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# Implementing Strategy Through IS Projects: A Theory Building Literature Review

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## ABSTRACT

In project management, a growing area of importance is “benefits realization”, including techniques to achieve on time and on budget efficiency. Broadly, it refers to aligning efforts with strategic purpose, realizing the purposes for which the project was selected, and gaining benefits from its effectiveness. There is a dearth of writing about how strategy is realized through IS projects, particularly at the program or project level. Our purpose is to create a clear, more detailed and predictive linkage between organizational strategies and IS project enactments by addressing the question, “How do organizations translate strategy through IT-enabled strategic initiatives?” In this RIP paper, we lay the foundation for our review and describe the process for our examination. By examining mechanisms for executing strategy, findings should be relevant both to academics in terms of providing insights for further testing and/or refinement, as well as practice for forming a basis for predicting outcomes and selection of execution process techniques.

## Keywords

Project management, IS project development, strategy, IS project outcomes

## INTRODUCTION

Project management, information systems (IS), and strategy are domains that cross organizational functions. Researchers often draw on one domain to inform research in a second. For example, research at the intersection of project management and IS has found that even when project management best practices such as user engagement are followed, IS development projects are not always successful (e.g., Gallivan and Keil, 2003). Similarly, there is a large corpus around IS alignment with corporate strategy (e.g., Chakravarty, Grewal, and Sambamurthy, 2013; Setia, Sambamurthy, and Closs, 2008), and researchers have examined strategic management processes to formulate and implement strategy at the corporate level (i.e., Hill & Jones, 2001; Mintzberg and Quinn, 1996; Thompson, 2001). What is missing is how corporate strategy gets translated into implementation, particularly at the program or project level. In practice, the two sets of activities are well connected; projects and programs are important ways for strategy to be implemented in the enterprise and we ought to understand much better how this occurs (Kaiser et al., 2015). As expressed by Näsholm and Blomquist (2015, p. 60), “Programs are often of a strategic nature for the organization and have broad long-term implications (Arto and Kujala, 2008) and they can even be considered as tools for strategy implementation to achieve organizational objectives (van Buuren, Buijjs, and Teisman, 2010)”. Examining the intersection of these three domains offers the opportunity for new insights into best practices for more impactful IT-enabled projects and organizational strategy. The overarching objective is to address the question, “How do organizations translate strategy through IT-enabled strategic initiatives?”

In this research in progress (RIP) paper, we lay the foundation for our review and describe the process for our examination. In the background section, we elaborate on the goal of our investigation, define key terms, establish its boundaries, and present a set of guiding questions that expand on our research objective. Next, we briefly describe our methods, and then present the results of an initial and very preliminary analysis. We conclude with a description of the expected contribution of our review and theory building effort.

## BACKGROUND

After an initial examination, we find no literature in any of the three key domains that directly addresses the question presented above. Ashurst and colleagues (2008) proposed the benefits realization capability model, which posits that

benefits from systems implementation are derived from following a series of best practices, based on their evaluation of successful IT project implementations. Our interest is broader, including the initial decision to address organizational strategy through IT systems, and considering both successful and failed projects. The academic and popular presses are full of articles that describe failures across project management and strategy domains (e.g., Sull and Sull, 2015; Workfront, 2014). This is an enduring problem in practice, and an investigation across the three domains may yield theoretical and practical insights to address this problem (Lyytinen and Grover, 2017). The idea that projects are a mechanism for implementing organizational strategy is so deeply embedded in common thinking that it is rarely questioned or studied. As phrased by Pinto (2015) in a popular project management textbook: “Projects are building blocks in the design and execution of organizational strategies” (p. 6).

Teams working on particular tasks (e.g. doing projects) is intuitively a key to achieving strategic goals, but this is not necessarily the same as guiding projects to on-time and on-budget outcomes. Nor does it guarantee that projects will fulfill their ultimate objective to advance organizational strategy even when efficiently delivered (Hjelmbrekke, Laedre, and Lohne, 2014). Our purpose is to create a clear, more detailed and predictive linkage between organizational strategies and IT-enabled project enactments. We are particularly focused on the “how” question regarding how strategies can be effectively moved forward by IS projects. Assuming that no extant theories will be found that provide theoretical explanation and predictive power relative to the question of interest, we will draw on insights from our review and analysis of the literature to offer a theoretical model and set of propositions to guide future research.

This study uses two perspectives to examine implementation of strategy through IT-enabled projects. First, it examines the broader issue of what has been learned so far, particularly addressing whether there are mechanisms designed to implement strategy through projects and evidence about their effectiveness. Second, it addresses how such knowledge might be applicable in the realm of projects focused primarily on the development and implementation of IS. The topic represents the confluence of three streams of thought pertaining to strategy, IS projects, and project management broadly. We will scan each of these literature streams for reference to the implementation of strategy through IS projects, to note linkages or missing links in the extant knowledge base, and to use these insights to suggest a theoretical model in the form of propositions to guide future research.

We follow Webster and Watson’s (2002) guidance by first describing the key concepts and delineating the boundaries of our research, along with a set of questions driving our investigation. Next, we describe our methods, followed by a short example of how the analysis might unfold. Moving from this RIP to the full paper, this will be followed by a model and propositions to guide future research. Our process is congruent with Vom Brocke and colleagues’ description of how to conduct an MIS review. Our objective is explanation building through a theoretical review. Our scope is broad, and sources of material will include both conceptual and empirical research. Further, we assume knowledge exists regarding organizational strategy and its enactment in general, with execution through projects as one approach. We assume knowledge exists about better ways to implement IT-enabled projects, although not necessarily ones that aim to maximize strategic goals. In sum, we will review the following literatures: project management in terms of enacting strategic purposes, strategy pertaining to implementation, and IT implementation and IT project management. We will also evaluate the enterprise project governance literature (e.g., Dinsmore and Rocha, 2012), which integrates organizational strategy and effective project conduct.

Organizational *strategy* will be considered mainly from a top-down formal strategy planning perspective. This is a dominant perspective on strategy and is most likely to initiate a strategic push toward the design and execution of IS projects. Some scholars view strategy as emergent, most notably Mintzberg (1996), and we will examine issues of de facto strategy that may be emergent from IS project processes and deliverables.

*Projects* are activities with a beginning and end aimed at creating particular products and/or services that did not exist before. They vary on many dimensions including size, the nature of the product/service, their complexity, the membership and structure of teams, the work packages, the risks, and the stakeholder characteristics (Project Management Institute, 2013). More specifically, IT-enabled *projects* are focused activities with a beginning and end aimed at creating, deploying, changing, organizing, or otherwise structuring the computing and information resources of an organization. Such projects may address the range of levels of the technology stack from platform to content, with software applications somewhere in between. IS projects are generally of a socio-technical nature, implying some adjustment to the technical state or tools available within an organization as well as to the skills, approaches,

assignments, and understandings of the humans interacting with this technology. Thus, *project management* “is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements” (Project Management Institute, 2013).

We bound our investigation by only looking at details of IS project implementation as they apply to the enactment of strategy. Among the distinctions we make are to focus on strategic initiatives and projects, rather than compliance or emergency project development (e.g., Larson and Gray, 2014). Issues of strategic alignment of organizations and IS departments are largely be outside the boundary of this study, other than where they suggest or discuss projects per se as a mechanism for integrating alignment. General knowledge about how to run effective IS projects, such as critical success factors (CSFs) for agile or traditional approaches will be outside the scope of the study other than where such CSFs affect the ability to implement strategic goals.

### Guiding Questions

The following questions guide our investigation and theory building.

- What is known about how IT-enabled projects can be used to enact organizational strategy?
- What is missing in the general project management, IS implementation, and organizational strategy literatures relative to IS project execution and strategy realization?
- Are there processes, factors, techniques, or approaches that differentiate more from less successful enactment of firm strategy through the use of IS projects?
- Do IT-enabled projects differ from other projects relative to more effective strategy execution?
- Are there macro processes for handling the class of IS projects or micro processes for actions within IS projects that make them more effective at enacting organizational strategy?
- Can we integrate different directions of influence: how IS project management capabilities constrain the range of strategic foci for an organization as well as how organizational strategy can influence the organization and execution of IS projects toward manifesting strategic vision?

### METHODS

Because there is little research directly targeting the mechanics of implementing strategy through projects and programs, our review will examine three separate literature streams: organizational strategy, IS projects, and project management. Each of these offers the possibility of presenting direct observations of the interaction between organizational strategies and IS projects. We will search various digital libraries, most notably ABI Inform, ACM digital library and Business Source Premier, based on key words focused on all three topics and each pair of topics. In anticipation of large numbers of “hits”, we will select articles from 3-10 top journals in each of these literature streams. For example, in MIS, we will select articles from the eight journals in the senior scholars’ basket, and *Information and Organization* and *Information and Management*, which both have a significant number of manuscripts that address organizational level IS issues. In project management, we will select articles from the discipline’s three top journals - *International Journal of Project Management*, *Project Management Journal*, and *International Journal of Managing Projects in Business*. We will make a similar selection for strategy including *Organization Science*, *Academy of Management Journal*, *Academy of Management Review*, *Journal of Management*, *Journal of Strategic Management*, *Management Science*, and *Strategic Management Journal*.

We will extend our search using a snowball technique by reviewing the reference lists in the articles we examine for additional relevant articles. Finally, we will use ABI Inform and/or Google Scholar to identify papers that have cited seminal articles within the boundary of our review to find less obvious but important references to our research question. We expect the vast majority of citations of these key articles to not offer much new information regarding our research question, but consider them worthy of scanning for the sake of completeness.

### Analysis

Each paper is reviewed for information relevant to our research question. Where such relevant information is found we (1) extract those ideas, findings, definitions, and/or comments that apply to our research question; (2) qualitatively use techniques as described by Miles and Huberman (1994) and Corbin and Strauss (2014) to compare and contrast, to categorize, to quantify (where applicable), and to find patterns and observe the absence of extant knowledge; and (3) integrate these observations into a theoretical model and generate new propositions to guide future research. Specifically, we rely on abductive logic to sort and order the extracted content of these papers into a coherent pattern to facilitate the organization of related knowledge. We use a number of recommended theory building techniques including problematization (Alvesson and Sandberg, 2011) and contrastive explanation (Tsang and Ellsaesser, 2011). Analysis is supplemented with tactics of memoing, discussion to consensus, and theoretical saturation relative to a stopping rule for consideration of additional literature. We will provide a chain of evidence to illustrate how we triangulated and moved from an analysis of articles to conclusions. The objective is to find a categorization scheme that holds value as a way to organize the literature on this topic and, thereby, create theory based on the collected observations to date from the field. We have started with the project management literature as it seemed the most likely place to find answers already extant to our research question, but early examination shows that while this is a sometimes discussed phenomenon, there is little development of a detailed theoretical account for how this linkage is created and maintained.

### **Level of Analysis**

The methodological level of analysis is the article or study. We examine each of these with a primarily qualitative approach, although some quantification may meaningfully arise from the analysis. We expect that the content of the articles may span various levels of analysis. Some literature may link strategy with organizational outcomes at a firm level. Other literature may link particular IS projects with strategic alignment. We do not anticipate research that integrates project and firm level results, but hold open the possibility. Any theoretical model we present will address this issue and discuss associated measurement issues (Klein and Kozloski, 2000).

### **INITIAL ANALYSIS**

We have generated a set of 27 papers in the project management domain, published in the three targeted premier journals in the field. These are included in the Reference List. Initial analysis by one author has revealed (1) that no identified project management journal articles directly address the interaction of IS project management and strategy implementation in a thorough, theory-oriented, and compelling manner and that (2) the accumulated knowledge about project management, IS projects, and strategy execution present tantalizing glimpses and possibilities for extrapolation and theory building.

Our preliminary analysis surfaced two important distinctions or dimensions that need to be specified to understand the contribution of individual studies. These are the level of aggregation of projects and the actions, policies, and plans for varied project stages. We anticipate finding additional dimensions when examining further literature and will consider issues such as long term and short term effects, effects of strategy types and/or quality. For example, a poorly formulated strategy may be more difficult to guide even well run IS projects. Another promising avenue may derive from the directionality of influence: how different strategies affect the design of IS projects versus how variation in the execution of IS projects may enable or constrain strategy implementation at a firm level.

Temporality is another interesting dimension. Targeting variations based on project phase, for example, we can see that the work packages associated with a particular project may vary in their independence. Where they are highly independent, they may be performed in any order. Where they are highly interdependent they must be performed in a particular order. At a detailed work level, a program must be coded before it can be tested, and tested before debugged. However, for most projects at least a moderate level of interdependence creates a fairly regular series of types of work package execution in a particular order. These can be viewed in terms of (1) project planning and initiation, (2) project execution, and (3) project follow up. In terms of executing the organization's strategic plans through project activity, each of these stages holds risks and opportunities.

The first stage involves what Pinto (2015, p. 13) calls conceptualization and planning. We combine the two in considering the first stage as all activities prior to the beginning of execution. The line between conceptualization and planning in practice is a thin one particularly considering how much variation there is in actual implementation of

projects versus normative description of key activities. An important portion of project planning involves project selection: (1) strategies for selection; (2) goal and objective selection of a larger scale than individual projects (e.g. how selection can add up to a set of projects that through synergy provide benefits beyond the sum of the products of each project singly); and (3) consideration of particular projects with go-no-go decisions and where they may be along the continuum of high to zero alignment with strategic aims. Strategy operates relative to project planning in two simultaneous ways. First, it implicitly or explicitly suggests an alignment of the project's goals and activities with those of the larger organization. Second, it suggests internal strategies for approaching the mechanisms by which the project operates to retain efficiency while effectuating its goals.

The second stage addresses project execution. A stream of literature pertaining to global project management suggests that communication about overall global strategy is one of four keys to global project success (Aarseth, Rolstadås, and Andersen, 2014). This study distinguishes between a global strategy and a global project strategy. The former refers to a global business strategy, while the latter refers to the local adjustments needed to enact that overall strategy (such that projects adjust to local culture, preferences, labor, government, regulations, yet still support the overall business strategy). The authors advocate relationship management approaches toward customizing projects, or portions of large global ones, to local environments. Three particular activities are promoted – identifying key local stakeholders (who may have very different attitudes from one location to another), develop global human resource management policies, and define global systems such as decision making, communication and reporting structures as well as information and format standards.

The third stage involves project follow up. This may include change management whereby the organization changes its personnel, structure, and/or processes in order to take advantage of the new capabilities created through the project. This is typically a fluid interplay where the organization changes and the project products may also be adjusted.

Moving forward, we will methodically examine the three literature streams. The second author will review these already identified articles for verification and extraction of additional content; both authors will extend this review to IS and organizational strategy literatures.

## **CONTRIBUTION AND CONCLUSION**

This literature review will examine what has been learned so far about mechanisms designed to implement strategy through IS projects and whether there is evidence that these techniques have been effective. It addresses how such knowledge might be applicable specifically in the realm of projects focused primarily on the development and implementation of information technology. It is clear that (1) a very high percentage of projects, particularly those creating new products and/or services internally or externally to firm involve in part or whole the development or deployment of information technologies; (2) that by their nature much of the process of developing IS is of an intangible nature and functions differently (e.g. stakeholders, risks, schedule, and assessing partial completion of tasks) from projects; and (3) that IS projects present a very rich target where understanding, predictability, and helpfulness can have a significant positive impact on practice. In summary, it is always difficult to be precise on what will be found with a work in process. Initial searching of the literature shows: (1) that indeed this is a topic not explicitly addressed often; (2) that generates new and interesting questions; and (3) that promises new insights through the arranging of and extrapolation among extant materials.

Both IS and strategy are part of the central core of interest for the SIGITPROJMGMT community. This study will illuminate the connection between project management, an organization's strategy, and specifically how IS projects may or may not instantiate them. The topic, therefore, is a formidable complement to the study of systems and how they lead to advancing organizational strategies. By examining mechanisms for executing strategy, findings should be relevant both to academics in terms of providing insights for further testing and/or refinement as well as practice for forming a basis for predicting outcomes and selection of execution process techniques. The study pertains to consideration of a topic not well covered but one that appears on "the shop floor" consistently in practice. We are focused on theory building but also on providing utilitarian understanding of the phenomenon (Galliers, Jarvenpaa, Chan, and Lyytinen, 2012). We believe implications of the study's findings will be relevant broadly to those interested in project management generally, IS management, and in strategy, particularly in terms of its execution. We fully expect that future work will include the potential for (1) empirically testing the propositions we put forth and (2) further exploring parallel or even conflicting alternative approaches to executing strategy through IS projects.

In project management, a growing area of importance pertains to benefits realization: techniques to achieve on time and on budget efficiency (Ashurst et al., 2008). However, in the broader sense it refers to aligning efforts with strategic purpose and realizing the purposes for which the project was selected and gaining benefits from its effectiveness. How strategy is realized through IS projects represents a timely and important area of study. Our contributions are to (1) collect what is known about this phenomenon in current literature; (2) emphasize the mechanisms and processes by which such strategic benefits are realized; and (3) consider specifically the role of IS and both behavioral and technical issues that may impact the effectiveness of particular mechanisms.

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