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The Role of Stakeholder Perceptions during IT-Enabled Change: An Investigation of Technology Frames of Reference in a Sales Process Innovation Project

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THE ROLE OF STAKEHOLDER PERCEPTIONS DURING IT-ENABLED CHANGE: AN INVESTIGATION OF TECHNOLOGY FRAMES OF REFERENCE IN A SALES PROCESS INNOVATION PROJECT

BY

Brett Wayne Young

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ACCEPTANCE

This dissertation was prepared under the direction of Brett Wayne Young's Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctoral of Philosophy in Business Administration in the Robinson College of Business of Georgia State University.

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ABSTRACT

**The Role of Stakeholder Perceptions During IT-enabled Change:
An Investigation of Technology Frames of Reference in a
Sales Process Innovation Project**

BY

Brett Wayne Young

August 23, 2010

Committee Chair: Dr. Lars Mathiassen

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The literature emphasizes the important role played by stakeholder perceptions in explaining success and failure of IT-enabled change efforts. However, our knowledge of how stakeholder perceptions evolve and interact with outcomes during change processes is still limited. Consequently, this study adapts technological frames of reference (TFR) to explore the dynamics of stakeholder perceptions based on action research into an IT-enabled sales process innovation project at *VoiceTech*.

The study attempts to answer the following research questions: How can TFR be adapted and applied to support action research into IT-enabled change efforts? What was the role of stakeholder perceptions during IT-enabled sales process innovation at VoiceTech? How do stakeholder perceptions evolve and interact with outcomes during IT-enabled change efforts?

The study develops TFR as a theory for investigating stakeholder perceptions during IT-enabled change and it offers a process model of how frame interactions, incongruencies, and inconsistencies contribute to frame shifts and change outcomes over time. In addition, the study provides detailed insights into how the IT-enabled sales process innovation at *VoiceTech* shaped and was shaped by shifts in stakeholder perceptions over time.

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Table of Contents

Tables

Figures

Chapter 1 Introduction

1.1 Research Domain

Over the last 30 years, the literature has put increasing emphasis on how processes can be improved through adoption of information technology (IT). We know outcomes in IT-enabled change can be attributed to several factors influencing technology acceptance (e.g. Hsiao & Ormerod, 1998; Macredie & Sandom, 1999; Speier & Venkatesh, 2002). While there is general agreement that stakeholder perceptions play a major role in shaping change outcomes, there are important gaps in the literature on how stakeholder perceptions evolve over time and interact with outcomes during IT-enabled change efforts. Consequently, this study provides insights that fills these gaps by adapting Technology Frames of Reference (TFR) theory (Orlikowski & Gash, 1994) to investigate an ongoing IT-enabled process innovation effort into the sales organization within the firm *VoiceTech* - a medium-sized telecommunications company with offices in a dozen cities in the United States.

Many studies in the IT-enabled sales process innovation literature emphasize how specific factors related to IT adoption impact salesperson acceptance and performance. With studies showing more than half of all sales force automation (SFA) projects fail (Bush, *et al.*, 2005; Rivers & Dart, 1999; Schafer, 1997), researchers have increasingly studied the role that organization, culture, cognition, and technology play during implementation of new sales technologies. However, most of these studies focus on automating the salesperson (Manssen, 1990; Wedell & Hempeck, 1987) rather than more broadly understanding how sales organizations may be changed and enabled by the introduction of IT. In fact, IT-enabled sales process innovation has only been minimally investigated.

1.2 Research Perspective

Building on the socio-cognitive, cultural frames, and frames of reference research, Orlikowski and Gash's (1994) TFR theory argues that understanding a stakeholder's interpretation of technology is significant in understanding an organization's interaction with technology. Orlikowski and Gash's analysis of key stakeholders' varying interpretations of IT reveals significant differences between Technologists and users. The authors propose a conceptual framework examining these stakeholder-technology interactions and suggest different groups may have different technological frames. In demonstrating TFR, Orlikowski and Gash identify the nature of technology, technology strategy, and technology in use as the salient domains of the theory. These domains typically reveal conflicts among stakeholders at different levels and across different roles when organizations change technologies. TFR theory has been used to study group communication systems in a client services organization (Orlikowski & Gash, 1994), re-skilling of IT professionals in a telecommunications organization (Gallivan, 1996), EDI services in healthcare (Barrett, 1999), system requirements determination for a sales information system (Davidson, 2002), and bank email systems (Lin & Silva, 2005).

Davidson and Pai (2004) identified 52 studies that reference Orlikowski and Gash (1994) of which only eight studies utilized TFR analysis. While a limited number of studies on TFR appears in the information systems domain, this research is the first to apply Orlikowski and Gash's TFR through action research and the first to apply TFR in a study of stakeholder perceptions during IT-enabled sales process innovation. Subsequent studies to Orlikowski & Gash have used TFR and adapted the domains of interest

to suit the context under investigation. For example, Barrett (1999) used nature of technological change, nature of business transactions, and importance of market institutions; McLoughlin *et al.* (2000), while using action research, treated TFR as unidimensional; Davidson (2002) used IT delivery strategies, IT capabilities and design, business value of IT, and IT-enabled work practices; and Lin and Silva (2005) examined the nature of problems, requirements for the system, images of implementation, and issues around use.

As a consequence of these different authors creating different domains, there is no salient model within TFR studies for facilitating its application. Therefore, in this study, we build on the original domain constructs as defined by Orlikowski and Gash (1994). We develop TFR as a theory for investigating stakeholder perceptions during IT-enabled change and offer a process model of how frame interactions, incongruencies, and inconsistencies contribute to frame shifts and change outcomes over time. In addition, we offer more elaborate definitions, we extend the framework to include a technology implementation domain, and we offer a binary decision tree to help delineate each TFR domain into the sub-domains that are applied in our data analysis.

1.3 Research Questions

Thus, by drawing on TFR and based on efforts to understand how stakeholder perceptions of technology shape and are shaped during sales process innovation, this study asks the following research questions:

1. RQ-Overall: How do stakeholder perceptions evolve and interact with outcomes during IT-enabled change efforts?

2. RQ-Framing: How can TFR be adapted and applied to support action research into IT-enabled change efforts?

3. RQ-Context: What was the role of stakeholder perceptions during IT-enabled sales process innovation at *VoiceTech*?

The areas of concern are IT-enabled change as principally discussed within the information systems literature and sales force automation as primarily discussed within the marketing literature. Building on TFR as the theoretical foundation, we approach the investigation through an action research project into specific problems related to an IT-enabled sales process innovation effort within *VoiceTech*. Table 1.1 summarizes the contributions this research makes to the IT-enabled change literature, the TFR literature, and the SFA literature.

Table 1.1 Contributions of this Research

Literature	Contribution
Sales Force Automation	Provides an understanding of the role of stakeholder perceptions during IT-enabled sales process innovation at *VoiceTech*.
IT-enabled change	Provides an understanding of how stakeholders' perceptions shape and are shaped during IT-enabled change.

Technology Frames of Reference	Develops TFR as a theory for investigating stakeholder perceptions during IT-enabled change. Develops a process model of how frame interactions, incongruencies, and inconsistencies contribute to frame shifts and change outcomes over time.

1.4 Research Design

Since we do not know much about how perceptions of sales people vary within and across roles during IT-enabled change efforts, the research questions lend themselves to a case study and a critical realism philosophical perspective (Archer, *et al.*, 1998; Mingers, 2004). Specifically, the case in this research is situated at *VoiceTech*, a public telecommunications company headquartered in the southeastern United States with offices in over ten major U.S. cities. The study is based on action research (Mathiassen, 2002; McKay & Marshall, 2001; Susman & Evered, 1978) into the design and adoption of IT-enabled sales process innovations over a 30-month period. The intervention was initially designed to gain a better understanding of how sales force turnover rates might be reduced by adopting a new SFA system combined with mobile technology. As the action research project progressed, the original design was expanded to more broadly diagnose, plan, take action, evaluate, and provide specific feedback on a phased rollout of the SFA and mobile technology to the sales force. Through these interventions, rich data was generated allowing the study to gain deep insights into how and why the change process evolved at *VoiceTech.*

The action research project is organized and presented using Susman and Evered's (1978) five-step approach to action research for Diagnosing, Action Planning, Action Taking, Evaluating, and Specifying Learning. Data was generated from interviews, workshops, presentations, and observations conducted over the duration of the project. Specifically, the research team collected data from 32 interviews, two researcher presentations, and five collaborative workshops resulting in over 49 hours of recordings and 1,000 pages of transcriptions. In addition, research notes were created to capture reflections of the research team both during and after interviews and two researcher reflection sessions were held to discuss the ongoing project. The research team also collected materials such as *VoiceTech* sales force handbooks, SFA screenshots, company presentation materials, and public documents from quarterly and annual reports and the *VoiceTech* website. All levels of the company - from a newly hired sales person, to mid-level and senior-level executives, to the CTO and CMO – are represented in the interviews, workshops, and presentations. TFR (Orlikowski & Gash, 1994) provides the research framework by which the data is analyzed.

The detailed presentation of this thesis proposal is as follows: Chapter 2 provides an overview of the extant literature and identifies gaps in the IT-enabled change literature. Chapter 3 provides an overview of extant literature on TFR and identifies limitations and proposed extensions as a basis for our development of TFR as a framework for studying and managing IT-enabled change. Chapter 4 provides a review of the SFA literature and identifies limitations and gaps. Chapter 5 describes our application of action research methodology and our employment of the principles of canonical action research (Davison, *et al.*, 2004). Chapter 6 describes the problem solving through iterative action and presents the scheme for coding and analyzing data, for identifying frames and interesting themes, and for understanding frame dynamics during IT-enabled change. Chapter 7 provides a static view analysis of TFRs (Orlikowski and Gash,

1994) with evidence and contributions from an analysis of frames, incongruencies, and inconsistencies. Chapter 8 presents an analysis of TFRs from a dynamic view and provides shift evidence and contributions from analysis for secondary stakeholder roles and detailed interaction and shift evidence for the Innovators. Chapter 9 presents an analysis of sales process innovation from a process perspective and a TFR analysis from a marketing perspective. Chapter 10 discusses the contributions, limitations, and implications for theory and practice.

Chapter 2 IT-Enabled Change

IT-enabled change creates unique issues for organizations. Some of these issues include knowledge and power shifts, reduced process cycle times, changes in work methods, and increased complexity (Benjamin & Levinson, 1993). Mitchell & Zmud explain that as complexity increases, "understanding of internal process and technological environments … is critical" (2006, p. 347). Understanding IT-enabled change and evaluating extant literature is the focus of this section.

2.1 The Role of Stakeholder Perceptions

A literature review on IT-enabled change was completed to understand the extant research and the gaps and limitations of prior studies. The search included querying the ISI Web of Knowledge database on the terms "IT enabled business change," "IT enabled organizational change," "IT enabled change," "IT enabled organization," "technology enabled organization," and "technology enabled change." The search produced 29 citations from 1993 – 2009 (see Table 2.1). The results show that *Information Systems Journal*, *Information Systems Research*, *Information Society*, *Journal of Information Technology*, *Journal of Management Information Systems*, and *Sloan Management Review* have published over 40% of the total IT-enabled change articles to date. This approach allowed me to understand the contributions, gaps, and limitations of prior studies.

Table 2.1 IT-Enabled Change Publications

Journal	IT-enabled Change Articles
Information Systems Journal	2
Information Systems Research	2
Information Society	2
Journal of Information Technology	2
Journal of Management Information Systems	2
Sloan Management Review	2
17 other publications	1 each
TOTAL	**29**

The literature emphasizes the important role played by stakeholder perceptions in explaining success and failure of IT-enabled change efforts. For example, Macredie and Sandom (1999, p. 258) asserted that "a significant factor contributing to the difficulties of managing IT-enabled change is the discrepancy between the way people perceive technical change and the way they actually implement it." Furthermore, Mitchell and Zmud (2006) noted that incongruent stakeholder perceptions regarding the deployment of IT "will inevitably result in greater design uncertainty and implementation risk."

Ward and Elvin (1999) developed a framework for managing IT change by focusing on designing and managing the context, content, and outcome of the change process. Benjamin and Levinson (1993) concluded that many IT-enabled projects are less than successful because organizations do not provide necessary support after IT-enabled change. Meanwhile, new research shows that cultural consequences impact the success of IT-enabled change in multinational firms (Martinsons, *et al.*, 2009).

IT-enabled change literature has also evaluated cases of success and failure based on different factors like adaptive change ability (Mitchell & Zmud, 2006), assessment of process risks and rewards (Fiedler, *et al.*,

1994), simulating IT change strategies prior to actual implementation (Manzoni & Angehrn, 1997), dynamic IT change management capabilities (Hsiao & Ormerod, 1998), BPR as IT-enabled change (Tillquist, 2000), implementation costs (Sharma, *et al.*, 2008), and how IT-enabled change is guided by stakeholder perceptions of social identity (Schwarz & Watson, 2005).

Process studies have emphasized that IT-enabled change, alone, is not a sufficient condition for sustaining changes in organizational processes. Clark and Stoddard (1996) argued that organizations benefit most in business process reengineering (BPR) by merging IT innovations and process innovations. The authors present a BPR framework whereby combining IT and process change results a greater impact than what is achieved independently. IT is considered the primary catalyst for BPR by enabling the necessary cross-functional coordination of processes. Yet, IT-enabled BPR does not effectively address all of the complexities in organizational change (Davenport, 1993). Smith and Fingar (2003) proposed "obliterating" the bridge between business and IT and instead argued that business managers should focus on managing core business areas instead of managing processes tightly interwoven and controlled by technology.

2.2 Gaps in Current Knowledge

While the literature on IT-enabled change has provided significant contributions, our knowledge of how stakeholder perceptions evolve and interact with outcomes *during* change processes is still limited. Thus, our basic research question is

> *RQ-Overall: How do stakeholder perceptions evolve and interact with outcomes during IT-enabled change efforts?*

In answering this question we expect to add to our knowledge on IT-enabled change by offering a process model of how interactions, incongruencies, and inconsistencies in stakeholder perceptions contribute to shifts in perceptions and interact with change outcomes over time.

Chapter 3 Technological Frames of Reference

This section provides a presentation of TFR (Orlikowski & Gash, 1994) and its usage in existing research, and it describes our adaptation and extension of TFR to suit the needs of this study. Framing is one method of explaining how the perceptions of stakeholders shape and are shaped by their experiences during IT-enabled change (McLean, 1998). When introducing a technology like SFA, the roles and responsibilities of stakeholders within the organization may change. Hence, our underlying assumption is that understanding the impact such technologies have on individuals and the frames of reference those individuals have toward technological change is important for increasing success rates of implementations.

3.1 Frames and Roles

Building on the socio-cognitive, cultural frame, and frames of reference research, Orlikowski and Gash (1994) argue that understanding the stakeholders' interpretation of technology is significant in studying the stakeholders' interactions with technology. Orlikowski and Gash's analysis of key stakeholders' varying interpretations of technology (which they call technological frames) revealed differences between Technologists and users. These differences result in problems in development and use of the technology. The authors proposed a conceptual framework examining stakeholder-technology interactions and suggested different groups may have different technological frames.

Orlikowski and Gash define technological frames as

> "… that subset of members' organizational frames that concern the assumptions, expectations, and knowledge they use to understand technology in organizations. This includes not only the nature and role of the technology itself, but the specific conditions, applications, and consequences of that technology in particular contexts" (Orlikowski & Gash, 1994, p. 178).

In demonstrating TFR, Orlikowski and Gash (1994) identify the nature of technology, technology strategy, and technology in use as the salient domains of the theory. These domains typically reveal incongruent perspectives among stakeholders at different levels and across different roles whenever organizations change technologies. The nature of technology reveals that stakeholders across different roles tend to use different images to describe a technology based on prior experience with and knowledge about the technology. These stakeholders also have a varying understanding and knowledge about the capabilities and functions of the technology. Technology strategy is a domain in which stakeholders frame the company's motivation for adopting a particular technology and how that strategy changes business practices. Technology in use refers to how technology is actually used by end users. For example, educating users on how to use the new technology may not be a top priority. Thus, technology in use frames the incongruence in what is provided and what may be needed for different roles within the organization. The definitions of each TFR domain are presented in Table 3.1.

Table 3.1 Definitions of TFR Domains

TFR Domain	Description
Nature of Technology	"Refers to people's images of the technology and their understanding of its capabilities and functionality" (Orlikowski & Gash, 1994, pp. 183-184).
Technology Strategy	"Refers to people's views of why their organization acquired and implemented the technology. It includes their understanding of the motivation or vision behind the adoption decision and its likely value to the organization" (Orlikowski & Gash, 1994, pp. 183-184).
Technology in Use	"Refers to people's understanding of how the technology will be used on a day-to-day basis and the likely or actual conditions and consequences associated with such use" (Orlikowski & Gash, 1994, pp. 183-184).

Within socio-cognitive research, stakeholders act based on their own understanding of the environment. Bostrom and Heinen (1977) found that poor designs in information systems are the result of the way developers and designers view organizations. The authors suggested that existing frames of reference be made explicit so as to be understood and changed when necessary. Bostrom and Heinen also called for a more holistic approach to analyzing and understanding systems within organizations by using frames of reference. Shrivastava and Mitroff (1984) proposed using frames of reference as "a basis for examining the differences between the assumptions made by decision makers and by researchers" (Shrivastava & Mitroff, 1984, p. 18). The authors suggested that assumptions influence organizational strategy and shape problem formulation, solution alternatives, and solution choice. In this respect, understanding the differing assumptions that stakeholders have helps us understand the decisions they make from potential choices.

Within cultural frames research, Howard-Grenville and Hoffman (2003) argued that cultural frames "refer to the shared meanings held by individuals that shape their understanding of situations and guide their actions within an organization" (2003, p. 73). Daft and Lengel (1986) proposed using rich communication transactions for information processing as a means of overcoming the different frames of reference that individuals have regarding these situations. Huber (1990) focused on technology-prompted changes in organizational design. He predicted that IT "will have a significant effect on organizational design, intelligence and decision making" (1990, p. 67). The author also quotes Huber and McDaniel (1986) in an earlier study: "Any significant advance in information technology seems to lead eventually to recognition and implementation of new organizational design options, options that were not previously feasible, perhaps not even envisioned." Huber called for more research into IT as an intervention that changes organizations, enhances organizational intelligence, and allows for organizations to be designed differently than before. Thus, the first research question is

RQ-Framing: How can TFR be adapted and applied to support action research into IT-enabled change efforts?

In answering this question, we expect to further develop and apply TFR as a theory for investigating and managing stakeholder perceptions during IT-enabled change. This research accepts the challenges presented by various authors in the frames literature stream (e.g. Daft & Lengel, 1986; G. Huber, 1990;

G. P. Huber & McDaniel, 1986; McLean, 1998) to further enhance our understanding of how perceptions of stakeholders shape and are shaped by their experiences with technology. The following sections discuss frame incongruencies, frame shifts across time, and how TFR is adapted in our research.

3.2 Frame Incongruencies

Orlikowski & Gash (1994) pointed to incongruencies in frames across stakeholders. The authors noted that there are incongruencies between what different stakeholders expect, assume, and know about technology. The implication of these incongruent technological frames is that organizations "are likely to experience difficulties and conflicts around developing, implementing, and using technologies" (Orlikowski & Gash, 1994, p. 180). For example Technologists may know that a certain technology is more easily modified than another technology. This knowledge could lead the Technologists to recommend or adopt less useful technologies for managers or users. Managers may believe that by adopting a technology, they will gain better insight into business processes. Users, however, may expect technologies to be useful and find technologies onerous to use or that there is little personal benefit in using a technology they perceive as being tools for managers in micro-managing users. These incongruencies can create conflicts that inhibit the full adoption and usage of a technology.

Therefore, this research builds on TFR work by Orlikowski and Gash (1994). Davidson (2006) noted that action research and longitudinal case studies could help researchers identify how frame incongruencies impact IS. Motivated by these suggestions, the action research described in this research diagnoses the problem, plans actions, takes actions, evaluates actions, and then identifies findings – many of which were designed to reduce frame incongruencies.

3.3 Frame Shifts

Davidson (2002, p. 332) suggested that contextual changes can trigger frame shifts and that these shifts could result in a "reinterpretation of information and lead to new understandings." The author provided as examples the shifts that occur when participants change projects or when power shifts occur within organizations. In her study of requirements determination during information systems delivery, Davidson suggested that frames serve as problem solving templates and interpretive filters that may shift given changes in context:

> "Examining frame shifts helped explain how organizational change and shifting participation in the project influenced participants' understanding of project requirements … " (2002, p. 332).

Davidson (2006) identified a gap in the technological frames literature around the issue of frame structure. The author pointed to Orlikowski and Gash (1994) to define frame structure as "categories or domains of knowledge" (Davidson, 2006, p. 25). Fiol (1994) invoked a picture frame metaphor in describing the difference between frame content and framing structure. She compared the "content of the interpretation" to the picture and the "framing of the interpretation" to the picture frame. The author noted "differences in the breadth and rigidity of people's framing of their views" (Fiol, 1994, p. 405) and that rigidity or flexibility of stakeholders' framing indicates possibilities for change. The author also suggested that the number of issues considered (frame breadth) positively relates to decision effectiveness, especially in the early stages of a change process.

El Sawy and Pauchant (1988) improved our understanding of cognitive frames of reference by focusing on their influence on management strategy in dynamic environments. The authors investigated organizational turbulence and change while considering the socio-cognitive effects of frame-shifting. They found frame shifts can be abrupt and of short duration yet influence how stakeholders process or make sense of given information and thus influence the decisions they make and the actions they take. They find

> " … the missing key to understanding the role of cognitive frames of reference … was not in studying frames of reference themselves, but rather in studying their shifts and the process through which this shifting occurred" (El Sawy & Pauchant, 1988, pp. 457-458).

Davidson (2006) suggested using qualitative data collection and analysis, in-depth case-study design, action research methods combined with qualitative methods, institutional logics, and discourse analysis methods to elicit greater understanding of frames and framings. It is with that challenge of investigating IT-related organizational change in-depth, and in particular through a sales process innovation study at *VoiceTech*, that we proceed to discuss our adaptation of the TFR theory. Orlikowski and Gash (1994) identified technology frames of reference and how stakeholders in different roles within the organization frame technology, while Davidson introduced the concept of incongruencies across roles and frame shifts across time. So far, however, frame incongruencies within roles have not been studied to further our understanding of how stakeholders' frames shape and are shaped through technology use.

3.4 Adaptation

While a limited number of studies on Technological Frames of Reference (TFR) appear in the information systems literature, this study is the first to apply TFR theory in an investigation of sales process innovation. Subsequent studies to Orlikowski and Gash (1994) have used TFR and adapted the domains of interest to suit the context of the paper. Davidson and Pai (2004) identified 52 studies that reference Orlikowski and Gash (1994), of which only eight studies utilized TFR analysis. For example, Barrett (1999) used nature of technological change, nature of business transactions, and importance of market institutions; McLoughlin *et al.* (2000), while using action research, treated TFR as one-dimensional; Davidson (2002) used IT delivery strategies, IT capabilities and design, business value of IT, and IT-enabled work practices; and Lin and Silva (2005) used the nature of problems, requirements for the system, images of implementation, and issues around use.

Hence, there is no salient model within TFR studies for facilitating its application. We looked at and analyzed data throughout the project and subsequently spent considerable effort developing a coding scheme that focused on the salient features of our data (Mason, 2002; Miles & Huberman, 1994). As a result, we adapted and extended the original domain constructs defined by Orlikowski and Gash (1994) and developed more elaborate definitions to support our analyses. Specifically, we extended the framework to include a technology implementation domain, and we developed a binary decision tree to help delineate each TFR domain into the applied sub-domains.

3.4.1 The Nature of Technology

The nature of technology, as defined by Orlikowski and Gash (1994, p. 183), "refers to people's images of the technology and their understanding of its capabilities and functionality." Motivated by the need to

delineate stakeholders' general views concerning IT and stakeholders' general understanding of capabilities IT provides, we extend this definition to identify the two sub-domains of the nature of technology: (1) Images of technology: A stakeholder's use of images or metaphors to characterize the technology in general; and (2) Technology capabilities and functions: An stakeholder's understanding of the capabilities and functions of the technology in general.

The nature of technology can be examined independently of a particular context since it speaks to the general characteristics of the technology. Other views about the nature of technology include Davidson's (2002) view on how generalized knowledge of and expectations about various system features or attributes (like databases, user interfaces, reporting software, and system architecture) are framed. IT capabilities are examples of framing and includes the different understandings that developers and users have of features and how various parts of a system "fit together in the past, present, and future" (Davidson, 2002, p. 337)

Yoshioka, *et al.* (2002, p. 4) found that stakeholders have "different (and often incompatible) assumptions and expectations" and that these views vary widely regarding a technology's purpose and the features and functions the technology offers. These differences make it difficult for a selected technology to become fully established within an organization. Iivari and Abrahamsson (2002) found that views of the nature of and motives for implementing a technology vary within the organization's subcultures of users, specialists, engineers, and managers based on differing experiences and interpretations between groups.

3.4.2 Technology Strategy

Technology Strategy, as defined by Orlikowski and Gash (1994, p. 183), "refers to people's views of why their organization acquired and implemented the technology. It includes their understanding of the motivation or vision behind the adoption decision and its likely value to the organization." Motivated by a need to distinguish stakeholders' understanding of the rationale behind their organization's choice of IT from the projected organizational value of IT, we extend this definition to identify two sub-domains of the technology strategy: (1) Rationale for technology acquisition and implementation: A stakeholder's views of the initial reasons and visions for the organization's acquisition and implementation of the technology; and (2) Rationale for technology acquisition and implementation: A stakeholder's understanding of the projected value the technology is likely to bring to the organization.

McGovern and Hicks found examples of the differences between how stakeholders framed their views about the organization's technology strategy on the one hand, and how strategy changes "would impact jobs, work practices, and the culture of the organization" (2004, p. 252) on the other. The impact of a chosen technology strategy depends on the stakeholders' comprehension of strategy and business objectives even in situations where the implemented technology meets previously defined requirements. The business value of IT can influence an organization's relationships, and IT can be used to "improve internal operations, increase efficiency, reduce administration, and increase coordination" (Davidson, 2002, p. 337).

3.4.3 Technology in Use

Technology in use, as defined by Orlikowski and Gash (1994, p. 183), "refers to people's understanding of how the technology will be used on a day-to-day basis and the likely or actual conditions and consequences associated with such use." Motivated by an analysis of the data and a need to better

understand stakeholder views regarding the technology in use domain, we extend this definition to identify two sub-domains of technology in use: (1) Use of technology: A stakeholder's understanding of the use of the technology on a daily basis within the organization; and (2) Consequences from use of technology: A stakeholder's reflection on the consequences resulting from the use (and non-use) of the technology within the organization.

Davidson (2002) also found that developers tend not to concern themselves with how technology will be adopted into a user's everyday job, while users have certain assumptions about how a new technology fits within users' daily work practices. Users are stereotyped (by developers) as incapable and ignorant of the "proper" use of technology while developers are labeled (by users) as being unable to create usable applications. For example, Barrett (1999) refers to differences in stakeholder perceptions of "key characteristics of business transactions and to what extent they may be supported by new technology" (1999, p. 12) and found that users and IT professionals perceive the level of complexity of business transactions quite differently and, thus, the technology as used differs from the design. These differences frame different stakeholders' expectations regarding use and support needs.

3.4.4 Technology Implementation

Technology Implementation, as we define it in an extension of Orlikowski and Gash's (1994) three domains, refers to people's understanding of how the technology will be implemented as part of the organization's day-to-day operation and how each individual's adoption of the technology will be incentivized. This extension is both theory and data-driven. Because the *VoiceTech* case occurred during an ongoing implementation of an SFA, stakeholders constantly referred to implementation throughout the study. Their observations and understanding regarding implementation were distinct from the existing TFR domains. In addition, the implementation process has important implications in how stakeholders make use of IT.

Within the technology implementation domain is the involved stakeholders' understanding of the change process through which technology will be brought into the organization. For example, in prior research describing implementation experiences, stakeholders formed "haunting images of failure" (Lin & Cornford, 2000a) which fashioned their concerns about the speed of the implementation, skills available and skills required, the depth of vendor support and training, and the level of management risk. Davidson (2002) elaborates on IT delivery strategies with some of the same concerns as Lin & Cornford's (2000a) images of implementation but includes assumptions about user and developer roles, understandings of vendor alternatives, project coordination and phasing, and expectations. Davidson also studied differing understandings and assumptions that prevent stakeholders from reaching agreements about requirements.

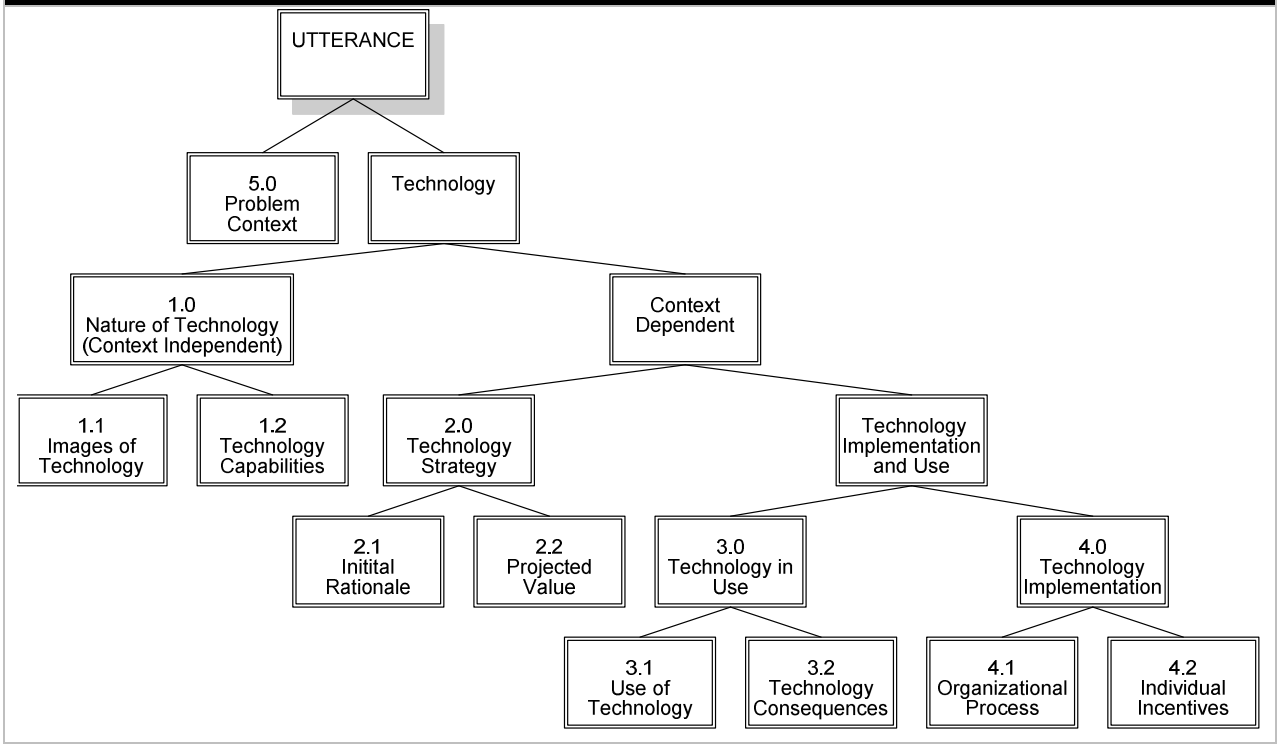
Thus, we elaborate this definition to identify two sub-domains of technology implementation: (1) Organizational implementation process: A stakeholder's understanding of the process by which the technology is implemented into the organization; and (2) Individual adoption incentives: A stakeholder's understanding of the incentives provided by the organization to incentivize an individual's adoption of the technology.

3.4.5 Adapted Framework

There are relatively few cases in the literature that shed light on how IT-enabled change efforts evolve over time and how the perceptions of the involved stakeholders, including customers, executives,

managers, professionals, and IT staff, shape and are shaped by these efforts (e.g. Pullig, *et al.*, 2002). Thus, this study adapts and extends a theoretic framework centered on TFR to investigate how different stakeholders interpret an ongoing sales process innovation effort (see Figure 3.1).

Figure 3.1 TFR Theory – a Binary Decision Model



Chapter 4 Sales Force Automation Technologies

There is considerable interest in organizing and managing IT-enabled change in the literature. However, the top journals are rather limited in their examination of stakeholder perceptions during transformation of organizational processes enabled by SFA technologies. This chapter reviews SFA literature with these considerations in mind.

From 1984 to 1997, the number of SFA vendors grew from 36 to more than 600 (Petersen, 1997). Buttle *et al.* (2006) cited a Datamonitor report projecting an SFA license revenue increase from $534 million in 2003 to $608 million in 2008. Global spending on SFA implementations was $3 billion in 2004 (Cotteleer, *et al.*, 2006) and all indications suggest that that amount is increasing rapidly (Siebel, 2002). Organizations typically spend between $5,000 to $15,000 per salesperson on SFA technologies (Erffmeyer & Johnson, 2001).

SFA is neither clearly defined in the literature nor by the vendors of SFA technologies. In fact, as Erffmeyer and Johnson (2001) noted, it can mean many different things – from using a fax machine to selling online. However, SFA generally refers to "converting manual sales activities to electronic processes through the use of various hardware and software applications" (Rivers & Dart, 1999, p. 59). The authors noted that SFA technologies are adopted primarily to reduce the time salespersons spend on non-value added support activities and to provide access to timely information. Another driving force in the need for SFA technologies is that they assist salespersons in managing the customer relationship (Landry, *et al.*, 2005).

An array of capabilities is provided by SFA hardware and software technologies. Collectively, these capabilities can facilitate sales process innovation and efficient data gathering and sharing. These capabilities support sales processes by offering real-time access to product offerings, sales team collaboration, information exchange, and electronic order tracking (Speier & Venkatesh, 2002). Earl (2001) suggested leveraging innovations such as expansive information sharing (whereby knowledge is shared broadly and in real time across the organization) results in a more successful sales organizations and a quicker response to business changes. SFA technologies also include tools used to facilitate information exchanges between buyers and sellers (Speier & Venkatesh, 2002). These tools can range from the simple to the complex. Simple tools include sales contact software used to manage the individual sales person's selling process. Complex tools include enterprise-wide systems accessible by all stakeholders and robust SFA systems employing the use of GPS technology on a mobile platform.

Given vaguely defined sales processes, high implementation and technology costs, high failure rates, and the potential for significant sales process innovation, it is important to examine the progress of SFA and the current state of the art of SFA research. A literature search was completed to better understand the extant SFA research and the gaps and limitations of prior studies. This search involved querying EBSCO and ABI/INFORM ProQuest databases using the terms "sales force automation," "sales support system," and "sales automation." After identifying only those SFA articles in peer-reviewed academic journals the search produced 71 citations in 34 journals from 1987 – 2010 (see Table 4.1). Table 4.2 groups the number of SFA articles by 3-year periods to show the increased attention SFA research has garnered recently. The results show *The Journal of Personal Selling & Sales Management*, *Industrial Marketing Management*, and *The Journal of Business and Industrial Marketing* have published over 40% of the total

SFA articles to date. The following sections review the SFA literature in three periods: Pre 1997, 1997-2005, and 2005-present. These periods roughly correlate with changes in supporting technologies that comprise and enable SFA.

4.1 Sales Force Automation Research (Pre 1997)

Much of the early SFA research focused on automating the routines of the salesperson. As a veteran SFA implementer stated anecdotally in 1986, "Most companies are automating the way they've been selling for 20 years. They're not thinking about what the information could do for them" (Maher, 1986, p. 29). In fact, Wedell and Hempeck (1987) noted that 60% of a salesperson's daily routine involved non-sales activities including travelling, planning, paperwork, waiting, and meetings. The authors suggested automating some of these activities could give the salesperson more time to work on core selling functions. Even from the earliest introduction of SFA technologies, one of the main goals was to improve productivity in the field (Wallerstedt, 1987). A study of agribusiness salespersons provided tangible evidence that salespeople using computers were more productive than those who did not (Harris & Pike, 1996). Moriarty and Swartz (1989) reported that some SFA implementations realized return on investment greater than 100%. The authors noted as a downside of adopting SFA technologies that salespeople may become consumed by it. The efficiencies gained are then counterbalanced by time spent understanding and using SFA systems.

The earliest research in this area focused on topics around then-emerging technologies such as using cellular phones (Swenson & Parrella, 1992) and leveraging various technologies to boost sales and marketing productivity (Moriarty & Swartz, 1989). Cronin and Davenport (1990) evaluated the long and short term effects of laptop use by salespeople. They concluded that strategic benefits to the organization had the lowest priority within the sales force and "personal and tactical gains were more likely to influence adoption" (Cronin & Davenport, 1990, p. 287).

4.2 Sales Force Automation Research (1997-2005)

As IT-enabled SFA capabilities expanded, so did the research on the growth in adoption and implementation of SFA technologies. The widespread availability of the internet during this period allowed organizations to "improve communications between the salesperson, the buying organization, and the selling firm" (Keillor, *et al.*, 1997, p. 209). However, in many cases the organizational benefits were unconvincing or much lower than expected (Mitchell & Zmud, 1999). Despite the promise of improved sales processes when adopting SFA technologies, 55% of SFA implementations fail to see a realizable return on investment and the SFA failure rate is at least 60% (Bush, *et al.*, 2005; Rivers & Dart, 1999; Schafer, 1997).

Parthasarathy & Sohi (1997) argued that organizations must adopt SFA effectively before individual salespersons are able to effectively take advantage of SFA. After examining the actual users of SFAs, Keillor *et al.* (1997) suggested that less experienced sales people perceive greater benefits from using SFA technologies while experienced sales people may perceive SFA as a threat. Gohmann *et al.* (2005b) and Honeycutt *et al.* (2005) focused on differences in perception of SFA systems between management and salespersons. These studies found that managers tend to view SFA systems as beneficial to salesperson efficiencies and overall performance while the sales force tends to view SFA systems as a waste of time. The studies are, however, limited to only two stakeholder groups, i.e. sales management

and sales professional. The adopted view of perceptions is generally limited to perceived tradeoffs for a sales force using an SFA (i.e. productivity gains/losses, data quantity/quality, dependence/independence, new/old responsibilities). Pullig *et al.* (2002) focused on sales professionals and their perception of technology use and its impact on sales performance. Also, the authors found organizational climate factors like training and reward systems affect sales professionals' perception of the SFA.

Rangarajan *et al.*(2005) and Bush *et al.* (2005), explored how perceptions about the usefulness and ease of use of SFA technology impact salesperson acceptance of an SFA. These studies focused on various elements and antecedents of the technology acceptance model (TAM) which posits that the perceived ease of use and perceived usefulness determine intention to use a technology (Davis, 1989; Davis, *et al.*, 1989). Morgan and Inks (2001) examined managerial commitment, training, user influence, and accurate expectations as factors that influence acceptance; Ahearne *et al.* (2004) examined the curvilinear relationship between the salesperson's usage of technology and individual sales performance; Gohmann *et al.* (2005a) evaluated differences between managers and salespersons in how an SFA is perceived; Jaychandran *et al.* (2005) examined the performance outcomes of relational information processes and CRM technology use; Schillewaert *et al.* (2005) extended the Technology Acceptance Model (TAM) to sales technology adoption. Speier and Venkatesh (2002) surveyed 454 salespeople in failed SFA implementations and found that the salespeople perceived the SFA system adversely affected the sales process. Rangarajan *et al.* (2005) suggested sales professionals' perceptions about the complexity and usefulness of an SFA and the difficulty of integrating an SFA in to their normal sales routines affects acceptance while Bush *et al.* (2005) proposed a model that includes perceptions of technology as an enabler of organizational processes impacting salesperson "buy-in." These studies point to the importance of understanding stakeholder perceptions during IT-enabled change.

4.3 Sales Force Automation Research (2006-present)

In the past few years, as mobile technologies have become more widely adopted, the impact on business practices has been profound (Barnes, *et al.*, 2006). In fact, companies like Salesforce.com and Siebel Systems offer SFA and customer relationship management tools as mobile-enabled services. Salesforce.com makes sales and customer data available through multiple access points including BlackBerry phones and iPhones (Salesforce.com, 2009). Siebel Sales software also provides mobility solutions for users in the field (Oracle.com, 2009). Dun and Bradstreet offers a database of millions of company records to help sales professionals build prospect lists within an SFA (zapdata.com, 2009). Thus, using mobile and IT-enabled SFA technologies such as these, the sales force is able to report real-time updates about customers and sales while remaining in the field. However, having a sales force effectively use a mobile SFA technology presents challenges to the adopting organizations. Andriole (2006) suggested that business collaboration and technology integration must be considered when implementing these new technologies within an organization. Buttle *et al.* (2006) found that little research exists examining the connection between SFA adoption, usage, and performance. The authors suggested taking a longitudinal approach to investigating SFA adoption and use.

Additionally, Buttle *et al.* identified a lack of focus on sales processes in the literature. Cotteleer *et al.* (2006) reported that, while the focus of an SFA is not on automating the salesperson, many companies do exactly that by digitizing sales activities rather than enabling the salesperson to do things an SFA cannot

do. Cotteleer *et al.* suggested companies instead focus on the overall sales process to achieve larger productivity and performance gains.

More recently, Sundaram *et al.* (2007) examined how pre-deployment acceptance of technology affects individual sales performance while Moutot and Bascoul (2008) studied the relationship between SFA use and CRM performance by examining individual sales behaviors. Cho (2008) evaluated resistance to innovation and the effect of job satisfaction on salesperson perspectives toward SFA after adoption. Mallin and DelVecchio (2008) used agency theory to evaluate the relationship between perceptions of SFA usefulness and actual usage by analyzing salesperson perceptions of usefulness for themselves and to their sales manager. Boujena *et al.* (2009) examined the benefits of SFA from the customer's perspective. Park *et al.* (2009) analyzed how the usage of SFA by salespersons impacts relationship-building from the perspective of the salesperson. Cascio *et al.*(2010) showed that salespersons perceive how committed the organization's leadership is toward SFA adoption and usage. In summary, these latest studies reemphasize the importance of understanding stakeholder perceptions toward IT-enabled change.

Table 4.1 Salesforce Automation Publications

Journal	SFA Articles
The Journal of Personal Selling & Sales Management	14
Industrial Marketing Management	12
The Journal of Business & Industrial Marketing	8
Journal of the Academy of Marketing Science	2
Marketing Intelligence & Planning	2
International Journal of Information Management	2
Journal of Marketing	2
Journal of Relationship Marketing	2
International Journal of Medical Marketing	2
25 other journals	1 each
TOTAL	**71**

Table 4.2 SFA Research Publications Across Years

Period	SFA Articles
Pre 1994	2
1994 - 1996	2
1997 - 1999	5
2000 - 2002	12
2003 - 2005	20
2006 - 2008	24
2009 – 2010 (July)	6
TOTAL	**71**

4.4 Gaps in Current Knowledge

As SFA technologies advanced but failure rates remained high, the typical focus of SFA studies was centered on automating the sales force (Landry, *et al.*, 2005). Many of the studies in the SFA literature failed to take adoption and use of technology into account. Other studies are limited by viewing

stakeholder perceptions based on the technology acceptance model (TAM). Collectively, current studies within the SFA literature generally are limited to salesperson perceptions of technology usage or they focus on the impact of technology on organization performance. While it is clear that the literature on SFA has examined salesperson perceptions, the focus of these studies is generally limited to differences in perceptions between two stakeholders (e.g. Gohmann, *et al.*, 2005b; Parthasarathy & Sohi, 1997), perceptions and attitudes toward SFA technology (e.g. Honeycutt Jr., *et al.*, 2005; Keillor, *et al.*, 1997) and TAM and perceived usefulness of the technology (e.g. Bush, *et al.*, 2005; Jones, *et al.*, 2002; Rangarajan, *et al.*, 2005). Additionally, the vast majority of studies on SFA are variance studies (e.g. Ahearne, *et al.*, 2005; Avlonitis & Panagopoulos, 2005; Speier & Venkatesh, 2002).

Despite these significant contributions in the area of IT-enabled sales process innovation, we are still limited in our understanding of how IT-enabled sales process innovation efforts shape and are shaped by shifts in stakeholder perceptions over time. Buttle *et al.* (2006) suggested taking a longitudinal approach to investigating SFA adoption and use. Consequently, this study examines longitudinally, over thirty months, IT-enabled sales process innovation efforts among multiple stakeholder roles at *VoiceTech*. Thus, the second research question is

> *RQ-Context: What was the role of stakeholder perceptions during IT-enabled sales process innovation at VoiceTech?*

In answering this question, we expect to gain detailed insights into how IT-enabled sales process innovation efforts shape and are shaped by shifts in stakeholder perceptions over time.

Chapter 5 Research Approach: Action Research

5.1 Research Design

The *VoiceTech* project calls for research that is iterative, collaborative, and has organizational development as one of its primary goals. Using these criteria, a canonical action research method (Davison, *et al.*, 2004) is used to enhance the research outcome. In an effort to enhance both rigor and relevance using action research in information systems, Davison *et al.* (2004) describes a set of five principles and associated criteria to help researchers practice the "iterative, rigorous, and collaborative process-oriented model" described by Susman and Evered (1978). The research conducted as outlined in this research proposal adopts these principles and explicitly identifies in Section 5.5 how they are addressed in the proposed research. Also in Section 5.5, Eden and Huxham's (1996) contentions for quality action research are used to help design and subsequently evaluate the research. Mason (2002) suggested a number of criteria for qualitative research design. These are reported in Table 5.1 and discussed in the following section as the practical and academic objectives of the research–also known as the dual imperatives of action research (McKay & Marshall, 2001; Rapoport, 1970).

The research adopts a critical realism perspective (Archer, *et al.*, 1998). Mingers proposed critical realism for IS research as an underpinning philosophy that can overcome some of the problems presented to IS researchers when trying to adopt purely positivist or interpretivist philosophies (Mingers, 2004). In particular, critical realism overcomes these problems by advancing research through a combination of realism and social construction. Mingers stated, "Critical realism asserts that the conditions for knowledge do not arise in our minds but in the structure of reality, and that such knowledge will not be universal and ahistorical" (Mingers, 2004, p. 92). Mingers argued critical realism re-establishes "a realist view of *being* in the ontological domain whilst accepting the relativism of knowledge as socially and historically conditioned in epistemological domain" (Mingers, 2004, p. 91).

Because action research uses intervention into real world settings as one of its tenets, critical realism is a well-aligned philosophical position and is an approach consistent with the adoption of a TFR theoretical lens at *VoiceTech.* Thus, by jointly applying TFR as analytical lens and action research as method of investigation during an IT-enabled change, we were able to iterate controlled staged experiments by making changes and observing changes and outcomes as they were implemented. Through these interventions, rich data was generated to give us deep insights into how and why IT-enabled changes evolved at *VoiceTech.*

5.1.1 Objectives

The practical objective of the project was to enable sales process innovation at *VoiceTech* in ways that enhance sales performance, reduce sales rep turnover, improve reporting and alerting, and make information readily available and ubiquitous. To achieve this objective, the investigators worked collaboratively with the *VoiceTech* task force to implement and monitor system, process, and human resource changes within *VoiceTech* during an SFA implementation. As a result, the proposed research reports on a longitudinal case study using action research methodology. The problem statement (defined in Section 5.3) outlines the context for the project. The study followed a 30-month investigation into sales process innovations at *VoiceTech.* We observed sales operations, interviewed 30 informants, and collaborated with *VoiceTech* employees in five workshops and two presentations. Confidentiality was

promised and all interactions and related interviews were recorded and transcribed. During the project, at least two *VoiceTech* key Innovators were always available for the periodic workshops and cooperation and availability of their managers, IT staff, and interviewees was coordinated through these two persons.

The academic objectives of the project are: 1) developing TFR as a theory for investigating stakeholder perceptions during IT-enabled change; 2) developing a conceptual model of how frame interactions, incongruencies, and inconsistencies contribute to frame shifts and change outcomes over time; and 3) providing detailed insights into how the IT-enabled sales process innovation at VoiceTech shaped and was shaped by shifts in stakeholder perceptions. The research is interpretive (Klein & Myers, 1999) and takes a critical realism perspective (e.g. Mingers, 2004) assuming reality is examinable using the concept of technological frames and frame shifting within and between groups and individuals.

A pilot study using stakeholder analysis was completed at *TrendInc* (Lewis, *et al.*, 2007) to practice action research principles and learn in practice about the role of stakeholder perceptions during organizational diagnosis and change. Using Atlas.ti 5.5 (ATLAS.ti, 1991-2009) as our data analysis tool, we investigated IT-enabled process innovation as the basis for designing our intervention into the sales process innovation effort at *VoiceTech.* Three full professors and one doctoral student comprised the academic team in the collaboration. We acknowledge that by using an action research approach, our interactions and collaborations with the research subjects shapes our analysis and influences the behaviors, responses, and actions of our subjects.

Table 5.1 Core Areas for Qualitative Design - Adapted from Mason (2002).

CORE AREA	OUR APPROACH
The research question(s)	RQ-Overall: How do stakeholder perceptions evolve and interact with outcomes during IT-enabled change efforts? RQ-Framing: How can TFR be applied and adapted to support action research into IT-enabled change efforts? RQ-Context: What was the role of stakeholder perceptions during IT-enabled sales process innovation at *VoiceTech*?
Background/purpose of the research	To enable sales process innovation at *VoiceTech* in ways that enhance sales performance, reduce sales rep turnover, improve reporting and alerting, and make information readily available to sales management and sales force.
Research strategy / Theoretical underpinnings	Use of TFR (Orlikowski & Gash, 1994) rooted in a critical realism perspective.
Data generation methods	Interviews, workshops, observations, presentations, field notes, project proposals, training material, meeting notes. Workshops and presentations involved active participation and discussion with *VoiceTech* key stakeholders responsible for developing, implementing, and managing the new SFA. Actions were planned, discussed, and evaluated during these workshops.
Sampling and access strategy	Interviewed 30 informants in 32 interviews. Conducted five workshops with key stakeholders. Presented two status reports to key collaborators. Each of the workshops and presentations involved active participation (see data generation methods above). Access to site was through the Sr. VP of Sales and Marketing.
Data analysis	Use Atlas.ti (v5.5) to code transcripts based on an adaptation of

	Orlikowski and Gash (1994) TFR domains. Identified key themes from deep analysis of the resulting coded utterances.
Pilot study	Used similar action research approach based on stakeholder perceptions in a study of IT-enabled process innovation at *TrendInc (Lewis, et al., 2007).*
Ethical, moral, political issues	Confidentiality of interview results was promised to all individuals interviewed.
Research duration	Research conducted over 30 months. Included 2 days of presentations, 5 days of workshops, 5 days of interviews, and 2 days of observations over the 30-month period.
Resource requirements	Two key *VoiceTech* Innovators available for periodic workshops ensuring cooperation and availability of their managers, IT staff, and interviewees throughout the project.
Research personnel	• 3 primary investigators are full professors • 1 investigator is this PhD student working with the professors • 2 key Innovators working for *VoiceTech*
Proposed use of the research	*Academic*: • Develop TFR as a theory for investigating stakeholder perceptions during IT-enabled change. • Develop a process model of how frame interactions, incongruencies, and inconsistencies contribute to frame shifts and change outcomes over time. • Provide detailed insights into how the IT-enabled sales process innovation at *VoiceTech* shaped and was shaped by shifts in stakeholder perceptions over time. *Practical*: • Enable sales process innovation at *VoiceTech* in ways that enhance sales performance, reduce sales rep turnover, improve reporting and alerting, and make information readily available and ubiquitous

5.1.2 Action Research Methodology

Action research as a method was developed by Kurt Lewin at the Research Centre for Group Dynamics at the University of Michigan in the post-World War II era of social change (Lewin, 1951). The method was intended as a "mode of social research intended to overcome some of the shortcomings of positivism" (Baburoglu & Ravn, 1992). Rapoport described action research in the following terms: "Action research aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework" (Rapoport, 1970, p. 499).

Unlike other research methods where the investigator is an observer, an action researcher is "viewed as a key participant in the research process, working collaboratively" (McKay & Marshall, 2001) with other stakeholders to bring about change or improvement in a problem context (Baskerville & Wood-Harper, 1996; McKay & Marshall, 2001). Action research has been successfully adopted and applied in

management (Huxham & Vangen, 2000), psychology (Cassell, *et al.*, 1988), and information systems (Baskerville & Wood-Harper, 1998; de Vreede, 1997; Olesen & Myers, 1999).

There are few examples of action research in the marketing literature. In fact, in an influential marketing article, Workman (1993) used participant observation at Zyrtek to understand and evaluate marketing's influence in new product development. The author spent nine months (full-time) observing and documenting the activities of engineering, marketing, and field groups and the processes by which new product development decisions were made. Workman states that he did not act as an advisor or consultant to Zyrtek during the nine-month period.

The result of Workman's (1993) research at Zyrtek is a description of the product development process, identification of impediments that prevent the marketing group from having greater influence in development decisions, and an elaboration of ways for marketing groups to become more influential throughout the development process. Had an action research approach been adopted at Zyrtek by Workman, one might infer that, instead of just observing, documenting, and explicating the decision making process, Zyrtek's marketing group might have taken iterative steps toward becoming more influential in new product development decisions. For example, since action research is iterative, collaborative, and has organizational development as one primary goal, a Zyrtek action research group might have been tasked with evaluating the baseline decision making process and then creating a action plan for moving the marketing toward a more influential role. Then, the research group might have used action research principles to solve problems collaboratively. In this way, the real-world setting would have informed theory and theory would have helped guide specific actions. The end result most likely would have still produced a high-quality research publication while also benefitting Zyrtek's marketing group during the nine-month period.

Susman & Evered (1978) offer six beneficial characteristics of action research (see Table 5.2): First, action research is future oriented. This means plans are made before actions are taken. Second, action research is collaborative. There is collaboration between investigators and "the client" whereby the investigators are not detached observers commenting on analysis of the results. Instead, investigators are active participants in both the research and problem solving aspects of a project. Third, action research implies system development. The system is developed through the cyclical action research approach and is expected to sustain after the research project concludes. The intent is the immediate problem is solved and knowledge generated about processes is used to enhance the system prospectively. Fourth, it generates theory grounded in action. Since action research as described by Susman and Evered suggests a cyclical form, actions can inform theory and theory can be used to guide which specific actions are undertaken and how analysis is framed. Fifth, it is agnostic to theory and action. Both actions and theory are reevaluated throughout the action research process. Predictions about the consequences of actions may be theoretically based, but use of any specific theory is not a guarantor of expected results. Sixth, and finally, it is situational. Each research situation is unique and interventions are based on interactions with involved stakeholders to address problems as presented, discussed, and through agreed-upon actions.

Table 5.2 Beneficial Characteristics of Action Research (Susman & Evered, 1978)

Action Research Benefit	As Applied at *VoiceTech*
1. Future oriented	Intent of project was to reduce sales rep turnover while successfully implementing the SFA.

2. Collaborative	Key stakeholders at *VoiceTech* were directly involved in the action research. The Innovators, Champions and Technologists supported and participated in the effort as appropriate. (See Figure 5.3 – Agency at *VoiceTech*). The Researchers actively participated in planning and evaluating actions and offered suggestions throughout the project. Workshops identified the intervention actions to be taken between workshops.
3. Implies system development	Methods employed by the Researchers were employed by *VoiceTech* Innovators to identify core problems and evaluate alternative approaches in dealing with those problems. A new SFA was being developed and implemented in several releases.
4. Generates theory grounded in action	As the project progressed, the Researchers used TFR as the framing lens through which to view the *VoiceTech* context. Interview questions and workshops used TFR domains to investigate the problem situation.
5. Agnostic to theory and action	While TFR was the theoretical framing, the action research did not specify or guarantee any particular results from the actions or theory as applied.
6. Is situational	The intervention was based on interactions with specific stakeholders at *VoiceTech*. The actions in this project were based on discussions and agreed-upon actions to address particular issues at *VoiceTech.*

5.2 Research Site

VoiceTech Communications, Inc. ("*VoiceTech*") was founded in 1999 with a mission to deliver to small businesses the communication capabilities typically reserved for large businesses. The company provides managed communications services in selected markets. *VoiceTech* launched its services in the Southeastern U.S. in 2001 and, at the time of the research project, operated in six cities. As of December 2008, *VoiceTech* served nearly 40,000 customers in twelve cities and targeted small to medium sized businesses with fewer than 250 employees. The company had a 99% customer retention rate and was one of the nation's fastest-growing providers of communication services with long-term plans to be in approximately 30 to 50 of the largest cities in the United States.

VoiceTech divides each city into two markets and each market into three regions (Figure 5.1). Each location is managed by a vice president and each market is managed by a director. Each region has a team manager, a senior sales rep that assists the manager, and up to ten sales representatives (Figure 5.2). Thus, each city has approximately 60 sales reps. Like many sales organizations, the competition is fierce within each sales team and between regions, markets, and cities. All sales information from each sales rep is transparent to all *VoiceTech* employees and is posted throughout each office on display boards, white boards, and daily sales updates, and is also discussed at daily morning sales meetings.

The company produces its management teams organically. Each sales rep – no matter how experienced prior to joining the company – starts at the bottom of the chain and progresses based on sales performance. The average sales rep is a new college graduate in a first job. Senior sales reps are those that have been with the company at least six to twelve months. The sales rep starting salary is approximately $28,000 with performance bonuses of up to $30,000 or more for meeting or exceeding sales targets. High-

performing sales reps are promoted to sales managers quickly and then manage their own team of up to ten sales reps.

At various times, managers act as mentors or coaches to sales reps in their charge. Managers have individual sales targets of their own, which they typically achieve very early in the month. They then spend the rest of the month setting expectations and managing their team's performance toward their targets. Directors have responsibility over three sales teams and report directly to the vice president in their city. They also work very closely with each manager in identifying and solving problems within individual sales teams. Additionally, directors help vice presidents generate weekly and monthly sales forecasts based on feedback each manager supplies from daily and weekly sales team meetings.

The daily routine at *VoiceTech* is highly regimented, and the company employs rigid sales force management based on the belief that it can identify and mold sales reps effectively. Sales reps go out into the field each day to an assigned area and are trained to cold call on at least 50 small businesses each day. Should they have first or second call-back appointments, those appointments can each take the place of up to ten cold calls. The company occasionally requires sales reps to engage in telemarketing in the office. This practice is also called a "blitz" with the objective being to schedule as many appointments as possible without having to go door-to-door. Blitzes sometimes are a result of poor sales performance within a team toward the end of a month.

During the first month on the job, sales reps receive intensive training in the *VoiceTech* sales methods and learn details about the company's product lines. When in the field, sales reps may call upon their manager or technical sales support representatives to answer questions about the sale. An intranet site also is available where sales reports, contracts, forms, and other pertinent information is updated frequently. However, based on interviews with the sales reps, very few reps utilize this offering before going into the field.

Figure 5.1 Geographic Division of Field Sales Management Responsibilities (Example)

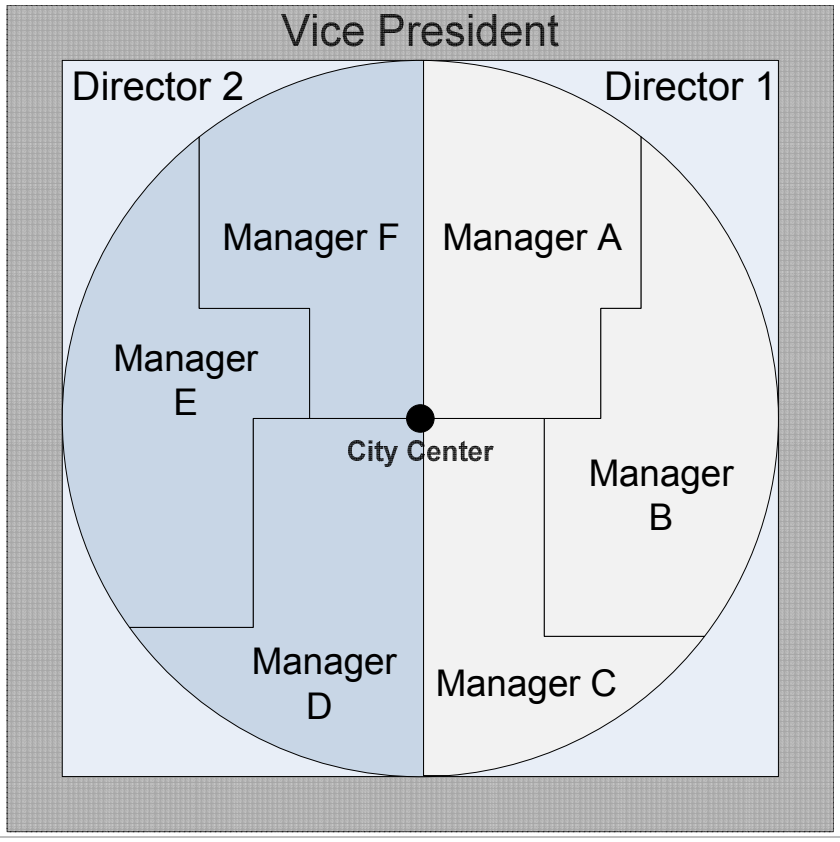
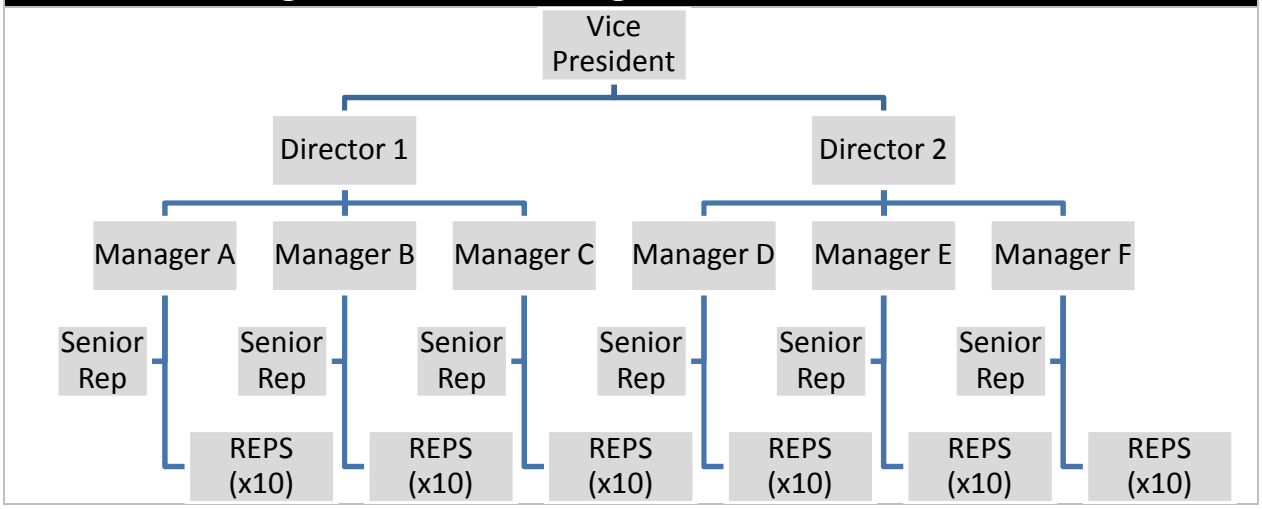


Figure 5.2 Sales Market Organization Chart at *VoiceTech*



5.3 Problem Situation

Before issuing its initial public offering in the mid-2000's, *VoiceTech* was one of the largest venture-funded firms in the state of Georgia. The company became a success on Wall Street by meeting and beating financial targets. The stock price increased 400% in its first three years and, by all accounts, the company was successful and perceived as highly innovative in its products and services. *VoiceTech* was given a business innovation award presented to a company that "has demonstrated the ability to develop and/or advance products with more innovative capabilities than competing vendors and products."

While the success of the company was unquestioned as measured by stock price, product offerings, financial reports, and innovation awards, *VoiceTech* had, at the point of our intervention, outgrown some of the sales processes and information systems it used to achieve those early results. The consequences of *VoiceTech*'s use of homegrown sales support systems, a sometimes overly-aggressive sales force, and a lean information gathering and dissipation process prompted the executive sales leadership at *VoiceTech* to look at how to adopt sales process innovations.

In 2005, *VoiceTech* decided to bring to its markets mobile technology capabilities in the form of a BlackBerry device. At the same time, it realized the mobile technology platform created an opportunity for innovating its sales processes. To complement its sales system with a mobile technology brings information capture and information usage closer to the point of sale. Thus, in early 2006, *VoiceTech* launched a wireless product, called "MobileVT," that uses a BlackBerry PDA/Phone device. The *VoiceTech* sales force uses this device as a product demonstration while also accessing in the field pertinent capabilities of the SFA.

The preliminary goals for the research at *VoiceTech* are captured in this Problem Statement from the Memorandum of Understanding (MoU):

> "While *VoiceTech* has recently successfully implemented a new IT-based sales support system to enhance sales practices, a joint venture with a provider of mobile, wireless services has made it feasible to adopt mobile technology to further develop sales performance. At the same time, however, *VoiceTech* is experiencing sales representative attrition[1] [turnover] of 15% per month. Those that leave *VoiceTech* are mainly non-core sales representatives with less than 6 months of engagement. As process disruptions, for example caused by introducing new and different forms of technology, can cause increased attrition rates, the key challenge is to enable sales process innovations by adoption of mobile technology in ways that will both increase sales performance and reduce sales representative attrition."

As the project unfolded and more knowledge was gained from our interactions with *VoiceTech* stakeholders, goals were modified for better alignment with the nature of the project. During WS1, the Director of Marketing and Sales Operations emphasized these motivations

> ""We've got lots of data out there and I think it can be streamlined. We need help figuring out how our people are using it or how they should be using it. … We're not confident that data is being turned into decisions that can be used. The second [uncertainty] is change management. … The implementation [go-live] date is

[1] "Attrition," in the *VoiceTech* context, is defined as sales representatives who leave the company.

> April 22nd … and we're looking for help to understand how we can best implement that." [40:179]

As was clear from the very start of the project, we included practical as well as research goals. Hence, the practical motivation for the project was to enhance sales process innovation in the following ways:

- Enhance sales performance. *VoiceTech*'s sales force spent too much time going to customers and businesses that were on the "do not call" list. Being able to identify these beforehand and in the field would improve sales representative efficiencies.

- Make information readily available. *VoiceTech* was using a homegrown sales tool. This tool, while useful in the startup phase of the company, outlived its usefulness and had problems with stability and data accuracy. As a result, *VoiceTech* had decided to adopt an SFA tool.

- Make information ubiquitous. As part of this adoption, the company anticipated adding mobile accessibility into its sales force operations vis-à-vis handheld BlackBerry devices which were also sold by the sales force to *VoiceTech* customers.

- Improve reporting and alerting. Sales reps, managers, executives, and analysts all used different tools for reporting results across the organization. The Innovators wanted to reduce the number of non-SFA reports and improve managers' ability to understand their sales teams' performance without having to rely on ad-hoc and offline reports.

- Reduce sales rep turnover. Sales representative turnover was extremely high, averaging over 15% per month. *VoiceTech* believed sales process innovation might help solve sales information problems that greatly frustrated its sales reps and managers.

The academic motivation for the research collaboration was to examine and understand the following during an ongoing IT-enabled sales process innovation:

- Developing TFR as a theory for investigating stakeholder perceptions during IT-enabled change.

- Developing a conceptual model of how frame interactions, incongruencies, and inconsistencies contribute to frame shifts and change outcomes over time.

- Providing detailed insights into how the IT-enabled sales process innovation at VoiceTech shaped and was shaped by shifts in stakeholder perceptions.

5.4 Research Organization

The research project was organized as an R&D collaboration between the Researchers and *VoiceTech* with support from the Georgia Research Alliance (GRA). In December 2005, GRA, *VoiceTech*, and the Researchers conducted a workshop in which the need for the proposed collaboration was discussed and an initial project plan developed. The collaboration team reported to the CMO and executive vice president of sales. All parties agreed to a Memorandum of Understanding (MoU) summarizing the research collaboration. The project was jointly funded by GRA, *VoiceTech*, and CEPRIN. Mathiassen argued that

a main concern in such collaborations is to "establish well functioning relations between research and practice" (2002, p. 329). Thus, numerous agency relationships exist in long-term collaborations like the one at *VoiceTech.*

5.4.1 Agency at *VoiceTech*

The overall organization of the project is illustrated in Figure 5.3 as five interconnected stakeholder groups that participated in the collaboration: "The Users," "The Champions," "The Innovators," "The Technologists," and "The Researchers." These groups had varying levels of interaction with each other and within the collaboration. The solid arrows in Figure 5.3 indicate frequent and direct interactions, while the dotted arrows indicate more irregular interactions.

The Researchers included the three full professors and the doctoral student. This group collaborated directly and on a regular basis with the Innovators in workshops and throughout the intervention into sales process innovation. The Researchers also interacted directly, but less frequently, with the Champions and the Technologists. These interactions were mainly through interviews and occasional workshop discussions.

The Champions included the Chief Marketing Officer (CMO) and the Director of Marketing and Sales Operations. The Director of Marketing and Sales Operations reported to the CMO and was responsible for executing the CMO's strategic vision of how the marketing and sales operation should advance. The Director of Marketing and Sales Operations was also the bridge from the Champions to the Innovators and, as a result, participated in several workshops and all presentations. In the context of this collaboration, the Champions interacted with the Innovators on a daily basis while their interactions with the User-Reps and User-Managers and the Researchers were less frequent.

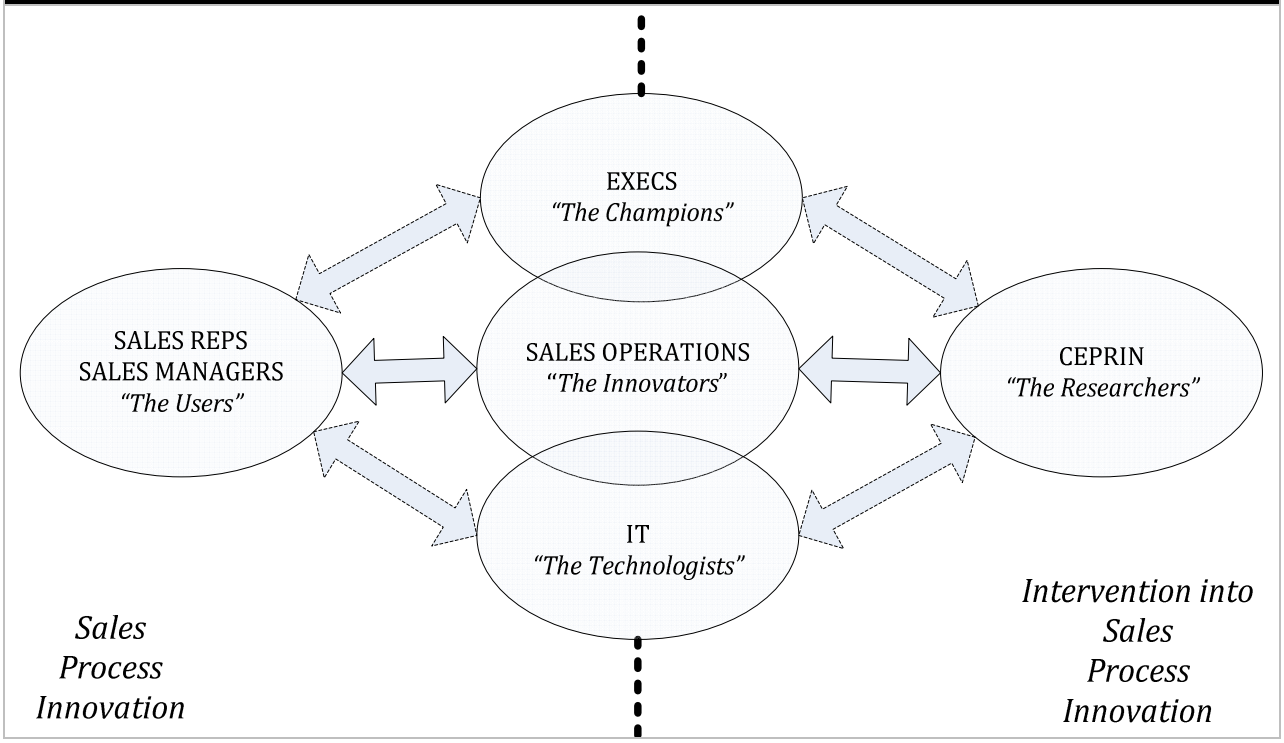
The Innovators included the Director of Sales Operations and a young, but experienced, Marketing Analyst. The Director of Sales Operations reported to the Director of Marketing and Sales Operations while the Marketing Analyst reported to the Director of Sales Operations, who became the primary point of contact during the collaboration and was responsible for implementing the SFA in sales operations. The Marketing Analyst had been with *VoiceTech* since its beginnings and had established good relationships throughout the company. He was charged with coordinating, planning, and monitoring the implementation across the various markets and on occasion conducting SFA training sessions for the users. In the context of this collaboration, the Innovators interacted directly with all groups. In this way the Innovators were situated as the primary go-betweens from the sales process innovation to the intervention side of the collaboration.

The Technologists included the Chief Technology Officer (CTO), the Director of IT Planning, and the IT Business Analyst. The CTO was ultimately responsible for ensuring the successful development and implementation of the SFA. He was also responsible for human resources at *VoiceTech*. The Director of IT Planning was responsible for directing technology adaptations to the SFA. The IT Business Analyst reported to the Director of IT Planning and was responsible for understanding and developing SFA user requirements. In the context of this collaboration, the Technologists interacted directly with the Innovators but less frequently with the User-Reps and User-Managers and the Researchers.

The User-Managers included the vice presidents, sales office managers, and sales directors. The User-Reps included sales team managers, sales leaders, and sales representatives (sales reps) located in each

city. Sales reps and team managers were the ultimate users of the SFA on a day-to-day basis. The directors and vice presidents use the SFA to manage their teams. Sales reps are in the field throughout the day while the others usually are monitoring and managing sales from the office. Sales reps are responsible for entering and updating data related to their sales funnel. Team managers and directors are responsible for managing and monitoring the sales teams and their regions. Vice presidents tend to focus less on the day-to-day sales activities and more on weekly and monthly planning. In the context of this collaboration, the users interacted directly with the Innovators but less frequently with the Champions and the Technologists.

Figure 5.3 Agency in the *VoiceTech* Collaboration



5.4.2 The Collaboration

A timeline of significant collaboration events during the 30 months-long study is shown in Figure 5.4. The first contact between the Researchers and *VoiceTech* was made by one of the Researchers with *VoiceTech*'s executive vice president of sales. After multiple discussions between *VoiceTech* senior managers and the Researchers, an initial workshop was held whereby the collaboration team agreed on a phased approach using *VoiceTech*'s decision to implement an SFA system as the basis for moving sales process innovation forward. The collaboration team consisted of the Researchers and the *VoiceTech* task force. The task force had been assembled by *VoiceTech* prior to the collaboration to address issues related to IT support of sales and marketing. The *VoiceTech* task force included representatives from sales operations, IT, and senior managers from those departments.

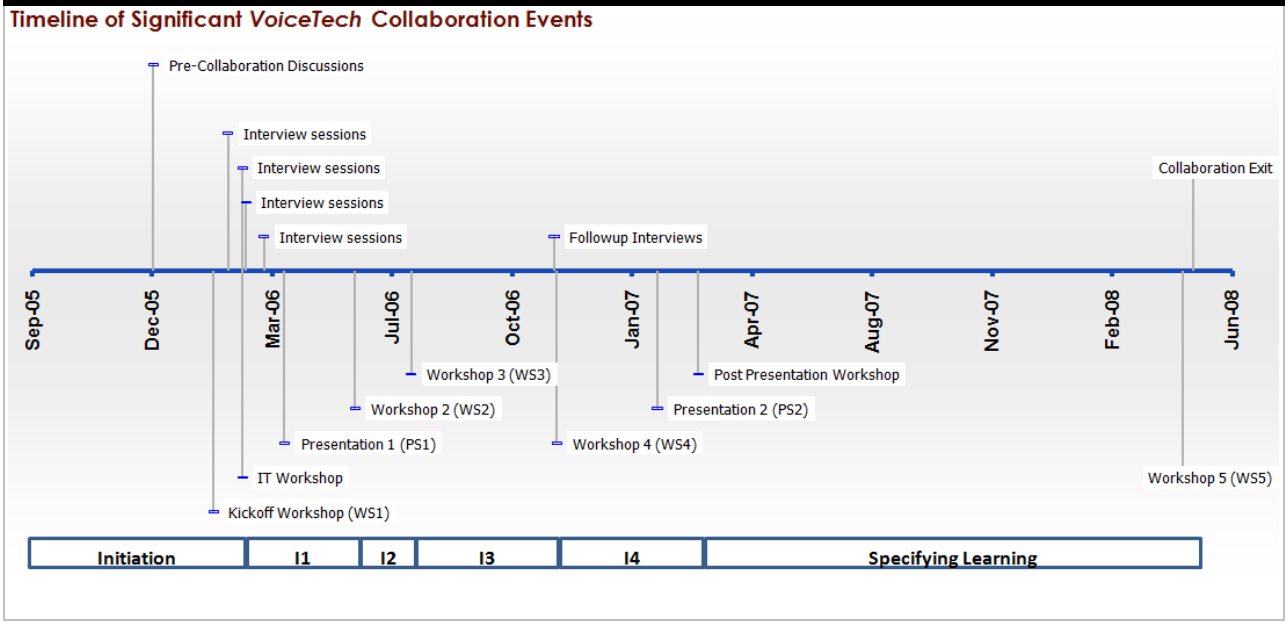
Beginning February 2006, the first in a series of five workshops and two summary presentations were conducted on site at *VoiceTech* involving the Innovators, the Technologists, and the Researchers. These workshops gave the Researchers insight into the problem situation as perceived by *VoiceTech* stakeholders. Actions were discussed, planned, and evaluated by the *VoiceTech* stakeholders and the

Researchers during these workshops and presentations. Agreed upon actions were taken by the stakeholders between workshops and presentations. (Chapter 6 discusses the specific actions taken and evaluations of those actions). The Innovators and the Technologists were members of the collaboration team as part of their normal work duties at *VoiceTech*. They provided the context and direction needed for the *VoiceTech* collaboration and were supported by the Champions. The workshops were voice-recorded and detailed notes were also taken to record questions needing further explanation and any decisions made by the collaboration team.

The Researchers conducted observations of sales representatives as they used their sales systems and observed managers meeting with their sales teams and conducting training sessions. We also observed the work areas of the sales managers and representatives, made notes, and took pictures of these workspaces for future discussions regarding the sales process and sales management practices. Field study notes were made on these observations. The final workshop was conducted in April 2008.

The Researchers adhered to the Principles of Canonical Research (Davison, *et al.*, 2004) and contentions for quality action research (Eden & Huxham, 1996). The research will therefore eventually be evaluated against these guidelines, as discussed in the following section. The research cycle (McKay & Marshall, 2001) and the approach to data collection and analysis are discussed in Chapter 6.

Figure 5.4 Timeline of *VoiceTech* Collaboration



5.5 Principles of Canonical Action Research (CAR)

The importance of achieving rigor and relevance in information systems research has been increasingly emphasized over the last 15 years (Applegate, 1999; Benbasat & Zmud, 1999; Lee, 1999). Specifically, the criticism regarding lack of rigor of action research has been addressed recently in canonical action research (CAR) principles outlined by Davison *et al.* (2004) and contentions for quality action research presented by Eden and Huxham (1996). These guidelines give action researchers specific criteria which should be addressed explicitly in action research projects.

5.5.1 Principle 1: The Researcher-Client Agreement

The Principle of the Researcher-Client Agreement (Davison, *et al.*, 2004) has guided the project by elaborating on the roles of the research team members and the intentions of the research. While there was no explicit agreement between the Researchers and *VoiceTech* that CAR would be used in the research project (1a), the Researchers did use CAR as guiding principles. These guidelines are outlined in the *VoiceTech Planning Considerations* (January 25, 2006) in Appendix B. Additionally, the focus of the project was clearly specified and agreed to in the MoU between the Researchers and *VoiceTech* (1b). Furthermore, co-sponsor GRA requires such an agreement to be in place. *VoiceTech* demonstrated its commitment to the project by explicitly agreeing to and then committing funding, resources, time, and innovation efforts from senior executives and managers (1c). The roles of *VoiceTech* members were delineated explicitly and members of the R&D collaboration were identified (1d). The agreement stated the main deliverables as recommendations on mobile technology and recommendations on the *VoiceTech* sales process (1e). The data collection methods were specified in the agreement as field study observations, interviews of employees at *VoiceTech,* and workshops to be conducted jointly among the Researchers and *VoiceTech* research team (1f). Table 5.3 summarizes the evaluation of the criteria for the researcher-client agreement.

Table 5.3 Criteria for the Researcher-Client Agreement

Principle 1. Criteria for the Researcher-Client Agreement (RCA)	Applied at *VoiceTech?*
1a Did both the researcher and the client agree that CAR was the appropriate approach for the organizational situation?	☐
1b Was the focus of the research project specified clearly and explicitly?	☑
1c Did the client make an explicit commitment to the project?	☑
1d Were the roles and responsibilities of the researcher and client organization members specified explicitly?	☑
1e Were project objectives and evaluation measures specified explicitly?	☑
1f Were the data collection and analysis methods specified explicitly?	☑

Related to the criteria for the researcher-client agreement, Eden and Huxhum (1996) implored action researchers to be organized, competent, and self-aware. The authors suggest that an action research project cannot merely be an extension of a consulting engagement. Rather, researchers must be aware ahead of time of the process by which research is produced. Additionally, Eden *et al.* suggest that researchers structure projects to achieve the dual aims of research and practical goals. More specifically, Eden *et al.*'s seventh contention is

> "(vii) a high degree of method and orderliness is required in reflecting about, and holding on to, the emerging research content of each episode of involvement in the organization."

From the beginning, the project team at *VoiceTech* kept in focus the dual aims of publishing meaningful research while offering practical recommendations for the company. The team identified and kept organized notes, transcripts, recorded audio, and other documents necessary to meet this contention. These notes and documents were reflected upon throughout the project to gain insight into the emergent research content as the project progressed.

In addition, the tenth contention is

> "(x) in order to justify the use of action research rather than other approaches, the reflection and data collection process - and hence the emergent theories - should be focused on the aspects that cannot be captured easily by other approaches. This, in turn, suggests that having knowledge about, and skills to apply, method and analysis procedures for collecting and exploring rich data is essential"

Different data collection and analysis methods might have been chosen in the *VoiceTech* context. However, our specific research design explicitly acknowledges the interpretive nature of our data collection methods. Our research also had as its objective "to enable sales process innovation." Thus, in this context, the researchers are not merely observers but are fully engaged by taking collaborative actions that change outcomes and then subsequently reflecting on those actions and outcomes (see Chapter 5 for action details). Furthermore, one of the primary investigators is a full professor with many years of action research experience, and the PhD student has participated in prior action research projects.

5.5.2 Principle 2: The Cyclical Process Model

Considering the Principle of Cyclical Process Model (Davison, *et al.*, 2004), all seven of the criteria were explicitly addressed. A cyclical process model was used following the "iterative, rigorous, and collaborative process-oriented model" as described by Susman & Evered (1978). The adoption of this model is elaborated in detail in Chapter 5. The Researchers independently diagnosed the situation (2b), planned actions based on the diagnosis (2c), implemented and evaluated actions (2d), and specified learning from the outcomes (2e). An explicit decision was made to not proceed through additional cycles (2f) due to project objectives being appropriately met (2g). The research team presented several options for continuing the project after evaluating the results of the first project. However, after having successfully completed the objectives of the first project, the decision was made to not create a new project. Table 5.4 summarizes the evaluation of the criteria for the cyclical process model.

Table 5.4 Criteria for the Cyclical Process Model

Principle 2. Criteria for the Cyclical Process Model	Applied at *VoiceTech?*
2a Did the project follow the CPM or justify any deviation from it?	☑
2b Did the researcher conduct an independent diagnosis of the organizational situation?	☑
2c Were the planned actions based explicitly on the results of the diagnosis?	☑
2d Were the planned actions implemented and evaluated?	☑
2e Did the researcher reflect on the outcomes of the intervention?	☑
2f Was this reflection followed by an explicit decision on whether or not to proceed through an additional process cycle?	☑
2g Were both the exit of the researcher and the conclusion of the project due to either the project objectives being met or some other clearly articulated justification?	☑

Related to the criteria for the cyclical process model, Eden and Huxham (1996) argued that good action research requires researchers to be professionals. Researchers do not rely on solely 'intuition' but on the conscious efforts to independently collect, assess, and reflect upon data. These actions are similar to the independent diagnosis of Davison *et al.*'s item 2b. More specifically, the eighth contention is

> "(viii) for action research, the process of exploration (rather than collection) of the data, in the detecting of emergent theories, must be either, replicable, or demonstrable through argument or analysis."

Independently of the *VoiceTech* task force, the Researchers conducted off-site discussions that were recorded or documented. The output of these discussions was, on the practical side, the sales process and mobile technology recommendations later presented to *VoiceTech.* The research outcome of these independent discussions was an in-depth analysis using IT-enabled change and sales process innovation theory in support of TFR theory as lenses to assess the problems at *VoiceTech*

In addition, the eleventh contention is

> "(xi) in action research, the opportunities for triangulation that do not offer themselves with other methods should be exploited fully and reported, but used as a dialectical device which powerfully facilitates the incremental development of theory"

The *VoiceTech* research team was able to triangulate various sources of data: we conducted 32 interviews with sales employees and managers, held five interactive workshops with key Innovators, engaged in several site observations and reviewed relevant company documents. These activities are described in detail in Chapter 6.

5.5.3 Principle 3: Theory

Davison *et al.* (2004) suggested the Principle of Theory to guide the project and help focus the research cycle. The project began without any specific guiding theories, but with an emphasis on stakeholder perceptions (Lewis, *et al.*, 2007) during IT-enabled change. However, during the diagnosis, we selected TFR as the lens to view and analyze the problem situation (3a).Theories related to innovation and sales processes helped focus the research. Literature reviews for TFR and sales process innovation were drafted early in the project and helped guide our action planning. Chapters 2, 3, and 4 are the result of the literature reviews.

Before the engagement with *VoiceTech* began, the domains of investigation and problem setting were considered and deemed to be of interest to the Researchers (3b). Specifically, the domains of investigation were sales process innovation and IT-enabled change. These items were also discussed in the first workshop with the *VoiceTech* participants. Interview questions specifically related to IT-enabled change and sales process innovation were asked during the first round of interviews. Questions related to TFR were formulated and asked during the second round of interviews.

Sales process innovation and IT-enabled change theories were used in support of the planned interventions (see our elaboration in Chapter 6). While the TFR analysis reported in this research was not completed until after the *VoiceTech* project was complete, the tenets of TFR (e.g. examining how stakeholder perceptions shape and are shaped by understanding stakeholders' experiences with the technology) were used to guide the research throughout the planned intervention (3d), including the outcomes (3e). TFR was further applied in the retrospective analyses during the period of specifying learning (see Chapters 6, 7, and 8). Table 5.5 summarizes the evaluation of the criteria for the principle of theory.

Table 5.5 Criteria for the Principle of Theory

Principle 3. Criteria for the Principle of Theory	Applied at *VoiceTech?*
3a Were the project activities guided by a theory or set of theories?	☑
3b Was the domain of investigation, and the specific problem setting, relevant and significant to the interests of the researcher's community of peers as well as the client?	☑
3c Was a theoretically based model used to derive the causes of the observed problem?	☑
3d Did the planned intervention follow from this theoretically based model?	☑
3e Was the guiding theory, or any other theory, used to evaluate the outcomes of the intervention?	☑

Related to criteria for the principle of theory, Eden and Huxham's (1996) contentions for quality action research are also helpful in the evaluation of this research. The first three contentions concern theory and context and are included here. The first contention is

> "(i) action research must have some implications beyond those required for action or generation of knowledge in the domain of the project. It must be possible to envisage talking about the theories developed in relation to other situations. Thus it must be clear that the results could inform other contexts, at least in the sense of suggesting areas for consideration."

The project initially focused on three main themes: sales process management, information capture and sharing, and mobile technology design. Each of these themes is applicable in and can inform other contexts outside of *VoiceTech.* Ultimately, the research focused on sales process innovation, IT-enabled change, and TFR as its guiding theories. Thus, this research meets Eden *et al.*'s first contention.

In addition, the second contention is

> "(ii) as well as being usable in everyday life, action research demands an explicit concern with theory. This theory will be formed from the characterization or conceptualization of the particular experience in ways which are intended to be meaningful to others."

Eden *et al.* recognized that research and practice concerns may result in different outcomes. The research at *VoiceTech* concerned itself with sales process innovation. Specifically, the research output concerned the role of TFR (see Chapter 3) in an innovation effort. The theory developed and applied at *VoiceTech* can be applied more generally to inform other innovation efforts. Meanwhile, the practical output of the project was a variety of recommendations on how SFA technology could be implemented as related to sales process innovation at *VoiceTech.*

Finally, the third contention is

> "(iii) if the generality drawn out of action research is to be expressed through the design of tools, techniques, models and method then this, alone, is not enough - the basis for their design must be explicit and shown to be related to the theory."

One of the outputs of this research is an adaptation and extension of Orlikowski and Gash's (1994) TFR framework. In the adaptation and extension, we found that stakeholder inconsistencies and interactions also contribute to TFR shifts and change outcomes (see Section 7.3, and Chapter 8). We also create a matrix whereby future research projects can use TFR to analyze how stakeholders respond to the nature, use, strategy, and implementation of technology. Chapters 6, 7, and 8 describe the process by which the data was analyzed and how this process informs and is informed by TFR. Chapter 9 describes the analysis of sales process innovation.

5.5.4 Principle 4: Change through Action

Davison *et al.* (2004) offered the Principle of Change through Action to demonstrate the attributes of relevance and rigor. This principle ensures actions are planned based upon hypothesized causes. In discussions prior to agreeing on collaboration, both the Researchers and the *VoiceTech* task force expressed a desire to improve the problem situation (4a). The Researchers were interested in understanding *VoiceTech's* implementation of an SFA and mobile connectivity. *VoiceTech* was motivated to improve retention rates by implementing this technology. Through the interviews and WS1, the Researchers and *VoiceTech* each specified several hypotheses as causes of the problem (4b). Thus, the actions that were planned throughout the intervention were designed to address these hypotheses (4c). The planned actions were approved and then implemented by the key Innovators at *VoiceTech* (4d). A comprehensive assessment was completed before and after the interventions (4e). The timing of the interventions was discussed and documented in the workshops (4f). Chapter 6 contains the complete details of the research cycle and its relation to the interventions. Table 5.6 summarizes the evaluation of the criteria for the Principle of Change through Action.

Table 5.6 Criteria for the Principle of Change through Action

Principle 4. Criteria for the Principle of Change through Action	Applied at *VoiceTech?*
4a Were both the researcher and client motivated to improve the situation?	☑
4b Were the problem and its hypothesized cause(s) specified as a result of the diagnosis?	☑
4c Were the planned actions designed to address the hypothesized cause(s)?	☑
4d Did the client approve the planned actions before they were implemented?	☑
4e Was the organizational situation assessed comprehensively both before and after the intervention?	☑
4f Were the timing and nature of the actions taken clearly and completely documented?	☑

Related to criteria for the Principle of Change through Action, Eden and Huxham's (1996) twelfth contention relates to the context of the problem situation and the validity of results. More specifically, the twelfth contention is

> "(xii) the history and context for the intervention must be taken as critical to the interpretation of the likely range of validity and applicability of the results."

As the results are analyzed and considered, the twelfth contention will be applied with care. The results should fully document our understanding of the history and context of the intervention as it relates to the validity and applicability of the results.

5.5.5 Principle 5: Learning through Reflection

Davison *et al.* (2004) provided the Principle of Learning through Reflection as the final CAR principle to help researchers and clients address the problem situation in a methodical way. The Researchers and key stakeholders participated in five workshops. The Researchers produced two presentations for *VoiceTech* (5a). The first, presented soon after the initial interviews, identified the key problems and made recommendations for change. The second, presented at the end of the intervention, gave an update on the project, and improvements and items needing more attention were identified and discussed (5b and 5d). The research activities and outcomes are reported in this research (5c) in Chapters 7, 8, 9, along with the results' implications for the research community (5f) in Chapter 10. The Researchers identified three opportunities for continued research (5e). Section 5.5 reports on how well CAR was followed. Chapter 10 addresses the conclusion of the results (5g). Table 5.7 summarizes the evaluation criteria for the Principle of Learning through Reflection.

Table 5.7 Criteria for the Principle of Learning through Reflection

Principle 5. Criteria for the Principle of Learning through Reflection	Applied at *VoiceTech?*
5a Did the researcher provide progress reports to the client and organizational members?	☑
5b Did both the researcher and the client reflect upon the outcomes of the project?	☑
5c Were the research activities and outcomes reported clearly and completely?	☑
5d Were the results considered in terms of implications for further action in this situation?	☑
5e Were the results considered in terms of implications for action to be taken in related research domains?	☑
5f Were the results considered in terms of implications for the research community (general knowledge, informing/re-informing theory)?	☑
5g Were the results considered in terms of the general applicability of CAR?	☑

Related to criteria for the Principle of Learning through Reflection, Eden and Huxham's (1996) fourth and fifth contentions relate to emergent theory and moving theory forward incrementally. These contentions are related to Davison *et al.*'s items 5e and 5f. More specifically, the fourth and fifth contentions are

> "(iv) action research will generate emergent theory**,** in which the theory develops from a synthesis of that which emerges from the data and that which emerges from the use in practice of the body of theory which informed the intervention and research intent."
>
> and
>
> "(v) theory building, as a result of action research, will be incremental, moving from the particular to the general in small steps."

Contributions are discussed in Chapter 10. Analysis, results, and contributions are considered in light of emergent theory (*contention iv*), and any theory building from these results is incremental (*contention v*).

In addition, the sixth contention is

> "(vi) what is important for action research is not a (false) dichotomy between prescription and description, but a recognition that description will be prescription (even if implicitly so). Thus the presenters of action research should be clear about what they expect the consumer to take from it and present with a form and style appropriate to this aim."

This contention, similarly to Davison *et al.*'s (2004) item 5c, argues that descriptive insights into the investigated issues and problems at *VoiceTech* should be clearly and completely presented to the reader. This research is presented in such a manner and identifies explicit and clear descriptions of the problems. Additionally, where appropriate, prescriptions are clearly presented.

Chapter 6 Problem-Solving at *VoiceTech*

The study proceeded using the five stages identified by Susman and Evered (1978). The *VoiceTech* project involved a single cycle with multiple workshops, interviews, and presentations (see cyclical process in Figure 6.1 and timeline in Figure 5.4). These were used to generate and collect data as well as to diagnose the problem (see Section 6.1), plan and take actions and evaluate actions (see Section 6.2), and specify learning (see Section 6.3).

Workshops each involved at least two Researchers and two key stakeholders from *VoiceTech*. During these meetings, a previously-arranged agenda was followed. Typically, this involved a discussion of changes made and actions taken since the previous workshop, an evaluation of those actions by the Researchers and the key stakeholders, and planning for future actions. The workshop participants discussed changes in detail to better understand impact and effectiveness. Recommendations for future changes and specific action items were discussed and documented. Decisions on actually implementing recommended changes were made solely by the *VoiceTech* task force.

Following completion of the project, all interviews, workshops, and presentations were transcribed. Data was subsequently coded using a coding scheme similar to one developed by Cousins *et al.* (2007). The coding scheme was based partially on the pre-existing TFR domains while the final coding scheme emerged after the Researchers reviewed the transcripts and held several coding scheme development discussions to further refine the coding scheme (see Section 6.4).

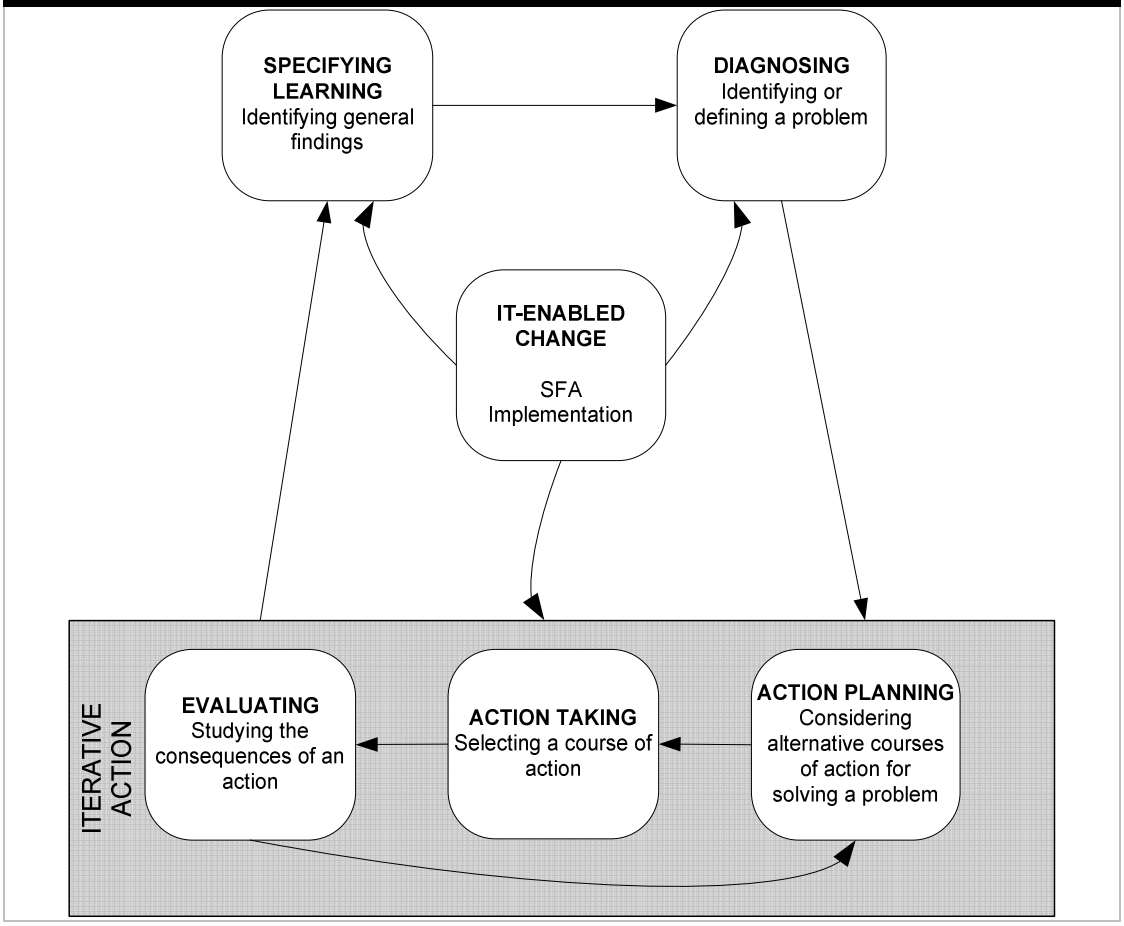
6.1 Diagnosing

Diagnosing is the first step in Susman and Evered's (1978) action research cycle (see Figure 6.1). This step consisted of identifying and defining the problem to be addressed in the collaboration. Diagnosing began when the Researchers coordinated a kickoff workshop (WS1) with the *VoiceTech* task force in February 2006. This workshop included the Researchers, the Director of Sales Operations (representing the Champions), the Director of Marketing and Sales Operations and the Marketing Analyst (representing the Innovators), and the Director of IT Planning and the IT Business Analyst (representing the Technologists). WS1 began with the three directors presenting a broad overview of the company and its sales processes. The overview incorporated *VoiceTech's* service offerings, internal and external organizational relationships, sales processes, sales force activities, the current and planned SFA, future requirements, and sales reports. The Researchers provided feedback on the proposed implementation plan. WS1 lasted 6 hours 22 minutes, and the resulting transcript is 127 pages long. Detailed notes also were taken during this meeting.

The overview of the sales process revealed that *VoiceTech* salespersons used "*POINT*" (the *VoiceTech* SFA) to record interactions with potential clients. Sales reps arrived at the *VoiceTech* office each workday, logged into *POINT* on one of the available shared computers, and printed out their scheduled client meetings for the week. Afterwards, sales reps would meet with their sales manager for a morning meeting during which each sales rep updated the team on sales from the previous day and projections for the remainder of the week. After morning meetings, sales reps would map out their day by identifying areas in their territory to call upon. The quota for each sales rep was 50 prospects visited each day. Sales

reps could reduce this daily quota by making a sale or having a second or third meeting with a potential client.

Figure 6.1 The Cyclical Process of Action Research at *VoiceTech*
Adapted from Susman and Evered (1978) p. 588



A review of the notes and transcripts from this first workshop confirms that the collaboration team diagnosed two primary areas of concern: 1) Integration of mobile technology with the SFA; and 2) salesperson turnover. Related to SFA mobile integration, the *VoiceTech* task force was specifically concerned with two issues: the stability of the SFA (including instability of the legacy system, unreliable SFA data quality, and potential media breaks after implementing a new SFA) and management information needs. Related to turnover, the *VoiceTech* task force was specifically concerned with two issues: incomplete adoption and usage of the current SFA (and, thus, incomplete adoption of the *VoiceTech* sales process) and system issues that were correlated with sales rep retention.

Emphasizing these concerns, the Director of Marketing and Sales Operations commented

> "We have a big hurdle to overcome there, kind of the mental state of where they are with the current system. I think we're going to have a win in the fact that we're going to come to them and say, 'Hey, listen, you know, there have been some issues. We're getting a whole new tool and we're equipping it for mobile

> device.' That will immediately get us somewhere, but if it doesn't, it's got to be backed up by the stability and the ease of use and then I guess … usability. Once we get the baseline out there—which is just replicating the functionality that we have for the current platform—what things do we need to do with it next to really get people to go, 'Yeah, I'm addicted to the tool, I have to have it'?" [40:1312] [2]

In 2003, *VoiceTech* realized it needed an SFA system. Prior to this, everything was manual and there was no computer system for tracking data. In late 2003, after several iterations of "home grown" SFA tools became unreliable and unscalable as the company expanded, the IS and sales operations teams evaluated a number of SFA vendors, including Siebel and SalesLogix (the legacy SFA at *VoiceTech*). Siebel was evaluated, but the price-point it offered was much too high for *VoiceTech.* Also, Siebel, the company, was bought by Oracle and *VoiceTech* was concerned about the software's continued development. Based primarily on those price and viability concerns, *VoiceTech* selected SalesLogix as its first SFA. In April of 2004, sales operations and *VoiceTech* IT launched a pilot of the SalesLogix system in the corporate office.

Based on feedback, *VoiceTech* IT made system improvements and additional SalesLogix SFA training was. In August 2004, the SalesLogix SFA was implemented at each office. The system was highly unstable and many issues still existed. Because of these problems and limited available resources, *VoiceTech* IT had to outsource support. Also due to limited resources, there was little in-house support for continued development of the legacy SFA. The Director of Marketing and Sales Operations stated,

> "We spent 2005 trying to get people to use it and to stabilize it. We were constantly looking for ways to make the system better and to improve the stability of the platform, but I guess people didn't trust it. It would go up, it would go down. Performance was inconsistent." [40:1141-1145]

In late 2005, the *VoiceTech* task force realized that SalesLogix SFA could not support the company's growth plans. The system was unstable with system crashes and unreliable with data consistency errors. At this point, the task force revisited its evaluation of Siebel SFA. *VoiceTech*'s CRM offerings already used the Siebel system and using the Siebel SFA could allow for a smoother integration, the task force believed. The Director of IT Planning acknowledged these issues,

> "That's why we kind of moved to Siebel at that point. It was actually going to be cheaper for us to move to Siebel, implement the mobile solution versus [the] pain and pressure [of in-house] development to enhance SalesLogix to include mobile. That's what drove the [decision]." [40:1157]

So, when Siebel representatives approached *VoiceTech* in 2005 with much lower pricing, the task force decided, strategically, it made a lot of sense to implement the Siebel SFA system. This system also provided built-in functionality for mobile integration with the SFA – functionality SalesLogix did not offer.

[2] Quotations and scenarios were collected from voice recorded workshops, interviews, and meeting minutes and notes taken on a computer during workshops and interview sessions, and from researcher reflections in post-interview and post-workshop sessions. The location of these quotes within the text [i.e. 40:1312] indicates the context, source, and approximate timeframe of the quote. The reference at the end of the quotation indicates our full transcript document in Atlas.ti [i.e. 40] and specific utterance [i.e. 1312].

During WS1, the collaboration team agreed the Researchers should interview at least eight sales reps – including both successful and not so successful sales reps, new sales reps and experienced sales reps, four managers, two directors and two vice presidents. Also scheduled to be interviewed would be the CMO, the senior vice president of sales, four internal sales managers, and two customers. Thus, there were 24 planned interviews. These would be scheduled for several weeks following WS1. The Researchers developed a series of semi-structured interview questions for the different roles within the *VoiceTech* sales organization. Coordination of the interviews and selection of the interviewees was handled by the Innovators based on the previously agreed-to criteria. These interviews mostly took place face-to-face with the interviewees on site at *VoiceTech's* corporate headquarters. For those interviewees located in other offices, the interviews would be conducted by phone. All interviews were to be recorded and later transcribed.

For sales managers and team leads, questions were asked from the following topics (See Appendix C for specifics on sales manager questions):

1. Daily planning of unit
2. Weekly planning of unit
3. Sales mentoring
4. Sales monitoring
5. Unit reporting
6. Periodic performance and goal reviews
7. General conditions

For sales reps, questions were asked on the following topics (See Appendix D for details on the sales rep questions):

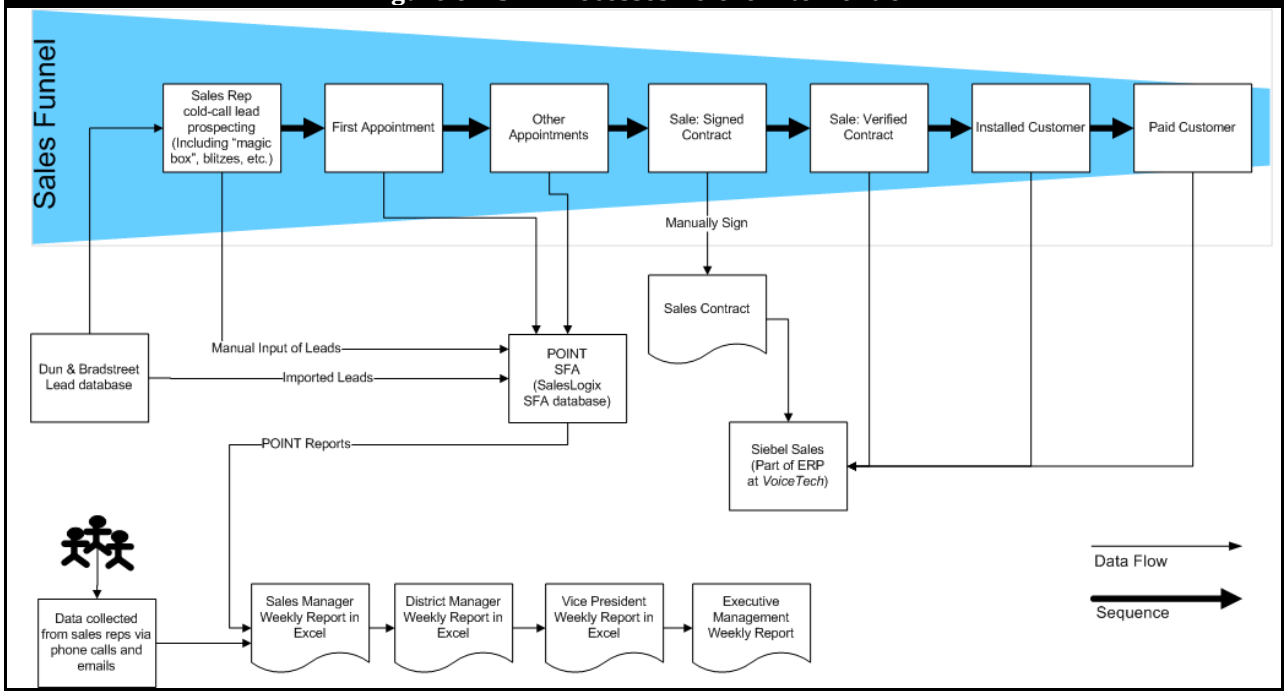
1. Daily planning
2. Weekly planning
3. Scheduled contacts
4. Unscheduled contacts
5. Daily summary reporting
6. Weekly results feedback
7. General conditions

The Researchers also believed office and field observations would help us gather additional insights into the sales process. Ultimately, while we did spend several hours one morning observing office routines, a new sales rep training session, and morning sales team meetings, we did not conduct any observations of sales reps in the field going door-to-door. Also, based on the availability of interviewees, over the following six weeks we were able to interview seven sales reps, five managers (including two customer care managers who interacted with the SFA indirectly), two directors, two vice presidents, the senior vice president of sales, the CMO, the CTO, four customers, the IT Business Analyst and the Director of IT planning (in a joint workshop), and the Marketing Analyst. These 26 interviews lasted more than 17 hours over 4 days during the six-week period.

In addition to clearly defining the problem situation and also as consistent with CAR, theory should inform the diagnosis. Our selection of theoretical framing, which occurred shortly after WS1, was

motivated by a need to understand the stakeholder views of how technology was being adopted, implemented, and used at *VoiceTech.* In fact, Orlikowski and Gash's (1994) and Davidson's (2002, 2004, and 2006) TFR research was instructive in helping us understand the stakeholder issues with technology at *VoiceTech*. Thus, during diagnosing, TFR was selected as the lens through which the problem situation would be viewed and analyzed. Figure 6.2 summarizes the process before the intervention.

Figure 6.2 SFA Processes Before Intervention



6.2 Iterative Action

The *VoiceTech* collaboration was a single cycle with multiple workshops, interviews, and presentations as iterative instances of action planning→action taking→evaluation stages. An iteration is roughly defined as the actions planned in one workshop, the actions taken subsequently after that workshop and before the next workshop, and the evaluation of actions during the next workshop. For example, actions planned in WS1 are taken between WS1 and WS2 and then evaluated during WS2. The workshops and presentations and the participants are summarized in Table 6.1. See Figure 5.4 for a timeline of the collaboration.

Following diagnosing, action planning occurred when the collaboration team specified actions to be taken by *VoiceTech* to improve the problem situation (Baskerville & Wood-Harper, 1998). Action planning was guided by theory and established a timeline by which changes should occur. Action taking followed action planning involving implementation of the planned actions and evaluation then followed. Outcomes were evaluated to determine whether the actions were successful. This section, similar to the presentation of an action research project by Kohli and Kettinger (2004), elaborates each iteration.

Table 6.1 Workshops and Presentations

Date	Context	Participants	Duration (H:M:S)
2/2/2006	Workshop 1 (WS1)	• The Researchers	6:22:15

		• Marketing Analyst • Director of Sales Operations • Director of Marketing and Sales Operations • IT Business Analyst • Director of IT Planning	
4/3/2006	Presentation 1 (P1)	• The Researchers • Marketing Analyst • Director of Sales Operations • Director of Marketing and Sales Operations • IT Business Analyst • Director of IT Planning	2:25:29
6/1/2006	Workshop 2 (WS2)	• The Researchers • Marketing Analyst • Director of Sales Operations • Director of Marketing and Sales Operations	3:51:41
7/18/2006	Workshop 3 (WS3)	• The Researchers • Marketing Analyst • Director of Sales Operations	3:22:29
11/16/2006	Workshop 4 (WS4)	• The Researchers • Marketing Analyst • Director of Marketing and Sales Operations • IT Business Analyst • Technical Analyst	3:57:30
2/8/2007	Presentation 2 (P2)	• The Researchers • Marketing Analyst • Director of Marketing and Sales Operations • Director of IT Planning Technical Analyst • IT Business Analyst • Data Analyst	1:35:24
4/28/2008	Workshop 5 (WS5)	• The Researchers • Marketing Analyst • Director of Sales Operations	2:12:03

6.2.1 Iteration 1 (WS1 through WS2)

6.2.1.1 Action Planning

At the end of WS1 in early February 2006 the collaboration team engaged in a session to plan actions to be taken before WS2. The most pressing action involved how to communicate the impending switchover from SalesLogix (the legacy SFA) to Siebel SFA. The first part of this switch was planned for approximately two months after WS1. The first recommendation from the Researchers to the *VoiceTech* task force was to carefully communicate with the stakeholders about the progress being made to stabilize "the system." In this way, no major functionality changes would be expected by the users. Instead, the

switchover would allow a phased rollout of planned SFA upgrades on a stable platform with later additions like mobile integration.

The interview sessions provided a wealth of insight into the problems initially identified in WS1. For example, a Midwestern manager confirmed that change communication was a problem for *VoiceTech:*

> "There have been times when we've had some of our execs here drop information on us. I recall six months ago Russell Barker [coming into] town and mentioning … something that was upgrading in our Siebel. We didn't even know it was coming. Siebel *POINT*, for example, was what it was. Russell Barker was here in town, it was showing up in three weeks. We didn't even know it was in route. I don't think that was Brook's fault. He couldn't believe that was the case. There's definitely a little bit of a cog in the system coming down our way on that stuff." [8:201]

Planning continued through Presentation 1 (P1). P1 was based on a 27-page PowerPoint presentation, lasted 2 hours 25 minutes including discussions, and the resulting transcript is 41 pages long. P1 was the Researchers' first opportunity to present initial observations and findings gleaned from interviews over the previous two months. The Researchers generally asked four questions that should be addressed during the action taking step of Iteration 1 (I1):

1. What information is offered by the SFA?
2. How to ensure that information is captured with acceptable quality?
3. What information is needed for management purposes?
4. What information is needed for sales rep purposes?

Following these questions were a series of *VoiceTech* assumptions and as-practiced observations. Each observation offered opportunities that *VoiceTech* could act upon to address the problem situation. In summary, these actions posited that *VoiceTech* should

1-A. Become project-focused within the scope of the SFA implementation.
1-B. Communicate the change process continuously.
1-C. Provide focused training on the SFA as needed.
1-D. Make SFA ubiquitous by ensuring real-time data usage and data capture.
1-E. Standardize and consolidate key sales management reports from a single source (the SFA).

Having a project focus within the scope of the SFA implementation would require a project manager and a project team that included IT support and some representative users and managers. The fast-paced sales culture at *VoiceTech* was such that the executives and managers were not afforded a real opportunity to take a broader strategic view of how IT could be used effectively if implemented correctly. The Director of Marketing and Sales Operations commented many times to the effect "I just need to get this in now. Once we do that, then we can worry about these other things …" This tactical view of IT left little time for the strategic view of the project.

As indicated in the quote from the Midwestern manager regarding change communication, the change process had not been clearly communicated to users or managers. This created frustration and confusion for users and managers when changes to the SFA were implemented with little to no user input and little IT support. Likewise, users rarely received detailed or formal training on how to use the SFA. Most often

the only training they received was a ten-minute informal training session from their managers or other sales reps.

With a ubiquitous SFA, *VoiceTech* might eliminate a lot of the user pain points that the company believed led to sales rep frustration and thus sales rep turnover. With real-time data capture, there would be no need for sales reps to return from the field to headquarters every day to enter data on one of the unreliable in-house desktop computers. Real-time data usage could incorporate location-aware technologies that would identify current and potential customers and do-not-call businesses. This would create a smarter and more efficient sales force. Similarly, consolidating and standardizing sales management reports with data collected into a single source location would eliminate the many media breaks that managers experienced when preparing sales summaries and forecasts. The data would then be readily available and, more importantly, reliable.

Additionally, the Researchers offered nine proposed SFA capabilities for which *VoiceTech* should endeavor during the implementation. These are summarized in Table 6.2. The Researchers, based on data collected during the 26 initial interviews prior to P1, multiple observations, and discussions in WS1 believed achieving these capabilities would innovate the sales process and eliminate or minimize the problem situation during the project.

Territory management capability to the SFA would help manage conflicts that frequently occurred among sales reps in the field. This capability would include functionality like frequently updating the Dun & Bradstreet data that is imported into the SFA, mapping and organizing of sales calls, and formal identification of geographical placement of potential and current customers within the territory.

Lead generation capability would give sales reps a more advanced and comprehensive ability to manage leads. This capability would include post-sale information, installation information, and contracts. Contact capture capability would allow the sales reps to collect contact information from leads, which could later be used to generate sales. This capability would minimize usage of manual data collection systems like index cards.

Lead qualification capability would help sales reps filter cold calls. This capability would allow sales reps to identify the most likely prospects while in the field. Developing SFA planning and support capability would allow *VoiceTech* to move from trusting the existing “paper-pushing” system to trusting the SFA system in a reliable way that would also be useful to the sales reps.

Real-time sales rep activity would give sales reps and their managers reliable, real-time access to their daily activities and sales results. Mature forecasting capability to the SFA would replace the many ad hoc forecasting routines with a more disciplined and efficient forecasting model. Finally, making the SFA ubiquitous would improve the SFA to make it widely available across time and geographic locations.

Capability gaps in the *VoiceTech* context are the identified gaps between IT that is currently available on the broader market and IT that is currently available within the organization. Assimilation gaps are defined as the identified gaps between what the IT currently available within the organization can accomplish and how it is actually deployed (Fichman & Kemerer, 1999). These nine proposed SFA capabilities (see Table 6.2) provided guiding principles for moving the implementation forward by closing the capability gap. They were subsequently evaluated during Iteration 3 and Iteration 4. The

attempt to close the assimilation gap is through other means like training, communication, etc., which are explored in the various iterations.

Table 6.2 Proposed SFA Capabilities

Capability	Explanation
Territory management capability	Add territory management capability to SFA to avoid and help manage conflicts over sales.
Lead generation capability	Add more comprehensive lead generation capability to SFA.
Contact capture capability	Add contact capture capability to SFA to provide more useful lead generation.
Lead qualification capability	Add lead qualification capability to SFA to help sales representatives filter cold calls.
SFA planning and support capability	Develop SFA planning and support capability for sales representatives.
Real-time sales representative activity	Add real-time sales representative activity information capturing capability to SFA.
Installation information capability	Add detailed installation information capability to SFA.
Mature forecasting capability	Add mature forecasting capability to SFA by replacing ad hoc forecasting methods with a more disciplined and efficient forecasting model.
Ubiquity capability	Make SFA ubiquitous.

6.2.1.1 Action taking

In the intervening period between WS1 and Workshop 2 (WS2), a user-guided training tool for new sales was created and a sales rep homepage on the Siebel SFA portal was created. The implementation also included a few additions to the system that the users would see as benefits. As the Marketing Analyst noted,

> "In addition to replacing the current SFA, we're going to be writing some new things for the reps because we don't want to change something without giving them a couple of things they can see as benefits. So we thought we would add a home page, and this is native to Siebel and then we will give them a snapshot of what they are currently working on and what they have to do for the day and some [shortcut] clicks to other steps." [35:32]

The Innovators addressed the need for more formal training by involving the trainer located in each office along with a group of sales managers. These trainers and managers were given a demonstration of the new Siebel SFA and provided feedback to the Innovators. By the time training was performed, vice presidents, directors, trainers, and sales managers would have interacted with the Innovators and provided feedback. The Director of Sales Operations stated

> "We used [sales managers] as a sounding board. We got some great feedback and we incorporated that so they could perform either as an improvement to the system or as how do we position, what's the message, where the 'gotchas' are. So that was limited to the training material. Then we wanted to test this with a group of [sales managers]. We wanted to use them as a sounding board. … So those are two things that we have done to date and each of those cases has generated a great deal of enthusiasm. They saw 90% great stuff and they saw, you know, a couple of things that were a little bit confusing because we're changing semantics on them a little bit." [35:271-272]

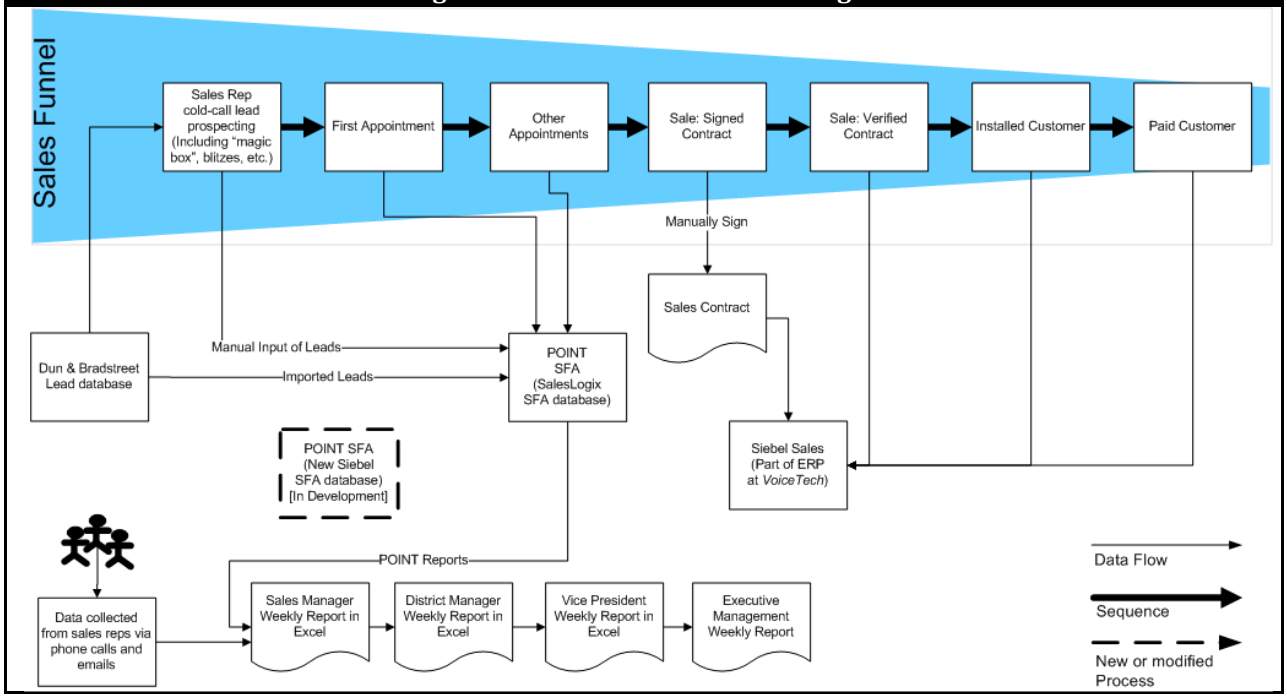
The training overview also allowed the Innovators to "pre-sell" the coming changes to the managers who, in turn, began "pre-selling" the changes to sales reps and other sales managers. The Director of Sales Operations commented on the training

> "So that's how we're setting the stage prior to us going out and actually doing the presentation to the reps on [the rollout day]. So they're all excited, they all see some benefit, they're all pre-selling this thing before we ever walk in there … to start the process. … That's how it is unfolding as we speak." [35:275]

6.2.1.2 Evaluation

Evaluation of I1 occurred at the beginning of WS2 in early June 2006 with a review of a handout prepared by the Innovators titled "Siebel SFA Update." This update revealed the SFA conversion of replacing the legacy SalesLogix SFA with Siebel SFA was progressing as planned. The plan was for the SFA conversion to be fully available to users within two weeks after WS2 and the project was now managed by IT. In essence, *VoiceTech* had at least minimally addressed points A (project focus), B (communication), and C (training) from the planned actions but had taken little to no action on point D (SFA ubiquity) and E (single sourcing) (see Table 6.4). Figure 6.3 shows the process changes after I1.

Figure 6.3 Iteration 1 Process Changes



6.2.2 Iteration 2 (WS2 through WS3)

6.2.2.1 Action Planning

Iteration 2 (I2) began in early June 2006 at WS2 (see Figure 5.4) with action planning for implementing mobility and additional capabilities. Initially, this would involve only the mobile integration of the SFA and would be available approximately eight weeks following WS2. The Innovators believed BlackBerry integration would be small and focused, from an IT point of view, but very important to achieving long-term benefits with the sales reps. Specifically, mobility would provide users location-based functionality

that would let sales reps identify, at the push of a button, all prospective customers in their immediate vicinity. Additionally, a summary activity report would be available within the portal, giving the sales reps the same data input functionality for which they routinely returned to *VoiceTech* each evening.

The collaboration team also agreed the project should operate on a dual track approach. First, the team would focus on the sales process analysis track to assist *VoiceTech* in improving sales and reducing sales rep turnover levels. This track would proceed by having additional interviews with senior executives and a presentation of findings subsequent to the interviews. Second, the team would focus on the SFA project planning track. This track would proceed with three to four workshops and have a primary focus of ensuring effective adoption of the SFA as *the* information processing platform for sales managers and sales reps.

In summary, the collaboration team planned the following proposed actions during WS2:

2-A. Launch SFA conversion (Siebel SFA emulating legacy SFA functionality) on June 12, 2006.
2-B. Improve quality and recentness of lead management
2-C. Investigate and exploit BlackBerry capabilities
2-D. Develop managerial dashboards and alarms
2-E. Manage sales organization adoption expectations
2-F. Continuously maintain and communicate clear SFA storyline throughout the sales organization.
2-G. Continuously assess and optimize patterns of SFA usability to include database indexing, use cases, default date inputs, etc.
2-H. Maintain effective feedback loops from all levels of SFA usage to include sales reps, managers, executives, and IT.

5.2.2.2 Action Taking

In mid-June 2006, SFA conversion occurred on schedule (as revised in WS2). The original expectation at the start of the collaboration was that the SFA conversion launch date would be in late April 2006. The Director of Sales Operations noted the six-week delay was due to an inability to say "no" to user requests, but

> "It's important that we don't miss it next time. IT really rose to the occasion and made a lot of midstream corrections where it needed to be for a launch." [36:50]

5.2.2.3 Evaluation

Evaluation of I2 occurred during WS3 in July 2006 (see Figure 5.4). In evaluating the results from SFA conversion, the Innovators highlighted what they believed were positives and negatives from the conversion. First, in the legacy SFA, there was 90%+ entry of appointments – but only after executives mandated use of the system. However, within four weeks of launch of the new Siebel SFA, the participation from users approached 80%-90% (without management mandating use) – which was similar to the old system (with mandates). By WS3, participation approached 100% (without mandates), and 75% of appointments statuses were being updated. The Marketing Analyst noted

> "The first lesson [is] keep it simple and as less customized as possible. So therefore our expectation [of an earlier launch date] didn't meet our result. I think that was the first thing to point out was we didn't launch it when we thought we

> would. … We're focusing on the [mobility] plan to ensure our timeline is realistic." [36:48,52]

The Director of Sales Operations emphasized the Marketing Analyst's comments on SFA conversion issues

> "This project is one of the bigger projects that the [*VoiceTech]* IT department has been managed to very tightly … and we've found some gaping holes in [the] process, QA, [and] some leadership issues. So, those are all things that are going to be highlighted and right now as we speak, there's kind of a post mortem document that I'm preparing that's going to kind of be a 'lessons learned' of what happened and what we observed, what went right, what went wrong and how do we make it never happen again. Because I don't want to repeat what I went through in the [SFA conversion] release in another release and still be able to keep my sanity." [36:54]

Finally, the Innovators expectations prior to launching Siebel SFA training were that sales reps would need only a minimal amount of training. The Marketing Analyst confirmed

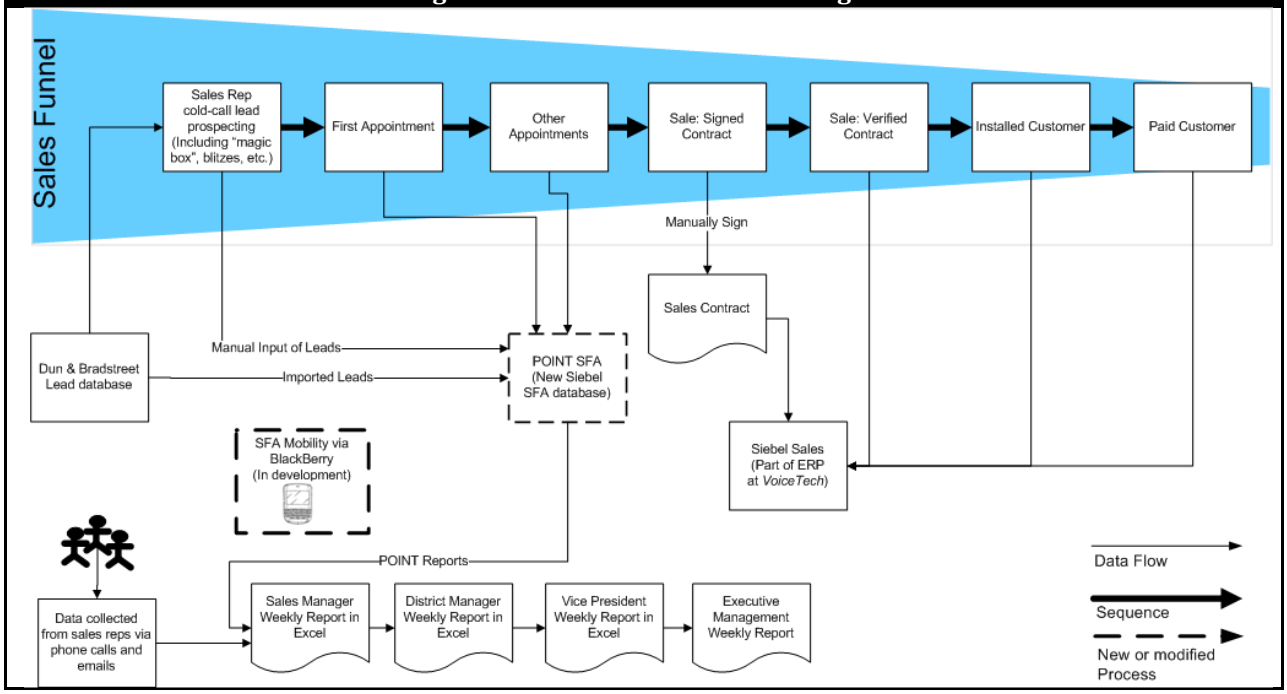
> "So our expectation going into this was, you know, this system is going to be similar to what the sales reps have seen before in terms of functionality and kind of how things work. So one hands on session [where] we get the reps in a room [and] show them how to do it, that will be sufficient training. The result was that a good number of the reps felt like they needed more training." [36:125]

Thus, after the Siebel SFA training session the Innovators realized that 30%-40% of sales reps were not ready after one session. The Director of Sales Operations agreed

> "We really didn't get the face time we had hoped by the sales organization from the training perspective. So we rolled this out with about as minimal training as you can possibly have for something like this that really affects their daily lives in the branch and I think we did a thirty-minute branch-wide training for each branch." [36:155]

In summary, an evaluation of I2 actions taken showed *VoiceTech* had successfully completed points A (SFA conversion), and at least minimally began addressing points C (BlackBerry capabilities), E (expectation management), F (communication), and H (feedback loops) from the planned actions but had taken little to no action on points B (lead quality), D (dashboards) and G (SFA usability) (see Table 6.4). Figure 6.4 shows the process changes as of I2.

Figure 6.4 Iteration 2 Process Changes



6.2.3 Iteration 3 (WS3 through WS4)

6.2.3.1 Action Planning

Iteration 3 (I3) began in July 2006 with WS3 identifying additional action planning for mobility and future capabilities (see Table 6.3). This planning proceeded by incorporating needs identified in the evaluation from SFA conversion. For example, the Director of Sales Operations revised his training plans by having sales managers become accountable for ensuring sales reps were trained on Siebel SFA. Each dedicated office trainer would also be responsible for ensuring sales managers were trained. This training plan was a culture change for *VoiceTech* and would be utilized in future system changes, as the Director of Sales Operations confirmed

> "This is going to help us for two reasons. It's going to help us from the standpoint of the final adoption of those that have not got their arms around this thing from the original release, number one. Number two, I think it's going to be a stronger system of bringing new releases to the sales organizations … for in the future to get the word down to the reps, make sure the reps understand it, make sure they understand how to use it and make sure it's enforced that they do that new routine or whatever is going to be rolling out in the future in there and it's going to be monitored by the sales managers." [36:185]

Additionally, the following specific items were proposed during WS3:

3-A. Evaluate and improve mobile SFA usability
3-B. Develop SFA contact capture capability to encourage sales reps to sense and report market opportunities
3-C. Structure sales rep progression model to support adoption of SFA innovations

3-D. Continuously assess and optimize patterns of SFA usability to include user certification, automated "deal sold" messages to managers, mobile signal strength requirements, etc.

3-E. Adopt an expectation→result→measurement evaluation tool to manage assimilation of future SFA releases

6.2.3.2 Action Taking

Between WS3 and WS4 a number of actions were taken to address the problem situation. The Innovators reported that BlackBerrys were given to a select group of sales reps who had achieved certain sales quota goals (approximately 60% of reps). The remaining 40% typically were newer reps with less than six months experience. The Director of Sales Operations noted the way *VoiceTech* was using Siebel on a BlackBerry was innovative

> "RIM told us no one else had done this yet. We're the first, which surprised us. … All of a sudden they lease things to us at very, very low prices that we would never have bought a year ago that has really pushed us forward in terms of automation. They're more interested in how we want to use it, where we want to take it to, our business model, how to integrate better with our business model. They're asking those kinds of questions and trying to get further into our operational business with their applications, which is what you're supposed to do if you're a strategic partner." [37:41, 61]

6.2.3.3 Evaluation

Evaluation of I3 occurred during WS4. In late October 2006, the Innovators updated *VoiceTech* senior executives, including the CEO, on progress and planning on Siebel SFA. This update was presented to the Researchers in mid-November 2006 as part of Workshop 4 (WS4). The Innovators also reviewed the status and action items from their evaluation of SFA capabilities that the Researchers presented during P1. Table 6.3 provides an overview of this evaluation.

For territory management capability, *VoiceTech* implemented territory assignments within the SFA and added a duplicate phone number check. Lead generation capability had been planned but was not yet implemented. *VoiceTech* began rewarding sales reps for mining outside associations and current customer relationships, and sales reps were as a result becoming smarter about how leads were generated. Contact capture capability had not yet been considered within the then-current *VoiceTech* sales model. The Researchers identified different approaches to this that might work, including collection of business cards that were then digitally scanned and added to the SFA either by the sales reps or sales assistants.

For lead qualification, *VoiceTech* had planned but had not yet implemented what the Marketing Analyst termed a "lead knowledge base" within the SFA. SFA planning and support capability was provided by the help desk. However, the Innovators were considering developing a "frequently asked questions (FAQ)" database, creating an "ASK *POINT*" sales rep discussion group, and assembling an influential group of sales reps who could help the Innovators identify needs and plan future capabilities while supporting other reps. The Innovators had to some extent implemented real-time capability through sales reps' SFA mobile access. However, the Innovators also wanted to extend those real-time capabilities by allowing sales reps to add new appointments into the SFA via mobile connection in the field and utilize the handheld as more than just a tool that eliminated the need to return to the office.

Table 6.3 Review of SFA Capabilities

Capability	Explanation	Status	Status Description	Possible action items
Territory management capability	Add territory management capability to SFA to avoid and help manage conflicts over sales.	**Fully implemented**	• Territories in SFA • Duplicate phone # check implemented	N/A
Lead generation capability	Add more comprehensive lead generation capability to SFA.	**Planned but not implemented**	• Rely on reps to cold call and get referrals to generate leads • Reps also can get leads from national sales • Starting to mine associations and get smarter	• National sales support coming December 2006 • Will see information on the sales rep homepage • National sales managers will have a territory view and will be transparent to the team
Contact capture capability	Add contact capture capability to SFA to provide more useful lead generation	**Not considered**	• Currently provide contacts through Dun & Bradstreet imported data • Have not considered anything additional	• This is in the head of the sales rep but needs to be transferred to the system
Lead qualification capability	Add lead qualification capability to SFA to help sales representatives filter cold calls.	**Planned but not implemented**	• Planning more qualified leads	N/A
SFA planning and support capability	Develop SFA planning and support capability for sales representatives.	**Experimentally implemented**	• Help desk created • Testers don't want to test *POINT*	• Consider a user group • Possibly add FAQ and support forum on rep homepage • Consider a cross section of those that use, don't use, adopt, etc and then get adoption rate up • Get sales reps to be on steering committee
Real-time sales representative activity	Add real-time sales representative activity information capturing capability to SFA.	**Somewhat implemented**	• Reps have real-time access with the mobile system	• Make the mobile more useful throughout the day
Installation information capability	Add detailed installation information capability to SFA.	**Fully implemented**	• Have access to pending and installed customers	N/A
Mature forecasting capability	Add mature forecasting capability to SFA by replacing ad hoc forecasting methods with a more disciplined and efficient forecasting model.	**Planned but not implemented**	• Long way to go; exploring options • Currently a manual process that isn't tracked anywhere except in offline spreadsheets • Sales managers have 70%,80%,90% likelihood	• Purchase Siebel forecasting • Need to have something that is visible to all levels • Need to talk with VP-Marketing about what really needs to happen because the forecasting is updated every day
Ubiquity capability	Make SFA ubiquitous.	**Somewhat implemented**	• Need to add more mobile functionality	• Scheduled for April 2007 • Need to make mobile device efficient

VoiceTech had fully implemented installation information capability by giving sales reps access to information regarding pending and installed customers. Mature forecasting capability was planned but not

yet implemented. The Innovators were exploring options such as purchasing the Siebel forecasting module and allowing forecast visibility throughout the organization. Finally, *VoiceTech* had to some extent implemented ubiquity capability by extending mobile functionality to make sales reps more efficient in the field and had plans to include additional mobile capabilities with the next release in April 2007. The Director Sales Operations noted *VoiceTech* might now be more willing to explore additional capabilities because

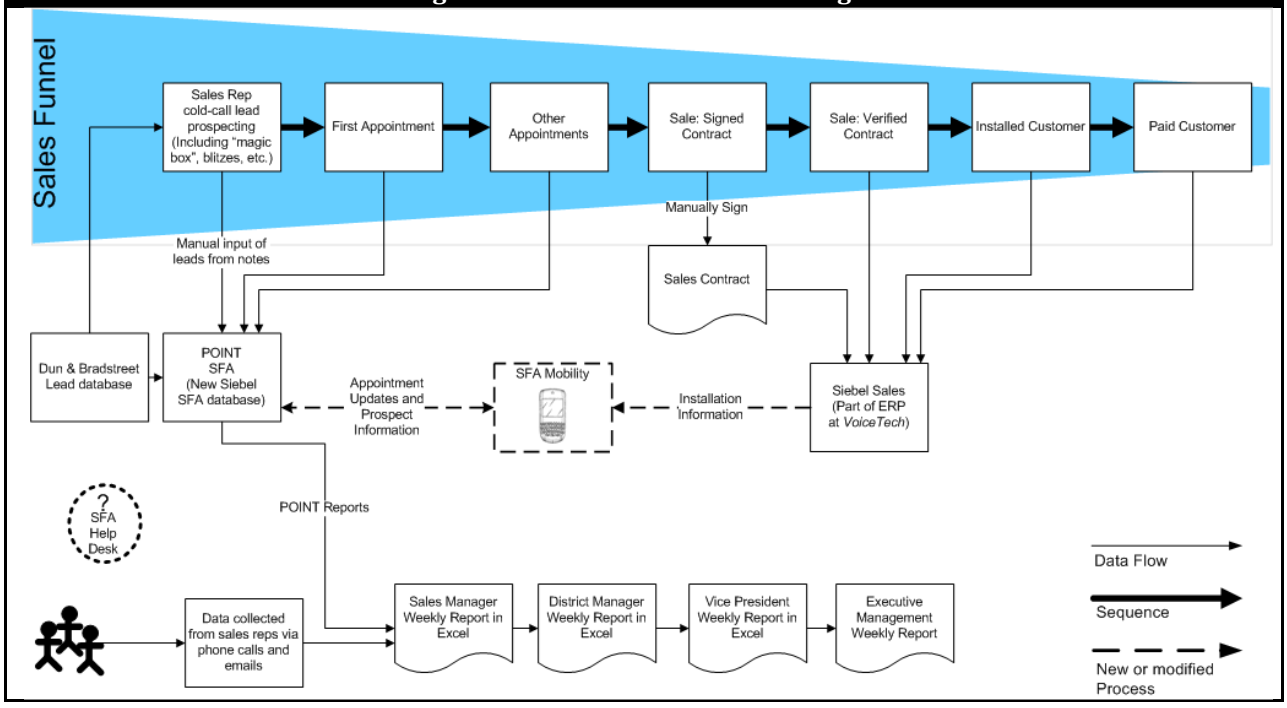
> "We're in a different place than we were a year ago. The decisions made at that time, I think, maybe were based on different issues I'm not sure exist or don't exist now … [and that was a] poor measurement though because we have a much better system now that's got more usefulness." [37:1472]

The Marketing Analyst noted the exercise of evaluating the SFA implementation using the nine capabilities was useful

> "I think that this and then maybe some of the other ideas that we had, but yeah, I think these are very good categories. It's not like I look at this and say, this is way off base. This is good and a lot of good things to think about." [37:1480]

In summary, an evaluation of I3 actions taken showed *VoiceTech* had addressed points A (improve SFA usability) and C (sales rep progression model) and at least minimally began addressing point E (evaluation tool) from the planned actions but had taken little to no action on points B (contact capture) and D (user certification) (see Table 6.4). Figure 6.5 shows the process changes as of I3.

Figure 6.5 Iteration 3 Process Changes



6.2.4 Iteration 4 (WS4 through P2)

6.2.4.1 Action Planning

Iteration 4 (I4) began with planning in WS4. The Innovators presented their SFA vision to the executives and to the Researchers:

> "Sales Operations will drive incremental sales productivity and reduced attrition [turnover] by increasing SFA functionality in these areas:
>
> - Management information: Management access to real-time forecast, sales activities, accounts, and historical trending data to optimize decision making.
> - Rep activity: Optimize sales rep productivity with mobile and productivity management capabilities.
> - Lead knowledgebase: Collect and maintain prospect information from initial contact through sale to fully manage the sales cycle.
> - Integration: Organize sales rep and sales manager activities around referrals, industries, community, and lead hand-offs between channels." (from *VoiceTech SFA Update, October 2006)*

This vision was discussed and was translated into the following proposed actions:

4-A. Exploit strategic partner relationships through strategic SFA planning
4-B. Enhance SFA real-time funnel management capability
4-C. Help senior executives prioritize SFA investment options related to training and technology
4-D. Identify SFA innovation options based on both the capability gaps and assimilation gaps
4-E. Continuously assess and optimize patterns of SFA usability to include sales manager access, achieve real-time capability, resolve information breaks, establish a lead knowledgebase, etc.

6.2.4.2 Action Taking

In the period between WS4 and P2, *VoiceTech* included the sales rep progression model into the SFA, initiated indirect and inside sales channel support reporting from within the SFA, added geographic vicinity search for leads, and upgraded the user interface to include data fields for sales rep activities and opportunities. As of P2, the SFA had been upgraded to include sales rep and sales manager opportunity management, lead referral management, and integration with branch operations so that marking an account as sold within the desktop or mobile version of the SFA automatically created an account in sales operations, reducing order entry time and eliminating one information break in the process. Scheduled installs were also included for the sales reps so they could contact customers after installations. Finally, the SFA upgrade created an efficient end-of-month close and sales reconciliation cycle. In summary, these changes provided real-time funnel management, streamlined integration with sales operations, and offered real-time visibility into sales and installations.

6.2.4.3 Evaluation

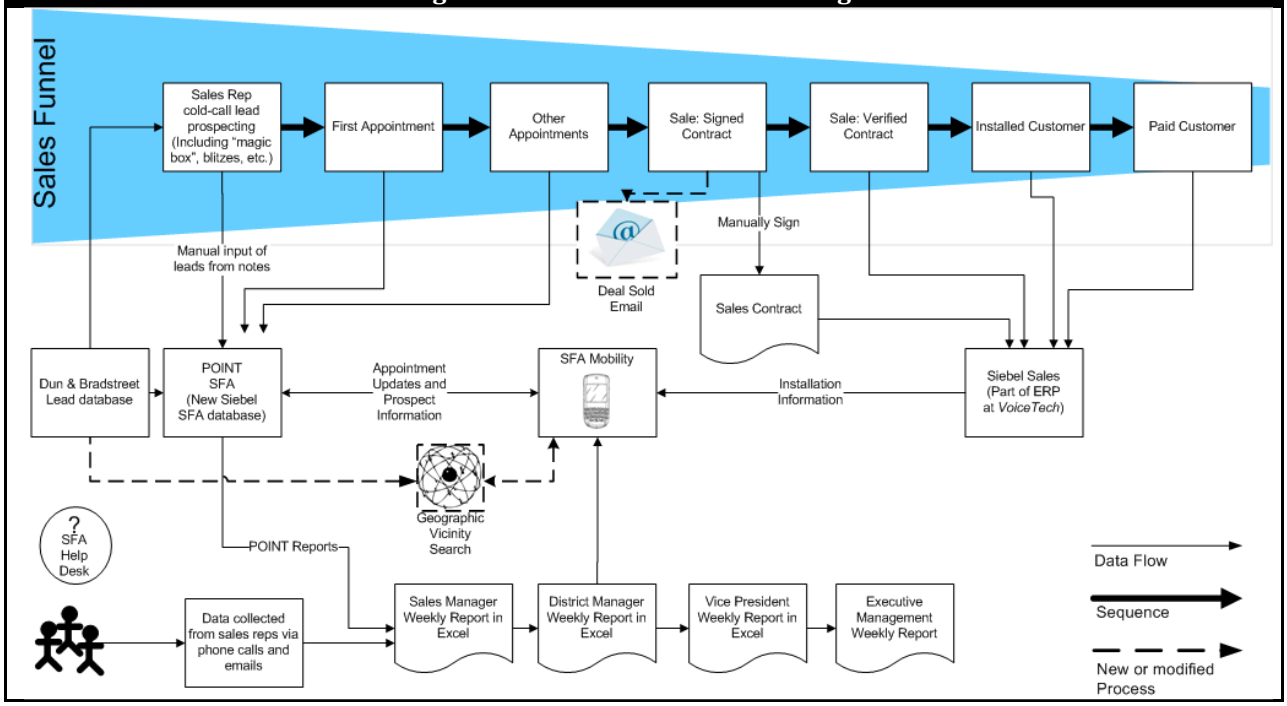
The Researchers made a second presentation (P2) in February 2007 summarizing their findings from the previous twelve months. Since the previous iteration, *VoiceTech* had successfully transitioned to the new Siebel SFA and adopted mobile technology into its sales force practices. These capabilities were believed

to have helped *VoiceTech* successfully reduce sales force turnover levels and stabilize sales performance across the sales organization. The Marketing Analyst noted *VoiceTech* was incrementally relying solely on the information from the SFA

> "We haven't said that there's not a sale unless it's entered into the [SFA]. We haven't been that radical, but what we have done is said there's an acceptable level of in-house [sales not yet recorded in the SFA]. … [We] developed a process [and are] holding managers accountable to it. It has to be at least 80% from the system versus in-house and then once we get there, let's incrementally increase that to be 100% as best we can. … [During a training session] one manager piped in and said, 'If [a sales rep] comes to me and says that a sale got taken away from you and you're not getting credit for it [and] if you can't print it out [from the SFA] and show me that it was in there, you're not going to get credit for the contact. You'll automatically lose.' "[42:127]

In summary, an evaluation of I4 actions taken showed *VoiceTech* had at least minimally addressed points A (strategic partnerships), B (funnel management), C (prioritization of SFA options) from the planned actions and began to address points D (innovation options) and E (SFA usability) (see Table 6.4). Figure 6.6 shows the process changes as of I4.

Figure 6.6 Iteration 4 Process Changes



6.2.5 Summary

During the four iterations of the collaboration, the Researchers and the Innovators (primarily) had discussed, planned, and evaluated twenty-three action items. Table 6.4 summarizes planned actions and evaluations for each action. At least seven items remained open at the conclusion of P2, including, SFA ubiquity and single sourcing from I1; contact capture capability from I2; optimizing SFA usability from I3 and I4; and innovation and strategic partnership options from I4.

As of March 2007, P2 was believed to be the final interaction of the collaboration. However, in April 2008, the Innovators and Researchers conducted a follow-up workshop to review the SFA status as it had progressed during the previous twelve months. No specific actions had been planned by the collaboration team at the end of P2. Nevertheless, *VoiceTech* had taken a number of actions concerning the SFA during the intervening time. For example, the company executives decided to form a sales leadership academy to help develop sales leaders for its expanding operations. Also, the Innovators developed and articulated an SFA mission of increasing sales rep productivity and retention and created a vision of meeting user needs and providing SFA ubiquity. Every sales rep received a BlackBerry mobile device and could access the mobile SFA. However, at the request of the board of directors, the Innovators had begun evaluating cost-benefit analyses on providing laptops to sales reps.

During WS5, the Researchers and Innovators discussed methods for improving SFA usability and increasing user adoption. SFA usability suggestions included creating a social network component for the SFA, developing user feedback loops, and providing contract capture capability. Similarly, increasing user adoption included clearly communicating the SFA storyline, integrating the *VoiceTech* sales rep progression model into the SFA, and implementing a deal-sold email.

VoiceTech had made definite progress in addressing its sales force information needs. The Innovators and Champions realized sales process improvements were needed and had taken actions as of WS5 to address those issues. Overall, the collaboration was deemed successful by the Innovators. The Director of Sales Operations concluded the collaboration with the following:

> "Every time we meet with you guys, we walk away with a couple of pearls of wisdom, and we find a way to sort of weave it into our world so that it keeps us a little more effective and efficient and we love that. So it's been a great experience to work with you." [41:744]

Table 6.4 Planned Actions and Evaluations (I1-I4)

Planned Actions		Evaluation
1-A. 1-B. 1-C. 1-D. 1-E.	Become project-focused within the scope of the SFA implementation. Communicate the change process continuously. Provide focused training on the SFA as needed. Make SFA ubiquitous by ensuring real-time data usage and data capture. Standardize and consolidate key sales management reports from a single source (the SFA).	*VoiceTech* had at least minimally addressed points A (project focus), B (communication), and C (training) from the planned actions but had taken little to no action on points D (SFA ubiquity) and E (single sourcing).
2-A. 2-B. 2-C. 2-D. 2-E. 2-F. 2-G. 2-H.	VoiceTech should launch SFA conversion (implement Siebel SFA emulating legacy SFA functionality) on June 12, 2006. Improve quality and recentness of lead management Investigate and exploit BlackBerry capabilities Develop managerial dashboards and alarms Manage sales organization adoption expectations Continuously maintain and communicate clear SFA storyline throughout the sales organization. Continuously assess and optimize patterns of SFA usability to include database indexing, use cases, default date inputs, etc. Maintain effective feedback loops from all levels of SFA usage to include sales reps, managers, executives, and IT	*VoiceTech* had successfully completed points A (SFA conversion), and at least minimally began addressing points C (BlackBerry capabilities), E (expectation management), F (communication), and H (feedback loops) from the planned actions but had taken little to no action on points B (lead quality), D (dashboards) and G (SFA usability).
3-A. 3-B. 3-C. 3-D. 3-E.	Evaluate and improve mobile SFA usability Develop SFA contact capture capability to encourage sales reps to sense and report market opportunities Structure sales rep progression model to support adoption of SFA innovations Continuously assess and optimize patterns of SFA usability to include user certification, automated “deal sold” messages to managers, mobile signal strength requirements, etc. Adopt an expectation→result→measurement evaluation tool to manage assimilation of future SFA releases	*VoiceTech* had addressed point A (improve SFA usability) and C (sales rep progression model) and at least minimally began addressing point E (evaluation tool) from the planned actions but had taken little to no action on point B (contact capture) and D (user certification).
4-A. 4-B. 4-C. 4-D. 4-E.	Exploit strategic relationships through strategic SFA planning Enhance SFA real-time funnel management capability Help senior executives prioritize SFA investment options related to training and technology Identify SFA innovation options based on both the capability gaps and assimilation gaps Continuously assess and optimize patterns of SFA usability to include sales manager access, achieve real-time capability, resolve information breaks, establish a lead knowledgebase	*VoiceTech* had at least minimally addressed points A (strategic partnerships), B (funnel management), C (prioritization of SFA options) from the planned actions and began to address points D (innovation options) and E (SFA usability).

6.3 Specifying Learning

At the end of P2, the Researchers provided a project assessment as summarized in Table 6.5. This assessment identified key findings from the four iterations in addition to six interviews conducted with executives and managers in November 2006 from questions focused on TFR (see Appendix E). This assessment included evaluating the results thus far at *VoiceTech* based on the degree of closing of the capability and assimilation gaps and against evolutionary and radical process innovations. While strong gains were made toward innovating the sales process during this project, a number of deficiencies remained.

Table 6.5 *VoiceTech* Process Assessment (as of February 2007)

Process	Assessment
Capability Gap	• (+) Pull toward enhancing SFA capabilities • (–) Minimal exploitation of strategic relationships
Assimilation Gap	• (+) Positive perception of new SFA platform and BlackBerry throughout sales • (–) Ad hoc spreadsheet regime persisted • (–) SFA assimilation gap remained • (–) SFA certification and coaching development still needed
Evolutionary Change	• (+) Positive impact of sales rep progression model • (–) Still needed to innovate sales recruitment • (–) Still needed to consider a variety of sales process innovations
Radical Change	• (–) Still needed to differentiate sales tactics in mature markets

Specifically, for the capability gap, there was a positive pull by the Innovators toward enhancing SFA capabilities and providing new capabilities. However, *VoiceTech* had only minimally exploited strategic relationships with RIM (maker of the BlackBerry), Siebel (maker of the SFA), and the telecommunication provider. This failure prevented *VoiceTech* from radically innovating its mobile capabilities for sales reps.

The Researchers also found important SFA assimilation gaps remained. The cause of these gaps included a) a lack of trust in SFA; b) unavailability of needed reporting tools within the SFA; and c) personal preference. The Innovators had established a generally positive perception of the SFA and mobile platforms throughout the sales force. However, there was still a strong indication that a "spreadsheet regime" existed among the district managers and vice presidents whereby dual sales data continued to be collected and analyzed. The recommendation that the Innovators adopt an SFA certification and coaching program remained unfulfilled. The Researchers believed incorporating this program into the process of developing new sales reps would further help close the assimilation gap.

IT-enabled process changes had occurred during the first twelve months of the project. Figures 6.3 – 6.7 compare the before, during, and after process changes. Yet most of these changes would be classified as evolutionary and not radical. For example, there was a positive view of the impact of the *VoiceTech* sales rep progression model and its incorporation and management from within the SFA. However, *VoiceTech* still had problems recruiting the right salespersons and holding down its turnover rate among new sales reps. Additionally, at the time of the presentation, there was a proposal for each office to hire a recruiting manager to take on many of the sales rep recruiting duties then managed by district managers. This would free up the district managers' time, which they could then use in driving sales and coaching sales managers and sales reps.

Finally, there was radical IT-enabled process change suggested which would differentiate the sales process according to market maturity. With this radical change, it was proposed that, instead of canvassing an area with dozens of sales reps in the target market, the SFA would provide an evaluation of qualified leads which would then be contacted to gauge the opportunity. However, this radical change would require *VoiceTech* to practically abandon the sales model that had thus far been effective.

This action research project's *in situ* findings furthered our understanding of the role of TFR as viewed through the eyes of key stakeholders in an ongoing SFA implementation. The following sections describe the data coding process and an analysis of the rich data collected throughout the project.

6.4 Coding Data

Before coding began, we kept returning to the data and TFR theory to identify the salient themes that kept appearing as we read the transcripts and literature on TFR. We adopted six coding scheme principles to guide coding development. These principles consisted of the following:

1. Each quote must be self contained and as brief as possible. In other words, the quote should be concise yet expansive enough that it not to require additional interpretation in order to code it.
2. Do not include all possible quotes. Code selectively to include quotes that:
    a. speak directly to the theory, or
    b. have high relevance to the case
3. Strive for consistent coding practices.
4. Apply 2-pass coding scheme
    a. 1st pass: code among 4 high-level constructs (e.g. 1.0, 2.0, 3.0, 4.0)
    b. 2nd pass: assign low level codes (e.g. 1.1, 2.2, etc)
5. Where applicable, use multiple codes.
6. Apply role code to the speaker only. For example, if one role speaks about another role (or another's view), this is captured by coding the speaker role only.

The Researchers established the coding scheme by adopting a procedure similar to one developed by Cousins *et al.* (2007). The resulting process is presented in Figure 6.7.

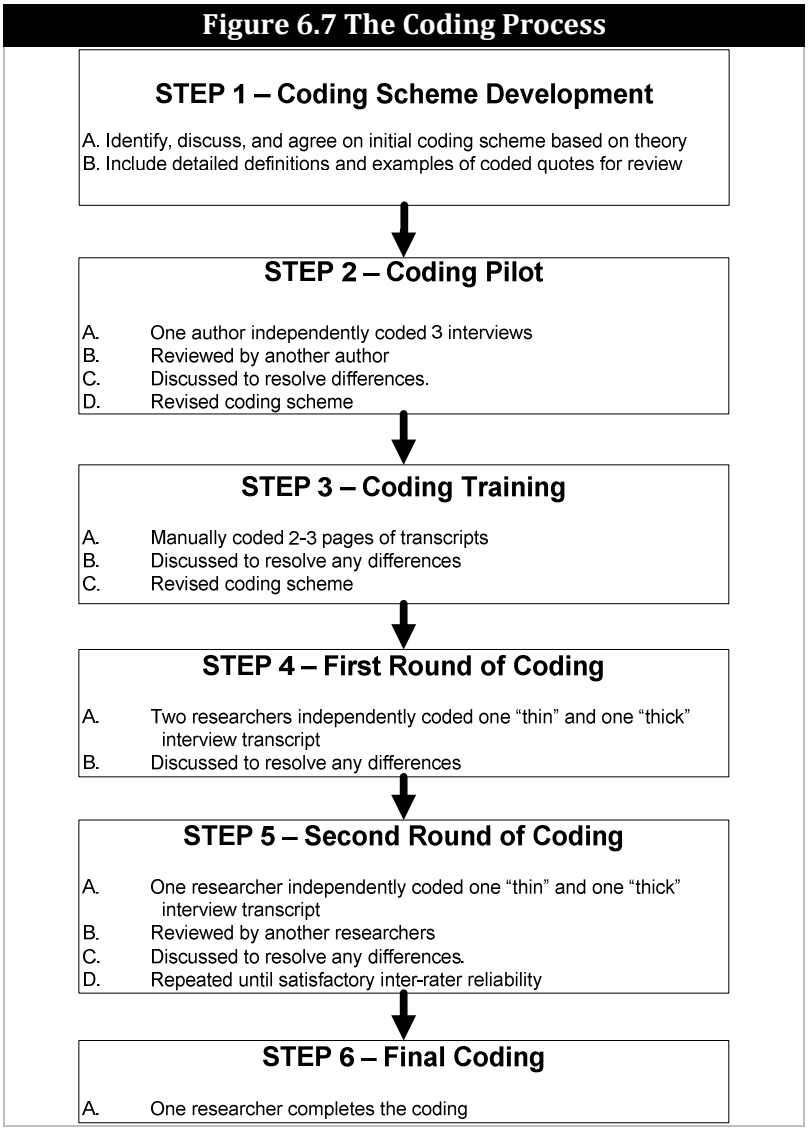
First, three of the Researchers met on two occasions in Fall 2007 to identify, discuss, and agree upon an initial coding scheme (Miles & Huberman, 1994) based on TFR theory. This scheme, at the highest level, included the TFR domains identified by Orlikowski and Gash (1994), with numerous sub-domains for each top-level domain. The scheme included detailed definitions of each sub-domain and exemplars of quotes for each sub-domain.

Second, after developing this initial coding scheme, two Researchers conducted a coding pilot. During this pilot, one researcher independently coded three separate interviews. These coded interviews were reviewed by a second researcher. The two Researchers then discussed to resolve any differences and the coding scheme was revised so that it was clearer, more concise, and applicable based on the coding pilot discussions.

Third, a coding training session was conducted by two Researchers. During this training session, each researcher manually coded several pages from transcripts. The Researchers then discussed and resolved any differences. The coding scheme was again revised based on these discussions.

Fourth, two authors held the first round of coding. This round included two Researchers independently coding one "thin" and one "thick" interview transcript. "Thin" and "thick" were defined by the richness of the interview content. For example, "thin" might involve five relevant quotes over 20 utterances whereas "thick" might involve fifteen relevant quotes over 20 utterances (where an utterance is generally conceived as one spoken line in the transcript file within Atlas.ti and could be one word to one paragraph or more in length depending on the transcript). The Researchers then discussed the coding to resolve any differences. The coding scheme was revised and Figure 6.7 is the final result of these discussions. An inter-coder reliability (using Cohen's) of greater than .663 was achieved on all codes but two (see Appendix F) and achieved a 97.8% coder agreement.

Figure 6.7 The Coding Process



Fifth, a second round of coding was conducted. In this round, one author independently coded one "thin" and one "thick" transcript (as defined previously). These coded transcripts were reviewed by a second researcher and the two Researchers discussed to resolve any differences. The plan was for this round to again be repeated until satisfactory inter-coder reliability was achieved. However, a coder agreement of

97.8% and an inter-coder reliability of greater than 0.884 (using Cohen's kappa) were achieved (see Appendix F) for all codes but one in the first iteration of the second round and final coding proceeded. A combination of all transcripts coded in the first and second rounds of coding achieved an inter-coder reliability of greater than 0.798 (using Cohen's kappa) on all codes except two (both of which were greater than 0.666 (using Cohen's kappa)).

The coding scheme developed in the fourth step and defined in Table 6.7 was then created in Atlas.ti (ATLAS.ti, 1991-2009). Each of the transcripts was imported into Atlas.ti and coded according to the scheme (see Appendix G for sample Atlas.ti screenshot). Any contextual information that did not fit into TFR domains was also identified. Table 6.6 summarizes the number of coded quotes per role and per TFR sub-domain. There were a total of 1624 coded quotes across all roles and sub-domains (each quote can relate to more than one sub-domain) plus an additional 350 contextually interesting quotes.

Table 6.6 Number of Coded Quotes Per Role, Per TFR Sub-domain

TFR Domains:	Nature of Technology		Technology Strategy		Technology Use		Technology Implementation	
TFR Sub-domains: / Roles:	1.1 Tech Images	1.2 Tech Capabilities	2.1 Initial Rationale	2.2 Projected Value	3.1 Tech Use	3.2 Tech Conse-quences	4.1 Org Process	4.2 Indi-vidual Incentive
Champions	4	14	14	25	39	34	56	30
Innovators	21	28	21	46	115	141	137	69
Technologists	3	33	12	18	27	47	50	15
Users-Managers	0	1	0	12	52	74	10	4
Users-Sales Reps	3	21	1	10	147	107	8	11
Researchers	8	18	1	16	9	55	39	18

Table 6.7 Adaptation and Extension of TFR Domains

TFR Domain	Description	Sub-Domains	Definition
1.0 Nature of Technology	"Refers to people's images of the technology and their understanding of its capabilities and functionality." (Orlikowski & Gash 1994, p. 183-184)	1.1 Images of technology	A stakeholder's use of images or metaphors to characterize the technology in general
		1.2 Technology capabilities and functions	A stakeholder's understanding of the capabilities and functions of the technology in general
2.0 Technology Strategy	"Refers to people's views of why their organization acquired and implemented the technology. It includes their understanding of the motivation or vision behind the adoption decision and its likely value to the organization." (Orlikowski & Gash 1994, p. 183-184)	2.1 Rationale for technology acquisition and implementation	A stakeholder's views of the initial reasons and visions for the organization's acquisition and implementation of the technology
		2.2 Projected value of technology	A stakeholder's understanding of the projected value the technology is likely to bring to the organization
3.0 Technology in Use	"Refers to people's understanding of how the technology will be used on a day-to-day basis and the likely or actual conditions and consequences associated with such use." (Orlikowski & Gash 1994, p. 183-184)	3.1 Use of technology	A stakeholder's understanding of the use of the technology on a daily basis within the organization
		3.2 Consequences from use of technology	A stakeholder's reflection of the consequences resulting from the use (and non-use) of the technology within the organization
4.0 Technology Implementation	Refers to people's understanding of how the technology will be implemented as part of the organization's day-to-day operation and how each individual's adoption of the technology will be incentivized.	4.1 Organizational implementation process	A stakeholder's understanding of the process by which the technology is implemented into the organization
		4.2 Individual adoption incentives	A stakeholder's understanding of the incentives provided by the organization to incentivize an individual's adoption of the technology
5.0 Contextual insight	Any quote that is interesting in understanding the context and is not easily captured by other codes.	n/a	n/a

KEY: **Original** **Adapted** **Extended**

Chapter 7 Analysis of TFRs: A Static View

This chapter describes the results based on the detailed coding and subsequent analysis of data. Our focus is on presenting TFRs at *VoiceTech* consistent with Orlikowski and Gash's (1994) and Davidson's (2002) original analyses. Like them, we present how each frame manifested itself for the different stakeholders and we analyze incongruencies between frames between stakeholder groups. In addition, we go beyond their original analysis by presenting evidence of inconsistencies in TFRs within specific stakeholder groups. Common for all of these results is that they provide a static view of observed TFRs without taking interactions and shifts over time into account.

The first section in this chapter provides details of frame evidence and our analysis. The second section details incongruency evidence and analysis. The third section includes inconsistency evidence and analysis. Finally, the fourth section provides a discussion of three significant contributions in this chapter.

7.1 Frame evidence and analysis

Along one dimension, we considered Orlikowski and Gash's (1994) domains of *Nature of Technology*, *Technology Strategy*, and *Technology in Use* and added a fourth domain, *Technology Implementation.* Along the other dimension, we expanded their two stakeholder role model (Users and Technologists) to include the following roles: Champions, Innovators, Technologists and Users. In the following, as summarized in Tables 7.1-7.5, we present evidence of the four TFR domains for each of the four roles at *VoiceTech*. The analysis considers initial stakeholder perceptions recorded prior to the Researchers' intervention after WS1 (see Figure 5.4). The analysis relies on the binary decision model (see Figure 4.1) and coding scheme developed in Chapter 6 (see Figure 6.7). The timeline of data collection used for Chapter 7 is data collected prior to P1 and includes the initial interviews with many stakeholders and the interactions of WS1 (see Figure 5.4).

7.1.1 The Champions' Technology Frames

The Champions were in a strategic decision making role at *VoiceTech* and included the Chief Marketing Officer (CMO) and the Director of Marketing and Sales Operations. Evidence of their initial TFRs is summarized in Table 7.1.

7.1.1.1 Nature of Technology

Images of Technology. In 2003, the Champions realized they needed an SFA system and implemented the first SalesLogix solution. After using this cheaper alternative for almost three years, the Champions recognized by the end of 2005 they needed a more effective SFA. They wanted *VoiceTech* to be "smarter" in how its sales teams identified and approached new customers. The CMO noted *VoiceTech* had *smart technology not being used smartly*

> "Our challenge is that we are doing a lot of brute force. We are not necessarily being … as smart as we could be. We are not taking advantage of tools and technology like we should be." [1:5]

Hence, having tolerated an unreliable system for several years, the Champions were persuaded to purchase Siebel Systems SFA. The Champions believed the unreliability problem was with the old *technology platform*

> "Most of the reason [the SFA] is not a success is because the platform is not stable. It doesn't come up, it doesn't work." [40:314]

> "I know Siebel is going to be more stable than SalesLogix. It's going to be easier to use. I've seen a demo. I know it will be friendlier for them to navigate" [40:156]

Technology capabilities and functions. The Champions believed the Siebel SFA would fill several capability gaps that existed with the legacy SFA thereby fulfilling important *VoiceTech capabilities versus needs*

> "We kind of have a challenge all the time because we think, well, what can Siebel do and we really need to separate ourselves from that." [40:293]

Specifically, the CMO and marketing director were concerned about SFA and CRM *integration* and provision of SFA *mobility*

> "Eventually, I want [sales data] coming in consolidated. I want to get these emails and not have to type in the spreadsheet." [1:52]

> "I know Siebel … has the promise of wireless integration coming." [40:156]

> "We had also thought about integration into Exchange. Everybody here at *VoiceTech* is on Outlook so there's got to be a way we can tie in an Exchange calendar to the tool so there is only one place that they're going for scheduling in the morning." [40:77]

In summary, considering the nature of technology, the Champions were convinced the new SFA was a superior technology compared to the legacy SFA. In expressing this belief, the Champions used images and metaphors, i.e. "smart technology", to characterize the technology and they pointed towards specific capabilities and functions, i.e. "mobile SFA access," in relation to managing the sales process, see Table 7.1.

7.1.1.2 Technology Strategy

Rationale for technology acquisition and implementation. The Champions were responsible for developing the overall strategy for marketing and sales operations. The marketing director acknowledged that a review of future needs led to the selection of Siebel as the new SFA platform

> "A couple of months ago … we decided that SalesLogix really wasn't going to be able to take us where we wanted to go. … [Siebel] was willing to give us great pricing, so strategically we thought this would be a better path for us to go down." [40:217]

The Champions were firmly committed to sales representatives using BlackBerry PDA as a product demonstration and also to access SFA in the field. However, Champions were opposed to giving each sales rep a laptop due to lack of IT resources and a concern that reps might not return them. These reasons confirmed that the Champions desired *cost minimization*

> "Our biggest challenge will be … will the laptops walk? … When the reps leave how do we make sure we'll get them back?" [1:7]

> "We're going to put some functionality onto the BlackBerry … because it's a low cost item … it's a $500 cost, not a $2000 cost, but we need to … weigh the cost and [understand] are we willing to pay the cost." [40:244]

Acquiring and implementing Siebel and adopting BlackBerrys was *opportunity driven*

> "Now we're doing mobile and ultimately we want … our sales reps equipped with a device they can use in the field. SalesLogix didn't really have that connection built in whereas Siebel did." [40:217]

Additionally, the marketing director indicated that the Siebel SFA would provide *up-to-date information, fulfill management needs,* and *reduce media breaks*

> "We want reps to use this tool because it is information we want to have or we think a sales manager, whether they're a [manager] or market director would want to have." [40:810]

> "We want [sales reps] to tell what appointments are going on and your appointment activity … tell us what happens on those appointments." [40:185]

> "We wanted to be able to populate lead data into the system and this would get to our D&B lead including industry information and that's recorded." [40:65]

Projected value of technology. The Champions expressed their belief that the selected SFA and mobile technologies would provide for *enterprise-wide innovation* at *VoiceTech*

> "We can utilize the Siebel along with everything." [40:220]

> "Right now] there's no connection between [when] we put it into SalesLogix and [the sale] closes and then we come over here and put it into Siebel for the customer." [40:275]

For example, the marketing director saw the SFA as making a *smarter sales force*

> "Reps are collecting a lot of information as they go about their daily business. When they leave we don't want that information to leave with them. … We wanted to see if we could capture that, so if that person left we could transfer that information to someone else and … mine the data to be more efficient." [40:835]

> "One of the grand ideas we had [when] we started with our SFA project is … we want our SFA to be able to tell us, well, these [businesses] are the ones that … we've had an appointment with and these are the ones we've never touched." [40:380]

Also, the marketing director envisioned the SFA as *providing for customer tracking and targeting* and allowing for *experience-based sales*

> "We wanted to automatically generate rolled up reports and be able to actually look at data like what percent of our customers are receiving a proposal. … We also thought we could do a better job of collecting prospect profile, … industry, … employee, … and competitor information." [40:51]

> "This is the device we're giving them the same thing we're selling to our customers." [40:252]

In summary, the Champions pointed to motives for acquisition and implementation of the technology and value that the technology would bring to *VoiceTech.* The Champions perceived as positive the reasons for and benefits of the new SFA at *VoiceTech,* e.g. "enterprise-wide innovation" and "up-to-date information." However, the Champions' comments about the initial rationale for the technology acquisition gave support to the view that *VoiceTech* employed a technology minimalist strategy for back-end sales operations, e.g. "cost minimization" and "opportunity driven," see Table 7.1.

7.1.1.3 Technology in Use

Use of technology. The Champions did not directly use the technology. However, they were responsible for sales operations and, thus, overall management of the SFA. The Champions perceived they understood how technology was used within *VoiceTech.* For example, the Champions stated that the technology was also *indirectly used by managers for reporting and analysis, preparing budgets and forecasts*, to *manage appointments* and *manage territories*

> "We've purchased D&B [Dun and Bradstreet] data for all of our markets. … We've loaded it into our SFA tool and we divide it up by these territory community combinations so each rep has access to it." [40:198]

> "[Sales reps] … come back to the office (which can be a challenge depending on where they are) … and they can do more computer time, general office wrap up and then [*POINT*] entry. So [*POINT*] is the name of our current SFA." [40:36]

> "We ask them to look at [*POINT*] to review appointments for the team and bring that information into the team meeting." [40:41]

> "Logging additional prospect test point, the SFA today is really all about appointments that are scheduled and completed or scheduled and cancelled." [40:75].

> "[The SFA is] providing stats on the appointments while they're out in the field because if they've got it already loaded, then they'll be able to see it on their [BlackBerry] device." [40:242]

Also, the marketing director indicated that the SFA technology was used within *VoiceTech* to *identify businesses on the Do Not Call list*

> "These … are reports that you can click on directly in the SFA. … There's an icon that says 'Do Not Call' and they can click on that." [40:420]

> "The 'Do Not Call List' … makes sure reps do not contact prospects that have called in or notified us that they don't want to be contacted anymore." [40:907]

The Champions realized the technology-minimalist approach at *VoiceTech* also meant that *technology was shared by sales reps*

> "One key fact is … the reps don't have their own computers. They share computers right now." [40:818]

Finally, the marketing director also reported that s*ome managers do not use the system at all*

> "[The] channel manager and city manager … don't use the system at all today." [40:348]

Consequences from use of technology. Several consequences occurred from using the technology. The Champions believed sales reps should become proficient in selling before using the technology. This created two sets of user groups – those with the mobile technology and those without. Given the design of the *VoiceTech* sales model, it was determined that *junior sales reps would not be using the technology*

> "not everybody is going to have a BlackBerry. The people that are filling out the [manual daily activity reports] are the exact people that won't have a BlackBerry." [39:528]

The Champions observed that some reps were comfortable using technology but most relied on manual prospect identification methods. They believed sales reps viewed the technology as *not easily used or useful*

> "We have some reps that are very … comfortable with technology and understand the value of putting time in to do that, but it's very few. … They walk … around with card boxes that are [their prospects on paper]." [40:236]

> "It would be too much time to enter all that data." [39:525]

The CMO acknowledged that as a consequence of frustrations with the current SFA technology, the sales force created *manual systems as a backup*

> "The problem right now is that the "in-house" number is generated from an Excel spreadsheet. … I think it's the biggest challenge we are going to have … the sales people fundamentally don't trust the systems. … Some sales managers take their spreadsheet and walk over to the system and say, forty, yeah, it matches." [1:25]

> "It's a trust issue. … They're all going to keep their whiteboards. They're going to say, I'm at forty. Let's say they hit their forty and they tell everyone I've got forty but the system shows it's thirty-eight. What do they do?" [1:39]

Typically, the CMO received sales and staffing reports that reported old data. Also, the reporting infrastructure and culture at *VoiceTech* resulted in *information not available in real-time*

> "The problem with that is we're looking in the rearview mirror a little bit. Typically [reporting] attrition happened two weeks ago. So that's what I get on a monthly basis. … Then on a weekly basis I get a report called the Executive Management Report, and it shows [deals] by market for … that week." [1:16]

> "[The Do-Not-Call List] is updated like on a quarterly basis when we get new D&B data … or on a quarterly basis also we add our customers in here. … If this gets printed off it's because [branch offices] called us and said, can you print a copy of this for our whole branch." [40:145]

The CMO also believed the technology did not provide information in the format needed. As a result, each manager had a preferred information source. The CMO realized this approach was not sustainable because the use of alternative information sources created *media breaks*

> "[The analyst] is able to pull something [from Siebel] and he dumps it into Excel because I don't like going into [the reporting system]. … It's never laid out exactly the way I want it. And I usually end up taking the … report and exporting it into Excel." [1:11]

> "What I'm doing now is taking every daily [report] and putting it into my own spreadsheet, more for curiosity and learning right now." [1:21]

The Champions observed there was little trust in any particular system or group of information because of *duplicate information in multiple systems*

> "I would argue that technical stability is directly related to data quality. They don't trust the data because they put something in … and then they go to another screen and it's gone. So there's some connection between data quality and the fact that the system doesn't work." [40:331]

> "It [the paper orders package] helps them sort out incorrect data entry in Siebel." [40:264]

In summary, while the Champions were not users of the technology, they did express an acute understanding of technology in use at *VoiceTech.* The Champions' perception was that User-Managers used SFA "for reporting, analysis, budgets and forecasts, appointments and territories", while the "technology was shared by sales reps" and allowed reps to "identify business on the Do-Not-Call" list. They understood the frustrations experienced by both stakeholder groups in using *VoiceTech's* legacy SFA technology. For example, consequences from using the technology included "no real-time report generation" and "duplicate information in multiple systems," see Table 7.1.

7.1.1.4 Technology Implementation

Organizational implementation process. The Champions' were ultimately responsible for ensuring *VoiceTech* successfully implemented and its sales reps adopted the new Siebel SFA. Even though the transition date was only two months away, the marketing director was still noncommittal on transition strategy decisions. This made the Champions' *transition strategy uncertain*

> "I think we need time to figure out what our transition strategy is." [39:533]

> "[My view is] let's have them be on the job for at least a few weeks … before we give them a $500 [BlackBerry] and everybody is trying to change my mind. … I'm having trouble continuing to justify why I wouldn't give that to them. … So I think we're going towards they'll come out of training and a few days later get their device and learn to use it." [40:224]

> "There are some details we haven't worked out. Like are we going to ask them to maintain their personal cell phone and this is just a data device? Are we going to port their phone numbers and then port them back?" [40:255]

The company's emphasis on meeting daily, weekly, and monthly sales targets impacted its SFA project. The marketing director was not willing to engage in any discussion of implementation needs beyond the immediate release. Thus, the Champions had a s*hort planning horizon*

> "When I look at where we are with the conversion to Siebel and the other things we've got to do, I need to get through. We need to hit objective one and hit objective two before I can get to objective three." [40:249]

VoiceTech was moving away from an unreliable SFA platform to what the Champions believed was a more capable Siebel SFA platform. However, the change management path for moving from the old to the new system was unclear with only a few months before the go-live date. The project had been launched, but there was a *need for a clear change management strategy*

> "We want more people to be using the system. What do we need to do?" [40:245]

> "The second [uncertainty] is change management. … The implementation [go-live] date is April 22nd … and we're looking for help to understand how we can best implement that." [40:179]

> "[Regarding] change management implementation … just because it's going live here doesn't mean that on 4/23 the sales reps are going to come in the office and we're going to train them on it." [40:430]

> "For my sales force, I'm not at the point yet of communicating it. … It's going to look different. … Maybe if we just say, we've changed the screen." [40:442, 457]

> "We need the help of how to make it a carrot and not stick and the whole change management around that. … We're not ready yet." [40:309]

VoiceTech had abundant data available but little understanding of how its sales reps and managers were using or should be using the data. The marketing director was not confident data and reporting needs were being met by current practices. Thus, the Champions believed they *needed a data and reporting strategy*

> "We've got lots of data out there and I think it can be streamlined. We need help figuring out how our people are using it or how they should be using it. … We're not confident that data is being turned into decisions that can be used." [40:179]

> "We could get advice from you all about what data a sales manager needs and how they use that to manage their life and their people completely separate from [the SFA being used]." [40:152]

Regardless of the eventual chosen strategy, the marketing director emphasized *incremental technology adoption*

> "We're starting off with the flip phone and then we'll go to BlackBerry and then laptop access will be our third sort of element and that will now be our high speed data." [40:25]

Individual adoption incentives. The Champions believed users would adopt and use the new SFA but needed incentives to do so. Hence, by enhancing the SFA in different ways, users would more likely adopt it. First, the Champions believed they could incentivize by *equipping users with new tools*

> "Make [sales reps] smarter in their job [by giving] them the tools so they can be more productive, therefore, they get paid more." [1:30]

> "If we can equip them with a way to know who they should call … then that will really help our satisfaction of the reps. … What kind of resources can we give them to help them focus their sales activities? A neat example of this could be a system generating reminders. Like hey, that person that you visited three months ago, now their contract is up." [40:53]

The marketing director believed that an "automatic win" would result when users had an SFA that "worked." In fact, much of the previous year was spent working on making the SFA s*table and useful*

> "We have a big hurdle to overcome. … We're getting a whole new tool and we're equipping it for mobile device. That will immediately get us somewhere. But it's got to be backed up by the stability and the ease of use." [40:62]

> "Since it doesn't work properly they don't know how to use it. … We're going to get a win automatically [on the go-live date] … So we're going to give them something new. It's going to work." [40:155]

Similarly, the marketing director believed the SFA should become a critical asset for sales reps. She wanted for reps a *system that is beneficial*

> "How can we make [the SFA] successful so that in the end the reps are excited about using the platform? … How do we need to … implement mobile capabilities … [so that it changes from] something that [sales reps] have to do to something that is absolutely critical for them." [40:180]

> "[Sales reps] thought, if I'm going to be investing all this time to enter this information to the SFA, I want to know that nobody else can see that and use it to their benefit." [40:73]

The Champions believed new sales reps should achieve certain sales milestones before being issued the BlackBerry. Hence, another way to incentivize SFA usage was by offering mobile *technology as a reward*.

> "[After 90 days we can tell sales reps] congratulations, I'm going to give you your laptop now, or you know, something that says, ooh, I'm willing to cut it for another six months." [1:31]

> "They won't get a BlackBerry until they've met some kind of milestone." [39:518]

Finally, *VoiceTech* based portions of Managers and Reps' compensation on SFA data. A tactic used with some success in the past was *compensating users for data entry*

> "[Managers and team leaders] wouldn't get a portion of their compensation unless their teams were at 100%; we called it *POINT* participation. … It worked, but it was more the stick not the carrot." [40:397]

In summary, the Champions were leading *VoiceTech* in the overall implementation process of the new SFA. However, certain problems remained, e.g. there was a "short planning horizon" and "need for a clear change management strategy." These and other shortcomings of the implementation process inhibited sales innovation at *VoiceTech*. On the other hand, the Champions were still committed to improving the Users' SFA experience. For example, they believed that by providing "system that is beneficial" and "stable and useful" Users would adopt the system, see Table 7.1.

Table 7.1 Summary Evidence of The Champions' Initial TFRs

Champions	**Nature of Technology**	**Images of Technology** • *Smart technology not used smartly* • *Technology platform*	**Technology capabilities and functions** • *Capabilities vs. Needs* • *Integration* • *Mobility*
	Technology Strategy	**Rationale for technology acquisition and implementation** • *Cost minimization* • *Opportunity driven* • *Fulfill management needs* • *Reduced media breaks* • *Up-to-date information*	**Projected value of technology** • *Enterprise-wide integration* • *Smarter sales force* • *Better customer tracking and targeting* • *Experience-based sales*
	Technology in Use	**Use of technology** • *Indirectly used by managers for reporting & analysis* • *Prepare budgets and forecasts* • *Manage appointments* • *Manage territories* • *Identify businesses on the Do Not Call list* • *Technology shared by reps* • *Quantitative sales rep assessments* • *Some managers do not use the system at all*	**Consequences from use of technology** • *Junior sales reps not using the technology* • *Not easily used or useful* • *Information not available in real-time* • *Manual systems used as backup* • *Media Breaks* • *Duplicate information in multiple systems*
	Technology Implementati	**Organizational implementation process** • *Transition strategy uncertain* • *Short planning horizon* • *Need change management strategy* • *Need data and reporting strategy* • *Incremental technology adoption*	**Individual adoption incentives** • *Equip with new tools* • *Stable and useful* • *System that is beneficial* • *Technology as a reward* • *Compensate for data entry*

7.1.2 The Innovators' Technology Frames

The role of Innovators included the director of production management in sales operations and the Marketing Analyst.

7.1.2.1 Nature of Technology

Images of Technology. The Innovators believed a key to sales process innovation was having *technology independence*

> "[*VoiceTech* should] become technology agnostic … [with] the information that needs to be delivered." [40:294]

Technology capabilities and functions. The Innovators understood the capabilities and functions of the technology to be *mobility* and *real-time organization*

> "If this was the perfect world, this [data] would push out [to the BlackBerry] with some sorting tools." [40:146]

> "It's always available because the Siebel always [updates] where I'm at this location, is this location okay? It comes back with some sort of affirmation." [40:269]

The Innovators also spoke of technologies having inherent *capability uncertainties*

> "There are shortcomings on the interface that we're using and we'd like to know about it." [40:85]

> "It's got the capability of doing it. The question is do we want to do it? There's a couple of ways we can enable that technology in the handset, but they're researching that right now. It's possible, the question is, do we want to do it." [40:231]

> "Unless you [have a way] to voice the text that can be turned into reports." [40:594]

In summary, the Innovators understood that by implementing the SFA and giving Users "mobility", *VoiceTech* could manage sales operations more effectively and become a "real-time organization." The Innovators also expressed concerns with "capability uncertainties" inherent in the selected technology. They believed these concerns would be addressed at some point in the future. However, uncertainties made the Innovators question the feasibility of adding new functionality, see Table 7.2.

7.1.2.2 Technology Strategy

Rationale for technology acquisition and implementation. As a cost conscious organization, value and cost drove many of the *VoiceTech* decisions – including the SFA. The Innovators were keenly aware of this and understood a primary factor in acquiring and implementing the selected SFA was *cost minimization*

> "It's because we don't want to spend the money for Siebel reports in the system. … I think the main underlying reason is cost savings … for the new system." [16:88] and [16:91]

> "[A software vendor] tried to sell it to us but it just was not in our budget. Then they made it very attractive." [16:185]

> "We only have e-mail licenses that are cheaper. We don't give them the full $2,000-$3,000 for every manager to [have] full access." [16:310]

Additionally, Innovators explained the technology acquisition decision was *based on IT input*

> "I think what we were limiting ourselves in our thinking was the number of systems that were available and the number of methodologies that were available. … It's really a decision with the IT team that we kind of worked with." [16:74]

Projected value of technology. The Innovators trusted the new SFA and its related technologies could make *VoiceTech* managers and sales reps smarter. Innovators believed key projected values of the selected technology were *smarter management* and a *smarter sales force*

> "[The SFA will provide] market analysis capability for us." [16:186]
>
> "They [can enter] building codes [into the mobile SFA] and get a list of all of the leads and quickly determine which ones are ones that would be good, valid prospects." [40:234]
>
> "[We can create] a dashboard somewhere in the SFA where they could see by rep what the activity was." [16:101]

In summary, the Innovators believed an underlying goal regarding choice of technology at *VoiceTech* was "cost minimization." The Innovators saw this as one of the main reasons for selecting a technology (both old and new), but the selection decision was also "based on IT input." The Innovators believed the new SFA could make the sales operations group smarter. For example, "smarter management" and a "smarter sales force" were projected values of the technology, see Table 7.2.

7.1.2.3 Technology in Use

Use of Technology. The Innovators had a very good understanding of how technology was used by sales reps and managers at *VoiceTech.* The Innovators realized the primary use of the SFA was for *managing appointments*

> "Management verifies that the rep has entered all their appointments into the system because they'll look at their appointment tracker and they'll say, why isn't ABC Company in the system" [39:579]

VoiceTech sales operations inadvertently supported competing information systems. The Marketing Analyst created reports *used as a backup to the SFA* and developed *spreadsheets used as a duplicate system*

> "This [report] is something that the branch uses as a backup to Siebel. … They'll enter in information related to an order … who sold it and what the product is and when it was signed and some other information." [16:40]
>
> "I compare [activity reports] to the [SFA] daily just to make sure they're close." [16:47]

The Marketing Analyst believed there was no need for managers and executives to use the SFA because *reports were pushed via email*

> "That's the report that is e-mailed [and] … information is sent on a daily basis to … [an] e-mail box." [16:23]
>
> "The push is they get this report daily or they get this report weekly." [16:80]

The director explained the system provided early warning metrics for sales management and that the *reports were used to manage sales reps*

> "There's a reason why we're monitoring appointments which translate to sales, which translate to these in-house numbers that are non-Siebel because we're trying to get as much early warning information as possible [about missing sales targets]." [40:260]

Manual reports consisted of data collected from disparate systems, phone calls, and daily sales meetings. The information was aggregated into single reports by the Marketing Analyst under the director's guidance. The Innovators recognized appointment and sales data was generated across these multiple systems and that many reports required *manual intervention*

> "[This] is a report that I get to help me calculate [another report]." [16:53]

> "We have another weekly report [that is] an executive level report. … It's primarily manual. It really measures the gory details of activity out in the branch." [40:105]

> "The order tracker [report] is a manual process that's captured in the field where there's a branch administrator that literally just updates all the sales activity … because that information is not captured in [the SFA]." [40:110]

> "To create [this] report, the person doing that would probably ask a [sales team leader] how many did you sell and what are your appointments in order to get the data." [16:49]

These manual reports were so numerous that information was redundant. For example, the director noted *many reports were very similar*

> "[These five reports] are effectively different versions of this *POINT* Report." [40:133]

Consequences from use of Technology. The Innovators reflected on a number consequences resulting from use and non-use of the technology at *VoiceTech.* Consequences around unreliability of data, duplicate information in multiple systems, and media breaks were the most concerning to the Innovators. For example, the Marketing Analyst did not trust any numbers in reports. Overall, the Innovators believed SFA *data was unreliable*

> "I don't look at sales in *POINT* because I don't have any confidence in them." [16:117]

> "The reason I don't use this [data] for the executive report is because I don't trust the sales number." 40:426]

Innovators noted the disadvantages of not having real-time updates. Because there was no mobile updating of sales and appointment results, *information in the SFA was not real time*

> "The only disadvantage is it's not live, it's a daily update." [16:2]

> "We want this data today, not three weeks from now. … That's a little bit of a challenge that we've had is timing. When do we get the data in the cycle" [16:267] and [16:268]

> "Assuming [updating] is available while you're out in the field, but it's not. So they have to do it before they go out in the field during the day." [40:421]

Manager reps believed SFA usage was negatively affected by the system's *lack of functionality*

> "The only thing we're giving them to plan their day is this territory book, which is this 50 page [of sales] leads." [16:138]

> "There aren't qualifying steps in the system." [16:112]

> "We don't track cold calls on the account by account basis in *POINT*, so they couldn't update anything in *POINT* right now that would give management that type of automated report." [39:607]

Managers could only see their own immediate reports in the system. A senior sales manager could not see information on sales reps two or three levels below. Hence, the SFA provided *limited managerial access to information*

> "Each sales manager can print out their own reps' appointment trackers but the [senior sales managers] can't print out 30 pages of all the reps [below her]." [16:15]

Another consequence using the legacy SFA was *minimal exploitation of existing functionality*

> "I know that we can [manually] set a reminder within *POINT* to [make callbacks]. … I don't think any [sales reps] do it." [39:600]

> "[Sales reps] use [the lead list] as a guide more than a … hard list of things to call, businesses to call. They use it as a guide and that's all." [40:400]

The Marketing Analyst acknowledged that because managers were frequently unable to get the information they need, *reports were created outside SFA*

> "I know there are reports that the sales organization uses without our even knowing about it." [16:61]

> "If [managers] don't find what they need in the SFA they'll just make their own report." [40:404]

> "There's a lot of reports floating around that are created by people either here at corporate or at the sales branches and-but there's not one person that has the thumb on all the reports that exist and all the data floating around." [40:535]

Finally, newer sales reps did not enter complete sales data. This was a consequence of limited training on the *sophisticated SFA*

> "It is tough to manage some reps that are earlier in their career in sales and having to use a sophisticated system like an SFA." [16:100]

Additionally, the legacy SFA could not support all *VoiceTech* reporting needs. Therefore, many sales managers created spreadsheets and used whiteboards which. These additional information sources introduced into the *VoiceTech* information system a number of *media breaks*

> "We're working on getting this into Siebel, but there's a couple of instances where [users] type in some of their orders so they could track it … but we use it to look at … the point of sale." [16:42]

> "[If sales reps are] updating all of their activity on or near real time … it would be accurate. But, since they track it manually and they get different numbers than what *POINT* is telling them, they're always going to count on their manually counted numbers as being the gospel." [40:278]

Finally, the SFA was not integrated with other *VoiceTech* systems. Thus, the Innovators recognized *duplicate information in multiple systems*

> "The data source is three things: … *POINT* [which] has the appointment data; the daily e-mails; and the activity report has the sales data." [16:45]

> "[This report] is not generated from Siebel [but from separate sources]. "[16:162]

> "The data is somewhere else, but we decided for that specific report not to give them 30 pieces of paper." [16:16]

In summary, the Innovators fully understood the usage of the SFA, e.g. "reports were used as a backup to the SFA" and the SFA's primary usage was "appointment management." Similarly, they understood many consequences from use of technology, e.g. "data was unreliable," "duplicate information in multiple systems," and "information in the SFA was not real-time," see Table 7.2.

7.1.2.4 Technology Implementation

Organizational implementation process. Despite the upcoming changeover to the new Siebel SFA, the Innovators believed *VoiceTech* had *no global vision*

> "I think we have to find a global initiative, we haven't taken a global vision and documented that. We have a lot of ideas, but we haven't cohesively created a project, a smarter project" [39:602; 603]

> "If we're saying this is a platform change, the screen has changed a little bit, does that change the flavor of how change management works? Is it actually a five or a six or a seven [release] release … where change management really becomes more valid." [40:355]

The Innovators viewed IT as the gatekeeper of the SFA. The Innovators were clear that, in their view, the *IT department guided the SFA implementation*

> "We're getting push back from [IT stating] that we're not buying a certain [SFA] module, so therefore we are limited in what they can do." [16:104]

> "I guess we're under the perception that things that we want to achieve should be Siebel with the BlackBerry. If someone comes back and says … things we'd like to do are not achievable with BlackBerry then … there's going to be a learning curve." [40:251]

The Marketing Analyst occasionally received requests from senior sales managers for new reports. The genesis of numerous ad hoc manual reports were these *top down initiatives*

> "[Senior sales managers] send me an e-mail or they call me and say, I'm looking at our information down here and I'm not seeing installation information. Can you please point me in the right direction, tell me where I can get this … and another [manager] calls me with the same request. … So, I start doing ad hoc manual reports." [16:9]

> "The [senior sales manager] whips us an e-mail [stating] … I've got 50 things in 50 sheets of paper and I get that from three people. I say, oh, we might have an issue to look at." [16:214]

Innovators believed that before top levels of *VoiceTech's* sales organization fully adopted the SFA, sales reps would have to adopt the SFA first. Thus, the key to the organizational implementation process was *bottom up implementation*

> "I think you have to start from the bottom up. You have to start from the rep doing something new and then start the [managers] doing something new and then it bubbles up to the [senior sales managers]." [16:68]

> "It's tricky because [sales managers] all want to see the data, but then they want to see the summary information and they want to see the detail information. If they don't have it, they get mad. Then they get mad if they get too much information all at once. So, it's like what's the right balance when you have a company with 30 different sales managers and personalities?" [16:202]

Another key for successful organizational implementation was how ad-hoc reports would become standard reports. This required fulfilling requests from *continuous report development*

> "We have to fulfill the [report] requests somehow so usually we'll send ad hoc-type reporting or information data to the people requesting it. … There will be a reporting release or an IT release coming up for reporting and they are looking for requests. [We] will say … let's put the install report in the release. We define requirements for these reports then submit the requirements to the IT team. The request is prioritized and delivered and we test the report for accuracy. Then it goes to the release cycle process and it's released and the report now shows up as a standard report." [16:9]

According to the Innovators, the implementation of Siebel SFA would not result in radical SFA changes. This meant, at least initially, the primary benefit of the new SFA was stability and not a change in the sales process even though there were *new sources of data*

> "*POINT* goes away and it's being replaced by the Siebel SFA. So Siebel SFA and Siebel CRM will now serve as the data sources. … The data, the reports, the look and feel and the data will be exactly the same." [16:144]

An area where execution during the implementation process could have been better, as expressed by the Marketing Analyst, was through *enhanced training*

> "I think one of the things that we may not have done a good job with was training [to know which] report do you use if you want to pull appointments." [16:17]

> "As a corporate group, we haven't done any training in a while in reporting. … We don't have a corporate [training] team. I agree with them, training is probably something that we could do better." [16:209]

Individual adoption incentives. The Innovators believed a culture change within *VoiceTech* was required before the sales force would use the SFA. Thus, an attraction for users would be making the new SFA e*asily accessible and reliable*

> "It's going to take availability of the Siebel SFA to be able to handle all of this and it's going to be a culture change … [to] wean them off of the manual reports. We need to make easy for the reps that they want to go into the SFA and do this." [16:123]

> "As we're updating Siebel SFA, how do we get this, make these reports easier for everybody because we're going to … track everything in one system." [16:124]

> "Having the data accessible is going to be really important because like before *POINT* wasn't very reliable." [16:125]

Sales reps and managers were beginning to be partially compensated based on successful installations. This information was not available on the legacy SFA or sales reports. Innovators believed this could be available and would encourage users to adopt the new SFA. Thus, an incentive would be *providing needed information*

> "Right now we have a request for installation numbers that the sales managers are being paid on installations so therefore they want to see a list of what's installed. So, that's an idea right now." [16:6]

In prior adoption efforts, Innovators increased SFA usage by c*ompensating for data entry*

> "We're telling them to do 100%. We had an adoption problem, so we took the stick out." [39:576]

> "But if we got some feature functionality that thing attracts them to use it and then, by the way, oh, you're paid by what's entered in there, so you might want to get it right. We might see people active." [40:142]

In summary, the Innovators believed Users influenced the implementation process at *VoiceTech,* i.e. it was a "bottom up implementation," while the "IT department guided the SFA implementation." Additionally, the Innovators were responsible for managing the SFA project for sales operations. Thus, they were interested in providing individual adoption incentives for users, e.g. "compensating for data entry," and making the SFA "easily accessible and reliable," see Table 7.2.

Table 7.2 Summary Evidence of The Innovators' Initial TFRs

Innovato	Nature of Technology	**Images of Technology** • *Technology independence*	**Technology capabilities and functions** • *Mobility* • *Real-time organization* • *Capability uncertainties*

	Technology Strategy	**Rationale for technology acquisition and implementation** • *Cost minimization* • *Based on IT input*	**Projected value of technology** • *Smarter Management* • *Smarter Sales force*
	Technology in Use	**Use of technology** • *Manage appointments* • *Used as backup to SFA* • *Spreadsheets used as duplicate system* • *Reports are pushed via email* • *Reports are used to manage reps* • *Manual intervention* • *Many reports are very similar*	**Consequences from use of technology** • *Data is unreliable* • *Information not real time* • *Lack of functionality* • *Limited managerial access to information* • *Minimal exploitation of existing functionality* • *Reports created outside SFA* • *Sophisticated SFA* • *Media breaks* • *Duplicate information in multiple systems*
	Technology Implementation	**Organizational implementation process** • *No global vision* • *IT guides SFA implementation* • *Top down initiatives* • *Bottom up implementation* • *Continuous report development* • *New sources of data* • *Enhanced Training*	**Individual adoption incentives** • *Easily accessible & reliable* • *Provide needed information* • *Compensate for data entry*

7.1.3 The Technologists' Technology Frames

The role of Technologists included the Chief Technology Officer (CTO), the Director of IT Planning and the IT Business Analyst.

7.1.3.1 Nature of Technology

Technology capabilities and functions. The director of IT planning believed BlackBerry GPS capabilities would provide access to pertinent information using the technology's *mobility*

> "It would be better [to have] a hand held and GPS capability … [than] a big, thick report where they have to take out the field." [13:53]

> "Handhelds will be GPS enabled so we'll be able to automatically provide a lot of this information based on where the rep is standing" [40:129]

However, Technologists were concerned a constraint for fully implementing SFA was Siebel's *limited connectivity*

> "Another constraint is that with the BlackBerry you're constantly connected to the internet whether it's if you're using a tablet PC or a laptop, you would need … [a] wireless network card. So we also have that constraint because the reason why they want to go mobile is to update Siebel." [40:88]

> "The thing with Siebel … is that when you go wireless it is limited functionality." [40:259]

Due to the sophisticated nature of Siebel's technology and the available functionality, the Technologists were not concerned with SFA *platform compatibility*

> "There's nothing that's been said that's scared me as far as capabilities. We can do graphical display on reports, Siebel will be GPS enabled to do mapping and all this stuff that we talked about, so not concerned with what the current capabilities are." [40:1141]

In summary, the Technologists believed the key functionality provided by SFA technology was "mobility" and "platform compatibility." The Technologists understood the technology's mobility features could be hindered by "limited connectivity" when using SFA on BlackBerry devices, see Table 7.3.

7.1.3.2 Technology Strategy

Rationale for technology acquisition and implementation. The *VoiceTech* CIO reasoned the legacy SFA choice was primarily cost decision. He also believed Siebel's recent price decrease created greater value that justified the acquisition of the new Siebel SFA. Thus, the primary rationale for choosing both old and new SFA systems was *cost minimization*

> "We wanted to pay this much and they wanted us to pay this much and we weren't going to pay that much … the system just wasn't cost justifiable." [13:3]

> "We needed a very simplistic SFA system … but no one [else] was willing to equate the price to the value … so that's why we went in that direction." [13:23]

> "They gave us an incredible deal on it." [40:218]

VoiceTech was beginning sales of a BlackBerry mobile device which could also run Siebel SFA. Additionally, as *VoiceTech* continued to expand, it needed a more reliable SFA platform. Choosing Siebel SFA provided *VoiceTech* the opportunity to capitalize on its needs for SFA mobility and reliability. The Technologists were convinced the timing decision to implement the SFA was also *opportunity driven*

> "I would say that if we hadn't started in the business of selling these devices, I'm not so sure we would be at the point where we would put that application on the device." [13:8]

> "[We told the SFA vendor] let's make a deal in terms of … you guys wanted us charged this and we want to pay this … because now is probably an opportune time for us, if we are going to change." [13:41]

> "So think of it as if we weren't selling this, we are just piggybacking on another opportunity. … We committed … to start providing this infrastructure to sales reps [and as] it became apparent that we were accelerating that functionality [it was] definitely something that we should take a look at." [13:85]

Projected value of technology. The Technologists viewed the projected value of the new SFA technology primarily as an improvement in the platform technology. Specifically, the most significant projected value was from *enhanced reliability and scalability*

> "Siebel has been an … extremely reliable and scalable platform." [13:27]

> "I think the fact that it will be a lot more reliable will help … debunk a lot of the [view that] … it's not a very reliable of system." [13:38]

Similarly, another technology-specific projected value was that integrating Siebel SFA into *VoiceTech's* existing Siebel CRM platform would provide *enterprise-wide integration*

> "The benefits [are] of adding it all to the same system versus today that we've assembled it." [40:276]

The Technologists also projected that Siebel SFA provided *VoiceTech* a *cost-effective mobile solution*

> "If we were trying to do the mobile development on top of Sales Logics, that alone would cost more than just buying Siebel, so we viewed it as a pure business case decision." [13:42]

The CTO and the director of IT planning believed the new SFA would enhance *VoiceTech's* sales operations. With an enhanced SFA, *VoiceTech* would know more about its potential customers and available opportunities and thus have a *smarter sales force*

> "Part of the objective for the SFA in the long term is to allow reps to sell smarter so we'll know what door they're knocking on and know if anybody has knocked on that door in the past six months." [40:199]
>
> "[Sales reps] manage all of the information about leads that would help them in the future." [13:32]
>
> "[Manager] adoption of *POINT* is more of them driving actions based on data." [13:33]

The numerous manual and multiple systems created media breaks across the organization. Data from spreadsheets and paper reporting was re-entered into the SFA and CRM. One of the CIO's projected values of the new SFA was *reduced media breaks*

> "One inherent advantage we get with Siebel … [is to] force it so that no account here got created until you had the proper information on the lead [already in the system. Currently] there is a disparity and so you [question] how accurate is all this information." [13:16]
>
> "This is truly just an enabler … in terms of … manual activity and … unless you can get it in an automated system there is no way you can [handle it]." [13:5]

In summary, the Technologists implicitly understood specific features were not the primary reason the technology was acquired and implemented. Instead, "cost minimization" was the primary decision factor for the particular SFA technology and the timing of the decision was "opportunity driven." The Technologists did attribute some projected values to the technology, e.g. "enhanced reliability & scalability," and "reduced media breaks," see Table 7.3.

7.1.3.3 Technology in Use

Use of Technology. In the Technologists understanding of the use of technology at *VoiceTech*, the SFA had a simple purpose. The Technologists viewed the SFA as a tool *primarily for appointment tracking* and *managing appointments*

> "They only enter appointments. … They don't enter in every single door they knock on, just the doors that they're going to set up an appointment with." [39:317]

> "The rep doesn't do anything in *POINT* until they've scheduled a first appointment with that prospect, so when a rep is out there cold calling, knocking on doors, they don't capture any of that information in *POINT* until they've actually scheduled an appointment. … There are basically four results and that's it." [39:344]

> "The appointment tracker report is highly used. … In the morning meetings the [manager] will [ask] what appointments do you have today, what appointments do you have next week and the rep just reads down this report." [39:450]

The Technologists believed data entry into the SFA by the sales reps was a simple process. With *VoiceTech's* technology minimalist sales operations, the Technologists expectation was for an SFA as a *simple solution*

> "It's just numbers. Say I went on 40 cold calls today, that's all they enter." [39:363]

> "All a rep does [is] enter an additional contact down here. Most of the times they don't. Mainly the thing they do is they just enter the [sales] opportunity." [39:393]

> "So it's-as you can see, there's not a whole lot of information they're doing in *POINT*. … It's super simple." [39:412]

The Technologists expected *VoiceTech* would implement the simple new SFA to replicate functionality of the legacy SFA. Thus, the director of IT planning believed in *minimal additional exploitation*

> "There will be very little difference between what we capture today versus what we're going to capture in Siebel." [39:342]

> "Sometimes [reps] will enter an additional contact down here. … Mainly the thing they do is they just enter the opportunity." [39:393]

Consequences from use of technology. The Technologists understood the current and future SFA technologies each had use consequences. The SFAs design limited the ability of managers from seeing data entered by sales reps and limited senior managers from seeing subordinates' data. The CIO was not convinced that managers needed this information, even with *limited managerial access*

> "Even though sales management may be asking for this data, I'm not convinced … what should a [sales manager] do with the information that that person has access to and then similarly what should a [senior sales manager] look at every day … what should a VP look at every day and what behaviors should that person change?" [13:104]

The director of IT planning believed that because the SFA was not trusted and not available when and where needed, *sales used manual systems as a backup*

> "I think some of the push back [is because] they didn't trust a lot of the data in the system and they have their own manual one at the same time." [40:135]

> "The only time reps enter the SFA is when they're back in the office … so that's the reason why a lot of them carry cards around is they can write the status of the meeting they just got out of on the card. … They have to wait until they enter it." [40:58]

> "You'll go down to the branch and you'll see thousands of index cards down there." [40:222]

A consequence of using the legacy SFA was that because of the perceived limited SFA capabilities and system problems, *VoiceTech* managed *duplicate and conflicting data*

> "One prospect can show in multiple different places. The only catch there is if I come back and I don't do a search for it and I just enter it. Now, I've just entered a dup in the system and I'm working the same prospect you are and I have no idea you're working at it." [39:391]

> "If I don't search for a prospect and just enter it as a dup, there's no way for the system to catch it." [39:429]

> "[Sales reps] get so many quirky, weird errors all the time, they could be opening up help desk tickets all day long." [39:444]

According to the CIO, one of the consequences from having unstable systems and infrastructure, and limited self-managed reporting capabilities, was *duplicate information in multiple systems*

> "I bet a lot of what [the Marketing Analyst] does today is because information is in different places." [13:34]

> "[These reports] pull on data that is currently not in *POINT* and/or … is not accessible in our data warehouse." [13:14]

> "I would say the *POINT* data is viewed as a system of record … but there are a lot of other sources that provide information … the task is to consolidate this into a single set of information." [13:37]

The Technologists removed functionality within the new SFA to focus on current needs. Most of the development of the new SFA involved disabling functionality versus maximizing functionality. Thus, the Technologists explained that to fit *VoiceTech's* sales model the *technology had to be customized*

> "We ripped out a ton of functionality within the SFA so it's very narrowly focused on what we need it for, so most of the development on the SFA is turning off stuff versus maximizing return on stuff." [40:189]

> "We [created] a work around based on how to deploy this with our existing sales model." [39:415]

> "We have a system edit that says, if [a prospect's data] hasn't been touched in two weeks, auto-close it." [39:416]

> "We're trying to get the navigation and the functions … to be the same, but the visual of the screens look nothing [like the legacy SFA]." [39:496]

> "One of the holes we've identified we haven't fixed yet." [39:426]

In summary, Technologists had a basic understanding of how Users used SFA technology. For example, Technologists believed Users employed the SFA "primarily for appointment tracking" and "managing appointments." Also, Technologists believed the SFA Users compensated for "information distributed across multiple systems" and that "sales used manual systems as a backup," see Table 7.3.

7.1.3.4 Technology Implementation

Organizational implementation process. Because the initial implementation process was designed to only replace the functionality of the legacy SFA with a new SFA platform, the Technologists had *low requirements uncertainty*

> "Our goal is just replace it just in functionality, so we don't have a whole lot of questions as far as how that's going to work." [39:480]

> "We have [the analyst's] requirements document which outlines everything that *POINT* does, all the data that's captured, all the functionality that we're deploying, so I think it's a good description." [39:337]

The Technologists had little in-house development support. Even though new requirements were minimized and existing functionality was replicated, the Technologists had s*erious resource constraints*

> "We have serious constraints in order to meet our timeline and everyone agrees that something needs to be done, it's just we have real resource constraints." [39:484]

> "We had little in-house support from a development perspective so we had to outsource a lot of the support which kind of prolonged stabilizing the applications." [40:50]

Similarly, the CIO described *VoiceTech's* reliance upon third-parties instead of internal IT resources

> "We leverage heavily third party applications, including Siebel for example, to do a lot of the heavy lifting … but really quite frankly spend more of our time integrating applications and moving data from application A to application B." [13:1]

> "It's a little deceiving because we do a lot of out sourced development, but we also do a lot of ASP's [Application Service Provider]. So we have less [resources] probably than others just because of our reliance on application service providers." [13:2]

The Technologists explained the main goal was to deploy the new SFA with the existing functionality of the legacy SFA. The Technologists understood their initial task was to *replicate the existing system*

> "The main goal for the initial [SFA release] is to launch as is with the same functionality." [39:475]

> "We're not going to introduce a whole lot of brand new functionality at the same time we're transitioning to a whole new SFA platform." [40:301]

Each SFA release was scoped and planned shortly before its implementation. Technologists were clear on this point when asked about details for future releases. The director of IT planning understood he had a quarterly basis operating plan and thus the organizational implementation process became quarterly. As a result, the Technologists had a *short-term planning horizon*

> "We haven't scoped that release yet as a whole, so we might find enhancements that maybe we'll want to put in at the same time, just haven't done that analysis yet." [39:506]

> "We haven't scoped it out yet. The next opportunity for a release will be in October. We just need to do that analysis." [39:507]

> "We haven't even started development on Siebel yet. We're going to start in a couple of weeks, so our plan was replicate existing functionality within the Siebel SFA solution." [40:149]

> "We wouldn't start the development on the reports on February 15. Realistically we wouldn't start those until probably March. We can't create the reports until you have a lot of the data." [40:303]

Individual adoption incentives. The Technologists believed users of the new SFA needed incentives to adopt the system. The CIO suggested a key for individual adoption of the SFA was *intuitive system usage*

> "If I had to choose between right now between functionality over navigation ease, I would choose navigation." [13:39]

> "How do we make it so that we have a more intuitive user experience so that I can sit down a 22 year old in front of a screen and they should largely be able to do all of the transactions that we need them to do without training?" [13:10]

> "One of our learning's in 2005 was we just need to send [data to managers] via e-mail so that they can act upon it rather than having them log into [the SFA]." [13:49]

Additionally, the CIO believed another incentive was providing users *improved information management*

> "If you are going to capture all of this data and no one is going to do anything with it, what's the point." [13:20]

> "[If] people aren't logging on and doing the basic adoption or basic updating of activities because you are screwed because … if you don't do that then you haven't done anything." [13:55]

The director of IT planning also suggested sales reps be *compensated for data entry*

> "And they [will] get paid to enter [SFA data], so we're hoping [adoption is] 100%."

In summary, the Technologists believed their charge was to implement a more stable SFA platform but not change much, e.g. "replicate the existing system." Technologists believed they knew all of the SFA

requirements and did not plan for any new functionality, e.g. "low requirements uncertainty" and "short planning horizon." As a result, *VoiceTech* had "serious resource constraints" in its implementation process. To increase users' SFA adoption, Technologists suggested simple solutions, e.g. "intuitive system usage" and "compensate for data entry," see Table 7.3.

Table 7.3 Summary Evidence of The Technologists' Initial TFRs

Technologists	**Nature of Technology**	**Images of Technology** • --	**Technology capabilities and functions** • *Mobility* • *Limited connectivity* • *Platform compatibility*
	Technology Strategy	**Rationale for technology acquisition and implementation** • *Cost minimization* • *Opportunity driven*	**Projected value of technology** • *Enhanced reliability & scalability* • *Enterprise-wide integration* • *Cost-effective mobile solution* • *Smarter sales force* • *Reduced media breaks*
	Technology in Use	**Use of technology** • *Primarily appointment tracking* • *Manage appointments* • *Simple solution* • *Minimal additional exploitation*	**Consequences from use of technology** • *Limited managerial access to information* • *Sales uses manual systems as a backup* • *Duplicate and conflicting data* • *Duplicate information in multiple systems* • *Technology must be customized*
	Technology Implementatio	**Organizational implementation process** • *Low requirements uncertainty* • *Serious resource constraints* • *Replicate existing system* • *Short-term planning horizon*	**Individual adoption incentives** • *Intuitive system usage* • *Improved information management* • *Compensate for data entry*

7.1.4 The Users-Managers' Technology Frames

7.1.4.1 Nature of Technology

Technology capabilities and functions. A senior-level User-Manager expressed a desire for mobile technology with *touch screens*

> "Because we move fast and them having to sit down at a computer and put it in [is inefficient] … something like a touch screen [would] be great." [160:168]

In summary, User-Managers spoke minimally regarding the nature of technology. User Managers understood sales reps desired technology that was easy to use, e.g. "touch screens," see Table 7.4.

7.1.4.2 Technology Strategy

Projected value of technology. An expected problem solved in the new SFA technology was giving senior-level User-Managers access to sales rep performance data. Thus, a projected value of the technology was the s*haring of operational data*

> "If *POINT* would allow me to view manager-level things and if I could see ... how many [completed sales] we have currently that would be really helpful." [19:20]

A senior manager projected the SFA technology would benefit *VoiceTech* with *one integrated data source*

> "If they could go to one place and everybody went to one place [for the same data]. … It hits me on my BlackBerry and it hits everybody on their BlackBerry so wherever you are, what city and stuff like that, you know exactly what's going on." [29:2,3]

Another projected value espoused by managers was that giving the sales reps *PDAs enabled SFA integration*

> "Obviously the [PDA] technology … would merge into the *POINT* system." [19:40]

In summary, User-Managers perceived the value of the technology as enabling integration across the organization. User-Managers pointed to the "sharing of operational data" and "one integrated data source" as examples, see Table 7.4.

7.1.4.3 Technology in Use

Use of Technology. Technology was used by the sales force in various ways based on individual needs. The technology enabled sales reps to reserve a prospect's account by associating the sales rep with the prospect. This reservation helped *VoiceTech's* User-Managers deal with conflicts between different sales reps. Thus, technology was used to *manage territories*

> "*POINT* is really our territory management [tool] because [it] enables reps to go into particular accounts and input data and in essence reserve the account saying I'm working with this customer. Here's when I'm meeting with them." [18:14]

User-Managers used the technology for *tracking sales*

> "If I have a rep that's not writing deals or I've got a team that's struggling, the first thing I look for is how many new opportunities have they opened in the current month to date." [33:22]

> "We have a month end report that basically tells us how many deals … the branch has on a daily basis … " [29:10]

> "I get an automatically generated report every morning from our automated system which is called *POINT* … It shows me the total amount of activity for each manager's market." [18:1]

Senior-level User-Managers spent a lot of time each day preparing and reviewing sales performance reports. Because the legacy SFA had many problems and did not give managers the information they needed in a timely manner, managers used alternative technologies, like spreadsheets and email, for *manual sales reporting*

> "My business manager goes to all the sales managers in the office and gets an update for their sales that day. She updates the tracker that shows the forecast they made that morning for the day, the results to that forecast, and their weekly results of their weekly forecast." [18:5]

VoiceTech encouraged competitive behaviors between its sales teams and between different sales markets. In most cases, sales performance data was openly available to all sales employees. Thus, the technology allowed User-Managers to evaluate sales performance and *compare markets*

> "An Excel spreadsheet is sent out on e-mail everyday … to every other [senior sales manager] in the company, the senior [executive] team in the company, and a few other people so everybody knows where everybody is at in sales at the end of every day. I can look and see where every market is and their number of sales. I can even see where every [sales] team is." [18:6]

> "The [market] report is done in deals primarily … and from there I get a 10,000 sq. ft. view of what's going on in all the markets. The other report that is generated for me that I look off of is called the executive report which basically gives that information for all the branches." [29:5]

Forecasting was another important management task. On a daily, weekly, and monthly basis, managers were required to make projections about sales of their teams. Thus, *VoiceTech* User-Managers understood technology was used in each office location to *support forecasting*

> "The [forecast] report generates a forecast for the following week. So, you get the following week forecast and when that week ends you get a percentage of what you did to forecast for the week and so forth." [29:7]

> "[Forecasting] is based on the information we gathered on Friday … from the past week. On Monday, we gather all the information on that because things happen from Friday to Monday. … Then we have our plan for the rest of that week. So we take the information from the past week and kind of apply it to what's going to go on this week and kind of let it dictate [the forecast]." [7:20]

> "The information is passed on to me in an accurate manner as to whether we're meeting with qualified decision makers and then that's narrowed down into a forecast." [18:84]

Besides managing their sales reps, managers were also required to help their office in its sales rep recruiting efforts. *VoiceTech* did not have a formal system for managing the recruiting process so User-Managers used alternative technologies for *manual recruitment tracking*

> "Recruiting is a huge part of our job. I use Outlook for scheduling. I don't necessarily have any system to generate reports, so I have come up with a couple of my own. … It would be kind of neat if we had something consistent … but I am coming up with my own Excel spreadsheet to track it." [19:1]

Some User-Managers used the technology to generate reports that *supported training*

> "I actually use [the dashboard reporting] tool to train them on performance and numbers and activity so they can see it in black and white themselves and it has been very helpful." [19:32]

Consequences from use of Technology. User-Managers could not access sales rep data. Managers could view team leaders' data and team leaders could view sales rep data. As a result, User-Managers believed

one of the most unfavorable consequences of the legacy SFA was *limited managerial access to information*

> "I can only view the [sales team leaders] and that is one of the biggest hurdles for *POINT* as a [manager]." [19:9]
>
> "Every person above can only view the person below. So [managers] can't view what I can view as a senior manager. I can't view what a [sales team leader] can view. I can just view really just teams, not individual reps." [19:14]
>
> "I used to sign in as a sales team leader every day. *POINT* isn't really useful to me at all." [19:18]
>
> "If I ask the [sales team leader] for their user name and password and sign in as them I can then view it, but is that appropriate to ask them for their user name and password?" [19:72]

Many sales reps did not like the technology's user interface. Others entered data only to see it disappear the next time it was accessed. Newer sales reps did not enter data at all. Thus, User-Managers believed another consequence of the legacy SFA was that *data was unreliable*

> "It's never accurate. … Not necessarily all of the information you need [is in *POINT*] … " [19:28]
>
> "Sometimes they don't do [*POINT* updates] it for a week." [7:173]
>
> "Sometimes the system is messed up and they can't get in it. They use that excuse or it didn't work for two days. So, the information gets shoddy. Plus you can have duplicate appointments in there." [7:6]
>
> "A lot of conflict results as to the ownership of the account even when deals are closed." [19:120]

Another consequence from using the legacy SFA was that instead of relying on a single, authoritative source for sales information, User-Managers created *duplicate information in multiple systems*

> "I have each person sending me the same exact Excel spreadsheet with just their information and then I do a lot of cutting and pasting into the master tracker and send that out to the branch." [19:27]
>
> "Everybody has their own system and that's just a way for each manager to track the individual deals sold for the month." [19:2]
>
> "We have several different places where we report that so it seems to be somewhat redundant all of the time where you are reporting numbers at the front board, numbers to [the senior manager] verbally and then the reports that she generates come from that." [19:24]

User-Managers believed the *VoiceTech* sales model did not give sales reps the opportunity to update *POINT* consistently because the sales reps were in the field so long each day. The result was that sales *information was not real time*

> "If they had easy access to input *POINT* throughout the day, it would be good." [19:7]

> "There's always time at sometime during the day or lunch break that you have some time, but you don't have the technology or the instrument to be able to do that." [19:16]

> "They don't do it immediately. So maybe by the end of the week they will update all of the information for the activity throughout the week … There are only so many computers and everybody shares them." [19:31]

Because there was no forecasting system, User-Managers generated monthly forecasts as guesses based on the number of available employees and those employees' past history. For this reason *forecasting was ad-hoc*

> "We generate the monthly forecast at the beginning of the month, and that's almost a pure guess based on headcount." [33:24]

> "I can take a slice of whatever I want, how they did last week on their appointments forecast, their deal forecast, their head count, at risk, how many people we're potentially losing in the recent time frame, and then it goes on to make their forecast for the following week." [18:9]

> "I run a meeting everyday with my managers in which at the beginning of every week they forecast for the week and everyday of that week they forecast what they're doing that day, all of which is making up their monthly forecast." [18:28]

Senior managers believed information should be consolidated. Because of the ad-hoc nature of reporting at *VoiceTech*, User-Managers believed there were *too many reports*

> "It seems like we have just a lot of reports. It would be nice if we could consolidate a little bit. Right now for what I need, things are working but consolidation would probably help." [29:16]

User-Managers were required to track their sales teams in real time. However, *VoiceTech* did not have systems that provided information to managers in real-time. As a result, managers had manual systems for tracking sales. Included were telephone calls from sales reps and updating erasable white boards throughout the office. Also, managers used SFA information outputs and manually re-entered information into other systems, spreadsheets, and manual reports. The consequence of these inputs and outputs were *media breaks*

> "The [senior manager sees] … all of the results and stuff on his board, too." [7:16]

> "I give [updates] to him and put them up on the board [and] change it on his board" [7:31]

> "I have to change it. I got two more deals today. … I even have a big board and I have a little summary board that I use also." [7:32]

> "It would require more control for us to do that with *POINT*. … So it is more manual, a call, what did you get today? And it's accurate data." [18:7]

> "Actual handwritten daily activity reports, turning in business cards, things like that." [18:21]
>
> "I personally train my [sales team leaders] to have everybody put it into *POINT*, print out their individual appointment trackers and then the [sales team leader] scrub it for accuracy and then puts it into some sort of tracking themselves to see the numbers. So there is a lot of steps to do that." [19:3]
>
> "The administrator … collects information and puts it together into a spreadsheet for everybody. … Each [sales team leader] has to e-mail their numbers for the day and then she puts it into the spreadsheet." [19:30]

User-Managers believed the legacy SFA to be less reliable than manually collected data. To collect more accurate data, they believed SFA unreliability required *tighter sales rep management*

> "[*POINT*] is definitely not as reliable as manual data but it's a lot easier to manipulate. So the challenge you have is to try to manage your people to give you true data, and I know it's not totally accurate. I haven't figured a better way to make it accurate other than to manage it better." [18:20]
>
> "We generally have to scrub information … and the [sales team leader] lets individual reps know there is a discrepancy in what was verbally reported and what we have in *POINT*." [19:38]

In summary, User-Managers understood their SFA use as managing teams, reporting and tracking sales, and supporting forecasting requirements, e.g. "manage territories," "tracking sales," and "support forecasting." In characterizing the consequences of using the technology, User-Managers expressed concerns about the lack of accurate and real-time information, e.g. "data was unreliable" and "information was not real-time," see Table 7.4.

Table 7.4 Summary Evidence of The User-Managers' Initial TFRs

User-Managers	**Nature of Technology**	**Images of Technology** • --	**Technology capabilities and functions** • *Touch screens*
	Technology Strategy	**Rationale for technology acquisition and implementation** • --	**Projected value of technology** • *Sharing of operational data* • *One integrated data source* • *PDA enables SFA integration*
	Technology in Use	**Use of technology** • *Manage territories* • *Track sales* • *Manual sales reporting* • *Compare markets* • *Support forecasting* • *Manual recruitment tracking* • *Support training*	**Consequences from use of technology** • *Limited access to operational data* • *Data is unreliable* • *Duplicate information in multiple systems* • *Information not real time* • *Ad-hoc forecasting* • *Too many reports* • *Media Breaks* • *Tight sales rep management*

	Technology Implement ation	**Organizational implementation process** • --	**Individual adoption incentives** • --

7.1.5 The Users-Reps' Technology Frames

The role of User-Reps included the sales team leaders, sales reps, and customer care reps. Each of these users were members of the sales force.

7.1.5.1 Nature of Technology

Technology capabilities and functions. Sales reps believed technologies, including laptop computers and BlackBerrys or smartphones, had necessary functionality to provide up-to-date information and increase sales rep *mobility*

> "Having some type of device where you can look at this information and locate it through a hand held device would definitely be beneficial." [10:2]
>
> "I think more information as far as the emails, Do Not Calls, territory list in a more accessible manner, handheld, laptop. … To have that information available to you to make the job a little bit easier." [15:54]
>
> "The information they would need to retrieve through a hand held device is information that they would need during an appointment." [10:4]

Sales reps spent all day in the field visiting as many prospects as possible. Thus, these reps believed the technology should have *mapping capabilities*

> "If there's some kind of like grid or like just a map of each zip code and they could like highlight it with their mouse and then boom, it would create a list of what you highlighted of which prospects are in that chunk and if it's at least 50, boom, you're golden." [5:41]

A sales rep suggested the technology should also have built-in capabilities for *real-time sales reporting*

> "Normally I have about two appointments a day. Let's say I'm hitting 30-35 doors every day and if I can see how many doors it takes for me, cold calls to appointment ratio and then maybe appointment to sales ratio so I know every 100 doors that I hit, there's going to be a deal." [26:43]

In summary, the User-Reps focused on technology capabilities and functions they could use in the field. Specifically, the User-Reps understood technology would benefit them. They spoke of the features and capabilities of the technology, e.g. "mobility" and "mapping capabilities," see Table 7.5.

7.1.5.2 Technology Strategy

Projected value of technology. User-Reps believed the technology's mobile solution made *smarter sales force*

> "A laptop would be huge. You know, the big thing about having a laptop, you can [view] your *POINT* territory book [which] has the decision makers name.

> But if you had a laptop or a mobile device out in the field that had internet service, you could conceivably look up every president, CEO or owner before you walked through that door and you could learn a little bit more." [11:6]

The customer service reps believed the technology would e*nhance customer service management*

> "Siebel's CRM tool is phenomenal and if you can actually get into there and massage everything and pull it out, it would be very useful." [20:3]

In summary, while User-Reps spoke only sparingly regarding technology strategy, they perceived the new SFA would make them more effective. The User-Reps expressed a belief that a "mobile solution makes the sales force smarter" and would "enhance customer service management," in relation to the projected value of technology, see Table 7.5.

7.1.5.3 Technology in Use

Use of Technology. The sales reps were required to manage their sales activity using *VoiceTech's* sales operations technologies. For example, some sales reps used technologies like MapQuest for territory mapping, Dunn and Bradstreet for prospect information, and online databases for reporting purposes. Each of these technologies helped sales reps complete their *daily activities*

> "In the morning I'll print out paperwork for my appointments." [15:37]

> "Headcount, we do have to enter that information in the appointment directory every Friday, then we have to get the number of headcount, the number of total heads we have and then effective heads." [23:6]

> "Oh, the on-line report should take 30 seconds. You put in how many cold calls you made, how many appointments you set, how many telemarketing calls you made and how many deals you sold. Just four numbers." [23:24]

> "[Managers] need a tool to track what's going on and I think it's a pretty good tool for tracking, you know, our activity." [26:3]

Sales reps were also expected each day to enter all sales appointments into the SFA. This information became data used to generate various sales management reports. Thus, User-Reps primarily used the SFA for *appointment management*

> "[In] *POINT* you have a list of … your appointments. I had a first appointment with ABC Company today … and the first appointment has a day and time on the calendar. I'll come back and I'll status that appointment on a drop down box as appointment completed, call back, or second appointment. If I do second appointment, it will have me enter in a pop-up calendar and enter in when the second appointment is and that appointment is considered statused because there is an outcome that you recorded and the second appointment was set." [15:25]

> "At the end of every week and every month, I print out my appointment tracker and I can do it per rep and I can say, you know, so and so went on eight appointments for the entire month, that's why, you know, they finished where they did finish and just-or didn't do well." [5:4]

> "The online [system] goes into detail as far as how many cold calls they made, presentations, sit downs, how many referrals they got and how many phone calls they made and how many appointments they set. So that helps track everything and it helps the reps figure out their ratio." [10:76]

Sales managers used technology to track and verify each sales rep's orders were correctly entered and properly assigned. Thus, users understood technologies were available for *order tracking*

> "I have to check orders in our order tracker and then in our Siebel database to make sure the rep's name [is there and] make sure they are under me." [5:21]

Unbeknownst to many sales reps, the SFA allowed VPN access from User-Reps' home computers. Thus, only a handful of User-Reps used *remote SFA access*

> "I have my VPN set up at home so I can get onto the network here." [2:7]

Customer care reps dealt with customers after the sale was made. They used technology for maintaining c*ustomer contacts*

> "[Customers] will say can you send me some more information in writing and I'll just shoot them an email attachment on it." [24:21]

Customer care reps also referenced information in the SFA but principally used Siebel CRM and a *VoiceTech* knowledge base to facilitate *customer relationship management*

> "We have the knowledge base and each week we have an out space tracker, so if we get a question … not in the knowledge base or we don't actually have it in front of us, we just jot it down and they'll get the information in the knowledge base. They're always adding different things to that." [24:34]

VoiceTech maintained sales rep handbooks, product manuals, competitor data, and sales forms within its intranet. This information was available to all reps and some affirmed the *intranet supplements training*

> "We don't go over the handbook together. We will sit and go over the intranet together. That's one of the things that I kind of guide them through when they're first hired and they come out of training." [10:23]

> "Information can be found on our sales intranet, so I would follow up with the reps if I feel like they aren't using the information that's provided to them. … That's something that's provided on the sales intranet that the reps have access." [10:67]

> "We get on the sales intranet on a daily basis … there's a lot of things that are provided in the sales intranet that the reps don't know … and don't want to take the time to look at it." [10:69]

Consequences from use of Technology. Only sales reps on the job for three or more months used *POINT*. Non-use by newer reps exacerbated problems with duplicate and conflicting data. These sales reps had to write sales contacts on sheets of paper as a result of *junior sales reps not using the technology*

> "In the first three months they tell you [your SFA is] that sheet of paper." [2:12]

Because junior reps did not use the SFA, User-Reps believed *paper reports were used to manage reps*

> "The paper [reports] go into more detail as far as where they've been. It's easy for someone just to put a number up there on the online [report]." [10:78]

> "It helps us figure out how they're managing their territory, helps us figure out … a lot of information that we look through that to make sure they're getting the right information when they're out cold calling." [10:81]

The *POINT* SFA was consistently viewed as a frustration to sales reps. They were frustrated with not being able to get the information they needed, not being able to login to the SFA, and not having filtering capabilities on many reports. User-Reps believed these characteristics made the SFA *not easily used or useful*

> "I would prefer [being able to go] into *POINT* to print it out and it would be nice and neat and typed." [5:1]

> "They're going to write it on their calendar and then they have to turn around and go sit at a computer if there's one available and if the database actually works and then they have to enter it in there." [5:7]

> "You're dealing with like 2000 pages, so it's real tedious and highly annoying." [5:16]

> "There needs to be less frustrating things like *POINT*." [5:17]

> "You'll start a task and it will lock up and you don't have time to log out and restart your computer, so you just don't do it and then you forget to do it, so you've wasted 10 minutes." [5:24]

Because User-Reps were in the field most every day without mobile access to the SFA, they only updated *POINT* when they had time and were in the office. The consequence was that *information was not real time*

> "If I need to be out the door for an 11:00 o'clock [appointment], I'll leave [sales data] on my desk and when I get back … I'll put it in." [2:1]

Another consequence of using the *POINT* SFA was it relied on a software and hardware platform that was outdated and not scalable to *VoiceTech's* current growth trajectory. As a result, many of the interviewed User-Reps reported that the *SFA was slow*

> "The system is very slow, it's very antiquated. It looks like it runs on an old Dos system." [2:2]

> "It's just a slow-running program. … There's just a lot of times where you can't log in." [2:3]

> "It's very slow … and it's just extremely annoying." [5:89]

Sales reps were required to use one of a handful of computers in each office. These User-Reps acknowledged *PC sharing caused frustration*

> "It is frustrating because there are not that many computers and then there's a line to check your e-mail." [9:20]

User-Reps admitted calls and visits to businesses on the do-not-call list were made because the *SFA was not used to identify prospects or DNC's*

> "We just kind of had to walk around and see what was going on and I mean I didn't really use the territory book that much. -" [9:62]

> "When somebody sends a branch email that says 'Do Not Call this person,' that sticks in my head more than me flipping through and saying I just spent five minutes scanning this list and I'm not supposed to call this person." [15:35]

Because sales reps were in the field each day with no mobile access to the SFA, they created *duplicate information in multiple systems*

> "I can't just update something in the system or do emails as much because I'm in my car. … So I've made my own sheets and things like that to keep myself organized just for my sanity." [5:9]

> "The paper [report] is the biggest hang up for everybody because it's so time consuming and so redundant." [15:20]

Each office occasionally printed out territory books and made them available to sales reps so they could use them to verify information for future sales calls. In other cases, sales reps resorted to making sales calls from business cards other reps had collected. Thus, the system contained *duplicate and conflicting data*

> "I know we have our territory books but they are so outdated, they're not updated, half the businesses on there don't exist anymore and they don't have the new businesses. So I don't know how old they are but they're very uninformative." [2:13]

> "There's just so many cards lying around the office, if you just pick a handful up, you might call [a business on the do-not-call list] and just not know it. … I'm certainly not going to remember when I get back [to the office], so I just throw it into my personal 'do not call this person again' [stack]." [2:16]

The User-Reps believed their territory books were inaccurate. The books, which provided information about all the businesses in a given territory, contained so many errors about those businesses that reps tended to not rely on them. They were a product of data entered into *POINT*. Thus, because of the problems with *POINT* and the errors in the territory books, users believed prospect *data was unreliable*

> "We have a territory book that's a product of *POINT* that has a list of … businesses in your territory and the decision maker's name. But, the information is inaccurate a lot of the time and stuff changes. The database isn't updated too often … so I don't really rely on that information very much at all." [11:4]

Because the SFA technology was limited, the User-Reps were required to use printed marketing materials and forms. There was *no online form capability*

> "Our presentation kits along with the other collateral is in a book that's about two inches thick and … when the reps are cold calling fifty doors a day, they don't know if they should be carrying that information or not." [10:166]

Sales reps believed pushing too much information to a PDA had negative consequences. They believed a PDA interface had to be simple. The PDA had limited screen space and *mobile access to information was limited*

> "I think it would be faster just to text message … our project engineer, and say 'Hey, does this work with this?' And he could reply yes or no. Whereas … [providing] an index of everything we do … would just be way too difficult." [2:18]

The *POINT* SFA was not designed with mobility features. Instead, it required reps to return from the field to the office each evening to enter sales activities into *POINT*. Reps believed they had better tools to use in the office than in the field because of this *limited mobile functionality*

> " They want us to be at the office [telemarketing] … but it's not very efficient to sit there with your cell phone and try and make 200 calls. … So you come here, you have a computer with internet access. … You have better tools here to utilize than I would if I was in my car making calls." [11:25]

Successful sales reps tended to be self-motivated and socially engaging. They wanted to be out in the field meeting and engaging potential customers face-to-face or on the phone instead of via email or text messages. In light of this desire to not use email and text messaging to engage customers, some User-Reps believed less socially engaging, and therefore less successful, reps, might rely on the technology to interact with customers. The successful reps believed a *mobile SFA solution made the sales force less interactive with customers*

> "I know a lot of reps that use e-mail way more frequently than I do. I'm a phone person. I would rather be on the phone talking to someone than contacting via e-mail. It takes longer and … it's less interaction." [2:11]

The sales reps understood the *SFA was used as arbiter for opportunity conflicts*

> "[With] *POINT*, one of the first intentions of it was to solve rep conflict." [11:15]

> "It's hard to go out there and find a deal to close and you come back into the office and then you have to battle it out with another rep inside the office." [11:122]

The legacy SFA provided limited information about territory assignments for sales reps in the field. This lack of clarity in the system prompted some User-Reps to claim that *territories were not well understood*

> "Territories have been the biggest problem for me and I've had this idea since *POINT* came out" [5:14]

> "There needs to be an automated way to retrieve that data … right there." [5:28]

> "There needs to be a map for that that I can highlight like region your mouse just kind of highlight an area and then, boom, all the prospects pop up." [5:121]

In summary, the User-Reps use of technology was directly related to the information they were required to submit. Thus, the User-Reps perceived the SFA was used for tracking their activities, e.g. and "appointment management" and "order tracking." However, the User-Reps perceive the SFA as being limited in providing benefits to them, e.g. "duplicate and conflicting information" and "SFA was slow," see Table 7.5.

7.1.5.4 Technology Implementation

Organizational implementation process. User-Reps believed interfacing with the IT department for needed reports was a protracted process. A customer care rep understood anytime a new report or query was needed, he had to *submit requests to an IT queue*

> "It's not the quickest process. It's not as if there is an interface where I can go in and say I need to see this, this and this. You actually need to go to the person that can write the query. Regardless of whether or not I can write a Siebel query, they have to do it. … They want to help, but there's a queue and you sort of have to prioritize your report against other ones." [20:4,5]

Individual adoption incentives. The User-Reps believed users could be motivated to use the new SFA and mobile technologies if it would *facilitate prospect management*

> "I think it would be great if each day you had a list given to you to call these people and cold call these people." [9:22]

> "Definitely, that's [the value of the prospect list] the only reason I would ever use it." [26:36]

Another suggested incentive for increasing user-rep adoption was to modify the data entry process to increase *ease of use*

> "The only thing I think about *POINT* is it's hard to type in when you have to reschedule an appointment. You almost have to go in there and under the appointment you can say, okay, the appointment has been cancelled and then you have to go in and type in a new appointment instead of just reschedule to this time. I think that would make things a lot easier." [26:8]

Finally, the customer care reps wanted to have a *quick turnaround on requests*

> "I'd love to have access to data because I don't want to have to wait on anyone. … If I could say 'Here's what I need to see and here's when I need to see it' and it would come right away." [20:5]

In summary, the User-Reps spoke minimally about *VoiceTech's* implementation process. Customer care User-Reps noted their frustrations with the length of time required to make changes to the SFA, e.g. "submit to IT queue" and "quick turnaround on requests." User-Reps believed they would use the SFA if it was easier to use and would help them identify prospects, e.g. "ease of use" and "facilitate prospect management," See Table 7.5.

Table 7.5 Summary Evidence of The User-Reps' Initial TFRs

User-Reps	Nature of Technology	**Images of Technology** • --	**Technology capabilities and functions** • *Mobility* • *Mapping capabilities* • *Real-time reporting*
	Technology Strategy	**Rationale for technology acquisition and implementation** • --	**Projected value of technology** • *Smarter sales force* • *Enhanced customer service management*
	Technology in Use	**Use of technology** • *Daily Activities* • *Appointment management* • *Order Tracking* • *Remote SFA access* • *Customer contacts* • *Customer Relationship Management* • *Intranet supplements training*	**Consequences from use of technology** • *Junior sales reps not using the technology* • *Paper reports used to manage reps* • *Not easily used or useful* • *Information is not real-time* • *SFA is slow* • *PC sharing causes frustration* • *SFA not used to identify prospects or DNC's* • *Duplicate information in multiple systems* • *Duplicate and conflicting data* • *Data is unreliable* • *No online form capability* • *Mobile access to information is limited* • *Limited mobile functionality* • *Mobile solution makes sales force less interactive with customers* • *SFA used as arbiter* • *Territories not well understood*
	Technology Implementation	**Organizational implementation process** • *Submit to IT queue*	**Individual adoption incentives** • *Facilitates prospect management* • *Ease of use* • *Quick turnaround on requests*

7.2 Incongruence evidence and analysis

Following Orlikowski and Gash (1994), we use the analysis of initial TFRs at *VoiceTech* to evaluate TFR incongruencies between roles. This analysis reveals important differences in understanding across roles as the innovation effort was initiated. Evidence of these differences is presented in the following based on comparisons of TFRs across roles. Table 7.6 summarizes these incongruencies.

7.2.1 Incongruence in Use of Technology

There was incongruence in understanding why *VoiceTech* was using an SFA. This incongruence existed between Champions and Innovators, on one hand, and Technologists and Users, on the other. The Champions and Innovators had a nuanced view of how technology can improve sales performance in different areas. The Technologists and Users had a much simpler view restricted to few areas of the sales process.

The CMO used aggregate sales results information based on weekly manual consolidation of sales spreadsheets. He understood the efforts of the involved stakeholders in manually creating these reports

> "The [productivity analysis] report has … the productivity per sales rep in each market. … They can get the data from *POINT* and from other … things that people submit. But, there is a tremendous amount of manual Excel spreadsheets to bubble this stuff up. [The Marketing Analyst] … gets everyone's [spreadsheets] on Saturday. He works on them on Sunday and sends them in to [executives], myself, and all the [senior sales managers]. Daily, the branch managers go into their tracker, which is an Excel spreadsheet, and they say, oh, look at that! We are at this many deals by channel by product. And they send us an email. There's probably fifty people on that email." [1:15, 1:18]

Also, the Marketing Analyst, as an Innovator, understood the results, the source of the data, and how it could be used

> "Month-end results come from an automated report. This comes right from Siebel data. These are official results so they come right from the system. This is just a different formatting of the same data." [16:31]

> "This is something that the branch uses as a backup to Siebel. So when they are entering orders into Siebel or receiving orders, they'll enter in information related to this order on this big list here and they'll enter some people who sold it and what the product is and when it was signed and some other information." [16:40]

However, the Technologists' understanding of complexity of use was not aligned with the needs and current uses of the SFA. The director of IT saw little need for change in *VoiceTech's* processes with the new Siebel SFA

> "There will be very little difference between what we capture today versus what we're going to capture … in Siebel." [39:342]

> "They update it as necessary and really in addition to that, the only other information they're entering as it relates to that specific prospect is 'I went out on the first meeting with this prospect on this date and on this time and here's the result of that meeting' after they went out on it." [39:344]

> "So, as you can see, there's not a whole lot of information they're doing in *POINT*. They're coming in here and they're scheduling appointments and they're logging statuses against appointments and that's 90% of what they do in here. It's super simple." [39:412]

Likewise, the Users believed the SFA was primarily used for tracking and scheduling of appointments

> "*POINT* is really our territory management … [and] enables reps to go into particular accounts and input data and in essence reserve the account." [18:14]

> "You have a few functions in *POINT*, an appointment tracker, and you have the list of your opportunities. You can view a Do Not Call list … and you can fill in your [activity report] … with just a base number, no details" [15:27]

> "I think it's a pretty good tool for tracking, you know, our activity" [26:3]

> "[The SFA is used] … for performance … what they've sold and I guess on a daily basis of maybe appointment trackers, too, how many appointments they have set for the week." [7:20]

This incongruence regarding technology in use at *VoiceTech* created a tension between the stakeholders. Champions and Innovators envisioned, on the one hand, an SFA that would enhance the Users' sales performance. They understood *VoiceTech's* growth was not sustainable using a simple SFA. The Technologists, on the other hand, believed there would be few changes in the SFA other than the technology platform being more stable. Also, the User-Reps believed the SFA to exist only for entering the basic information about their daily activities. The User- Managers believed the SFA's main purpose was to give them occasional reports about User-Reps' performance.

7.2.2 Incongruence in Technology Strategy

A second incongruence was that Champions, on one hand, believed they had a clear strategy and vision for implementing Siebel SFA and for innovating the *VoiceTech* sales process

> "We decided that *POINT* really wasn't going to be able to take us where we wanted to go. When we looked at, well, … ultimately we want to be able to have our sales reps equipped with a [mobile] device that they can use in the field, *POINT* didn't really have that connection built in whereas Siebel did. Siebel [is] our base CRM for everything else that we do. They were willing to give us great pricing. So, strategically we thought this would be a better path for us to go down to implement [solutions] that will tie into everything else that we have already.

On the other hand, the Innovators believed *VoiceTech* lacked a global vision and was only tactical in implementing and adopting technologies and making small incremental changes to the sales process

> "I think we have a lot of that information in different places, but I think what we're having to find is as a global initiative, we haven't taken like a global vision and documented that." [39:602]

> "I think what you're asking for is what we would call a vision statement about what in a perfect world, how would we want this whole thing to work in a global sense. We have to find that right now." [39:622]

This incongruence between the Champions, who led *VoiceTech,* and the Innovators, who were charged with implementing the new SFA created uncertainty about how to enhance the sales performance. Both stakeholder groups wanted an SFA that provided enhanced benefits to the whole sales organization. However, without clearly communicated and achievable goals, the technology strategy's existence was in question.

7.2.3 Incongruence in Projected value of technology vs. Consequences from use of technology

The third incongruence, on one hand, was the User-Reps believed the SFA should provide support for them to make smarter decisions. This was reinforced by User-Reps seeing much value in having enhanced prospect data

> "I feel like we should have a list like go to these specific businesses this week. They have not been hit in a while. Their contracts are coming up or they are not

> in a binding contract, we haven't talked to them in a while, these would be good prospects. But instead it is just 'go find them.' "[9:16]

However, on the other hand, the Users-Managers believed the SFA would help them control User-Rep activities. This view was enforced by User-Manager comments on how they believed the SFA should be used

> "Every sales team fills out [a report] every Friday night and turns it in to our vice president who then sends it to people above them … Pulling the report is very beneficial to us because … reps can't lie to us [by saying] "I ran this many appointments, I ran eight." We can look and see if they really ran four. They may have had eight scheduled but four of them canceled. I think it's really beneficial … to see their closing ratio. I think that stuff is very, very beneficial for us as management." [22:2]

The User-Reps wanted to use the SFA to make themselves smarter sales reps. They believed they could use SFA information to target prospects with expiring competitor contracts. The User-Managers believed additional information should be used to control sales reps more effectively. The incongruence was in how these stakeholders perceived SFA value. Should sales reps discover sales managers using sales-rep-entered information against the sales reps, the likely result would be decreased SFA use.

Table 7.6 Summary of Incongruecy Evidence

Incongruency Summary
Use of Technology • Champions, Innovators – Nuanced view of how technology can improve sales performance • Technologists, Users – simpler view restricted to few areas of sales process **Technology Strategy** • Champions- believed *VoiceTech* had a clear strategy and vision for implementing SFA • Innovators – believed *VoiceTech* lacked a global vision and was merely tactical in implementing SFA **Projected value *versus* Consequences from use of technology** • User-Reps – believed SFA should provide support for making smarter decisions • User-Managers – believed SFA would help them control User-Rep activities

7.3 Inconsistency evidence and analysis

Finally, as part of the static analysis of TFRs at *VoiceTech*, we go beyond Orlikowski and Gash's approach by analyzing TFR inconsistencies. Inconsistencies reveal important differences in understanding within roles as the innovation effort was initiated. Evidence of these differences is presented here based on comparisons of statements within each role. Table 7.7 summarizes these inconsistencies.

7.3.1 The Champions' Inconsistencies

Technology strategy vs. Technology implementation. Technology was a tool by which the CMO had sanctioned the position of SFA within the organization. Initially, he chose the inferior *POINT* platform over a more robust platform. However, the CMO was a proponent of using "smart" technology and taking advantage of available sales tools. He believed using these smart tools would help address and resolve some of the retention problems *VoiceTech* was experiencing.

> "Our challenge is that we are doing a lot of brute force [sales]. We are not necessarily being, and this is something you can say of corporate, they don't want to help me with this, but we're not being as smart as we could be. We are not taking advantage of tools and technology like we should be." [1:5]

However, when *VoiceTech* acquired the new SFA, it copied the old sales process to the new platform instead of leveraging the new platform to innovate the sales process. The marketing director wanted to take small steps

> "We need to get a base platform that's reliable and then an extension in step one is giving them the BlackBerry which we already know Siebel can integrate with and then if we wanted to take it, the step three could be a more fully functional device." [40:246]

Thus, the inconsistency is that Champions did not create an environment where "smart" technology made the sales force smarter. The level of resources allocated (or allowed) by Champions for implementation was minimal.

Projected value of technology vs. Technology in use. The Champions envisioned an SFA that promoted smart behavior in the sales organization. They believed the value of the new Siebel SFA would be collecting better information on prospects and using better information to increase sales

> "One of the things we wanted was to increase reporting efficiency. … We wanted to automatically generate rolled up reports. … Just all kinds of things that we don't have the ability to do in the manual paper world. We also thought we could do a better job of collecting prospect profile information, what industry are they in, how many employees do they have, what competitors do they have right now." [40:51]

However, the Champions promoted others being smarter, but did not change their own behavior. For example, manual processes like sales spreadsheets continued to be used extensively in forecasting and tracking results

> "Monthly, I get a report. It's a one-pager. It's in Excel, and it basically lists by market by channel by package, you know, we have voice one, two and three, the number of sales, installs, churn, customers (inaudible) all in one nice spreadsheet. I like it. I love it a lot because I can go in and manipulate it, play with it." [1:10]

The inconsistency is the Champions appreciated the potential value of fully utilizing the new SFA, but still promoted, encouraged, and rewarded traditional behaviors within the sales organization.

7.3.2 The Innovators' Inconsistencies

Projected value of technology vs. Technology implementation. The Innovators believed mobility would be of great benefit to the sales reps

> "We [could] get [data] that tells all of the prospects that are in this building. So, you go into a building. [Sales reps] want to know who is in this building and they pull up that building code and get a list of all of the leads and quickly determine which ones would be valid prospects and then go talk to those [prospects]." [40:234]

However, the Innovators continued to inherit whatever IT provided, and IT did not guide SFA implementation to achieve smarter management or a smarter sales force

> "We're getting push back from IT that we're not buying a certain module. Therefore we are limited in what they can do. So that's what's driving us." [16:104]

The inconsistency was that Innovators perceived an SFA to be beneficial to the sales reps. They believed IT was leading the way in "smarter sales" SFA implementation when, in fact, the reality was that IT was trying to minimize the amount of work it had to do to implement the system.

Projected value of technology vs. Technology in use. One of the Innovators' projected values of the SFA was it could enhance real-time reporting for User-Managers

> "It would be a dream if the reps with the handheld device could update something in the field and the system would have that updated and there was a dashboard somewhere in the SFA where [managers] could see by rep what the activity was. That would be very helpful." [16:101]

However, spreadsheets based on non-real-time data were created by the Innovators and distributed to managers and Champions

> "I pull a query for that. There are some things that I just pull." [16:167]

> "That's manual branch data that is … put here. There is Siebel [CRM] data that's included in here, as well. … So there's a mix of system data and manual inputs to generate this report." [40:99]

The inconsistency was the Innovators continued to provide manually produced spreadsheets to User-Managers and Champions instead of utilizing the SFA to develop "smarter sales" throughout the organization.

7.3.3 The Technologists' Inconsistencies

Projected value of technology vs. Technology in use. The Technologists took a minimalist approach to IT and minimized work performed for sales operations. The Technologists believed there was a low requirements uncertainty for the SFA project and therefore minimized the project's resource allocation. The Technologists commented

> "A big focus of the *POINT*'s effort from day one was to be as light weight as possible." [13:5]

> "Right now the reason we're implementing as is, … the stability of *POINT* and they need something to work with and due to constraints, you know, we can't [allocate more resources]." [39:310]

Even with minimal resources allocated, the CIO believed the IT department would build the SFA to enable the Champions' smarter sales vision

> "[The SFA] has the potential to be an enabler to support other broader efforts, which is how do we make the sales reps smarter, working smarter rather than working harder." [13:83]

The inconsistency was Technologists perceived the SFA conversion task to be minimal when in fact the task was quite challenging. Moreover, the Technologists understood other stakeholders at *VoiceTech* were envisioning an SFA that provided innovative solutions for the company, including mobile access to SFA data, real-time reporting, location-aware prospect identification, and ubiquitous connections.

Projected value of technology vs. Organizational implementation process. The Technologists inherited the Champions' vision of a smarter sales organization

> "At some point we need to … make the system smarter than existing, so we've done some of that already and we're tracking some of those requests. They're just not on track to be deployed" [39:476]

In fact, the Technologists basically viewed the SFA as a simple solution. The director of IT planning commented

> "So you guys can see it took me all of probably about two to three minutes to create this … so it's pretty easy for the rep. … As you can see, there's not a whole lot of information they're doing in *POINT*. … It's super simple." [39:412]

Moreover, the director of IT planning acknowledged IT removed much of the new SFA's built-in functionality to make it "simple"

> "We ripped out a ton of functionality within the SFA so it's very narrowly focused on what we need it for, so most of the development on the SFA is turning off stuff versus maximizing return on stuff, so it's a very simple solution." [40:189]

The inconsistency was the Technologists understood the vision of a smarter sales organization, but still decided to replicate the existing system. Hence, the Technologists were not carrying out *VoiceTech's* espoused "smarter sales force" goal and did not exercise the IT leadership required to reach this goal.

Table 7.7 Summary of Inconsistency Evidence

Stakeholder	Inconsistencies
Champions	**Technology strategy vs. Technology implementation –** • Champions did not create environment where smart technology made sales force smarter • However, the level of resources allocated or allowed by Champions was minimal **Projected value of technology vs. Technology in use** • Champions appreciated the potential value of fully utilizing the new SFA • However, Champions still promoted, encouraged, and rewarded traditional behaviors

	within the sales organization
Innovators	**Projected value of technology vs. Technology implementation** • Innovators perceived an SFA to be beneficial to the sales reps. They believed IT was leading the way in "smarter sales" SFA implementation • However, the Innovators view was inconsistent with the fact that IT was trying to minimize the amount of work it had to do to implement the system **Projected value of technology vs. Technology in use** • Innovators continued to provide manually produced spreadsheets to User-Managers and Champions • Innovators were not utilizing the SFA to develop "smarter sales" throughout the organization
Technologists	**Projected value of technology vs. Technology in use** • Technologists perceived the SFA conversion task to be minimal • In fact the task was quite challenging when considering how other stakeholders envisioned the SFA

7.4 Discussion

Our focus in this chapter was to better understand the role of TFRs in IT-enabled organizational change based on detailed analyses of the sales process innovation project at *VoiceTech.* Specifically, we applied Orlikowski and Gash's (1994) TFR theory to analyze the rich data we had collected throughout our action research at *VoiceTech,* including collaborative workshops with key stakeholders, interviews with Users, Managers, Technologists, Innovators, and Champions, and several on-site observations.

We approached these analyses with the inspiration that there is more to TFR than frame incongruence (Orlikowski and Gash 1994). Davidson (2002) brought forth the idea of TFR shifts while others, for example, examined TFR using actor network theory (Lin & Cornford, 2000b), power struggles (Lin & Silva, 2005), and how political processes shape IT adoption (McGovern & Hicks, 2004). However, extant literature presents no salient model for examining TFR in action research (Davidson 2006). Thus, in this section we started to fill this gap by answering our first research question: "How can TFR be adapted and applied to support action research into IT-enabled change efforts?"

The section has presented a static view of TFRs related to IT-enabled change at *VoiceTech* and the underlying analysis and resulting findings offers initial contributions to TFR theory. First, we have elaborated our understanding of the role of TFRs during IT-enabled organizational change. Second, we developed and elaborated the TFR constructs in a binary decision model and related coding scheme. Third, we extended TFR theory to include inconsistencies in TFRs for specific stakeholder roles. These contributions are presented and substantiated in detail below.

Contribution 1: Understanding the role of TFRs in IT-enabled organizational change

The IT-enabled change literature is limited in understanding how TFRs evolve and interact with outcomes during IT-enabled change processes. The chapter provides important insights from *VoiceTech* by revealing the TFRs for five roles as the SFA initiative was initiated. These analyses established the TFR baseline from which the collaboration would proceed and for evaluating the change process and its outcome. Chapter 7 provides further details by identifying subsequent shifts in TFRs for each stakeholder group and by focusing in greater detail on how the Innovators interacted over time with the Researchers.

We found the Champions to be idealistic, but inconsistent in how they initially lead the sales organization's process innovation efforts. For example, the Champions were visionary and understood that, with the current growth of the company, *VoiceTech* could not continue with its legacy SFA. However, the Champions had an uncertain transition strategy and a short planning horizon. Additionally, the Champions insisted on *VoiceTech* remaining as technology minimalists. For example, the Champions valued cost minimization over providing sales reps the best mobile SFA technology. They also perceived that the SFA would give them a smarter sales force, while initially being satisfied with applying minimal technology to achieve the desired level of sales force smartness. Moreover, the Champions did not mandate that the SFA be used in all cases as the authoritative information source. Instead, they continued to tolerate multiple information systems with manual reports, emails, and spreadsheets.

Similarly, we found the Innovators to be visionary, but practical problem solvers. They were caught between all stakeholders while effecting IT-enabled change at *VoiceTech.* For example, the Innovators were responsible for coordination and overall management of the innovation effort. Thus, they worked closely with User-Reps and User-Managers to understand sales operation needs; with Champions to understand the vision of executives; and with the Technologists to understand technological capabilities and project management concerns. While they generally understood the technological capabilities of the SFA, the Innovators saw the Technologists as responsible for technology development. Still, the Innovators believed that the Technologists limited the available SFA functionality. At the same time, because they understood information needs of the sales organization, the Innovators were responsible for increasing adoption and use of the SFA. As a result, they believed increased adoption and use of the SFA would lead to a smarter sales force. Additionally, the Innovators were aware of the consequences from continued use of multiple information systems and a non-real-time SFA. Thus, they believed a real-time, single-source system would provide User-Reps and User-Managers the needed information.

The Technologists were reactionary. They were not technology leaders in the sales organization and showed little vision for process innovation. Instead, the Technologists continually minimized the amount of work they believed required to successfully implement sales process innovations. For example, they believed their main objective in developing the SFA was to "turn off" functionality. Likewise, the Technologists' goal, as they perceived it, was to replicate the legacy SFA's functionality on the new, more stable Siebel SFA platform. Similarly, the Technologists believed the SFA would be limited in its use and that User-Reps only wanted simplistic functionality. Additionally, the Technologists perceived the mobile SFA as having limited capabilities. Thus, they were not interested in exploring innovative ideas regarding mobile SFA usage.

The User-Managers had no vision for sales process innovation. The User-Managers' compensation dictated their emphasis on using the SFA. In the present situation, this meant they de-emphasized the importance of accurate, real-time sales data in the SFA. For example, User-Managers viewed problems only in the short-term. They were concerned with the specific details of the SFA as it affected their daily job performance. This included managing their territories, tracking sales, supporting forecasting, and creating User-Rep performance reports. While they did see value in an integrated data source, it was confined to improving their own sales team's performance rather than contributing to the broader innovation context. Due to a limitation in the SFA, the User-Managers were restricted from viewing their User-Reps' individual sales performance. This limitation was a disincentive for adopting the SFA and

made the SFA less useful to them on a daily basis. Thus, they continued to rely on manual sales reports, spreadsheets, and white boards as their "real-time" reporting systems.

The User-Reps expressed real problems and real consequences from using the SFA. They were interested in improving their own job performance, but they were skeptical of how much benefit they would get from the new SFA due to negative experiences with the prior SFA. For example, the User-Reps believed a mobile SFA would make a smarter sales force. However, as the primary users of the SFA, the User-Reps were discouraged that the SFA was not easily used or useful. Also, they did not rely on data in the SFA because it was not real-time. The User-Reps perceived the SFA to be a slow system of shared computers, to produce unreliable data, and to require duplicative work. Thus, until the User-Reps were given an SFA that could resolve those problems, it was unlikely they would willingly adopt and use the system.

These analyses provided evidence that important incongruencies were represented at *VoiceTech.* For example, an important incongruence during Initiation was in understanding *VoiceTech's* use of technology. This incongruence was between the Champions and Innovators, on one hand, and Technologists and Users, on the other. Whereas the Champions and Innovators understood how the SFA could improve the sales organization, the Technologists and Users believed there would be little difference in the old and new SFA systems. This incongruence created tensions between stakeholders. Once Champions and Innovators understood this incongruence, they would be able to modify their communications to Users regarding SFA use.

Another important incongruence during this period concerned stakeholder perceptions of *VoiceTech*'s technology strategy. The Champions, on one hand, believed their strategy and vision for the Siebel SFA was clearly communicated as being a better system for integrating with other systems. On the other hand, the Innovators were uncertain of the overall strategy and explicitly believed there was no clear vision for implementing the new SFA. This disconnect led to miscommunications, misunderstandings, and uncertainty between Champions and Innovators. To eliminate this incongruence, the Innovators believed it was their responsibility to develop and clearly communicate an overall vision for the SFA implementation.

The third significant incongruence was between the projected value of the SFA as perceived by the User-Reps, on one hand, and the consequences from use of technology as perceived User-Managers on the other hand. The User-Reps believed that the value of the new SFA was it would support their sales activities. However, the User-Managers believed that the value of the SFA was it would enhance *VoiceTech* management's ability to monitor and manage User-Reps. This incongruence created distrust within the User-Rep community. User-Reps distrusted the SFA because they believed the majority of SFA benefits accrued to the User-Managers. Understanding this incongruence prompted *VoiceTech*, later in the project, to include beneficial SFA features for User-Reps that could be easily used and clearly communicated.

Contribution 2: Development of TFR constructs to be supportive of detailed data analysis

Our second contribution is the extension and elaboration of TFR constructs (see Table 6.7) and development of new instruments for detailed data analysis (see Figure 4.1 and Figure 6.7). We based our framework on Orlikowski and Gash's (1994) TFR domains (see Table 4.1). Orlikowski and Gash

established *Nature of Technology, Technology Strategy, and Technology in Use* as their TFR domains. After reflecting on our data and TFR theory we added *Technology Implementation* as a fourth domain. Moreover, based on the TFR domain definitions established by Orlikowski and Gash and our definition for *Technology Implementation*, we established two sub-domains for each TFR domain. These extensions of TFR theory established a broader and more elaborate foundation for analyzing stakeholder perceptions during IT-enabled change.

Within *Nature of Technology*, we defined sub-domains as *images of technology* and *technology capabilities and functions.* The *Nature of Technology* is context independent and identifies a stakeholder's familiarity with technology. *Technology Strategy*'s two sub-domains were *rationale for technology acquisition and implementation* and *projected value of technology*. These sub-domains helped us understand stakeholder perceptions of why *VoiceTech* was adopting and implementing the selected SFA and how it would be of benefit to the organization. The *Technology in Use* sub domains were *use of technology* and *consequences from use of technology*. These provided insights into stakeholder perceptions of how the technology was actually used (or not used) and consequences resulting from use (or non-use). As action researchers, our active participation in the project influenced ongoing implementation decisions. Hence, we developed the *Technology Implementation* domain with its two sub-domains of *organizational implementation process* and *individual adoption incentives.* These sub-domains helped us establish stakeholder perceptions of how SFA was being implemented at *VoiceTech* and what incentives were provided to encourage adoption.

In addition, we developed a binary decision model (see Figure 4.1) for determining which, if any, of the domains and sub-domains applied to each stakeholder utterance. In this way, we were able to complete a rigorous, detailed, and comparative analysis of stakeholder perceptions. The analysis proceeded by coding each individual utterance and grouping utterances into themes within each sub-domain. This allowed us to aggregate and summarize our findings within and across roles. By adapting and elaborating TFR constructs and developing new instruments, we were better equipped to provide detailed analysis of stakeholder perceptions.

Contribution 3: Extending TFR theory to include inconsistencies in TFRs for specific groups

Focusing on a static view of stakeholder perceptions, Orlikowski and Gash (1994) provided evidence of TFR incongruencies between stakeholder groups. As an important extension of the TFR literature, our analyses also revealed inconsistencies within stakeholder groups. Inconsistencies and incongruencies are quite different. Whereas incongruencies represent differences in perspectives across stakeholder groups, inconsistencies are expressions of conflicting views within a particular stakeholder group.

For example, we found the Champions to be inconsistent, on the one hand, in their perception of the SFA as a smart technology and, on the other hand, how they permitted minimal resources for implementing smart solutions. This particular inconsistency was a theme which would continue throughout the project. However, as we elaborate in the next chapter, understanding the existence of this inconsistency within the Champions' group allowed the Researchers and Innovators to push for more resources and "smarter" solutions.

Also, the Champions were inconsistent, on the one hand, in their understanding of the value of a "smart" technology strategy and, on the other hand, their unwillingness to make necessary changes in their own

technology usage. The Champions sustained *VoiceTech's* multiple systems through their own creation and tolerance of manual information systems. They believed that at some point in the future they would move to a single source of information, but they were unwilling to commit themselves to that change during this period.

The Innovators were inconsistent in their view of the value of the technology. For example, on the one hand, the Innovators viewed SFA mobility as a significant value for giving *VoiceTech* a technological edge by giving User-Reps an advantage and increase sales knowledge in the field. However, on the other hand, during Initiation the Innovators were unwilling to challenge the Technologists on their limited view of how the SFA could benefit User-Reps. As a result, the Innovators were willing to implement the SFA system as developed by Technologists. As we will discuss in the next chapter, the Innovators' view changed over time and eventually led to a changes in the management of the IT department.

Additionally, the Innovators were inconsistent, on the one hand, with a projected value of technology that included the benefits of enhanced real-time reporting from the SFA, and, on the other hand, with a view of technology use that continued their own practice of creating numerous manual reports. This inconsistency promulgated the problems with multiple information sources and unreliable data at *VoiceTech*. As we shall see in the next chapter, once this inconsistency was *pointed* out to the Innovators, they understood they should change their report development methods. The result was the development of a comprehensive SFA vision for moving the SFA project forward.

Likewise, we found the Technologists, on the one hand, understood *VoiceTech's* vision of smarter sales, yet, on the other hand, did not exhibit IT thought leadership by replicating the existing SFA on a the new technology platform. The Technologists acknowledged that they removed much of the functionality of the SFA to make it simple. While this may have been what some users and managers wanted, it showed little critical reflection on how to develop and implement an overall vision for the SFA.

Additionally, the Technologists were inconsistent in how they perceived the implementation task. On the one hand, they understood *VoiceTech* wanted to use the SFA project to innovate the entire sales process. On the other hand, they minimized the effort required to develop the SFA as part of effective sales process innovation. As we elaborate in Chapter 8, appreciating and resolving these inconsistencies required changes in the leadership of the implementation process at *VoiceTech.*

Summary. This chapter used TFR theory, incongruencies, and inconsistencies to examine TFRs during the Initiation of the *VoiceTech* project. We established in great detail the TFRs that initially existed for each of the stakeholders at *VoiceTech.* We described important examples of incongruencies between stakeholder groups and we detailed significant inconsistencies within stakeholder groups.

We have made three important contributions in this chapter. First, we established that TFR theory could be used to examine IT-enabled organizational change. Second, we developed and used TFR constructs that were supportive of our detailed data analysis. Third, we extended TFR theory to include inconsistencies and differentiated those from the incongruencies already established in the literature. It is important to note that because human beings are involved, inconsistencies do exist in individuals' perceptions and actions. The significance of identifying inconsistencies is, similar to incongruencies, to help understand significant barriers towards and possible drivers of IT-enabled change.

Orlikowski and Gash (1994) present TFR as a process theory that can be used to examine the shifts that occur over time during IT-enabled change. Chapter 7 established the baseline from which subsequent shifts occurred during our intervention at *VoiceTech*. In the following chapter, we examine how some of these inconsistencies and incongruencies were resolved; and why some where not resolved. Chapter 8 contains the details of TFR shifts and analyses of their influence on the changes that were to unfold over time.

Chapter 8 Analysis of TFRs: A Dynamic View

This chapter introduces time as a major structuring device for identifying how and when TFRs shifted and the dynamics influencing these shifts. Consistent with Davidson's (2002) original analyses, a first analysis considers TFR shifts for the secondary roles of Champions, Technologists, and Users between pre-implementation and implementation (see agency relationships in Figure 5.3). A second analysis goes beyond existing TFR theory to analyze in greater detail the interactions between the primary roles of Innovators and Researchers during the problem-solving cycle and how these interactions affected the Innovators' TFRs. Based on these analyses, we then propose how to extend current theory to include TFR in action.

8.1 Shift Evidence and Analysis for Secondary Roles

Following Davidson (2002), this section analyzes framing shifts. Davidson analyzed shifts in frame salience within a requirements determination project. Similarly, our analysis provides evidence of modified frames (frames existing in a prior period but now modified) in TFR domains for the Champions, Technologists, User-Managers, and User-Reps during the SFA implementation. Our analysis also provides evidence for significant new frames (frames observed for the first time) that emerged and became salient during the implementation. Tables 8.1 – 8.5 summarize these shifts.

8.1.1 TFR Shifts for Champions

Evidence of The Champions' modified and new frames is explained below and summarized in Table 8.1.

8.1.1.1 Modified Frames

Images of Technology. We observed a shift in the Champions' images of technology. In an interview during Initiation (see timeline in Figure 5.4), the Director of Marketing and Sales Operations expressed *VoiceTech* had *unreliable technology*

> "Most of the reason it's not a success is just the platform is not stable. It doesn't come up, it doesn't work, it doesn't." [1:33]

Meanwhile, the CMO had, for some time, dissatisfied with how *VoiceTech* was using its SFA technology. He believed the company was finally putting in place better sales tools which would make the sales force more efficient. However, his concern was whether the sales force would adopt and use these new sales tools, including the SFA and BlackBerrys, in a smart way. By November 2006, the CMO's view had changed. In a follow-up interview he spoke glowingly about managers' and users' increased confidence in the SFA. The CMO now believed *VoiceTech* had transitioned to a *world-class solution*

> "I think, number one, without a doubt is confidence. Confidence in the platform from the sales and marketing side. … From what we've got now with the Siebel SFA, we have a world-class solution. I think we've got a really good opportunity." [4:1]

In summary, the Champions' view shifted dramatically over the nine-month period between Initiation in February 2006 and the follow-up interview with the CMO in November 2006 (see Table 8.1). Much progress had been made in transitioning to the more stable Siebel SFA system. During Initiation, there was uncertainty regarding how sales reps and sales managers would respond to an improved and most

likely more complex Siebel SFA. By November 2006, the CMO believed those who were using the system had confidence in the platform. This was a TFR shift in the image of the technology from unreliable system to world-class solution.

8.1.1.2 Champions' New Frames

Rationale for technology acquisition and implementation. During WS2 in June 2006 (see Figure 5.4), the Director of Marketing and Sales Operations spoke about the reasons *VoiceTech* was giving sales reps BlackBerry devices. During this SFA release, BlackBerry distribution was limited based on sales performance. In the Director of Marketing and Sales Operations' view, *BlackBerrys were for product demos and rewards*

> "There are three reasons we're giving reps the BlackBerrys. First of all, it's something we sell now so they need to have it like a demo tool. And then … we're using it as a recognition device … it's not time-based, but more success-based. … Then, definitely being able to make them more productive." [35:5]

Interestingly, the Champions did not plan on giving BlackBerrys to all sales reps. Instead, situated in a sales culture, the Champions were focused on using BlackBerrys as an incentive for sales reps to achieve a certain sales level and to get the sales rep to not leave the company. At this stage of the SFA project, the Director of Marketing and Sales Operations was also concerned with recovery costs should a sales rep leave without returning the BlackBerry. As has been elaborated previously, *VoiceTech* was a cost-conscious organization and, as a result, giving every sales rep a BlackBerry was out of the question.

Projected value of technology. The Champions' perceptions of the value the selected technology would bring to *VoiceTech* were revealed over the duration of the project. First, the Director of Marketing and Sales Operations believed using the *SFA as a portal would increase use*

> "It's going to tell them when their customers are being to be installed, when they get paid. So I look at it as kind of the attraction that makes them want to log in more so than just that's why they are doing their job." [35:863]

The idea was this portal would incorporate pertinent information for sales reps and sales managers. Even though the Director of Marketing and Sales Operations acknowledged that entering opportunity and sales data into the SFA was part of a sales rep's job, she also understood the history of the legacy SFA at *VoiceTech.* This history included a system that was unreliable, unstable, and not useful in the eyes of most sales reps.

A shift in this perception was revealed in a November 2006 interview when the CMO believed one of the benefits of the SFA was it would enable sales reps to gather data in the field using the BlackBerry. As a result, he believed the *SFA provides visibility*

> "So, that visibility into the data that we already had is the number one thing that I'm seeing. Then, at the same point in time … part of what we're doing for the Siebel SFA is that we've now been able to bring BlackBerry into the mix." [4:35]

Finally, during the same November 2006 interview, the CMO believed that with the SFA, *VoiceTech* had made an important and valuable investment and that the *SFA gives confidence*

> "There are a lot of good features to come out but there's definitely a confidence that, wow, this is a really good tool. The company has made a really strong investment; this is going in the right direction." [4:15]

In summary, two new salient themes emerged within the Champions' TFRs over the duration of the project (see Table 8.1). The Champions' rationale for the BlackBerry technology was that the technology would be a useful product demonstration for potential customers. Simultaneously, the BlackBerry would provide an incentive for lower-level sales reps to achieve sales targets at which time they would be presented with their BlackBerry. Several projected values of the SFA technology emerged from the Champions during the project. The Champions believed a newly created portal enabled by the SFA could entice sales reps to use the system. Likewise, the CMO believed the BlackBerry provided sales reps and managers visibility into data gathered in the field and the SFA gave them confidence the data was reliable and the platform was stable.

Table 8.1 Evidence of TFR Shifts for Champions

Modified Frames	New Frames
Images of Technology: Shift from *Unreliable technology* to *World-class solution*	**Rationale for technology acquisition and implementation: *BlackBerrys as demo and reward***
Unreliable technology	***BlackBerrys were for product demos and rewards*:**
Director of Marketing and Sales Operations: (in 1st Interview): "Most of the reason it's not a success is just the platform is not stable. It doesn't come up, it doesn't work, it doesn't." [1:33]	Director of Marketing and Sales Operations (in WS2): "There are three reasons we're giving reps the BlackBerrys. First of all, it's something we sell now so they need to have it like a demo tool. And then … we're using it as a recognition device … it's not time-based, but more success-based. … Then, definitely being able to make them more productive." [35:5]
World-class solution	**Projected value of technology: *SFA provides visibility, SFA as portal will increase use, SFA gives confidence***
CMO (in 2nd interview): "I think, number one, without a doubt is confidence. Confidence in the platform from the sales and marketing side. … From what we've got now with the Siebel SFA, we have a world-class solution. I think we've got a really good opportunity." [4:1]	***SFA as a portal will increase use***
	Director of Marketing and Sales Operations (in WS2): "It's going to tell them when their customers are being to be installed, when they get paid. So I look at it as kind of the attraction that makes them want to log in more so than just the that's why they are doing their job." [35:863]
	SFA provides visibility
	CMO (in WS4 interview): "So, that visibility into the data that we already had is the number one thing that I'm seeing. Then, at the same point in time which is really part of what we're doing for the Siebel SFA is that we've now been able to bring BlackBerry into the mix. "[4:35]
	SFA gives confidence
	CMO (2nd interview): "There are a lot of good features to come out but there's definitely a confidence that, wow, this is a really good tool. The company has made a really strong investment; this is going in the right direction." [4:15]

8.1.2 TFR Shifts for Technologists

Evidence of the Technologists' modified and new frames is explained below and summarized in Table 8.2.

8.1.2.1 Modified Frames

Technology Capabilities and Functions. During WS1 in February 2006, the Technologists remained uncertain about the capabilities of the upcoming SFA and BlackBerry integration. The Director of IT Planning believed that the new SFA system basically would replicate the existing system

> "Even we don't have a good grasp for [BlackBerry capabilities]." [40:296]

Later, during WS4 in November 2006, the IT Business Analyst admitted that this lack of understanding was true during February but the Technologists now understood all of the BlackBerry capabilities

> "At the time in February [2006] we didn't know exactly what the BlackBerry could do, but we do now." [37:169]

Thus, there was a shift from uncertainty to understanding BlackBerry capabilities. This shift was based on the Technologists' experience in implementing a BlackBerry-capable SFA. The Technologists had worked to give sales reps and managers basic BlackBerry functionality. They believed this experience, along with collaboration from BlackBerry consultants, provided them the skills they lacked nine months prior. This shift also gave the Technologists more confidence to implement more complex SFA functionality into the BlackBerry.

Use of Technology. At Initiation in February 2006, the Technologists' perception of SFA use was that everything that was needed was available to sales reps and managers. The Technologists' initial view during WS1, as expressed by the Director of IT Planning, was that the *users only minimally exploit the technology's capabilities*

> "The SAM's and MD's just go into *POINT* for reporting purposes … to look at data that's already captured." [39:343]
>
> "This information is D&B up here and … sometimes they'll enter an additional contact down here. But most of the time they don't. Mainly they just enter the opportunity." [39:393]

Later, during WS3 in July 2006, the IT Business Analyst argued that *VoiceTech's sales process limited SFA exploitation*

> "We customized Siebel to do what [the legacy SFA] did. The way Siebel works out of the box is a contact management system where you're managing accounts and contacts. But the way *POINT* is designed is to search for a lead and then claim that account and put that in your account. … So to have a leads view you have to turn off the accounts view. So that's what we mean by turned off." [36:131]

Thus, there was a shift from the Technologists' perception that User-Reps minimally exploit the SFA to a perception that the *VoiceTech* sales process limits SFA exploitation. The shift to the latter view points to limitations with the SFA that could only be changed through a change in the *VoiceTech* sales process. Significantly, no longer were the Technologists arguing that the SFA users were the limiting factor for SFA progress. Instead, at least as perceived by the Technologists, the limitation now *pointed* to the fundamentals of the company's sales process.

In summary, the Technologists' TFR shifts were centered on understanding SFA capabilities and understanding how the SFA was used (see Table 8.2). They had greatly increased their understanding of BlackBerry capabilities and we detected a shift in this frame over time. Likewise, we detected a shift in how the Technologists perceived technology in use at *VoiceTech.* This perception shift was from users being a limiting factor to the *VoiceTech* sales process being a limiting factor.

8.1.2.2 New Frames

Technology capabilities and functions. Once the new SFA was introduced in June 2006, managers could no longer see reports on employees two or more levels below them. The SFA only reported managers' direct reports. Thus, as viewed by the Technologists in WS4, the new SFA functionality *limited managerial access to information*

> "Siebel only shows your direct reports right now. That's basic Siebel [functionality]." [37:94]
>
> "[Managers] do not automatically see everyone underneath them in Siebel because of the way that we do positions in Siebel. Everyone has a unique position in Siebel whereas the way Siebel was designed was that you're supposed to have positions and then people are in the positions." [37:164]

This awareness of after-implementation SFA limitations identified a problem. The Siebel SFA was operating as designed, yet the Technologists knew the *VoiceTech* sales process dictated a different setup. Solving this problem would eliminate one reason why managers didn't use the SFA as their sole source of sales information.

Rationale for technology acquisition and implementation. A significant cause of the data problems at *VoiceTech,* according to the Technologists, was the existence of duplicate records in the SFA. Sales reps might perform a cursory search in *POINT* for a prospect. For example, the prospect could be "I.B.M." yet the sales rep searched for "IBM" with no match. Not finding a match, the sales reps entered new prospects. In the legacy SFA there was nothing preventing this type of duplicity. Thus, as perceived by the IT Business Analyst, the acquisition of a de-duplication solution would help *VoiceTech avoid duplicate records*

> "So the main reason why we wanted to have that validation was to prevent duplicate records. … We had purchased a [de-duplication] application solution but that hasn't made it scope yet." [37:81]

By WS4, when the above quote was made, the Technologists knew the duplicate records problem was frustrating the sales force. The Technologists had a solution they believed would fix the issue but because of limited resources and time, the solution had not been implemented.

Organizational implementation process. During WS2 in June 2006 (see Figure 5.4), the Director of IT Planning argued sales reps were limited in what they could do with the BlackBerry since the *BlackBerry design limits data collection*

> "We struggled with how they are going to enter all that information on a BlackBerry because it is going to be somewhat cumbersome." [35:112]
>
> "I think we still need to figure out this whole cold calling and how we capture that because that is valuable data to capture. "[35:179]

This perception emerged as the Technologists gained more experience in implementing SFA functionality into the BlackBerry. Interestingly, as the Technologists became more familiar with BlackBerry integration, they believed valuable data on prospects and sales opportunities was being ignored due to these limitations.

In summary, three new salient themes emerged within the Technologists' TFRs over the duration of the project (see Table 8.2). The Technologists' believed there were several limitations in how the system was being implemented and used at *VoiceTech.* First, the Technologists' view of the SFA's capabilities and functions was the SFA was working as designed. However, they believed internal *VoiceTech* processes limited User-Manager access to needed information. Also, the Technologists believed *VoiceTech* had acquired a de-duplication application that would solve a major User-Rep frustration with using the SFA. However, the solution had not been implemented into the SFA by WS4. Finally, the Technologists were struggling with how to better utilize the BlackBerry version of the SFA in the field. They believed the BlackBerry design limited how much data could be collected, thus limiting its usefulness.

Table 8.2 Evidence of TFR Shift for Technologists

Modified Frames	New Frames
Technology Capabilities and Functions: Shift from not understanding to understanding BlackBerry capabilities ***Replicate existing system [Don't understand BlackBerry's capabilities]*** Director of IT Planning (in WS1): "Even we don't have a good grasp for [BlackBerry capabilities]." [40:296] ***VoiceTech now understands the BlackBerry's capabilities*** IT Business Analyst (in WS4): "At the time in February [2006] we didn't know exactly what the BlackBerry could do, but we do now." [37:169]	**Technology capabilities and functions: *Limited managerial access to information*** IT Business Analyst (in WS4): "Siebel only shows your direct reports right now. That's basic Siebel [functionality] … " [37:94] IT Business Analyst (in WS4): "[Managers] do not automatically see everyone underneath them in Siebel because of the way that we do positions in Siebel. Everyone has a unique position in Siebel whereas the way Siebel was designed was that you're supposed to have positions and then people are in the positions. "[37:164]
	Rationale for technology acquisition and implementation: *Avoiding duplicate records* IT Business Analyst (in WS4): "So the main reason why we wanted to have that validation was to prevent duplicate records … We had purchased a [de-duplication] application solution but that hasn't made it scope yet." [37:81]
Use of Technology: Shift from *Users minimally exploit the SFA* to the *VoiceTech sales process limits SFA exploitation* ***Users only minimally exploit the technology's capabilities*** Director of IT Planning (in WS1): "The SAM's and MD's just go into *POINT* for reporting purposes … to look at data that's already captured." [39:343] Director of IT Planning (in WS1): "This information is D&B up here and … sometimes they'll enter an additional contact down here. But most of the time they don't. Mainly they just enter the opportunity." [39:393] ***VoiceTech sales process limits SFA exploitation*** IT Business Analyst (in WS3): "We customized Siebel to do what [the legacy SFA] did. The way Siebel works out of the box is a contact management system where you're managing accounts and contacts. But the way *POINT* is designed is to search for a lead and then claim that account and put that in your account. … So to have a leads view you have to turn off the accounts view. So that's what we mean by turned off." [36:131]	**Organizational implementation process: *BlackBerry design limits data collection*** Director of IT Planning (in WS2): "We struggled with how are they going enter all that information on a BlackBerry because it is going to be somewhat cumbersome . " [35:112] Director of IT Planning (in WS2): "I think we still need to figure out this whole cold calling and how we capture that because that is valuable data to capture. "[35:179]

8.1.3 TFR Shifts for User-Managers

Evidence of the User-Managers' new frames is explained below and summarized in Table 8.3. Given the data available from User-Managers we did not identify any evidence of their modified frames.

8.1.3.2 New Frames

Projected value of technology. In a follow-up interview in November 2006, *VoiceTech*'s VP of Sales believed the time was near for eliminating duplicative sources of sales information. His perception was the *SFA should become the real-time and authoritative information source*

> "I think as we get larger we'll need to do something like that [get rid of spreadsheets], just to be able to get the information. … I think it would be helpful even for upper management to get us each to manage what we're doing." [6:125]

Until this point, no senior manager had indicated readiness to eliminate the numerous spreadsheets, duplicative reports, and multiple emails used to track sales information on a daily basis. One of the values of the system as expressed earlier by other stakeholders was to eliminate these. Now, the most senior User-Manager believed this was possible and would be helpful for managing day-to-day activities.

Use of technology. In the November 2006 follow-up interview, the VP of Sales related his BlackBerry usage experience to that of the sales reps. For the VP of Sales, *BlackBerry was used primarily for phone and email*

> "[I use BlackBerry] primarily [for] email and reports. … A lot of attachments, and of course phone. But, the main thing there is email and phone primarily. … That's all. I don't use it for Siebel." [6:49]

Given the lack of BlackBerry SFA usage at the top, it is not surprising that User-Reps did not use their own BlackBerrys to the fullest extent possible. In a November 2006 interview, a sales manager in a Midwest *VoiceTech* office recognized the *limited rep usage of BlackBerry SFA*

> "I don't see the reps using [the BlackBerry SFA] as much as they should." [8:21]

These statements in November 2006 showed nominal use by managers and sales reps of the BlackBerry SFA. The User-Managers realized their own BlackBerry use was minimal while that of the User-Reps was less than expected.

Consequences from use of technology. In the past, *VoiceTech* rewarded sales managers with a bonus if all their sales reps were updating the SFA one hundred percent of the time. However, in November 2006, the sales manager in the Midwest *VoiceTech* office believed sales reps should *realize that SFA is part of job*

> "Well, [SFA usage] shouldn't be something we're bonus-ing a manager for. It should be something we penalize a manager for if it's not happening. That's part of their job." [8:16]

This statement by the sales manager was one of the first to recognize that using the SFA should not be optional for sales reps.

Organizational implementation process. In the November 2006 follow-up interviews, the User-Managers were consistent in their belief that communication and training should be enhanced for all SFA users. By this time, Siebel SFA had been in place for five months and there was an acknowledgement by senior management that more could be done with the SFA implementation process. First, the VP of Sales suggested that instead of additional SFA innovations, *VoiceTech* should require all users to get *enhanced training*

> "I think we need to fine tune what we have right now and get better at what we're using right now more so than putting more investment into future innovations. I

> think we should train our people and be more competent in what we can use today." [6:19]

Second, the sales manager in the Midwest office perceived lack of communication as a limiting factor during the implementation process. The manager believed executives and senior managers *need to communicate clear goals*

> "Even now, they don't verse us on that as much as I think they want. There have been times when we've had some of our execs here drop information on us. I recall six months ago [the CMO] staying in town and mentioning something about … upgrading in our Siebel. We didn't even know it was coming. … [The CMO] was here in town; [the SFA] was showing up in three weeks. We didn't even know it was in route." [8:30]

Third, the User-Managers perceived lack of a feedback avenue related to the SFA as a frustration. In the then-current process as described by the sales manager in the Midwest office, User-Reps could give feedback to their sales team managers. However, sales team managers did not have a clear feedback avenue defined. Instead of providing feedback on the SFA directly to the developers or IT representatives, sales reps had to go through several layers of bureaucracy to get their feedback heard. Thus, the User-Managers perceived that the implementation process would be improved and User-Reps well-served with a revamped *feedback system*

> "If you're asking for an official channel that reps have known about to say, hey, if you go down this channel, you can voice your opinion about what upgrades, maybe stuff like that? … I'm not aware of that something like that being in place." [8:35]

Individual adoption incentives. A Midwest sales manager perceived that using the BlackBerrys as an incentive was helping reduce the attrition rate at *VoiceTech.* He believed in using *technology as a reward*

> "Some of our sales teams have as many as 30-40% of our reps have BlackBerrys now. Getting these kids the tools to be able to get in and do that stuff, especially from their appointment, that's big." [8:4]

The sales manager's comment about the percentage of reps having BlackBerrys and the benefit they get from having them made the Researchers later question why all reps were not given the devices as soon as they were hired. The sales manager believed the incentive was working but, maybe unknowingly, also identified the weakness of only giving out BlackBerrys as an incentive.

The User-Managers also believed it was not enough to just give User-Reps BlackBerrys and expect them to perform better. Instead, the Midwest sales manager believed that if *VoiceTech* continued to add features to the BlackBerry, the design needed to change. in fact, the sales manager wanted the mobile SFA to be as similar as possible to the desktop SFA. This was to make certain that sales reps would not be doing duplicative training. As a result, the sales manager suggested *VoiceTech enhance BlackBerry usability*

> "We definitely need to make sure the keystrokes and the things that we're doing are similar with both products so we're not double training these guys. We train them too much as it is on other stuff. … But, if we can make that easier for them,

> I think we're going to see them go into the BlackBerrys more to get that data put in." [8:5; 8:22]

As an example, the sales manager wanted to make the BlackBerry SFA reflect the keystroke path that User-Reps used on the desktop version. He believed this would rapidly incentivize adoption and make the BlackBerry less confusing or intimidating to sales reps.

In summary, nine new salient themes emerged within the User-Managers' TFRs over the duration of the project (see Table 8.3). By November 2006, the User-Managers believed the SFA should be the authoritative source for real-time sales information. They had developed confidence in the new SFA and understood the investment would benefit the organization as more users exploited its capabilities. However, the User-Managers, and particularly the most senior User-Managers, did not themselves use the SFA much, if at all. They believed there was limited sales rep usage of the BlackBerry SFA. Yet, they also perceived using the SFA was part of the sales rep's job and that managers shouldn't be incentivized just because reps used the system. The User-Managers believed that the SFA implementation at *VoiceTech* was limited by minimal training, poor communication, and no readily available feedback loop for sales reps. They believed that BlackBerry technology as a reward was an effective incentive and that making the BlackBerry SFA more usable and similar to the desktop SFA would be an effective incentive.

Overall, the User-Managers appeared to recognize the value of the SFA in general and the BlackBerry specifically. They wanted their sales team leaders and sales reps to recognize that value as well. There were some contradictions with their own non-use of the SFA but, as mentioned previously, this was related to the then-present design of the SFA which limited their access to SFA data.

Table 8.3 Evidence of TFR Shifts for User-Managers

Modified Frames	New Frames
--	**Projected value of technology:*SFA as real-time and authoritative information source***
	VP of Sales: "I think as we get larger we'll need to do something like that [get rid of spreadsheets], just to be able to get the information … .I think it would be helpful even for upper management to get us each to manage what we're doing … " [6:125]
	Use of technology: How BlackBerry is used
	BlackBerry used primarily for phone and email (WS4 Interviews)
	VP of Sales: "[I use BlackBerry] primarily [for] email and reports. … A lot of attachments, and of course phone. But, the main thing there is email and phone primarily. … That's all. I don't use it for Siebel." [6:49]
	Limited rep usage of BlackBerry SFA (WS4 Interviews)
	Midwestern Sales Manager: "I don't see the reps using [the BlackBerry SFA] as much as they should." [8:21]
	Consequences from use of technology: *Realization that SFA is part of job (WS4 Interviews)*
	Midwestern Sales Manager: ""Well, [SFA usage] shouldn't be something we're bonus-ing a manager for. It should be something we penalize a manager for if it's not happening. That's part of their job." [8:16]
	Organizational implementation process: Communication and training should be enhanced *(WS4 Interviews)*
	Enhanced training required (WS4 Interviews)
	VP of Sales: "I think we need to fine tune what we have right now and get better at what we're using right now more so than

	putting more investment into future innovations. I think we should train our people and be more competent in what we can use today." [6:19] ***Need to communicate clear goals (WS4 Interviews)*** Midwestern Sales Manager: "Even now, they don't verse us on that as much as I think they want. There have been times when we've had some of our execs here drop information on us. I recall six months ago [the CMO] staying in town and mentioning something about … upgrading in our Siebel. We didn't even know it was coming. … [The CMO] was here in town; [the SFA] was showing up in three weeks. We didn't even know it was in route." [8:30] ***Need feedback system (WS4 Interviews)*** Midwestern Sales Manager: "If you're asking for an official channel that reps have known about to say, hey, if you go down this channel, you can voice your opinion about what upgrades, maybe stuff like that? … I'm not aware of that something like that being in place." [8:35] **Individual adoption incentives: *Technology as a reward (WS4 Interviews)*** Midwestern Sales Manager: "Some of our sales teams have as many as 30-40% of our reps have BlackBerrys now. Getting these kids the tools to be able to get in and do that stuff, especially from their appointment, that's big." [8:4] **Individual adoption incentives: *Enhanced BlackBerry usability (WS4 Interviews)*** Midwestern Sales Manager: "We definitely need to make sure the keystrokes and the things that we're doing are similar with both products so we're not double training these guys. We train them too much as it is on other stuff. … But, if we can make that easier for them, I think we're going to see them go into the BlackBerrys more to get that data put in." [8:5; 8:22]

8.1.4 TFR Shifts for User-Reps

Evidence of the User-Reps' modified and new frames is explained below and summarized in Table 8.4.

8.1.4.1 Modified Frames

Consequences of Technology use and **Technology capabilities and functions.** During Initiation interviews (see Figure 5.4), a recently-hired sales rep believed *VoiceTech* should provide sales reps with prospect information for making sales calls on specific businesses. As a consequence of non-use of available technology, the *SFA was not used to identify prospects and DNCs*

> "[Visiting every company is] a complete waste and seems there should be some system … We should have a list like 'go to these specific businesses this week. They have not been hit in a while. Their contracts are coming up or they are not in a binding contract, we haven't talked to them in a while, these would be good prospects.' But instead it is just 'go find them'. So people get frustrated seeing VoiceTech people every other month. "[9:16]

> "[On a recent day] we got kicked out by security in the middle of the third door and there went the day and so after that we just kind of had to walk around and see what was going on and I mean I didn't really use the territory book that much." [9:62]

Another sales rep in a southeast office supported the perception of SFA non-use. This sales rep refused to use the available technology – a printout of businesses to not call on – because it would take too much time. Another consequence of the non-use of the SFA was calling upon businesses that did not want to be called upon by *VoiceTech* sales reps

> "When somebody sends a branch email that says, 'Do Not Call this person,' that sticks in my head more than me flipping through and saying, 'Oh, you know, I just spent five minutes scanning this list and I'm not supposed to call this person the next card down.' "[15:35]

However, by November 2006, User-Reps understood how the SFA could help them in the field. A sales team leader in a central region office had several ideas for how *BlackBerry GPS can help identify prospects and DNC's*

> "How about I could use my BlackBerry and I could VPN into … my computer [while sitting] in traffic on the way to work and print out my *POINT*." [14:11]

> "If I have GPS … [for example] I can type in my territory and it knows where I am." [14:61]

Thus, a shift happened in the User-Reps' perception of how the SFA might be used to help them be more effective in the field. In most cases, User-Reps wanted more direction on which prospects to visit and which ones to avoid. The User-Reps believed having this type of information instantly available on their BlackBerry would make their days more effective.

Use of technology. During the Initiation interviews, some User-Reps were concerned that the sales rep-customer relationship would be negatively affected by sales reps using the mobile SFA in the field. Some User-Reps, including a southeast-area sales rep, perceived that the *mobile SFA solution makes sales force less interactive with customers*

> "I'm a phone person. I would rather be on the phone talking to someone than contacting via e-mail. It takes longer and it's - I hate to use the word unprofessional but it's less interaction so I don't know how to describe that." [2:11]

However, by November 2006, User-Reps were beginning to realize the possibilities of using the BlackBerry. For example, a central region sales team leader believed that the *SFA could communicate information about reps' customers*

> "You're making me think about what I did today and how I communicated with my reps and their complaint to me about installs or *POINT*. … When a customer of theirs has a trouble ticket and they go and they call customer care to open a trouble ticket, I figure the rep should know about that." [14:42]

Having the BlackBerry also led User-Reps to find creative ways to communicate with their customers and other sales reps. For example, a central region sales team leader was energized that his *BlackBerry was used for customer and rep interaction*

> "I make all my customers email me right to my freakin' hip. I have my fax go to my phone. I couldn't even imagine how I used to function without my

> BlackBerry. … [I interact] very frequently because now I can email the [10 sales reps in my group] … and I can send group texts. If I'm at an appointment, I just text them, 'Hey, I'm in an appointment. I'll call you right back.' [With] the BlackBerry instant messenger, I can just IM them; ... [I do this] … all the time." [14:9]

Thus, a shift occurred from User-Reps' perceiving during Initiation that the BlackBerry would make them less interactive with customers, to November 2006, when a User-Rep suggested the BlackBerry could be used constructively to interact with customers and communicate information about customers to other reps.

In summary, the User-Reps' TFR shifts were centered on identifying prospects and sharing information about and with customers (see Table 8.4). Initially, User-Reps were frustrated with the lack of BlackBerry functionality for these tasks. There was also the perception that using the BlackBerry would reduce interaction with prospects and other sales reps. Instead, the User-Reps became comfortable using the BlackBerry for these tasks and believed the BlackBerry enhanced interaction.

8.1.4.2 New Frames

Technology capabilities and functions. In November 2006, User-Reps had been using BlackBerrys for several months and limitations were based on their experience with the mobile SFA. For example, a sales team leader in a central office perceived that the *BlackBerry design limits internet access*

> "I was very excited to have this phone because of MapQuest … [but] the screen is too small, so I have trouble doing that. So, I've really never even used the internet on it once." [14:61]

This indicated that the design of the BlackBerry limited the usability and effectiveness for User-Reps in the field. The sales team leader wanted to map out locations of potential clients but was frustrated by the results on the BlackBerry's small screen and never used the internet on the device.

Projected value of technology. A sales team leader in a Midwest *VoiceTech* office believed in November 2006 that sales reps should have laptops to be able to manage their sales as if it were their own business. User-Reps anticipated the day when *senior-level reps would get laptops*

> "At some point we will offer a laptop to senior sales reps. That hasn't come yet, but I think they're talking about that for 2007. I think that's important. I think it's important for certainly senior sales reps to have that kind of accessibility because if we truly want them to manage this like it's their own business, they should be able to access that [and] do some analyzing or updating of things at night" [25:31]

After experiencing the new SFA for several months, User-Reps could see the value in having such technology not only on their BlackBerrys but also on a laptop. However, it would be another year before serious consideration would be given to the issue of sales reps being issued *VoiceTech* laptops. However, for *VoiceTech* to continue its growth, the sales team leader believed it was necessary for individual sales reps to be entrepreneurial, including having their own laptops.

Consequences from use of technology. The Midwest sales team leader believed some sales reps were able to adopt and use technology right away. In his view, these User-Reps loved to make technology work

for them. He also believed other sales reps feared new technology. For example, the team leader indicated many of his sales reps had problems using simple technology like calendar updates in Microsoft Outlook. Thus, in his view, the *BlackBerry was intimidating to some reps*

> "I think there are just some people on this planet that adopt technology right away and love to make it work for them. I think there are other people that are always probably going to fear it. … I think the BlackBerry is pretty intimidating to some people." [25:9]

By November 2006, a consequence of implementing the mobile SFA technology was many User-Reps were intimidated by the BlackBerry SFA. Some User-Reps enjoyed discovering how the BlackBerry could help them be better sales reps while others were not proficient even at relatively simple tasks. It is interesting that *VoiceTech* tolerated non-use behavior considering the SFA had become a core sales technology for the company. The sales team leader believed that by closing this gap in understanding, sales reps could work more effectively.

Organizational implementation process. The User-Reps received training on the BlackBerry SFA as soon as it was rolled out to each office. However, the training was short and not in-depth. Much of the learning was from peers who discovered how to do something and shared knowledge with other sales reps. As of November 2006, at least among sales team leaders in two Midwest offices, there was a belief that communication to sales reps regarding the SFA should be improved and that all User-Reps *need enhanced training*

> "We had BlackBerry training, but it wasn't really that much in depth." [14:44]

> "Training, training, training. I think leaders just need additional training. I think the reps obviously need a ton of training on this. But, if we truly just expect that it's going to happen at the sales manager level, we're not going to have any sort of unified results. … I think the training is important, but I think it's important that it happens across the board. Ultimately, if we want to develop these folks as sales professionals and keep them here and have them be interested in expanding their career with *VoiceTech*, they do need to take advantage of some of these tools that we're giving them, [for] example, BlackBerry integration. They just don't know how to do it today." [25:41]

The sales team leaders believed that the BlackBerry integration would help sales reps do their jobs better. However, they also believed that the current level of training on the BlackBerry SFA was ineffective. One of the sales team leaders also believed that expanding User-Reps' technology skills was imperative for developing future *VoiceTech* leaders.

In summary, four new salient themes emerged within the User-Reps' TFRs over the duration of the project (see Table 8.4).. In November 2006, these new themes centered on how the BlackBerry could and should be used by User-Reps. Also included was a view that sales reps should be given laptops. While there was a perception that the BlackBerry design limited specific tasks, sales team leaders recognized that having a process for more in-depth and effective training on the BlackBerry SFA would enhance sales reps' careers. Overall, the sales team leaders appeared to have a good understanding of the BlackBerry's value, capabilities, and consequences.

Table 8.4 Evidence of TFR Shift for User-Reps

Modified Frames	New Frames
Shift from perception that *SFA is not used to identify prospects and DNCs* to *Mobile SFA is helping reps identify prospects and DNC's* **Consequences from use of technology: *SFA is not used to identify prospects and DNCs (Initiation Interviews)*** New Sales Rep: "[Visiting every company is] a complete waste and seems there should be some system … We should have a list like 'go to these specific businesses this week. They have not been hit in a while. Their contracts are coming up or they are not in a binding contract, we haven't talked to them in a while, these would be good prospects.' But instead it is just 'go find them'. So people get frustrated seeing VoiceTech people every other month. "[9:16] New Sales Rep: "[On a recent day] we got kicked out by security in the middle of the third door and there went the day and so after that we just kind of had to walk around and see what was going on and I mean I didn't really use the territory book that much." [9:62] Southeastern Sales Rep: "When somebody sends a branch email that says, 'Do Not Call this person,' that sticks in my head more than me flipping through and saying, 'Oh, you know, I just spent five minutes scanning this list and I'm not supposed to call this person the next card down.' "[15:35] **Tech Capabilities: *BlackBerry GPS helps identify prospects and DNC's (WS4 Interviews)*** Central Sales Team Leader: "How about I could use my BlackBerry and I could VPN into … my computer [while sitting] in traffic on the way to work and print out my POINT." [14:11] Central Sales Team Leader: "If I have GPS … [for example] I can type in my territory and it knows where I am." [14:61] **Use of Technology: Shift from perception that *Mobile makes reps less interactive with customers* to perception that *mobile SFA could communicate information about customers to reps*** ***Mobile solution makes sales force less interactive with customers (Initiation Interviews)*** Southeastern Sales Rep: "I'm a phone person. I would rather be on the phone talking to someone than contacting via e-mail. It takes longer and it's - I hate to use the word unprofessional but it's less interaction so I don't know how to describe that." [2:11] ***SFA could communicate information about reps' customers (WS4 Interviews)*** Central Sales Team Leader: "You're making me think about what I did today and how I communicated with my reps and their complaint to me about installs or POINT. … When a customer of theirs has a trouble ticket and they go and they call customer care to open a trouble ticket, I figure the rep should know about that." [14:42] **Use of technology: *BlackBerry used for customer and rep interaction (WS4 Interviews)*** Central Team Leader: "I make all my customers email me right to my freakin' hip. I have my fax go to my phone. I couldn't even imagine how I used to function without my BlackBerry. … [I interact] very frequently because now I can email the [10 sales reps in my group] … and I can send group texts. If I'm at an appointment, I just text them, 'Hey, I'm in	**Tech Capabilities: BlackBerry design limits internet access (WS4 Interviews)** Central Sales Team Leader: "I have not used the internet one time because number one, it's not really as colorful and two, I was very excited to have this phone because of MapQuest … [but] the screen's too small, so I have trouble doing that. So, I've really never even used the internet on it once. … " [14:61] **Projected value of technology: Senior level reps get laptops (WS4 Interviews)** Midwestern Sales Team Leader: "At some point we will offer a laptop to senior sales reps. That hasn't come yet, but I think they're talking about that for 2007. I think that's important. I think it's important for certainly senior sales reps to have that kind of accessibility because if we truly want them to manage this like it's their own business, they should be able to access that [and] do some analyzing or updating of things at night" [25:31] **Consequences from use of technology: BlackBerry is intimidating to some reps (WS4 Interviews)** Midwestern Sales Team Leader: "I think there are just some people on this planet that adopt technology right away and love to make it work for them. I think there are other people that are always probably going to fear it. … I think the BlackBerry is pretty intimidating to some people." [25:9] **Organizational implementation process: Communication and training should be enhanced (WS4 Interviews)** ***Need enhanced training*** Midwestern Sales Team Leader: "We had BlackBerry training, but it wasn't, really that much in depth." [14:44] Midwestern Sales Team Leader: ""Training, training, training. I think leaders just need additional training. I think the reps obviously need a ton of training on this. But, if we truly just expect that it's going to happen at the sales manager level, we're not going to have any sort of unified results. … I think the training is important, but I think it's important that it happens across the board. Ultimately, if we want to develop these folks as sales professionals and keep them here and have them be interested in expanding their career with VoiceTech, they do need to take advantage of some of these tools that we're giving them, [for] example, BlackBerry integration. They just don't know how to do it today." [25:41]

an appointment. I'll call you right back.' [With] the BlackBerry instant messenger, I can just IM them,..[I do this] … all the time." [14:9]	

8.2 Interaction and Shift Evidence and Analysis for Innovators

In this section, consistent with Davidson (2002), we analyze frame shifts for Innovators across the entire project. Also, we add analysis of the interactions between the Innovators and the Researchers which contributed to frame shifts for Innovators. These interactions occurred through our close collaboration with Innovators across the duration of the project. We include specific interactions between Innovators and Researchers to identify salient frames and TFR shifts. Also, we analyze the problem focus, solution options, the problem-solving plan, and details from the SFA project to understand when and how interactions and shifts occurred. The analysis is based on pre-, during-, and post-implementation interviews and workshops with the Innovators. The post-implementation follow-up workshop with Innovators helped us understand the results of the sales process innovation project.

8.2.1 Initiation: Through February 2006

During Initiation (see timeline in Figure 5.4), contractual agreements were made between the Researchers and *VoiceTech* management (see Appendix B). These agreements in January 2006 outlined the role of the Researchers and the purpose and funding for the project.

During WS1, the Director of Marketing and Sales Operations (one of the Champions) presented a broad overview of the company and the Innovators assisted in providing contextual information and details of the *VoiceTech* problem situation. Initially, WS1 in February 2006 was to be about identifying an appropriate new SFA system and retaining sales reps. However, at the time of WS1, a new SFA system had already been acquired. The focus then shifted to how *VoiceTech* should introduce and implement the new SFA. The workshop included discussions on how to structure interventions and also a diagnosis of particular areas of concern. See Table 8.5 for a summary of TFR in action during Initiation.

8.2.1.1 Innovators' Problem Focus

During Initiation in February 2006, the Innovators were focused primarily on three problem areas within *VoiceTech's* sales operations. In their opinion, unstable technology, non trustworthy information, and non-adoption were three large contributors to the sales force turnover problem at *VoiceTech.*

Technology was unstable. The Marketing Analyst believed that the technology was unstable. The fact that sales reps attempted to access *POINT* on all of the computers simultaneously exacerbated the instability problem

> "It increases the load on *POINT* which may in turn bring the reliability problem when they overload it." [40:61]

The legacy SFA was not designed to be accessed simultaneously by so many users. The platform instability, in conjunction with the overall non-robust design of *POINT*, caused great frustration for sales reps and their managers.

Information was not trusted. One of the most insightful perceptions related to the reliability of technology. In fact, the Innovators did not trust the numbers reported from SFA data. The Marketing Analyst had no confidence in sales reports

> "I don't look at sales in *POINT* because I don't have any confidence in them." [16:117]

> "I trust the appointments completed number … sales from first appointment, sales for second appointments, but never a really accurate sales number and I don't want to trust the reps marking the sales." [40:426]

> "We have three versions what's sold. It will all reconcile at the end of the month, but as we progress throughout the month, we have different tracking methods." [16:261]

Meanwhile, the Director of Sales Operations believed the lack of trust in data reinforced the use of multiple information systems with duplicate data

> "If reps were … updating all of their activity on or near real-time around databases it would be accurate. But, since they track it manually and they get different numbers than what *POINT* is telling them, they're always going to count on their manually counted numbers as being the gospel." [40:278]

This, in turn, exacerbated the data trustworthiness problem and created a situation whereby each manager only trusted his or her own data. Reliable real-time data was non-existent.

Non-adoption was creating media breaks. The Innovators believed a main problem at *VoiceTech* was that User-Reps and User-Managers were not fully adopting the SFA. As a result, media breaks were created from information being manually re-entered into different systems. The Marketing Analyst affirmed this view while reviewing the different reports that sales operations created and used

> "The order tracker is a manual report and the information is not captured in any system. It has a lot of columns and a lot of information." [16:39]

The Director of Sales Operations acknowledged sales reps were inconsistent in how often they reported their sales activities. These were kept manually and then on occasion entered into *POINT*

> "Some reps will just keep this as a log in their car and fill it out. Others will fill it out at the end of the day. I know for [a southern office] they require every rep to turn this in every day. … Then they enter this into *POINT*." [40:415]

These three problem areas formed the impetus for the Innovators' involvement in the SFA project.

8.2.1.2 Researchers' Problem Focus

Similarly to the Innovators, the Researchers were primarily focused on specific problems during Initiation. Contractually, the collaboration focused on solving two problems: integration of mobile technology with the SFA and salesperson turnover. Researcher #1 offered this overall problem assessment at the end of WS1

> "You have two problems. You would like to be better at sales. You would like to have a more stable sales force. Now we want to introduce mobile technology on top of a given sales system and then move on. That was sort of the framing of the project." [40:2439]

Integration of mobile technology with SFA. Integrating mobile technology into the SFA had been of primary importance before the project began. However, during WS1 in February 2006, *VoiceTech* asked the Researchers to look more broadly at the transformation of the entire sales process

> "When we started this project, mobile technology was very much at the forefront. But [now] you would like us to step back and focus, initially at least, more on what information should be there and how should it be managed as part of the sales process and how should that change process be managed. Then only secondarily focus on the opportunities for mobile technology. … So it's still something we look at as much as before, but now we have to consider also the transformation of the basic system." [40:420;424]

Salesperson turnover. During WS1, the Researchers identified some concerns regarding the *VoiceTech* sales model. The Researchers proposed four factors to consider in the high salesperson turnover. First, they questioned how reps were being compensated

> "So if the rep sells a basic package then what's your process for relationship development on an issue of maximizing customers? Is that the rep or is that marketing? … So there's no additional benefit to the sales rep once they've made the acquisition and customer installation, then any additional apps, there's no benefit to the rep that had that? … So there's no enduring relationship between the rep and the customer?" [40:212;218;226]

Second was a concern that too many reps were overlapping inside a given territory. The Researchers suggested this created frustration by reps visiting the same prospects frequently

> "There's more than one rep per community. There's typically two to three per community, so how do they coordinate-how do they avoid that, I mean, that they contact the same customer? … The thing that surprises me is that you obviously have a very structured approach to the sales process and you have good reasons for that. Then one can wonder why there is not a one-to-one relationship between communities and sales reps because that would avoid [overlap] and what's the rationale for keeping this going?" [40:580;596]

Third, the Researchers were concerned about the rigid demands imposed upon the sales force

> "What's the underlying logic for having this very legalistic [process where] you need to sit down and have a meeting every day and go over what we do and don't do and we need to come to the office by the end of the day?" [40:738]

Fourth, the Researchers speculated the sales process was designed for the least experienced and least successful sales reps but not for the experienced and successful reps

> "When you look at the entire system here … it seems to be a system that is designed for learning. So it's a system that is designed not for the best salespeople, but for the worst. So ask yourself, why does it look like this and why

> are all these guys doing all of this and what kind of information would you exchange? I think the reason would be that it is 'Because a lot of our sales people are inexperienced and they need to learn and that takes time and we need to take care of them.' There are a lot of things going on … amongst these … [hundreds of] sales people. There are maybe [half] that are very effective and mature and the system is not designed for them. The system is designed for the other half. … So if my assumption is correct, the system is designed not for the core reps, but for those that are trying to become core reps. That might be a key reason why many people leave." [40:942;946;950]

In summary, these problems formed the initial basis for further questioning during interviews and later workshops. The transformations triggered by the integration of the mobile technology with the new SFA became the focus. While the Researchers did not believe they could directly impact sales person turnover, these problems could also be addressed during the project and this could improve other sales process concerns.

8.2.1.3 Solution Options

Innovators' solution options. During Initiation, The Innovators spoke about two solutions they believed would help them resolve the problems they perceived. First, the Innovators believed that enforcing sales rep usage of the system would address the technology adoption issues

> *VoiceTech* Director of Sales Operations: "[This] is just another version [of the] participation report. … We had this, instead of pull, we got a push of this SFA column forcing the reps to use it and [the report] just is an automated report that's given to the management teams to demonstrate the use of [the SFA] at the rep level." [40:1901]

> *VoiceTech* Marketing Analyst: "This has to be legislated in the use of *POINT* and we're confident that what's in there is based upon the reps, of course with *POINT* we had to give them some kind of report that told them how they were doing." [40:1902]

Second, the Innovators wanted to effectively communicate to sales reps that a stable SFA platform was soon becoming a reality

> *VoiceTech* Director of Sales Operations: "Well, it depends on how we spin this with the reps. If we're saying this is platform change, the screen has changed a little bit, you know, does that change the flavor of how the change management works and is it actually a five or a six or a seven release after which change management really becomes more valid?" [40:3216]

The Innovators also believed the continual problems sales reps experienced with the legacy SFA contributed to sales reps leaving the company.

Researchers' solution options. During WS1, the Researchers posited that *VoiceTech* needed a vision for how to manage future information related to sales and a strategy for how introduce the Siebel SFA to the sales force. Researcher #1 offered the following examples on the design of the sales information process

> "If you look at information processing in any organizational concepts, the first thing you will look at is whether you can avoid it. I mean there's no reason to

> exchange information unless you need it and in many organizations a lot of people spend a lot of time processing information and one of the other ways without anything coming out of it except to prepare yourself for the final act which is sales or research or whatever. … Say that I offered you now [hundreds of experienced] reps and you could trust me that you're going to have them the next two years. No one will leave, no one will die, nothing is going to happen and then I ask you, how would you design the system for those reps to be most efficient and effective and happy? Would it then look like that? Probably not. Then it would look different." [40:942]

> "Talking to sales reps and managers would be useful information, too. But as [Researcher #2] points out, we're not only interviewing them about how they think about the current system, it's also the design exercise, that is what would you like to have in the future now that we have a better technology?" [40:2477]

Researcher #2 offered several suggestions on how to introduce the new SFA to the sales force

> "Here are some thoughts for how a successful change management takes place. Number one is communicate, communicate, communicate. So somehow you have to let them know [about the coming changes] and engage them. The second thing is find some champions. Don't try and take this as a cold turkey everywhere. What you want is some of these high performing sales people that people implicitly look towards as being the guys and girls in the know; the ones they want to emulate and get them on board. Whatever it takes to get them on board." [40:2401]

The solution options for the Researchers during Initiation were based on the discussion from WS1 while the Innovators' solution options were based on their experiences with similar problems.

8.2.1.4 Salient Frames

Salient frames are those frames that the Innovators and Researchers were most focused on during Initiation. The Innovators were primarily focused on the *technology in use (*27 utterances) and *consequences of technology use* (17 utterances). By comparison, the greatest number of utterances for any other particular TFR was five. In Contrast, the Researchers were primarily focused on the *organizational implementation process* (7 utterances). By comparison, the greatest number of utterances for any other particular TFR was two.

8.2.1.5Interactions

Primary Interaction Roles. During the Initiation period, the Innovators acted as problem solvers. They focused on the specific problems at hand and not on creating a larger vision for what the SFA should be. Conversely, the Researchers acted as agenda definers. They focused on helping the Innovators develop a longer-term vision for the sales process. These roles played out during several key interactions between the Innovators and Researchers during WS1.

Interaction Context. As defined previously, interactions manifested themselves as discussions centered on specific topics. During Initiation, there were four significant Innovator-Researcher interactions. Two of these were focused on technology capabilities and functions. The other two were focused on consequences of technology use.

- **Technology capabilities and functions.** This interaction focused on basic choice of technology: BlackBerry versus laptop. The Innovators argued for cost and real-time capability. The Researchers questioned the validity of the cost-benefit assessment and addressed the Innovators' misperception of the difference in real-time capability between the two options. [40:1504-1524]

> Researcher #2: "Have you done a calculation of what it would cost to have each of them have a computer, portable computer and what the savings would be in making them work more effective and efficient. It's sort of an underlying assumption here that they cannot have a computer use now, of course. From an information processing point of view, that's a huge restriction and we can operate under that restriction if you have very, very good reasons, but if you don't have very good reasons it seems to me to be a huge issue."
>
> *VoiceTech* Director of Sales Operations: "At what point in the process is it a huge issue? When they're trying to share a computer at the end of the day to input or when they're on the road?"
>
> Researcher #2: "It's at all points in time. You see … if their mindset is that [the only] information that you will accept is electronic and it's readily available they can look at these lists of prospects and can in-flight sort it according to 20 different criteria; one being 'Which building am I in now?' I think it would make their work much easier and much more effective and they would not waste a lot of time. It would make the data in the system much more reliable because it would be real-time data. Everything would be real-time data that was put in there at the point of capture rather than five hours later sitting in an office."
>
> *VoiceTech* Director of Sales Operations: "How would they do that if they're on the road all day? How would that real-time connection be done because today they [would now] have a laptop. They don't have to have a future service we're going to have where they're going to be able to have connectivity to a cell tower and we'll be able to translate data back and forth, but we don't have that today from a laptop."
>
> Researcher #2: "Yeah, so that would be one solution, that's of course, the ideal that you have phone line connection. The other could be that every morning you download the most current version of whatever information you need on your desktop and then you go and work and you update that as you work. Then when you come back you just upload that."
>
> *VoiceTech* Director of Sales Operations: "So that from a corporate standpoint it would still not be real time, it would be 'in a day data' "
>
> Researcher #2: "Yeah, but from their *point of view* it's real time. I mean, every city that you're in has at least GPRS, so you're at least that good for a constant connection. So it's not really that much of an issue. The problem with BlackBerry is that its basic messaging scheme is essentially that of an SMTP message."
>
> *VoiceTech* Director of Sales Operations: "I think it would be, maybe as far as evaluation, is to help us understand the ROI on two different models … obviously, but we're focused on objectives here. But we need to understand those things."

This interaction was the beginning of a series of discussions regarding the need (or lack thereof) for sales reps having and using laptops. While the Innovators focused on cost minimization and limited usability of a laptop, the Researchers focused on questioning their assumptions throughout the project.

- **Technology capabilities and functions.** This interaction focused on SFA functionality on a BlackBerry versus a laptop. The Researchers suggested that the BlackBerry offered limited functionality compared with a laptop. The Innovators believed the BlackBerry functionality, even if limited, was all sales reps needed. Innovators also believed a laptop would be too large for sales reps to use while in the field. [40:1574-1578]

  > Researcher #2: "I don't know that much about Siebel's current operating scheme, but my guess is they don't care [about devices used]. They just limit the functionality if they think they're going to a mobile or a handheld device. I'm sure there are plenty of people that are using notebooks or laptops out in the field [with] Siebel. So they have screens and whatever that are sort of tailored to that type of a computing device versus a smaller BlackBerry. So I'm not sure that there's that much difference."
  >
  > *VoiceTech* Director of Sales Operations: "It goes back to how much functionality are we having to walk away from? Right now I guess we're under the perception that things that we want to achieve should be Siebel with the BlackBerry. So if someone comes back and says, 'You can only do these two things or these things and these other five things we'd like to do are not achievable with BlackBerry' then we have to look at it with fresher eyeballs and ask questions about what are we-where do we go from here, but for right now the assumption is that most everything that we think we can do could be pushed through the BlackBerry, so there's going to be a learning curve if we learn otherwise."
  >
  > Researcher #2: "So you're going to take all these computers out of the little computer section? The BlackBerry is now a perfect substitute for the computers that they normally spend their time on in front. Is that the vision? We don't need computers anymore, we're just going to use these BlackBerrys?"

  This interaction did not resolve the question of which device was better suited for sales reps. However, it explicated the initial position of the stakeholders. The interaction made it clear the Researchers believed the laptop would offer benefits that *VoiceTech* managers and sales reps could use to achieve greater sales performance. The Innovators believed that, unless proven otherwise, the BlackBerry offered everything sales reps needed.

- **Consequences from use of technology**. This interaction was about the need for and perceived benefits of reports and the contents of individual reports needed by managers. The Researchers proffered that many reports were unused and therefore could be eliminated. Researches believed reports should be the result of data gathered in a single, authoritative information source. The Innovators agreed the report process should be scrutinized. [40:1779-1775] & [40:1803]

  > Researcher #2: "So has anyone done an analysis yet on what exactly people do with these reports? … My suspicion is some people look at one column. … Other people … keep it on file in case somebody raises a question with them and other

> people do other things with it. So the question would be to me, at least, what does the [senior manager] do with this information and what's salient to them because the way to improve these things is to say, 'What's the step that they then next go through?' They get out their little piece of paper and they start looking at this stuff and they come to a number and that's the actionable thing and that should be the report, you see, as opposed to the stuff that they use as input into their little hand things."
>
> *VoiceTech* Director of Sales Operations: "Each manager up and down the chain has a different incentive they're trying to drive or a particular metric to meet. … This is used by a number of people in the branch and corporate. The genesis of this report I could never tell you … and I think that over time additional fields have been added by different users of the report so now we have this hybrid report that accommodates many users."
>
> *VoiceTech* Marketing Analyst: "They go there because that's the best place to go for what they need."
>
> Researcher #2: "Exactly, but you don't actually know on a per user basis what they need."
>
> …
>
> *VoiceTech* Director of Sales Operations: "No, let's go back and make sure we know what the objective is really. … We don't pretend for a moment that this is all effective because it's kind of evolved over time on its own without one owner of the whole thing, so it needs a lot of scrutiny."

The result of this interaction was an agreement that reports were being generated in multiple formats from multiple, possibly errant, sources and that the report creation process as a result was ineffective. The Innovators resolved to consolidate reporting.

- **Consequences from use of the technology**. This interaction focused on data in the system, reports not being trusted, and incentives for use. [40:2065-40:2099]

> Researcher #3: "Could I return to something that the two of you just discussed which I just want to make sure I understood? So logically Report C is just an accumulation of a number of Report Q's. It's the same data except that the data in Report Q is not trusted by those that acquire the data in Report C, so therefore they apply it from a different source. Is that correct on the third?"
>
> *VoiceTech* Marketing Analyst: "Yes. And there are additional columns in C that aren't on the Q as well."
>
> *VoiceTech* Director of Sales Operations: "I don't know if anybody uses Q, do they?"
>
> *VoiceTech* Marketing Analyst: "I think they do sometimes."
>
> *VoiceTech* Director of Sales Operations: "We know who would use it but we don't know if they find any value and really use it for anything."

Researcher #2: “Prints out on demand, right? So you could then figure that out. Has anybody demanded it?”

Researcher #3: “And is it correct that Q is based on data from sales reps.”

VoiceTech Director of Sales Operations: “Yes.”

Researcher #3: “and that’s the reason that the receiver of C doesn’t use it because they don’t trust it as accurate data?”

VoiceTech Director of Sales Operations: “If they were 100% of the time going into *POINT* and updating all of their activity on or near real time around data bases it would be accurate, but since they track it manually and they get different numbers than what *POINT* is telling them, they’re always going to count on their manually counted numbers as being the gospel.”

…

VoiceTech Marketing Analyst: “The reason I don’t use this for the executive report is because I don’t trust the sales number. I trust the appointments completed, sales from first appointment, sales for second appointments, but never a really accurate sales number and I don’t want to trust the reps marking the sales. I want the office vice president to tell me how many were sold.”

Researcher #1: “I’ve found out over 30 years I’ve studied the financial segment and their use of information technology and the big question in the financial sector is how much money is in this account. That’s a very important question and it’s very important that you agree on that. Unfortunately you don’t and you can imagine like 30 years ago when there was a transition from manual accounting to electronic accounting and that was a complete mess, but still today it’s still somewhat of a mess and the way forward is to trust the electronic data because if you don’t trust the electronic data then that discussion will never stop, but that of course then reinforces that they need to be accurate.”

Researcher #1: “Now you have a double system which has a cost to it. You spend a lot of money on processing two different systems of information because the one doesn’t trust the other. I don’t know why. That’s simply a waste of time. It’s an enormous waste of time and that brings me back to what I would reinforce many times which is, if those that enter the data see no reason for doing it or only have a cost in doing it, you can never trust the data. You’ll never get to that point. Those that enter the data must have an incentive or a carrot or a stick, you know, or both of some smart combination so that whatever they entered is exactly what is needed to be entered and you can trust it.”

VoiceTech Director of Sales Operations: “If they were paid on what they entered they might get a little motivated.”

Researcher #1: “That’s right.”

VoiceTech Director of Sales Operations: “Well, what’s the stick then?. … If we got some feature functionality that thing attracts them to use it and then, by the way, oh, you’re paid by what’s entered in there, so you might want to get it right. We might see people active.”

> The result of this interaction was a focus on identifying the reasons users did not use or trust information in the system. Researcher #1 used an analogy to managing critical account information in the financial industry, where it could depend on whose *point of view* defined which account balance was to be trusted. If the electronic data was to be trusted as a single source, the system must be accurate. This interaction became the basis for starting to work toward the SFA as the single, authoritative source of sales information.

In summary, some interactions, like the interaction on report creation, led to immediate agreement. However, other interactions, like the interaction around data in the system not being trusted, became the basis for an ongoing dialogue over the course of the project in which Researchers and Innovators continued to discuss the merits of particular actions.

8.2.1.6 Problem-solving

At WS1, a plan was developed for the Researchers to interview at least 24 people and to conduct field and office observations. Initiation concluded with an IT Workshop (IT-WS) three weeks after WS1. The Researchers would then present findings at future workshop. The legacy SFA was still in full use but a decision had been made by *VoiceTech* in December 2005 to implement Siebel SFA. Ongoing support of the legacy SFA continued. Initial implementation planning began for the new Siebel SFA. The future SFA plans during Initiation were expected to be the following:

- February 15, 2006 – development to start to replace existing SFA functionality.
- March 1, 2006 – report development to begin
- April 22, 2006 - planned as the date for the Siebel SFA to be launched in alpha or beta in a production environment for sales reps to use.
- Future releases – planned at as-yet undetermined dates in the future and would determine how to change information collection behaviors and reporting/analysis and implement mobile devices.

In summary, Initiation established a baseline from which the collaboration would proceed. The Innovators were mainly concerned with how to implement the SFA. The Researchers were mainly focused on how to innovate the sales process. Problems were identified and possible solutions were discussed through several interactions between the Researchers and Innovators.

Table 8.5 TFR in Action During Initiation

Iteration	Problem Solving (How people interact)	Salient TFRs (How people think)	Sales Process Innovation (How the problem setting changes)
Diagnosing [Initiation through WS1] **Includes:** • **Initiation** • **IT WS** • **WS1** **Dec 2005 – Feb 2006**	**Summary:** Prior to WS1, contractual agreements made with *VoiceTech* management. WS1 was a broad overview of the company and problem situation presented primarily by *VoiceTech* Champions and Innovators. The workshop included discussion on how to structure intervention and a diagnosis of particular areas of concern. Contractually, the collaboration focused on solving	**Innovators' Salient Frames** • Technology in use • Consequences of technology use **Researchers' Salient Frames** • Organizational implementation process **Primary Interaction Roles** • **Innovators:** Active problem solvers	**SFA Status:** Original SFA in full use. Decision made to adopt Siebel in December 2005. **SFA Activities:** Ongoing support of legacy SFA. Initial planning of new SFA implementation. **SFA Plans:** • *February 15, 2006* – Development to start to

two problems:

- Integration of mobile technology with the SFA
- Salesperson turnover

Innovators' Problem Focus

- Technology was unstable
- Information was not trusted
- Non-adoption was creating media breaks

Researchers' Problem Focus

- Integration of mobile technology with SFA
- Salesperson turnover

Innovators' Solution Options

- Enforce sale rep usage of SFA
- Communicate that stable SFA was becoming reality

Researchers' Solution Options

- *VoiceTech* needed to develop a vision for managing future information needs

- **Researchers:** Agenda definers

Interactions

- **Technology capabilities and functions** The interaction focuses on basic choice of technology: BlackBerry versus laptop. The Innovators argue for cost and real-time capability. CEPRIN questions validity of cost-benefit assessment and corrects misperception of difference in real-time capability between the two options. [40:1504-1524]

- **Technology capabilities and functions:** Interaction around functionality of Siebel on BlackBerry vs. laptop. [40:1574-1578]

- **Consequences from use of technology** Interaction around the need for and perceived benefits of all the reports and the contents of individual reports needed by managers. [40:1779-1775] & [40:1803]

- **Consequences from use of the technology** Interaction focused on data in the system, reports not being trusted, and incentives for use. [40:2065-40:2099]

replace existing SFA functionality

- *March 1, 2006* – report development to begin
- *April 22, 2006* - planned as the date for the Siebel SFA to be launched in alpha or beta in a production environment for sales reps to use
- *Future releases* – planned at as-yet undetermined dates in the future.

8.2.2 Iteration 1: WS1 – WS2 (February 2006 – June 2006)

Iteration 1 (I1) included the time period of WS1 in February 2006 to WS2 in June 2006. During I1, the collaboration team was focused on the initial release of Siebel SFA. The Researchers interviewed key stakeholders and presented initial findings to the Champions and Innovators during P1 in April 2006. See Table 8.6 for a summary of TFR in action during I1.

8.2.2.1 Innovators' Problem Focus

During I1, the Innovators focused primarily on three problems. The Innovators were concerned with the SFA not being designed to capture needed information, implementing best practices, and understanding how far and how to progress with the SFA

Siebel SFA not designed to capture needed information. The Director of Sales Operations believed that the mobile SFA was confusing to reps. He believed that *VoiceTech* needed only a limited amount of information

> "[The Director of IT] said that they're spending more time disabling functionality on this thing than they are … turning up functionality on it. One of the reasons why is it's too easy to confuse and overwhelm the rep … in the field with a lot of functionality staring them in the face. So we, for the lack of a better word, 'dumbed' them down a little bit so that it's very simple." [43:551]

Thus, the SFA implementation team was reducing the quantity of data for input by sales reps. The Innovators believed this would help increase SFA adoption.

Implementing best practices. The Director of Sales Operations believed *VoiceTech* could institutionalize best practices across the organization to achieve long term SFA objectives

> "We talked about a [best practices] user group as a one-time shot. … But then we haven't talked much about it beyond that in terms of keeping it intact for some long period of time." [43:529]

> "So the best practices is really about … lessons learned. How do we get those shared with everyone, how do we do it on a regular basis, how do I … institutionalize that in some longer term way." [35:534]

The Innovators envisioned creating a core group of sales reps and sales managers to help guide best practices for the *VoiceTech* SFA. The Director of Sales Operations believed having this core group could help spread the "SFA message" and lead to wide adoption and enthusiasm for the technology.

Identifying a vision for SFA. During the IT Workshop in February 2006, the Innovators offered their views on an SFA vision for *VoiceTech*

> *VoiceTech* Director of Sales Operations: "I think what you're asking for is what we would call a vision statement about what, in a perfect world, how would we want this whole thing to work in a global sense. We have to find that right now." [39:622]

> *VoiceTech* Marketing Analyst: "I think what we're having to find is as a global initiative, we haven't taken like a global vision and documented that. We have a lot of ideas, but we haven't cohesively created a project, a smarter project and then had details." [39:602;603]

The Innovators wanted to create a global vision for the SFA and identify how it should be implemented into the daily lives of the *VoiceTech* sales force. However, the focus on getting the SFA implemented in short order required so much effort that no cohesive, long-term SFA vision had been developed.

8.2.2.2 Researchers' Problem Focus

During the I1, the Researchers focused primarily on six issues within *VoiceTech's* sales operations. In a post-interview discussion in March 2006, the Researchers reflected on what they had learned from the interviews and WS1 and the IT Workshop. Six issues summarized the Researchers' preliminary views of the problems *VoiceTech* was experiencing in its sales process

- **Help needed with transition from legacy SFA to Siebel**. During WS1, this became the primary focus for the research engagement. *VoiceTech* did not ask the Researchers to implement the system for them. Rather, the Innovators and Champions wanted the Researchers to focus on how best to transition from one system to another and build support among the sales reps and sales managers. In the post-interview Researchers-only reflection session, Researcher #3 emphasized this as the primary objective

  > "The primary objective is to help [*VoiceTech*] transition from *POINT* to Siebel." [17:48]

  Thus, helping *VoiceTech* transition to a new SFA, and specifically a mobile-enabled Siebel, became the high-level objective for the Researchers.

- **Sales rep turnover is too high**. The collaboration team from *VoiceTech* believed implementing the Siebel SFA would solve multiple problems for them, including reducing sales rep turnover. However, the Researchers believed solving sales rep turnover was not something they, as researchers, could control. Instead, while solving the turnover problem would remain one of the measures of success, Researcher #1 offered a way to move forward

  > "I would push [sales rep turnover] into the background and say, 'Well, we're not going to spend a lot of time talking about that; we'll do that in the final deliverable. As you have asked us, we will focus much more narrowly on information processing and in particular how you're going to manage effectively the transformation to Siebel and how you're going to plan doing that so you take ultimate advantage of that in the future. And the next time in the final deliverable, we'll elaborate on this and we'll also look at the sales process … and how to address the issue of increased sales representative retention.' "[17:50]

  By agreeing to subordinate the sales turnover problem to a success measure rather than a specific objective, the Researchers were able to focus on the specific problems they believed they could successfully address.

- **No single, authoritative information system**. The Researchers believed that until and unless *VoiceTech* made the decision to rely upon a single, authoritative SFA, there could be real-time understanding of sales activities in the field. At Initiation, the Researchers discovered that each manager relied upon his or her own method for tracking sales, appointments, and productivity. These numbers were usually tracked on white boards in managers' offices and during daily or weekly sales team meetings. Those numbers were transferred into a spreadsheets or additional whiteboards that were updated throughout each day. As a result, managers were left scrambling at month-end and on each weekend when preparing summary reports for senior managers. Researcher #1 believed that this issue required creating a vision for *VoiceTech* leadership

  > "What is on our table is to try to push a vision to the management people so that they can become clear on where they're going. So, let me give you an example. … I think they need to move towards one system and I think that's good advice and I think they can easily do it. It's going to be hard work but that's what I would recommend them to do." [17:84]

Moving to a single, authoritative system would require *VoiceTech's* sales leaders creating a vision for what information was valid and necessary. While moving to the Siebel SFA would be a useful step in reaching that vision, the larger vision of a single, authoritative system would require a huge change in management's signals and establishing expectations.

- **Espoused sales model was not actual sales model used**. The discrepancy between the espoused and actual sales model was significant. The Researchers developed an operating assumption during Initiation that corporate management believed *VoiceTech* had a unified sales model when, in fact, several different sales models existed. Researcher #3 elaborated on the discrepancy between espoused and actual sales models

  > "[*VoiceTech* executives and managers] talk about the sales model and the religion around the sales model. I decided that they're not following the sales model. There are numerous discrepancies from this espoused sales model … What's actually done is walk around and search for targets of opportunity so there's a first point of divergence from the sales model that they have distinct territories and that's not true. They overlap and they use targets of opportunity. There should be balance calls on customers but the actual reality is there are multiple calls on some and none on others." [17:86]

  The model in use depended upon the market maturity of the *VoiceTech* office, sales rep experience levels, and managers' technological abilities. Some reps utilized the DNC list and evaluated potential prospects each day prior to entering the field. Other reps used targets of opportunity to fulfill their required daily quota. Some prospects were called upon many times while others were never called upon. Experienced sales reps did not have to return to the office while inexperienced sales reps did return. Some managers scrutinized the daily activity entered into *POINT* while others ignored it entirely. The result of these differences was multiple sales models at *VoiceTech*.

- **Uncoordinated sales operations**. With uncoordinated sales operations, sales reps were making sales but saw little coordination or distribution of pertinent prospect information. Some sales reps exploited referrals to build their network while other sales reps overlooked referral opportunities. Researcher #3 believed sales were uncoordinated

  > "At the bottom line, everybody is selling, no coordination. At the same time, lots of coordination and the results will be territory burnout, uncoordinated account development around relationships, cross-selling, up-selling. Retention is good, but referrals are not fully utilized and it's going to result in a slowdown of the sales in territories. Some are already no longer meeting their numbers.
  >
  > "The sales model for new territories could and possibly should be different from one that is a mature market. So, rather than a one size sales model fits all, it may in fact be appropriate to have these two, one that recognizes that we have a mature market and how we approach that through relations and building an existing customer base versus finding them in the first place." [17:92;94]

  While customer retention was good, referrals from current customers for new customers were underutilized. Sales reps spent much of each day visiting prospects that were already customers, or were not good prospects. For example, sales reps often visited businesses recently visited by

other *VoiceTech* sales reps. The result was inefficient sales operations, lack of up-to-date knowledge about good prospects, a frustrated sales force, and irritated businesses.

- **SFA not perceived as beneficial by sales reps**. In its then-current state, the SFA was used to monitor the sales reps' performance. The system was unreliable and unstable and sometimes unused. As a result, sales reps perceived the SFA as being beneficial only to *VoiceTech* management's needs. Researcher #1 saw sales rep buy-in as important to the overall success of the SFA vision

> "Another very important part of the vision is what [the Marketing Analyst] just said which I agree a lot with - you would never, ever get true buy in from the sales reps into this information system if you don't give them something back. What has to be developed over the next three years is the capability for each sales rep to [use the SFA for how to] plan and spend the day." [17:84]

The Researchers believed sales rep buy-in to be core to making the sales process more efficient and effective. Moving to the more stable and reliable Siebel SFA and the step towards handheld devices could be seen as the technological basis for making that buy-in happen. However, sales reps would not necessarily adopt and use the new SFA just because it was new and more stable or reliable. Instead, creating easily observable sales rep benefits from using the SFA would be critical in obtaining their buy-in.

These six underlying problems and how to solve them formed the basis for the Researchers' recommended actions during the project.

8.2.2.2 Solution Options

Innovators' solution options. During I1, the Innovators offered two solution options. First, they believed *VoiceTech* could create grass-roots efforts to get users to understand benefits of the system. The Director of Sales Operations explained

> "We're a big believer in trying to get a grass-roots effort to buy into it and have that spread into the branch of it and a wide adoption of it where enthusiasm and wide adoption of it." [43:533]

Second, the Innovators wanted to create an ongoing user group to communicate lessons learned during implementation. This group, as summarized by the Director of Sales Operations, could become the core go-between group communicating the needs of internal customers

> "We [could] even … have a core group that we meet with maybe quarterly that is representative. … We fly them in quarterly and this … core group becomes the guiding force of how we perceive a vision of this thing long term. It becomes the voice of the customer, the internal customer." [35:550]

Researchers' solution options. During I1, the Researchers presented nine proposed SFA capabilities (see Table 6.2) that would help *VoiceTech* innovate the sales process and eliminate or minimize the problems that *VoiceTech* experienced. The Researchers then identified six specific actions that the Innovators should take into consideration:

1. Commit to a broader comprehension of SFA scope and functionality with goals, budget, timeline, and deliverables packaged as a project.

2. Convert to Siebel SFA and cultivate and commit sales organization to Goals and SFA Capabilities.
3. Make SFA ubiquitous by enhancing sales representative support to ensure in-field, real-time usage and accurate data capture. Involve sales representatives.
4. Provide management information based on Siebel SFA; standardize key management report content; allow for individualized presentation and access. Involve sales managers.
5. Communicate change process continuously.
6. Provide focused training in Siebel SFA usage as needed.

These six actions summarized the Researchers' proposed solutions to many of the problems identified during this period.

8.2.2.4 Salient Frames

During I1, the Innovators were mostly focused on *technology in use* (73 utterances), *consequences of technology use* (75 utterances), and *organizational implementation process* (75 utterances). By comparison, the greatest number of utterances for any other particular TFR was nineteen. Likewise, the Researchers were also mostly focused on *consequences of technology use* (25 utterances) and *organizational implementation process* (29 utterances). By comparison, the greatest number of utterances for any other particular TFR was five.

8.2.2.5 Interactions

Primary Interaction Roles. During I1 and similar to Initiation, the Innovators were active listeners and problem solvers. Conversely, and also similar to the Initiation period, the Researchers were active agenda definers. The Innovators and the Researchers focused on consequences from use of the technology.

Interaction context. During Presentation 1 (P1), there was one significant Innovator-Researcher interaction. This interaction focused on the consequences of use of technology.

- **Consequences from use of technology**. This interaction focused on the consequences of not using a single, real-time, authoritative data source. The Innovators questioned Researchers about how to decide when a sale in the system is really a sale in actuality. [43:120-149]

> Researcher #1: "This is a rather crucial issue for executives as well. It's not only managers but also executives here that think they don't trust the system. We have not heard that they would trust SIEBEL either. That is a huge discrepancy in the intended investment in this system."
>
> *VoiceTech* Director of Sales Operations: "I … live this pain point every day and going forward I'm seeing less and less of the number being captured in the spreadsheet reconciled with numbers in the system. Somehow before they sort of did magically. I'm not quite sure how. But now I'm starting to see that everything sort of diverge a little bit."
>
> Researcher # : "In fact … the goal of being fifty point days and to keep the numbers on it because the funnels will take care of themselves would be and least one person will cold call."

> *VoiceTech* Director of Sales Operations: "which is kind of two things aligning this behavior. One of them is that the Siebel system is not designed to capture certain data points and so we can't put into this spreadsheet. … We're going to try to make some changes in Siebel and see if we can capture some of these other things. … When do we count a sale a sale? I guess there's this culture that we count it while it's still in the briefcase. Do we want this thing to be a little more formal when we count it? Does it need to be entered in Siebel in order to count it as a sale? What are the rules that we should be operating towards? So, those are-that's dialogue currently in play [with executives]."
>
> Researcher #3: "I think there's a second kind of issue, too, which is how quickly something that happens in the field gets back into headquarters and into [the SFA]."
>
> *VoiceTech* Director of Sales Operations: "Well, we call it briefcase time and the deal is signed, but then it's sitting in a briefcase or a trunk of a car or something for a couple of days. This is what I don't understand … if the deal gets closed today at 2:00, why it's not in Siebel at 5:00? I don't get it. "
>
> Researcher #2: "Isn't it amazing? Because they're out on the road and they don't want to come back. They hit their number for the day and for the week and so they're catching a couple of drinks early. And no one trusts the system anyway."
>
> *VoiceTech* Director of Sales Operations: "We've said that that's okay in the past and we've counted it, it's-bring the letter in Monday and then we'll enter it in the system and we'll be okay, so."
>
> *VoiceTech* Marketing Analyst: "Yeah, I think we want it to come on in because we realign to see what's in our pipeline [and what the] sales force is doing in the last two days of the month."
>
> *VoiceTech* Director of Sales Operations: "That's a dilemma right there. We will end up at early warning data telling us."

This interaction was the beginning of a series of discussions regarding how to implement a real-time SFA for understanding the *VoiceTech* pipeline. The Innovators focused on the *VoiceTech* culture as supporting the process, as it then existed, for allowing sales reps to have delay reporting their sales. The Researchers believed no one trusted the SFA anyway and that this is a contributing factor to the sales reporting delay.

8.2.2.6 Problem Solving

In the intervening time between WS1 in February 2006 and WS2 in June 2006, the Researchers conducted 25 interviews, participated in an IT Workshop with two Technologists, and communicated initial assumptions and observations during P1 in April 2006 to the Innovators and Champions. The legacy SFA was still in full use due to delays in the Siebel SFA implementation. Development and modification of Siebel SFA continued while Innovators planned SFA mobility integration. Future plans developed for I2 of the research collaboration were expected to include the following:

- June 12, 2006 – SFA conversion to replace legacy SFA. Create portal for reps. (Date was moved from April 22 to May 22 to June 12).

- July 22 – SFA to integrate BlackBerry.

In summary, I1 included interviews, a presentation, and a workshop (see Figure 5.4). The Innovators were mainly concerned with technology use – including both actual day-to-day use and consequences of use – and also how to better organize the implementation process. The Researchers were mainly concerned with the then-present negative actual and perceived consequences of the technology. These concerns led to discussions regarding which stakeholders needed what information and at what intervals. Also, the Innovators and Researchers discussed ways to effectively communicate developments regarding the new SFA.

Table 8.6 TFR in Action During Iteration 1

Iteration	Problem Solving (How people interact)	Salient TFRs (How people think)	Sales Process Innovation (How the problem setting changes)
Iteration 1 [WS1 – WS2] **Includes:** • **WS1** • **Interviews** • **P1** • **WS2** **Feb 2006 – June 2006**	**Summary:** During WS1, the collaboration team made plans for actions to be taken over the coming weeks and months. During the intervening time between WS1 (02/02/06) and WS2 (06/01/06), Researchers conducted 25 interviews and communicated their initial assumptions and observations in a presentation (P1 on 04/03/2006) to the Innovators and Champions. **Innovators' Problem Focus** • Siebel SFA not designed to capture needed information • Implementing best practices • Identifying a vision for SFA? **Researchers' Problem Focus** • Help needed with transition from SFA conversion • Sales rep turnover is too high • No single, authoritative information system • Espoused sales model is not actual sales model used • Uncoordinated sales operations • SFA not perceived as beneficial by sales reps **Innovators' Solution Options** • Have grass roots efforts to get users to buy into benefits of the system thereby generating enthusiasm, support, and wide adoption of the SFA • Create ongoing user group to communicate lessons learned, etc. during implementation	**Innovators' Salient Frames** • Technology in use • Consequences of technology use • Organizational implementation process **Researchers' Salient Frames** • Consequences of technology use • Organizational implementation process **Primary Interaction Roles** • **Innovators:** Active**,** listener, problem solvers • **Researchers:** Active agenda definers **Interactions** • **Consequences from use of technology** Interaction around the consequences of not using a single, real-time, authoritative data source. [43:120-149]	**SFA Status:** Original SFA in full use. Delays occurring in new SFA implementation. **SFA Activities:** Development and modification of Siebel SFA. Planning of mobility integration. **SFA Plans:** • *June 12, 2006* - SFA conversion to replace SFA. Create portal for reps. (Date was moved from April 22*, 2006* to May 22*, 2006* to June 12*, 2006*). • *July 22, 2006* – SFA to integrate BlackBerry.

Researchers' Solution Options

- Presented nine proposed SFA capabilities (Table 6.2) and six specific actions that would innovate the sales process and eliminate or minimize the problem situation

8.2.3 Iteration 2: WS2 – WS3 (June 2006 – July 2006)

Iteration 2 (I2) included the time period of WS2 in June 2006 to WS3 in July 2006. During I2, the collaboration team discussed plans for future SFA releases. The team agreed to proceed with the project on a dual track approach with the following focal points: (1) sales process analysis to assist VoiceTech in improving sales and reducing turnover; and (2) SFA project planning to ensure adoption of the SFA as the information system. See Table 8.7 for a summary of TFR in action during I2.

8.2.3.1 Innovators' Problem Focus

The Innovators identified four key problem areas on which they wanted to focus going into SFA mobility integration.

Improve management information. The Innovators intended on improving management information. The Director of Sales Operations explained that the objective was to give managers more information in a management dashboard

> "This is all about the data and we're going to be doing a lot of work in 2007 around data, around how we report it, how real time it is, how automated it's going to be and how in a perfect world we'd like to have electronic dashboard. [This would be] a web app that any decision-making manager can go to and see data that's relative to them and be able to make decisions on it This is nothing more than kind of a breakdown of the elements and the things that we look at today and how we want to transform those into what we want to view as a management panel in the future." [36:930]

Establish real-time reporting. The Director of Sales Operations identified real-time reporting as another problem focus. The lack of real-time performance status for sales reps contributed to the lack of trust in the SFA

> "Real-time reporting of status appointments and sold deals … becomes the one reporting aspect that's going to happen in our next release." [36:930]

Provide functionality for sales reps. The Innovators focused on providing more functionality for sales reps. The Director of Sales Operations summarized this as being where *VoiceTech* would expend much development effort to deliver more functionality for its sales reps

> "[We want to] optimize sales channel and rep activity. This is more of the functionality and this is where you're going to see majority of the releases this year." [36:930]

Expand mobile capabilities. The Innovators wanted to expand mobile capabilities. The Director of Sales Operation expected that sales reps would have access

> "[With] mobile capabilities the sales rep will have universal access to prospect information while in the field through the use of the BlackBerry. They can access leads lists, Do Not Call [lists] … existing customers and prospects. … They can also status their appointments while in the field and indicate whether it was completed but sold or if it was lost. One other feature that we want built in which is what we call the vicinity reporting which indicates, based on where the rep is standing with the unit, what opportunities are in [the] immediate area that [a sales rep] can go knock on the door and try to create an appointment." [36:936]

These four areas defined the Innovators' problem focus for SFA mobility integration.

8.2.3.2 Researchers' Problem Focus

The Researchers were primarily focused on how to implement the SFA in ways that would encourage sales reps to adopt and use it. With this in mind, Researchers discussed with the Innovators five specific problems they perceived related to these topics.

SFA integration with other areas of *VoiceTech*. The Researchers were concerned that *VoiceTech* was isolating within sales operations the benefits of using the SFA. Researcher #2 expressed this concern during a planning discussion during WS2

> "One of the things that I don't see … is integration with other areas of *VoiceTech*. So integration across *VoiceTech* now that you get this system up and running. You have Siebel and you have Siebel in other places in the organization." [36:1079]

Integration of SFA training into daily routines. A consistent problem focus of the Researchers throughout the collaboration concerned how users would be trained to use the system. The Researchers were concerned that the process by which users would be trained was not a priority. Researcher #2 emphasized this concern

> "The other thing is that I'm a bit worried on the one called develop training. … You develop your training but you then test it. Do you take five reps from down here or two [managers] that you know very well and test it and you know it doesn't work and then you improve it. So, before you throw it in the head of 300 people, throw it on the head of two people and there's always changes you can make and you know, it turns out that blue works out better than red on your slides or whatever or maybe more important … But you see, the training is so important for how it actually hits the road and what kind of adoption rate you get just due to the training.
>
> You may want to give them the BlackBerrys and give them the basic BlackBerry training and let them use it for a week or two before you then say, now we do the Siebel training because if there's any sort of learning curve for learning the BlackBerry, you don't want to hand them the BlackBerry and say, all right, now we're going to try to train the BlackBerry and we're going to train you how to use the Siebel on top of that. It's sort of a one-two punch rather than saying, here's the BlackBerry, here's the basic training. [Instead,] let them go out and

> play with it for a week or two and get comfortable with the BlackBerry and then back in for the specific Siebel training." [36:1270]

Sales rep role transitions. The Researchers previously discussed with the Innovators how to handle role transition of experienced and senior managers. The Researchers were now concerned about a much more significant role transition of the sales reps. Researcher #2 expressed this concern and focused on how *VoiceTech* would implement the SFA into the daily lives of sales reps as they gained experience

> "You have to say this is the behavior of this particular role currently. Here's what we see as a transition to how we would prefer this person to behave a year out, six months, whatever you're planning horizon is. Then these are the kinds of things that we have to then bring into place in order to provide proper support for that transitional role. That's actually one of the additional capabilities which is role transition." [36:1087]

Using mobile SFA without persistent connections. Another concern of the Researchers was giving sales reps BlackBerrys to use in the field where persistent connections to a mobile network were unavailable. Researcher #2 believed that dropping connections to the mobile network would frustrate sales reps and inhibit mobile SFA adoption

> "Let's say you're in a weak connection area [and] they enter this data and then somehow the connection drops even though it was initially active, do they lose everything or does it persist? … These things come and go is what I'm saying and so you may want to either first check to see what happens when you lose signal. Then, secondly, you may say [users] need at least two bars signal strength before they try to do this as opposed to frustrating the heck out of them by the connection … [being] dropped." [36:1235]

Sales model changes based on BlackBerry issuance. The Researchers foresaw a problem that would occur if sales reps were not issued BlackBerrys at the same time. Specifically, Researcher #3 believed that the sales model would be different for the two different groups

> "The other thing that's going through my mind, too, is that the initial rollout, a large proportion of the sales force is going to get the BlackBerry, but then what happens-the model will change as it goes to the individual basis then. Now you'll have individual getting BlackBerrys at different times. So will you hold the group until there's a key group of five or ten before they go into the training or as soon as an individual earns a BlackBerry, will they be handed a BlackBerry?" [36:1587]

In summary, the Innovators were mainly focused on creating an SFA vision, implementing best practices, and capturing the appropriate management information. The problems that the Researcher focused on during I2 primarily concerned how sales reps would be issued, be trained on, and use mobile technology to connect to the SFA in the field.

8.2.3.3 Solution Options

Innovators' Solution Options. During I2, the Researchers articulated two solution options they were interested in trying. First, the Director of Sales Operations planned on developing a vision document that would define the overall vision for the SFA

> "We would like to write the equivalent of a vision document about how we want to move to fully automated reporting and create a blueprint, like an 18-month blueprint. … of how we go to fully automated reporting and what the change of process for the company would be to get there. It would totally eliminate all the spreadsheets, it would eliminate all the things they do in the branch or do internally. It would create a value-added set of metrics on the dashboard that we could monitor and then there would be this tool that they would be able to forecast or project data into the future." [35: 1510]

Second, the Innovators were focused on having *VoiceTech* acquire and develop the appropriate SFA technologies to address problems in sales operations. During WS3, the Director of Sales Operations discussed his plan for ensuring this happened

> "In theory, we'll provide the marketing requirements. … This is what we're trying to accomplish, these are the business goals and you guys go back and find the right technology to put that together. Marketing is not going to tell you what technology to use, that's IT's job. So that's in theory how it works. Now what has happened many times is IT has kind of dictated requirements because they have made a decision on technology in absent of us bringing any requirements to them or bringing very shaky requirements to them.
>
> "The way we turn that around a little bit is to be a little more thorough and we've been talking about this a lot in the past couple of days, is how do we have a better process engagement with IT so that we get closer to the requirements that we need the first time and without surprises and what truly meets what we want to accomplish out in the field. Part of it is sales and marketing teams doing a better job around requirements and resources. Compiling it and documenting it and passing it off and having to engage with IT about these are things that are critical. These are things we can't walk away from so your technology needs to match these things and these are nice to have and these are must haves. That's a better engagement.
>
> "So that's where we got to get to. We have to go to there. We're not there yet, but … my perception of it … [is that] it has been because there's not been any resources applied to this being a broader engagement among the departments [and thus it] becomes more of just an IT decision." [35:1659; 1663]

Researchers' Solution Options. During I2, the Researchers offered two solution options. First, they believed that *VoiceTech* should develop effective and continuous communication to reps and managers. The Researchers believed that the Innovators should create multiple channels of communication regarding this project. For example, a newsletter that might contain such things as summaries of problem tracking and features on upcoming releases, contributions by users to best practice, and surveys and survey results. Thus, the Researchers suggested that Innovators assume that the to-be-implemented system is not going to be perfect and, therefore, Innovators should initiate an engagement campaign of communication and feedback that encourages problem discovery, feature extension, usage and best practices, identifying and nurturing "champions" for usage, and outlines the way forward. Researcher #3 elaborated

> "In addition to problem support, you may also want to think about how do you transmit best practices. If somebody discovers a wow, that's a neat use … . that can then by e-mail go to the [managers] who [communicate] that in the morning

> [to sales reps or during a] training session or something like that. Sometimes they do what they call newsletters. In other words, when you have a new system roll-out, you actually have a type of newsletter associated with it. That would be a good place for contributions for best practices and broadcasting that and here are some major issues that have been identified by these individuals. Give them some recognition, and here's what we're up to next." [36:524]

In WS2, the Researchers also suggested the Innovators continue to demand improved usability of the system. For example, the Researchers believed the sales rep homepage should serve as a "portal" to needed information rather than just a landing page. More specifically, this was a suggestion that the SFA functionality should be modular with the entry page specialized to each role in the sales organization based upon what that role needs in the way of primary information and access. The Researchers expanded on these ideas

> Researcher #2: "If I was a [manager], I would like to know, first of all, how are each of my sales reps doing today so therefore, who should I spend time with on a face-to-face basis. I would like to know what expectations are there for me to go to the field with some of them and try to close deals, and I would like to know what tasks I have, which I want information like creating reporting or having meetings with my district manager. … So that's the kind of world view I would like to have on my web. And a dashboard." [36:1218]

> Researcher #1: "We want the Siebel system to be THE information system. Now, for that to happen, it's not really only the sales reps, it's the … managers and [senior managers] that need to change behavior. Therefore, the system needs to be attractive to them and try to appeal to that information process and thereby that home page it's rather crucial." [36:1224]

8.2.2.4 Salient Frames

The Innovators were mostly focused on *organizational implementation process* (33 utterances), *consequences from use of technology* (18 utterances), and *individual incentives for adoption* (15 utterances). By comparison, the greatest number of utterances for any other particular TFR was eight. Likewise, the Researchers were also mostly focused on *consequences from use of technology* (4 utterances). By comparison, the greatest number of utterances for any other particular TFR was one.

8.2.2.5 Interactions

Primary Interaction Roles. During I2, the Innovators were agenda definers and problem solvers. They focused on successfully completing *VoiceTech's* SFA conversion and identifying gaps and solutions for future releases. The Researchers were active problem definers. They focused on presenting problem areas as they perceived them and offering suggestions and critiques for *VoiceTech's* SFA planning and implementation process

Interaction context. During WS2 and WS3 there were four significant Innovator-Researcher interactions. Both of the interactions focused on the organizational implementation process.

- **Organizational implementation process**. This interaction focused on the implementation process going forward. The Researchers suggested that the Innovators develop a prototype of the next deliverables to review at a later date with the collaboration team. The suggestion was that, at least for a 4-hour workshop with the Researchers, the Innovators should remove themselves from the day-to-

day minutiae and focus more on the future of the sales process at *VoiceTech*. At that time, the Innovators agreed this was a good idea. [35: 583-627]

> *VoiceTech* Director of Sales Operations: "We're in user testing and training right now which is the later part of May and the first part of June now. This is where we're at. The week before May and the first week of June is the activity we're in now."
>
> Researcher #: "Let me say that this is exactly what I think is good. It's good to discuss now of course. There's not much meaning on discussing what you have done, but what we could also offer is we want to make more than this one work shop. So this means that you're probably already engaged in that. You're going to make a similar one for the next release."
>
> *VoiceTech* Director of Sales Operations: "Yes."
>
> Researcher #: "And we could discuss that with you."
>
> *VoiceTech* Director of Sales Operations: "We're going to be able to affect that a lot more than the release where we were very limited with what we could do anyway. It has kind of taken the Siebel SFA, kind of taken it out of shrink wrap and bolted it on and making just a few little changes that kind of help us along here. So we didn't have a lot of say, but now going forward, we can really mold that to the needs of business and that's where I think we have an opportunity to affect things a little bit more. We have a lot of limitations around what we could do with [SFA conversion]. We tried to make the best of it. I felt like we're doing about as good a job as we can, making the best of a shrink wrap, off the shelf an SFA solution with a few tweaks that IT is able to do."
>
> …
>
> *VoiceTech* Director of Sales Operations: "So the one thing we haven't talked about, and we've talked about this more off-line, is after the week after the launch do we have subsequent meetings or calls with VPMGs or MDs or the trainers, okay, two weeks have passed, what's your feedback, what's working, what's not? So we can get these very frequent periodic feedbacks for the first maybe month or so after the launch just to get a lot of near real-time feedback and then group feedback on a weekly basis, or something like that. We haven't really set that up or talked about that."
>
> Researcher #: "I think we do, of course, that's … a launch, definitely and whether that turns into a periodic feedback session."
>
> *VoiceTech* Director of Sales Operations: "Going back to we don't want to run into the proverbial functional wall. We want to continue to reach out well after the initial launch because we want to know what's working and what's not and to make sure we truly have identified what the next release contents are. What are the next deliverables. ...We haven't really validated that."
>
> …
>
> Researcher #1: "Let me suggest that next workshop, if that would be useful to you, you might develop a first prototype of a similar plan for the next deliverable,

> which is the BlackBerry and we could discuss that and look at that and look at all the activities in detail and come up with ideas. If you want to do that."
>
> *VoiceTech* Director of Sales Operations: "I think it is probably something we want to do because this is going to roll-out the end of July."
>
> *VoiceTech* Director of Sales Operations: "So then we would have to probably bring you guys in, in the next two to three weeks. The trick there is we're going to be so focused on the launch, that until about the 12th."
>
> Researcher #1: "Here's the good news, David, we will help you not only be focused on that, we will help you also think of the future. For four hours of peace where no one can interrupt you."
>
> *VoiceTech* Director of Sales Operations: "There you go. We have to keep thinking in those terms."

The Researchers wanted to hold an off-site, no interruptions workshop to discuss the Innovators' planning for integrating BlackBerry into the SFA and introducing it to the sales force. The Innovators agreed to this in principle but noted they were quite busy and focused on the next SFA rollout. While this interaction did not lead directly to an off-site workshop, it did emphasize that the Innovators found their interactions with the Researchers to be useful in pushing the SFA forward.

- **Organizational implementation process**. This interaction centered on how to improve efficiency in the SFA user interface. The Researchers suggested pre-filtering dropdown results by city instead of returning all results. The Innovators agreed with the suggestions of the Researchers. [35:821-855]

> Researcher #2: "My concern is more that you're giving them a drop down list that they have to pick from and so the more information that comes in the drop down list, i.e. the less selective the more painful it is for somebody to actually make a choice because you have limited screen territory and it gets much worse, of course, when you're on a hand held."
>
> *VoiceTech* Director of Sales Operations: "I thought there was a selector; … didn't that selector exist?"
>
> Marketing Analyst: "It's here."
>
> *VoiceTech* Director of Sales Operations: "So basically, what's it defaulting to? So you can choose Atlanta, and when you do everything just in the Atlanta market appears?"
>
> Researcher #: "Maybe what you want to do is bring that up as pre-selected because that probably would be how most people would operate (Inaudible) and then, you know, have a drop down for 'all' or … "
>
> *VoiceTech* Director of Sales Operations: "Is there an 'all' select on there?"
>
> Researcher #: "Yeah, but blank is only by default so rather than having 'blank' as a default which encompasses everything, you'd rather have 'all' as one of the selector items and then you are able to pre-default to a specific market."

> *VoiceTech* Director of Sales Operations: "I like that idea. That's a good point."
>
> *VoiceTech* Marketing Analyst: "So this goes to an opportunity with me as the owner of an opportunity. 'Pending' means pending action for me to do something and so I need to follow up on that and to create an appointment down here, there are tabs here so inside Georgia State University there's contacts, and I can get some information about who they have now, their current provider."
>
> Researcher #: "Again, is that possible to qualify that?"
>
> *VoiceTech* Marketing Analyst: "Um, that would qualify … all the providers that are (Inaudible) market."
>
> Researcher #: "I mean, really, if you want a reasonable human interface, you try to limit as much as possible the selections to those that are only applicable to the context, as narrow as you can define that context. It also cuts down on the search time, typically depending on how your database is organized."
>
> Researcher #: "Let me ask a question. How do you put this together? Do you sort of say, "I'd like one of these and one of those"? Do you have to design this or does Siebel have a working page where you can say (Inaudible). How do you design this?"
>
> *VoiceTech* Marketing Analyst: "It's done by the developer through Siebel tools and through Scripton..
>
> Researcher #: "So there's probably standard modules that you can pull in."
>
> *VoiceTech* Marketing Analyst: "It's out of the box."

- **Organizational implementation process**. This interaction focused on designing the role and responsibilities of the internal SFA help desk. The Innovators believed that the trainers had too much, already, to work on the help desk. The Innovators insisted that customer care agents were off-limits for helping sales reps. The Researchers believed the same help desk system used by customer care could be used to collect information regarding sales rep problems with the SFA. [35:401-484]

> Researcher #3: "I remember from when we interviewed customers, I remembered we sort of broadly for the customers we talked to, they were pleased with *VoiceTech*'s responsiveness as they adopted *VoiceTech* system. That's exactly what I'm talking about here. "
>
> …
>
> Researcher #1: "Well, I would engage the trainers. I don't know who these trainers are, but I would say these trainers have a double responsibility. Not only do they have to help people learn this, but they are also the ones that have the finger, talking to everyone and they have to report every day. You can report to the trainer in each location what doesn't work."
>
> *VoiceTech* Director of Sales Operations: "The trainer is so besieged with other duties right now that we don't want them to be in it long-term. That's something we want like the first week, I think it makes sense."

> Researcher #1: "Then you will need another person."
>
> *VoiceTech* Director of Sales Operations: "We need for them to have a clear way of accessing something back to corporate if they have a problem."
>
> Researcher #2: "So maybe you have one system for the first week and then after that, you have another system."
>
> Researcher #3: "Yeah, I'm still at, why couldn't you use your existing system? In other words, your existing set of people who are taking customer calls about issues."
>
> *VoiceTech* Director of Sales Operations: "They don't know anything about it."
>
> Researcher #2: "Fundamentally, they are listeners. They listen to what the problem is and then they record it presumably into some system and then some informed individual, if necessary, gets back to them."
>
> *VoiceTech* Director of Sales Operations: "It's kind of a system demarcation, kind of a partition exists where they're not going to have access and be able to help the rep calling from a branch. They've been highly focused on serving our customers. We would have to kind of evolve that organization over time if we were going to go down that path. That would be a longer term thing if we felt that would be something that would be a good fit right now for the launch. ...Although conceptually, it's a very intriguing thought. We have what we call an internal help desk that addresses all system related support issues and they're the experts. They can get in there and see exactly what the reps see and … or the error or the experience, make a note of it, hand it off to the programmers and then that's kind of the real short way without having a lot of people in between to transport that information."
>
> Researcher #2: "The help desk information has to be analyzed too because it provides a lot of training."
>
> *VoiceTech* Director of Sales Operations: "That's a great point and I agree. That's not something I'm sure we have really talked much about in terms of how we collect that data."
>
> …
>
> *VoiceTech* Director of Sales Operations: "Have you seen organizations that use their customer care group to support internal activity like you were suggesting here?
>
> Researcher #1: "Well, they certainly use the same reporting system. Whether they use the same individuals, okay, probably not.
>
> *VoiceTech* Marketing Analyst: "We use the same system as customer care reps based with IT use. Not like real customers with *VoiceTech*.

This interaction prompted the Innovators to reconsider how the SFA help desk should be supported and utilized. The Researchers believed the help desk for *VoiceTech* customers should be able to take calls and collect SFA problem information and then route those calls to the

appropriate persons. The Innovators believed assigning customer help desk personnel to be not an appropriate task for customer care employees. However, there was an agreement that collecting, tracking, and communicating SFA problems in an organized manner were critical needs.

- **Organizational Implementation Process.** In a previous workshop, the Researchers had suggested to the Innovators that sales reps should maintain relationships with customers to which they made sales. The Innovators and Champions discussed this suggestion and decided to change the sales model to require sales reps to contact new customers to get referrals. [36:1018-1032]

  > Researcher #3: "That's the gap in your sales model because typically from what we came to understand is that once the rep has made the sale to that particular business, he is no longer in a relationship between the rep and the business.
  >
  > *VoiceTech* Director of Sales Operations: "Well, that's about to change.
  >
  > Researcher #2: "Good for you.
  >
  > *VoiceTech* Director of Sales Operations: "That is a modification to the model that we're about to make.
  >
  > Researcher #1: "Excellent.
  >
  > *VoiceTech* Director of Sales Operations: "You guys will notice that you guys commented on it, shared it with a number of us and we've had a lot of dialogue about it since. There was another need in the business that we had to drive. We saw that maybe we marry this up and drive the reps to be responsible for a longer relationship with their customers that we might get a slightly different result than we have in the past. So we're starting to make that change right now. So every rep is required to contact their customers 30 days after their installed and check up on them and there are a couple things they have to do in that task."
  >
  > Researcher #3: "Then you really do need the CRM piece of this to submit this."
  >
  > *VoiceTech* Director of Sales Operations: "Yeah, and the driver is the referral business. So we want to make sure the customer is happy, want to make sure they're billed correctly, make sure how they were installed and their expectations met, and oh, by the way, we'd love to get three referrals from you. So we're going to really drive the referral business and that goes back to making sure we phase in to this SFA and we do it in some way that's going to be meaningful and useful for the rep."

  This interaction revealed the details of the sales model change and a system requirement it necessitated. The Innovators indicated that they were making the change based on a prior discussion with the Researchers.

8.2.3.6 Problem Solving

In the time between WS2 and WS3, SFA conversion was progressing as planned and the new SFA was to be available on time in June 2006. The implementation team had begun detailed planning for future releases. Future plans developed for Iteration 3 of the collaboration included the following:

- Through July 21, 2006 – Development of SFA

- July 22, 2006 – SFA mobility release
- July through August 4, 2006 – User Testing
- August 5, 2006 – SFA maintenance release; Technical certification and deployment of SFA
- August 7, 2006 – Training of users
- November 20, 2006 – SFA maintenance release

In summary, I2 included the planning portions of WS2 in June 2006, the period after WS2 and the discussion of problems and results in WS3 in July 2006 (see Figure 5.4). The Innovators were focused on the process by which the organization would communicate changes and train sales reps and sales managers. Likewise, the Researchers were mainly concerned with the organizational implementation process and in the Innovators developing methods within the sales organization for communicating SFA changes, best practices, and system issues. The Researchers also again emphasized the need to rely solely on one SFA information system and for *VoiceTech* to abandon its heavy reliance on manually created spreadsheet reporting.

Table 8.7 TFR in Action During Iteration 2

Iteration	Problem Solving (How people interact)	Salient TFRs (How people think)	Sales Process Innovation (How the problem setting changes)
Iteration 2 [WS2 – WS3] **Includes:** • **WS2** • **WS3** **June 2006 – July 2006**	**Summary:** During WS2, the collaboration team discussed plans for future SFA releases. Researchers identified numerous needs (key observations) from Innovators' status update and Technologists' SFA demo. The team agreed to proceed with the project on a dual track approach with the following focal points:: • *Sales process analysis* to assist *VoiceTech* in improving sales and reducing turnover • *SFA project planning* to ensure adoption of the SFA as the information system **Innovators' Problem Focus** • Improve management information • Establish real-time reporting • Provide functionality to reps • Expand mobile capabilities **Researchers' Problem Focus** • SFA integration with other areas at *VoiceTech* • Integration of SFA into daily routines • SFA rep role transitions • Using mobile SFA without persistent connections • Sales model changes based on BlackBerry issuance **Innovators' Solution Options** • Develop a vision document • Develop appropriate SFA technologies to address problems **Researchers' Solution Options** • Effective and continuous communication to reps and managers • Improve usability of the system	**Innovators' Salient Frames** • Organizational Implementation process • Consequences from use of technology • Individual adoption incentives **Researchers' Salient Frames** • Consequences from use of technology **Primary Interaction Roles** • **Innovators:** Active, agenda definers, problem solvers • **Researchers:** Active, problem definers **Interactions** • **Organizational implementation process** Interaction focused on the implementation process going forward. [35:583-627] • **Organizational Implementation Process** Interaction centered on how to improve efficiency in the SFA user interface. [35:821-855] • **Organizational Implementation Process** Interaction focused on designing the role and responsibilities of the internal SFA help desk. [35:401-484] • **Organizational Implementation Process** Interaction centered on how sales reps should maintain relationships with customers to get referrals. [36:1018-1032]	**SFA Status:** SFA conversion was progressing as planned and the new SFA was to be available on time in June 2006. Began detailed planning for SFA mobility and future functionality. **SFA Activities:** Implementation of the new SFA. Began development of continuous training program. **SFA Plans:** • *Through July 21, 2006* – Development of SFA • *July 22, 2006* – SFA mobility release • *July through August 4, 2006* – User Testing • *August 5, 2006* – SFA maintenance release; Technical certification and deployment of SFA • *August 7, 2006* – Training of users • *November 20, 2006* – SFA maintenance release

8.2.4 Iteration 3: WS3 – WS4 (July 2006 – November 2006)

Iteration 3 (I3) included the time period of WS3 in July 2006 to WS4 in November 2006. During WS3, collaboration team reviewed the Innovators' expectations versus results. The Siebel SFA launch in June 2006 resulted in version control issues that were quickly resolved and Innovators realized that a one-time

short training session for users was insufficient. *VoiceTech* met the expectation of Siebel SFA being more stable and easier to use. It partially met the expectation that managers and reps would have better sales data visibility. Iteration 3 includes all actions between the end of WS3 through the end of Workshop 4 (WS4). See Table 8.8 for a summary of TFR in action during I3.

8.2.4.1 Innovators' Problem Focus

During I3, the Innovators were primarily focused on addressing how to achieve the suggested SFA capabilities (see Table 6.2) identified by the Researchers during WS2 in June 2006.

Evaluating SFA Capabilities. The Innovators spent much of I3 working to implement some of the SFA capabilities that were presented by the Researchers in WS2 (these capabilities are evaluated in Table 6.3). For example, at WS4 in November 2006, the Marketing Analyst confirmed that lead generation capability and lead qualification capability had been planned but not implemented

> "So for lead generation, there's nothing in the SFA that gives them leads to call on except this list of Dunn & Bradstreet leads and so we haven't really considered people giving warm leads to reps through a cold calling department." [37:1258]

> "I would say that we're laying some sort of more intelligent leads in qualification and searching the leads and the knowledge base, so I would change my answer here to understanding that this would fit in with lead knowledge base." [37:1314]

SFA planning and support capability had been experimentally implemented but the Innovators were focused on expanding support capabilities

> "We have a testing group, but they're sometimes unreliable. I love [Researcher #4's] recommendation on the FAQ's and the forms and make it an Ask the *POINT* Group or the *POINT* Wizard and he could post something and I could reply to the post." [37:1316]

Real-time sales rep activity and ubiquity capability had been somewhat implemented

> "I view this that we somewhat did this with the mobile functionality we did, but we definitely need to extend that being able to add a new appointment into the mobile system and make the handheld more than just something that you'll use before you go home so you don't have to come back to the office. Something that will be your companion throughout the day." [37:1342]

Mature forecasting capability had been planned but not implemented. The Marketing Analyst believed that *VoiceTech* had a lot of work remaining to fully provide this capability

> "A long way to go here. We are planning and we're exploring options. Do we buy Siebel Forecasting? The forecasting that we do is different from Siebel Forecasting. With Siebel Forecasting, you forecast things in stages over a revenue base and here we're just forecasting opportunities. … We haven't seen a solution that this is … exactly what we need.

8.2.4.2 Researchers' Problem Focus

During I3, the Researchers were focused primarily on three problems. The Researchers were concerned about media breaks in the system, communicating SFA benefits, and performance metrics.

Media breaks in the system. The Researchers were concerned about the number of media breaks remaining in *VoiceTech's* information systems. These breaks resulted in users and managers taking information outputs from one system and re-entering them into another system. Researcher #1 explained

> "There is a break [when] a person has not put it into a computer so that's the first break. Of course we can try to resolve that break by bringing the computer to the person so that as much as possible they can enter the data when it happens. And the ultimate is of course that it's automatically entered. … There are other breaks and you would like to remove all breaks. That's the ideal world. You would like to capture information when the thing happens and you would like it to be readily available for whoever wants to look at it." [37:715]

Communicating SFA benefits. The Researchers were concerned that the Innovators had not communicated SFA benefits to *VoiceTech* executives who made the SFA investment decisions. Researcher #1 suggested to the Innovators to communicate SFA benefits so executives would be willing invest more in SFA training and user adoption

> "You have an opportunity to tell [executives] that it pays off that we make these investments in sales and sales technology. … The next thing, which is very difficult to make them understand, is that okay you paid for the technology, now I'm also asking you to pay for people adopting the technology. That's the assimilation gap. And many managers would say, well I already paid for the technology now these people can start using it can't they? It's not happening. So that's an extra sales pitch you have to do to invest in. I think executives tend to be easier to persuade to invest in a new gadget than investing in making people use it." [37:365]

Performance metrics. The Researchers believed that when metrics were changed it also changed sales rep and sales manager behavior. Specifically, as *VoiceTech* reduced its sales rep turnover (referred to as 'attrition') its sales managers changed their behavior toward reps and kept more lower-performing sales reps that they might have otherwise. Researcher #2 explained

> "Let me just say, what happens when you change metrics is you change behavior and it isn't always necessarily the behavior that you want to change. [For example,] getting attrition below double digit to single digit is the goal. Everybody knows the goal and they're being rewarded according to that goal. There are a couple of ways of doing that and one is obviously to keep the good people longer; but, the second one is not to get rid of the bad people. What seems to be happening is both things." [37:911]

Instead, the Researchers wanted *VoiceTech* to focus on improvements in sales performance. Specifically, the Researchers believed improvement should be the focus and getting the sales force to adopt the SFA technology was one way to create some improvement. Researcher #1 asked the Innovators to look at ways *VoiceTech* could increase sales performance

> Researcher #1: "My belief is that the more you make the small groups, even the regional sales reps focus on improvement, the better it will happen. It's not something you can only do by you guys sitting here in headquarters and having great ideas and putting new technology in their hand. That will, of course, create some improvements, but another side of improvement is the people constantly trying to improve." [37:1430]

8.2.4.3 Solution Options

Innovators' Solution Options. During WS3 in July 2006, the Innovators developed two solution options. First, the Director of Sales Operations described how the SFA would provide management information

> "This is about rep productivity and getting access to data to manage the business in a smarter fashion than we have in the past. So the first section, management information is all about the data … how we report it, how real time it is, how automated it's going to be and how in a perfect world we'd like to have electronic dashboard, a web app that any decision making manager can go to to see the data that's relative to them and be able to make decisions on it … and how we want to transform those into what we want to view as a management panel in the future." [36:930]

Second, the Innovators were focused on providing mobile capabilities. The solution was to give sales reps the ability, while in the field, to access prospect information with their BlackBerry and to update daily activities in the SFA

> Director of Sales Operations: "The sales rep will have universal access to prospect information while in the field through the use of the BlackBerry. They can access leads lists, Do Not Call, … [and] existing customers and prospects … [and] vicinity reporting which indicates based on where the rep is standing with the unit what opportunities are in the immediate area." [36:936]

> Marketing Analyst: "The main BlackBerry functionality is being able to status an appointment from the field. It's being able to enter their [daily activity] information, that's where they did their report card on what they did that day." [36:948]

Researchers' Solution Options. The Researchers identified two primary solutions during I3. First, the Researchers believed the Innovators should continue to aggressively evaluate the SFA implementation during each release to identify areas for improvement

Second, Researcher #1 suggested the Innovators involve *VoiceTech* leadership and top sales reps as SFA evangelists. This suggestion including making the presentation of the BlackBerry and the initial training on the BlackBerry the responsibility of the sales rep's manager

> "After the initial implementation of the BlackBerrys … [for example], John gets his BlackBerry. He should then get it from the manager. I mean, you give it to the manager and then in the morning session the manager gives it to John and the others see that he gets it. After that session John will stay with Eve and go through, I don't know, a quarter or half an hour session of individual training or whatever." [36:1607]

8.2.3.4 Salient Frames

The Innovators were mostly focused on *organizational implementation process* (57 utterances), *consequences from use of technology* (50 utterances). By comparison, the greatest number of utterances for any other particular TFR was thirty two. Likewise, the Researchers were also mostly focused on *consequences from use of technology* (15 utterances). By comparison, the greatest number of utterances for any other particular TFR was seven.

8.2.3.5 Interactions

Primary Interaction Roles. During I3, the Innovators were active problem solvers. They focused on how *VoiceTech* could incrementally improve the SFA for users, managers, and executives. The Researchers were active problem definers. The Researchers listened as the Innovators described actions taken during the periods of time prior to the workshops and then defined problems, as they perceived them, with the implementation and with planning.

Interaction context. During I3, there were two primary Innovator-Researcher interactions. One interaction focused on the use of technology and the other interaction focused on the organizational implementation process.

- **Use of Technology.** This interaction focused on the assimilation and training gaps and how those gaps might be closed. The Researchers expressed two types of variation in how sales reps and sales managers consumed information: sales rep understanding (do or do not do) and managerial decision-making process (analytics or emotional). The Researchers believed closing the two gaps required developing an information process that removed the sales rep variation philosophy while benefitting or at least appealing to the manager variation. [37:414-450]

> Researcher #2: "Training is certainly a component, but simply defining formal channels by which individuals can say 'Here's what I can't do or I don't understand how I can do it' but the capability is there, that's a training gap. Another one is 'I need this functionality but I don't know how to accomplish it' and so some other creative individual may have put two or three together very creatively in order to essentially create that functionality. … It's not a matter of a new report. It's a matter of 'How do I get the current report to do this thing that I used to be able to do in the previous version.' And it's kind of a just-in-time training. You don't really know you need it until you're there and say, 'Gee, how do you do that?'
>
> *VoiceTech* Director of Sales Operations: "One of the things we learned early on in one of our first workshops is we need to think in terms of the day in the life of the sales rep and what they're trying to achieve in their world and try to put everything in those terms. This is an area I think we can do a lot more work with. … Because of limited resources we didn't get as far down as I wanted us to but we know essentially what for a [manager] the ten tasks they have to do … to be a successful [manager]. … What we haven't effectively done yet is boiled that down to some bullets that said, 'To be a successful *VoiceTech* [manager], here are ten things if you do you will be at or above plan and you will be going to a trip somewhere or you'll be knocking the cover off the ball and getting bonuses.'"
>
> Researcher #1: "And how you can use *POINT* to achieve it."

VoiceTech Director of Sales Operations: "Exactly. … 'What you do is you leverage the SFA, go the screen, pull this out, sit down and coach your rep on this item.' Okay so we haven't got to that level and really had that conversation in those terms yet. … They consume things in those bite size portions where they're not going to read things, they're not going to sit in long presentations or training. They just don't have that personality. They don't have that where-with-all to sit there and absorb that kind of stuff. So we have to put it in those terms and those cheat sheets, here's a hint of how to be more successful. We've just got to work better on that.

VoiceTech Marketing Analyst: "What else works is like just sitting down with the rep and going, 'Hey bud here's how you do this. He's like, 'You can do that?' Just one on one works very well."

VoiceTech Director of Sales Operations: "That level of assimilation helps kind of short circuit some of the needs for training because some of the reps and some of the [managers] get that right away. They see it and go, 'Wow.'"

Researcher #1: "It's correct that the assimilation gap has to do with variation, but unfortunately there are many types of variation. I'll just make a distinction between two types of variation. One type of variation is 'do' – 'do not do'. Okay, so you have certain sales reps they do as you want them to do. That is, they look at installed information for example. Then there are other sales reps, they simply don't look at installed information. Even if they have the ability to look at the installed information, they don't do it for some reasons. Those variations you want to remove. Do you want to have people exploit as you intended the capabilities in the system to the extent possible. So that variation you want to remove. Then there's another type of variation which has to do with all these reports which is the way in which you do it when you do it. I think [Researcher #2] came up with here. Clearly there are two types of managers."

…

Researcher #1 "The number guys and the emotional guys. Let's say that. So people are different and you have like 300 people out there and they're different. You're never going to make them the same. You're not going to turn all of them into number guys. Some of them are emotional guys. One guy sits in the car with his sales reps and he talks to them, that's how he manages them and inspires them to sell. Another one he looks at the numbers in the morning and says, seven, I want that to be nine, come back in the evening. And that type of variation is not necessarily one we would like to remove. From an information processing *point of view* , of course, we see people processing information differently. … I think you would allow for a certain level of variation there because it's just an expression that the system is effective because people are different and let them have a little bit of variation."

VoiceTech Marketing Analyst: "Let them use it to the fullest as to their personality."

VoiceTech Director of Sales Operations: "Exactly. Because you've got the analytical type, the people type."

> *VoiceTech* Marketing Analyst: "I have the guys that are picking at numbers and I have the guys like, well I don't know this computer stuff."
>
> Researcher #1: "If you present yourself to the world as the guys in headquarters that have the solution for all managers and sales reps, you know, and you're going to do it this way, it's not going to work."
>
> *VoiceTech* Director of Sales Operations: "Some people will shut down on that."
>
> …
>
> Researcher #2: "I'm not arguing that you want a hundred different reports, I'm not arguing that. I'm just saying that you might want different views on the same basic information. Profiles."

The Researchers and Innovators agreed that at least two types of variation existed across the sales organization. First, was a sales rep's understanding of what information was available to him or her. The Researchers suggested this type of variation (do or do not do) should be minimized. On the other hand, a manager's decision making process could be viewed as analytical or emotional. This variation should be accounted for within the system to, as the Marketing Analyst stated, "Let them use it to the fullest as to their personality." This interaction stimulated the Innovators into identifying areas of the SFA where the sales rep understanding could be enhanced to reduce variation and where variations in decision making processes could be utilized more fully.

- **Organizational implementation process.** This interaction focused on the SFA implementation process in a new market. The discussion centered on the Innovators' plan to get managers and sales reps to adopt the SFA. [37:665-697]

> *VoiceTech* Director of Sales Operations: "We have a commitment from the [senior manager in the new location]. It's kind of like the ten steps to getting well. … So there is an awareness and we've moved to the commitment level, so now it's taking action. We've got to sit down and have a scheduled action plan of how we're going to do that."
>
> Researcher #2: "When you say adoption, everything that you've predicated before is that they have to enter certain information to get paid. They're entering that certain information to get paid but nothing else?"
>
> *VoiceTech* Marketing Analyst: "They're not entering appointments."
>
> Researcher #2: "So all the activity is on track but they're flipping the switch to say this account has been sold and that's pretty much it."
>
> *VoiceTech* Marketing Analyst: "There's reps that are using it … they may be entering 80 appointments a week versus 200."
>
> *VoiceTech* Director of Sales Operations: "There's a minimal amount of activity that's going on and there's a maximum amount of activity which is a lot."
>
> *VoiceTech* Marketing Analyst: "They're not totally at the bottom. They're doing something but it's not enough."

> Researcher #2: "But people normally take their clues, if you will, from the senior people above them. If they see the senior people above them are using this stuff, okay then even if they resist that notion in their own mind they basically follow along. On the other hand, if the senior person doesn't do it, then that sends a completely different signal. So if you want to try to improve this, you might try working with the SAMs or the MD first to get them to make a bit more use of it by the carrot … stick. And that filters back down to the people below."
>
> *VoiceTech* Marketing Analyst: "In Chicago when I went out and I sat with all the managers, that first time with the [senior manager] and he's like, 'Wow if we use this, this is going to help us.' And then he was in the meeting with me. He said, 'I want to be in the meeting with you.' So I was teaching, [and he said] 'Listen to [the Marketing Analyst], he knows what he's talking about.' And the managers are sitting there like, okay. He says, 'So let's pull up [a sales rep's] view. So we pull up his view and he says, see [the sales rep] has ten opportunities in there.' [The sales rep said], 'Well, I've got more than that.' … It was just great. So, that can be one step."
>
> *VoiceTech* Director of Sales Operations: "But sometimes you put people on the spot a little bit and you see how well or not well they're managing that view. We're sitting there and how old it is and is it statused or not."
>
> *VoiceTech* Marketing Analyst: "It's three out of eight people having activity in there. … So we've got to put together a plan around that one. That's a remaining open issue."
>
> *VoiceTech* Marketing Analyst: "We believe we still have a gap to access to information but we believe analytics is a big part of this where they … (they meaning the sales managers) get an email with an activity report … So last night they get the activity report for all the activity, the total gory details that some of them love and just eat up."

The Researchers emphasized getting managers and senior managers to adopt the technology would go a long way in helping increase adoption rates among sales reps. The Innovators needed to develop a plan for implementing the SFA in new locations where no prior system existed. The problem in this particular new office was SFA use was not mandated by management. The SFA did not provide enough benefit to sales reps for them to use it consistently without a mandate.

8.2.4.6 Problem Solving

Siebel SFA launched as planned June 22, 2006 (on the revised schedule). As I3 concluded, Siebel SFA was in full use by sales reps at *VoiceTech*. BlackBerrys were given to a select group of experienced sales reps who had achieved their sales performance targets. The Innovators estimated that 80-90% of sales reps were using the SFA (mobile or desktop) at least for keeping track of appointments. The Innovators also estimated that approximately 75% of those appointments were being updated by sales reps with current status updates. Prior to WS 4, the Innovators presented to *VoiceTech* executives an SFA project overview. The executives and board of directors pushed the Innovators to continue developing the SFA and consider giving all sales reps laptops to use in the field. The plans for Iteration 4 of the collaboration were less specific than previous iterations but included the following:

- 1H 2007 – Make sure appropriate information gets to right decision-makers in the field

- 2H 2007 – Possibly give laptops to senior sales reps

In summary, I3 included progress toward the original project goal of providing a mobile SFA to sales reps. Sales reps were able, at a minimum, to update a prospect's status in the field. During I3, the Innovators focused on addressing SFA capabilities (as initially discussed in WS3). The Innovators had implemented several of the SFA capabilities but others were only partially implemented or not considered. The Researchers were focused on helping *VoiceTech* implement a system that was stable and easy for sales reps and managers to use. The Researchers also pushed the Innovators to identify managerial information needs. Doing this would help the Innovators create an SFA which managers would motivated to use.

Table 8.8 TFR in Action During Iteration 3

Iteration	Problem Solving (How people interact)	Salient TFRs (How people think)	Sales Process Innovation (How the problem setting changes)
Iteration 3 [WS3 – WS4] **Includes:** • **WS3** • **WS4** • **Follow-up Interviews** • **Researcher Reflection #2** **July 2006 – Nov 2006**	**Summary:** New SFA was launched June 22, 2006. During WS3, collaboration team reviewed Innovators' expectations v. results evaluation. SFA launch had a number of version control issues that were resolved. Innovators realized single training session was not sufficient. Met expectation that new SFA would be more stable and easier to use. Partially met expectation that managers and reps would have better sales data visibility. **Innovators' Problem Focus** • Evaluating SFA Capabilities **Researchers' Problem Focus** • Media breaks in system • Communicating SFA benefits • Performance metrics **Innovators' Solution Options** • Provide management information • Provide mobile capabilities **Researchers' Solution Options** • Innovators should continue to aggressively evaluate the SFA implementation during each release to identify areas for improvement. • Involve VoiceTech leadership and top sales reps to be SFA evangelists.	**Innovators' Salient Frames** • Organizational Implementation process • Consequences of technology use **Researchers' Salient Frames** • Consequences of technology use **Primary Interaction Roles** • **Innovators:** Active, speakers, problem solvers • **Researchers**: Active, speakers, problem definers **Interactions** • **Use of technology** Interaction focused on the assimilation and training gaps and how those gaps might be closed • **Organizational implementation process** Interaction focused on SFA implementation process in new markets	**SFA Status:** New Siebel SFA launched as planned June 22, 2006 (on revised schedule). Siebel SFA in full use. Estimated 80%-90% sales rep participate. Estimated 75% of appointments are updated by sales reps with status updates. Planning continues for future releases. **SFA Activities:** BlackBerrys given to select group of sales reps. Innovators updated *VoiceTech* executives on progress and planning of the SFA. Innovators worked on addressing SFA capabilities (from P1). Development and modification of Siebel SFA. Planning of mobility integration. **SFA Plans:** • *1H 2007* – Make sure appropriate information gets to right decision-makers in the field • *2H 2007* – Possibly give laptops to senior sales reps

8.2.5 Iteration 4: WS4 – P2 (November 2006 – March 2007)

Iteration 4 (I4) included the time period of WS4 in November 2006 through the post-P2 follow-up workshop in March 2007. During P2 in February 2007, the Researchers presented their final summary of the sales process innovation collaboration. This review included results from actions of the collaboration team during the prior twelve months. The Researchers also presented several plans for continuing the collaboration. See Table 8.9 for a summary of TFR in action during I4.

8.2.5.1 Innovators' Problem Focus

The Innovators were concerned with primarily three problems. These problems included how to ensure a positive perception of the SFA, SFA investment metrics, and communicating SFA benefits.

Positive perception of the SFA. The Innovators wanted the reception of the SFA to be positive. However, some influential managers and sales reps focused on known SFA stability issues. The Marketing Analyst believed there were office locations where more attention was needed

> "There [could be] one person that has a negative [view]; they focus on the little bugs and glitches and not the overall picture of what we're trying to do. I think it's overall positive, but I think there are negative patches." [42:243]

SFA investment metrics. The Innovators believed they should be able to measure the impact of the technology on sales performance. The Director of Sales Operations wanted to understand how well *VoiceTech* was leveraging recent SFA technology and related investments

> "Something that has been swirling around in my head for a few months now is … how do you build the structure so that we're measuring something that through these investments we see this continual movement of the needle in the right direction on a couple of the metrics that help drive the business, obviously, and we haven't quite mastered that yet." [31:73]

Communicating SFA benefits. The Marketing Analyst believed that, while communication of SFA benefits to users had improved, the users still did not fully understand how to use the SFA to improve sales

> "They're inputting, inputting, inputting, and nothing's coming out that says, how is this useful or here's what you've done. There's one tracker report that shows the appointments they have. … They need to use it as a tool to improve themselves. "[42:263]

7.2.5.2 Researchers' Problem Focus

The Researchers were concerned with primarily two problems. These problems included how to close the capability gap and the assimilation gap.

Capability gap. The Researchers continued to push the Innovators to work with Siebel and RIM to include new capabilities in Siebel SFA and BlackBerry products. The Researchers emphasized that doing this would require *VoiceTech* to identify specific future needs

> "The tactics related to capability goals, they're completely different. It's more like you guys sitting here making smart decisions and working with Siebel and with RIM and trying to find out what should we do tomorrow and maybe even speculating of wild things you could do that you don't do today and so these tactics are very different and the investments you need to make in those two arenas are different." [42:155]

Assimilation gap. The Researchers continued their concern with the assimilation gap of sales reps and managers. This gap meant that users were not taking advantage of capabilities that existed within the technology.

> "What we need there is basically marketing. … It's training, it's coaching, it's talking about, it's making visible, it's spreading best practices from one sales rep to another sales rep maybe on the team of just one SAM. If one [team manager] is able to observe that amongst her ten sales reps there's one that stands out as doing excellent work and part of the reason for that is this person's capability to utilize the tools and the information in front of this person. … Then you can go to moving the [managers] to be more coaches than filters of who should be employed, etc.,," [42:153-155]

7.2.5.3 Solution Options

Innovators' Solution Options. During I4, the Innovators said they were singularly focused on ensuring that, across the organization, useful SFA information reached the correct decision makers. In a post-P2 follow up workshop in March 2007, the Director of Sales Operations described how his team would accomplish this goal

> "One of the important lessons that we learned through the dialog with your team is that we've got to put value added things in this system that are going to be useful for the rep, useful for the [managers]. … Make sure that there is information in there that can show them how … they are performing as well as tools that get visibility that they never had before. … That's something we didn't do in the legacy SFA. That's what we're doing in the new SFA. In fact, the first six months of this year, that's our singular focus is making sure that we have the right information being pushed to the right decision maker in the field at all levels so they can manage the business." [31:53]

Researchers' Solution Options. The Researchers continued pushing the Innovators to assess *VoiceTech*'s technology and process innovation and make adjustments as necessary. During P2 in February 2007, Researcher #1 suggested the Innovators add metrics to the SFA vision to measure how each SFA investment had affected sales and attrition performance

> "Look into performance. Then you learn something about strength, weaknesses, gaps, whatever and that information can feed back into the technology side or the process side and help you make smart decisions about where to invest more money as you move forward. … The only one that matters in a way is performance assessments. So it's the output that matters, isn't it? It's what your customers experience. It's what the bottom line tells you about the effect of changes in technology or sales process that is most important for making decisions about where to invest in further innovations." [42:79-83]

Also, during P2, Researcher #1 emphasized the need for the Innovators to focus on process innovation instead of focusing so heavily on technology innovation

> "You can have a capability focus or an assimilation focus; that is, you can develop the technology further or you can develop people's ability to use it further. We have discussed that many times and I think you've become good at doing that. But, what we want to indicate here is that on the process innovation side there is still a lot that can be done and some of this is unpredictable. … Ideally what we would like to have to help us in this continuous improvement would be to have performance assessments that indicate month for month or

> maybe quarter for quarter whether technological innovations and process innovations in fact have an impact on sales performance" [31:71]

8.2.5.4 Salient Frames

During P2, the Innovators were mostly focused on *individual adoption incentives* (6 utterances) and *consequences from use of technology* (5 utterances). By comparison, the greatest number of utterances for any other particular TFR was two. Likewise, the Researchers were also mostly focused on *consequences from use of technology* (10 utterances) and *organizational implementation process* (10 utterances). By comparison, the greatest number of utterances for any other particular TFR was four.

8.2.5.5 Interactions

Primary Interaction Roles. During I4, the Innovators were active problem solvers. They focused on ways to incentivize use of the SFA and problems that remained in implementing the SFA system, including the mobile SFA. Meanwhile, the Researchers were active problem definers. The Researchers presented a summary of their findings from the workshops, interviews, and observations over the previous twelve months.

Interaction context. During I4, there was one primary Innovator-Researcher interaction.

- **Organizational Implementation Process**. This interaction focused on the Innovators' approach to assimilation. The Researchers again discussed their views on how the Innovators might increase user assimilation of the SFA. The Marketing Analyst confirmed that the way that the Researchers discussed assimilation and capability gaps had helped the Innovators in understanding how to approach and close these gaps. [42: 147-173]

> *VoiceTech* Marketing Analyst: "The way in which you think capability versus assimilation and you presented this last time you were here. That really helped me a lot in thinking about how we should proceed with the system because there are things we can do to-sometimes there is the problem with our sales force doesn't understand the capabilities and how the capabilities benefit them. We can push that so far, but then there's another problem. Sometimes we don't have what's in the system that we need. So for instance, we're developing reporting capabilities and those are needed, but weren't in the system. … I think it's a great framework to think about how to proceed.
>
> Researcher #1: "Of course it points at completely different strategies. So, if you think about the assimilation gap, what we need there is basically marketing you can think in a way. It's training, it's coaching, it's talking about, it's making visible, and it's spreading best practices from one sales rep to another sales rep. … [Assume] one manager is able to observe that amongst her ten sales reps there's one that stands out as doing excellent work and part of the reason for that is this person's capability to utilize the tools and the information in front of this person. [Then] if this manager is then able, through several morning meetings, to spread these practices to other people in the group, that will really boost sales. … Then you can go to coaching [and] moving the senior managers to be more coaches than filters of who should be employed. … Whereas the tactics related to capability goals, they're completely different. It's more like you guys sitting here making smart decisions and working with Siebel and with RIM and trying to find out what should we do tomorrow and maybe even speculating of wild things you

> could do that you don't do today and so these tactics are very different and the investments you need to make in those two arenas are different."
>
> …
>
> *VoiceTech* Marketing Analyst: "We also need to think about assimilation before we introduce capability. If we introduce this capability, would [users] even use it and that's something that we try to do with a needs analysis up front. We don't want to go and throw technology at sales if they won't… adopt it in the first place."
>
> Researcher #1: "[Are there] examples of investments you've done that were a failure in the sense that it turned out that that particular feature was not useful at all? Because there might be examples of that; that might be a reason for the assimilation gap that what the smart managers and engineers have come up with is in fact not useful. Are there such examples?"
>
> *VoiceTech* Marketing Analyst: "I think that you would rank each feature on a scale. One would be 100% and another would be maybe 70% and then you would stack rank each feature. … I don't think we have any feature that's not used by anybody because the feature set is so condensed. … The features that we have there are very simple and there's not too many of them. So I think … the newer features, for instance on the mobile [SFA], could be stack ranked as nothing is used as much as we want."
>
> Researcher #1: "Another way to think about that, too, is some of the features will be for control purposes and some of the features would provide benefits to the sales reps and you really need to strike a balance between things that they find useful and things that they feel are controlling or requires input for now."
>
> Researcher #1: "The capability goals, I'll not go through them in detail, but they are also still, I think, very appropriate."

The Innovators understood that they needed to consider how to increase assimilation to the SFA before introducing new technologically-focused SFA capabilities. The Marketing Analyst believed that every feature was The Researchers agreed that capabilities within the SFA were not being exploited. The Researchers believed that this was particularly true for managers and sales team leaders who had not fully adopted the SFA. This interaction motivated the Innovators to further analyze the assimilation-capability gaps and prepare a response for closing these gaps.

8.2.5.6 Problem Solving

During I4, the Siebel SFA was being extensively used throughout *VoiceTech*. Mobile technology launched to tenured reps with basic functionality. While the Innovators were exceeding adoption rate expectations from the prior SFA, they believed sales reps and managers were still not fully utilizing the capabilities within the system. However, managers did use the SFA as the authoritative source for resolving sales conflicts. Many initiatives discussed in the collaboration during 2006 were now active (e.g. Siebel SFA, mobile SFA, formal training). Yet, territory management was not fully implemented and reporting out of the SFA was not comprehensive. The Innovators identified capability & assimilation gaps and formulated a framework for how to proceed. Siebel Analytics was being planned to provide reporting and dashboard analytics capabilities and the Innovators were working with the Technologists to

develop reporting for 'right-brained' people. The Innovators encouraged managers to share SFA best practices at higher levels.

In summary, the formal collaboration ended with P2 and the post-presentation workshop. However, the Innovators and Researchers agreed to have a follow-up workshop to review SFA status sometime around the end of 2007. The Innovators' plans for the coming year were to leverage what they had learned during the sales innovation collaboration and make sales operations more efficient.

Table 8.9 TFR in Action During Iteration 4

Iteration	Problem Solving (How people interact)	Salient TFRs (How people think)	Sales Process Innovation (How the problem setting changes)
Iteration 4 [WS4 – P2] **Includes** • **WS4** • **P2** • **Post-P2 Workshop** **Nov 2006 – Feb 2007**	**Summary:** During P2 in February 2007, the Researchers presented their final summary of the sales process innovation collaboration. **Innovators' Problem Focus** • Positive perception of the SFA • SFA investment metrics • Communicating SFA benefits **Researchers' Problem Focus** • Capability gap • Assimilation gap **Innovators' Solution Options** • Ensure useful SFA information reaches correct decisions makers through SFA **Researchers' Solution Options** • Add metrics to the SFA vision to see how each SFA investment has affected sales and attrition • Innovators should focus on process innovation rather than on technology innovation	**Innovators' Salient Frames** • Individual adoption incentives • Consequences of use of technology **Researchers' Salient Frames** • Consequences of use of technology • Organizational Implementation process **Primary Interaction Roles** • **Innovators:** Active, problem solver • **Researchers:** Active, problem definers **Interactions** • **Organizational Implementation Process** Interaction focused on the Innovators' assimilation approach. [42: 147-173] •	**SFA Status:** New Siebel SFA is being used. Mobile technology launched to tenured reps with basic functionality. Exceeding adoption rate expectations. Managers use SFA as authoritative source. Many needs discussed in the collaboration during 2006 are now active (e.g. Siebel SFA, mobile SFA, training). Territory management is not fully implemented. **SFA Activities:** Innovators used identified capability & assimilation gaps to formulate a framework on how to proceed. Siebel Analytics being implemented for reporting and dashboard analytics. Innovators are working with technologists to develop reporting for 'right-brained' people. SFA best practices shared at higher levels. 2007 is about making sales operations efficient. **SFA Plans:** Formal collaboration ended with P2. No SFA plans discussed.

8.2.6 Specifying Learning: P2 – WS5 (February 2007 – March 2008)

Specifying Learning (SL) included the time period of P2 in February 2007 to Workshop 5 (WS5) in April 2008. WS5 was the follow-up workshop discussed in P2. *VoiceTech* experienced significant business growth during the period after WS4, which included the period with no workshops or interviews between P2 and WS5. The growth was large enough that the Innovators, Champions, and senior executives believed that quality leadership was lacking in the branches. The Director of Sales Operations said that many of the new managers had progressed so rapidly that they were "missing the special sauce."

VoiceTech's ability to effectively scale for new markets and replicate the success was problematic. As a result, the top two sales and marketing leaders, including one of the Champions, would be heading up a sales excellence team – a "GE-approach to developing leaders" as the Director of Sales Operations described it. Iteration 5 included the period from February 2007 to March 2008. WS5, which took place on April 21, 2008, was the final workshop of the collaboration. See Table 8.10 for a summary of TFR in action during SL.

7.2.6.1 Innovators' Problem Focus

During SL, the Innovators had primarily focused on addressing three problems. These problems included quantifying SFA benefits, sales rep recruiting, and sharing best practices throughout the organization.

Quantifying SFA benefits. The Innovators believed one of their biggest challenges was understanding how to quantify SFA benefits. The Director of Sales Operations requested suggestions from the Researchers as to how to measure the SFA's impact on productivity

> "One of the biggest challenges we've had here, and we'd love to get your insight as we go through this, is how do we quantify the benefits of this? I mean I know that's got to be a challenge that many industries have to go through is we're trying to correlate activity and things we see in the data around the use of the model with success. We're trying to draw correlations and I don't know if there are things you've seen in the industry that are sort of rules of thumb that might give us a little direction where to go, what data to analyze a little more deeply and maybe do some statistical analysis around, but we'd be interested in hearing your thoughts on that." [41:122]

Sales rep recruiting. During SL, sales rep turnover had increased again. The turnover rates were back to the levels prior to the collaboration. The Director of Sales Operations believed that the majority of the turnover was happening because *VoiceTech* was growing faster than its ability to recruit, train, and retain quality sales reps

> "It's up, it's up. It's not where we want it to be. … We've been doing a lot of hiring and there's been a lot of [turnover] and the majority of it has been happening in the first 120 days of tenure. … That's why this sales excellence group has been formed. … But they recognize that the recruiting process has not been consistent and we're bringing people on and then when they exit 90 days later they say, 'Well I'm going to move; I was planning to move.'" [41:136; 146; 150]

Sharing best practices. The Director of Sales Operations believed that *VoiceTech* struggled with how to share SFA best practices across the organization. He said that *VoiceTech* had not institutionalized best practices and had not formalized any process for sharing best practices

> "I think we struggle with [sharing best practices], still. I think it's done at a higher level. It is done through training. … It's not something that's institutionalized. … We don't have anything like that. We certainly talked a lot about it but we certainly have not done anything about it." [41:220; 236]

7.2.6.2 Researchers' Problem Focus

In WS5, the Researchers were concerned primarily with three problems. These problems included sales rep promotions and continued reliance on spreadsheets.

Sales rep promotions. Researcher #1 was concerned that VoiceTech was promoting to manager its most successful sales reps. The problem for the Researchers was that by promoting sales reps early in their careers, *VoiceTech* was not getting the full benefit of the reps' sales abilities. If this progression strategy were to change, it would necessitate a change in the sales model

> "I don't think it pays off in the long run not to have the best sales people not continue to do sales. This was the first thing that struck me when I came here that you talked about retention and you keep saying now, well our sales reps are not sales reps for more than a year. I think why don't you have sales reps that are sales reps for 15 years because they're very good at sales, because that's what drives your business. I mean it's not the managers of the sales rep that drive your business, it's only if the sales reps are sort of not so smart. But if your sales reps are really smart, they don't need managers that they sell." [41:524]

Continued reliance on spreadsheets. The Researchers believed that *VoiceTech* was continuing to rely on spreadsheets as a major reporting method. During WS5, Researcher #1 again raised this concern to the Innovators

> "You spend an enormous amount of your time keeping up the spreadsheet game." [41:728]

7.2.6.3 Solution Options

Innovators' Solution Options. As of WS5, the Marketing Analyst had been promoted to a new role within the company. The Innovators were attempting to replace him with someone who would be more focused solely on the SFA. The replacement would do industry benchmarking as described by the Director of Sales Operations

> "If you guys know anybody who is an SFA expert, I'd be interesting in talking to that person and looking at their resume. I'm looking at … somebody who works with SalesForce.Com who can really benchmark the industry, who has been in that focus for a while [and] who is going to interface with IT and talk IT speak." [41:118]

The Director of Sales Operations believed *VoiceTech* had to become more sophisticated in how it managed projects and measured long-term benefits of SFA investments

> "I think we have to start to get sophisticated on how we would analyze our projects; [for example] are the projects short term or long term, when do they get cash flow and what's the shelf life of that benefit. … The other thing is depending on what part of the business you're talking to, their methodology may be a little bit different so if we're interfacing with IT and we're all trying to make a case and quantify financially what the benefit is to the company, the challenge there is we're not all speaking the same language. Everyone is doing their math a little differently and so I think that's got to be fixed so that everyone is on the same page and we're all using the same methodology so we can make an apples-to-apples comparison."

Researchers' Solution Options. In WS5, the Researchers were focused on identifying ways *VoiceTech* could continue improving its sales results through innovative SFA use. For example, the Researchers suggested the Innovators incorporate a social networking component into the SFA. Researcher #2 believed that by providing the interface into a social network could provide at least a partial solution to the assimilation problems

> "Now that this is ubiquitous across all your sales reps are you using social networking in any fashion? The problem with introducing it when it was for tenured [sales reps] only sort of created exclusive class; but now that you have it ubiquitously it strikes me that some of these social networking tools could accomplish things that you may not be able to accomplish in other means. I'm just curious if you looked at any of it?" [41:180]

The Researchers also again emphasized the need to make the SFA useful for individual reps, thereby creating rep 'pull' of the technology. Researcher #1 observed that if sales reps saw a need for using the technology they would enter the necessary data into the SFA

> "A very good example of what we have often been talking about [is] this push thing. Namely, that if you can make each individual rep really pull towards using this tool for some personal benefit, I mean they really see this to be useful for me, then of course immediately they have the consequence that they put in the data that they need to put in to see it, and that drives much more adoption than anything you can do, you know, talking to them, training them, whatever. If they see a need for using it, they'll put in the data." [41:324]

The Researchers also were focused on *VoiceTech'* sales process. The Researchers believed the Innovators, with the now mostly successful SFA implementation, should begin to focus on improving the sales process rather than innovative sales technology

> Researcher #1: "As long as you keep your model, your investments will be in technology and leadership to try to make the model as effective as possible. But there is another option which is to innovate your model which would focus on sales rather than on sales management which would focus on sales rather than sales technology. So it's just an option and I'm just making that observation that you're not doing that." [41:528]

> Researcher #2: "I'd even go further and say more frequently process innovation precedes technology adoption in support of the innovation. And innovation by the way, just because you have a radical to the model somewhere in the future doesn't mean that you basically jump from where you are now to there. You simply say … 'How do I get there incrementally' and it also gives you the opportunity to learn and change." [41:530]

The Researchers suggested that *VoiceTech* try differentiated sales tactics in new markets. This change would give *VoiceTech* the opportunity to see if new branches could achieve higher sales through different sales models. For example, Researcher #2 proposed having an alternative sales process which would allow sales reps to own the customer relationship

> Researcher #2: "You're opening one new branch every four months or something or three months probably in order to drive 30% and it will probably be two

> months next year in order to maintain that. I mean these are all like little laboratories for experimentation. You don't have to say well let's just carbon copy this and stamp it on this one. You can say, 'Here's an opportunity to try an alternative process model for sales or a different view on the relationship between strategy, customer, marketing, sales.' Because you can open these things anyhow. … You're running your own little experimental lab and cauldron if you will in trying some of these things out. [41:550]

8.2.6.4 Salient Frames

The Innovators two were mostly focused on *consequences from use of technology* (17 utterances), *use of technology* (16 utterances), *organizational implementation process* (16 utterances), and *individual adoption incentives* (13 utterances). By comparison, the greatest number of utterances for any other particular TFR was eight. Likewise, the Researchers were mostly focused on *individual adoption incentives* (6 utterances), *consequences from use of technology* (4 utterances), and *use of technology* (3 utterances). By comparison, the greatest number of utterances for any other particular TFR was.

8.2.6.5 Interactions

Primary Interaction Roles. During WS5, the Innovators were active problem solvers. They had spent the previously year improving the SFA and training users in all *VoiceTech* offices. They were now focused on resolving the remaining issues with user assimilation and technology innovation. Meanwhile, the Researchers were passive solution providers. As the Innovators presented their self-evaluation of achievements over the previous year and challenges they continued face, the Researchers provided alternatives and potential solutions for the Innovators to consider.

Interactions context. During SL, there were two primary Innovator-Researcher Innovations.

- **Individual adoption incentives**. This interaction focused on the sharing of best practices across cities via websites, blogs, social networking, email, and other methods. The Researchers believed that best practice sharing could be accomplished through any of these methods but that it was important that grassroots efforts be at the center. The Researchers believed that the ability to build reputational capital in a social network would persuade sales reps to share best practices. [41:180-240]

> Researcher #: "Now that this is ubiquitous across all your sales reps, are you using social networking in any fashion? … Now that you have [the deployed SFA] ubiquitously, it strikes me that some of these social networking tools could accomplish things that you may not be able to accomplish in other means"
>
> *VoiceTech* Director of Sales Operations: "The social networking, give me an example of that."
>
> Researcher #2: "It runs everything from IM-ing, to Facebook, to any kind of sites that allow people to share. … There's a technology piece to this and then there's a 'what are you trying to achieve' piece of it. But, the idea is to create networks of individuals having similar problems or solutions and empowering those who are most able to contribute and giving them some peer recognition within the social network."

VoiceTech Director of Sales Operations: "So this would be along the lines of - it wouldn't necessarily be a case study but it would be highlighting success stories around successful reps and how they're successful?"

Researcher #: "No, it's not really - unfortunately you don't get to control this very much. I mean you basically give people the opportunity to join this structure _"

VoiceTech Director of Sales Operations: "A grassroots thing."

Researcher #2: "Yeah, it really is and so initially you tend to have people who are seeking recognition for their skills and abilities in terms of doing things and then other people sort of joining in initially as lurkers and then they start to contribute themselves and it essentially creates a social structure. … So, if you can provide them with technologies that allow them to do that, that social structure will become stronger and reinforce levels of performance amongst them."

VoiceTech Director of Sales Operations: "That's interesting. I see where you're going with that. The challenge we have at our branch is that the rep level is a bit siloed and it's sort of the culture. It's not anybody is really siloed, they're just so focused on what they've got to do every day in their heads that they're not thinking about that other branch 400 miles away."

Researcher #2: "But this doesn't have a branch structure to it. People simply have needs. This gets to something called reputational capital. … If you look at this generationally, increasingly in the younger generations they're shifting more towards what's called reputational capital. And so reputational capital is built by essentially achieving certain levels of reputation within a social structure, and Lars gave a perfect example in the case of sort of open source where you build your reputation as a clever programmer or software developer across a space which is essentially working on some particular project. It doesn't matter whether I'm in Finland or Timbuktu."

…

VoiceTech Director of Sales Operations: "We have some technical limitations we've applied to the reps that sort of throttle that a little bit. I like the idea, the problem is they don't have laptop computers. We have IM."

VoiceTech Marketing Analyst: "Yeah, they use IM all the time."

Researcher #2: "You don't need anything much fancier than that really. I mean you can always augment it by providing a web interface so they can use it on their computer through a portal. But you do [already] have this going on. You realize, of course, people go to Friday at the bars and they trade all these stories so you have a kind of social network except it's constructed out of convenience and proximity as opposed to a lot of knowledge."

VoiceTech Director of Sales Operations: "I'm curious how you create that with this topic. How do you make it that interesting that they would [use it]?"

VoiceTech Marketing Analyst: "Try to make social networking work-related."

> Researcher #3: "How do you share best practices across cities now? Do you have a website?"
>
> *VoiceTech* Director of Sales Operations: "I think we struggle with that still. … We do it through … talking to one another. It's very high level. There's a few events that occur throughout a year when the opportunity exists."
>
> Researcher #3: "Do you have a blog?"
>
> *VoiceTech* Director of Sales Operations: "Not that I know of."
>
> Marketing Analyst: "We have a website that we can use to make announcements to the reps but we haven't shared best practices through that vehicle. It's more announcements."
>
> Researcher #3: "Do you send out any email around problems or specific techniques?"
>
> *VoiceTech* Marketing Analyst: "If I get a lot of feedback about a certain issue I'll do a broadcast but it hasn't been a regular communication."
>
> *VoiceTech* Director of Sales Operations: "It's not something that's institutionalized that goes out on a regular basis and people are expecting to see and learn from it. We don't have anything like that. We certainly talked a lot about it but we certainly have not done anything about it. So we need to borrow a marketing plan for our SFA. So we need to build a viral marketing scheme for the SFA."
>
> *VoiceTech* Marketing Analyst: "I think we can do more of that. … [For example,] I was able to speak at a tenured rep class and observe other training sessions and I noticed the knowledge sharing across branches was something that the reps needed to hear, especially as they're building the referral network."

The Innovators realized that they needed a better method of supporting the sharing of best practices. They had no structured means to collect best practice information across offices and did not provide any formal encouragement to do so. The Researchers suggested the Innovators create, support, and publicize *VoiceTech* social networking technologies whereby reps and managers would be willing to share knowledge and experiences with other sales reps and managers. The Researchers explained the technological support mechanisms for such a social network could be formalized. However, the Researchers emphasized that employee participation in the network should be grass-roots and encouraged through the sales reps' accumulation of reputational capital among other sales reps.

- **Technology strategy**. This interaction focused on innovating the sales process. *VoiceTech* had implemented innovative sales technology without changing it sales process. The Researchers suggested that the research on information systems has found that there is a low return on investment when implementing technologies without innovating processes. Thus, the Researchers emphasized the need for the Innovators to evaluate sales processes and indentify processes to be improved. The Innovators agreed and implied the new sales excellence team would be focused on these changes. [41:516-538]

Researcher #1: "If you read the literature, it would say, I'm just talking generically, but it would always say for a company to invest in technology without innovating its processes, the return on investment is insignificant. You only get significant return, I'm talking generically now, you only get a significant return on your investment if you use the technology to enable innovation on your process."

VoiceTech Director of Sales Operations: "I believe it. Makes perfect sense, otherwise everyone's gonna be using their laptops to get on Facebook."

Researcher #1: "So therefore as I look at this I'd say, 'Well, I'll come back in five years and then I'll walk [down that] path.' So there's a delay in picking up the idea of innovation where still it's very focused on technology innovation which is good, I'm not arguing against that. ..Now that the technology is in place and now that you have this sort of intelligent backbone in the company, I think is the real challenge. That's where the great fruits are in terms of return on investment. That's just my prediction."

Researcher #1: "I don't think it pays off in the long run not to have the best sales people not continue to do sales. This was the first thing that struck me when I came here that you talked about retention and you keep saying now, well our sales reps are not sales reps for more than a year. I think why don't you have sales reps that are sales reps for 15 years because they're very good at sales, because that's what drives your business. I mean it's not the managers of the sales rep that drive your business, it's only if the sales reps are sort of not so smart. But if your sales reps are really smart, they don't need managers [for them to be successful]."

VoiceTech Director of Sales Operations: "I think a benefit of this sales excellence concept that's being implemented now, to your point, is we're going to re-look at how we cultivate leaders because right now we have a leadership vacuum. So what we're doing is taking the path of least resistance in the here and now and not looking in the future and saying by sucking all the good reps out of the ranks and making them sales management, how is that going to fix us in the future? Well, I'm not sure it does but we have a manager now. So we're sort of trading one off for the other and we have to rethink the whole idea of who are the leaders, ask tough questions that maybe you just asked."

Researcher #1: "Let me challenge you again. As long as you keep your model, your investments will be in technology and leadership to try to make the model as effective as possible. But there is another option which is to innovate your model which would focus on sales rather than on sales management and which would focus on sales rather than sales technology."

Researcher #2: "I'd even go further and say more frequently process innovation precedes technology adoption in support of the innovation. Just because you have a radical to the [current sales] model somewhere in the future doesn't mean that you basically jump from where you are now to there. You simply say 'I think this is a really interesting ideal state, how do I get there incrementally' and it also gives you the opportunity to learn and change."

> Researcher #3: "Marketing's viewpoint would have at the heart of it the customer relationship. What do you want that to be? Then the next level out would be definition of roles of sales and marketing and customer support; the next level out is engineering, re-engineering processes; and then the final level out is the technology level."
>
> *VoiceTech* Director of Sales Operations: "So all those others sort of have to be in play first [and] thought out."
>
> Researcher #3: "You have to have a relationship marketing strategy that drives the definition of your sales force and your marketing people and then you engineer your processes to support that and then you support your processes with technology."
>
> *VoiceTech* Director of Sales Operations: "You have a galvanized process before you build technology."

The Researchers emphasized the need for *VoiceTech* to evaluate its sales model and sales processes in light of the new SFA. The Researchers also suggested the Innovators need not jump from the current process state to the desired process state in one leap. Instead, the Innovators should identify the steps needed to achieve the desired state. The Innovators agreed with this step-by-step approach instead of the path-of-least-resistance approach they were then currently employing. The Innovators believed the sales excellence team should make sales processes an area for emphasis.

8.2.6.6 Problem Solving

During SL, *VoiceTech* was providing ongoing support of new SFA. The Innovators continued their work on integrating SFA and BlackBerry training into core sales rep training. The plans for the SFA project in the next twelve months included the following:

- Integrate SFA into general training of sales reps
- Sales operations challenged by *VoiceTech* Board of Directors to get each sales rep a laptop
- Global location (similar to GPS) to be rolled out to sales reps
- Do-Not-Call list to be built into mobile SFA

Table 8.10 TFR in Action During Specify Learning

Iteration	Problem Solving (How people interact)	Salient TFRs (How people think)	Sales Process Innovation (How the problem setting changes)
Iteration 5 [P2 – WS5] **Includes:** • **WS5** **Feb 2007 – March 2008**	**Summary:** The year between P2 and WS5 saw significant business growth at *VoiceTech.* So much so that the Innovators and Champions (and also senior executives) believed that there was not enough quality leadership in the branches – "missing the special sauce." *VoiceTech's* ability to scale to new markets and replicate the success was now a problem. To address this, the top two sales and marketing leaders, including one of the Champions, would be heading up a sales excellence team – a "GE-approach to developing leaders." Workshop 5 was the final workshop of the collaboration. **Innovators' Problem Focus** • Quantifying SFA benefits • Sales rep recruiting • Sharing best practices **Researchers' Problem Focus** • Sales rep promotion • Continued reliance on spreadsheets **Innovators' Solution Options** • Replacing the Marketing Analyst • Quantify long-term SFA benefits **Researchers' Solution Options** • Incorporate social networking into SFA • Make SFA useful to individual sales reps • Improve sales processes rather than innovate sales technology • Differentiate sales tactics in new markets	**Innovators' Salient Frames** • Consequences from use of technology • Use of technology • Organizational implementation process • Individual adoption incentives **Researchers' Salient Frames** • Individual adoption incentives • Consequences of use of technology • Use of technology **Primary Interaction Roles** • **Innovators:** Active, presenters, problem solvers • **Researchers:** Passive, solution providers **Interactions** • **Individual adoption incentives** Interaction is around sharing best practices across cities via website, blogs, social networking, email, etc.. [41:180-240] • **Technology strategy** Interaction focused on innovating the sales process before implementing innovative sales technology. [41:516-538]	**SFA Status:** Every rep now receives a BlackBerry. Innovators conducted "adoption tours" and adoption stable since April 2007. Intermittent BlackBerry adoption issues still exist at some locations 93% of sales reps are entering and updating appointments. 60% are entering daily activities (e.g. number of visits). "Deal Sold" email sent is nearly 100%. Managerial dashboards now 80% adopted. **SFA Activities:** Ongoing support of new SFA. Continuing Innovators working on integrating SFA and BlackBerry training into core sales rep training. **SFA Plans:** • Integrate SFA into general training of sales reps • Sales operations challenged by *VoiceTech* Board of Directors to get each sales rep a laptop • Global location (similar to GPS) to be rolled out to sales reps • Do-Not-Call list to be built into mobile SFA

8.3 TFR Shifts for Innovators

Evidence of the Innovators' modified and new frames is explained below and summarized in Table 8.11.

8.3.1 Modified Frames

Consequences from Use of Technology. During WS4 in November 2006, the Innovators believed Siebel SFA was easier to use than previously. The Marketing Analyst based this on discussions with sales reps who believed the *SFA was easily used and useful*

> "It's easier to find my way around in POINT. And the reps have told me that it's easier to use than it was before." [37:45]

Later, during P2 in February 2007, the Marketing Analyst acknowledged the frustrations of User-Reps who had been using the SFA. The Innovators now saw the *SFA* as *not easily used or useful*

> "They're inputting, inputting, inputting, and nothing's coming out that says how this is useful or here's what you've done." [42:181]

Thus, there was shift in the Innovators' perception from SFA as easily used and useful to the SFA as not easily used and useful. This shift was based on feedback the Innovators received at two different points in time. As a result, the Innovators began working to identify benefits they could deliver via the SFA to the sales reps.

Projected Value of Technology, Consequences from Use of Technology, Organizational Implementation Process, and Individual Adoption Incentives. During WS3 in July 2006, the Innovators were focused on the *VoiceTech* sales model. They believed the sales model was unchangeable. As a result, sales model accommodations were made during the SFA implementation design. For example, the Director of Sales Operations summarized the *rep progression model* and how the *VoiceTech sales process limits SFA exploitation*

> "The way it works right now is they are-they promote themselves. So when they hit the number based on their commission statements tracking this. … [It] means they get … a BlackBerry and a couple of other things." [36:202]

> "There's a constraint in the business that POINT was developed to address … and that constraint still exists as it moved over to the new system and … was emulated." [36:137]

During P2, the Marketing Analyst acknowledged the Researchers' feedback on the sales process was influential in shifting the Innovators perceptions regarding the process impact on technology. The Innovators now saw a *need to innovate sales processes before innovating sales technologies*

> "When you came and did the workshops is when it got interesting to see and I think it improved our SFA rollout. I think it would have gone worse had we not. So we appreciate, [the] feedback translated to direct, immediate viewpoints, and ways of thinking that were beneficial." [42:213]

In a Post-P2 follow-up in March 2007, the Director of Sales Operations agreed the focus had shifted toward addressing process innovation to improve the sales model

> "On the process innovation side we have this gap that we're not seeing that we might want to be thinking about and here are some things that you could do to help facilitate us being more effective there. … I have gotten everyone to kind of nod-to agree with this perspective that we look at and manage this entire platform … [as] the organizational management tool to drive a very structured sales business model." [31:14; 57]

During WS5 in April 2008, the Innovators confirmed they were now focused on sales process change in support of the sales model. Accordingly, the Marketing Analyst perceived the SFA as a *platform to innovate sales process*

> "We want to look at process innovation. Our main idea 'to-be SFA' from a corporate objective is to automate the *VoiceTech* sales model. … Our focus is to automate the *VoiceTech* model whether it's a radical change or an evolutionary change. Most of the time it's evolutionary." [41:47]

As of WS5, the Marketing Analyst perceived sales reps benefitted from *VoiceTech's* decision to *integrate progression model within the SFA*

> "[We have] integrated the progression model with the SFA. We've released a process where the reps use the SFA and ratios." [41:306]

Thus, there had been a shift from Innovators focusing primarily on reinforcing the sales model in WS3 to focusing on sales process innovation in support of the sales model in WS5. This shift helped the Innovators provide individual incentives to increase user adoption of the SFA. The shift also focused the Innovators on defining what the SFA should become at *VoiceTech.*

Projected Value of Technology, Use of Technology, Consequences of Technology Use, and Organizational Implementation Process. During WS1 in February 2006, the Innovators emphasized that, in their view, giving sales reps laptops was unnecessary. The Director of Sales Operations believed the BlackBerry SFA and Siebel provided all the needed functionality. Thus, *laptops were not necessary*

> Director of Sales Operations (in WS1): "It goes back to how much functionality are we having to walk away from. … I guess we're under the perception that things that we want to achieve should be Siebel with the BlackBerry. … There's going to be a learning curve if we learn otherwise." [40:1576]

However, as of WS4 in November 2006, the Director of Sales Operations acknowledged *VoiceTech's* 2007 plan included *senior sales reps getting laptops*

> "We have laptops for the senior sales consultant level. … They don't have laptops yet but that's one of the things we're working through on the 2007 plan right now." [37:237]

By WS5 in April 2008, the Innovators had concluded giving laptops to sales reps could prove beneficial for the sales reps and sales performance. For example, Director of Sales Operations believed the *lack of laptop computers limited SFA exploitation*

> "We have some technical limitations we've applied to the reps that sort of throttle [social networking capabilities] a little bit. I like the idea. The problem is they don't have laptop computers." [41:237]

During WS5 the Innovators revealed that the *VoiceTech* board of directors had challenged company leadership to justify why sales reps were not being provided laptops. Thus, the Director of Sales Operations acknowledged that the Innovators were addressing the *board of directors desire to provide laptops to sales reps*

> "The board challenged us why do we not provide laptops to all of our sales reps as a potential productivity tool. So we've been looking into this a great deal and really trying to understand where the opportunity is there versus the cost." [41:282]

Also during WS5, the Innovators indentified additional sales process benefits of sales reps being provided laptops. For example, the Director of Sales Operations suggested that *laptops could be used for service demonstrations and point of sale automation*

> "We are developing on line demos and demo a lot of our products. … The second is there could be automation pushed all the way out to the point of sale. On line forms to the point where the customer says 'I agree', and you just indicate a couple things here, do a couple things to the [laptop] keypad, hit go and we'll have the order form flow back to corporate." [41:284; 285]

Thus, there was a shift from the Innovators' initial perception that the laptops were unnecessary to the perception that the lack of laptops limited sales reps' ability to exploit SFA capabilities. This shift then progressed further due to executive pressure to provide sales reps with laptops. Initially, the Innovators' perception shift was primarily motivated by user feedback on the limitations of the mobile SFA. However, when the Innovators' were challenged by the board of directors, their perception shifted to identifying specific justifications for providing laptops to sales reps. Therefore, at WS5, the Innovators were working on understanding the potential benefits and costs of providing laptops to sales reps.

Individual Adoption Incentives. During WS1 in February 2006, the perception at *VoiceTech* was that *sales reps should have to earn a BlackBerry mobile device*. The reasoning was that the device was too expensive to distribute to all sales reps. However, at WS5, the Director of Sales Operations acknowledged a shift in perception regarding BlackBerry distribution had occurred so that *BlackBerrys were given to all reps at start date*

> "They all get [BlackBerrys] now as soon as they start. Pretty much everyone is getting it now. We've changed." [41:232]

Thus, the perception had shifted from the view that only select reps should get BlackBerrys due to cost minimization to one where BlackBerrys were given to all reps at start date. This shift gave all sales reps the ability to demo the product to prospects and eliminated the necessity of returning to the office each evening to enter sales activities on the shared desktop computers.

Organizational Implementation Process. During WS4 in November 2006, the Innovators described an evolving relationship that appeared to be developing between *VoiceTech* and its technology partners including Siebel RIM (maker of the BlackBerry device), and its communication backbone partner. With

VoiceTech's large and rapidly growing sales force, these partners were becoming more interested in *VoiceTech's* implementation strategy. As a result, the Innovators became interested in exploring *strategic partnership options*

> "Ever since Siebel got bought by Oracle, they seem to be more engaged with us. So the general relationship seems to be evolving a little now. … They're more interested in how we want to use it, where we want to take it … [and] how to integrate better with our business model." [37:15]

However, nearly eighteen months later at WS5, the Marketing Analyst explained strategic partnerships had not developed

> "The recommendation [from the Researchers] was to exploit RIM … and Siebel relationships through strategic planning and we haven't taken you up on that yet. All we've done is if we have a problem, we'll go to RIM … or Siebel. But we haven't sat with them and said 'we have this great technology and you could learn from us to build better technology on your side but benefit the industry.'" [41:33]

Thus, while the Innovators in WS4 appeared to be interested in strategic partnerships, their view by WS5 had shifted from excitement about strategic partnership options to inaction.

Organizational Implementation Process. During WS1 in February 2006, the Innovators believed an SFA vision had not yet been developed. Instead, *VoiceTech* was using sales-related information pulled from different, sometimes conflicting, sources. This resulted in a disjointed SFA implementation effort. The Marketing Analyst supposed *VoiceTech* had *no global SFA vision*

> "I think we have a lot of that information in different places, but I think what we have to find is as a global initiative, we haven't taken like a global vision and documented that. We have a lot of ideas, but we haven't cohesively created a project, a smarter project and then had details." [40:602 - 603]

However, by WS5, the Innovators' perception had shifted so they believed *VoiceTech* had developed an SFA vision by *using the Researchers' suggestions to strategize about SFA*

> "[This collaboration] gave us an opportunity to work with you all to go through that transition and to ensure we're thinking about everything as we release this platform and also to think about alternative approaches such as releasing BlackBerrys to more people and laptops, better tools, looking at some of these vision points you all gave to us. We've tried to look at that and use that stuff." [41:11]

Thus, a shift occurred in the Innovators' views from no SFA vision existing to, at the end of the collaboration, acknowledging that the collaboration had helped them develop an SFA vision. The Innovators' perception at WS1 was they needed global vision but did not have one. They acknowledged the Researchers' suggestions helped them to strategize about SFA.

In summary, the Innovators' TFR shifts primarily were centered on SFA ease of use and innovating the sales process (See Table 8.11). Initially, the Innovators were focused on helping sales reps by making the SFA easy to use. As the SFA implementation progressed, the Innovators realized *VoiceTech's* sales

processes should be innovated before sales technologies were further innovated. Thus, the Innovators began looking for ways to enhance use of the SFA platform through sales processes innovation.

8.3.2 New Frames

Consequences from Technology Use. Between WS1 in February 2006 and WS2 in June 2006, the Innovators, at the recommendation of the Researchers, had analyzed how sales reps performed their day-to-day tasks and compared that with sales tasks within Siebel SFA. After completing this analysis the Innovators' perception had changed. The Director of Sales Operations acknowledged they found the *SFA was not aligned with sales rep activities*

> "What … we observed out in the branches is that the real daily tasks that the reps perform throughout the day don't necessarily marry up perfectly with how the Siebel system was designed. You guys made a recommendation [that] what we needed to do was some real research out in the field and find out how the reps really do their job and then build a system that totally dovetails to their needs based on their activity level, based on how they need to access it, based on what they do in there." [36:75]

Initially, the Innovators understood minor changes to the SFA would be necessary. The Innovators believed the SFA could address most of *VoiceTech's* sales rep needs. However, when they began matching sales reps' and sales managers' needs to actual SFA capabilities, the Innovators realized Siebel SFA only addressed the critical needs in a limited way. As a consequence, their perception of Siebel SFA now became that it was more limited than the legacy SFA.

Rationale for technology acquisition and implementation. During WS2 in June 2006, the Innovators elaborated on the rationale for the Siebel SFA implementation. In addition to the reasons mentioned during WS1 (e.g. platform instability, mobility, ease of use), the Director of Sales Operations now viewed as equally important the *elimination of the spreadsheet regime through automated reporting*

> "We want to move to fully automated reporting and create an 18-month blueprint … of how we go to fully automated reporting and what the change of process for the company would be to get there. It would totally eliminate all the spreadsheets. … We're going to write a draft version of that and put a stake in the ground." [35:188]

The Innovators realized SPI gave them momentum for changing the internal company sales processes. They understood s eliminating spreadsheet reporting by creation of automated reporting processes would necessitate a company culture shift in how sales were reported. This was a position the Innovators now were ready and willing to take by putting "a stake in the ground."

Organizational Implementation Process. During WS2, the Innovators expressed a need for better SFA project management. They originally believed they had in place the necessary resources and tools to management the SFA implementation, but the Director of Sales Operations now expressed *VoiceTech needed better project organization*

> "The week after the launch do we have subsequent meetings with [sales managers]? … So we can get these very frequent periodic feedbacks for the first maybe month or so after the launch just to get a lot of near real-time feedback

> and then group feedback on a weekly basis, or something like that? We haven't really set that up or talked about that." [35:823]

The Innovators believed there were resource limitations that restricted sales management from providing feedback. *VoiceTech* planned on rolling out Siebel SFA to all markets at one time. This presented project organization challenges that the Innovators recognized needed to be addressed.

Organizational Implementation Process. During WS3 in July 2006, the Innovators discussed how the initial release of *VoiceTech's* Siebel SFA had shortchanged managers. In fact, the Director of Sales Operations acknowledged the perception that *managers were not considered in initial SFA releases*

> "We put all of our energy into making sure we got the rep functionality … and the rep interface right. We really shortchanged the [managers] in that process. … We could have more proactively trained them. That's one user group that kind of fell by the wayside." [36:79; 88]

The Innovators realized that, while *VoiceTech* had concentrated delivering a usable SFA to sales reps, sales manager needs had not been considered. This resulted in the delivered Siebel SFA being less functional than the legacy SFA.

Organizational Implementation Process. During WS3 the Innovators revealed that there had been pain points in how *VoiceTech* handled change management related to the initial release of the Siebel SFA. These problems led the Director of Sales Operations to the view that *VoiceTech* as a company, rather than individual departments within the company, *needed a change management strategy*

> "We went in to certify off the production platform and … things had changed. So we were real taken aback by why would that have happened and so that's one of the process procedures that I'm challenging IT. Why go to the trouble to make a certification on the development platform? They should be the same on the production platform and yet we saw different things, different bugs, different issues. … Basic fundamental IT organization issues that we stumbled upon that maybe happened all along. … It became painfully clear that there was an issue. … One of the takeaways was we were really focusing on change management for the sales organization, but I think there was also a change management going on in the IT shop … and serendipitously as we were going through the process." [36:13; 16]

The Innovators discovered that even though sales operations performed a quality assurance check on the development system of the SFA prior to the production system release, the IT department had experienced fundamental change management issues that caused numerous SFA problems.

Rationale for technology acquisition and implementation. During WS4 in November 2006, the Innovators addressed the SFA capabilities proposed by the Researchers in WS3 (see Table 6.2). The Marketing Analyst revealed one the capabilities that the Innovators were now exploring, but had not yet resolved, was *mature forecasting capability*

> "Mature forecasting capability, a long way to go here. We're exploring options. … There's sort of an art plus a science component equals your forecast and then having that full up, being visible to all levels, we haven't seen a solution that this is exactly what we need." [37:191]

The art portion of the forecast, as suggested by the Marketing Analyst, was there was no standard forecasting method in use across the organization. However, the Director of Sales Operations believed the forecasting process should be standardized and automated

> "I think one of the take always is that we recognize that it's not probably the best way of forecast and I think we're kind of stepping back and looking at the bigger picture and looking at how should this work and how will we automate it." [37:1444]

Technology capabilities and functions. The original intent of the first Siebel SFA release was to migrate, as closely as possible, the capabilities from the legacy SFA into the Siebel SFA. However, the Innovators recognized additional capabilities existed within Siebel SFA. During WS4, the Marketing Analyst provided examples of the Innovators' perception of SFA *capabilities vs. needs*

> "What did we change between the time we had the SalesLogix SFA system to the Siebel SFA system? These are the main capabilities we've added on this as-is. It was supposed to be this as is migration but it turned out there were more capabilities in Siebel that we could take advantage of. The first is mobile. We wrote a very basic first release of BlackBerry functionality for reps and in that functionality they can update an existing appointment. They can also see their calendar, what their appointments are for the day and tomorrow. … [Also] Siebel Wireless has become pretty interested in our project. … They're going to come back and talk to me and say, okay you're using this, what do you need from us, and what additional functions do you need?" [37:5-8]

The primary focus of this exercise was to identify the minimal functionality that could be delivered to sales reps. Additionally, the Innovators revealed that by identifying capability gaps, Siebel had become interested in providing additional capabilities to *VoiceTech.*

Use of Technology. During WS4, the Innovators discussed several ideas concerning how to create user interest and gather feedback. The Marketing Analyst believed one potentially good idea was development of an online *FAQ board*

> "I love [Researcher #4's] recommendation on the FAQ's and the forms and make it an … 'Ask the POINT Group' … and [a sales rep] could post something and I could reply to the post. I think that would be [useful] . … It's another idea of how we can extend the POINT community because we need to earn their trust before this can happen. … I feel like I have to do more in terms of getting them to understand the capabilities and get adoption a little bit higher." [37:584; 585]

The Innovators were focused on users adopting the SFA and mobile SFA technology. Because of the limited availability of IT and help-desk resources, they also wanted to create self-supporting help groups. They believed online help provided through an FAQ could provide the support that users needed.

Organizational implementation process. *VoiceTech* believed that its SFA should accomodate all sales reps and sales managers, regardless of personality or stylistic differences. As of WS4, based on observations and discussions with users, the Innovators recognized that User-Reps and User-Managers were utilizing the SFA differently. The Director of Sales Operations view was that *VoiceTech* should close assimilation gaps by modifying the *SFA to accommodate left- and right-brain users*

> "It's always a challenge because everybody kind of uses different parts of the brain in trying to use tools and references and reference materials so that you accommodate as many people … as possible. … So, we have a gap but we've been neglecting the left brain people and what we need to get is a view that gives them a chart that says appointments by day, or the number of second [appointments]. Give them the top five snippets, they can log in each day and they can see they have a problem here based upon the most impactful numbers like the level of appointments, the close ratio, etc. Then we can get those left brain people in the fold. So we're working with requirements on getting some of these dashboards created for managers." [37:57; 245]

Depending on the personality or management style of the user, SFA usage differences were causing user frustration and, in some cases, leading to incorrect data being entered into the SFA. The Innovators hoped to address these concerns by incorporating SFA dashboards and charts which would accommodate all types of users.

Images of Technology. The Innovators believed *VoiceTech's* SFA held proprietary information that gave the company a competitive edge. To emphasize this view during P2, the Director of Sales Operations expressed the SFA *technology as a "special sauce*"

> "I would draw a comparison with this to the life of a company like a Wal-Mart or a UPS where they have this 'special sauce' internally around their technology and their flow of product and information and how they manage that. They're constantly trying to raise that bar. They're trying to improve it, you know, and maybe in small incremental improvements all the time." [31:10]

This view of the SFA as a special sauce meant the Innovators were especially focused on ensuring successful implementation. The Innovators also expected the SFA to be improved so *VoiceTech* retained its competitive edge.

Individual adoption incentives. During P2, the Innovators continued to discuss ways that users could be incented to more fully adopt the SFA. The Marketing Analyst's view was that more proficient users could be given special status within the organization. To support this proposal, he suggested that *VoiceTech designate expert SFA users*

> Marketing Analyst: "An idea I had recently was to [identify] people that know the SFA to a higher level than all the other users and have them be helpers to the newer reps. We're always having a class of new reps that come in and … they understand relationships more than just [SFA training] presentations. So they need someone to sit next to them and say, 'click here, click here, click here.' I think the best person to do that is another rep and to have them maybe be certified to sort of an expert status and then they can be a user group for us as well as training new people that come in." [42:176]

The Innovators view was to identify and certify specific User-Reps as SFA experts. These certified sales reps would then be available to help train new users in the field and also be used to test SFA upgrades and modifications.

Projected value of technology. As of WS5 in April 2008, the Innovators had been working on the SFA implementation project for over two years. Since P2 in February 2007, *VoiceTech* had been making small

refinements to the SFA. The Marketing Analyst now viewed the SFA as a *platform to innovate sales process*

> Marketing Analyst: "How do we best innovate the SFA to increase sales rep productivity and retention? [That was a] good question that you all proposed to us. … Through technology innovation we want to look at capabilities and adoption and we added industry benchmarking as something we want to look at to that box. … Then we want to look at process innovation. Our main idea for the to-be SFA from a corporate perspective is to automate the VoiceTech sales model. … Our focus is to automate the VoiceTech model whether it's a radical change or an evolutionary change." [41:46; 47]

Similarly, the Innovators viewed the SFA as a technology platform by which they could introduce innovation into the sales process. For example, sales activity reporting had not been fully automated and sales rep compensation was primarily calculated manually. Thus, by WS5 the Innovators primary focus was process innovation.

Projected value of technology. The Innovators believed the mobile SFA would allow sales reps to achieve SFA data entry and be able to get prospect and sales performance information from any location. During WS5, the Marketing Analyst summarized the *VoiceTech* vision for achieving *SFA ubiquity*

> "Our vision is to meet capability and adoption needs to the program specifically providing the SFA everywhere we can in the sales reps world strategically aligning it to our model and getting the flow of data there in and out." [41:7]

As of WS5, SFA ubiquity had not been achieved. Every sales rep had been provided a BlackBerry mobile device and could access the SFA remotely. However, there were limits to the technology capabilities which inhibited SFA ubiquity. For example, the BlackBerry did not maintain a constant data connection; the SFA did not provide true real-time mobile capabilities; and the wireless service was not available in some areas.

In summary, thirteen new salient themes emerged within the Innovators' TFR during the collaboration (see Table 8.11). The Innovators were primarily concerned with identifying sales rep and sales manager needs and properly aligning SFA capabilities. After the initial release of the SFA, the Innovators focused on ways the SFA could be enhanced. The Innovators also found it important finding means to provide support for new users. Finally, as the collaboration concluded, the Innovators began addressing their perception that the *VoiceTech* sales process needed innovating. Overall, the Innovators were most concerned with consequences from use of technology and the organizational implementation process. They had developed a deep understanding of the SFA and BlackBerry technologies' benefits and limitations. During WS5, the Innovators articulated the SFA vision and explained how all of their SFA functionality requests fit within that vision.

Table 8.11 TFR Shift Evidence for Innovators

Modified Frames	New Frames

Modified Frames	New Frames
Shift in perception that SFA is easily used and useful to belief that the SFA is not easily used and useful	***Consequences from Technology Use: SFA not aligned with sales rep activity (in WS2)***
Consequences from use of technology: SFA easily used and useful Marketing Analyst (in WS4): "It's easier to find my way around in *POINT*. And the reps have told me that it's easier to use than it was before." [37:45]	Director of Sales Operations: "What … we observed out in the branches is that the real daily tasks that the reps perform throughout the day don't necessarily marry up perfectly with how the Siebel system was designed. You guys made a recommendation [that] what we needed to do was some real research out in the field and find out how the reps really do their job and then build a system that totally dovetails to their needs based on their activity level, based on how they need to access it, based on what they do in there." [36:75]
Consequences from use of technology: SFA not easily used and useful Marketing Analyst (in P2): "They're inputting, inputting, inputting, and nothing's coming out that says how is this useful or here's what you've done." [42:181]	***Rationale for technology acquisition and implementation: Elimination of spreadsheet regime (in WS2)***
	Director of Sales Operations: "We want to move to fully automated reporting and create an 18-month blueprint … of how we go to fully automated reporting and what the change of process for the company would be to get there. It would totally eliminate all the spreadsheets. … We're going to write a draft version of that and put a stake in the ground." [35:188]
Shift from focus on THE sales model to the sales process	***Organizational implementation process: Need project organization (in WS2)***
Organizational implementation process: Rep progression model Director of Sales Operations (in WS3): "The way it works right now is they are-they promote themselves. So when they hit the number based on their commission statements tracking this … [it] means they get … a BlackBerry and a couple of other things." [36:202]	Director of Sales Operations: "The week after the launch do we have subsequent meetings with [sales managers]? … So we can get these very frequent periodic feedbacks for the first maybe month or so after the launch just to get a lot of near real-time feedback and then group feedback on a weekly basis, or something like that? We haven't really set that up or talked about that." [35:823]
Consequences from use of technology: VoiceTech sales process limits SFA exploitation Director of Sales Operations (in WS3): "There's a constraint in the business that *POINT* was developed to address … and that constraint still exists as it moved over to the new system and that constraint is what was emulated and was not out of the box with the standard Siebel system." [36:137]	***Org Process: Managers not considered in initial SFA releases (in WS3)***
	Director of Sales Operations: "We put all of our energy into making sure we got the rep functionality … and the rep interface right. We really shortchanged the [managers] in that process. … We could have more proactively trained them. That's one user group that kind of fell by the wayside." [36:79; 88]
Organizational implementation process: Need to innovate sales processes before innovating sales technologies Marketing Analyst (in P2): "When you came and did the workshops is when it got interesting to see and I think it improved our SFA rollout. I think it would have gone worse had we not. So we appreciate, [the] feedback translated to direct, immediate viewpoints, and ways of thinking that were beneficial." [42:213]	***Organizational implementation process: Need change management strategy (in WS3)***
Projected value of technology: SFA enables sales process Director of Sales Operations (in P2): "On the process innovation side we have this gap that we're not seeing that we might want to be thinking about and here are some things that you could do to help facilitate us being more effective there. … I have gotten everyone to kind of nod-to agree with this perspective that we look at and manage this entire platform … [as] the organizational management tool to drive a very structured sales business model." [31:14; 57]	Director of Sales Operations: "We went in to certify off the production platform and … things had changed. So we were real taken aback by why would that have happened and so that's one of the process procedures that I'm challenging IT. Why go to the trouble to make a certification on the development platform? They should be the same on the production platform and yet we saw different things, different bugs, different issues. … Basic fundamental IT organization issues that we stumbled upon that maybe happened all along. … It became painfully clear that there was an issue. … One of the takeaways was we were really focusing on change management for the sales organization, but I think there was also a change management going on in the IT shop … and serendipitously as we were going through the process." [36:13;
Projected value of technology: Platform to innovate sales process	

Modified Frames	New Frames
Marketing Analyst (in WS5): "We want to look at process innovation. Our main idea 'to-be SFA' from a corporate objective is to automate the VoiceTech sales model. … Our focus is to automate the VoiceTech model whether it's a radical change or an evolutionary change. Most of the time it's evolutionary." [41:47] ***Individual adoption incentives: Need to integrate progression model within the SFA*** Marketing Analyst (in WS5) "[We have] integrated the progression model with the SFA. We've released a process where the reps use the SFA and ratios." [41:306] **Shift from belief that the laptops were unnecessary to the belief that the lack of laptop computers limits sales reps to view that laptops are an being evaluated again because of executive pressure** ***Organizational implementation process: Laptops are not necessary*** Director of Sales Operations (in WS1): "It goes back to how much functionality are we having to walk away from. … I guess we're under the perception that things that we want to achieve should be Siebel with the BlackBerry. … There's going to be a learning curve if we learn otherwise." [40:1576] **Tech Use: Senior level reps getting laptops** Director of Sales Operations (in WS4): "We have laptops for the senior sales consultant level. … They don't have laptops yet but that's one of the things we're working through on the 2007 plan right now." [37:237] ***Consequences from use of technology: Lack of laptop computers limits SFA exploitation*** Director of Sales Operations (in WS5): "We have some technical limitations we've applied to the reps that sort of throttle [social networking capabilities] a little bit. I like the idea. The problem is they don't have laptop computers" [41:237] ***Board of directors desire to provide laptops to sales reps*** Director of Sales Operations (in WS5): "The board challenged us why do we not provide laptops to all of our sales reps as a potential productivity tool. So we've been looking into this a great deal and really trying to understand where the opportunity is there versus the cost." [41:282] ***Projected value of technology: Laptops could be used for service demonstrations and point of sale automation*** Director of Sales Operations (in WS5): "We are developing on line demos and demo a lot of our products. … The second is	16] ***Rationale for technology acquisition and implementation: Mature forecasting capability (in WS4)*** Marketing Analyst: "Mature forecasting capability, a long way to go here. We're exploring options. … There's sort of an art plus a science component equals your forecast and then having that full up, being visible to all levels, we haven't seen a solution that this is exactly what we need." [37:191] Director of Sales Operations: "I think one of the take always is that we recognize that it's not probably the best way of forecast and I think we're kind of stepping back and looking at the bigger picture and looking at how should this work and how will we automate it." [37:1444] ***Technology capabilities and functions: Capabilities vs. Needs (in WS4)*** Director of Sales Operations: "What did we change between the time we had the SalesLogix SFA system to the Siebel SFA system? These are the main capabilities we've added on this as-is. It was supposed to be this as is migration but it turned out there were more capabilities in Siebel that we could take advantage of. The first is mobile. We wrote a very basic first release of BlackBerry functionality for reps and in that functionality they can update an existing appointment. They can also see their calendar, what their appointments are for the day and tomorrow. … [Also] Siebel Wireless has become pretty interested in our project. … They're going to come back and talk to me and say, okay you're using this, what do you need from us, and what additional functions do you need?" [37:5-8] ***Use of Technology: FAQ board (in WS4)*** Marketing Analyst: "I love [Researcher #4's] recommendation on the FAQ's and the forms and make it an … 'Ask the POINT Group' … and [a sales rep] could post something and I could reply to the post. I think that would be [useful] . … It's another idea of how we can extend the POINT community because we need to earn their trust before this can happen. … I feel like I have to do more in terms of getting them to understand the capabilities and get adoption a little bit higher." [37:584; 585] ***Organizational implementation process: Needs SFA for left- and right-brain reps (in WS4)*** Director of Sales Operations: ""It's always a challenge because everybody kind of uses different parts of the brain in trying to use tools and references and reference materials so that you accommodate as many people … as possible. … So, we have a gap but we've been neglecting the left brain people and what we need to get is a view that gives them a chart that

Modified Frames	New Frames
there could be automation pushed all the way out to the point of sale. On line forms to the point where the customer says 'I agree', and you just indicate a couple things here, do a couple things to the [laptop] keypad, hit go and we'll have the order form flow back to corporate." [41:284; 285]	says appointments by day, or the number of second [appointments]. Give them the top five snippets, they can log in each day and they can see they have a problem here based upon the most impactful numbers like the level of appointments, the close ratio, etc. Then we can get those left brain people in the fold. So we're working with requirements on getting some of these dashboards created for managers." [37:57; 245]
Shift from only select reps get BlackBerrys because of cost minimization to BlackBerrys given to all reps at start date	***Images of Technology: Technology as a "special sauce" (in P2)***
Individual incentives: BlackBerrys given to all reps at start date Director of Sales Operations (in WS5): "They all get [BlackBerrys] now as soon as they start. Pretty much everyone is getting it now. We've changed." [41:232]	Director of Sales Operations: "I would draw a comparison with this to the life of a company like a Wal-Mart or a UPS where they have this 'special sauce' internally around their technology and their flow of product and information and how they manage that. They're constantly trying to raise that bar. They're trying to improve it, you know, and maybe in small incremental improvements all the time." [31:10]
Shift from strategic partnerships with RIM and Siebel ***to no strategic partnerships***	***Individual adoption incentrives: Designate expert SFA users (in P2)***
Projected value of technology: Strategic partnership options Director of Sales Operations (in WS4): "Ever since Siebel got bought by Oracle, they seem to be more engaged with us. So the general relationship seems to be evolving a little now … They're more interested in how we want to use it, where we want to take it to, our business model, how to integrate better with our business model." [37:15]	Marketing Analyst: "An idea I had recently was to [identify] people that know the SFA to a higher level than all the other users and have them be helpers to the newer reps. We're always having a class of new reps that come in and … they understand relationships more than just [SFA training] presentations. So they need someone to sit next to them and say, 'click here, click here, click here.' I think the best person to do that is another rep and to have them maybe be certified to sort of an expert status and then they can be a user group for us as well as training new people that come in." [42:176]
Organizational implementation process: Need to exploit strategic partnerships Marketing Analyst (in WS5): "The recommendation [from the Researchers] was to exploit RIM … and Siebel relationships through strategic planning and we haven't taken you up on that yet. All we've done is if we have a problem, we'll go to RIM … or Siebel. But we haven't sat with them and said 'we have this great technology and you could learn from us to build better technology on your side but benefit the industry." [41:33]	***Projected value of technology: Platform to innovate sales process (in WS5)***
	Marketing Analyst: "How do we best innovate the SFA to increase sales rep productivity and retention? [That was a] good question that you all proposed to us. … Through technology innovation we want to look at capabilities and adoption and we added industry benchmarking as something we want to look at to that box. … Then we want to look at process innovation. Our main idea for the to-be SFA from a corporate perspective is to automate the VoiceTech sales model. … Our focus is to automate the VoiceTech model whether it's a radical change or an evolutionary change." [41:46; 47]
Shift from *no global vision* to *using the Researchers' suggestions to strategize about SFA*	***Projected value of technology: SFA ubiquity (in WS5)***
Organizational implementation process: No global vision Marketing Analyst (in WS1): "I think we have a lot of that information in different places, but I think what we have to find is as a global initiative, we haven't taken like a global vision and documented that. We have a lot of ideas, but we haven't cohesively created a project, a smarter project and then had details." [40:602 - 603]	

Modified Frames	New Frames
Organizational implementation process: Using the Researchers' suggestions to strategize about SFA Marketing Analyst (in WS5): "[This collaboration] gave us an opportunity to work with you all to go through that transition and to ensure we're thinking about everything as we release this platform and also to think about alternative approaches such as releasing BlackBerrys to more people and laptops, better tools, looking at some of these vision points you all gave to us. We've tried to look at that and use that stuff." [41:11]	Marketing Analyst: "Our vision is to meet capability and adoption needs to the program specifically providing the SFA everywhere we can in the sales reps world strategically aligning it to our model and getting the flow of data there in and out." [41:7] ***Organizational implementation process: IT guides SFA implementation (in WS5)*** Director of Sales Operations: "We sort of push everything through IT and say we need these three things in IT. We expect them to be able to be technologists and technology experts and go out and try to understand what the latest and greatest things they can do with Siebel are and with the rep and be able to pull those things together as technologists and come up with a solution. In the real world that's not working that way right now. They're so under water with projects that they pop into the very transactional world over there, some like our sales team, and they don't really look at things holistically or take time to go research it and pull back a really nice solution. They sort of just say, we don't have the internal capability of doing that right now so we're going to put that over here and apply a lot of hours to it, it's going to be very expensive and may one day potentially actually stay on a list somewhere but right now it will probably fall off." [41:34]

8.4 Discussion

The literature calls for TFR in action. For example, Davidson and Pai (2005) suggested that

> "In an action research project, TFR researchers would work with practitioners during IS/IT project activities to assess TFRs and to plan, monitor, and adjust interventions, such as tackling frame incongruence. By observing, taking action, and observing outcomes, researchers could elicit the phenomena they are interested in for research purposes and observe unfolding cause/effect processes. In these ways they would be able to assess the effectiveness of TFR analysis for improving organizational outcomes." (Davidson & Pai, 2005. p 486)

This section presented an analysis of dynamics of TFRs. In doing so, we have provided detailed shift evidence and analysis from secondary stakeholder roles. We described the modified frames and significant new frames for the Champions, Technologists, User-Managers, and User-Reps. Our analysis also includes interaction and shift evidence for the Innovators. These interactions primarily were the result of the Researchers' workshop collaborations with the Innovators. The evidence provides pre-, during, and post-implantation interaction details. We provide evidence of Innovators salient frame shifts

by analyzing the views of the Innovators over time to identify thematic shifts. The resulting contributions are presented and substantiated below.

Contribution 1: Evidence of shifts as a result of stakeholder interactions

Our first contribution is providing evidence of shifts as a result of stakeholder interactions. This chapter has shown exactly how interactions unfolded and how interactions resulted in shifts in TFRs for the Innovators. For example, many of the Researchers' recommendations and suggestions from the early workshops and presentations initially met resistance from the *VoiceTech* Champions and Innovators as not feasible or not possible. However, upon returning for the later workshops, it became clear that many of the Researchers' suggestions had been implemented or were in process. For example, giving all sales reps a BlackBerry was the standard protocol by WS5. Also, *VoiceTech* was considering giving sales reps a laptop, as well.

To help us understand the role played by stakeholder interactions, we specifically focused on Innovator-Researcher interactions. For each episode (Initiation, Iterations 1-4, and Specifying Learning) we provided detailed evidence and analyzed the problem focus, solution options, salient frames, and problem-solving that occurred during interactions. Thus, we have shown that interactions contribute to frame shifts.

During Initiation, we found the Innovators to be primarily focused on technology usage while the Researchers were focused on the implementation process. The four interactions focused on technology capabilities and the consequences of technology use. These interactions formed baseline positions that each group would focus on throughout the project. For example, one interaction focused on identifying why some users did not trust SFA information. The result of the interaction was that the collaboration became focused on positioning SFA as the authoritative source of sales information. During I1, we found the Innovators and Researchers to be primarily focused on technology use and the implementation process. The primary interaction during I1focused on how to implement a real-time SFA. These interactions involved discussing various technology solutions and changing the culture to support such a shift.

During I2, the Innovators were primarily focused on the implementation process, consequences from use of technology, and providing incentives for SFA adoption while the Researchers were primarily focused on consequences from use of technology. The two key interactions in I2 focused on the implementation process. For example, the Researchers suggested that the Innovators develop a vision for the future of SPI at *VoiceTech.* Another key interaction concerned identifying means to improve the SFA user interface. During I3, the Innovators were primarily focused on the implementation process and, with the Researchers, on consequences from use of technology. The two key interactions during I3 focused on the use of technology and on the implementation process. For example, one interaction centered on closing assimilation gaps and understanding how different users utilized the SFA. The other key interaction focused on the SFA implementation process as implemented in new *VoiceTech* office locations. These interactions generally addressed how to shift the focus from providing technology toward providing usable solutions.

During I4, the Innovators were primarily focused on individual adoption incentives and consequences from use of technology while the Researchers were primarily focused on consequences from use of

technology and the implementation process. The key interaction during I4 centered on how to increase assimilation to the SFA. The result of the interaction is that the Innovators became motivated to address assimilation gaps by focusing on process innovations before focusing on additional technology innovations. During the SL, the Innovators and Researchers were primarily focused on use of technology, consequences from use of technology, and adoption incentives. The two key interactions during SL focused on sharing SFA best practices and sales process innovation. These interactions generally shifted the Innovators' focus toward increasing user benefits through sales process innovation.

Contribution 2: Evidence of changed outcomes as result of TFR shifts

Our second contribution is providing evidence of changed outcomes as a result of TFR shifts. In certain situations, the Innovators did not take advantage of numerous Researcher offers to help develop an effective communication strategy, SFA rollout plan, detailed project plan, and strategic vision for SFA. The Researchers suggested to the Innovators that they (the Researchers) were able to take the longer-term strategic view and help Innovators focus on strategic objectives. This offer, too, was rebuffed. The result was, by the end of the collaboration, a realization that the SFA Objectives defined by the Researchers early in the project had become the Innovators' strategic vision for continued development of the SFA.

A second example of changed outcomes occurred during the collaboration when the Innovators recognized that *VoiceTech* should begin focusing on the sales process and not only sales technology. For example, one changed outcome was when *VoiceTech's* executives made changes in the company's executive and senior leadership team to focus on sales processes that had become ineffective as the company rapidly grew. This changed outcome occurred just prior to WS5 and was a result of TFR shifts that had occurred during the SPI project. First, the Innovators had become much more focused on not just implementing an SFA but also on sales process innovation.

A third example of changed outcomes concerned the *VoiceTech* sales model. The sales model was "*The* Sales Model" from the beginning of the collaboration. However, during the collaboration, *VoiceTech* became more open to the idea of enhancing "*The* Sales Model" whereby sales reps could begin to utilize references from their network of customers. This was a non-trivial departure from the stance taken by *VoiceTech* stakeholders in early workshops and interviews.

A fourth example of TFR shifts resulting in changed outcomes occurred in the Innovators' and Champions' changing view toward providing laptops to sales reps. Throughout the project the Innovators and Champions had rejected the Researchers' suggestions of providing laptops to sales reps. However, just prior to WS5 the Innovators were tasked with providing justification for why laptops were not being used by sales reps. While part of the influence for this change was a challenge from the *VoiceTech* board of directors, the Innovators had previously expressed concern about the limited SFA capabilities on the BlackBerry mobile device.

Contribution 3: Evidence of TFR in Action

Our third contribution is evidence of TFR in action. In this chapter, we looked at and analyzed empirical data gathered throughout the SFA project. We provided detailed insights into the change process at *VoiceTech* and demonstrated that, in addition to incongruencies between and inconsistencies within stakeholder groups there exist key interactions between stakeholder groups that contribute to frame shifts

over time. Based on these insights, we propose extensions to TFR theory by outlining a model of TFR in action and by providing detailed definitions of TFR domains and sub-domains to support future research into how stakeholder interactions affect and are affected by IT-enabled change efforts.

Summary. This chapter analyzed the dynamics TFR at *VoiceTech.* We established that TFRs are not static and provided evidence of modified and new frames for each stakeholder group over the duration of the collaboration. We found evidence of interactions and shift evidence and analysis by examining key Innovator-Researcher interactions that took place during the collaboration.

We have made three important contributions in this chapter. First, we established evidence of shifts as a result of stakeholder interactions. Second, we found evidence of changed outcomes as a result of TFR shifts. Third, we provided evidence of TFR in action. These contributions explain how TFR shifts unfold over time.

Chapter 9 Analysis of Sales Process Innovation

This chapter introduces a process model of the sales process innovation at *VoiceTech* as it occurred. Consistent with Newman and Robey (1992), this model includes antecedent conditions, key episodes that occur over time, and outcomes. The model is also consistent with Davidson (2002) in identifying key change triggers leading to the next episode.

9.1 Antecedent Conditions, Episodes and Outcomes

This section describes the antecedent conditions, episodes, and outcomes of the *VoiceTech* collaboration. Table 9.1 summarizes the key episodes and details.

9.1.1 Antecedent Conditions

In 2004, *VoiceTech* launched their first SFA. At that time, the company evaluated several vendors and selected SalesLogix. The company had its internal IT department make basic customizations within the SalesLogix system to track sales rep activity.

In early 2005, *VoiceTech* was partially supporting its sales activities with SalesLogix SFA technology. The company implemented several releases of the SalesLogix SFA. After implementing these changes, the Innovators solicited feedback from users and received a negative response. This was the impetus for what eventually led to the purchase of Siebel SFA.

The other condition was an increasing concern at *VoiceTech* about too many sales reps leaving the company. Economically, solving this problem required much focused energy of *VoiceTech* managers for identifying, interviewing, investing in, and training new personnel. More importantly, sales rep turnover had an adverse effect on sales force effectiveness because learning to sell required considerable experience with the *VoiceTech* context, organization, and services. These antecedents formed the conditions into which the Researchers entered the SPI collaboration with *VoiceTech.*

Thus, in early 2006, *VoiceTech* was faced with two parallel concerns. One was a need to take advantage of mobile technology and the other was the need to have a more stable sales force. The company had experienced explosive 30% per year growth and its information systems and sales processes were unable to efficiently support that growth. These concerns became the impetus for collaboration between the Researchers and *VoiceTech* over the next 30 months.

9.1.2 Episode 1: SFA Conversion

In September 2005, the Siebel SFA vendor (Siebel CRM Systems, Inc. – a dominant company in CRM and SFA products with over 45% of the market in 2002) was purchased by Oracle Corporation. Shortly thereafter, Siebel salespersons presented to *VoiceTech* the opportunity to purchase their SFA product at a value price. *VoiceTech* did so and began the transition to the new SFA and integration with their previously-implemented Siebel CRM system. *VoiceTech* Champions and the Researchers soon began discussions regarding how *VoiceTech* could take advantage of this new tool to leverage it in the context of sales practices with the overall goal of improving sales.

The company planned to introduce a mobile technology into its customer product offerings. Thus, *VoiceTech* believed that it could innovate the sales process by introducing mobile SFA technology to the

sales force in a way that would enhance information capture and usage by sales reps. A secondary benefit of this mobile technology was it would eliminate the need for experienced sales reps to return to the headquarters each evening to enter the data on the office-located SFA computers.

During April 2006, *VoiceTech* implemented Siebel SFA. However, Siebel was launched with the goal of converting legacy SFA functionality onto the more stable Siebel SFA platform. The result was a 'dumbed-down' Siebel SFA.

9.1.3 Episode 2: Selective Mobility

In July 2006, *VoiceTech* gave BlackBerrys to select tenured and productive sales reps, but with quite limited functionality. The Researchers believed all sales reps should be provided with a BlackBerry upon employment. The Researchers' belief was that with only select sales reps having BlackBerrys dual sales processes would be created possibly leading to sales rep performance differences. However, *VoiceTech* argued against this reasoning by citing the cost of the device as limiting the group of reps to which mobility should be provided. This gave sales reps the option of not returning to the office to enter daily activity information.

Introducing mobility for sales reps the provided the potential for sales reps to gather additional prospect data and use GPS technology to identify prospects that had not been visited recently. For example, had *VoiceTech* desired, sales reps could have collected and entered contract expiration information, updated business owner information. Additionally, integrating GPS information could have informed sales reps on which specific prospects to visit given the sales reps' geographic location. However, *VoiceTech* chose to introduce mobility with limited functionality. Sales reps used the BlackBerry's web browser to login to the SFA. Sales reps were able to mark an account as 'sold' while in the field. In turn, basic sales information would be transferred in real-time from the SFA to sales operations where post-sales activities occurred. This included updating customer information within the SFA and CRM and coordinating product installation for new customers. However, new prospects not in the SFA database could not be entered from the mobile SFA.

9.1.4 Episode 3: Incremental Improvement

During late 2006 and early 2007, the Innovators conducted what they termed "adoption tours." In these tours, one of the Innovators would travel to *VoiceTech* offices around the United States to give in-depth training to sales reps. The result was an increase in sales rep adoption of the SFA. 93% now entered and updated daily appointments and nearly 100% of sales reps sent a "sold" email and updated an account as sold within the SFA. However, approximately 40% of sales reps still did not enter daily cold call levels. The Innovators believed this information was needed to help sales reps and mangers understand the closed sales to cold calls and appointments ratios.

During this period, many suggestions were made by users and managers on how to improve the SFA. The Innovators addressed critical needs and software bugs first and then began working on a prioritized list. For example, suggestions included one-click access to the SFA on BlackBerrys, In addition, suggestions were made by the Researchers. For example, the Researchers suggested enhancing the SFA to include real-time funnel management capability and more seamless integration of the SFA with the CRM to reduce media breaks. The Innovators also started helping senior executives to prioritize SFA investment

options by identifying SFA needs and benefits. Executives could then more intelligently allocate resources to particular SFA options.

9.1.5 Episode 4: Smarter Sales

During 2007, the Champions and Innovators made a decision to give a BlackBerry to every sales rep, regardless of performance. The belief was that having the mobile SFA helped sales reps understand, in real time, their job performance. Also, sales managers were given new reporting functionality with visibility into all of their sales reps' sales activities. The BlackBerry also increased morale by eliminating the need for sales reps having to return to the office. This was true for all but the newest sales reps who were still obligated to report back to the office each afternoon. Sales reps were also given the capability of creating sales notices via the BlackBerry which were distributed office-wide automatically upon a sale being recorded. Other new functionality included the ability for sales reps to capture prospect contract information and integrating the sales rep progression model with real-time funnel management capability to include sales and close ratios. During this period, the Innovators also worked on developing replicable training which could be given for all sales reps in all offices. This was particularly important for sales training in *VoiceTech's* newly opened offices.

By 2008, the company was growing at thirty percent per year. This meant sales leadership also needed to develop at a similar rate. Executives realized this challenge and decided to create a sales leadership academy. This new academy would be a forum in which *VoiceTech* could drive its culture and critical training programs and develop sales leadership across all levels of the sales force. The CEO selected the senior vice president of sales and the Director of Marketing and Sales Operations to lead this effort. This move emphasized how important sales force leadership was to the ongoing growth and success of the company. In early 2008, the *VoiceTech* board of directors challenged the Champions and Innovators to provide laptops to all sales reps and sales managers. The Innovators were tasked with investigating how to do this and what costs and benefits would accrue as a result.

9.1.6 Outcomes, Assessment and Next Steps

In mid-2008, the Innovators assessed their sales improvement effort based on the collaboration they had with the Researchers over the previous two years and from feedback in the field. They realized the BlackBerry had inherent limitations it its design. The screen was too small to implement much more functionality into the device. Instead, the company should distribute laptops to all sales people, the possibility of providing additional SFA capabilities remained.

At the end of the collaboration effort, several goals remained incomplete. For example, having the SFA as a single authoritative source of sales information and eliminating spreadsheet reporting were not accomplished. *VoiceTech* had not incorporated social networking capabilities into the sales process or SFA. Also, the company had not exploited possible strategic relationships with its SFA technology providers. In summary, during the thirty months of the sales innovation project, the company had doubled the number of locations, moved from a legacy SFA to a "world-class" solution, and continuously but incrementally improved its sales operations. The result was *VoiceTech* had positioned itself to achieve smarter sales by incorporating or planning to incorporate most of the Researchers' suggested SFA capabilities and creating a sales leadership academy.

Table 9.1 Key Episodes in Sales Process Innovation at *VoiceTech*

Key Episode	Episode Summary	Technology Strategy	Technology Use	Technology Implementation
Antecedent Conditions (Sept 2005)	Sales force attrition, system instability, use of multiple manual systems including whiteboards and spreadsheets	--	Office PC, rare use of Home PC via VPN	Morning meetings, whiteboards, spreadsheets, SalesLogix
1: SFA Conversion (Sept 2005-April 2006)	Decision to implement Siebel SFA; Implement Siebel SFA but same as SalesLogix SFA functionality (Implemented June 12, 2006).	Conversion	Office PC	Morning meetings, whiteboards, spreadsheets, SalesLogix; Conversion to Siebel SFA; Siebel SFA implemented with most functionality turned off; Integration of Siebel SFA with Siebel CRM
2: Selective Mobility (May 2006-August 2006)	Implement mobile tactically; (Mobile Implemented July 22, 2006)	Integration	Office PC, basic Siebel SFA functionality in BlackBerry browser	BlackBerrys given to selected, experienced, productive sales reps; Basic updates of daily activities
3: Incremental Improvement (Nov 2006-Mar 2007)	Collaboration with the Researchers	Implementation	BlackBerry, Office PC	Office visits and adoption tours, training sessions
4: Smarter Sales (April 2007--April 2008)	Mobility fully deployed for all sales reps; geo-location; Smart sales materialized here with creation of new sales excellence team	Innovation	BlackBerry, Office PC, Laptops	BlackBerrys available to all sales reps, regardless of experience; SFA release with full BlackBerry integration, automated sales notices; replicable training; Sales excellence team created headed up by EVP of Marketing and the Director of Marketing and Sales Operations; goal is to develop sales leadership and drive discipline via the *VoiceTech* sales model; focus on effective scaling and growth in leadership ranks; transition to laptops;
Specifying Learning	Internal performance assessment ; Laptops, changing sales model, sales leadership academy	Evaluation	Managerial dashboards, reporting system; BlackBerry, Office PC	Innovators' assessment of the sales process innovation effort; Reviewed results with the Researchers.

9.2 TFR Analysis

This section traces sales process innovation at *VoiceTech* through four key episodes: SFA Conversion, Incremental Improvement, SFA Mobility, and Smarter Sales. Table 9.2 provides a summary of these episodes and the primary inconsistencies, incongruencies, interactions, and key change triggers leading to the next episode. The objective of this section is to explain, through use of the extended TFR concepts, how *VoiceTech* achieved sales process innovation incrementally.

9.2.1 SFA Conversion

The path to SFA Conversion at *VoiceTech* began with the decision in 2004 of selecting SalesLogix as the then-new SFA platform. SalesLogix was an upgrade from *VoiceTech's* previously used sales tracking systems. SalesLogix was modified, allowing for sales reps to easily enter data about their daily sales activities. However, in 2005, as *VoiceTech* continued to grow, they began to experience performance issues with the SalesLogix solution. As a result, in September 2005, *VoiceTech* selected Siebel SFA as the replacement for SalesLogix. SFA Conversion includes details from that decision through the Researchers first presentation (P1) in April 2006. Thus, Episode 1 was about the transition from the legacy SFA to Siebel SFA (see Table 9.2).

9.2.1.1 Incongruencies

Smarter sales (Champions) *versus* Sales control (User-Reps). A key incongruence during SFA Conversion was between the Champions' and User-Reps' view of SFA benefits. On the one hand, the Champions believed the SFA could enable smarter sales and help sales reps become more efficient. For example, the SFA could provide information that would help sales reps better identify prospects to target. Also, the Champions believed sales effectiveness and efficiency could be improved through information management and technology support. On the other hand, the User-Reps believed the managers and executives wanted to exert more control over sales reps. The User-Reps believed corporate managers wanted more elaborate data so as to micro-manage sales reps. Their reasoning was that the SFA conversion would provide managers with access to real-time data about sales reps' daily activities.

Strategic vision (Champions) *versus* Strategic void (Innovators). The second key incongruence in this episode was between a belief by the Champions that a SFA strategic vision existed and had been communicated, and the belief by the Innovators that there was a SFA strategic void. The Champions believed those who needed to know about the SFA knew what they needed to know. The Director of Marketing and Sales Operations said she was not yet ready to communicate to users and managers any details regarding the SFA. The Champion's believed the SFA strategic vision consisted of knowing the legacy SFA would be replaced with Siebel SFA and mobility would be introduced shortly thereafter. The Innovators explained that a strategic vision statement had not been documented. This incongruence illustrated the lack of communication of the SFA's purpose and lack of an SFA vision. There existed no high-level strategy and no long-term planning envisioning what the SFA should be in a year or five years time. Instead, short-term tasks dominated the planning of all SFA efforts at *VoiceTech*.

Technology options (Champions, Innovators) *versus* Simple usage (Technologists, User-reps). The third key incongruence in the SFA Conversion episode was between the perception by the Champions and Innovators of the SFA as providing technology options for *VoiceTech* and the perception by the Technologists and User-reps that the SFA was intended only for simple usage. For example, the Champions and Innovators believed the new Siebel SFA would provide future benefits to users and managers that the legacy SFA could not possibly provide. However, when *VoiceTech* implemented Siebel as a replacement for SalesLogix, a decision was made to replicate old functionality onto the new SFA. This prevented *VoiceTech* from taking advantage of the new SFA. Instead, the replication decision meant many of the problems users had with the legacy SFA were now being programmed into the new SFA. For example, the Technologists spent much effort in turning off new SFA features that they believed users and managers did not need. They perceived the SFA as being a very simple and easy to use tool with

minimal data input. The result was that their perception limited the immediate Siebel SFA benefit as only a more stable replica of the legacy SFA.

9.2.1.2 Inconsistencies

Strategic vision *versus* resource allocation (Champions). The Champions crafted a strategic vision for sales whereby smart SFA technology would make the reps smarter. The CMO believed deploying this smart technology would make the sales reps more effective in the field. The belief was sales reps could use functionality like GPS positioning, real-time sales updates, and real-time lead generation to target specific prospects. However, *VoiceTech* was a technology-minimalist organization. The Champions believed that, with minimal resource allocation to the SFA, they could implement a complex system. This meant that instead of arguing to have more technologist resources assigned to the project, they accepted whatever resources they could get. Also, instead of incorporating SFA training fully into the sales reps' training program, the Champions believed training could occur in a few minutes time. The result was an SFA that was not easy to use and was perceived as not useful by many sales reps. The inconsistency in the Champions' framing of the conversion meant smart SFA technology did not make sales reps smarter because too few resources were allocated to effectively implement the technology.

Projected value *versus* implementation leadership (Innovators, Technologists). The Innovators' projected benefits of the SFA were that it would provide mobile access to real-time sales data. Similarly, the Technologists projected the Siebel SFA as a "smarter system." However, the Innovators and Technologists did not provide the implementation leadership that would have supported their views. Instead, the Innovators left much of the implementation decision-making that would have provided the benefits they projected to the Technologists. The Technologists removed much of the Siebel SFA's functionality. Furthermore, the Technologists did not fully understand how sales reps and managers would utilize the SFA data. The inconsistency in implementation leadership meant that the stated benefits of the Siebel SFA, mobile access to real-time sales data, were postponed.

9.2.1.3 Interactions

SFA vision and capabilities. During an initial interaction concerning laptops and BlackBerry devices, the Innovators and Researchers staked out their initial positions regarding mobility. They discussed the long-term SFA vision and the SFA capabilities that vision would require. The Innovators believed the BlackBerry device was sufficient to support the SFA. The Innovators also believed giving the sales reps laptops would be too unwieldy and too expensive. However, the Researchers believed using the BlackBerry in the field to collect sales activity data was more difficult. Thus, because of the BlackBerry design limits, the Researchers believed that the laptop would be the better mobile device for sales reps.

9.2.1.4 Key Change Triggers

Desire for more 'real-time' data. The SFA Conversion episode had three change triggers which were the keys for moving *VoiceTech* into the next episode. First was the desire for more 'real-time' data. Aside from the individually-managed and manually-tracked reports on sales activities, managers lacked a real sense for how sales were going until the end of the week. It was at this time the sales numbers began to be rolled up for executive managers. What was lacking was a reliable hourly (or even daily) view of sales. The result was that near the end of every month, senior managers applied increased pressure on their sales managers and sales reps to make more sales. Therefore, managers desired a trustworthy real-time view of sales.

Avoiding sales reps return to office. Another change trigger was the desire to avoid sales reps returning to office at the end of each day. In exit interviews of sales reps leaving the company, the requirement to return to the office each evening was a major annoyance. Originally, this requirement had been in place to 'de-brief' new sales reps at the end of the day and to provide mentoring. However, the SFA technology did not easily support remote logins for experienced reps. Thus, even when *VoiceTech* relaxed return-to-office requirements for those experienced reps, it created a backlog of data not entered into the system. The SFA technology was slow and unreliable. Sales reps were unable to login to the system. Data was lost because of system instability. The result was sales reps did not enter data frequently enough. When Sales reps returned to the office at the end of the day they were frustrated having to wait for the shared computers. Even the most basic data entry that should have taken seconds to enter took minutes. The *VoiceTech* managers strongly desired resolution of these problems by providing a new SFA that would eliminate the need of sales reps returning to the office each day.

BlackBerry as a *VoiceTech* product offering. The third change trigger was the selection of BlackBerry as a *VoiceTech* product offering. This addition to the company's available products gave impetus to providing real-time updates in the field which, in turn, would eliminate the need for returning to the office. Sales reps could use the BlackBerry as a demo product, a phone, a communication device with their managers, and update their sales activities in the SFA while in the field. *VoiceTech* Champions acknowledged that had BlackBerrys not been a product offering, implementing a mobile SFA would have been unlikely. However, they believed this product's availability could be taken advantage of to improve the sales reps' job performance and job satisfaction.

9.2.2 Selective Mobility

The key change triggers in Episode 1 (SFA Conversion) advanced the implementation to Episode 2 (Selective Mobility). Development and implementation of Siebel SFA began in mid-2006 and the Innovators began looking to craft a shared understanding of the *VoiceTech* SFA vision. The discussions in WS2 and WS3 centered on this core concept. At WS2 on June 1, the SFA Conversion had been scoped to include Siebel SFA as the replacement of the legacy SFA. SFA Conversion also included adding basic SFA functionality including a native Siebel homepage for sales reps, integrating Siebel Sales and Siebel Call Center to provide additional information for sales reps, and an online help reference. SFA mobility plans consisted of the BlackBerry integration which included viewing and managing of sales activities and for providing limited location-based functionality. However, the Innovators cautioned that technology for supporting location-based functions was still being developed and might not be available until a later release. The Selective Mobility episode includes details beginning with WS2 in May 2006 through activities in October 2006 (see Table 9.2). Episode 2 was about providing SFA mobility to sales reps by integrating the BlackBerry mobile device.

9.2.2.1 Incongruencies

Streamlined processes (Innovators) *versus* Legacy sales processes (Technologists). The Innovators realized the sales reps did not manage SFA information in consistent ways. Therefore, a system design goal was to create streamlined processes by which sales reps would enter information into the SFA and by which sales managers would extract information from the SFA. This included minimizing the number of steps required to enter and extract information. It also included integrating Siebel SFA with Siebel Sales and Siebel CRM. Doing so would eliminate many of the duplicative information systems at *VoiceTech* and provide sales reps and sales managers with desired sales information they did not have. On the other

hand, the Technologists believed that the Siebel SFA should replicate the as-is legacy processes. This meant that they were not focused in streamlining processes but emphasized replicating existing processes in a more stable system.

Mobile technology as reward (Innovators) *versus* Minimal use expectations (Champions). Early in the project, the Innovators viewed the mobile technology as a reward for successful sales reps. The Innovators also believed sales reps should have to earn the right to use the BlackBerry. This gave a higher status within the office to those reps that earned the BlackBerrys. The Innovators believed sales rep performance would increase while sales rep turnover would decrease. Thus, successful sales reps were given basic mobile SFA functionality during the mobile integration. Sales reps could update existing appointments created in the SFA desktop version. Sales reps could not create new appointments using the mobile SFA. However, even this basic functionality served a primary purpose: sales reps did not have to return to the office at the end of the day. On the other hand, the Champions expected minimal training as necessary for use of the mobile technology. For example, the Champions believed the time required for training sales reps on the mobile SFA required only a few minutes of effort. They based this on their belief that the mobile SFA was a simple, stable platform replacement of the previous SFA.

9.2.2.2 Inconsistencies

Projected value versus daily usage (Innovators). The Innovators projected the SFA would improve sales rep effectiveness. However, as of WS3, this had not occurred. The Innovators expected sales reps would use the Do-Not-Call list to eliminate unnecessary sales calls on prospects who did not want to be visited. Instead, the Innovators observed daily sales rep tasks did not align with how the Siebel SFA was designed. The Innovators realized the actual daily use of the SFA technology was inconsistent with the SFA's projected value.

Strategic vision versus short-term planning (Innovators). The Innovators were responsible for developing a long-term strategic vision for how the SFA would be utilized at *VoiceTech*. However, as of Episode 2, they had not developed the strategic vision. Instead, they were focused on the next upcoming SFA release. For example, *VoiceTech* employed a quarterly release cycle to implement upgrades into the SFA. This meant the Innovators focused on a three to six month time horizon instead of three to five years. As a result of this short-term planning focus, the Innovators were not envisioning where the SFA would lead them several years down the road. They were not investigating future uses for the SFA. For example, during this episode the Innovators supported the tactical deployment of the mobile SFA for only those reps who had earned them. As a result, there was an inconsistent view regarding the value of the mobile SFA. Those who had achieved sales targets received the BlackBerry and were able to use it to increase efficiency. Conversely, new and less successful sales reps who had not received the BlackBerry were unable to enhance their efficiency. They did not have a BlackBerry to demo to the prospect and could not submit daily sales activities in the field.

9.2.2.3 Interactions

SFA help desk design. This interaction concerned deciding how to create and manage a help desk for the SFA. The Innovators initially planned to send subject matter experts from corporate to each office to help in the early transition to the Siebel SFA. However, the Researchers believed resource constraints would prevent this from actually happening and suggested using local trainers. The Innovators observed that the trainers were already too heavily burdened to become long-term help desk. The Researchers then

suggested that the Innovators find some way to gather feedback on the SFA. The Researchers believed having the capacity to fine tune the SFA in a near real-time manner would give the users confidence in the new system. Other suggestions for the help desk included using the customer care help desk and sales managers. The Researchers pointed out that regardless of which help desk option was chosen for feedback data collection, the information collected needed to be analyzed and incorporated into the training program. The benefit of having a help desk is that it would help *VoiceTech* create better sales reps. The result of the interaction was the Innovators realized the help desk would serve a critically important role in gathering feedback from users in the field. This feedback could then be used to improve sales rep training and also be used by IT to eliminate system bugs and user interface problems.

Implementation strategy and tactics. This interaction focused on designing the implementation process for future releases. The Researchers believed additional off-site workshops were needed whereby the Innovators could focus on long-term planning. The Innovators believed this was, indeed, a good idea that would remove them from focusing on the finer points of the day-to-day implementation. As it turned out, this off-site meeting never happened. Instead, the Innovators developed a plan for the BlackBerry integration. The Researchers' intention in this interaction was to help the Innovators create a longer-term vision for SFA planning. The Innovators acknowledged that having such a plan and reviewing it in detail with the Researchers would be beneficial. However, even though the meeting never took place, the interaction did focus the Innovators attention on the need for long-range planning.

Selective information return via user interface. The Researchers were concerned the user interface on the BlackBerry SFA made usage difficult. In a preliminary review of the user interface, the Researchers noted that too many prospects were returned in the on-screen drop-down selector. Because of the limited screen territory, this information overload made selecting specific data more difficult. The Innovators and Researchers discussed various options for improving the interface. One of these options was to limit the number of prospects returned by pre-filtering it to a specific city or zone of a city for which the sales rep was assigned. This interaction led to a change in the default prospect selection parameters and a better user experience.

9.2.2.4 Key Change Triggers

***VoiceTech* wanted to improve the mobile experience**. There were two change triggers during the Selective Mobility episode that moved *VoiceTech* into the next episode. First was *VoiceTech's* desire to improve the sales reps' experience with the mobile SFA. The company had introduced the BlackBerry with limited capabilities to experienced sales reps. With actual usage feedback came the realization that users loved the BlackBerry but not the SFA on the BlackBerry. Sales reps were frustrated by quirks in the user interface. The Innovators wanted sales reps to exploit the information provided through the BlackBerry. The Innovators and Champions wanted the SFA to become the real-time and authoritative sales information source. To accomplish these goals, improvements were needed in the mobile experience.

User suggestions on new functionality. The Technologists had disabled many out-of-the-box features that were not believed to be important. This simplified the SFA implementation. However, as sales reps began using the SFA, they realized that the available functionality was limited and began requesting new features. For example, sales reps wanted reports on sales rep efficiency, product installation information for new customers, and geo-location functionality that would identify good prospects in the immediate

vicinity. The Innovators wanted to improve and increase the SFA's available functionality. Therefore, new functionality was planned for future implementation releases.

9.2.3 Incremental Improvement

The key change triggers in Episode 2 (SFA Conversion) advanced the implementation to Episode 3 (Incremental Improvement). The BlackBerry had been fully implemented into the sales force and the belief among the Champions was that sales rep morale had improved. In this episode, the Siebel SFA and mobile SFA were stabilized and *VoiceTech* began to improve the overall SFA and sales processes incrementally through training, new functionality, and a developing vision for what the SFA should become. In November 2006, at follow-up interviews with Champions and at WS4 with the Innovators, both stakeholder groups believed that the users' confidence in the SFA platform had increased significantly. The Champions believed that the biggest benefit from the SFA implementation was giving User-Reps insight into data on customers they had actually sold. With this functionality, User-Reps then had the ability to see which prospects were sold, and which had been installed. Sales reps could then return to those customers to get referrals. The Champions also believed that sales managers and sales reps recognized the significant investments in sales technologies. The users credited *VoiceTech* management with attempting to improve available information and the effectiveness of the sales force. The Champions recognized, and User-Managers and User-Reps confirmed, that there were still significant improvements to be made. Thus, Episode 3 was about making incremental improvements in the SFA (see Table 9.2).

9.2.3.1 Incongruencies

Single information source (Champions) *versus* Multiple information sources (Innovators). The Champions believed that, as of November 2006, all data regarding sales and sales performance was coming from the Siebel SFA. However, during WS4, the Innovators revealed that there still was a large risk of human errors because many reports were manually calculated and manipulated. The incongruence was the lack of a shared understanding of the source of data used to create reports for *VoiceTech* managers and executives.

SFA easily used (Innovators) *versus* SFA not easily used (User-Managers). An expected benefit for implementing the Siebel SFA was that it would provide an SFA that was easier to use. The Innovators believed this had been achieved. For example, User-Reps were able to export data about their sales funnels to review with managers. Also, User-Reps could enter sales information via the mobile SFA while in the field and reconcile sales numbers in the SFA automatically rather than manually, as was the case in the legacy SFA. Additionally, a sales rep homepage had been implemented making sales performance information, installations, appointments, and prospect data available with one click. However, User-Managers viewed the SFA as not easy to use based on feedback sales reps. For example, one frustration experienced by sales reps was the inability to search the prospect database by phone number. Instead, the phone number had to be entered with a specific corporation name. Also, the User-Managers were frustrated by the inability to print data from the mobile SFA, the lack of a useable prospect sorting feature, and operating system problems with new PCs in the office.

The incongruencies in the Innovator and User-Manager perceptions regarding the SFA's ease of use showed that the User-Managers did not know about some of the new SFA features and that the Innovators' view of the SFA, at points, was more idealistic than what was being experienced in the field.

Regardless, understanding that users continued to experience frustrations prompted the Innovators to further explore ways to extend functionality and encourage additional training.

9.2.3.2 Inconsistencies

Mobile technology as world-class solution *versus* Limited capabilities (Champions). At WS4, the Champions perceived sales reps had more confidence in the Siebel SFA platform than before with the legacy SFA platform. In fact, the Champions believed the *VoiceTech* SFA was a world-class solution. However, during interviews, the Champions acknowledged that User-Reps remained frustrated with the user interface of the mobile SFA. For example, even while many of the stability problems had been solved, users expressed to the Champions a continued annoyance with quirks in how Siebel SFA worked. Additionally, the Champions perception of the mobile SFA was that it only provided limited capabilities. The inconsistency was that Champions emphasized the email, cell phone, and contact database capabilities of the mobile device rather than the world-class SFA solution they believed they had implemented.

Additional capabilities requested *versus* minimal additional exploitation (User-Reps). During interviews in November 2006, User-Reps acknowledged that they had requested new features for the mobile SFA. However, User-Reps also recognized that they had minimally used the available features already provided with the SFA. Additionally, senior reps believed the SFA should be the single, authoritative source for information about sales, but confirmed that they continued to use spreadsheets to report sales even while similar functionality existed within the SFA. The inconsistency was that additional capabilities were requested by User-Reps but those same User-Reps acknowledged that similar capabilities within the SFA were minimally exploited.

Real-time authoritative information *versus* Unreliable data (User-Managers). During interviews prior to WS4, the User-Managers stated they would like to get rid of manual spreadsheets and rely on the SFA as the authoritative information source for sales. They perceived data availability and reliability within the legacy SFA was poor. They also perceived the data in the new Siebel SFA was current and reliable. However, the User-Managers' perception of Siebel SFA and the mobile SFA was that it was too easy to enter incorrect data. Thus, their view was that the data in the SFA was unreliable. These inconsistent views meant that the User-Managers continued to rely on conflicting and duplicate systems for sales data collection and reporting.

9.2.3.3 Interactions

Assimilation gaps. During WS4, the Researchers framed a discussion to focus on assimilation gaps. Sales reps and sales managers had not been fully utilizing the functions and capabilities of the SFA. This concern led to an interaction between the Researchers and the Innovators on how to address the assimilation gap. The Researchers framed two types of assimilation gaps with the first type regarding sales rep behavior and the second type regarding management style.

The Researchers believed that sales rep behavior caused variation in how the SFA was used. For example, some sales reps did as they were trained. These sales reps would check the "Do Not Call" list before calling on prospects each day. On the other hand, some sales reps did not do as they were trained. For example, these sales reps never looked at the "Do Not Call" list and, therefore, visited prospects who had requested to never be called upon again by a *VoiceTech* sales rep. The Researchers and Innovators agreed that this first type should be eliminated because it caused variation in the stated *VoiceTech* sales process.

The second type of variation concerned how managers made decisions. The Researchers elaborated on the two types of managers: those that made decisions analytically and those that made decisions emotionally. For example, one sales manager might make a decision based on a 'gut feeling' after speaking with a rep while another sales manager might rely almost entirely upon reports and SFA data. The Researchers noted that, from an information processing point of view, people process information differently. Therefore, the Researchers believed that the SFA should allow for these differences to help User-Managers understand that the SFA is effective. Furthermore, the Researchers believed that the system should be capable of presenting different views of the same information depending on a user's preferences.

The Innovators recognized variations in decision making styles should be utilized and accounted for within the SFA design. Thus, this interaction led to Innovators exploring ways to ensure better training for sales reps while enabling varying sales management styles to more fully exploit the SFA.

Real-time SFA. The Innovators and Researchers continued to explore ways to achieve a real-time SFA. This WS4 interaction between the Innovators and Researchers revolved around the definition of real-time, the technical details in choosing different real-time functionality, and the consequences of achieving a real-time SFA. The Innovators believed having real-time SFA data readily available at daily sales meetings would increase sales rep accountability and managerial visibility. For example, the Innovators acknowledged that sales reps did not trust SFA data because the SFA reports were updated periodically throughout the day instead of immediately. Some sales reps updated the SFA each evening while others updated each morning.

Differences in SFA data entry behavior by sales reps led to morning meetings being a discussion about what data was correct. The result was that neither sales reps nor their managers trusted the SFA. The Innovators acknowledged that the Technologists had informed them that trying to achieve real-time was not possible given the current technology structure at *VoiceTech.* So, the Researchers and Innovators discussed alternatives like extract, transfer, and load (ETL) technologies, event log analysis technologies, and business activity monitoring (BAM). The interaction helped the Innovators develop requirements for creating real-time dashboards for managers.

Intelligent prospecting. This WS4 interaction concerned making *VoiceTech* sales reps smarter regarding which prospects to contact. The Innovators believed that increasing intelligence about prospects was a critical need in each office as the company matured and increased market share in each location. For example, the Innovators were most concerned about the prospects that sales reps were not calling upon. The Innovators believed they had an opportunity to help reps by creating a lead knowledgebase where data about new prospect opportunities would be identified. The Researchers agreed that a prior discussion had concerned alternatives to the Dunn and Bradstreet (D&B) prospect data and that joining forces to develop better prospect data with non-competing industries, like pharmaceutical sales organizations, could be mutually beneficial to *VoiceTech* and the other organization. This interaction resulted in the Innovators pursuing development of the lead knowledgebase.

Planning SFA support capabilities. This WS4 interaction expanded the WS3 discussion concerning an SFA help desk. In this interaction, the Researchers and Innovators discussed the specific details on how such support might be provided. For example, the Researchers suggested using an online frequently asked questions (FAQ) knowledgebase and an online project bug tracker to rapidly disseminate help information and solutions to problems. The Researchers and Innovators also discussed the creation of a

group of influencers that would support new users and provide valuable feedback to the implantation team. The result of this interaction was that a group of influencers was created to help with SFA adoption. These influencers included several top performing sales reps and sales managers. They provided feedback to the SFA implementation team, helped communicate SFA strategy throughout the branches, and participated in SFA train the trainer sessions to learn about new functionality.

9.2.3.4 Key Change Triggers

Decision to give all sales reps mobile devices. The Champions' and Innovators' stated policy for BlackBerry distribution had been that only sales reps who earned a BlackBerry by reaching a certain sales target would be given the BlackBerry mobile device. However, during the year between the post-presentation workshop in March 2007 and WS5 in April 2008, *VoiceTech* made the decision to give every sales rep a BlackBerry mobile device during the first week of sales training. This decision was one that the Researchers had encouraged from the earliest discussions with the Innovators and Champions. This was a key change in how *VoiceTech* managed its sales force and gave all sales reps the mobile SFA tools previously available only to experienced reps.

Strong pull toward enhancing SFA capabilities. Prior to WS5, *VoiceTech* implemented the sales rep progression model into the SFA. This was based on a request from the sales reps who wanted a tool to look at the sales ratios in their sales funnel. Sales managers began using the tool during monthly coaching sessions with sales reps to review the sales rep's sales efficiency. The Innovators observed that this key change triggered an increase in SFA adoption. The Innovators also implemented a deal-sold email that broadcast news of a newly sold deal to management whenever a prospect was marked as sold. This allowed managers to express real-time congratulations to the sales rep and publicize the achievement. The Innovators recognized, as beneficial features to the sales reps continued to be implemented, that the sales reps increased SFA usage for managing their daily sales activities.

Adoption tours. During 2007, the Innovators began visiting each office location and help User-Reps and User-Managers understand SFA capabilities. During these visits, the Innovators visited each branch a couple of times and also did some adoption campaign events. The Innovators conducted training sessions and gathered feedback during their office visits. This key change triggered an increase in user adoption rates and helped the user community better understand how the SFA could help them in the field.

9.2.4 Smarter Sales

The key change triggers in Episode 3 (Incremental Improvement) advanced the implementation to Episode 4 (Smarter Sales). The research collaboration ended at WS4. However, in early 2008, the Researchers requested a follow-up workshop with the Innovators to understand how the impact of the collaboration on *VoiceTech's* sales innovation effort. The result was WS5 on April 21, 2008. At WS5, Siebel SFA had been in place for nearly two years. Most sales reps had been using the BlackBerry mobile SFA for approximately one year. The company continued its strong revenue growth and now had five additional office locations. Sales leadership challenges began to emerge as the firm scaled in size.

As a result of these challenges, in the week prior to WS5, *VoiceTech's* executives made the decision to create a new group responsible for recruiting of sales reps, training of sales reps, and instilling the *VoiceTech* culture through a sales leadership academy. The Innovators compared this program to those of successful firms like General Electric and Honeywell. The expectation was that this focus on sales

leadership and sales excellence would help the company reestablish its founding sales culture at all levels. The Smarter Sales episode includes details of events beginning with the period after the post-presentation workshop in March 2007 through interactions of WS5 in April 2008 (see Table 9.2).

9.2.4.1 Incongruencies

There were no observed incongruencies during this episode.

9.2.4.2 Inconsistencies

Easy-to-use SFA *versus* Difficult for advanced use. The Innovators believed that there were many benefits for sales reps and sales managers who exploited the available SFA capabilities. In fact, the Innovators had characterized the SFA as easy-to-use. For example, a managerial dashboard had been developed during this period. This provided sales managers the ability to see in real-time all of their sales reps' sales activities in an easy-to-print report. However, the technology that supported the reporting system was actually outside of the SFA. In fact, the Innovators acknowledged that getting the same report from within the SFA required many steps.

Additionally, the Innovators believed that the form factor of the BlackBerry device was limiting to SFA innovation and made advanced use difficult. The Innovators noted sales reps were unable to run any detailed reports about their prospects or sales activities from the BlackBerry. These advanced reports required using the desktop version of the SFA. The inconsistency was that the Innovators had developed simplified ways to access data from the SFA, but the SFA remained difficult for advanced use.

9.2.4.3 Interactions

Sharing of best practices. One key interaction between the Innovators and Researchers during WS5 was a focus on how SFA best practices could be identified and shared across the sales organization. The Innovators believed sales reps were too focused on their own performance to share with other reps in different offices what they had learned about the SFA. The Researchers discussed non-intrusive methods for disseminating best practice information, for example, using social networking technologies, capturing discussions from periodic gatherings of sales reps and sales managers at the *VoiceTech* headquarters, and creating newsletters or emails. The Innovators confirmed that during sales training classes, the sales reps tended to share their in-the-field sales experiences with other reps and that knowledge sharing did take place in that context. The result of this interaction was that the Innovators acknowledged that they should encourage the sharing of SFA best practices between offices.

Innovating sales processes before innovating sales technologies. At WS5, the Innovators were focused on sales process innovation. They wanted to innovate the SFA so as to increase sales rep productivity and sales rep retention. The Innovators' expressed goal was to automate the *VoiceTech* sales model. In response, the Researchers emphasized that the general literature found that the return on technology investment was insignificant without first innovating processes. In fact, the Researchers argued, more frequently process innovation precedes technology adoption in support of the innovation. The interpretation, therefore, was that the return on technology investment was only significant when using technology to enable innovation on processes.

The Innovators believed that *VoiceTech* had been focusing on technology innovation without much process innovation. The Innovators acknowledged that focusing on ways to innovate processes was the key for achieving the gains they desired. The Innovators pointed to the recent creation of the sales

leadership and sales excellence team as one process change that could be supported with technology innovations. The Researchers observed the *status quo* at *VoiceTech* as a situation where the company's success with its sales model resulted in the company looking for ways to innovate everything else to make the sales model more successful. The Innovators agreed that it was this approach that pushed them toward automating the SFA.

9.2.4.4 Key Change Triggers

Company expansion into new markets. A key change trigger during this episode was *VoiceTech's* push for sales revenue growth. This growth meant that the company expanded into new markets and added five new office locations. Also, the firm expected to grow the number of office locations at a 30% per year pace. This fast-paced growth required a change in how *VoiceTech* developed its sales leadership.

Scaled leadership. *VoiceTech* had experienced strong revenue growth over the previous year. This growth triggered a need for developing sales leaders who adhered to the culture that had made *VoiceTech* successful. The company developed the sales leadership and excellence program to be able to handle growth and to create leadership depth at all levels of the firm.

Recognition of limited mobile SFA capabilities. During this period, adoption of the SFA stabilized and most sales managers and sales reps began using the SFA. However, the Innovators consistently received feedback that the mobile SFA was limited and that users desired a more robust technology. This triggered an exploration of ways to improve the mobile SFA. Additionally, the company was now open to the possibility of giving users laptops for more advanced SFA usage in addition to the basic features of the mobile SFA.

Push by VoiceTech board of directors toward laptops. The board of directors questioned the Innovators in a meeting prior to WS5 as to why all sales reps had not been given laptops. The reasoning the directors gave was that most other sales organizations had provided laptops to the sales force but *VoiceTech* was relying on shared office computers and BlackBerrys. This push for laptops was a key change trigger for the Innovators and Champions. As a result, the Innovators began exploring the feasibility of providing laptops and identifying an expanded set of capabilities that could be provided to users. For example, the Innovators were now exploring scanning of business cards, providing electronic forms and signatures, creating product demonstration videos, SFA tutorial videos, and the creation of online real-time SFA reports for sales reps in the field.

Table 9.2 SFA Process – TFR Analysis

Episode	TFR Analysis	Key Change Triggers
Episode description and period of time	**Salient Frames; Incongruencies, Inconsistencies, and Interactions**	**Key change triggers leading to the next episode; Frame shifts**
1: SFA Conversion (September 2005 - April 2006) • Antecedents • Selection • WS1 • Interviews	***Incongruencies between stakeholders*** • Smarter sales (Champions) ***versus*** Sales control (User-reps) • Strategic vision (Champions) ***versus*** Strategic void (Innovators) • Technology options (Champions, Innovators) ***versus*** Simple usage (Technologists, User-reps)	• Desire for more 'real-time' data • Avoiding sales rep return to office • BlackBerry as a *VoiceTech* product offering

Episode	TFR Analysis	Key Change Triggers
• P1	***Inconsistencies within stakeholders*** • Strategic vision ***versus*** resource allocation (Champions) • Projected value ***versus*** implementation leadership (Innovators, Technologists) ***Interactions between Innovators and Researchers*** • SFA vision and capabilities	
2: Selective Mobility (May 2006 - October 2006) • WS2 • WS3	***Incongruencies between stakeholders*** • Streamlined processes (Innovators) ***versus*** Legacy sales processes (Technologists) • Mobile technology as reward (Innovators) ***versus*** Minimal use expectations (Champions) ***Inconsistencies within stakeholders*** • Projected value ***versus*** daily usage (Innovators) • Strategic vision ***versus*** short-term planning (Innovators) ***Interactions between Innovators and Researchers*** • SFA help desk design • Implementation strategy and tactics • Selective information return via user interface	• *VoiceTech* wanted to improve mobile experience • User suggestions on new functionality
3: Incremental Improvement (November 2006 - March 2007) • Interviews • WS4 • Reflection 2 • P2 • PostP2 WS	***Incongruencies between stakeholders*** • Single information source (Champions) ***versus*** Multiple information sources (Innovators) • SFA easily used (Innovators) ***versus*** SFA not easily used (User-Managers) ***Inconsistencies within stakeholders*** • Mobile technology as world-class solution ***versus*** Limited capabilities (Champions) • Additional capabilities requested ***versus*** minimal additional exploitation (User-Reps) • Real-time authoritative information ***versus*** Unreliable data (User-Managers) ***Interactions between Innovators and Researchers*** • Assimilation gaps • Real-time SFA • Intelligent prospecting • Planning SFA support capabiliti**es**	• Decision to give all sales reps mobile devices • Strong pull toward enhancing SFA capabilities • Adoption tours
4: Smarter Sales (April 2007 - April 2008) • WS5	***Incongruencies between stakeholders*** • N/A ***Inconsistencies within stakeholders*** • Easy-to-use SFA ***versus*** Difficult for advanced use ***Interactions between Innovators and Researchers*** • Sharing of best practices • Innovating sales processes before innovating sales technologies	• Company expansion into new markets • Scaled leadership • Recognition of limited SFA capabilities on mobile • Push by *VoiceTech* board of directors toward laptops

9.3 Discussion

Our focus in this chapter was to better understand the role of stakeholder perceptions during IT-enabled sales process innovation (SPI) at *VoiceTech.* Specifically, we observed four distinct episodes during an SFA implementation. This analysis builds on the analyses from Chapter 7 an Chapter 8 to provide a comprehensive TFR analysis (Orlikowski and Gash, 1994) of how perceptions, interactions, and change triggers (Davidson, 2002) shaped and were shaped through the sales process innovation efforts at *VoiceTech*. While our focus in Chapters 7 and 8 was to contribute to the TFR literature, the focus here is on leveraging those insights to contribute to the SFA literature.

In our analyses, we have used extended TFR concepts for multiple stakeholders to explain stakeholder perceptions and key change triggers that were salient during the SFA implementation. The extant literature in this area, generally, is limited to variance studies and studies between two stakeholders. There are few examples in the SFA literature that focus on the impact of technology on stakeholder perceptions during an implementation project. For example, Gohmann *et al.* (2005b) used productivity measures to examine differences between management and sales reps after completion of the SFA; the authors call for a longitudinal study to examine changes in perceptions over time. Thus, in this section we have started to fill this gaps by answering our second research question: "What was the role of stakeholder perceptions during IT-enabled sales process innovation at *VoiceTech?*

The section has presented a grounded process model of SPI at *VoiceTech* in which we have explained the antecedent conditions, episodes, and outcomes of sale process innovation effort. In doing so, we considered the role of stakeholder perceptions during SPI at *VoiceTech*, over time; we described the organization of stakeholder participation in SPI at *VoiceTech*, over time; we described the barriers and enablers of SPI at *VoiceTech* as related to stakeholder interests, over time; and, we elaborated on problems related to stakeholder participation and impacts on stakeholder perceptions and SPI outcomes from interventions, over time. The resulting contributions are presented and substantiated in detail below:

Contribution 1: A grounded process model for SPI at *VoiceTech*.

The extant literature is limited in understanding the process by which sales process innovation occurs. The chapter adapts Davidson's model (Davidson, 2002) to our case by identifying the antecedent conditions, episodes, and outcomes of SPI at *VoiceTech*. For example, the antecedent conditions included the SalesLogix SFA implemented in 2004. This platform had supported SFA through an IPO in 2005 but had become unstable given the company's recent growth rate. Additionally, *VoiceTech* was concerned about an increasing rate of sales reps leaving the company. Many of the departing sales reps expressed frustration with the SFA and sales processes.

We identified four episodes during our collaboration at *VoiceTech.* These episodes included SFA Conversion, Selective Mobility, Incremental Improvement, and Smarter Sales. At the conclusion of our collaboration, we elaborated on outcomes and assessed the then-current situation and proposed next-steps for SPI at *VoiceTech.*

During the SFA Conversion episode, the Champions, Innovators, and Technologists had begun planning for a company-wide conversion from the legacy SFA to Siebel SFA. During February 2006, the

Researchers began their collaboration at *VoiceTech*. In April 2006, *VoiceTech* implemented Siebel SFA to include basic functionality that converted the legacy SFA onto the Siebel SFA platform.

During the Selective Mobility episode, BlackBerrys were distributed to a select group of sales reps. Generally, these reps were experienced and productive and were entrusted with the responsibility for updating their sales activities via the mobile version of the SFA rather than returning to the office. During the Incremental Improvement episode, the Innovators began visiting each of the *VoiceTech* office locations to encourage sales reps and sales managers to more fully utilize the SFA. Users provided feedback and many improvement suggestions that the Innovators prioritized and began including in quarterly SFA updates.

During the Smarter Sales episode, a BlackBerry mobile device was given to every sales rep. During 2008, *VoiceTech* continued its strong growth by adding additional offices. Based on this growth, executives decided to create a sales leadership academy that would train future sales leaders. As of mid-2008 when the Researchers completed the collaboration, the outcome for SPI at *VoiceTech* was still in-progress. The company was considering providing laptops to sales reps and new SFA features were being considered for implementation. In summary, developing the process model in this manner allowed us to identify specific events and key change triggers that helped *VoiceTech* move from a legacy SFA through incremental improvements and toward smarter sales and sales process innovation.

Contribution 2: The role of stakeholder perceptions during SPI at *VoiceTech.*

Our second contribution is our comprehensive understanding of the role stakeholder perceptions played during SPI at *VoiceTech.* Prior studies have primarily examined SPI implementations from two stakeholder roles – management and sales reps or technologists and users. Our investigation provides details from five key stakeholder roles (Champions, Innovators, Technologists, User-Reps, and User-Managers) as well as how the Researchers' interactions impacted the Innovators' perceptions during the collaboration.

Significant to our understanding was the longitudinal study design. The Researchers were given an opportunity to investigate SPI and interview and interact with 30 different individuals over a 30-month period. Data generated from interviews, workshops, presentations, and observations provided a rich source from which we conducted our analysis. In total, over 1,000 transcript pages from nearly 49 hours of recordings were analyzed.

Our analysis provided a comprehensive understanding of pre-existing stakeholder perceptions, formation of stakeholder perceptions, and shifts in stakeholder perceptions during IT-enabled change at *VoiceTech.* To understand the dynamics of stakeholder perceptions over time we have provided a detailed analysis of the inconsistencies within stakeholder groups, the incongruencies between stakeholder groups, and the interactions among stakeholder groups. By evaluating each of these over time, we have been able to show how the dynamics of stakeholder perceptions played out during the process at *VoiceTech*.

Contribution 3: Demonstrating how TFR applies well to understanding SPI

Our third contribution is our demonstration of how TFR applies well to understanding SPI. Orlikowski and Gash (1994) established that key perception incongruencies between different stakeholder groups can be significant inhibitors for user adoption of new technologies. Davidson (2002) found evidence of the

shifts in stakeholders' salient frames of reference during implementation of new technologies. Davidson also identified key change triggers that helped an organization and its stakeholders implement new technologies even while facing uncertainties and other problems. Through our TFR analysis of SPI at *VoiceTech*, we contribute to this body of knowledge by adapting TFR theory. We extend the categorization of TFR differences to include inconsistencies within groups and interactions between groups to help us understand the process by which shifts in stakeholder perceptions occur during SPI. Brief examples of each of these findings are given below.

During Episode 1 (SFA Conversion), we identified a key incongruence, on the one hand, between the Champions' view of a smarter SFA and, on the other hand, User-Reps' perception was that the SFA was a control mechanism for managers. These incongruent views helped explain one of the reasons that users were resistant to adopting the SFA.

During Episode 2 (Selective Mobility), we found that the Innovators were, on the one hand, responsible for developing an SFA vision and, on the other hand, continued to focus on the short-term quarterly SFA update cycle. This inconsistency prevented the Innovators from investigating what role the SFA should play over the coming years.

During Episode 3 (Incremental Improvement), an interaction occurred between the Researchers and the Innovators concerning assimilation gaps. The Researchers found that sales reps exhibited differences in SFA usage behavior. These differences were one cause of unreliable SFA data. The Researchers proposed and the Innovators agreed that the SFA design should support elimination of this type of user variation. Meanwhile, the Researchers identified two management style differences among sales managers. For example, analytical sales managers tended to rely heavily on sales reports to make daily management decisions while other sales managers tended to rely more on gut-feelings and sales rep discussions. The Innovators realized that the SFA design, in this case, should support these stylistic differences.

One of the key change triggers pushing SPI at *VoiceTech* from Episode 3 (Incremental Improvement) to Episode 4 (Smarter Sales) was the decision to give all sales reps a BlackBerry mobile device. This decision was a significant change in *VoiceTech's* stated position in Episode 1 when it was proposed by the Researchers. Providing each sales rep, upon employment, a mobile SFA helped move SPI toward smarter sales. Sales reps could enter and access sales data in real time while in the field.

Contribution 4: Action research into SPI

Our fourth contribution is demonstrating how action research supported an investigation of SPI. The Researchers collaborated with key stakeholders at *VoiceTech* with the dual goals of action research in mind (Susman and Evered, 1978). The Researchers followed a process of Diagnosing, Action Planning, Action Taking, Evaluating, and Specifying Learning. Data generated from interviews, workshops, and presentations was used to help to help *VoiceTech* solve the practical problems of sales rep turnover and low adoption of the SFA. Simultaneously, the Researchers used TFR theory to support the SPI investigation.

The Researchers were active participants during the collaboration. Researchers reviewed data collected during interviews to provide feedback and make suggestions during P1. Researchers worked primarily with the Innovators during five workshops to evaluate actions planned and actions taken. The results of

these evaluations helped change stakeholder perceptions of the SFA. Meanwhile, TFR theory was used to help the Researchers better understand the nuances and dynamics of stakeholder perceptions at *VoiceTech.*

Summary. This chapter provided an analysis of SPI at *VoiceTech* as it occurred during an SFA implementation. Consistent with Newman and Robey (1992), we described the antecedent conditions, key episodes, and outcomes of SPI at *VoiceTech.* Also, we applied TFR analysis to explain in detail the key stakeholder perceptions during four episodes.

We have explicated four contributions in this chapter. First, we developed a process model for SPI at *VoiceTech.* Second, we provided a comprehensive understanding of the role of stakeholder perceptions during SPI at *VoiceTech.* Third, we demonstrated how TFR can be applied to understand SPI. Fourth, we explained how action research can support an SPI investigation. The SFA literature calls for a longitudinal study of SPI as it occurs and for investigating key stakeholder perceptions during a technology implementation. Chapter 9 contains the details of this investigation from a marketing perspective and an analyses of the process by which SPI occurred.

Chapter 10 Conclusion

10.1 Contributions Summary

Throughout the action research interventions, rich data was generated allowing the study to gain deep insights into how and why the change evolved at *VoiceTech.* Practical As a result, we provide insights into the change process at *VoiceTech* and we extend TFR theory by outlining a conceptual model of frame dynamics and by offering detailed definitions of TFR domains and sub-domains to support future research. Specific contributions from chapters 7, 8, and 9 are summarized below.

Chapter 7 provides three important contributions to TFR theory. First, we explicated how TFR theory could be used to observe IT-enabled organizational change. Second, we developed and used TFR constructs that supported the detailed analysis. Third, we extended TFR theory by including inconsistencies as distinguished from incongruencies.

Chapter 8 provides three important contributions to TFR theory. First, we showed that TFRs are dynamic and that shifts can occur as a result of stakeholder interactions. We provided modified and new frames evidence for five stakeholder groups that supports this claim. Second, we observed changed outcomes at *VoiceTech* as a result of TFR shifts. Third, we demonstrated TFR in Action through collaboration interactions between the Innovators and the Researchers.

Chapter 9 provides four important contributions to SPI literature. First, we developed a process model of SPI at *VoiceTech.* Second, we explicated through great detail the role of stakeholder perceptions during SPI at *VoiceTech.* Third we demonstrated how TFR can be useful to understanding SPI. Fourth, we used an action research approach to support a longitudinal study of SPI.

10.2 Sales Process Innovation at *VoiceTech*

Contributions to addressing the practical problems at *VoiceTech* (see Table 6.4) include improved SFA usability, communication of a clear SFA storyline throughout the organization, and development of a prioritization of SFA options. As a result, there was a large decrease in the salesperson turnover rate to the point where the organization became concerned the resulting rate was too low. There were also important issues that were partly resolved at the end of our intervention (see Table 6.5). These issues included making SFA a single source of sales data for *VoiceTech*, capturing contact information real time, and SFA ubiquity.

A contribution of the research addressing the RQ-Context is to the IT-enabled sales process innovation literature. Extant studies in this body of knowledge provide very limited insights into how stakeholder perceptions vary across roles, within roles, and over time during sales process innovation efforts and how these shifts impact innovation outcomes. Instead, SFA studies have generally been limited to variance studies examining factors that better automate salespersons (Landry, *et al.*, 2005). Through the in-depth collaborative investigation of ongoing sales process innovation within the *VoiceTech* context, this research provides an understanding of how stakeholders' perceptions shape and are shaped during IT-enabled change and draws lessons for how sales managers can effectively facilitate such efforts.

10.3 Conceptual Model of Frame Dynamics

A main research contribution addressing the RQ-Overall is the conceptual model (Figure 10.1) for understanding how stakeholder inconsistencies, incongruencies, and interactions contribute to outcomes during IT-enabled change. Exemplary process models include Newman and Robey's social process model of user-analyst relationships (Newman & Robey, 1992), Keil and Robey's process model of project de-escalation (Keil & Robey, 1999), and Mahring and Keil's escalation process model (Mahring & Keil, 2008). Analysis of the detailed coding of TFR instances across the different roles at *VoiceTech* has led to a conceptual model of TFR in action.

The model provides an understanding of how inconsistencies, incongruencies, and interactions in stakeholder perceptions contribute to frame shifts and interact with outcomes during IT-enabled change (Figure 10.1). Similar to Orlikowski and Gash (1994), we identified incongruencies between stakeholders in different roles and drawing on Davidson's (2002) studies we also identified frame shifts during our action research at *VoiceTech*. While frame incongruencies often led to frame shifts for specific stakeholders and subsequently impacted change outcomes, we also observed how inconsistencies within stakeholder perceptions and interactions between stakeholder roles contributed to frame dynamics (see Chapter 8). These additional sources of frame shifts have not been noted earlier in extant TFR theory. Hence, our model contributes to the literature by explaining in detail the process by which shifts in stakeholder perceptions occur and interact with change outcomes.

10.3.1 Incongruence

The first driver of frame dynamics is *incongruence* of frames across stakeholders (Orlikowski and Gash, 1994). As noted in Chapter 3, incongruencies between what different stakeholders expect, assume, and know about technology tend to lead to conflicts during IT-enabled charge. For example the Director of Marketing and Sales Operations stated that the major benefit of the SFA is that it "skyrockets to the next level" *VoiceTech*'s reporting capabilities. Meanwhile, the sales reps and sales managers were less concerned with reporting capabilities; there focus was on how the SFA would help them increase sales. These incongruencies were expressions of conflicting interests across stakeholder groups that inhibited full adoption and usage of the technology.

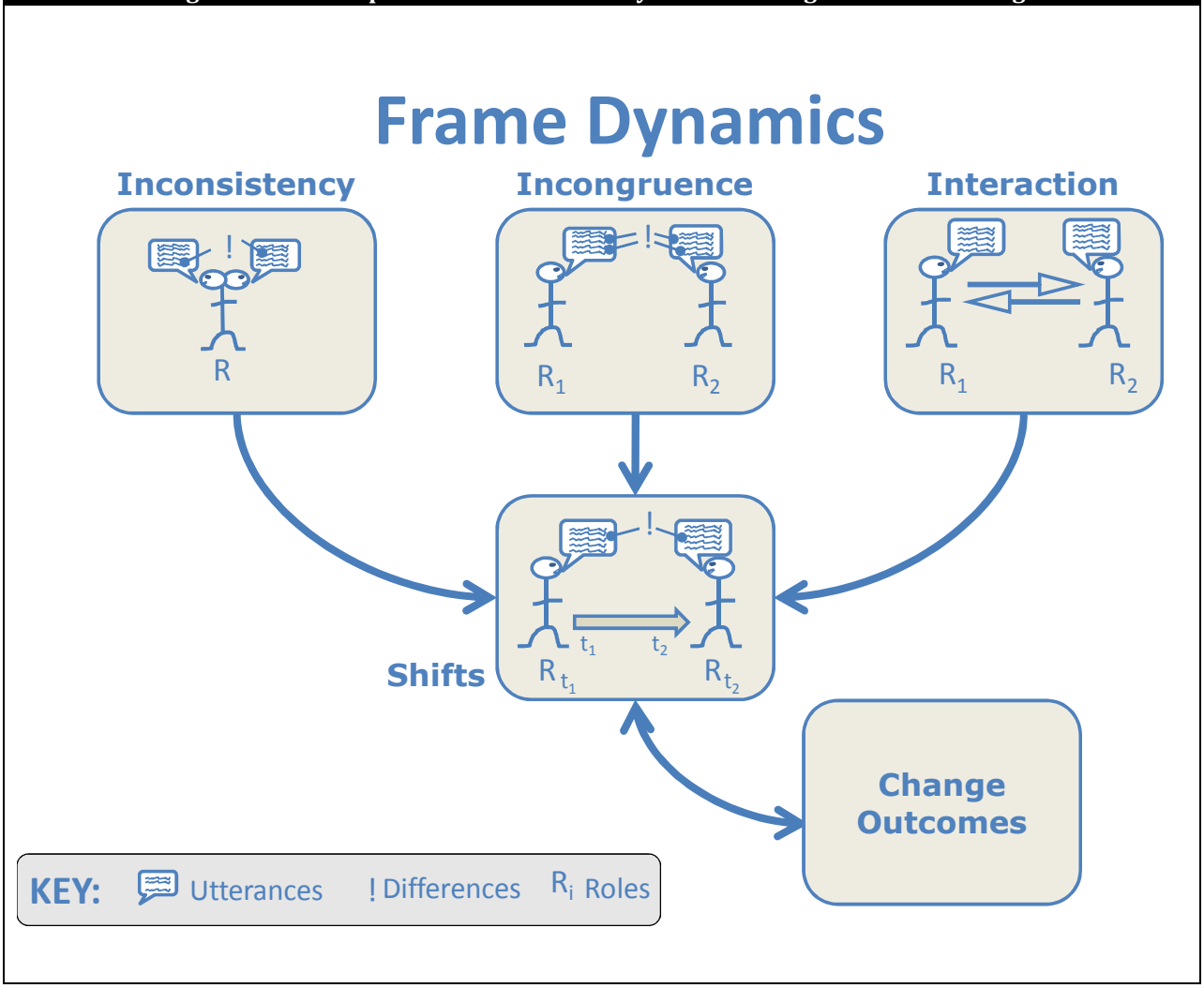
10.3.2 Inconsistency

The second driver of frame dynamics is *inconsistency* of frames within stakeholder groups. An individual may articulate expectations, assumptions, and knowledge about technology that is inconsistent with other articulations by the same stakeholder or another stakeholder in a similar role. For example, several managers at *VoiceTech* stated that the new SFA technology provided greater data reliability but yet continued to rely on their offline spreadsheets to manage reports to senior management. Also, the CMO was focused on developing a "smarter" strategy, as he put it, using smart technology and smart systems to support the sales operation. Yet, the VP of marketing and sales operations, who reported directly to the CMO, was much more task oriented and was a roadblock to distributing the smart technology to all sales reps. These inconsistencies were expressions of conflicting views within a particular stakeholder group that prevented it from clearly articulating and committing to a specific strategy for implementing the new technology to innovate the sales process at *VoiceTech*.

10.3.3 Interaction

A third driver of frame dynamics is *interaction* between stakeholders. While incongruence and inconsistency are expressions of conflicts between and within stakeholder groups, interactions between stakeholders provide opportunities to share perceptions and express interests across stakeholders during the change process. For example, *VoiceTech* sales reps gained new knowledge about the new technology when attending a training session by the sales operations analyst designed to provide updates on the SFA's capabilities. Another example of interaction between stakeholders was one sales rep sharing with another how to perform certain tasks within the SFA. Interactions like these provide in-action opportunities for stakeholders to learn about options and challenges related to the change process without necessarily being driven by incongruencies or inconsistencies.

Figure 10.1 Conceptual Model of Frame Dynamics During IT-Enabled Change



10.3.4 Frame Shifts

We observed at *VoiceTech* how three different drivers led to frame *shifts*. As described in Chapter 3, Davidson suggested that frame shifts can lead to changes in outcomes (Davidson, 2002). In our proposed model, frame shifts are the result of the positive and negative perceptions formed by stakeholder inconsistencies, incongruencies, and interactions. Frame shifts evolve over time and interact with change

outcomes. For example, at *VoiceTech* many suggestions provided by the Researchers in the workshops and presentations were initially seen by the *VoiceTech* Innovators as being not feasible or possible. However, during the last two workshops, many of these suggestions had been implemented or were in-process. Specifically, by the end of the project, the *VoiceTech* Innovators' and managers' framing of the usefulness of mobile technology had changed and every sales rep had, as a result, been given a BlackBerry and sales rep use of laptops was being considered.

10.3.5 Change Outcomes

The final element of our model of frame dynamics is *change outcomes*. Fiol (1994, p. 405) compared the "content of the interpretation" to a picture and the "framing of the interpretation" to the picture frame. Rigidity or flexibility of stakeholders' framing indicates possibilities for change. An example of outcomes impacting frame shifts occurred at *VoiceTech* as sales reps began seeing relevant information provided within the SFA and on their BlackBerrys. As a result, they began to change their perception of the SFA from being a source of more data for managers to the SFA being useful in actually managing specific accounts. Such relevant information included recently activated customers, referral information, and installations. An example of frame shifts impacting outcomes occurred at the third workshop, when the Researchers presented the ideas of capability and assimilation gaps needing attention from *VoiceTech* Innovators. During the fourth workshop, one of the Innovators stated that he had used this conceptualization to change the approach to implementing the SFA. He had used the capability and assimilation framework to propose a new SFA sequencing strategy to the Champions taking into consideration the impact of introducing a new capability before better understanding sales reps' and sales managers' needs.

10.4 Application and Adaptation of TFR

Another contribution addressing the RQ-Framing is that our research at *VoiceTech* led to further development of TFR as a practical tool for investigating stakeholder perceptions during IT-enabled change (see Figure 4.1). To date, there has been no salient model within TFR studies for facilitating the application of TFR theory. Subsequent studies to Orlikowski and Gash (1994) have used TFR and adapted the domains of interest to suit the context of the paper. Davidson *et al.* (2004) identified 52 studies that reference Orlikowski and Gash (1994) of which, however, only eight studies utilized some form of TFR analysis. In our research, we looked at and analyzed data throughout the project and subsequently spent considerable effort developing and applying a coding scheme that focused on the salient features of our data (Mason, 2002; Miles & Huberman, 1994). As a result, we adapted and extended the original domain constructs defined by Orlikowski and Gash (1994). Specifically, as described in the Technology Frames of Reference section, we developed more elaborate definitions to support our analyses, we extended the framework to include a technology implementation domain, and we delineated a specific set of TFR sub-domains. The detailed analyses are explicated in Chapters 7, 8, and 9.

10.5 Limitations

With any research, there are always some anticipated limitations. In this proposed research, these relate to the generalizability of the research, the choice of TFR as the theoretical framework, the coding method, and the reliance on key stakeholders.

First, the choice of a problem situation with a single company may limit generalizability of the research. It is not possible to claim that the claims made in this research will apply in other settings. However, through the careful, rigorous approach articulated by the application of CAR (see Chapter 5) in evaluating the research, we have attempted to minimize this limitation.

Second, the choice of Orlikowski and Gash's (1994) TFR as the theoretical framework has implications for the analysis of the collected data. In all likelihood, there exist other theories that might legitimately be used as a framework for examining and explaining the case. However, we have systematically reviewed other TFR applications (see Chapter 3) and believe that the adaptation and extension of TFR is satisfactorily explicated and that TFR is justifiably applicable in this research.

Third, the selected qualitative coding scheme using Atlas.ti presents some limitations concerning one researcher coding all transcripts (see Chapter 6). It is possible that multiple researchers may have coded some of the data differently. However, we believe that the coding pilot and results of the first and second rounds of coding addressed this limitation.

Fourth, the reliance on key stakeholders has implications on how the data was collected and analyzed. The structure of the research project limited our ability to interact deeply with the User-Reps, the User-Managers, the Champions, and the Technologists. However, we did conduct in-depth interviews with these and interacted with stakeholders during workshops and presentations. While our main source of data after the initial interviews was through the Innovators, the many interviews, workshops, presentations, researcher notes, researcher reflections, and company documents provided us with deep understanding of the problem situation and allowed us to triangulate the data.

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APPENDIX A Data Sources – Workshops, Interviews, and Reflections

Date	Context	Atlas.ti Doc#	Position	Stakeholder Role	Audio File	Length (hh:mm:ss)	Number of Transcript Pages
02/02/2006	Workshop	40	WS	WS1	V0202000	6:22:15	127
02/15/2006	Interview	01	CMO	Champions	V0215003	1:08:09	25
02/15/2006	Interview	05	SAM	User-Reps	001_A_002	0:53:30	25
02/15/2006	Interview	07	MD	User-Managers	V0215004	0:42:04	29
02/15/2006	Interview	10	TL	User-Reps	V0215001	0:50:05	32
02/15/2006	Interview	11	REP	User-Reps	V0215002	0:52:42	30
02/15/2006	Interview	15	REP	User-Reps	002_B_001	1:01:30	31
02/15/2006	Interview	23	SAM	User-Reps	122135	0:45:00	14
02/15/2006	Interview	29	SVP	User-Managers	003_C_001	0:10:00	2
02/27/2006	Interview	13	CIO	Technologists	V0227001	1:02:34	20
02/27/2006	Interview	27	Customer	Customers	V0227000	0:20:30	9
02/27/2006	Interview	28	Customer	Customers	V0227000	0:22:00	8
02/27/2006	Interview	34	Customer	Customers	085927	0:17:00	6
02/27/2006	Interview	39	IT	Technologists	V0227002	2:17:39	48
03/02/2006	Interview	02	REP	User-Reps	092755	0:35:00	11
03/02/2006	Interview	09	REP	User-Reps	V0302001	0:22:10	8
03/02/2006	Interview	20	CSA	User-Reps	V0302001	0:36:00	13
03/02/2006	Ad-hoc	21	EXEC	Innovators	V0302000	0:18:20	6
03/02/2006	Interview	22	TL	User-Reps	103901	0:21:00	9
03/02/2006	Interview	24	CUSCARE	User-Reps	V0302003	0:30:36	15
03/02/2006	Interview	26	REP	User-Reps	V0302002	0:18:35	9
03/17/2006	Interview	18	VPGM	User-Managers	V0317000	1:00:01	16
03/17/2006	Interview	19	MD	User-Managers	V0317002	1:05:19	20
03/17/2006	Interview	30	CC	User-Reps	101226	0:25:30	7
03/17/2006	Interview	32	Customer	Customers	093051	0:15:00	5
03/17/2006	Interview	33	VPGM	User-Managers	V0317001	0:37:05	9
03/22/2006	Interview	16	Analyst	Innovators	V0322000	1:47:02	6
03/22/2006	Reflection	17	CEPRIN	CEPRIN	V0322001	1:22:32	23
04/03/2006	Presentation	43	WS	P1	V0403000	2:25:29	41
06/01/2006	Workshop	35	WS	WS2	V0601000	3:51:41	64
07/18/2006	Workshop	36	WS	WS3	V0718000	3:22:29	72
11/14/2006	Interview	04	CMO	Champions	V1114002	0:23:49	25
11/14/2006	Interview	06	SVP	User-Managers	V1114004	0:41:55	15
11/14/2006	Interview	08	MD	User-Managers	V1114005	0:23:49	13
11/14/2006	Interview	12	EXEC	Champions	V1114000	0:50:57	17
11/14/2006	Interview	14	SAM	User-Reps	V1114006	0:36:17	17
11/14/2006	Interview	25	SAM	User-Reps	V1114001	0:47:04	16
11/16/2006	Workshop	37	WS	WS4	V1116000	3:57:30	71
11/16/2006	Reflection	38	CEPRIN	CEPRIN	V0208001	0:19:02	23
02/08/2007	Presentation	42	WS	P2	V0208000	1:35:24	28
03/14/2007	Interview	31	EXEC	Innovators	V0314001	0:30:19	8
04/21/2008	Workshop	41	WS	WS5	V0421000	2:12:03	37
TOTALS						Total: 49h:06m Avg: 1h:08m	Total Transcript Pages: 1062

APPENDIX B *VoiceTech* Planning Considerations, January 25, 2006

Problem Statement

While *VoiceTech* has recently successfully implemented a new IT-based sales support system to enhance sales practices, a joint venture with a provider of mobile, wireless services has made it feasible to adopt mobile technology to further develop sales performance. At the same time, however, *VoiceTech* is experiencing sales representative attrition [turnover] of 15% per month. Those that leave *VoiceTech* are mainly non-core sales representatives with less than 6 months of engagement. As process disruptions, for example caused by introducing new and different forms of technology, can cause increased attrition rates, the key challenge is to enable sales process innovations by adoption of mobile technology in ways that will both increase sales performance and reduce sales representative attrition.

Project Themes

The following themes will guide data collection, analysis and recommendations throughout the R&D project.

Sales process management: How is mobile technology best integrated into the sales process? How can adoption of mobile technology enable innovation of the sales process to enhance sales and reduce sales representative attrition?

Information capture and sharing: Which information should be made available on mobile devices to support sales? Which information should be captured on the mobile devices? How can this information be effectively shared across the sales process?

Mobile technology design: What are the most appropriate mobile devices in this context? Which sales activities should be enabled by these devices? What are the requirements for designing appropriate mobile sales services?

To support this we will adopt a comprehensive view of the key elements of sales processes and sales process management that determine sales outcome and sales representative perceptions.

Data Collection

The project will draw on the following data sources to address the three themes:

- Sales process management:
  - Interviews – tape recorded
  - Field Studies
  - Sales process documentation
- Information capture and sharing:
  - Sales System demonstration & assessment
  - Systems documentation
  - Interviews – tape recorded
  - Field Studies
  - Business relationship conditions with vendor
- Mobile technology design:
  - Exemplary mobile technology designs
  - Mobile Device demonstration & assessment
  - Systems documentation
  - Interviews – tape recorded
  - Field Studies (usability criteria)
  - Business relationship conditions with vendor

Field studies and interviews are conducted as follows:

- Field studies to observe sales practices.
  a. How many?
     i. Suggestion: 4X half to whole day field observation
  b. Specifics?
     i. Sales reps: High performing vs low performing; new vs established; Morning vs afternoon; days of week; seasonal differences
     ii. What order (interview first or observe first?)
- Tape-recorded interviews with sales representatives, managers, and IT specialist at *VoiceTech*.
  a. Are there others?
     i. Suggestion: Customers

ii. Suggestion: Call-center customer service
iii. Suggestion: Attractive non-customers or prospective customers

b. How many? How Long? What order?
i. Sales Rep: (8 / face-to-face / 45min -1 hour) - No overlap with field studies
ii. Customers: (4 / telephone / 30min)
iii. Sales Managers: (2 / face-to-face / 45min -1 hour)
iv. IT Specialists: (2 / face-to-face / 45min -1 hour)

- Tape-recorded interviews with sales representatives that have left *VoiceTech*.
  a. How many?
  i. Ex-Sales Rep: (4 / telephone / 30min)
  ii. High/low; early/late departure

Project Deliverables

The main deliverables of the R&D collaboration to *VoiceTech* are:

- Mobile technology recommendations: Selection of appropriate device configurations, scenarios of usage, requirements for mobile service to support sales, recommendations for the next steps.
- Sales process recommendations: Changes in sales process that will integrate the mobile technology, enable enhanced sales, and reduce sales representative attrition.

The R&D project is expected to result in a scientific publication. Target journal: *Industrial Marketing Management.*

Project Organization

A task force consisting of the Director of Marketing and Sales Operations, the Director of Sales Operations, and the Marketing Analyst, from *VoiceTech* Communications, and the Researchers, and possibly one or two masters-level students from the Center for Process Innovation.
The task force will organize its initial work around up to six 4-hour workshops at *VoiceTech*.
The task force will report to the CMO and Executive VP of *VoiceTech* Communications.
The R&D collaboration will last 3 months. A detailed project plan will be developed by the task force once the project is initiated.
Expected *VoiceTech* Contributions:

- ❒ Planning of field studies and interviews
- ❒ Provision of secondary data & documentation
- ❒ Participation in assessment of data collection, analysis, and recommendations
- ❒ Tools to prototype screen images based on high-level information and functional requirements to PDA
- ❒ Ongoing provision of technical feasibility feedback
- ❒ Management availability for interim meetings and final presentation

APPENDIX C Sales Representative Interview Guide

Assumed generic activities:
1. Daily planning
2. Weekly planning
3. Scheduled contacts
4. Unscheduled (opportunistic contacts)
5. Daily summary reporting
6. Weekly results feedback
7. General conditions
8. Others?

Question Outline:

1. Daily planning

a. Information received to assist in this activity?
b. Which of this is used?
   - In what way? How do you receive this information?
c. Is this appropriate? (Push vs. Pull?)
d. Additional information needed to do planning?
   - Where do you get it?
e. Do you convert this information to a different format?
   - How might it be better organized for your needs?
f. How does the plan change as the day progresses?
   - What triggers these changes?
   - How do you acquire the new information?

2. Weekly planning

a. Information received to assist in this activity?
b. Which of this is used?
   - In what way?
c. How do you receive this information?
   - Is this appropriate? (Push vs. Pull)
d. Additional information needed to do weekly planning?
   - Where do you get it?
e. Do you convert this information to a different format?
   - How might it be better organized for your needs?
f. How does the plan change as the day progresses?
   - What triggers these changes?
   - How do you acquire the new information?
g. How can the linkage between daily and overall scheduling be improved?

3. Scheduled contacts

a. What information is needed and accessible on or before you arrive at a scheduled contact?
b. Any additional information that would be helpful to have?
c. Assuming you meet with your contact, what information would you like to be able to provide or access
d. Would being able to close a deal at the point of contact improve your results?
   - If so, how might additional information enable you to do this?

4. Unscheduled contacts

a. How do you generally identify additional sales contacts in the field?
b. What information might be useful in support of this identification and to improve yield?
c. What information would you like to have at hand in order to be more effective with unscheduled contacts?

5. Daily summary reporting

a. At what point do you record your contacts during the day (e.g. immediately after, end-of-day, following morning)
b. How could the effort needed to do this be reduced?
c. Do you receive a summary of this information (for feedback and error checking)?
d. What do you assume is done with this information?

6. Weekly results feedback

a. What are your key performance indicators?
b. How accurate is the feedback?
c. What isn't included that should be?

7. General Conditions

a. Are there aspects of the sales organization practices you find distressing or dysfunctional?
b. Which of these might lead to dissatisfaction with your job s? (If any)
c. What are some ways to address the above issues? (If any)
d. If sales practices and reporting were to change, what current aspects of these would you insist on keeping?

APPENDIX D Sales Manager Interview Guide

Presumed generic activities:

1. Daily planning of unit
2. Weekly planning of unit
3. Sales Mentoring
4. Sales Monitoring
5. Reporting
6. Periodic performance & goal reviews
7. General conditions
8. Others?

Question Outline:

1. Daily planning of unit

a. Information received to assist in this activity?
b. Which of this is used?
   - In what way?
c. How do you receive this information?
   - Is this appropriate? (Push vs. Pull)
d. Additional information needed to do planning?
   - Where do you get it?
e. Do you convert this information to a different format?
   - How might it be better organized for your needs?

2. Weekly planning of unit

a. Information received to assist in this activity?
b. Which of this is used?
   - In what way?
c. How do you receive this information?
   - Is this appropriate? (Push vs. Pull)
d. Additional information needed to do planning?
   - Where do you get it?
e. Do you convert this information to a different format?
   - How might it be better organized for your needs?
f. How can the link between your daily and overall scheduling be improved?
g. How does the plan change as the week progresses?
   - What triggers these changes? How is the change information provided?

3. Sales mentoring

a. Whom do you mentor?
b. What information do you receive and use to mentor others?
   - What are the sources for this information? (push/pull)
c. What is the frequency of this mentoring?
d. What changes in information support would allow you to be more effective in mentoring?
e. What information do you provide to those you mentor?

4. Sales monitoring (those supervised but not mentored)

a. Whom do you monitor?

b. What information do you receive and use to monitor others?
    - What are the sources for this information? (push/pull)
c. What is the frequency of this monitoring?
d. What changes in information support would allow you to be more effective in mentoring?
e. What information do you provide to those you monitor?

5. Unit Reporting

a. What information do you report about the unit?
    - To whom?
    - When?
    - How?
b. How could this reporting effort be reduced?
c. Do you receive a summary of this information (for feedback and error checking)?
d. What do you assume is done with this information?

6. Periodic performance and goal reviews

a. What are your key performance indicators?
b. What information do you receive about unit performance and goals?
    - When and how do you receive this information?
c. What improvements could be made in how this information is received and presented?
d. How do you transform this information into action?

7. General Conditions

a. Are there aspects of the sales organization practices you find distressing or dysfunctional?
    - Which of these might lead to dissatisfaction with the job for *VoiceTech* sales reps? (If any)
b. Which of these might lead to dissatisfaction with the job for *VoiceTech* sales managers? (If any)
c. What are some ways to address the above issues? (If any)
d. If sales practices and reporting were to change, what current aspects of these would you insist on keeping?

APPENDIX E Interview Guide for Sales Executives

Framing Opening Questions:

- We would like answers from your perspective and your position in the organization (rather than what you think others think).
- What has happened from POINT→Siebel along a number of dimensions?
- Your view of future developments?

Time Period	**SALES (I)** **Tech strategy frame**	**INFORMATION (II)** **Tech in use frame**	**TECHNOLOGY (III)** **Nature of Tech frame**
From Jan '06 to Nov '06	What are the most important changes that have happened in each of the following areas? 1) Exec. Sales Mgt & Sales operations 2) Vice Presidents 3) District Manager 4) Sales Manager 5) Sales Rep What is the most significant sales capability that has changed? What are the most significant performance metrics that have changed?	What are the most important changes that have happened in each of the following areas? 1) How is information collected? 2) How is information shared? 3) How does information support decision making? What is the most significant new type of information that has become available? What is the most significant improvement in the quality of information? (examples) 1) Relevance 2) Timeliness 3) Efficiency 4) Reliability	What are the most important changes that have happened in each of the following areas? 1) Technological capabilities / functionality 2) Access to technology 3) Quality of technology delivery What is the most significant technological capability that has changed? What is the most important improvement over previous sales technology?
Future Developments	Where would you like your sales organization to be moving over the next year? (Across different markets, both existing and new)\ What is the most significant enabler / barrier?	What additional sales information would you like to become available over the next year? (Across different levels of sales organization) What is the most significant enabler / barrier?	What additional technological capabilities would you like to become available over the next year? (Across different levels of sales organization) What is the most significant enabler / barrier?

APPENDIX F Inter-Coder Reliability

Step 4 - First Round of Coding

CODE	Percent Agreement	Scott's Pi	Cohen's Kappa	Krippendorff's Alpha	Agree	Disagree	Cases	Decisions
None/5.0	94.5%	0.826	0.827	0.826	259	15	274	548
1.1	99.6%	0.665	0.665	0.665	273	1	274	548
1.2	99.3%	0.663	0.663	0.664	272	2	274	548
2.1	97.8%	0.239	0.239	0.240	268	6	274	548
2.2	99.3%	(0.004)	(0.004)	(0.002)	272	2	274	548
3.1	95.6%	0.715	0.716	0.716	262	12	274	548
3.2	95.3%	0.685	0.686	0.686	261	13	274	548
4.1	100.0%	*	*	1.000	274	0	274	548
4.2	99.6%	0.665	0.665	0.665	273	1	274	548
				Totals:	2414	52		
				% Agreement:	97.8%			

Step 5 - Second Round of Coding

CODE	Percent Agreement	Scott's Pi	Cohen's Kappa	Krippendorff's Alpha	Agree	Disagree	Cases	Decisions
None/5.0	94.3%	0.884	0.884	0.884	198	12	210	420
1.1	100.0%	*	*	1.000	210	0	210	420
1.2	100.0%	1.000	1.000	1.000	210	0	210	420
2.1	99.0%	0.928	0.928	0.928	208	2	210	420
2.2	98.1%	0.898	0.898	0.899	206	4	210	420
3.1	98.1%	0.490	0.493	0.492	206	4	210	420
3.2	99.0%	0.955	0.955	0.955	208	2	210	420
4.1	98.1%	0.940	0.941	0.941	206	4	210	420
4.2	100.0%	1.000	1.000	1.000	210	0	210	420
				Totals:	1862	28		
				% Agreement:	98.5%			

*Scott's pi and Cohen's kappa could not be calculated for this variable due to invariant values.

Combination of First and Second Round of Coding

CODE	Percent Agreement	Scott's Pi	Cohen's Kappa	Krippendorff's Alpha	Agree	Disagree	Cases	Decisions
None/5.0	94.4%	0.878	0.878	0.878	457	27	484	968
1.1	99.8%	0.666	0.666	0.666	483	1	484	968
1.2	99.6%	0.798	0.798	0.798	482	2	484	968
2.1	98.3%	0.781	0.781	0.781	476	8	484	968
2.2	98.8%	0.863	0.863	0.863	478	6	484	968
3.1	96.7%	0.686	0.687	0.687	468	16	484	968
3.2	96.9%	0.825	0.825	0.825	469	15	484	968
4.1	99.2%	0.948	0.948	0.948	480	4	484	968
4.2	99.8%	0.962	0.962	0.962	483	1	484	968
				Totals:	4276	80		
				% Agreement:	98.1%			

APPENDIX G Atlas.ti Screenshot

Screenshot taken from actual coding within Atlas.ti 5.5 (with participants real names redacted).