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A Temporal Model of Mindful Interactions Around New Service Conception

Joe Rubleske
Syracuse University

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ABSTRACT

The organizational ability to innovate is widely acknowledged as crucial to sustained success. For libraries and other service providers, innovation entails the continuous development of new services that propose value to customers. This new service development process can be understood as comprising a "front end," in which new service ideas are conceived and developed, and a "back end," in which selected ideas are implemented. Our understanding of the former – that is, of new service conception in libraries – is particularly underdeveloped.

To build a conceptual foundation for research in this area I used qualitative data collection techniques and constant-comparison analysis within the framework of a comparative, embedded case study. Fourteen new service ideas conceived by three case organizations – two public library systems and one library consortium – served as the units of analysis. The model that emerged from the data – a "Temporal Model of Mindful Interactions Around New Service Conception" – depicts library administrators as active producers of new service concepts. More specifically, the model posits that the innovative library administrator continuously identifies new customer needs and new external solutions through seven types of mindful interactions. At the same time, she tries to match unmet customer needs with potential external solutions in order to produce a *new service concept* that is ready for implementation.

The model extends the concept of individual mindfulness as developed by Weick and Sutcliffe (2006) and Weick and Putnam (2006). In short, it proposes that an individual can concurrently maintain two modes of mindfulness – *cognitive-flow mindfulness* and *content mindfulness* – in order to facilitate knowledge creation in the form of a new service concept.

More specifically, one can be mindful during an interaction of its potential for engendering novel content (cognitive-flow mindfulness) while keeping in mind certain organizationally-influenced content (content mindfulness). The individual who can concurrently maintain both modes of mindfulness is better able to make novel associations between new information and the content about which she is mindful (e.g., the library's mission and major goals, unmet customer needs, potential external solutions).

While the data behind the model suggest that mindfulness can be maintained by administrators in smaller, more resource-challenged libraries, and in libraries with non-consolidated organizational structures, the data also reveal that the new service concepts produced by these administrators were yielded only after an external funding source was obtained. For these libraries, developing and delivering new services without grant monies, or without a mechanism within the service for generating revenue, may not be feasible. This does not mean that the administrators of these libraries should stop trying to innovate, or should stop being mindful of new service possibilities, but rather that (1) they must be mindful, perhaps to a greater degree than their counterparts at better-funded libraries, of an interaction's potential for engendering an external funding source, and (2) they may not be able to devote as much time to identifying new customer needs and potential external solutions. Instead, they may need to devote much of their time to addressing ongoing financial challenges.

A TEMPORAL MODEL OF MINDFUL INTERACTIONS AROUND NEW SERVICE CONCEPTION

by

Joe Rubleske

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M.Pl., Indiana University, 1996

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Syracuse University
School of Information Studies
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1 INTRODUCTION

The growing economic importance of service activities has been well documented for more than 40 years (e.g., Fuchs, 1968; Gershuny and Miles, 1983; Gallouj, 2002; Chesbrough and Spohrer, 2006). One oft-cited indicator is the service sector's expanding share of U.S. gross domestic product, which was recently estimated to be 80 percent (U.S. Bureau of Economic Analysis, 2011).[1] While the activities that comprise this massive sector vary considerably – consider, for example, that restaurants, hoteliers, consulting firms, investment banks, schools, airlines, and hospitals are all service providers according to the North American Industrial Classification System (NAICS) – they are all alike in that each involves the application (by the service provider) of a specialized competency to an economic exchange with a co-producing customer (Mills and Morris, 1986; Gallouj and Weinstein, 1997; Vargo and Lusch, 2004). It is through this exchange that the service provider *proposes* value to the customer, who in turn determines the value of the service by consuming it (or not) (Vargo and Lusch, 2004; Vargo and Lusch, 2008).

A service provider's competitive position thus depends on the value of its service offerings as determined by its customers. Of course, a service that is valued highly today may not be valued highly tomorrow, so service providers must continuously develop new services even when their existing service offerings are proving successful (Berry *et al*., 2006; Möller *et al*., 2008). Accordingly, knowing how to effectively *conceive* new service ideas may help a service provider forge a competitive advantage. Yet we still know little about how new service ideas are conceived. Indeed, the most salient gap across the service innovation, new service development, and innovation management literatures is the lack of detailed knowledge about new service conception.

1 Private-sector and public-sector service providers account for roughly 67 and 13 percent, respectively, of U.S. GDP (U.S. Bureau of Economic Analysis, 2011).

This study aims at beginning to fill this gap by developing foundational theory on new service conception in the context of public library administration. Public libraries are compelling settings for at least two reasons. First, the recent economic downturn has forced legislators to cut public spending, which in turn has intensified local, state, and national dialogues about the comparative value of various public services. In many locales, public libraries have been among the first public services to sustain budget cuts (Hoffman *et al*., 2011). In some cases these cuts are sizable, even where use of library services has increased. In the midst of this debate, and in the face of these budget cuts, can it be said that public libraries are innovating? If so, how? By examining new service conception in the context of public libraries, this study seeks to better understand innovation work in the context of resource scarcity.

A second reason why libraries offer a compelling setting is that they are assumed to innovate only through new technology adoption. More specifically, both of the studies that (to date) have investigated in detail the production of innovations in libraries concluded that the adoption of a new technology is the sole driver of library innovation (Drake and Olsen, 1979; Katsirikou and Sefertzi, 2000). This study sets out to challenge this assumption.

In order to develop foundational theory on new service conception by public library administrators, five major design decisions were made:

- To frame the study as a comparative, embedded case study;
- To select three case organizations – two public library systems and one library consortium – that contrast along four dimensions (form of library, number of employees and administrators, customer/service area characteristics, extent of resources);
- To identify *new service concepts* (as analytic units) and the individuals involved in their conception using the "chain referral" technique;

- To collect data through two *in situ* modes (interviews and direct observation) and through the collection of public and private documents; and
- To use Glaser's (1998) constant-comparison method to analyze data and develop theory.

The model that emerges from the analysis ("A Temporal Model of Mindful Interactions Around New Service Conception," Figure 4, p. 126) depicts library administrators – that is, people who set goals and make strategic decisions on behalf of a library or a large program or division within a library – not as people who facilitate the conception of new services, but rather as people who conceive them directly. More specifically, the model posits that the innovative library administrator continuously identifies new customer needs and new potential external solutions through seven types of mindful interactions. At the same time, she tries to match unmet customer needs with potential external solutions in order to produce a new service concept that is ready for implementation.

The concept of mindfulness is central to the model. Specifically, I draw from work by Weick and Sutcliffe (2006) and Weick and Putnam (2006) to propose that an individual can concurrently maintain two modes of mindfulness – *cognitive-flow mindfulness* and *content mindfulness* – in order to facilitate knowledge creation. In other words, one can be mindful during an interaction of its potential for engendering novel content (cognitive-flow mindfulness) while keeping in mind certain organizationally-influenced content (content mindfulness). The individual who can concurrently maintain both modes of mindfulness is better able to make novel associations between the content about which she is mindful and new information; in turn, this individual is better able to produce new service concepts.

Document Organization

This document is organized into six chapters. Chapter 2 reviews four bodies of literature:

service innovation (Section 2.1.1) and new service development (Section 2.1.2); innovation management (Section 2.2); and library innovation (Section 2.3). Section 2.4 presents a summary of the implications of these reviews for the study. In Chapter 3 I present the study's design and methods. Major sections include an overview of the research design (3.1) and detailed discussions of case selection (3.2), data collection (3.3), and data analysis (3.4).

Chapter 4 lays the groundwork for answering the research question by presenting findings through two major sections. The first section (Section 4.1) presents detailed accounts of each of the three case organizations. Section 4.2 is composed of 14 sub-sections, one for each new service concept that is examined. In each of these sub-sections I describe the new service concept (i.e., what the service provides, how it is provided) and then recount how it was conceived. In the chapter's final section (Section 4.3) I present and analyze timelines showing how each of the 14 new service concepts was conceived over time.

Chapter 5 draws from findings presented in Chapter 4 to introduce the model. Following a brief discussion of the concept of mindfulness in Section 5.1, each of the model's three components is described and illustrated with examples in Section 5.2. Section 5.3 considers the model's implications for the research question. In Chapter 6 I outline the model's limitations (Section 6.1) before briefly discussing the model's implications for research (Section 6.2) and practice (Section 6.3). The chapter concludes in Section 6.4 with a brief discussion of the possibilities for future studies which make use of the model.

2 LITERATURE REVIEW

This dissertation study begins to fill a conspicuous gap in the service innovation and library administration domains, namely, how library administrators conceive new service ideas. This chapter demonstrates the need for this research by reviewing three bodies of literature: service innovation and new service development studies (Section 2.1); innovation management studies (Section 2.2); and library innovation studies (Section 2.3). A fourth section (2.4) summarizes the implications of the literature review for this study and identifies working assumptions which may influence data collection and analysis.

Definitions of "Service" and "Service Innovation"

Before proceeding with these reviews, it may be helpful to define the terms "service" and "service innovation." Drawing mostly from Mills and Morris (1986) and Vargo and Lusch (2004), I define a **service** as the application of a specialized competency by a service provider to a customer need, where every application is unique to some degree and involves the customer as a co-producer.[2] It is through this application that the library *proposes* value to the customer, who in turn determines the value of the library's specialized competency by opting to consume it or not (Vargo and Lusch, 2008).

A **service innovation**, then, can be defined as the introduction to a service market (by a service provider) of a new value proposition, where "value" can entail a solution to a problem (Gago and Rubalcaba, 2007), aid or intervention (Gadrey, 2000) or, more generally, a benefit of some kind (Normann and Ramirez, 1993). Implicit in this definition is the assumption that the

2 The argument that all services are co-produced to some degree has been examined at length (e.g., Fuchs, 1968; Mills and Margulies, 1980; van der Aa and Elfring, 2002; Schultze *et al*., 2007; Blazevic and Lievens, 2008). As Miles (2008) has suggested, though, examples abound of less interactive services (e.g., financial investments that are left alone for years) and goods produced through high levels of interaction (e.g., many customized goods). Accordingly, Miles proposed that "customer intensity" measures should be applied to service and goods exchanges alike.

service provider possesses the ability to deliver the service. Further, a service innovation can be *new to the market* or *new to the firm*. A new-to-the-market service is a service that has not been introduced to a particular market before. For example, Cuyahoga County Public Library (CCPL) claims to be the first local public library to have notified customers of available items via text message. Thus, this service, when it was first launched by CCPL, was (according to CCPL) new to the *library* market. A new-to-the-firm service, on the other hand, is effectively a "me-too" service innovation. For example, every local public library that notified customers of available items via text message *after CCPL had already done so* was offering a new-to-the-firm service.

Distinguishing a new-to-the-market service from a new-to-the-firm service is not always a straightforward exercise, though, because a service provider may be unaware that the new service it is conceiving – a service its developers assume to be the first of its kind – has already been developed and launched by another service provider in the same market. (Indeed, very few if any markets maintain a definitive list of services and the organization that first provided them.) While such a service is, by definition, a new-to-the-firm service, one could argue that, from the perspective of the uninformed service provider, it is a new-to-the-market service in that no blueprint or model was used in its conception. In essence, *the uninformed service provider conceived it as if it were a new-to-the-market service*. While this distinction may be unimportant to the customer, it is important for the purpose of this study because a service provider may conceive new-to-the-market and new-to-the-firm services differently.

2.1 New Service Development and Service Innovation Studies

The growing economic importance of service activities has been well documented for more than 40 years (e.g., Fuchs, 1968; Gershuny and Miles, 1983; Gallouj, 2002; Chesbrough and Spohrer, 2006). Today, providers of private and public services ranging from hospitality and insurance to

air travel, education, telephony, management consulting and health care claim roughly 80 percent of U.S. gross domestic product (U.S. Bureau of Economic Analysis, 2011). Indeed, the accumulating evidence of ongoing service-sector growth relative to growth in manufacturing and agriculture has led to societal acceptance of the claim that we live and work in a "service economy."

Just as our industrial economy depended heavily on material goods innovation (Estrin, 2008), our service economy depends heavily on service innovation (Gadrey *et al*., 1995; Berry *et al*., 2006; Sheehan, 2006) and, consequently, on the conception and development of new services. Yet studies of service innovation and new service development were largely absent until the mid-1980s (Gadrey *et al*., 1995), and the few studies conducted prior to 1990 either assumed that new services were conceived and developed in much the same way as new material goods (e.g., Donnelly *et al*., 1985; Bowers, 1989) or that technology acquisition was the only means by which service providers innovated (Pavitt, 1984; Barras, 1986). As the next two sections demonstrate, the progress made since 1990 has been surprisingly modest: there remains disagreement over whether the service innovation process is driven mostly by new technology adoption, by formal (and top-down) strategic planning, or by ongoing efforts to identify new customer needs; and we still do not know how, exactly, new services are conceived.

2.1.1 Service Innovation Studies

Keith Pavitt (1984) argued 27 years ago that an organization innovates along one of four "trajectories": scale-intensive (e.g., a mass producer that develops technology internally); specialized supply (e.g., a smaller firm that produces industry-specific technologies); science-based (e.g., a high-technology firm that develops scientific technologies internally); and supplier-dominated. All service providers, according to Pavitt, follow the "supplier-dominated trajectory"

because they innovate by adopting the "equipment and materials" of suppliers. Two years later, Barras (1986) extended Pavitt's argument by proposing at a high level how service-innovation-via-technology-adoption is achieved. According to Barras' Reverse Product Cycle (RPC) theory – which drew explicitly from Utterback's (1979) Product Life-Cycle theory – service innovation consists of three sequential stages. In the first stage, a service provider adopts a new technology in order to improve efficiency and lower costs. In the second stage, the service provider begins to exploit its contextual understanding of the new technology to improve the efficiency and/or effectiveness of service provision. This "process innovation" ultimately yields a "product innovation" in the third and final stage, at which point the service provider launches the new service product. At some point thereafter, rivals enter the new market.

Gallouj (1998) presents a brief example of Barras' RPC in which the introduction of a mainframe computer (in the RPC's first stage) helps make the activity of insurance policy record-keeping more efficient. Soon after (in the second stage), workers use the new system to develop an in-house application for generating insurance policy quotations more rapidly. In the third and final stage, workers make use of new knowledge (gained from the process innovation) and a more advanced technical infrastructure to develop a new service product, namely, online quoting.

Barras' RPC has been criticized on two fronts. First, it implies that technology is the sole driver of service innovation despite ample evidence that innovation trajectories often differ across firms using the same technologies (Gallouj, 1998; Uchupalanan, 2000). As Gallouj (1998, p. 136) noted, it does not take into account "the appearance of new functions which are independent of technology." Second, RPC theory assumes that service providers always acquire technologies from external sources, thus ignoring the possibility that some service providers develop new technologies internally or substantially modify existing technologies internally. For

example, many large financial services providers develop their own information systems (Tether *et al*., 2001) and/or "do substantial work on systems design, specification, configuration and integration" (Miles, 2008, p. 125).

Rejecting the idea that service innovation is a technology-driven process, Sundbo (1997) argued that services follow a "service professional" trajectory in which service innovation can be understood as a strategy-driven process. For Sundbo, service innovation occurs through intrapreneurship that is sensitive to and often constrained by strategic plans formulated by managers. (As Toivonen and Tuominen (2006, p. 4) noted, "it is the task of managers to guide [Sundbo's] service innovation process.") While Sundbo acknowledged that technology plays a key role in service innovation, he believed that its role was ultimately subservient to strategy.

Like Sundbo, Toivonen and Tuominen (2006) reject the idea that service innovation is a technology-driven process. For Toivonen and Tuominen, though, service innovation is a process driven by customer feedback, not strategy *per se*. More specifically, they argue that interactions between service provider and customer (which occur through an "interface") yield new service ideas that *may be* conceived without influence from strategic plans. Moreover, these new service ideas – within which knowledge about customers is embedded – ultimately inform strategic planning.

2.1.2 New Service Development Studies

Whereas service innovation studies are concerned primarily with service innovation as an economic driver of service industries, new service development (NSD) studies are concerned primarily with how service providers produce successful new services. To this end, most NSD studies over the past 27 years (starting with Lovelock (1984)) have concluded or presumed that success tends to follow not from an improvised approach to NSD but from the use of a

formalized NSD process that is tied closely to an organization's strategic plans (Froehle and Roth, 2007). This conclusion echoes Sundbo's (1997) argument, though it is worth noting that few if any NSD studies cite Sundbo's work (and Sundbo does not cite any NSD studies).

The development of a normative NSD process model was until recently the domain's most critical task. (In the past ten years or so, NSD researchers have turned their attention toward strategic planning and customer/stakeholder management for NSD.) The earliest efforts in this regard were translations of the popular Booz, Allen, and Hamilton (1982) "gate" model of the new product development (NPD) process (e.g., Donnelly *et al*., 1985, Bowers, 1989; Scheuing and Johnson, 1989). As such, these first-generation models depicted a process in which service providers, acting more or less on their own, work to complete one stage (e.g., idea generation) before moving on to the next stage (e.g., idea screening), and the next one, until the new service is launched commercially. A second generation of process models accepted that NSD proceeds through a set of stages, but proposed an iterative process (e.g., Tax and Stuart, 1997; Johnson *et al*., 1999; Alam, 2006; Opitz, 2008) in which the management of multiple, concurrent stages is necessary or even desirable (Alam and Perry, 2002; Menor *et al*., 2002, Froehle and Roth, 2007). A composite model (Rubleske and Kaarst-Brown, 2009) of these second-generation process models appears in **Figure 1** (below).

In this idealized view of NSD, new service conception follows a strategic planning process that results in the specification of a new service objective, which in turn provides a structure in which new service ideas are generated. Once generated, ideas are screened and refined; for those that make the cut, a new service concept specification is written. This specification describes the value the customer will receive and how s/he will receive it and provides the basic requirements for service system design in NSD's "back end" (Goldstein *et al*.,

2002). Some new service concepts are then approved for implementation while others are rejected.

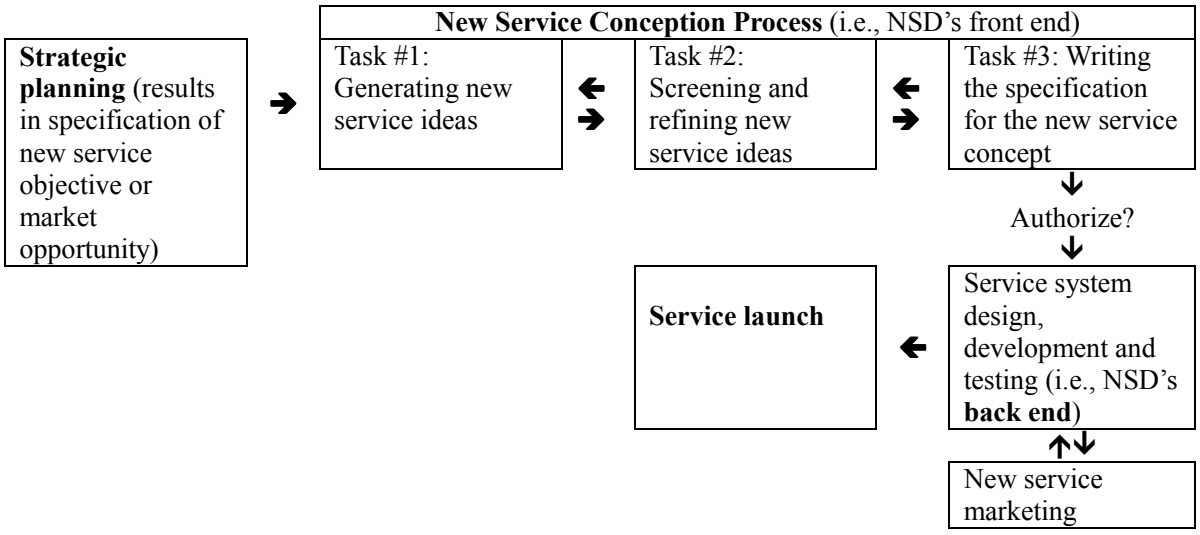

Figure 1: A Composite Model of the New Service Development (NSD) Process (Rubleske and Kaarst-Brown, 2009)

At least four criticisms can be leveled against this model. First, it assumes that customer input is always processed into new service ideas *through strategic planning*. If the service innovation and NSD domains had overlapped, Toivonen and Tuominen (2006) would likely have rejected this assumption (as they did with Sundbo). Second, it assumes that a strategy-driven process is superior to other process types. While this may be true in many cases, there are undoubtedly numerous examples in which a successful new service began when, say, a service provider's employees conceived, with whatever resources available to them, a new service that diverged in some way from the organizational mission. Indeed, such a scenario can be explained by Sarasvathy's (2009, p. 74) Effectuation Theory of Entrepreneurship, and in particular its Bird-in-Hand Principle in which entrepreneurs (or intrapreneurs) "start with means and create new effects."

A third criticism is that the model offers few details on any of NSD's constituent activities. How, exactly, a new service idea is generated or refined, or a new service system is developed, is not clear. Fourth, and finally, the model's developers assume implicitly that the boundaries between activities are clear. Might the boundaries between, say, idea generation and idea refinement be blurred? For example, might some degree of refinement of the *seed* of a new idea be needed to generate the idea? More to the point, *when*, exactly, is a new service conceived? These questions have not been considered by NSD researchers.

2.1.3 Summary of the Service Innovation and New Service Development Literatures

In sum, there remain substantial gaps in our knowledge about how new service ideas are conceived. From the service innovation literature – which is concerned primarily with service innovation as an economic driver of service industries – we are told that new service conception is driven by new technology adoption (Barras, 1986), by formal strategic planning (Sundbo, 1997) *or* by ongoing efforts (which may ignore strategic plans) to identify new customer needs (Toivonen and Tuominen, 2006). The possibility that the conception of new services may be driven by any or all of these three forces, depending on the context, has not been considered, let alone explored. And from the new service development (NSD) literature – which is concerned primarily with how service providers produce successful new services – we have learned that new service ideas should be generated in response to a "new service objective" defined through strategic planning and derived from market analysis and customer feedback. Newly generated ideas are then "screened" and "refined," with the presumed best ideas approved for implementation in NSD's "back end." Little if any thought has been given to the possibility that distinguishing idea generation from idea refinement may be difficult, or to the question, "At what point is a new service conceived?"

Thus, and with respect to the collection and analysis of data for this study, the service innovation and NSD literatures sensitize me not to a concept *per se* but rather to two main questions. First, at what point is a new service conceived, and how clear are the boundaries between the generation and refinement of new service ideas? Second, is new service conception driven mostly by new technology adoption, by formal strategic planning, or by ongoing efforts (which may ignore strategic plans) to identify customer needs? Does context or the type of new service matter?

2.2 Innovation Management Studies

"Innovation management studies" refer here to studies aimed at better understanding how innovation – which is typically framed as the successful implementation of new ideas (for products, services, processes, business models, etc.) – can be facilitated by managers within organizational contexts. These studies appear mostly in journals that serve the management studies and organizational studies fields (e.g., *Academy of Management Review*, *Organization Studies*, *Technovation*). Given the tremendous size of this body of literature (Tang, 1988; Gopalakrishnan and Damanpour, 1997; Tzeng, 2009), this section relies heavily on a small number of seminal studies and review articles to assist in determining whether and how it might be useful to the present study.

Given that the vast bulk of innovation management (IM) studies examine innovation as a dependent variable (Anderson *et al*., 2004) or desirable outcome to be realized through managerial facilitation (Kanter, 2004), there is some value in determining the methods by which managers effectively facilitate innovation. The following list of such methods is not exhaustive, but rather represents an attempt by the author to identify some of the more popular methods. These methods include:

- The direction of employees' attention toward innovative activities and away from routine (van de Ven, 1986; Hargadon and Sutton, 2000);
- The motivation of employees, which is accomplished in large part by offering them a compelling organizational vision and by giving them ample autonomy in the performance of challenging and rewarding tasks (Amabile, 1996);
- The possession of certain traits (e.g., a willingness to take risks) and skills (e.g., an ability to recognize market opportunities and gauge risks) and continuous acquisition of valuable information (e.g., organizational capabilities, market trends) (Montalvo, 2006);
- The development of a culture of innovation (van de Ven, 1986; Frohman, 1998) through tactics such as uncertainty tolerance (Farkas, 2010), the rewarding of idea generation and sharing (Frohman, 1998; Leavy 2005), the encouragement of experimentation (Farkas, 2010) and the involvement of customers as co-innovators (Lu and Guo, 2009); and
- The formation of smaller innovation teams that are given sufficient resources to meet established expectations (Amabile, 1996).

As Montalvo (2006) noted, these "determinant models" remain fragmented despite calls for unification. Anderson *et al*. (2004) criticized the IM domain as a whole, arguing that it had become "routinized." For Anderson *et al*., the domain's progress had stalled as a result of its single-minded focus on the incremental extension of existing theories of innovation's determinants. In response, Anderson *et al*. advocated a handful of new pathways for IM research, including exploratory studies, studies of innovation as an independent variable, cross-culture studies, and studies that use a multi-level framework.

IM studies are problematic in at least three other ways. First, they rarely distinguish between different innovation types. Do the methods that apply to the facilitation of product or

process innovation apply as well to the facilitation of *service* innovation? To date, this question has not been answered. Second, in assuming that managers only "innovate through others" (Kanter, 2004), they imply that managers do not produce innovations directly. While there are, in all likelihood, empirical studies that have examined an instance of direct innovation production by managers, I was not able to identify any studies that have conceptualized this activity. Only in Ettlie and Rosenthal's (2011) rhetorical study of the difference between service and material goods innovation did I find an explicit mention of managers as direct innovation producers:

> "Services are significantly more likely [than material goods] to have a short beta testing process and ***to exploit general manager (internally sourced) ideas for new offerings*** as an alternative to formal innovation structure." (p. 285) (emphasis added)

While recognizing that the primary role of most managers vis-à-vis innovation is to facilitate innovation, I argue that many managers *do*, in fact, produce innovations directly, particularly in the case of services (Ettlie and Rosenthal, 2011). Indeed, various studies of library administrators, which I review in the following section, demonstrate this.

A third way in which IM studies are problematic involves the limited emphasis they place on the role of resources in the innovation process. This is surprising given that a smaller but still sizable knowledge domain has formed around the question of whether "slack resources" – or the "cushion" of actual or potential resources that are available for discretionary use (Bourgeois, 1981) – enable innovation. If the answer is yes, as Cyert and March (1963) argued nearly 50 years ago, then firms with greater slack resources would seem to have an innovation advantage.

The relationship between slack resources and innovation is still a matter of debate, though. Thirty years after Cyert and March (1963) posited that slack resources were essential to

innovation, Nohria and Gulati (1996, p. 1245) argued that "slack fosters greater experimentation but also diminishing discipline over innovative projects." For Nohria and Gulati, the relationship between slack resources and innovation can be visualized as an inverse U-shaped curve: "both too much and too little slack may be detrimental to innovation" (p. 1245).

More recently, researchers have argued that the relationship between innovation and slack resources is more complicated than once assumed. For Katila and Shane (2005, p. 825), the "market environment" plays a key role: resource-strapped firms are often able to innovate, despite a lack of resources, in "more competitive, smaller, and less manufacturing intensive markets." Voss *et al*. (2008) propose that two types of slack resources – "financial slack" and "customer relational slack" – result in more exploration (for innovation) and less exploitation. ("Operational slack" and "human resource slack," on the other hand, result in less exploration and more exploitation.) And Hoegl *et al*. (2008) argue that a "bounded creativity approach" can help an organization innovate in the face of limited or absent slack resources. For Hoegl *et al*. (p. 1382), "a team process that leverages the team's domain-relevant skills, an engaging project objective, strong team cohesion, and team potency" can overcome a lack of resources. In sum, researchers do not agree (or perhaps no longer agree) on the need for slack resources, or some minimum level or amount of slack resources, for innovation activities.

Public library administration researchers are less equivocal on the subject. The argument that local public libraries are less able (or unable) to innovate in the absence of slack resources, or when faced with scarcely enough resources to deliver basic services, has been made with little opposition for nearly 40 years. Childers and Krevitt (1972), upon presenting data which demonstrated a decline from 1958 to 1968 in the public funding of municipal library services, suggested that this trend, if not reversed, could prevent many municipal libraries from adapting

to a rapidly changing and increasingly technological environment. (The public funding of municipal services actually increased after World War II, according to the authors, in part because Americans embraced public libraries in response to their eradication by Nazis in Germany.)

Seven years later, Seymour and Layne's (1979) *For the People: Fighting for Public Libraries* detailed the continuing decline and called for activism aimed at educating legislators on the importance of public libraries to society. Faced with a shrinking budget, library administrators may not be able to address the emerging needs of patrons, Seymour and Layne reasoned. In the same year, Drake and Olsen (1979) applied Cyert and March's theory to libraries, arguing that a library with more resources is more likely to adopt (and be an early adopter of) a new technology. In the past 32 years, however, few if any studies in the library and information science literature have focused on the impact of slack resources (or lack thereof) on innovation.

Summary of the Innovation Management Literature

In sum, the innovation management (IM) domain has focused its efforts almost entirely on the facilitation of organizationally-situated innovation by managers. Accordingly, it has produced numerous models of the determinants of innovation, though no unified model has been widely adopted. Three limitations of IM studies are noted: first, they do not distinguish service innovation from product or process innovation; second, they see managers only as innovation facilitators, thus ignoring the role some play as direct producers of innovation; and third, they place limited emphasis on the potentially crucial role of resources in the innovation process. Despite these limitations, the IM domain has contributed a great deal to the study of organizationally-situated innovation. In particular, it depicts the new service conception process as

considerably more complex than it is depicted in service innovation and new service development studies. For the purposes of the present study, attempts to answer the question of how new services are conceived should consider the roles played by individual, organizational and (where applicable) work-group factors.

2.3 Library Innovation Studies

Libraries are a type of service provider (Bednarz, 2008). Among other services, they lend items (e.g., books, audiobooks, e-books, DVDs, games), provide access to computing resources, offer various training and educational programs, provide reference and reader's advisory services and (in the case of public libraries) serve as a clearinghouse for government documents. There is also no doubt that innovation in library services has historically been common (e.g., Drake and Olsen, 1979; Katsirikou and Sefertzi, 2000; Deiss, 2004).

For this reason, libraries offer a suitable context for the empirical study of new service idea conception. Indeed, I suggest that libraries – and local public libraries in particular – provide a compelling context for this study in two ways. First, while local public libraries are compelled to change (and in turn innovate) regularly in order to meet the unique and evolving needs of the community they serve (Kaarst-Brown *et al*., 2004), many (if not most) now have fewer current-dollar resources than ever with which to do so (Goulding, 2009). Thus, an empirical study of how local public libraries conceive new service ideas may yield findings that help shed light on the still-indeterminate nature of the relationship between innovation and slack resources (see Section 2.2). Second, and as detailed below, libraries are assumed to innovate only through new technology adoption. More specifically, both of the studies that (to date) have investigated in detail the production of innovations in libraries concluded that the adoption of a new technology is the sole driver of library innovation (Drake and Olsen, 1979; Katsirikou and

Sefertzi, 2000). This study challenges this assumption.

A review of the library innovation literature revealed five types of library innovation research, each discussed in turn through its own section:

- Studies of innovation adoption by and in libraries (Section 2.3.1);
- Studies presenting a proof-of-concept for a new technology or managerial practice conceived by a library (Section 2.3.2);
- Studies that identify and promote innovative uses of an existing technology (Section 2.3.3);
- Studies (or articles) in which an expert offers advice on library innovation, where anecdotes offer supporting evidence (Section 2.3.4); and
- Critical and conceptual studies of library innovation (Section 2.3.5).

2.3.1 Studies of Innovation Adoption by and in Libraries

Given the prevailing belief that most service innovations emerge through technology adoption (Barras, 1986; Toivonen and Tuominen, 2009), it is not surprising that the bulk of library innovation studies fall primarily into this category. Indeed, two major studies of innovation at the library level – one conducted in 1979, the other in 2000 – concluded that libraries, like most service providers, innovate mostly through the adoption of a new technology or managerial practice. According to Drake and Olsen (1979):

> "[I]nnovation will be provided to libraries – primarily by specialty suppliers adapting innovative techniques and devices to the particular needs of the library market – rather than pioneered within libraries. There are a few libraries located within large universities which can call upon the skills of engineers, computer scientists and others who will work with the library in developing new processes, techniques or devices." (p. 100)

Twenty-one years later, Katsirikou and Sefertzi (2000, p. 705) drew the same conclusion: "In

most cases innovation either as a product or as a procedure goes into the libraries, it's not the phenomenon produced by them."

Innovation adoption by libraries has been examined at the individual and organizational level. At the individual level, empirical studies have examined innovation adoption by library customers (e.g., digital libraries (Nov and Ye, 2009); "electronic devices" (van Rijnsoever and Donders, 2009)) and by library employees (e.g., "intellectual technologies" (Wildemuth, 1992); encoded archival description (Yakel and Kim, 2005); web 2.0 tools (Kim, 2010)). At the organizational level, case studies of the adoption and/or implementation by a library of a technology are most common (e.g., digital preservation software (Altenhoner and Steinke, 2010); open-source ILS (Rafiq and Ameen, 2009); virtual reference (Hvass and Myer, 2008); RFID (Yu, 2008); voice over Internet protocol (Booth, 2008); virtual worlds (Guder, 2009); "library 2.0" (Gosling *et al*., 2009)). Large-N studies of innovation adoption and/or implementation at the organizational level are also fairly common (e.g., Lietzau, 2009; Dee and Newhouse, 2009; Pungitore, 1995; Musmann, 1982). For example, Rabina and Walczyk (2007) recently argued that the disproportionately high numbers (among surveyed librarians) of "opinion leaders" and "late adopters" – and disproportionately low numbers of "early adopters" – may inhibit the ability of libraries (and the library field) to adopt innovations in a timely fashion.

Finally, Drake and Olsen's (1979) rhetorical study of innovation adoption also focused on the organizational level. Drake and Olsen argued that innovation adoption by libraries is a function of a library's economic environment, which comprises (1) the external environment (including "the population", government funding and technological developments), (2) the institutional setting and (3) internal library operations (i.e., its ability to increase staff productivity and provide valuable services). For Drake and Olsen, a library with more resources

is more likely to adopt (and be an early adopter of) a new technology than is a library with fewer resources.

So what have we learned about library innovation from these innovation adoption studies? First, these studies have shed light on many of the difficulties and best practices associated with implementing new technologies and managerial practices. Indeed, telling an implementation story that other libraries might find useful – and, in doing so, enumerating a particular innovation's pros and cons – is the main reason why most innovation-adoption *case studies* are produced. Accordingly, a library administrator who wants to know what challenges another library faced in implementing a fairly common technology (e.g., a new integrated library system) – and how they addressed these challenges – will probably be able to find a pertinent case study.

Second, these studies suggest (but do not explicitly state) that the extent to which an adoption decision is based on a deliberate, systematic evaluation of needs and possible solutions is in large part a function of (1) the estimated cost of implementing the innovation and/or (2) the potential cost of terminating an implemented innovation. In other words, an information and communication technology (ICT) that is relatively easy to implement (e.g., a blog or a Twitter account) may be adopted with very little deliberation, as in the case of Missouri River Regional Library's (MRRL) adoption of "web 2.0 tools" (Hastings, 2007, p. 36): "We had been watching the Public Library of Charlotte-Mecklenburg County, NC, on its adventures through the wilds of Web 2.0, and we decided to follow the trail it had blazed." ICTs that do *not* push a library down a path from which it cannot change course may also be adopted with relatively less deliberation (see, e.g., Jowitt's (2008) case study of a library's adoption of podcasting). Adopting, say, virtual reference is a bit riskier, though; several employees must be trained and many work-hours must

be committed, and thus decisions to adopt it (as a practice and as a technology) tend to involve greater deliberation (e.g., Dee and Newhouse, 2009; Hvass and Myer, 2008).

The value of this body of literature – that is, of studies of library innovation adoption – is limited by three major shortcomings, though. First, the bulk of these studies are case studies aimed not at developing a conceptual framework or at understanding innovation adoption critically, but rather at drawing from anecdotes to produce best practices. Such studies tend to be valuable only to practitioners implementing the same innovation. Further, while some of these case studies take care to discuss how implementation may differ in other library contexts, very few ever attempt to discuss how findings might apply to other innovations or innovation types.

A second shortcoming of these studies is that they typically devote very little attention – often a single paragraph – to describing the work that informed the adoption decision. As a result, a reader may suspect that the amount of such work is understated in cases where deliberation is mentioned in passing, and that the highly rational process outlined (but not detailed) in some studies reflects not what really happened but rather an idealized process or "reconstructed logic" (Kaplan, 1964/1998) aimed at demonstrating that due diligence was exercised prior to adoption. In a recent survey-based study of health-science librarians, for example, Dee and Newhouse (2009) depicted innovation adoption as an ordered and tidy process comprising a few broad activities:

> "Most interviewed librarians began the planning process for implementing a new digital reference service with an examination of the published literature on vendors that provide digital reference services. Librarians also obtained practical information through attendance at library workshops on electronic services, and learning from experiences of other libraries that have used digital reference software." (p. 19)

A third shortcoming of the literature on library innovation adoption is its preoccupation with technological innovations. In one search, for example – of studies published from 2008 to 2010 and indexed in ProQuest's *Library and Information Science Abstracts* (LISA) database – I identified 13 empirical studies of innovation adoption by libraries. (This search was not aimed at identifying every study of this type.) Of these 13 studies, 11 examined the adoption or diffusion of a technological innovation: open-source software (2); digital preservation software (Kopal); "electronic reference tools"; "social software"; "Intranet 2.0"; "library 2.0 functionalities"; "web site resources"; digital libraries; an "electronic thesis" application; blogs; and "features in an electronic medical records system." Only two studies – both written in the Japanese language for the *Journal of the Japanese Society of Library and Information Science* – examined the diffusion of a managerial practice or customer-facing service not defined in technological terms.

2.3.2 Studies Presenting a Proof-of-Concept Conceived by a Library

A second type of library innovation study presents a proof-of-concept for a new technology or managerial practice conceived by a library as a new-to-the-market service. This is not to say that the new technology or practice is indisputably a new-to-the-market service, *but rather that the library in question conceived it without knowledge of an existing, similar service* (should one exist). Most of these studies are produced by library administrators and library-systems developers who were involved with the proof-of-concept's conception and/or development. Examples include:

- A new mentoring model (i.e., Resource Team Model) for new library faculty at California State University at Long Beach's library (Bosch *et al*., 2010);
- An electronic library (developed by/for a school library) "with context-awareness metadata for supporting learning activities conducted in real-world environments" (Chu *et al*., 2010);

- A concept for an organizational structure designed to promote an "innovative university library" (Jing and Jin, 2009);
- "Innovation Boot Camp" for employees of the University of Guelph Library (Bergart and D'Elia, 2010);
- The concept of "citizen service tasks" in a Danish local public library (Pors, 2010); and
- Holland's renowned DOK public library (or "library concept center") in Delft (van de Geer and Boekesteijn, 2010).

The existence of these studies – and of briefer articles appearing in library trade magazines – demonstrates that the conception of new-to-the-market services by libraries may be more common than is widely assumed. Moreover, they suggest – given that an administrator was integrally involved in each of the six examples – that *library administrators play a key role in service innovation*. However, these studies offer few details on how the idea for the proof-of-concept was generated, focusing instead on describing how the service is (or will be) delivered in order to facilitate its adoption by other libraries.

2.3.3 Studies that Identify and Promote Innovative Uses of Existing Technologies

The third type of library innovation study describes and promotes an innovative use of an existing technology *by a library*. Examples include:

- The use of a new LibGuides application programming interface (by the University of South Florida Library) designed specifically for special collections (Griffin and Lewis, 2011);
- Unique uses of Really Simple Syndication (RSS) feeds (by York University Library) from Science, Technology and Medicine (STM) databases (Nariani, 2010); and
- The creation of a novel LOCKSS (i.e., Lots of Copies Keep Stuff Safe) network by a consortium of university libraries (Reich and Rosenthal, 2009).

These studies are similar in at least two respects to the proof-of-concept studies: first, many other (briefer) examples can be found in library trade magazines; and second, they provide few details on how the idea for the new service was conceived.

2.3.4 Studies (or Articles) in Which an Expert Offers Advice on Library Innovation

The fourth type of library innovation study presents an editorial by an expert on a topic related to library innovation. Evidence for the expert's argument is typically anecdotal; indeed, these editorials may not be "studies" in a strict sense. Cervone's recent series of editorials ("Managing Digital Libraries: The View from 30,000 Feet") in *OCLC Systems & Services* are an exemplar (e.g., Cervone, 2010), as are other "letters from the editor" that address library innovation (e.g., Farkas, 2010). While these articles are no doubt useful to practitioners – and possibly to researchers trying to articulate a problem faced by practitioners – the omission of a methodology through which conclusions were reached limits their usefulness to this study.

2.3.5 Critical and Conceptual Studies of Library Innovation

The fifth and final type of library innovation study engages with the idea of library innovation critically and/or introduces a new concept related to library innovation. Five such studies were identified.

- Olaisen *et al*. (1995) examined an award-winning Norwegian library and suggested that library innovativeness can be measured along three key dimensions: propensity for change; active engagement in interorganizational networking; and routine production of project documentation.
- Like Sundbo (Section 2.1.1), Deiss (2004, p. 17), believes that a library's efforts to innovate should proceed from strategic plans: "[I]t is unlikely that effective innovation can occur without the use of strategy." Deiss also argues that Light's (1998) four innovation principles

– which Light developed from studies of various non-profit and government organizations (other than libraries) – apply to libraries as well. These internal strategies for innovating include (1) committing to "environmental control", (2) affording workers "the freedom to imagine", (3) "preparing the organization for innovation through leadership", and (4) framing management information systems as a servant of the organization's mission "rather than the other way around" (p. 20).

- For Bednarz (2008, p. 80), the modification of routines signals library innovation: "[R]outine in libraries is this special kind of social structure that translates an irregularity of possible information (communication) into a regularity of response (action)." In other words, a pattern of "irregular responses," brought about by some disruption, signals an emerging service innovation. Bednarz does not say how patterns of irregular responses come about, though, and as a result we are left to wonder whether librarians play active or passive roles in the conception of new services.
- Lu and Guo (2009, p. 258) drew from case study findings to suggest that academic libraries could support innovation communities based on "user participation, joint construction and interaction and communication." These innovation communities are thus more aligned with Toivonen and Tuominen's (2006) argument (i.e., that service innovation is driven by customer feedback) than with Sundbo's.
- Scupola and Nicolajsen (2010) conducted a case study of a Danish academic library to help them answer the question, "How are academic libraries involving customers in the innovation and development of traditional and electronic services?" Scupola and Nicolajsen conclude that active participation by customers in the library innovation process will yield better outcomes.

2.3.6 Summary of the Library Innovation Literature

In sum, three major findings were gleaned from a review of the library innovation literature. First, the bulk of library innovation studies are atheoretical case studies of the adoption and implementation of a techno-logical innovation. They are useful mostly to practitioners who want to learn more about the challenges and best practices associated with a particular innovation. Second, the existence of proof-of-concept studies that report on an innovation conceived by a library suggests that (1) libraries conceive new-to-the-market services and (2) library administrators play a key role as direct producers of new services and not just as facilitators (e.g., Bergart and D'Elia, 2010; van de Geer and Boekesteijn, 2010).

Third, very few library innovation studies explore the idea of library innovation critically or conceptually. Among those that do, four studies reach conclusions about the forces that drive or facilitate library innovation:

- Deiss (2004) argues (as Sundbo did) that innovation's "front end" is driven mostly by strategic planning;
- Lu and Guo (2009) and Scupola and Nicolajsen (2010) argue (as Toivonen and Tuominen did) that innovation is driven by customer input;
- Olaisen *et al*. (2004) suggest that LI is promoted in libraries that have a "propensity for change" and engage actively in interorganizational networking.

As with the service innovation and new service development literatures, the most salient gap in the library innovation literature is the lack of knowledge about how, exactly, new services are conceived. I suspect that one of the two main reasons why this gap has yet to be filled has to do with an assumption, made by the authors and editors of the many single case studies of library innovation adoption, that would-be adopters of the innovation in question are mostly (or even

strictly) interested in a description of the innovation itself and in how it should be implemented and/or delivered. If so, it is an unfortunate assumption to make because would-be adopters are better prepared when they also know why and how the author's library conceived or adopted the innovation. The second reason why this gap has yet to be filled has to do with the general lack of methodological rigor in many library and information science studies. Omitting a discussion of why and how the author's library conceived the idea for a library innovation *in a case study about the development and use of the innovation* reveals an implied lack of understanding about the case study method and a lack of interest in the use or development of theory.

2.4 Implications of the Literature for This Study

Each of the four bodies of literature reviewed in this chapter has yielded valuable knowledge about how services are innovated. Service innovation studies (Section 2.1) suggest that new technology adoption, formal strategic plans, and customer needs are the primary drivers of service innovation. Unfortunately, these studies have been more concerned with identifying a single primary driver than with considering whether (1) these forces are co-drivers of service innovation or (2) the primary driver is a function of contextual factors (e.g., industry- or organizational-level factors). New service development (NSD) studies (Section 2.1) have provided a model of NSD in which ideas for new services, once generated, are screened and refined; for those that are determined to be the best, a new service concept specification is written. This specification describes the value the customer will receive and how s/he will receive it and provides the basic requirements for service system design in NSD's "back end" (Goldstein *et al*., 2002). This model does not tell us, however, *how* and *at what point* a new service is conceived.

The innovation management (IM) literature (Section 2.2) does not focus on *service* innovation *per se*, but contributes nevertheless by directing attention to the attributes of individuals, organizations, and (where applicable) work groups as potentially crucial innovation determinants. Two limitations of IM studies were noted, though: first, that managers are depicted only as innovation facilitators, when they may in fact be direct producers of innovation as well, particularly in service industries; and second, that slack resources in an organization may serve a more crucial role than these studies assume. Finally, the library innovation literature (Section 2.3) contributes to the present topic in two key respects. First, it provides evidence – through several proof-of-concept studies – that managers *do* produce innovations directly. Second, it suggests that new service conception by libraries is driven largely by strategic plans (Deiss, 2004), customer input (Lu and Guo, 2009; Scupola and Nicolajsen, 2010), and the degree to which a library networks with other organizations (Olaisen *et al*., 1995). The most conspicuous limitation of the library innovation literature, at least for the purpose of this paper, is that it tells us very little about now new library services are conceived.

Given the findings from this review, the study presented in the following chapters aims at developing foundational theory on one of the most salient gaps in the service innovation, NSD, IM and library innovation literatures, namely, how new services are conceived. More specifically, and given the lack of knowledge about the role played by (or administrators) in new service conception, this study aims at answering the research question, ***How, and at what point, are new services conceived by library administrators?***

3 METHODOLOGY

Background on the Evolution of the Research Question

My proposal for this dissertation study, defended on 29 April 2009, was based on a more narrow research question, namely, how library administrators use information and communication technologies (ICTs) to conceive new service ideas. At the time, committee members suggested that I consider a broader line of inquiry. Indeed, after only a few interviews it became clear that the question of the role of ICTs in new service conception could not be answered until the new service conception process itself was better understood. What follows is my attempt to articulate my thought process in reaching this conclusion.

Sensitized by a typology of ICT functions in new *product* conception (Gordon *et al*., 2008) – per my dissertation proposal – I asked a participant how a certain new service idea had "come about." She responded by telling a brief story in which she determined, upon seeing a workshop presentation on the digitization of photographs and other documents of historical interest, that her organization should develop and launch a digitization service. Immediately after the presentation she approached two other individuals "in the hallway" – one a subordinate, the other a representative of a partner organization – and requested their opinion on the matter. After agreeing that such a service could propose value to customers, the three of them discussed briefly how they would proceed, namely, by summarizing the idea and presenting it to members of two committees.

Based on this respondent's story, I determined that at least five ICTs were involved in the conception of this particular new service:

- Presentation software (e.g., Microsoft PowerPoint) and associated projection devices;
- E-mail (including listservs);

- Word processing software (e.g., Microsoft Word);
- Web browsing software (to view existing digitization services); and
- OCLC's CONTENTdm platform.

The latter ICT (i.e., CONTENTdm) was designed by OCLC (i.e., Online Computer Library Center) to enable the storage and retrieval of large multimedia collections. It was not used in a conventional sense during the conception process, but its existence – and the existence of other platforms like it – led the interview respondent to conclude that a digitization service (of the kind presented to her at the workshop) was technologically viable. Without it, the respondent may have simply concluded that a digitization service could be reconsidered if and when an "off-the-shelf" platform became available.

Each of the stories told during my first few interviews was similar to this one with respect to the ICTs used in the conception of a new service. More specifically, individuals involved in a new service's conception communicated mostly through e-mail, made use of Microsoft Word (or a similar application) to prepare occasional summaries (for use in meetings or monthly reports, e.g.), used web browsers for information gathering and, in cases where a new service's delivery depended on the adoption of an ICT, identified the ICT (e.g., CONTENTdm, employee orientation software) that the organization would need to adopt.

Accordingly, I asked myself, "If the bulk of future interviews yields similar stories, is this line of inquiry worth pursuing? Is there any value in determining that library administrators use e-mail, Microsoft Word and web browsers – and very few, if any, other ICTs – to conceive new service ideas?" I concluded that there *might* be value in determining that library administrators do *not* use (per Gordon *et al.*'s (2008) typology) ICTs designed to support data mining, data visualization or brainstorming. But *should* they use such ICTs? Perhaps they should use them,

but only if they engage in these activities. And whether or not they should engage in these activities is a question that would be difficult to answer without first knowing how library administrators approach the general problem of new service conception.

At that point I realized that my initial research question had been too specific. Why inquire into the role of ICTs in new service conception when we know very little about new service conception generally? As a result, prior to my first trip to Cuyahoga County, Ohio (on 8-9 June 2009) I revised my research question – to ***"How do library administrators conceive new services?"*** – and prepared accordingly for data collection at Cuyahoga County Public Library (CCPL).

3.1 Overview of Research Design

To investigate and develop theory on how library administrators conceive new services, I used qualitative data collection techniques (mostly interviewing and direct observation) and constant-comparison analysis (Glaser, 1998) within the framework of a comparative, embedded case study (Yin, 2003). Fourteen ***new service concepts*** – that is, ideas for new services that have been approved for implementation – served as the units of analysis. **Table 1** summarizes the research design by identifying five major design decisions and presenting the rationale for each decision.

In an *Academy of Management Review* article on methodological fit in management research, Edmondson and McManus (2007) argued that a study's design depends on the state of existing theory on its topic, where existing theory can be "mature", "intermediate" or "nascent." Whereas an intermediate-theory topic is understood through proposed constructs with tentative relationships, a nascent-theory topic has "attracted little research or formal theorizing" and often aims at "understanding how a process unfolds" (p. 1161). As demonstrated in Chapter 2, existing theory on new service conception is more nascent than intermediate.

Table 1: Major Research Design Decisions

Major Design Decision	Rationale for Decision
Frame study as a comparative, embedded case study	* The research question calls for the study of a *bounded unit* (the new service concept) within its *context* (the library and its environment) (Eisenhardt, 1989; Lee, 1989; Creswell, 2006; Yin, 2003; Flyvbjerg, 2006) * The literature on how to develop theory inductively using the case-study method is ample (e.g., Darke *et al*., 1998; Eisenhardt and Graebner, 2007; Small, 2009) * The case-study method allows for "moderatum" generalizations (Williams, 2000) and replication (Lee, 1989)
Select three cases that contrast along four dimensions: form of library; number of employees and administrators; service area; and extent of resources	* Multiple cases offer more empirical support for emerging theory (Darke *et al*., 1998; Small, 2009) * Contrasting (or "maximum variation") cases can reveal the variety of experiences associated with the phenomenon of interest and, in turn, make an emerging theory more robust (Flyvbjerg, 2006; Eisenhardt and Graebner, 2007)
Identify new service concepts and the individuals who produced them using the "chain referral" technique, starting with each case organization's Executive Director	The chain referral (or "snowball") technique can be an effective means of identifying (within a social group) individuals who possess knowledge on a certain subject or who are (or were) involved in a certain activity, event, process, etc. (Biernacki and Waldorf, 1981)
Collect data through two *in situ* modes (semi-structured interviews and direct observation at meetings) and through the collection of public and private documents	* The case-study method requires multiple sources and forms of evidence (Darke *et al*., 1998; Eisenhardt and Graebner, 2007) * Interviewing and observing participants in person and at their place of work typically yields richer data in interpretive studies (Klein and Myers, 1999; Walsham, 2006) * Through interviews, researchers can better understand processes, events and activities from a participant's perspective (Weiss, 1995) * Direct observation may reveal attitudes, beliefs and behaviors that are not stated or observed in interviews (Hops *et al*., 1995)
Use Glaser's (1998) constant-comparison method to analyze data and develop theory	* Glaser's constant-comparison method has been used in numerous inductive theory-building studies (Wasserman *et al*., 2009)

For Edmondson and McManus (p. 1160), a nascent-theory study should result in new constructs and a "suggestive theory, often an invitation for further work on the issue." To build this theory, the researcher in a nascent-theory study should (p. 1160):

- Collect "qualitative, initially open-ended data that need to be interpreted for meaning";
- Collect data through interviews and observations (and through the acquisition of documents);
- Analyze data through "thematic content coding for evidence of constructs"; and
- Set as a goal of data analysis the identification of patterns.

As Table 1 illustrates, and as detailed in Sections 3.3 and 3.4, respectively, data collection and data analysis techniques for this study conform to Edmondson and McManus' guidelines for a nascent-theory topic. Moreover, data analysis (using Glaser's constant-comparison method) yields the "suggestive theory" presented in Chapter 4. The study itself is framed as a comparative case study in which an embedded, bounded unit (a new service concept) is examined in detail within its larger context (a library and its environment) in order to facilitate comparison. Edmondson and McManus' notion of a study based on a "nascent-theory" topic is, in essence, a theory-development study, and numerous researchers have demonstrated how the case-study method is well suited as a framework for developing theory (e.g. Eisenhardt, 1989; Yin, 2003; Flyvbjerg, 2006; Eisenhardt and Graebner, 2007).

The remainder of this chapter is organized into three main sections. Section 3.2 presents in brief each case organization and provides the rationale for its selection. In Section 3.3 (Data Collection) I document how and when each case organization was accessed and exited and how trust was gained (3.3.1), describe how new service concepts and participants were selected (3.3.2) and provide details on the three major modes of data collection (3.3.3). And in section 3.4 (Data Analysis) I briefly review the constant-comparison method, describe how data were prepared for analysis and present my techniques for creating and developing categories and generating theory from categories.

3.2 Case Selection

The purpose of this section is twofold: first, to provide a broad overview of each case organization; and second, to provide the rationale for each case organization's selection. **Table 2** presents a summary of the three cases along four dimensions: form of library; number of employees and administrators (in 2009); customer characteristics; and primary funding source(s).

Table 2 Summary of the Three Case Organizations

Name of Library	Form of Library	Number of Employees and Administrators in 2009	Customer Characteristics	Primary Funding Source(s) and Relative Extent of Resources
Cuyahoga County Public Library (CCPL) ***Administered in Parma, OH***	CCPL is a ***consolidated*** local public library system with 28 branches	819 total employees, of which ~75 are managers and 10 are Executive Team* members	In 2009 CCPL served 528,000 active cardholders residing in 47 urban and suburban municipalities located outside the city of Cleveland and within Cuyahoga County	State (via Public Library Fund) and local funds ***Relatively plentiful resources despite recent funding cuts***
Central New York Library Resource Council (CLRC) ***Administered in Syracuse, NY***	CLRC is the administering unit of a ***consortium*** of 50 libraries	Six employees, including five administrators and one "office support" worker	CLRC is one of nine Reference and Research Library Resource Councils ("3Rs") in the state of NY; it serves 49 libraries located in Herkimer, Madison, Oneida and Onondaga counties	State funds administered by NYSL**; project funds may come from other public and private sources ***Relatively few resources***
Mid-York Library System (MYLS) ***Administered in Utica, NY***	MYLS is the administering unit of a ***cooperative*** of 43 local public libraries	Approximately 30 employees, including four administrators	Most of MYLS' 43 member libraries in Herkimer, Madison and Oneida counties are located in small towns or semi-rural areas	State funds administered by NYSL; member libraries are funded locally ***Relatively few resources***

* In 2009, 672 of CCPL's 819 employees worked at a branch library, while 147 employees (including the nine top-level administrators) worked at the administration building in Parma, Ohio. Branch managers are included in the estimate (~75) of total managers.
** The New York State Library's (NYSL) Division of Library Development is responsible for the distribution of state funds to local, regional and state libraries.

Cuyahoga County Public Library (CCPL) was the first case selected. As indicated below, CCPL was chosen because it is an innovation exemplar among local public libraries. The second and third cases – the Central New York Library Resources Council (CLRC) and the Mid-York Library System (MYLS) – were selected because each offered a contrast to CCPL along key dimensions and each agreed to participate in the study. Case selection thus followed a "maximum variation" logic (Flyvbjerg, 2006, p. 230) in which the case-study researcher tries to "obtain information about the significance of a variety of circumstances." In theory-development studies, the examination of contrasting cases can yield an explanation (theory) that

may be applicable to a wider range of contexts (Yin, 2003; Eisenhardt and Graebner, 2007). In the following three sections I describe in brief each case organization and provide my rationale for selecting it.

3.2.1 Case #1: Cuyahoga County Public Library (CCPL)

Through its 28 branches, Cuyahoga County Public Library (CCPL) serves a socio-economically diverse population residing in 47 cities, villages and townships located beyond the service of the Cleveland (Ohio) Public Library. In 2009 – the year in which almost all of the data were collected – CCPL loaned over 19 million items to many of its 528,000 active registered cardholders. Circulation has increased more than 50 percent since 2003.

CCPL is a consolidated local public library system, meaning that its nine top-level administrators (or "Executive Team") can exercise authority over all 28 of its branch libraries. A six-person Board of Trustees appoints the Executive Director (who in turn appoints the remaining eight administrators) and works with her to develop strategic and financial plans. In 2009 CCPL employed nearly 819 employees, including 537 "bargaining unit" (BU) and 282 "non-bargaining unit" (NBU) employees. (The latter includes three groups: "confidential employees" (i.e., finance and HR); employees who work less than 16 hours per week; and "managers," who comprise approximately 25 percent of NBU employees.) Of CCPL's 819 total employees in 2009, 672 worked in a branch library and 147 worked in the administration building in Parma, Ohio.

Like all local public libraries in Ohio, CCPL receives a portion of state income tax as well as local property tax revenues. In 2009, 30 percent of its $76 million in receipts came from the state of Ohio's Public Library Fund, while 62 percent of its receipts came from local property taxes. As Fialkoff (2007) put it, "It's difficult not to be awestruck by Ohio's libraries," where

there is “an ethos of public support, noticeable in Cuyahoga County, that contrasts sharply with the antitax sentiment out west.” Indeed, Ohio boasted 39 of the top 100 libraries in the 2010 HAPLR rankings. While Ohio local public libraries (CCPL included) saw their budgets frozen from 2003 to 2009 and cut for 2010, they still appear to possess more capital and human resources than most other U.S. local public libraries.

Rationale for Case's Selection

Simply put, the Cuyahoga County Public Library (CCPL) was selected as the first case because it is widely considered to be one of the most innovative local public library systems in the U.S. It is perennially ranked in the top three of large U.S. local public libraries by Hennen's American Public Library Ratings (HAPLR) – and ranked first in 2009 and 2010 – and boasts a well publicized record of innovation. For example, it was the first local public library in the U.S. to participate in the academic resource-sharing cooperative known as OhioLINK and to offer notifications to patrons via text messaging. It was one of three founding members of the popular virtual reference service KnowItNow 24x7 and was among the first public libraries nationwide to provide licensed career counseling (Jaffe, 2003), ‘kindergarten kits’, homework centers (Rua, 2008), a permanent collection in a retirement community and, more recently, passport services (Kleinerman, 2010). Its innovativeness in staff training (Evans, 2004) and genealogy services (“Genuine genealogist,” 2006) has also been documented, and it was among the earliest adopters (among local public libraries) of wireless internet access in all branches, of self-service checkout and of the acceptance of credit and debit cards for late fees and other payments (Schnall, 2006).

Just as importantly, CCPL's Executive Director (ED) agreed to let me interview CCPL administrators and managers and attend certain meetings. Securing this agreement may have been aided by her close ties to Syracuse University's School of Information Studies (iSchool), as

she regularly serves as an Adjunct Professor at the iSchool and is a long-time friend of the iSchool's current Dean.

3.2.2 Case #2: Central New York Library Resources Council (CLRC)

The Central New York Library Resources Council (CLRC) is one of nine Reference and Research Library Resources ("3Rs") Councils in the state of New York. According to the New York 3R Association web site (www.ny3rs.org), the mission of a 3R council is "to ensure and support interlibrary sharing of resources – print and electronic – among all kinds of libraries and to ensure equal access to information for all New Yorkers." CLRC's administrative unit pursues this mission by providing services to 50 member libraries. These services include the administration of the region's interlibrary loan process, the management of shared-item delivery, the maintenance of shared bibliographic resources, the subsidization of medical information, and the advocacy of library interests to state legislators.

Like New York's other 3R councils, most CLRC services are funded with state monies allocated by the New York State Library's (NYSL) Division of Library Development. The CLRC was launched in 1967 and charged with serving libraries and library systems in four Central New York counties: Herkimer; Madison; Oneida; and Onondaga. Representatives from its 50 member libraries – including academic, public, hospital, military and corporate libraries – elect 15 trustees to CLRC's Board. During the data collection period, the CLRC was administered in Syracuse, NY by a six-member staff including an Executive Director, a Member Services Coordinator, a Sharing and Outreach Coordinator, a Medical Circuit Librarian, a Regional Archivist and an Office Coordinator. The Regional Archivist left CLRC in October 2009, leaving it with four administrators. The CLRC lacked the funding to fill the vacated position.

Rationale for Case's Selection

CLRC was selected as the second case primarily because it offered a sharp contrast to CCPL along three key dimensions: form of library (consortium); resources (far fewer); and number of employees (five administrators and one Office Coordinator). Whereas CCPL's nine top-level administrators routinely interact with the other 138 workers in CCPL's administrative building, and occasionally interact with branch-level workers, CLRC's administrators interact, with few exceptions, only with the administrators of member libraries via committees. CLRC also was selected because it agreed to participate in this study and because its staff members were open to sharing their experiences.

3.2.3 Case #3: Mid-York Library System (MYLS)

By "Mid-York Library System" (MYLS) I refer specifically to the 30-person administrative unit which serves a cooperative of 43 local public libraries in Herkimer, Oneida and Madison counties. In a cooperative public library system, proposed policies and programs are typically approved or rejected through a process in which representatives of member libraries vote. Unlike in consolidated public library systems, then, the Director of a cooperative public library system typically wields limited administrative authority.

Of the 43 localities that contain an MYLS member library, 16 are hamlets or villages with less than 1,000 residents, 17 are villages or small towns with between 1,000 and 5,000 residents, and seven are towns or very small cities with between 5,000 and 11,000 residents. Indeed, MYLS' service area includes only three cities with 20,000 or more residents: New Hartford (21,172 in 2000), Rome (32,850) and Utica (62,235). Much of MYLS' service area can be described as rural or semi-rural.

MYLS' mission is to "improve and expand library services" in these areas. According to its (now former) Director, three major types of benefits accrue to MYLS members: economies-of-scale purchasing of library items and information technology (IT); resource sharing (including interlibrary loan); and IT automation (e.g., centralized cataloging, e-mail accounts). Services provided by MYLS include the acquisition, cataloging and processing of system-wide library items, the maintenance of the shared electronic catalog, continuing education (including "trustee training") and the delivery of library items. At the outset of data collection, MYLS' workforce included 31 employees, four of whom were administrators: a Director; an IT Administrator; a Chief Financial Officer (CFO); and an Assistant Director. Three "specialists" reported to the IT Administrator, one specialist reported to the CFO, and four managers – each responsible for a small department (e.g., Reference and Electronic Services) – reported to the Assistant Director. The IT Administrator, CFO and Assistant Director each reported to the Director.

Rationale for Case's Selection

CLRC's Executive Director suggested in May 2009 that MYLS' administrative unit would, for at least three reasons, make a useful third case site. (MYLS is a member of CLRC.) First, it would provide a contrast to the CCPL and/or CLRC in a few key ways:

- It is organized as a cooperative (and not, like CCPL, as a consolidated unit);
- It serves mostly small-town and rural communities; and
- It lacks to a significant degree the fiscal resources that CCPL possesses.

Second, its engagement in 2009 and 2010 with planned organizational change (see above) and with a revised five-year strategic plan could provide an uncommon opportunity to see how new service conception may be affected. Third, CLRC's Executive Director suspected that MYLS' Director would be willing to participate in the study. As noted in the proceeding section,

MYLS' Director agreed to participate in the study, at least initially.

3.2.4 Case Selection Summary

The three case organizations were chosen deliberately and systematically. As a well-documented innovator of library services, Cuyahoga County Public Library (CCPL) was the first case organization selected. The second and third selections – the Central New York Library Resources Council (CLRC) and the Mid-York Library System (MYLS) – offered contrasts to CCPL in terms of organizational form (consortium and cooperative, respectively), organizational size (much smaller in both cases), and resources (fewer in both cases). As noted by Yin (2003), Eisenhardt and Graebner (2007) and others, the selection of contrasting cases can yield an explanation (theory) that may be applicable to a wider range of contexts.

3.3 Data Collection

The collection of data from three case organizations aimed at answering the research question, "How do library administrators conceive new services?" To this end, data collection was designed to obtain:

1. Basic, descriptive information about the case organization and study participants;
2. Information about the history and context within which each case organization and its employees function; and
3. Information directly related to the research question.

As **Figure 2** illustrates, data collection at Cuyahoga County Public Library (CCPL) and Central New York Library Resources Council (CLRC) began in June 2009 and ended in February 2010. Data collection at Mid-York Library System (MYLS) began in July 2009 and ended four months later, in November 2009. Data-analysis activities (described in Section 3.4) began in May 2010 and concluded in October 2010.

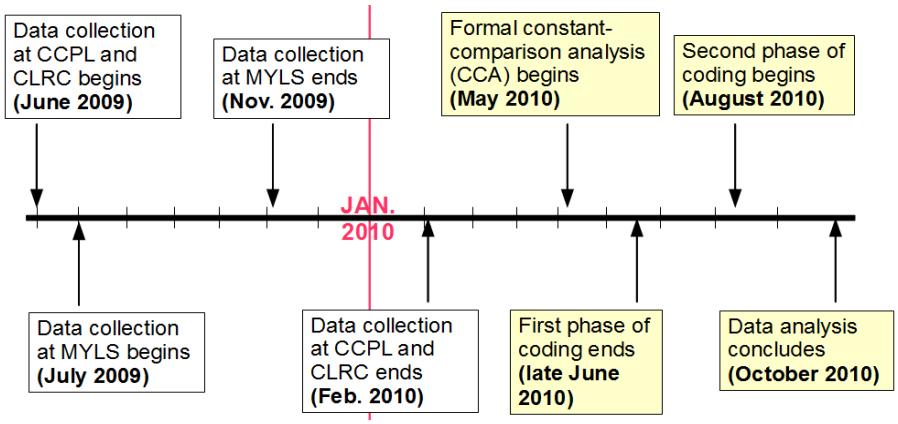

Figure 2: Data Collection and Analysis Timeline

Data were collected using qualitative techniques – mostly *in situ* interviews and direct observation – that have proven effective at helping researchers understand work processes and make sense of participants' perspectives surrounding a socially complex phenomenon (Dubé and Paré, 2003; Gephart, 2004). Studies (such as this one) that ask a *why* or *how* question typically employ qualitative methods (Myers, 2009), as do case studies (such as this one) aimed at producing new theory (Eisenhardt and Graebner, 2007).

More specifically, data were collected from or through the 49 major sources listed chronologically in **Table 3**. Of these 49 sources, 28 are from CCPL, 14 are from CLRC and seven (7) are from MYLS. For the purpose of this study, a "data collection source" can be (1) a formal or informal interview with one or more participants, (2) a meeting at which I took notes, (3) a salient e-mail received from a participant or (4) a public or private document produced by the participating organization. Formal, semi-structured interviews were the primary mode by which data were collected, as they comprise 26 of these 49 sources. The remaining 23 sources include 10 meetings, 10 public or private documents and three (3) informal interviews.

Table 3: Summary of the 49 Data Collection Sources

Source No.	Source Date	Participant(s)	Mode of Collection	Location	Source Identifier*
1	04/17/09	Executive Director (CCPL)	Informal interview	Telephone	CCPL-1
2	05/19/09	Executive Director, Resource Sharing and Outreach Coordinator and Regional Archivist (CLRC)	Interview	CLRC	CLRC-1
3	05/28/09	Director (MYLS)	Interview	MYLS	MYLS-1
4	06/04/09	Executive Director, Resource Sharing and Outreach Coordinator and Member Services Coordinator (CLRC)	Interview	CLRC	CLRC-2
5	06/04/09	Director (MYLS)	Informal interview	Telephone	MYLS-2
6	06/08/09	Director of IT (CCPL)	Interview	CCPL HQ	CCPL-2
7	06/08/09	Youth Services Director (CCPL)	Interview	CCPL HQ	CCPL-3
8	06/08/09	Branch Manager (CCPL)	Interview	Garfield Heights BL**	CCPL-4
9	06/08/09	Career Center Manager, Maple Heights branch library (CCPL)	Interview	Maple Heights BL	CCPL-5
10	06/08/09	Executive Director (CCPL)	Interview	CCPL HQ	CCPL-6
11	06/09/09	CCPL Executive Team	Interview	CCPL HQ	CCPL-7
12	06/09/09	Internet and Media Services Manager (CCPL)	Interview	CCPL HQ	CCPL-8
13	06/09/09	Branch Services Co-Directors (CCPL)	Interview	CCPL HQ	CCPL-9
14	06/09/09	CCPL Branch Managers (for monthly meeting)	Direct observation	Chagrin Falls BL	CCPL-10
15	06/19/09	Automation Consultant (MYLS)	Interview	MYLS	MYLS-3
16	06/19/09	Director (MYLS)	Interview	MYLS	MYLS-4
17	07/07/09	CLRC staff (for monthly meeting)	Direct observation	CLRC	CLRC-3
18	07/07/09	E-mail from Deputy Director (CCPL)	Private document	n/a	CCPL-11
19	07/16/09	Member Services Coordinator (CLRC)	Interview	CLRC	CLRC-4
20	07/28/09	E-mail from Executive Director (CCPL)	Private document	n/a	CCPL-12
21	08/13/09	“Direct Access” project team (for meeting) (CLRC)	Direct observation	CLRC	CLRC-5
22	08/13/09	Executive Director (CLRC)	Interview	CLRC	CLRC-6

Table 3: Summary of the 49 Data Collection Sources, continued

Source No.	Source Date	Participant(s)	Mode of Collection	Location	Source Identifier*
23	08/26/09	BSK Live Sales Manager and Branch Services Director (CCPL)	Interview	CCPL HQ	CCPL-13
24	08/26/09	Internet and Media Services Manager (CCPL)	Informal interview	CCPL HQ	CCPL-14
25	08/26/09	Deputy Director (CCPL)	Interview	CCPL HQ	CCPL-15
26	08/27/09	Project meeting with University Hospitals representative, OverDrive CEO, OverDrive General Counsel and CCPL Deputy Director	Direct observation	OverDrive, Cleveland OH	CCPL-16
27	08/27/09	Executive Director (CCPL)	Interview	ED's personal residence	CCPL-17
28	09/08/09	CLRC staff (for monthly meeting)	Direct observation	CLRC	CLRC-7
29	09/16/09	Director (MYLS)	Interview	MYLS	MYLS-5
30	11/02/09	Executive Director (CCPL)	Interview	ED's personal residence	CCPL-18
31	11/03/09	CCPL Executive Team (for monthly meeting)	Direct observation	CCPL HQ	CCPL-19
32	11/03/09	Director of Development (CCPL)	Interview	CCPL HQ	CCPL-20
33	11/03/09	Internet and Media Services Manager (CCPL)	Interview	CCPL HQ	CCPL-21
34	11/03/09	Branch Services Director (CCPL)	Interview	CCPL HQ	CCPL-22
35	11/03/09	Deputy Director (CCPL)	Interview	CCPL HQ	CCPL-23
36	12/07/09	CLRC staff (for monthly meeting)	Direct observation	CLRC	CLRC-8
37	01/05/10	CLRC staff (for monthly meeting)	Direct observation	CLRC	CLRC-9
38	01/07/10	Attendees of a CNY Heritage information session (CLRC)	Direct observation	MYLS	CLRC-10
39	01/21/10	*MYLS Reporter* newsletter, Vol. 7, Number 1 (Jan.-Feb. 2010)	Public document	n/a	MYLS-6
40	02/01/10	CLRC staff (for monthly meeting)	Direct observation	CLRC	CLRC-11
41	02/01/10	Executive Director (CLRC)	Interview	CLRC	CLRC-12
42	02/01/10	Memorandum to CLRC staff from its Executive Director (*Shaping the Message*)	Private document	n/a	CLRC-13
43	02/24/10	Deputy Director	Interview	Telephone	CCPL-24

Table 3: Summary of the 49 Data Collection Sources, continued

Source No.	Source Date	Participant(s)	Mode of Collection	Location	Source Identifier*
44	02/25/10	2009 Annual Report	Public document	n/a	CCPL-25
45	05/09 to 05/11	Cuyahoga County Public Library web site (www.cuyahogalibrary.org)	Public document	n/a	CCPL-26
46	June 2010	*A History of Cuyahoga County Public Library*, produced and published (in late 2009) by CCPL's Marketing Division	Public document	n/a	CCPL-27
47	April 2011	2010 Comprehensive Annual Report	Public document	n/a	CCPL-28
48	05/09 to 05/11	Central New York Library Resources Council web site (www.clrc.org)	Public document	n/a	CLRC-14
49	05/09 to 05/11	Mid-York Library System web site (www.midyork.org)	Public document	n/a	MYLS-7

* Source identifier refers to the chronological order in which the data source was collected *for its case organization*. For example, the interview with CCPL"s Executive Director on 06/08/09 was the sixth data source collected for the CCPL case, so it is identified as CCPL-6.
** "BL" refers here to branch library, as in "Garfield Heights branch library."

The remainder of this section is divided into three discussions: of gaining access to and building trust in each case organization (3.3.1); of new service concept and participant selection in each case organization (Section 3.3.2); and of the three modes used to collect data (3.3.3).

3.3.1 Gaining Access to and Building Trust at Each Case Organization

Empirical studies of human behavior can be enriched by interviewing and/or observing participants in a "naturalistic" setting such as their place of work (Lincoln and Guba, 1985; Mellon, 1990; Pettigrew, 1990). Merely gaining access to a workplace is not enough, though, as a researcher also must gain participants' trust to a point where they are comfortable sharing their knowledge and telling their stories. Accordingly, I conducted all but three of 29 interviews and attended all 10 meetings at case organization work sites[3] and strived to gain the trust of study participants. In the following three sub-sections – one for each case organization – I provide

3 Two of the 27 field interviews were conducted at the personal residence of CCPL's Executive Director.

details on access (including dates of entry and exit) and assess my efforts to gain participants' trust.

Access, Entry, Exit and Trust-Building at Cuyahoga County Public Library (CCPL)

CCPL's Executive Director (ED) agreed on 17 April 2009 to let me interview CCPL administrators and managers and attend certain meetings. Given the costs associated with traveling 350 miles from Syracuse, New York to Cuyahoga County, Ohio, I planned to visit CCPL's administrative building and selected branches on no more than three occasions. On the first occasion I conducted eight interviews and attended one meeting on 8-9 June 2009. Nearly three months later – on a briefer visit on 26-27 August 2009 – I conducted four interviews and attended one meeting. On the third and final visit to CCPL (on 2-3 November 2009) I conducted five interviews and attended one meeting. While this final visit concluded my field study at CCPL sites, I conducted one more interview (with CCPL's Deputy Director) on 24 February 2010.

By the second visit to CCPL (on 26-27 August 2009) I had gained the Executive Director's and Assistant Director's trust to a point where each felt comfortable confiding with me on "off the record" statements that each requested not be included in this document. During this visit (and the next), I accepted the Executive Director's invitation to stay at her personal residence and began to develop a friendship with her and her husband and their two daughters. This development is noteworthy because I sensed during my third and final visit that two participants were more reserved than they had been in previous interviews. I interpreted this behavior as a sign that they regarded me as a possible informant for the Executive Director. While I never divulged any confidential information to the Executive Director, and reiterated my commitment to confidentiality, these participants may have had ongoing concerns. What

mattered to them, I suspected, was my growing friendship with their supervisor and, consequently, the increased possibility that I might divulge confidential information.

The caution exhibited in these two interviews was not evident in the other three third-visit interviews or, for that matter, in any other interview. In sum, I posit that my efforts to gain the trust of CCPL participants were generally successful and, as a result of multiple visits and interviews, the data I collected at CCPL is reliable and trustworthy.

Access, Entry, Exit and Trust-Building at Central New York Library Resources Council (CLRC)

The Executive Director of CLRC during the data collection period agreed in early May 2009 to let me interview CLRC employees and attend monthly staff meetings. Data collection began on 19 May 2009 with a loosely structured, get-to-know-each-other interview (CLRC-1) with the ED, the Resource Sharing and Outreach Coordinator and the Regional Archivist. Data collection continued through 1 February 2010 and comprised five interviews, attendance at seven meetings and the acquisition of one key document (CLRC-13). Unlike CCPL, CLRC is located only five miles from my personal residence, so travel to and from CLRC's office (in Syracuse, New York) was not a concern.

Through four interviews and three meetings I was confident that I had gained the trust of CLRC participants and that our rapport was close. At the 7 December 2009 staff meeting (CLRC-8), however, the Executive Director was reserved with me where before she had been very genial. Attributing this behavior to stress associated with CLRC's financial struggles (see Section 4.2.1), I opted against asking her if I had said or done something that concerned her.

At the January 2010 staff meeting (CLRC-9) the Executive Director once again was reserved with me. Afterward I approached her privately and asked her if I had made an insensitive remark. She said that the questions I had been asking in staff meetings suggested that

I questioned CLRC's value. I replied that I only wanted to learn how library service providers function and that my questions were not critical or judgmental. At that point the Executive Director retreated somewhat, stating that high levels of stress related to CLRC's budget cuts may have caused her to misinterpret my questions.

Shortly after this interaction we agreed that a brief "wrap-up" interview with her (CLRC-12) – immediately following the 1 February 2010 staff meeting (CLRC-11) – would be my final data collection incident. A few days later (at CLRC-10) I asked CLRC's Member Services Coordinator if my questions seemed critical of CLRC. (I did not mention my conversation with the Executive Director.) "Not at all," she replied. "I think you asked some important questions and made us think more about innovation." In sum, I would assess my efforts to gain the trust of CLRC participants as mixed but sufficiently successful to analyze CLRC as a case: with respect to the Executive Director, trust was gained and interactions were businesslike; and with respect to other CLRC employees, no uneasiness was discerned throughout the data collection period. As with CCPL data, all indications are that CLRC data are reliable and trustworthy.

Access, Entry, Exit and Trust-Building at Mid-York Library System (MYLS)

The Director of MYLS during the data collection period agreed in mid-May 2009 to be interviewed for this study and to consider permitting the participation of CLRC employees. Data collection began on 28 May 2009 with a get-to-know-each-other interview (MYLS-1) in which the Director provided an overview of MYLS' mission and operations, described MYLS' efforts to conduct a SWOT analysis aimed at "organizational realignment," and asked for clarification on what participation in the study might entail. At this point the Director would not commit to allowing access to "non-supervisory staff," but she did approve an interview with MYLS' Automation Consultant, who she identified as being closely involved with the conception of a

certain new service idea, namely, MYLS' "Cybermobile" proposal.

I conducted a brief, informal interview by telephone with the Director on 4 June 2009 (MYLS-2), at which point I scheduled on-site interviews with the Director and with the Automation Consultant. After interviewing them separately on 19 June 2009 (MYLS-3 and MYLS-4), the Director requested that interviews with MYLS employees (other than her) be postponed until organizational realignment efforts had concluded. The next data-collection incident was a longer interview with the Director on 16 September 2009 (MYLS-5), after which she again requested that interviews with MYLS employees be postponed until further notice.

I sent a voice mail and e-mail to the Director in November 2009 inquiring into the status of MYLS' realignment efforts, but received no response. I did the same in early February 2010 but again received no response. After learning in September 2010 that the Assistant Director had been promoted to Director, I sent an e-mail to the new Director in which I requested a post-realignment organizational chart. In her response, the new Director stated that she did not know why the former Director stopped responding to my e-mails and voice mails, but speculated that she simply had been too busy to participate in my study. Accordingly, the 16 September 2009 interview with the Director (MYLS-5) serves, in effect, as the "exit" of my field study at MYLS, although I did obtain in January 2010 (via MYLS' web site) a very useful document, namely, the January-February 2010 *MYLS Reporter* (MYLS-6), which the Director who was interviewed for this study wrote.

Despite not being granted permission to interview MYLS employees, my rapport with the Director was surprisingly open. (At one point she described an interview as "therapeutic.") In short, the Director provided candid and detailed responses to my questions. Unfortunately, my inability to interview others at MYLS – the Automation Consultant excepted – prevented me

from confirming the Director's assertions and obtaining multiple perspectives. As a result, the data collected at MYLS – data which mostly suggests that new service conception at MYLS was inhibited by realignment efforts and a lack of resources – mostly reflect the beliefs and attitudes of two administrators.

3.3.2 New Service Concept and Participant Selection

As noted in Chapter 2, a *new service concept* (Goldstein *et al*., 2002) is an idea for a new service that has been (1) developed to a point where the value the customer will receive from it (and how s/he will receive it) and (2) specified in terms of its requirements to a point where service system design can commence. In effect, a new service concept is a new service idea that is ready to be implemented. The reason for examining new service concepts, in short, was to better understand how *successful* new service ideas are conceived.

The selection of participants at each site needed to be linked directly to the new service concepts selected for examination. Accordingly, my plan in terms of new service concept and participant selection was (1) to identify "new service ideas currently being implemented" and "recently launched services" and then (2) to interview and possibly observe the individuals who were closely involved in the conception of these new services. I executed this plan by asking my primary contact at each case organization (i.e., the Director/Executive Director) to identify new/recent services and new service ideas currently being implemented. Each Executive Director was then asked to identify the individuals who were closely involved in their conception. Each interviewed worker, in turn, was asked to identify "involved" individuals. This approach to identifying new service concepts and participants has been described as the *chain referral* (or "snowball") technique (e.g., Biernacki and Waldorf, 1981). This technique is appropriate for studies requiring non-representative samples (Trost, 1986) where, for example, a

researcher wants to interview only those individuals who experienced the phenomenon being examined.

Per van der Walk's (2008, p. 306) instruction to promote the triangulation of evidence by posing the same questions to multiple informants, I attempted to interview as many involved workers as possible. Scarce resources (i.e., time, money) and the unavailability of potential participants (including partnering representatives not employed by the case organization) prevented me from interviewing some involved workers, particularly at MYLS (see Section 3.3.1). For most new service concepts, though, the number of involved workers was small – only one or two individuals, in some cases – and as a result I was able to interview each/all of of them.

In order to identify more new service concepts, each interviewee (beyond the Executive Director) was asked to identify new/recent services and new service ideas currently being implemented. Across all three case organizations, more than 20 new service concepts were identified, 14 of which were sufficiently represented in the data to enable analysis. **Table 4** identifies each of these 14 new service concepts along with (1) the name of the first participant who identified it and (2) the names of participants who provided substantive information about it. (A description of each of these new service concepts is provided in Section 4.2.) Table 4 lists new service ideas by case organization (with CCPL first, CLRC second and MYLS third) and then in the order in which they were first identified during the data collection process.

Of these 14 new service concepts, 10 were conceived and implemented by CCPL, three by CLRC and one by MYLS. CCPL's 10 new service concepts were identified by five individuals – including three by the Youth Services Director – while CLRC's three new service concepts were identified by two individuals. MYLS' new service concept was identified by the

Table 4: The 14 New Service Concepts Examined in this Study and the Participants Who Identified and Discussed Them

Name of New Service Concept	First Participant to Identify the New Service Concept	Participants Who Provided Substantive Information About It
1) By Kids for Kids (CCPL)	Youth Services Director	Youth Services Manager (primary), Executive Director
2) Camp Cuyahoga (CCPL)	Youth Services Director	Youth Services Manager
3) Homework Centers (CCPL)	Youth Services Director	Youth Services Manager, Branch Services Director
4) Cuyahoga Works (CCPL)	Internet & Media Services Director	Internet & Media Services Manager, Executive Director
5) Library orientation and digital services for teen parents (CCPL)	Executive Director	Executive Director
6) Item downloading from Ahuja Medical Center kiosks (CCPL)	Deputy Director	Deputy Director (primary), University Hospitals representative, OverDrive CEO
7) Monitor-Mentor program (CCPL)	Branch Services Director	Branch Services Director
8) Toy lending service (CCPL)	Branch Services Director	Branch Services Director (primary), Executive Director
10) New branch library at MetroHealth (CCPL)	Deputy Director	Executive Director, Deputy Director
11) Customer notification by text message (CCPL)	Executive Director	Executive Director (primary), IT Director
12) Extra-service area delivery via UPS Campus Ship (CLRC)	Executive Director	Executive Director (primary), Resource Sharing & Outreach Coordinator, Member Services Coordinator
13) CNY Heritage digitization program (CLRC)	Member Services Coordinator	Member Services Coordinator (primary), attendees at a CNY Heritage information session (CLRC-10)
14) Affiliate membership (CLRC)	Executive Director	Executive Director

Director. Ten of the 14 new service concepts were examined through the perspective of two or more individuals, and all four new service concepts examined through the perspective of only one informant were conceived by that informant.

3.3.3 Modes of Data Collection

Three modes of data collection were employed for this study: semi-structured interviews; direct observation at staff and project meetings; and public and private document acquisition. These

modes are among the most common modes employed in theory-building case studies (Alvesson and Karreman, 2007; Eisenhardt and Graebner, 2007). By using multiple modes to answer an interpretive research question, a researcher can better attest to the reliability of his data (Denzin and Lincoln, 2008). Each of these three data-collection modes was used to some degree to help satisfy the study's *five major data collection needs*:

- Descriptive information about each case organization;
- Descriptive information about study participants;
- The identification of new service concepts to examine;
- Information about each new service concept; and
- Information about how each case organization regards and approaches service innovation in general.

In the following three sub-sections – one for each data-collection mode – I define the mode, state why it is useful and then outline how I used it to satisfy these needs.

Semi-Structured Interviews

The qualitative interview is "one of the most important data gathering tools in qualitative research" (Myers and Newman, 2007, p. 3) because it can help a researcher learn about and better understand a phenomenon (such as a process) he has not experienced from the perspective of someone who has (Weiss, 1995). In this study, 29 of the 49 data-collection sources (see Table 3) involved a semi-structured interview, which can be defined as a question-and-answer-based verbal exchange that draws from questions prepared beforehand by the researcher while "unfolding in a conversational manner [which] offers participants the chance to explore issues they feel are important" (Longhurst, 2010, p. 103).

Of these 29 semi-structured interviews, 26 were *formal* in the sense that they were conducted at a scheduled time and in a private setting such as an unoccupied conference room or a participant's office. Alternatively, the three *informal* interviews were conducted spontaneously and by telephone (CCPL-1 and MYLS-2) or during an unexpected break between scheduled interviews (CCPL-14). There were several other spontaneous conversations with participants, of course, but these were "off-topic" conversations that served to either build rapport or support my data collection efforts (e.g., borrowing and learning how to use a digital recording device, getting directions to a branch library).

Most, but not all, of the audio from formal interviews was digitally recorded. CLRC's Executive Director expressed discomfort with this practice, so none of the five interviews with CLRC employees was digitally recorded. (For these interviews I relied on my notes.) Further, problems associated with a microphone (CCPL-15) and with a small, mobile recording device (CCPL-21 and CCPL-23) prevented the capture of audio from three interviews. Altogether, 18 of the 26 formal interviews were digitally recorded and transcribed.

Semi-structured interviews helped satisfy the five major data collection needs through the questions included (below) in **Table 5**. Three points pertinent to Table 5 should be noted. First, the list of questions in Table 5 is not inclusive; rather, only *predetermined* questions are included. Many other questions emerged during the course of each interview, as is typical with semi-structured interview protocols. Second, descriptive information about each case organization (i.e., the first data collection need) was satisfied mostly through annual reports and/or web sites, so relatively few questions on that topic were asked. Third, every participant signed an informed consent letter (Appendix B) that had been approved by Syracuse University's Institutional Review Board (IRB) before the interview commenced. The letter of approval from Syracuse

University's IRB is included in Appendix A.

Table 5: Interview Questions and the Data Collection Needs They Helped Satisfy

Data-Collection Need	Interview Questions
Descriptive information about each case organization	* What has the past year been like at [case organization]? Have there been any major initiatives or problems in the past year? * What are the most pressing challenges at [case organization] right now? How are they being addressed?
Descriptive information about study participants	* What is your title? * What are your major responsibilities? * Who is your direct supervisor? * How long have you worked for [case organization]?
The identification of new service concepts to examine	* Have you helped launch any new services recently? Are you aware of any recently launched services? * Are you currently involved in the implementation of any new service ideas? Are you aware of any new service ideas currently being implemented?
Information about each new service concept	* Can you please describe how this new service will work? How will it benefit customers? (*gets at the value proposed by the new service concept)* * What is "new" about this service? Is there an existing service that you based this service idea on? *(gets at whether service is new-to-the-market or new-to-the-firm)* * Can you remember how the idea for this service first came about? (Variants: How did this idea first come about? How did you first come up with this idea?) * How was [is] the implementation of the new service idea [being] funded? * What is the current status of this idea [service]?
Information about how each case organization regards and approaches service innovation in general	* Where do new service ideas come from in [case organization], generally? * How would you describe [case organization's] philosophy behind service innovation? * What conditions are needed for new service ideas to be generated? * What do you think is behind an innovative culture?

Direct Observation at Staff and Project Meetings

The direct observation of participants in their "natural" settings is another common and powerful data-collection mode in theory-development studies (Eisenhardt, 1989; Dubé and Paré, 2003). Data from direct observation typically assume the form of *field notes* prepared at the case site (i.e., "in the field") or very soon after one has left the case site (Lincoln and Guba, 1985; Denzin and Lincoln, 2008). Eisenhardt (1989, p. 538) has described field notes as a "running commentary" through which researchers ask themselves what they are learning from and about participants.

For this study, direct observation was limited to attendance at seven CLRC meetings and three CCPL meetings. Field notes were taken during each meeting and then, within a day or two, edited by making clarifications where needed, highlighting key points and reorganizing. These "cleaned" field notes served as data for coding (see Section 3.4). Direct observation at meetings helped satisfy every data collection need except the identification of new service concepts to examine.

Public and Private Document Acquisition

The third and final mode of data collection was the acquisition of public and private documents. These documents were not primary sources, but provided clarification or confirmation of data collected through interviews and observation. Altogether, three private documents (including two salient e-mails from CCPL administrators and a memorandum to CLRC staff) and seven public documents (including each case organization's web site) were collected. Two of the 10 documents – the two e-mails from CCPL participants – were used to identify and learn about new service concepts. The other eight documents were used mostly to help describe each case organization and learn about how the case organization regards and approaches service innovation.

3.4 Data Analysis

Theory development in the social sciences entails the simplification and abstraction of a complex social phenomenon through data reduction techniques (Miles and Huberman, 1994). Glaser's (1978; 1998) constant-comparison method is one of the more popular data reduction techniques (Selden, 2005; Wasserman *et al*., 2009). For Glaser, data reduction yields a conceptual framework through three phases: open coding; axial coding; and theoretical coding. In each of

the following three sections – one for each phase – I draw from the literature on the constant-comparison method to describe each phase and then outline how the phase was applied to the present study.

3.4.1 Phase One: Open Coding

For Glaser, *open coding* includes three major activities: first, categorization, or the labeling of data "chunks"; second, the constant comparison of categories; and third, the writing of "theoretical memos" that help conceptualize categories (Glaser, 1998). In the first activity, a delimited "slice" or "chunk" of data is labeled. This label is referred to as a *category*, and has been described as "a word or short phrase that symbolically assigns a summative, salient, essence-capturing and/or evocative attribute to a portion of language-based or visual data" (Saldaña, 2009, p. 3). A category can be *in-vivo* (i.e., in the participant's own words) or *constructed* (i.e., in the researcher's words). In short, a category represents "a datum's primary essence" (Saldaña, 2009, p. 3).

The second activity of open coding – the constant comparison of categories – begins with the second chunk of data to be coded. Is it similar to the first chunk, or is it different? If the analyst determines that it is sufficiently different then he creates a new category. If it is similar then the analyst is forced to reevaluate the first category. Should the first category be relabeled? Should each chunk of data be categorized to reflect the similarities *and* differences between them? If so, how? In short, the analyst is forced to consider every new data chunk in terms of existing categories (Glaser, 1998).

The analyst engages in open coding's third activity – the writing of "theoretical memos" (or simply *memos*) – at the same time that he labels data and compares categories. Indeed, the memos elucidate categories and develop their properties (Boychuk-Duchscher and Morgan,

2004) while describing the connections between them (Tan, 2010). For Sousa and Hendriks (2006, p. 323), memos "reveal and relate" categories.

Open coding was applied to this study as follows. Prior to coding, interviews, interview notes, and field notes were transcribed and assembled within a single text file. Headers were used to identify and delineate each major data collection source. Open coding on the data in this text file commenced in early May 2010 and concluded in June 2010 (see the timeline in Figure 2). A word-processing application (OpenOffice Writer) served as the coding tool, per guidance from LaPelle (2004). For example, constructed codes were highlighted in green and in-vivo codes in yellow, and an XML-like syntax was developed that distinguished categories from data and facilitated the search for similar categories using the "Ctrl+F" (find) function. A list of extant categories was maintained in a separate text file.

The categories associated with the first 17 data collection sources (see Table 3) are presented in **Table 6** for illustrative purposes. At this point in time very little CLRC data had been collected. Table 6 shows that the analysis up to this point in time had yielded six core and 14 total categories for CCPL, one core category for CLRC and three core and six total categories for MYLS. During the analysis that yielded these 21 categories I produced numerous brief theoretical memos aimed at elucidating categories and potentially shaping the theoretical coding process. Eight illustrative memos are included in **Table 7**.

3.4.2 Phase Two: Axial Coding

At its essence, axial coding entails the building of relationships between the discrete categories created during open coding (Glaser, 1978; 1998). More specifically, categories deemed by the analyst to have "the greatest explanatory relevance" to the phenomenon in question are designated as "axes" from which "spokes" (i.e., sub-categories) extend (Strauss and

Corbin, 2008, p. 104). (Indeed, the term "axial coding" refers to the practice of producing diagrams resembling wheels.) In addition, the analyst begins to describe categories and sub-categories in greater detail by articulating their attributes (Glaser, 1998). The analyst continues to write memos as well, but memos in the axial coding phase aim at describing the relationship between top-level categories, thus anticipating the third and final phase (Selden, 2005).

Table 6: Selected Categories Formed During Open Coding

Case	**Category** (Core Categories Are Shown in *Italics*)
Cuyahoga County Public Library (CCPL)	*XA0 [identifying new customer needs]*
	XA1 [evidence that identifying customer needs is main problem]
	XA2 [through direct interaction with customers]
	XA3 [through interactions with branch-level workers
	XA4 [through interactions with residents in public settings
	XA5 [through interactions with representatives of other organizations
	XB0 ["dot connection" and puzzle solving]
	XC0 [learning about internal capabilities and worker preferences]
	XD0 [identifying new technologies, organizational practices and funding sources (T/OP/FS]
	XD1 [through interactions with representatives of other organizations]
	XD2 [through awareness of exemplary service providers]
	XD3 [through various articles, reports, stories, etc.]
	XE0 [on resources and their role in new service conception]
	XF0 [developing and maintaining a culture of innovation]
Central New York Library Resources Council (CLRC)	YA0 [recognizing services that could be adopted and tailored for CLRC customers]
Mid-York Library System (MYLS)	*ZA0 [organizational problems]*
	ZA1 [cultural and structural problems]
	ZA2 [operational problems]
	ZA3 [financial problems]
	ZB0 [strategies for addressing organizational problems]
	ZC0 [identifying customer needs]

Table 7: Selected Theoretical Memos Produced During Open Coding

Memo Identifier	Theoretical Memo
1	CCPL administrators give the impression (see e.g. patron-notification-by-text-message) that new service conception at CCPL is driven by customer needs and that problems beg for solutions. As [name] stated, when asked about the origins of the Cuyahoga Works service, "It was probably the kind of thing where [name] was sitting around and thinking, 'We need to do this', and she was talking to the right people, and that's how it all started."
2	But solutions also beg for problems. In other words, it seems that there would be two approaches to formulating a new service concept. In the first approach, library administrators identify a customer need and then determine the financial and operational means of meeting it. In the second approach, library administrators become aware of a new technology or organizational practice or a new source of funding and then try to identify a customer need that can be met by/through it. In other words, *NSD at CCPL could also be about solutions in search of problems*. If so, CCPL might also attempt, on occasions, to *manufacture* needs, no?
3	For [name] (at MYLS), decentralized authority results in *ad hoc*, redundant, poorly executed services, which in turn beget a lack of customer trust. And at CCPL the ED is "trying to move from hierarchy to design."
4	[Name]'s discourse is about quashing resistance, transforming culture and streamlining services. Innovation discourse is limited; the Cybermobile was an afterthought to her, at first, discussed only because I asked questions about it. The need for new training programs for trustees isn't seen as an opportunity but rather as a project that will add to [name]'s headaches.
5	One of my first thoughts [on MYLS] was, "Does Lewin's unfreezing-moving-refreezing model apply here?" In Lewin's model, the moving stage involves the assuaging of workers' concerns. There does not appear to be any assuaging of concerns at MYLS right now.
6	Regardless of whether a lack of resources are preventing innovation, [name] and [name] believe this to be the case. Argument for them being right: securing enough funds to ensure an organization's survival demands constant or frequent attention from administrators. Is it possible (or reasonable) for administrators to attend to service innovation as well? Argument against it: but is it a lack of resources that prevents ideas or objects like CASSIE from being better utilized? If so, what kind of resource? Could an enterprising individual take the initiative to make better use of CASSIE? (I would say yes.)
7	Clearly there is a good deal of tension and even antagonism at work here, but the Board of Trustees presumably knew what they had in [name], and presumably they're behind the change. (As [name] said, "the Board is behind me.")
8	Potentially germane concepts (to CCPL and/or MYLS): Sarasvathy's Effectuation Theory; associative thinking ("jigsaw puzzle", "putting pieces together"); Weick and Sutcliffe's notion of mindfulness; customer intelligence (CI) in the LIS literature

As open coding approached the point of categorical saturation in early- to mid-June 2010, axial coding commenced. Impelled by an early memo that associated a set of categories with Weick and Sutcliffe's (2006) notion of mindfulness (with which I had been familiar for some time), I had by this time re-read the article and was sensitized to the idea of mindful interactions.

A preliminary model was developed in July 2010 during the axial coding phase (**Figure 3**). This model was included in a publication titled "How Do Public Library Administrators Generate and Evaluate Ideas for New Services? A Proposed Model Based on Evidence from the Cuyahoga County Public Library" (Rubleske *et al*.,2011).[4] The model illustrates that axial analysis had revealed, in anticipation of theoretical coding, a process of new service conception involving certain interactions (e.g., "with representatives of vendors, partners and other libraries") in which the innovative library administrator is sometimes mindful of "new service possibilities." In effect, the model served as a memo in support of theoretical coding.

3.4.3 Phase Three: Theoretical Coding

In theoretical coding, all categories (axes) and sub-categories (spokes) are systematically linked through a "core category." Per Glaser (2002, p. 30), a core category is "the category which organizes the other categories by continually resolving the main concern" of the study. The core category is the category with the "greatest explanatory relevance" for this concern (Strauss and Corbin, 2008). All other categories are framed in terms of the core category.

There is no cookbook for generating theory from core and axial categories, at least in the Glaserian conception of grounded theory. For guidance on this problem I drew from Leedy and Ormrod (2005) and Sousa and Hendriks (2006). For Sousa and Hendriks, theory is developed in large part by preparing an outline from memos; for Leedy and Ormrod, "the categories and their interrelationships are combined to form a story line that describes what happens in the phenomenon being studied" (p. 141). Ultimately, a new grounded theory is developed by carefully articulating the properties of the core category and of axial categories and by describing

4 Rubleske, J., Kaarst-Brown, M. and Strobel, T. (2011). How do public library administrators generate and evaluate ideas for new services? A proposed model based on evidence from Cuyahoga County Public Library. *Proceedings of the 73rd Annual Meeting of the American Society for Information Science and Technology (ASIS&T)*.

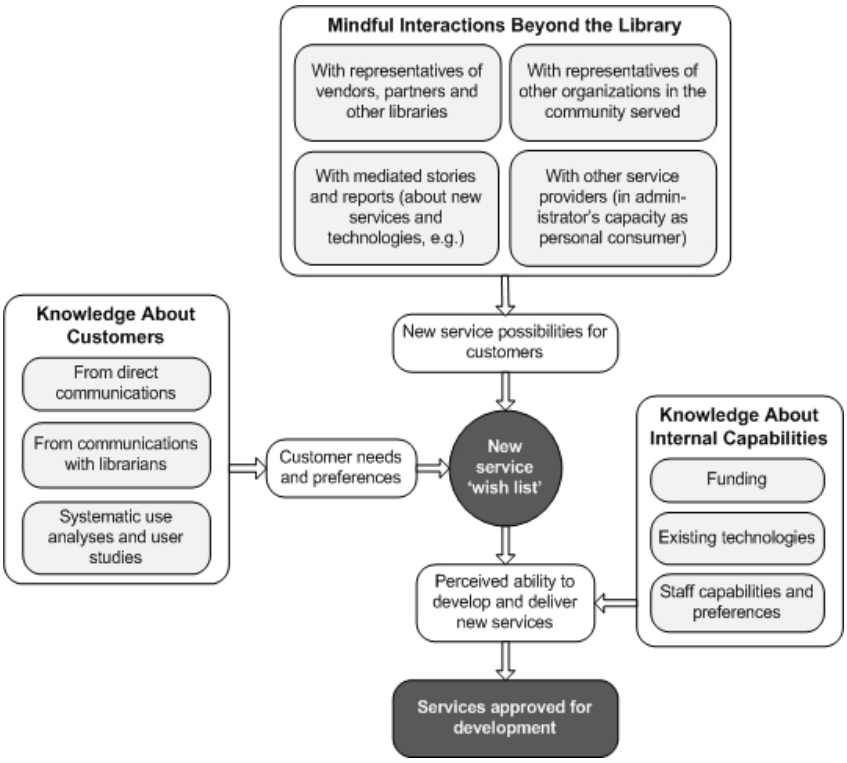

Figure 3: A Preliminary Model of New Service Conception

their relations. In many cases – as in the present study – much of this work is produced iteratively through diagrams. The grounded theory is finalized at the point where the theorist is confident that none of his data refutes the propositions implied or stated by the theory.

With regard to the present study, theoretical coding commenced in August 2010 and concluded in October 2010. Six axial categories serve as the model's six components: mission comprehension; customer needs; potential external solutions; the identification of new customer needs and potential external solutions through mindful interactions; the matching of unmet customer needs and external solutions; and the new service concept. Axial categories are all subsumed by, and framed in terms of, the core category of *mindfulness*. The ways in which the model hinges on this construct is detailed in Chapter 5.

4 FINDINGS

How, and at what point, do library administrators conceive new services? Do factors such as new technology adoption, formal strategic planning, and emergent customer needs influence their efforts? What about certain organizational attributes – such as propensity for change, level of engagement in interorganizational networking, and the degree to which project-based documentation is produced (Olaisen *et al*., 1995) – do these influence their efforts? How important are slack resources to new service conception? This chapter lays the groundwork for answering these questions by presenting study findings through two major sections. The first section (Section 4.1) presents detailed accounts of each of the three case organizations. Section 4.2 comprises 14 sub-sections, one for each new service concept that is examined. In each of these sub-sections I describe the new service concept itself (i.e., what the service provides, how it is provided) and then recount how it was conceived. In the chapter's final section (Section 4.3) I present and analyze timelines showing how each of the 14 new service concepts was conceived over time. This analysis aims at identifying patterns can that assist model concept development and help answer the research question.

4.1 Description of Case Organizations

One cannot sufficiently understand a work practice such as new service conception until one examines it in detail across multiple organizational contexts (Klein and Myers, 1999; Eisenhardt and Graebner, 2007). Accordingly, this section describes in some detail the three cases comprising the study. Each case is surveyed along six dimensions: (1) its **history**; (2) its **service offerings**; (3) its **organizational structure**; (4) its **funding**; (5) its **organizational culture**; and (6) its **most salient concerns** at the time of data collection.

4.1.1 Cuyahoga County Public Library (CCPL)

Cuyahoga County Public Library (CCPL) History

In response to the growing need for public services beyond municipal boundaries, the state of Ohio passed a law in 1921 permitting the establishment of county library districts (CCPL-27). One year later, Cuyahoga County voters passed a referendum in favor of Cuyahoga County Public Library (CCPL), the first county library in the state of Ohio. For nearly two years CCPL provided library services through a handful of "stations" such as schools, town halls and stores. Then, in 1924, CCPL began offering library services through its first branch, in Chagrin Falls, Ohio. By 1929, only five years after in inception, CCPL had grown to 17 branches and 26 stations.

The population of Cuyahoga County grew rapidly after World War II (CCPL-27). From 1955 to 1965 the communities served by CCPL increased 155 percent, and 20 branch libraries were built or renovated as a result. The population served by CCPL grew steadily throughout the 1970s, 1980s and 1990s, and by 1997 CCPL's annual circulation (10.5 million items) made it one of the ten busiest library systems in the United States.

In 2009, CCPL's Marketing Division produced and published a colorful, 58-page history of CCPL. Titled *A History: Cuyahoga County Public Library*, this document (henceforth *History*) depicts CCPL as a long-time provider of cutting-edge services. In 1926, for example, CCPL began offering a "book car service" which prefigured CCPL's bookmobile (CCPL-27). In the 1930s and 1940s it produced weekly library-themed radio broadcasts, and in the early 1980s it adopted an early-generation online public access catalog (OPAC) that enabled customers to search its materials and even browse job openings. From the 1990s through the 2000s, CCPL was among the first local public libraries – if not the first – to provide services such as virtual

reference (KnowItNow 24x7), licensed career counseling (Jaffe, 2003), Homework Centers (Rua, 2008), self-service checkout, interlibrary loan through OhioLINK, wireless internet access, credit and debit card acceptance (for late fees and other payments) (Schnall, 2006) and passport services (Kleinerman, 2010). While *History* implies that CCPL has always been innovative, indicators such as awards and press coverage (in library trade magazines, e.g.) suggest that its production of innovative services has increased significantly since its current Executive Director was appointed in 2003.

Indeed, demand for CCPL's services increased throughout the 2000s even as populations in many of the towns it serves began to decline. The following excerpt from *History* provides a sense of the magnitude of CCPL's current operations.

> *Since 2003, the Library's circulation has increased 69.75 percent and customer visits to its branches have increased 30 percent. In 2010, there were 7.6 million visits to the Library's 28 branches, and its 787,594 active registered cardholders borrowed a record-breaking 20,389,173 items – an average of approximately 26 items for every person in our service district... Customers logged 1,205,277 hours on the Library's public access computers during the year... [and] Library staff answered 1,756,196 reference questions and 1,617,512 directional questions. The Library's meeting rooms were used 14,239 times with an attendance of 287,288 people.* (pp. xii-xiii)

Today, CCPL is a nationally-recognized innovator. It was ranked first among large U.S. local public libraries by Hennen's American Public Library Ratings (HAPLR) and is perennially ranked in HAPLR's top three.

Cuyahoga County Public Library (CCPL) Services

Through its 28 branches, CCPL provides all the services that one might expect of a large,

consolidated local public library in the U.S. (CCPL-26): item lending (including e-books); online, federated searching for library materials; access to computing resources and internet services; virtual and in-person reference services; reader's advisory (i.e., "Need-a-Read"); on-demand branch-to-branch delivery of items; and publicly available meeting rooms (there are 55 across all 28 branches). CCPL also coordinates events (including author visits, holiday programs, book discussions, "sit and knit", "cookies and books"), administers classes and workshops (e.g., basic computing, GED preparation, English for speakers of other languages (ESOL), financial management, genealogy); administers an interlibrary loan program (through OhioLINK and SearchOhio) and offers copying and faxing services.

CCPL also provides a number of services that many local public libraries do not provide (CCPL-26). For example, it offers homework assistance to children in primary and secondary grades through 10 Homework Centers (see Section 4.2.3) and offers job-seeking and career-development assistance to adults through a Career Center in the Maple Heights Branch library. Other less traditional services offered by CCPL include toy lending, genealogy research, various "kits and sets" (e.g., book discussion sets, "reminiscence kits" for seniors, "baby & me kits," kindergarten kits), a delivery service for homebound customers (Library2You), and passport services at every branch. A complete list of the services provided by CCPL is available from its web site (www.cuyahogalibrary.org).

Cuyahoga County Public Library (CCPL) Structure

As a consolidated public library, CCPL's administrators can exercise authority over all 28 of its branch libraries. CCPL serves a large, socioeconomically diverse population residing in 47 cities, villages and townships located beyond the service area of the Cleveland Public Library and within Cuyahoga County. The interests of this population are represented by a six-member

Board of Trustees that appoints the Executive Director and works with him or her to develop strategic and financial plans.

CCPL is administered from a central facility located, since 1990, near the middle of its service area in Parma, Ohio. Of CCPL's 819 total employees in 2009, 147 worked in (or from) this facility, including the 10 administrators comprising its "Executive Team." As the organizational chart presented in **Appendix B** shows (CCPL-28), five administrators report directly to the Executive Director: the Deputy Director; the Human Resources Director; the Facilities Director; the Finance Director; and the Marketing and Development Director. Six other administrators report directly to the Deputy Director: two Branch Services Directors; the Youth Services Director; the Adult Services Director; the Information Technology Director; and the Technical Services Director. (Three of the administrators who report to the Executive Director or Deputy Director are not members of the Executive Team.) An Administrative Manager also reports directly to the Deputy Director.

CCPL is organized into six divisions (CCPL-26):

- The *Executive Division* includes the aforementioned Executive Team: the Executive Director; the Deputy Director; the Human Resources Director; the Facilities Director; the Finance Director; the Marketing and Development Director; two Branch Services Directors; the Technical Services Director; and the Information Technology Director. This division also includes the CCPL Library Foundation, which serves to build CCPL's endowment through various fundraising activities. CCPL's Executive Director serves as the Library Foundation's President, and its Development Director serves as its Vice President.
- The *Operations Division* includes five departments: Contract Projects; Maintenance; Environmental Services; Shipping and Receiving; and Fiscal Operations.

- The *Human Resources Division* is not departmentalized. It is responsible for functions such as recruiting and hiring, negotiating union contracts, developing compensation and benefits plans, processing unemployment claims, and executing payroll transactions.
- The *Information Technology Division* is responsible for implementation and maintenance of the hardware and software associated with CCPL's customer-focused (e.g., the ILS, the web site) and internally-focused (e-mail, purchasing, accounting) information systems. It also provides technical support through its Help Desk, and trains library staff to effectively use various computer applications.
- The *Marketing Division* is responsible for functions such as external communications, advertising, development and fundraising, media relations, and publications.
- The *Technical Services Division* is charged with "providing library materials fully processed and ready for use by our customers to the branches in a timely fashion" (CCPL-26). It includes four departments: Acquisitions; Cataloging; Collection Development; and Processing.

Each of CCPL's 28 branch libraries is managed by a single Branch Manager who reports directly to a Branch Services Director. Each branch library also includes an Adult Services Librarian who reports directly to the Adult Services Director and a Youth Services Librarian who reports directly to the Youth Services Director. With 672 branch-level workers (in 2009) and 28 branch libraries, each branch library employs, on average, 24 individuals.

Cuyahoga County Public Library (CCPL) Funding

Like all local public libraries in Ohio, CCPL is funded primarily by revenues from both state income taxes and local property taxes. In 2009, 30 percent of CCPL's $76 million in receipts came from the state of Ohio's Public Library Fund (PLF), while 62 percent came from local

property tax revenues. (Eight percent came from grants and gifts.) While CCPL and other local public libraries in Ohio saw PLF revenues shrink by 17.8 percent in 2009 and 22.8 percent 2010 (Ohio Library Council, 2011), their per-capita budgets still exceed, for the moment at least, those of most of their counterparts in other U.S. states (ALA, 2010).

In recent years CCPL also has been effective at augmenting its state and local tax revenues with income from grants and bond sales and with in-kind services from partnering organizations. To this end it has a dedicated Office of Development (including a full-time Grant Writer) and a Library Foundation (see above). In the past three years CCPL has been awarded grants from the Mt. Sinai Health Care Foundation, the McGregor Foundation, the National Endowment for the Arts, the Cleveland Foundation and several others In 2009, in-kind services were provided by 48 partners, including the Cleveland Orchestra, the NFL's Cleveland Browns, Huntington Bank, and the Cleveland Museum of Natural History (CCPL-25).

Cuyahoga County Public Library (CCPL) Culture

For the purpose of this paper, an organization's culture can be examined, per Schein (2010), through its "espoused beliefs and values." These beliefs and values are the manifestation of the "basic, underlying assumptions" that shape the organization's behavior, which in turn reinforces these assumptions. While CCPL's mission (*"to be at the center of community life by providing an environment where reading, lifelong learning and civic engagement thrive"*) does little to reveal these assumptions, its stated vision implies them:

> *"We will be the most convenient library in the nation and be known for the quality of our customer service. Our branches and web site will be centers of excellence and serve as gathering places. Through innovative services and collaborations we will satisfy our community's needs and exceed expectations." (CCPL-26)*

In short, CCPL's primary aim is *to be a great, innovative library*. Indeed, it wants to be the first local public library *in the United States* to provide new services. Referring to the development of a service which allows hospital patients and visitors to download e-books and audiobooks from a "download kiosk" (see 4.2.6), CCPL's Deputy Director said, *"We really want to be first on this"* (CCPL-16). A handful of other administrators made a point of saying during interviews that CCPL was the first – or was among the first – to provide a certain service (e.g., *"Our Homework Centers weren't the first [of their kind], but we were pretty quick on the draw"* (CCPL-9)). By and large, the Executive Director's championed this aim at at every opportunity.

> *"I'm not going to be the director of anything but a great library. I don't want to do this if it's not going to be a great library, and innovating and changing things. And that's what I said during the budget cuts [in 2009] – we have to change the way we do things, our whole pattern of expenditures, because we have to keep innovating, figure out how to do it with less money."* (CCPL-18)

Moreover, the Executive Director believes that the people served by CCPL deserve a great library: *"Taxpayers in Cuyahoga County pay a ton of money for their libraries. They should have the best libraries in the country. And when we're cut by the state, we still have a lot of money. So the libraries should be great"* (CCPL-18). Indeed, the "basic, underlying assumption" that drives CCPL's Executive Director is that CCPL *owes it to the community* to be nothing short of outstanding.

The data suggest that CCPL pursues the Executive Director's vision through three major strategies: by hiring the people who fit best and promoting mission and goal adoption; by developing and offering new services based on knowledge or assumptions about what customers want; and by taking risks. Each is discussed briefly in turn.

Strategy #1: Hiring the people who fit best and promoting mission and goal adoption. According to CCPL's Branch Services Directors (CCPL-9), the key to developing and maintaining a strong, positive culture is to *"get the right people on the bus."* For the vision envisaged by CCPL's Executive Director, the "right people" are those who are *"good listeners,"* are passionate about their work (*"If we don't see the passion we're not so interested"*), possess a customer service ethos, and are willing to make impactful decisions. Further, they should have *"an innovation mentality – we screen for it. There's a culture of innovation [here] where everybody has that mindset of how do we do better, faster and cheaper."*

The Executive Director believes that it is imperative that CCPL's employees – especially its administrators – comprehend and adopt her vision. Indeed, she had clearly thought about who had and who had not adopted her vision, as demonstrated by this statement:

> *"[The Finance Director], [the Facilities Director] and [the Deputy Director] are my hires. [The Youth Services Director] has been promoted since I've come. They're wedded to my administration. [The IT Director] isn't wedded to my administration. That's fine with me, I can live with that. [The Marketing Director] has been my biggest loyalist from the time I walked in the door."* (CCPL-17)

There is ample evidence in the data to support the claim that the Executive Director's vision has been adopted by most administrators. For example, the IT Director, echoing remarks (nearly verbatim) made by the Executive Director, noted (CCPL-2) that *"new ideas come from 'non-libraries' – I can do it in Amazon, why not with the library?"* And to the extent that the Executive Director's vision is embodied in CCPL's "Six Initiatives[5]," administrators mindfully enact this vision through the conception of new services. In recounting the conception of Camp

5 CCPL's Six Initiatives include reconnecting with reading, ensuring every child enters school ready to learn, helping youth reach maximum potential, putting Cuyahoga County back to work, keeping seniors healthy, happy and independent, and connecting with new Americans.

Cuyahoga, for example, the Youth Services Director said that *"we looked at 'Summer Camp' as another way to help achieve the goal of maximizing youth potential – which is one of our primary goals"* (CCPL-3). A Branch Manager made a similar remark: *"Every camp first rolls out at Youth Services to make sure it fits one or more of our Six Initiatives – especially the 'maximize youth potential', 'reconnect with reading', and 'have every child ready for school' initiatives"* (CCPL-4).

Strategy #2: Developing and offering new services based on knowledge or assumptions about what customers want. At CCPL, new services are not launched for the sake of launching a new service, but rather to meet or even anticipate the emergent needs of its customers. The data suggest that CCPL's administrators determine these needs in large part by interacting directly with customers and by learning from branch-level employees who interact directly with customers. For example, when asked if CCPL employed 'secret shoppers' who glean information about customers from service exchanges, the Executive Director replied that they are not needed *"because I have customers talking to me all the time"* (CCPL-18). More often, though, CCPL's administrators learn about customer needs from the Branch Managers, Adult Services Librarians and Youth Services Librarians who report directly to them. For example, the Youth Services Director emphasized the importance of the monthly report she receives from each branch's Youth Services Librarian: *"It's really conversation. [It] has statistical data and narrative information... I read them all... in their unfiltered messiness"* (CCPL-3). Statements made by a Branch Manager interviewed for this study make it clear why they know what their customers need:

> *"We've had ice cream socials, senior fairs... I've chaperoned proms, volunteered to help build playground equipment, gone to high-school fundraisers and worked with PTA*

groups... The bottom line is knowing your community, and not just the people who come to the library. We have to go out there and meet everyone." (CCPL-4)

But the data also suggest that CCPL's administrators reach conclusions about customer needs in ways that do not involve direct interaction with customers or branch-level employees. For example, the Executive Director stated that she identifies customer needs by *"thinking like a customer"* (CCPL-18), such as when she determined that CCPL needed to "re-think" its web site. She also asserted that CCPL began conceiving and developing mobile device-based services after she realized, in 2004 or so, that *"even the poorest people have [cell] phones"* (CCPL-17). And the Youth Services Director noted that she was compelled to reconsider story-time hours upon realizing that *"the family structure had changed"* (CCPL-3). These and other anecdotes suggest that new services at CCPL are conceived in part as a result of the attention paid by CCPL's administrators to the world outside of CCPL and its implications for new service offerings.

Strategy #3: Taking risks. CCPL's Executive Director noted in passing (CCPL-17) that the development of new services at CCPL was *"like throwing spaghetti against a wall and seeing what sticks."* Indeed, her acceptance of reasonable levels of risk – at the cost of occasional programmatic failure – was demonstrated in her response to a question about whether CCPL conducts user studies:

> *"User studies are too expensive. The key issue is data points. Which ones? If you don't narrow it down you drown in information. You have to take risks and acknowledge that some initiatives will fail."* (CCPL-18)

This belief was echoed by other CCPL administrators. For example, CCPL's Deputy Director said, *"It's a huge library trait to solve all the problems before you do it. That's not our style"*

(CCPL-15). And a Branch Manager (CCPL-4) stated that *"it's really important to explore possibilities and take risks. Being able to work for an administration that is willing to take risks, that's vital."*

It is important to add, in closing, that CCPL's innovative culture may be enabled, in small or large part, by its comparatively ample resources. For example, many other local public libraries may lack the resources to hire and keep the type of people who (as described above) fit best with CCPL's vision and culture. Similarly, many other local public libraries may not be able to implement many of the new service ideas they generate. This concern is explored in more detail in Chapter 5.

Salient Concerns During the Data Collection Period at CCPL

During the data collection period, CCPL administrators were focused on addressing three prevailing concerns: ongoing budget cuts; the completion of a Facilities Master Plan; and providing services in non-traditional locations. Each of these concerns is discussed briefly in turn.

Salient concern #1: Ongoing budget cuts. Despite the cuts in state funding it sustained in 2009 ($5 million/17.8 percent) and 2010 ($9 million/22.8 percent), CCPL's per-capita budget remains larger than the budgets of most local public libraries outside of Ohio (American Library Association, 2010). Nevertheless, the weeks during which a state legislature negotiates the state's budget – when the size and implications of inevitable cuts are uncertain – can be a very distressing period of time to an organization's employees. An e-mail received by this author from CCPL's Deputy Director during this time reflects this distress:

> "*We got word today that a 2nd day 7-day interim budget has been approved so we are still in limbo here. These are challenging times – any degree of additional cuts will likely*

result in layoffs with the worst case scenario being upwards of 100 people out of work. I'm sure you can understand that people here are nervous so it is not a good time to solicit ideas about innovations. Most innovations require expenditures and most people are simply in the mindset of saving their jobs. I've been actively soliciting cost savings ideas and been getting a good deal of input." (CCPL-11)

Six weeks after this e-mail was sent, CCPL had eliminated 41 positions, terminated its interlibrary loan program and closed 21 of its 28 branches on Sundays. CCPL also responded to budget cuts with resourcefulness, though. First, it intensified efforts to secure grants and gifts and to develop relationships with partners that could offer in-kind services. Second, it devised an innovative means of addressing its second salient concern, that is, the financing of the building or renovation of 15 branch libraries (see below). Third, it conceived a new revenue-generating service, namely, the production of passports. More specifically, it began in April 2010 to provide passport services – $25 for a passport, $10 for a passport-sized picture – to Cuyahoga County residents via seven branch libraries. (Today, all 28 branches offer this service.) CCPL's Executive Director believed that CCPL could provide better customer service than the U.S. Postal Service, which had been the *de facto* provider of passport services. By July 2010, the service was generating $8,000 to $9,000 per month in revenues, enough to re-open all 21 branches that had been closed on Sundays.

Salient concern #2: Completion of a Facilities Master Plan.

While state revenues continued to shrink, CCPL's administrators remained focused on the development and implementation of a 10-year Facilities Master Plan aimed at building new branch libraries in six municipalities while renovating branch libraries in nine other municipalities. Altogether, these facility improvements were estimated to cost $100 million over

ten years (CCPL-26). Yet, as noted above, total funds to CCPL decreased substantially from 2008 to 2010. So how was CCPL able to finance these renovations?

The answer demonstrates CCPL's innovation efficacy, even with respect to facility financing. In short, CCPL did not want to go through the process of taking a bond to the ballot in each municipality in which a branch library would be constructed or renovated: not only is it administratively burdensome and costly to do so, but it is increasingly difficult for libraries and other public institutions to pass bond floats. Instead, CCPL took to the ballot in 2008 a proposal to increase slightly its operating revenues (i.e., millage), which voters approved (CCPL-26). This increased millage would be used to replace Public Library Funds from the state of Ohio, which in turn would be used to pay for notes CCPL had successfully issued. (Public Library Funds are typically used for operating expenses.) In the end, $75 million would come from notes CCPL had issued (notes are like bonds but mature sooner), $15 million would come from a capital-funds account that the Executive Director had grown from nothing, and $10 million would come from a "capital campaign."

Salient concern #3: Providing services in non-traditional locations. In response to a question about the future of local public libraries, the Executive Director said (CCPL-17), *"People don't want to leave their neighborhood anymore; they want to stay in their neighborhood or stay home."* In an earlier interview, the Youth Services Director had made a similar remark: *"What the community needs more than anything now is for us to be able to go to them, where they are, and take our services to them. That's what they need"* (CCPL-11). Of the 10 new service concepts developed by CCPL and examined in this study, three involved service delivery beyond branch-library walls. One new service concept (library orientation and digital services for teen parents) includes the delivery by e-mail of e-books for children or lullabies (as MP3 files) to

digital mobile devices. Two new service concepts – a new branch library at MetroHealth Hospital and item downloading from Ahuja Medical Center – involve the provision of library services within a health-care setting. According to the Deputy Director, thousands of customers and potential customers occupy health-care facilities every day, so why not bring CCPL's services to them?

> *"It's [i.e., MetroHealth] a new service model. It will be a health information location. So we're going to move our health information specialist to MetroHealth, and we're going to hire another one, so [during] the hours that it's open there will always be a health librarian there. There will be a collection of health books and also some popular materials for people to borrow while they're there. It will also be a pick-up location for people who work at the hospital."* (CCPL-18)

CCPL has provided services through non-traditional means for years. For example, its Warrenville Branch library includes an outreach program through which library materials and programming are provided to two nursing homes and through which the *"reading needs of incarcerated individuals at the Cleveland House of Correction"* are satisfied (CCPL-26). CCPL also provides services through the Montefiore Healthcare Center in Beachwood, the Renaissance senior community in Olmsted Township, and the Cornerstone of Hope, a non-profit bereavement center in Brecksville (CCPL-26).

4.1.2 Central New York Library Resources Council (CLRC)

Central New York Library Resources Council (CLRC) History

Publicly available information about the history of the Central New York Library Resources Council (CLRC) is limited. According to its web site (www.clrc.org), CLRC was chartered by the New York State Board of Regents in 1967 as one of nine Reference and Research Library

Resources Councils ("3Rs") serving the state of New York. Its service area includes four central New York counties: Herkimer; Madison; Oneida; and Onondaga.

As detailed below in the section devoted to its structure, CLRC comprises a small administrative unit, 50 member libraries, and a 15-member Board of Trustees which represents members' interests. This study examines CLRC's administrative unit (henceforth "CLRC"), which has as its mission *"to ensure and support the sharing of resources among all kinds of libraries and ensure equal access to information for all New Yorkers"* (CLRC-14). It pursues its mission through services provided to its 50 members.

Central New York Library Resources Council (CLRC) Services

The services provided by CLRC can be grouped into seven types, each described briefly in turn. Additional information about CLRC's services is available at CLRC's web site (www.clrc.org).

1) Produce news and information of relevance to members. Through blog posts, a bi-monthly newsletter (*Refermation*), and other outlets, CLRC produces news of interest to its members. It also maintains an events calendar, provides links to various library resources (including members' catalogs), posts library-related job openings, and produces videos of presentations and lectures.

2) Administer access to consortial libraries and databases. With regard to online databases, CLRC administers access (by members) to NOVEL (i.e., New York Online Virtual Electronic Library), FirstSearch, Newsbank and a handful of other databases. CLRC also manages the use of its in-house Library and Archival Resources Center (LARC). LARC includes books and other hard-copy materials *"that were chosen to help librarians and archivists serve their customers"* (CLRC-14). Members can browse the LARC collection online and request the delivery of LARC materials.

3) Administer the delivery or transmission of library materials. As detailed in Section 4.2.11, CLRC uses United Postal Service's Campus Ship (UPS-CS) program to deliver hard-copy materials from one member to another. (Non-members, or "affiliates," can also make use of UPS-CS, but at a higher rate.) Members can obtain digital items through interlibrary loan for US$4.

4) Perform 'copy cataloging' for members. In short, 'copy cataloging' entails the creation of a record in a digital catalog for a new acquisition. Rather than entering all the metadata associated with the record, though, the cataloger locates the acquisition's match in the Library of Congress database. CLRC provides this service at no cost for hospital-library members, while other members pay US$3.49 per record.

5) Administer training and professional development programs. CLRC administers dozens of library-related classes and workshops every year. Class offerings include Core Reference Skills, Grantseeking Basics, Microsoft Publisher, and Archival Appraisal Basics.

6) Administer sponsored programs. CLRC serves as the official agent for several New York-based programs (e.g., Coordinated Collection Development; Hospital Library Services Program; Documentary Heritage Program; Regional Bibliographic Database and Interlibrary Resource Sharing Program). At the time of this writing, three of the sponsored programs administered by CLRC are associated with the provision of medical library services.

7) Advocate on behalf of "3Rs" and publicly-funded libraries. In general, CLRC's advocacy efforts are aimed at securing sufficient funds for itself and members and at shaping information policy. In addition to the many letters and e-mails it sends to state legislators, CLRC also advocates by coordinating "Legislative Breakfasts" and an annual "Advocacy Day" bus trip.

Central New York Library Resources Council (CLRC) Structure

The CLRC is a *consortium* comprising an administering unit, 50 member libraries and a 15-member Board of Trustees which represents members' interests. Of the 50 members, 23 (46 percent) are academic libraries and 10 (20 percent) are hospital libraries or medical research center libraries. Of the remaining 17 members, five (10 percent) are libraries serving private-sector firms, four (8 percent) are local public libraries, two (4 percent) are non-profit organizations, two (4 percent) are law libraries, two (4 percent) are historical associations, one is a military library and one is a museum library.

CLRC's administrative offices are located in Syracuse, New York. During the data collection period, CLRC's administering unit (henceforth "CLRC") comprised only six members: an Executive Director; a Member Services Coordinator; a Sharing and Outreach Coordinator; a Medical Circuit Librarian; a Regional Archivist; and an Office Coordinator. With the exception of the Office Coordinator, each of these employees had administrative responsibilities. The Regional Archivist left CLRC in October 2009, leaving it with only four administrators. The CLRC lacked the funding to fill the vacated position.

Much of the work produced for the consortium is undertaken by committees. During the data collection period there were 11 committees *"comprised of library and archival representatives from the central New York region"* (CLRC-14). (One does not have to work for a member library to be a committee member.) Each committee also included a CLRC administrator serving as a liaison. The 11 committees included:

- An Archival Services Committee;
- A Continuing Education Committee;
- A Digitization Committee;

- A Finance Committee;
- A Hospital Library Committee;
- A Legislative Committee;
- A Library Resources & Services Committee;
- A Nominating and Board Development Committee;
- A Planning and Review Committee;
- A Resource Sharing Committee; and
- An Executive Committee.

The prominent role of committees at CLRC is largely a function of the lack of authority wielded by CLRC's Executive Director. Indeed, the Executive Director described the new service development process at CLRC as a *"diplomatic dance"* (CLRC-5): *"Usually we begin at the committee level, then take it to the general membership. If these groups [i.e., members] show interest we'll conduct a survey and then take it to the Board. Then we'll do a pilot or two."* Ultimately, numerous concerns must be addressed – often concerns that are specific to certain library types (e.g., hospital) or even to an individual library – before a new service can be implemented. Further, some "diplomatic dances" require capital and labor to an extent that precludes their resolution until assessment and development funding is first obtained.

Central New York Library Resources Council (CLRC) Funding

For the 2010 fiscal year, the administering unit of CLRC received 55 percent of its funds ($340,000) from the state of New York (as administered by the New York State Library's Division of Library Development), 36 percent of its funds ($225,000) from grants, and 9 percent of its funds ($50,000) from membership dues (CLRC-14). The $340,000 received from the state of New York in 2010 represented a 20 percent reduction from 2009. Additional cuts of 10

percent or more were anticipated for 2011. CLRC's Executive Director was disheartened but not surprised by these cuts; at one point she noted that *"the New York Division of Budget is not our friend... it sees libraries as a cost center"* (CLRC-7). Indeed, CLRC's continuous struggle with budget cuts had – during the data collection period at least – threatened to damage its strong, positive culture.

Central New York Library Resources Council (CLRC) Culture and Salient Concerns During the Data Collection Period at CLRC

These two sections are combined here because the superseding concern at CLRC – namely, substantial budget cuts – appeared to affect, to varying degrees over time and across individuals, CLRC's culture. The remainder of this twinned section develops this argument.

In the previous section I posited that CCPL's "basic, underlying assumption" (Schein, 2010) was that library customers deserve an outstanding, innovative library. As noted near the end of that section, though, CCPL possesses the resources needed to develop and maintain such a library. While CLRC's administrators undoubtedly wanted to provide outstanding, innovative services, its ability to do so was significantly hampered by its lack of resources. For example, the ongoing reduction of the operating budget was the primary topic of discussion at staff meetings. At one staff meeting (CLRC-9), for instance, each of the first four items on the agenda involved budget cuts or CLRC's response to them.

1) The budget: *"We're waiting.... We've extended [provision of a database] for a month. We might have to ask the libraries if they want to pay for this in a month or it will go away.... We haven't received any hospital money yet either."*
2) Documentary Heritage Program: *"We haven't received approval for an extension, so as of today this program is officially suspended."*

3) Site visits with individual legislators: *"We need to request funds…"*

4) Legislative Breakfasts and Advocacy Day: *"We need to shape our message to legislators…"*

Every other staff meeting agenda was similar. The Executive Director asked fellow administrators to be *"judicious in your spending,"* and not to *"worry about payroll, payroll is fine.... We built in a surplus, so we shouldn't panic. But we're waiting on $200,000 from [legislators]"* (CLRC-8). (According to CLRC's Executive Director, state funds to CLRC are typically delayed by the New York Division of Budget as long as possible in order to earn interest, thus exacerbating CLRC's financial anxiety.) This constant struggle to deal with (and prevent further) budget cuts while delivering services effectively and planning strategically took a toll on CLRC's administrators. As the Executive Director stated during one interview:

> *"It's just been so hard. And it's not going to get any better this year. I don't think I've ever been this tired. It's wearing me down but I'm not going to give in... There are people in this office who depend on me for a paycheck. I desperately need a break but I don't know how I can take one."* (CLRC-12)

The future of many programs funded by general revenues was uncertain. Less utilized programs were regularly eliminated. Grants were needed to develop, implement, and deliver most new services that did not generate revenue. The successful Central NewYork Heritage (CNYH) program – which aims at making local historical materials (e.g., postcards, maps, letters) publicly accessible through a web site – was only possible after receipt of an LSTA (i.e., Library Services Technology Act) grant for 2008 through 2010.

CLRC's administrators exhibited a great deal of resiliency, though. First, they lobbied legislators relentlessly, often by traveling to a legislator's office in central New York or to a local conference, workshop or community function that a legislator was planning to attend. Well-

planned trips to Albany, New York also were made. In preparation for one such trip, the Executive Director noted (CLRC-8), *"We need to present a streamlined voice. Whenever we talk to a legislator we need to use the same language."* The Executive Director knew where each legislator in CLRC's service area stood in terms of any given library funding issue. Some legislators were allies and some were not; others negotiated and voted differently every year.

A second show of resiliency involved the ongoing identification and pursuit of alternative funding sources. These included, for example, "member items" (i.e., *"a portion of state funding allocated by the [New York] Senate and Assembly that is required to be used for community projects, civic and public health initiatives in the recipient members' districts"* (www.oag.state.ny.us)) and "Go Local" funds (i.e., *"a service for finding local resources for health-related issues"* (www.nlm.nih.gov)). A third show of resiliency involved the conception and development of revenue-generating services. In other words, CLRC responded to budget cuts entrepreneurially. For example, CLRC submitted a successful bid to provide interlibrary loan services on behalf of the Mid-York Library System (MYLS), which opted to outsource the service. CLRC's Executive Director also generated the idea for an "affiliate membership" for non-members (see Section 4.2.13). This new service was designed to generate revenue.

In closing, the data suggest that CLRC's underlying culture – which has at its core values such as self-sufficiency, entrepreneurialism, and a service ethos – was both forged and threatened by the ongoing financial crisis faced by its administrators. At the time of this writing, three of the five administrators interviewed for this study – including the Executive Director – no longer work for the organization. Given the change in leadership, it would not be surprising to find that CLRC's culture has assumed a somewhat different character. Then again, the new administrators face the same problem their predecessors did, namely, a dearth of resources.

4.1.3 Mid-York Library System (MYLS)

Mid-York Library System (MYLS) History

By "Mid-York Library System" (MYLS) I refer specifically to the administrative and support unit which serves a cooperative of 43 local public libraries in Herkimer, Oneida and Madison counties. As with CLRC, publicly available information about this organization is very limited. According to its web site (www.midyork.org), MYLS was chartered by the New York State Board of Regents in 1960 to "improve and expand library service" in Madison, Oneida and Herkimer counties.

Much of MYLS' service area can be described as rural or semi-rural. Of the 43 localities that contain an MYLS member library, 16 (37 percent) are hamlets or villages with less than 1,000 residents, 17 (40 percent) are villages or small towns with between 1,000 and 5,000 residents, and seven (16 percent) are towns or very small cities with between 5,000 and 11,000 residents. MYLS' service area includes only three cities (7 percent) with 20,000 or more members.

Mid-York Library System (MYLS) Services

MYLS provides seven categories of services to its 43 member libraries (MYLS-7):

- Acquisitions, cataloging, processing, and delivery of physical materials;
- Virtual reference services to member libraries' customers;
- Continuing education (including classes, seminars, and workshops);
- Consulting and *"technical assistance services"* (e.g., the troubleshooting of technical problems, process optimization, the lending of audiovisual equipment);
- Advocacy of member libraries' interests to state legislators;
- *"Coordinated services"* (i.e., economies-of-scale purchasing of library items and IT); and

- Information technology (IT) automation.

With regard to IT automation, MYLS is responsible for maintaining an integrated library system (ILS) through which members and their customers can access and edit a shared online catalog. MYLS also administers shared databases, wireless internet services, an intranet, and e-mail accounts for member libraries. Based on the recommendations of a consulting firm that performed an organizational audit in 2009, MYLS began outsourcing much of this IT automation work in the first quarter of 2010.

Mid-York Library System (MYLS) Structure

In a cooperative public library system, proposed policies and programs are typically approved or rejected through a process in which representatives of member libraries vote, often through a Board of Trustees. Unlike in consolidated public library systems, then, the Director of a cooperative public library system typically wields limited authority.

MYLS' Director is appointed by a 15-member Board of Trustees which represents the interests of the 43 member libraries. As illustrated in MYLS' organizational chart from 2010 (**Appendix B**), MYLS' 31-member staff included four administrators: a Director; an IT Administrator; a Chief Financial Officer (CFO); and an Assistant Director. Three specialists reported to the IT Administrator, one specialist reported to the CFO, and four managers – each responsible for a small department (e.g., Reference and Electronic Services) – reported to the Assistant Director. The IT Administrator, CFO and Assistant Director each reported to the Director.

Mid-York Library System (MYLS) Funding

In 2009, 80 percent of MYLS' funds came from the New York Department of Education (MYLS-2). Twenty (20) percent came from counties and member fees. The amount received

from the state of New York represented a 10 percent cut from the previous year, however, thus forcing the Director to make the spending cuts identified below in the "culture" section. In September 2010, MYLS' Director stated that MYLS' Board was considering a proposal by MYLS to increase membership fees in order to deliver *"streamlined services more effectively and efficiently"* (MYLS-5).

Mid-York Library System (MYLS) Culture and Salient Concerns During the Data Collection Period at MYLS

As with the CLRC, these two sections are combined here because the most salient concerns at MYLS during the data collection period – namely, an organizational realignment and ongoing budget cuts – were clearly affecting MYLS' culture. Indeed, concerns related to organizational realignment were in some ways a result of and response to MYLS' culture.

In January 2009 – five months prior to the start of data collection – MYLS' Board of Trustees appointed a new Director whose primary objective was to transform (in the Director's words) the *"lax, we're-all-equals-here" culture at MYLS into a more "chain-of-command culture of accountability"* (MYLS-5). She described the culture she inherited in mostly negative terms:

> *"A faction of negativity is festering… And the bad news is that the staff has more loyalty with the libraries externally than internally within the staff. There isn't a lot of bonding internally, not just with administration but with each other. There's not a lot of camaraderie. It seems to all go external – they have their favorite libraries, favorite directors. But internally it's totally different. It's very difficult to get them in the same room. Forget fun stuff like birthdays – they won't do that. There will be three or four who won't even come in the room when we're celebrating something."* (MYLS-5)

The Director's goal, in short, was to get all MYLS employees to accept a top-down, chain-of-command authority structure.

> *"Everyone would go ahead and do their own thing… They see us all as equals. They see the organization as flat, and they've been making their own decisions for years… So I showed them the organizational chart, [and] they took offense and said 'It's a dictatorship'. It's basically a lack of knowledge, because most [of them] haven't worked anywhere else, so they don't know any different."* (MYLS-4)

The Director also made it clear that this change would be realized in spite of resistance:

> *"I guess my style and my philosophy at the moment is, 'We have things we have to put in place that are going to be changes, and we're going to be changing internally, and people can either come on board or they're going to be lost'… So my next step is to have these people who are negative report directly to me, one-on-one. I'll send them to training… the aim will be to have them accept a new style."* (MYLS-5)

During this turbulent time, the Director and the Assistant Director conducted in June and July 2009 a SWOT analysis in which comments were elicited from representatives of member libraries and from administrative staff. The first of two major findings was that member libraries wanted more training programs for staff and for trustees. The second major finding was that MYLS' ability to communicate effectively was widely questioned. As the Director put it, *"The majority of the comments had to do with communication. They didn't know we were offering a service, they didn't know such-and-such was available, they'd never heard of this, they were getting redundant communications… Mainly the way stuff is rolled out"* (MYLS-5).

Adding to the tension between leaders and administrative staff were the findings of an organizational audit performed by *"an outside company"* that had not worked with MYLS

before. (The firm was hired through an RFP.) After finding that *"the people in [the IT] department were not on board with the mission of Mid-York"* and that there were *"major problems with the network and backup,"* the consultants recommended that the 3-person IT unit be outsourced in order to save money and *"provide a secure environment for IT equipment and services"* (MYLS-5). Through the organizational audit the consultants also recommended that some of the Catalog and Processing Department be outsourced. As the Director noted (MYLS-5), *"[Y]ou can get the books all ready to go, you don't have to do that in house."*

At the same time, MYLS' administrators were dealing with a 10 percent cut in MYLS' 2009 operating budget. This cut led the Director to lay off two employees, impose a hiring freeze on five open positions, freeze staff pay, postpone planned IT upgrades, and discontinue its digitization and interlibrary loan services. (Interlibrary loan services provided by MYLS were outsourced to CLRC.) Moreover, the Director was still waiting in January 2010 for 17 percent of state funds to be released to MYLS (MYLS-6).

Regardless of the extent of the cuts, though, the transformation of MYLS' culture seemed inevitable. To positive and negative effects – mostly positive, if you adopt the Director's perspective – the "old" do-as-you-please culture was yielding to a "new" do-as-directed culture. The data for this study – mostly interviews with the Director – were collected during the transition from "old" to "new." *During this period, very little attention was given to new service conception*. Indeed, MYLS' two study participants identified only one new service, namely, a "cybermobile" (Section 4.2.14). This apparent repercussion of planned organizational change, at least at MYLS, makes it more difficult to determine the extent to which MYLS' scarce resources impacted its ability to conceive and develop new services.

4.2 Fourteen New Service Concepts

To develop a model of new service conception by library administrators, I identified (through techniques described in Section 3.3.2) 14 new service concepts across the three case organizations, including 10 from Cuyahoga County Public Library (CCPL), three from Central New York Library Resources Council (CLRC) and one from Mid-York Library System (MYLS). As noted in Section 2.1.2 (New Service Development Studies), an idealized new service development (NSD) process results in an idea that has been sufficiently developed and approved for implementation. Accordingly, each of the following 14 new service concepts reached this result, regardless of whether subsequent events prevented their implementation beyond a pilot program.

4.2.1 By Kids for Kids (CCPL)

According to its web site (www.bkfk.com), the New Jersey-based By Kids for Kids *"is a marketing and media relations firm that empowers kid-driven innovation. We are a trusted intermediary between kids and corporations."* In short, BKFK (1) develops and supplies toolkits that guide educators and children *"through the invention process"* and (2) administers contests (e.g., Invent a Game Challenge, Trash to Treasure Competition, Grow a Business Challenge) aimed at yielding nascent, commercially marketable inventions devised by children. Inventions deemed worthy of investment by a corporate partner (e.g., Mattel, Hasbro) are licensed to the partner by BKFK, with revenues or profits shared with the inventing child where applicable.

How it was conceived. In early 2009, a representative of BKFK contacted CCPL's Executive Director shortly after learning about her interest in innovative programs through her profile on the Public Library Association's (PLA) web site. According to CCPL's Executive Director (CCPL-6), BKFK had only worked with schools but wanted to begin working with public

libraries. After assessing BKFK's products (i.e., toolkits) and services (i.e., contests and licensing), and learning that BKFK would provide the toolkits to CCPL at no cost, the Executive Director asked CCPL's Youth Services Director to work with BKFK to develop a pilot program. Using BKFK's toolkits and *"content from other sources"*, CCPL's Youth Services Director (CCPL-3) worked with a mid-level CCPL administrator to *"put together a four-day curriculum, three hours per afternoon, for kids in grades 4 to 8, at South Euclid and Brecksville [branches]."* Two pilot "invention camps" – one at each of these branches – were offered at full capacity in June 2009. At the time of data collection, the Youth Services Director stated that they planned to tweak the successful pilots and develop *"a program model that hopefully can be replicated throughout the country"* (CCPL-3).

4.2.2 Camp Cuyahoga (CCPL)

Through Camp Cuyahoga, children having just completed 4th, 5th or 6th grade spend 120 hours over six weeks in the summer *"enhancing academic, social, career and community service skills while having fun."*[6] Camp Cuyahoga is offered annually at no cost at the Warrensville Heights Branch (CCPL-26). At Camp Cuyahoga children learn about library functions, listen to stories read or told by librarians and volunteers, learn how to find information and resources (such as games) on the Internet, participate in book-themed games, make crafts, and more (CCPL-3).

How it was conceived. According to CCPL's Youth Services Director (CCPL-3), Camp Cuyahoga was conceived in early 2006 as a *"spin-off"* of CCPL's successful Homework Centers:

> *"At the time I was still at our Maple Heights branch – and we had the Homework Center there and at other branches, and it had been very successful, and [the Executive Director] was quite taken with them. We had discussed how we could take this model [for the Homework Center] and extend it in the summer. So, as kind of a spin-off of [the*

6 See http://cuyahogalibrary.net/EventDetail.aspx?EventInstanceID=13956.

Homework Center], we made 'summer camp' [i.e., Camp Cuyahoga]."

The "we" who first discussed extending the Homework Center model included the Youth Services Director, who at the time was Children's Librarian at Maple Heights, and the Warrensville Heights Children's Librarian. Together they devised potential summer camp activities and presented the idea to CCPL's Executive Director *"as another way to help achieve the goal of maximizing youth potential – which is one of our primary goals [i.e., Six Initiatives]."* The Executive Director liked the concept of a more intensive summer camp for children, but could not approve its implementation without additional funds. Shortly thereafter, at a meeting of the Cuyahoga County Board of Commissioners, the subject of TANF funds (i.e., Temporary Aid for Needy Families) was raised. Mindful of the summer-camp concept, the Executive Director asked if some TANF funds might be available for "Camp Cuyahoga."

> *"So when [the Executive Director] saw the [funding] opportunity for a summer camp, that's when she pulled us all together, my colleague from Warrensville branch and myself, along with representatives from the [Cuyahoga County] Family and Children First Council [with whom CCPL had to work in order to receive TANF funds], and that's when we talked about how we were going to make it work."*

Camp Cuyahoga debuted at the Warrensville Heights Branch at full capacity in July 2006. The success of this pilot has led CCPL to offer Camp Cuyahoga at several other branches (CCPL-3). The Youth Services Director suspects, but is not certain, that Camp Cuyahoga was – and possibly still is – the first of its kind: *"We don't know of any other [public] libraries that do a summer camp [like Camp Cuyahoga]. Most of them do summer programs, like summer reading programs, but they don't do summer camps."*

4.2.3 Homework Centers (CCPL)

Through its Homework Centers, CCPL offers homework assistance, PC access, Internet access (with parental permission), and educational games to children in primary and secondary grades (CCPL-26). At each of 11 CCPL branches, a Program Coordinator works with paid and volunteer "coaches" from the *America Reads* program and Cleveland State University. Throughout the 2009 to 2010 school year, these coaches provided help in math, social studies, science, reading, and language arts through 14,600 individual and small-group sessions (www.library.ohio.gov). Homework Center services are available after school on Monday through Thursday throughout the school year.

How it was conceived. According to one of CCPL's two Branch Services Directors (CCPL-9), the idea for a Homework Center came separately but at roughly the same point in time in 2002, from both a Board member (who *"gets his ideas from all over the country"*) and the Maple Heights Children's Librarian. More specifically, the Branch Services Director first became aware of the Homework Center concept from the Board member but soon learned, when relaying the finding, that the Maple Heights Children's Librarian also was aware of them through various media reports. At the time, funding for Homework Centers was available through the general operating budget, so the Branch Services Director worked throughout 2003 to develop a pilot at the Maple Heights Branch, where *"there was a need because that community had a very low academic rating... and a lot of 'walkers' who spent the afternoon at the library."* Working closely with the Maple Heights Children's Librarian, the Branch Services Director developed a working model in which *"one-on-one tutoring wasn't the [original] intention – it was more about small groups, like having the math kids sit around a table"* (CCPL-9).

The Homework Center at Maple Heights Branch was launched in August 2004. While it *"didn't take off like gangbusters,"* it became successful *"gradually."* Its adoption accelerated, according to the Branch Services Director, when CCPL's Executive Director remembered that Cleveland Public Library (where she had worked until 2003) had partnered with Cleveland State University (CSU), which administered the federal America Reads program. By partnering with this program, CCPL secured the services of CSU students as Homework Center tutors. (Today, students from Wallace-Baldwin College in Cleveland, Ohio, also serve as Homework Center tutors through America Reads.) Since 2005, the Homework Center program has expanded (as of May 2010) to 10 branches. Additional funding is now provided by the Cleveland Foundation, and the Homework Centers earned an innovation award in 2006 from the Ohio Library Council (CCPL-9).

4.2.4 Cuyahoga Works (CCPL)

Cuyahoga Works offers a "one-stop portal" to regional job openings and employment resources (www.cuyahogaworks.org). As described by CCPL's Director of Internet and Media Services (CCPL-8), *"it gives job seekers both a path to pursuing employment and an idea of what kinds of resources they have [available to them]. It also makes things less confusing because there's only one place where people go; they don't have to try and figure out the difference between what we do and what [the Cuyahoga County's City & County Workforce Board's] Employment Connections does."*

How it was conceived. CCPL's Director of IT and Media Services – who managed the implementation of Cuyahoga Works – credits CCPL's Executive Director with generating the idea for Cuyahoga Works: *"It was a brainchild of [the Executive Director]... It was the kind of thing where she was sitting around and thinking, 'We need to do this', and she was talking to the*

right people, and she got it started" (CCPL-8). According to CCPL's Executive Director, at some point in 2005 she acknowledged that CCPL's Career Center web site and the Workforce Investment Board of the City of Cleveland/Cuyahoga County's (WIB) Employment Connections web site provided similar content, namely, a list of current job openings, descriptions and schedules of classes and workshops, names and phone numbers of licensed career counselors, and more (CCPL-17). What was needed, the Executive Director believed, was a single *"one-stop portal"* for Cuyahoga County job seekers. Accordingly, in early 2006 CCPL's Executive Director arranged to meet with the WIB's Executive Director to outline a strategy for consolidating the sites. Central to this goal was a set of focus groups – with staff members of CCPL's Career Center and WIB's Employment Connections as participants – aimed at identifying *"the most useful activities, redundant activities, and activities that one group did but not the other"* (CCPL-8). The web site for Cuyahoga Works was launched successfully in 2008.

4.2.5 Library Orientation and Digital Services for Teen Parents (CCPL)

Many teen parents receive counseling from Help Me Grow of Cuyahoga County, an Ohio Department of Health-based organization charged with helping infants and toddlers *"develop to their fullest potential"* (www.helpmegrow.org). In addition, Help Me Grow, in concert with CCPL, provides a Library Orientation and Text Message service which begins with a visit to a branch library for an orientation session. After this visit, teen parents can choose to receive automated text messages (about pertinent programs and services) and/or download lullabies and children's songs (CCPL-17).

How it was conceived. The Executive Director of Help Me Grow of Ohio contacted CCPL's Executive Director in early 2010 after concluding that the infants of teen parents could benefit from some of the services provided by CCPL. Mindful that one of CCPL's Six Initiatives is to

"help youth maximize their potential," CCPL's Executive Director suggested a *"brainstorming meeting"* in which she and two other CCPL employees (i.e., the Director of Development and the Office of Development's Grant Writer), together with Help Me Grow of Ohio's Executive Director, would generate ideas for *"linking new [teen] parents to our libraries, because it's so important to read to your babies"* (CCPL-17). During the meeting, CCPL's Executive Director suggested that – funding permitted – the Help Me Grow counselor who visits the teen parents (or teen parent) at their home could drive them to their nearest CCPL branch library, where a children's librarian would *"introduce them to library materials and get them signed up for a library card."* After Help Me Grow's Executive Director confirmed this activity's feasibility while adding that funding cuts had led to the elimination of follow-up visits, CCPL's Executive Director expressed disappointment at not being able to *"keep in touch with the parents."*

CCPL's Director of Development then suggested that CCPL send participating parents (i.e., those who opt in) text messages that *"remind them to read to their children"* and notify them of pertinent services. In addition, CCPL could provide links to digitized lullabies (as MP3 files) that parents could download and play to their children. This service – including the transport to the nearest CCPL branch library, the library orientation, the text-message reminders, and the downloadable lullabies – was available to clients of Help Me Grow of Ohio as of May 2011.

4.2.6 Item Downloading at Ahuja Medical Center (CCPL)

Using "download kiosks" located in patient and waiting rooms, patients and their guests at University Hospital's Ahuja Medical Center (www.uhhospitals.org) can download to compatible devices some of CCPL's digital collection (e.g., e-books and audiobooks). Non-cardholders are free to download content but are encouraged to obtain an account during the download process.

How it was conceived. In summer 2009, University Hospitals' Director of Advanced Technologies contacted CCPL's Executive Director, with whom he was acquainted via OneCommunity, where he had been an employee and she had been a Board member. (OneCommunity is a non-profit telecommunications provider serving the Cleveland region.) According to CCPL's Executive Director, this individual *"was present [as a OneCommunity employee] when we connected with [Velti] to do the text messaging [notification to customers]. He saw that we were very open to new ideas and new ways of using technology"* (CCPL-17). University Hospital was in the process of designing a state-of-the-art, $300 million facility – Ahuja Medical Center, to be located in Beachwood – and *"wanted our [i.e., CCPL's] branding and presence"* in it.

Per request of CCPL's Executive Director, the Advanced Technologies Director began working with CCPL's Deputy Director. At first, the Deputy Director had the idea of *"a computer-mediated self-service unit within the [patient and waiting] rooms"* (CCPL-11):

> *"I am determined to find a self-service model and I'm looking at a European product now distributed in the U.S. by a company called EVanced. It's basically a library vending machine."*

Shortly afterwards, though, CCPL's Deputy Director recalled that the Cleveland-based OverDrive, Inc. – with whom CCPL had worked in past projects – had begun manufacturing "download stations" for use with its inventory of e-books to which it had purchased distribution rights. According to the Deputy Director (CCPL-16), the e-books purchased from OverDrive *"are still cheaper than a [printed] book,"* and its *"inventory is growing."* By September 2009 CCPL and OverDrive reached an agreement with University Hospitals to provide e-books and audiobooks through digital kiosks located in patient and waiting rooms. According to CCPL's

Deputy Director (CCPL-11), *"integrating this service in a hospital setting was completely new."*

4.2.7 Monitor-Mentor Program (CCPL)

The term "monitor-mentor" refers to the individuals who work part-time monitoring (i.e., curbing *"unruly behavior"*) and mentoring (i.e., *"whetting the appetite for learning"*) school-age children who come unaccompanied to CCPL's branch libraries after school and in the summer. Monitor-mentors are required to be active employees of a local public school system.

How it was conceived. According to one of CCPL's two Branch Services Directors, both Branch Services Directors had been aware for some time – as a result of ongoing communications with Branch Managers – of *"unruly behavior"* by children who frequented libraries unaccompanied by a parent or guardian (CCPL-9). At some point in the early 2000s, after fielding a growing number of complaints from patrons, they *"started trying to get a handle on how to curb"* this behavior while *"whetting the appetite for learning at the same time... How can we do that so it's not a full-time job [for librarians]?"*

One of the Branch Services Directors came up with the idea of a 15-hour-a-week "Monitor-Mentor." (Jobs involving 16 or more hours of work per week are "bargaining unit" jobs requiring union approval.) Her idea was that people who work in a local public school system – that is, people who *"could put [children's] names to faces"* – would be hired as Monitor-Mentors and charged with *"developing a rapport"* with children who *"act out"* in order to change their behavior and channel their energy into more constructive pursuits (CCPL-9). At the time of this writing roughly one-third of CCPL's 28 branches employed at least one Monitor-Mentor, with some branches employing as many as three at *"peak hours"* (i.e., after school) (CCPL-26).

4.2.8 Toy Lending Service (CCPL)

Through CCPL's toy lending service, cardholders can check out toys – as many as 10 at a time – that are delivered to their branch of choice from a central repository (i.e., the Brooklyn (OH) branch library). A pictorial catalog of the 700 or so available toys (*"with multiples of most"*) (CCPL-26) is available online and in hard-copy form at each branch. Toys are classified into three groups: baby and toddler; pre-school; and school-aged. Cardholders can borrow a toy for up to three weeks, though toys can be renewed online. Borrowed toys can be returned to any branch library, and are *"cleaned and disinfected"* upon return (CCPL-26).

How it was conceived. In 1991 the Mayor of Brooklyn, Ohio – a town with a CCPL branch library – approached CCPL's then-Executive Director and described a *"toy lending service"* provided by *"an upstate New York library"* he had recently toured (CCPL-9). By 1992 CCPL launched a service, using funds provided by Brooklyn's Mayor, which drew from the New York-based toy lending service as a model: shelve toys for viewing (by category) at a single location (i.e., the Brooklyn, Ohio branch library) and allow cardholders to check out up to 10 toys for up to three weeks. Toys had to be returned to the Brooklyn branch.

Over the next 15 years, numerous customers expressed a desire for a toy lending service at their nearest CCPL branch library. Finally, in 2007 CCPL's Branch Services Directors received notice (from CCPL's Executive and Deputy Directors) that funding was available to redesign the service in a way that would make it easier for cardholders throughout the service area to borrow toys. According to one of the Branch Services Directors (CCPL-9),

> *"We hired an early childhood specialist, we went to the USA Toy Library Association in Chicago, we went to dry cleaners to see how they managed their product, because there's a whole execution level to this."*

CCPL's research yielded a revision of the 1992-based service in which CCPL's web site and integrated library management system (ILMS) play key roles. With this revised service, launched in December 2007, cardholders can access CCPL's web site to browse a pictorial catalog of toys. In addition, they can select online the toys they want to borrow and, after checking out virtually, have the toys shipped to the branch library of their choice. Toys can now be renewed online and returned to any branch library. One Branch Services Director noted (CCPL-9) that *"people come here from all over the country to see this. This is a huge collection where we clean it, we store it, and we ship it."*

4.2.9 New Branch Library at MetroHealth Medical Center (CCPL)

As part of CCPL's drive to provide services in locations other than stand-alone branch libraries (i.e., *"wherever [customers] are"*) (CCPL-3), it recently implemented a new, non-traditional branch library on the first floor of MetroHealth Hospital's main facility. According to CCPL's Executive Director, this new branch library benefits CCPL's customers in at least three ways (CCPL-18). First, a full-time health-informatics specialist is deployed there to help patients and visitors find, retrieve and interpret information related to medical care. Second, the branch library enables cardholding patients, guests and hospital employees to check out books and DVDs. And third, it lets visitors (including non-cardholders) access the Internet through one of a few CCPL desktop computers or through a wireless network serving the space in and near the new branch library.

How it was conceived. Since joining CCPL in 2003, CCPL's Executive Director had sought to offer CCPL's services through non-traditional locations such as hospitals, where large numbers of CCPL's customers (and potential customers) visit or work. One hospital she had targeted *"for a long time"* was MetroHealth Hospital's main facility in a strategically favorable location on the

near eastside of Cleveland. When she was able finally to devote sufficient time to the matter, she contacted the President of MetroHealth (CCPL-18): *"I finally pitched [the idea] to him, and we said we just needed the space. He loved the idea."* After MetroHealth's President agreed to provide *"prominent first-floor space"* to CCPL, CCPL's administrators began to address how renovation costs could be covered. Lacking sufficient general operating funds, the Executive Director worked with the Director of CCPL's Office of Development to submit a grant request to Mt. Sinai Health Care Foundation. CCPL was awarded the grant in early 2010; after the space was renovated, the new branch library at MetroHealth was opened on 28 February 2011.

4.2.10 Customer Notification by Text Message

Since May 2006, CCPL's customers have had the option of receiving notifications (of available items, e.g.), news, and updates by text message to mobile devices such as cell phones. Customers can go to CCPL's web site (www.cuyahogalibrary.org) to opt out of this service at any time. According to the Urban Libraries Council ("Member innovations 2010"), CCPL was the first public library in the U.S. to offer this service. In 2010, CCPL received an award from the Urban Libraries Council for a similar "renew by text message" service.

How it was conceived. During a June 2009 interview (CCPL-6), CCPL's Executive Director stated that *"it was probably around 2004 or early 2005"* when she realized – by reading various media reports and by observing the widespread adoption of mobile telephones – that *"mobile communications are the wave of the future."* She concluded shortly thereafter that the text-messaging functionality of mobile telephones could address an emerging customer need, namely, to be notified via text message that library items they had requested had become available.

The Executive Director was told by the Director of CCPL's Information Technology (IT) Department that it lacked the capability to deliver the envisioned service. Pressed to attend to

more critical concerns, the Executive Director did not, at that time, identify a telecommunications provider that could offer the service, but remained mindful of the idea nevertheless. Then, in mid- to late-2005, the Executive Director attended a social function organized by OneCleveland (now OneCommunity), a non-profit organization charged with providing broadband connectivity to other non-profit organizations throughout Cleveland. During this function, the Executive Director was introduced to a representative of Velti, a text-messaging provider. The conversation between the Executive Director and Velti's representative shifted to Velti's operations, and the Executive Director deduced that Velti could provide the service she envisioned. Velti submitted a proposal shortly thereafter and was awarded the contract to help deliver the service.

4.2.11 Use of UPS Campus Ship to Deliver Materials to Non-Members (CLRC)

In essence, UPS Campus Ship (UPS-CS) entails the collection of a package by a UPS representative at one college or non-profit location and its on-demand delivery to another location. With CLRC's use of UPS-CS, member-to-member shipments are billed only $1 per package shipped. Shipments from or to non-member libraries are billed in full, but these shipments are still much less expensive than if they had not used CLRC's UPS-CS because of the discount CLRC receives as a bulk buyer and non-profit organization. CLRC shipped 3,300 packages in fiscal year 2010 using UPS-CS (CLRC-14).

How it was conceived. While working *"on the side"* as a consultant for the Rochester Regional Library Council (RRLC) in 2009, CLRC's Executive Director received several requests from "affiliates" – or non-member libraries that make use of a council's services – wanting to make use (as recipients) of CLRC's interlibrary loan service (CCPL-2). (Like CLRC, RRLC is one of New York's "3Rs.") In executing these requests, she realized that it would cost an affiliate less

money to be billed in full via UPS-CS than it would to use UPS' default, non-discounted service. The new service proved to be popular, and in 2009 she began offering it to CLRC customers as well.

4.2.12 Central New York Heritage (CNYH) Digitization Program (CLRC)

Like the larger New York Heritage (NYH) program on which it is built, the Central New York Heritage (CNYH) program aims at making certain local and regional materials – such as photographs, postcards, maps, letters, and other materials of historical interest – accessible to the public through a CNYH platform and web site. Approved member libraries are authorized to publish digitized materials to the CNYH web site, *"but they must scan to the [DPI] specs that we've set and use the metadata standards we've established"* (CLRC-4). CLRC makes available its scanner to participants and will *"go to [participants'] place and load the client and provide training"* (CLRC-4).

How it was conceived. At some point in early- to mid-2007, the topic of digitization by libraries came up at an *"Academic Directors Roundtable"* attended by CLRC administrators. According to CLRC's Member Services Coordinator,

> *"[The Executive Director] said she didn't know much about [digitization], but [that] it's something [CLRC] should be doing. There were people at the table who offered to help her when she figured out what she wanted to do. It stayed on the back burner for a little while. But then the RFP came out for LSTA [i.e., Library Services Technology Act] funds for 2008 to 2010 projects and we said, 'let's see if we can make digitization for smaller members happen."* (CLRC-4)

The Executive Director and Member Services Coordinator "made it happen" by first forming a Digitization Committee (CLRC-10): *"We didn't have the expertise [at CLRC] so we*

formed the committee and populated it with people who do." Rather than perform potentially redundant work, the Digitization Committee decided to draw heavily from SENYLRC's (i.e., Southeastern New York Library Resources Council) digitization program, which in turn conformed to New York Heritage (NYH) standards by using OCLC's (i.e., Online Computer Library Center) CONTENTdm software as a platform. The Digitization Committee submitted the grant in December 2007, and it was awarded *"about nine months later"* (CLRC-4). In 2008, the Fayetteville and Liverpool Public Libraries became the first two libraries to participate in the program.

4.2.13 Affiliate Membership (CLRC)

An "affiliate membership" is a type of membership available to non-members (i.e., affiliates) that lets them purchase CLRC services in an *á la carte* fashion (CLRC-6). According to CLRC's Executive Director (CLRC-6), non-members had mostly been interested in CLRC's basic research and interlibrary loan services. At the time of data collection, CLRC's affiliate membership was offered only as a pilot to a handful of affiliates.

How it was conceived. According to CLRC's Executive Director (CLRC-6), a for-profit, industrial hygiene company *"had been asking us for years to join [CLRC], but we couldn't [let them] because we weren't willing to bend the rules that far"* (Per New York law (CLRC-14), membership in CLRC "is open to any institution that can demonstrate a need to provide improved reference and research services to its users.") In mid-2008, CLRC's ongoing relationship with this company led the Executive Director to articulate a new customer need, namely, *"library services for non-libraries."*

In October 2008 the Executive Director attended the 2008 New York Library Association (NYLA) Conference. In one of the conference's roundtables, discussion centered on membership

diversification and, in particular, on finding ways to gain businesses as customers. The discussion inspired the Executive Director:

> *"I came back from the Conference in Saratoga Springs, and the next day I literally woke up and it came into my head. The thought was this: We should try to develop our affiliate lines by marketing basic research or interlibrary loan to [non-libraries]."*

The Executive Director then contacted the industrial hygiene company.

> *"So I said, 'join us as an affiliate, tell us what you need, we will charge back $10 per [interlibrary loan] transaction and $75 per hour for research'. And they said, 'that seems fine'. And they have since used us extensively. So we went back to the Board and told them that this pilot is successful in that we learned about needs, made some revenue off it."*

The Executive Director is confident that there is a need for an affiliate membership: *"Right now so many firms are doing this search work themselves. We could be doing it better and cheaper."* To the extent that an affiliate membership is successful – such data are not available – CLRC would, according to the Executive Director, gain *"a different voice – a business voice – when threatened with funding cuts."*

4.2.14 Cybermobile (MYLS)

MYLS cardholders can board the cybermobile (parked at designated locations on given dates) and use one of a handful of notebook computers to access the Internet. Cardholders can also pick up and submit governmental forms and browse and check out a limited selection of circulating items (e.g., books, CDs, DVDs).

How it was conceived. At some point in 2007 or 2008, MYLS administrators became aware through stories in the media of library-operated "cybermobiles" (MYLS-3). Marketed as next-

generation bookmobiles, these cybermobiles carried government forms and circulating items (e.g., hard-copy books, CDs, DVDs) and were outfitted with several notebook computers that connect to the Internet wirelessly. When a new Director was hired in January 2009 – the Director who participated in this study – the concept of (and desire for) a cybermobile was discussed at least once (MYLS-4). According to MYLS' Director, she, too, had *"had the idea [for a cybermobile] in the back of my mind for a couple of years."* Without funds to purchase one, though, MYLS put the idea *"on the back burner."*

Then, in April or May 2009, *"an RFP came down from the [New York State Library's] NYLINE listserv."* The RFP had been issued by the New York Library Association (NYLA), which had been charged with administering the Broadband Technology Opportunity Program (BTOP) and allocating funds authorized by the American Recovery and Reinvestment Act (ARRA) of 2009. The timing of this RFP coincided with the demise of MYLS' bookmobile, according to the Director:

> *"More and more people got computers and cars, and less and less people came out to the bookmobile. It got to the point where we were spending too much per circ [i.e., circulated item]. We had to cut it [i.e., the bookmobile]. At the same time our whole system of moving materials around [i.e., the 'floating collection'] was becoming more popular. So we thought, 'Wouldn't it be nice if we could move around our pick-up location? Maybe [customers] could also get on the internet, get their IRS forms. It would be nice to send out a van to rural areas and say, 'Get your forms here'. It could also become an instant wireless hotspot... It would be useful in areas where there's a high concentration of very busy people, like a business park."*

Recognizing in BTOP an opportunity to fund a cybermobile, the Director *"put [the opportunity] on the agenda for the [next] Department Head meeting."* From there, two mid-level administrators – a Reference Consultant and an Automation Consultant – prepared and submitted a proposal in June 2009. In mid-2010 MYLS was awarded a grant to implement a scaled-down version of a cybermobile that NYLA termed "a mobile Public Computing Center (PCC)."

4.3 Fourteen (14) Timelines of New Service Conception

The preceding section's recounting of each new service concept's origins affords an opportunity to analyze the 14 new service concepts. Specifically, **Table 8** illustrates across five pages how administrators at Cuyahoga County Public Library (CCPL), Central New York Library Resources Council (CLRC), and Mid-York Library System (MYLS) realized these new service concepts over time by identifying and ultimately matching unmet customer needs and potential external solutions. As noted in the upper left-hand corner of Table 8, **the shaded column indicates the period of time (i.e., *T[1]*, *T[2]*, *T[3]* or *T[4]*) during which the unmet customer need was matched with potential external solutions solutions to yield the new service concept.** Before these timelines are presented, though, it is essential to provide definitions for seven key terms appearing in Table 8.

New service concept. A new service concept is an idea for a new service that (1) has been developed to a point where the value the customers will receive from it (and how they will receive it) has been articulated and (2) has been specified in terms of its requirements to a point where service system design can commence. In short, a new service concept is a new service idea that is ready for implementation.

Potential external solution. A potential external solution is a resource that – from the library administrator's perspective, at least – *could* help satisfy one or more customer needs. Four external (i.e., outside the library) solutions were identified: *existing service*; *existing ICT*; *funding source*; and *potential partner*. Potential *internal* solutions – such as library employees with pertinent expertise in a given area, or general operating funds – are not included in this model.

Existing service (as a potential external solution). An existing service is a service that is being (or has been) provided by another organization (or other organizations). From the library administrator's perspective, an existing service offers a general model or *blueprint* for its provision in a new context, though implementation in new contexts invariably entails local customization.

Existing ICT (as a potential external solution). An existing information and communication technology (ICT) is an ICT that (1) is available to the market and (2) could support the provision of a new service on a technical level. ICTs are interpreted at a fairly high level in this study; for example, "web-based technologies" enabled CCPL to realize its Cuyahoga Works concept, while "mobile Internet technologies" enabled CCPL to realize its idea to notify customers of available items by text message.

Funding source (as a potential external solution). A funding source is a source of funds (1) that is external to the library and (2) for which receipt is more likely than not. The local and state tax revenues that typically fund public libraries (i.e., general operating funds) are not included here.

Potential partner (as a potential external solution). A potential partner includes any individual who (or group that) could help implement, market or deliver a new service. A potential partner's participation is more likely than not. (Organizations providing *only* funds are included as

funding sources but not as potential partners.) Some partners provide expertise (e.g., America Reads, Velti), while others provide content (e.g., By Kids for Kids, Inc., Cuyahoga County Workforce Improvement Board) or facilities and new customers (e.g., MetroHealth Medical Center, University Hospital's Ahuja Medical Center).

New, unmet customer need. Satisfying customer needs is the service provider's principal function (Ramirez, 1999; Vargo *et al*., 2008). Accordingly, the library administrator works continuously to identify (and/or formulate) new customer needs. Because a library has limited resources, though, the library administrator also must determine which customer needs are most salient. Thus, "unmet customer need" refers here to a customer need that (1) has somehow become salient to the library administrator and (2) has been sufficiently articulated to enable matching with potential solutions.

Reading Table 8 may be made easier by stepping through the first new service concept (i.e., By Kids for Kids, or BKFK) as an example. During the first period of time (*T[1]*), administrators at CCPL identified through interactions with a BKFK representative three potential solutions: an existing service ("BKFK toolkits"); a funding source ("Toolkits provided at no cost"); and a potential partner ("BKFK, Inc."). Next, during the second period of time (*T[2]*), CCPL administrators articulated the customer need ("Children need innovation skills") that was implied by the existing service they had identified during *T[1]*.

CCPL's toy lending service (#8) was realized in much the same way as BKFK. As described in Section 4.2.8, the then-Mayor of Brooklyn, Ohio made CCPL aware in 1991 of a service (namely, toy lending) that was being offered by a local public library in upstate New York. At the same time he offered to fund the implementation of this service in Brooklyn, Ohio. The unmet customer need ("Parents and their children want to borrow toys") was articulated by

Table 8: Fourteen (14) Timelines of New Service Conception

The shaded column indicates the period of time in which the unmet customer need was matched with potential solutions to yield the new service concept.			**Period of Time *T[1]***	**Period of Time *T[2]***	**Period of Time *T[3]***
1) By Kids for Kids (CCPL)	***Potential external solution is identified***	Existing service	BKFK toolkits	---	
		Existing ICT	---	---	
		Funding source	Toolkits provided at no cost	---	
		Potential partner	BKFK, Inc.	---	
	Unmet customer need is articulated		---	Children need innovation skills	
2) Camp Cuyahoga (CCPL)	***Potential external solution is identified***	Existing service	---	---	
		Existing ICT	---	---	
		Funding source	---	Temporary Assistance to Needy Families (TANF) funds	
		Potential partner	---	---	
	Unmet customer need is articulated		Children need a library summer camp	---	
3) Homework Centers (CCPL)	***Potential external solution is identified***	Existing service	Other homework centers	---	---
		Existing ICT	---	---	---
		Funding source	---	---	---
		Potential partner	---	---	Tutors paid by America Reads
	Unmet customer need is articulated		---	Children need homework assistance	---

Table 8: Fourteen (14) Timelines of New Service Conception (continued)

The shaded column indicates the period of time in which the unmet customer need was matched with potential solutions to yield the new service concept.			**Period of Time *T[1]***	**Period of Time *T[2]***	**Period of Time *T[3]***
4) Cuyahoga Works (CCPL)	***Potential external solution is identified***	Existing service	---	---	---
		Existing ICT	---	---	Web-based technologies
		Funding source	---	---	---
		Potential partner	---	Cuyahoga Co. Workforce Improvement Board	---
	Unmet customer need is articulated		Job seekers need a one-stop portal	---	---
5) Library orientation and digital services for teen parents (CCPL)	***Potential external solution is identified***	Existing service	---	---	---
		Existing ICT	---	---	Mobile Internet technologies
		Funding source	---	---	---
		Potential partner	Help Me Grow of Ohio	---	---
	Unmet customer need is articulated		---	Children of teen parents need certain library services	---
6) Item downloading at University Hospital's Ahuja Medical Center (CCPL)	***Potential external solution is identified***	Existing service	---	---	---
		Existing ICT	---	---	OverDrive, Inc.'s download stations
		Funding source	University Hospital agrees to cover all associated costs	---	---
		Potential partner	University Hospital	---	OverDrive, Inc.
	Unmet customer need is articulated		---	Patients and visitors want downloadable e-books and audiobooks	---

Table 8: Fourteen (14) Timelines of New Service Conception (continued)

The shaded column indicates the period of time in which the unmet customer need was matched with potential solutions to yield the new service concept.			**Period of Time *T[1]***	**Period of Time *T[2]***	**Period of Time *T[3]***	**Period of Time *T[4]***
7) Monitor-Mentor program (CCPL)	***Potential external solution is identified***	Existing service	---			
		Existing ICT	---			
		Funding source	---			
		Potential partner	---			
	Unmet customer need is articulated		The "unruly behavior" of some children needs to be curbed			
8) Toy lending service (CCPL)	***Potential external solution is identified***	Existing service	Toy lending service	---	---	---
		Existing ICT	---	---	---	Web-based technologies
		Funding source	The town of Brooklyn, Ohio	---	---	---
		Potential partner	---	---	---	---
	Unmet customer need is articulated		---	Parents and their children want to borrow toys	Toys should be shipped to the customer's library of choice	---
9) New branch library at MetroHealth Medical Center (CCPL)	***Potential external solution is identified***	Existing service	---	---	---	
		Existing ICT	---	---	---	
		Funding source	---	---	Mt. Sinai Health Care Foundation	
		Potential partner	---	MetroHealth Medical Center	---	
	Unmet customer need is articulated		Customers want library services in non-traditional as well as traditional locations	---	---	

Table 8: Fourteen (14) Timelines of New Service Conception (continued)

The shaded column indicates the period of time in which the unmet customer need was matched with potential solutions to yield the new service concept.			**Period of Time *T[1]***	**Period of Time *T[2]***	**Period of Time *T[3]***	**Period of Time *T[4]***
10) Customer notification by text message (CCPL)	***Potential external solution is identified***	Existing service	---	---	---	
		Existing ICT	Mobile communications technologies	---	Database-integrated text-messaging technologies	
		Funding source	---	---	---	
		Potential partner	---	---	Velti, a telecommunications provider	
	Unmet customer need is articulated		---	Some customers want to receive library notifications via text message	---	
11) UPS-Campus Ship for delivery to non-members (CLRC)	***Potential external solution is identified***	Existing service	---	UPS-Campus-Ship		
		Existing ICT	---	---		
		Funding source	---	---		
		Potential partner	---	United Parcel Service, Inc.		
	Unmet customer need is articulated		Non-member libraries want reduced delivery costs	---		
12) Central New York Heritage digitization program (CLRC)	***Potential external solution is identified***	Existing service	New York Heritage	---	---	---
		Existing ICT	---	---	---	---
		Funding source	---	---	---	Library Services Technology Act (LSTA) grant
		Potential partner	---	---	Several digitization experts	---
	Unmet customer need is articulated		---	Some member libraries want to post digitized materials on the web	---	---

Table 8: Fourteen (14) Timelines of New Service Conception (continued)

The shaded column indicates the period of time in which the unmet customer need was matched with potential solutions to yield the new service concept.			**Period of Time *T[1]***	**Period of Time *T[2]***	**Period of Time *T[3]***
13) Affiliate membership (CLRC)	***Potential external solution is identified***	Existing service	---		
		Existing ICT	---		
		Funding source	---		
		Potential partner	---		
	Unmet customer need is articulated		Non-members want certain library services (e.g., interlibrary loan)		
14) Cybermobile (MYLS)	***Potential external solution is identified***	Existing service	Cybermobiles begin appearing in trade magazines	---	---
		Existing ICT	---	---	---
		Funding source	---	---	Funds from the federal Broadband Technology Opportunity (BTOP) Act become available
		Potential partner	---	---	---
	Unmet customer need is articulated		---	Customers need cybermobiles, not bookmobiles	---

CCPL administrators shortly thereafter (during *T[2]*). CCPL's toy lending service differs from CCPL's BKFK service, though, in that a closely related customer need ("Toys should be shipped to the customer's library of choice") was articulated during a subsequent period of time *T[3]*, which depended on the identification (during *T[4]*) of an existing ICT ("web-based technologies") in order to realize the new service concept.

Finally, it may seem curious that two new service concepts – CCPL's Monitor-Mentor program (#7) and CLRC's affiliate membership (#13) – were yielded during the period of time *T[1]* through only the articulation of an unmet customer need. For these two new service concepts, none of the four potential external solutions was needed. Instead, library administrators at CCPL and CLRC were able to satisfy these customer needs using only internal resources.

4.3.1 Analyzing the Fourteen (14) Timelines

The fourteen (14) timelines presented in Table 8 are analyzed here using descriptive statistics in order to identify basic patterns that may be helpful in developing a conceptual model and answering the research question. More specifically, analysis entailed the calculation of various frequencies (e.g., number of unmet customer needs identified during *T[1]*) and the identification of more common sequences. This analysis yielded seven salient findings.

1) *One-half (seven) of the 14 new service concepts were realized during a third time period.* Of the remaining seven new service concepts, four were realized during period of time *T[2]*, two during *T[4]*, and two during *T[1]*. (These numbers total 15 because two concepts were realized for CCPL's toy lending service.) No new service concepts required a fifth time period, though it should be noted that the length of time between the first (*T[1]*) and final (*T[n]*) time period varied across new service concepts. (The normalization of time is

discussed in more detail below.)

2) *The unmet customer need was articulated during the first time period (T[1]) in six of the 14 new service concepts*. For the remaining eight new service concepts, the unmet customer need was articulated during the second time period (*T[2]*).

3) *Ten of the 14 new service concepts depended on two or three potential external solutions.* One new service concept (i.e., CCPL's item downloading at Ahuja Medical Center) depended on four potential external solutions, while two new service concepts depended on no potential external solutions.

4) *No new service concept depended on all four types of potential external solutions*. Five new service concepts depended on the identification of three of the four types of potential external solutions.

5) *The most commonly identified potential external solution was the 'potential partner' (10 new service concepts)*. The 'external funding source' solution was identified for seven new service concepts, while the 'existing ICT' and 'existing service' solutions were each identified for six new service concepts.

6) *There were only three new service concepts for which an unmet customer need was articulated during the final period of time*. For two of these new service concepts – CCPL's Monitor-Mentor program (#7) and CLRC's affiliate membership (#13) – the library in question relied only on internal resources to realize the new service concept. For the third new service concept (CCPL's By Kids for Kids), the customer need ("Children need innovation skills") was articulated shortly after being implied by the existing service (BKFK toolkits) that was identified.

7) *Eleven of the 14 new service concepts were realized only after the identification of an existing ICT, funding source, or potential partner*. An existing ICT was the final "piece of the puzzle," so to speak, for five of the new service concepts, while an external funding source and a potential partner were each the final pieces for four of the new service concepts.

Three major implications emerge from these findings. The **first implication** is that ***time is an essential element of the process through which unmet customer needs and potential external solutions are matched***. In particular, each of the 14 new service concepts examined for this study was realized through no more than four time periods. This does not necessarily mean that the new service concepts were realized rapidly or in short durations, though for some of them this may be true. Rather, it suggests that *the matching processes which yielded these new service concepts involved four steps at the most*. What is not specified in Table 8, though, is time's length during or between these steps. The narratives of study participants (from which these findings are drawn) offer some specificity in this regard, but only to a degree; moreover, the ability of most respondents to accurately recall the exact week, month or even year of a certain event (such as when s/he became aware of a certain ICT) is limited. As a result, time is effectively normalized here.

Nevertheless, the finding that all 14 new service concepts emerged over four or fewer steps suggests – in concert with other evidence (e.g., the relatively few number of potential external solutions identified for most new service concepts) – that the development of most new library service concepts *may be* unelaborate. On the other hand, the finding that more new service concepts were realized during the third period of time (*T[3]*) than any other implies that many matching processes will involve more than two steps. In other words, for many new service concepts there will be at least three periods of time during which a library administrator

actively pursues or waits for external solutions that can be matched with an unmet customer need *or* actively pursues or waits for a customer need that can be matched with a set of potential solutions.

A **second implication** of these findings is that ***external solutions are essential to producing most new service concepts***. The finding that none of the 14 new service concepts depended on all four types of potential external solutions suggests that (1) some types of potential external solutions may not be needed to realize certain new service concepts and (2) library administrators rely on internal resources to help realize some new service concepts. The significance of potential external solutions should not be downplayed, though: first, only two new service concepts were realized through only internal resources; and second, ten of the 14 new service concepts depended on two or three potential external solutions, while another new service concept depended on four of them.

Moreover, potential partners appear to play a key role in new library service conception, with 10 of the 14 new service concepts having depended on one. Of these 10 partners, five were public or non-profit organizations, four were private-sector firms, and one comprised a group of cross-sector digitization experts. This apparent dependence on a partner implies that the conception and implementation of new library services often requires in-kind services and other forms of complementary resources (e.g., expertise, capabilities).

Finally, and perhaps not surprisingly, external funding sources and existing ICTs also appear to play key roles in new library service conception. In particular, the data suggest that the significance of these two solutions may be reflected not in the number of new service concepts that depended on them, but rather in their identification during the period of time in which the new service concept was realized. Indeed, six of the seven external funding sources and five of

the six existing ICTs were identified during this period of time, suggesting that their identification was essential to the new service concept's realization. In nearly all of these cases, it is possible if not likely that the new service concept in question would not have been realized without the ICT or external funding source.

A **third implication** of these findings is that ***the new service concepts can be classified according to the way in which the matching process began***. More specifically:

- Six of the 14 new service concepts can be characterized as ***need-driven*** in that the matching process began with a customer need articulated by a library administrator; and
- Eight of the 14 new service concepts can be characterized as ***solution-driven*** in that the matching process began with a potential external solution identified by a library administrator.

For example, CCPL's concept for Camp Cuyahoga was need-driven in that it began when a library administrator determined that "children need a library summer camp." CCPL's concept for its Homework Centers, on the other hand, began when a library administrator identified an existing service, namely, a Homework Center operated by another library. The recognition that some new service concepts are need-driven while others are solution-driven points to several questions that can be addressed in subsequent, larger-N studies: Do certain libraries – or certain library administrators – tend to produce more need- or solution-driven new service concepts? If so, why? Do need-driven new service concepts tend to be more successful than solution-driven new service concepts (or vice versa)? Which is more likely to yield a new service concept – a new customer need or a potential external solution? Finally, does serendipity seem to play a role in solution-driven new service concepts, or are concept-initiating solutions identified by those who possess the sagacity to recognize them?

In the proceeding chapter (i.e., Chapter 5), I draw from the findings presented in this chapter to introduce a temporal model of mindful interactions around new service conception. Following a brief discussion of the concept of mindfulness, each of the model's components is described and illustrated with examples. Chapter 5 concludes with a discussion of some of the more salient implications of the model.

5 A TEMPORAL MODEL OF MINDFUL INTERACTIONS AROUND NEW SERVICE CONCEPTION

This chapter introduces new theory by describing a temporal model of mindful interactions around new service conception. As the model's title implies, the notion of *mindfulness* is essential to the model. Accordingly, this chapter begins by briefly reviewing the mindfulness literature and providing a definition of mindfulness for use with this study. The model is then described, through its three major components and through examples drawn from Chapter 4, in Section 5.2. The chapter concludes in Section 5.3 with a discussion of the model's implications for the research question.

5.1 Mindfulness in New Service Conception

The concept of mindfulness emerged in this study during the open coding phase (see Section 3.4.1). More specifically, during this phase I documented, through a theoretical memo, how I associated a certain set of preliminary categories with Weick and Sutcliffe's (2006) concept of mindfulness, with which I had been familiar for some time. During the axial coding phase I re-read the article and, as a result, was sensitized to the concept while developing the model presented in Section 5.2. So what, exactly, is meant by "mindfulness," and why did I determine that the concept helped explain new service conception? Moreover, what other definitions of mindfulness have been advanced, and which definition best explains the phenomenon being investigated?

The bulk of studies of individual mindfulness from the management sciences draw directly or indirectly from work by Langer (1989), who in turn drew heavily from educational psychology. For Langer (1989), individual mindfulness is best understood as a state of consciousness in which an individual is "alert and actively aware" of present circumstances as they unfold. Rather than functioning on "auto-pilot" and mindlessly enacting routines that

dictate how sense is made of complexity and how behavior is governed (Ray *et al*., 2011; Issel and Narasimha, 2007; Swanson and Ramiller, 2004), the mindful individual tries to process "real time" information reflectively, sensitive to the potential of this information to challenge prevailing assumptions.

Routines are not without their virtues, though (Levinthal and Rerup, 2006). What is often described as "mindless" behavior is behavior that can promote learning, signal competency, strengthen social bonds, and execute everyday tasks with greater efficiency (Hoy, 2003). Moreover, mindfulness as the continuous focus of attention to a limited set of concerns can be detrimental; one of the opportunity costs of mindfulness, for example, is the potential value of some so-called "distractions" (Levinthal and Rerup, 2006; Weick and Roberts, 1993). Accordingly, Levinthal and Rerup (2006) posited that mindfulness and mindlessness are complements: routines enable individuals to attend mindfully to higher-order tasks such as the detection and processing of "the unexpected" and its subsequent development into new routines (Weick and Sutcliffe, 2006).

Thus, the individual's tendency toward mindlessness makes mindfulness possible and instrumentally valuable. For Weick and Sutcliffe (2006, p. 522), mindfulness can produce value where *an individual maintains awareness of a "discriminatory detail" during interactions in which this detail is not the primary focus*. (It is this suggestion that I recalled while coding data.) By keeping in mind a discriminatory detail, an individual is better able (or is more likely) to make associations between the detail (e.g., a fact, opinion, or proposition) and new information (Dane, 2011). Weick and Sutcliffe go on to suggest that mindfulness thus defined brings into play both Western and Eastern notions of mindfulness. While they do not elucidate on this suggestion (as it is raised in closing), contemporaneous work by Weick and Putnam (2006)

develops the idea further. Specifically, Weick and Putnam distinguish between Eastern and Western notions of mindfulness as follows:

> "In Eastern thought, to be where you are with all your mind means to pay more attention to internal processes of mind rather than to the contents of mind… In Western thought, to be where you are with all your mind means to pay more attention to the content of mind." (p. 276)

In other words, and in this author's words, mindfulness in the Eastern sense entails a keen awareness of one's 'train of thought' or *cognitive flow*, while mindfulness in the Western sense entails keeping in mind certain information or *content*. In practice, ***these two modes can be maintained concurrently in order to facilitate knowledge creation***. Specifically, one can be mindful during an interaction of its potential for engendering novel content (cognitive-flow mindfulness) while keeping in mind certain content with which one is already familiar (content mindfulness). The individual who accomplishes this is better able to articulate the relationship between new information and existing knowledge.

By seeing individual mindfulness in these terms – as the maintenance of two interacting modes of mindfulness in order to create knowledge – the notion of mindfulness can be applied to new service conception. In order to apply it to the present study, though, one should consider *what it means to be mindful in an organizational context*. According to Swanson and Ramiller (2004, p. 555), organizational mindfulness can be understood as "an organizational property grounded in the minds of participating individuals." More specifically, a mindful organization is an organization whose members (1) comprehend "organizational facts" (Swanson and Ramiller, 2004) and (2) have reached, through an ongoing process of "heedful interrelating" (Weick *et al*., 1999), some level of consensus on ***what they should be mindful of*** (i.e., content mindfulness)

and ***when they should be mindful*** (i.e., cognitive-flow mindfulness). Presumably, it can be said that an organization is mindful when a preponderance of an organization's members satisfy these criteria.

Organizational mindfulness was popularized nearly 20 years ago by Weick and Roberts (1993), who developed the concept as an explanation for how "high-reliability organizations" (e.g., nuclear power plants, air traffic control units, naval aircraft carriers) prevent catastrophic failures. Building on Weick and Roberts' work, Weick *et al*. (1999) proposed that a high-reliability organization can be mindful in five ways: preoccupation with failure; reluctance to simplify; sensitivity to operations; commitment to resilience; and deference to expertise. These five strategies can be understood, per Weick and Sutcliffe (2006), as the five discriminatory details of which members of high-reliability organizations should be mindful.

The discriminatory details of which individuals are mindful often depend on the organization. For members of an innovative library, for example, content mindfulness might entail keeping in mind the library's mission and major goals, unmet customer needs, and potential external solutions. By keeping these "details" in mind, a library administrator who also is mindful of her cognitive flow can associate this content with new information as it is received. In turn, she may be able to identify an external solution that satisfies an unmet customer need and/or formulate a new customer need that helps accomplish her library's mission.

For this study, then, mindfulness is defined as a state of consciousness maintained by an individual who is working on behalf of a "heedfully interrelating" organization (Weick *et al*., 1999). More specifically, *the mindful individual maintains both cognitive-flow mindfulness and content mindfulness in order to facilitate new service conception*. Thus, this study conceives mindfulness first and foremost as a means by which a library conceives new services through its

administrators. Implied by this conception is that innovative library administrators can increase the production of new service concepts by effectively maintaining mindfulness. This implication is developed in the following section, in which I introduce and describe a temporal model of mindfulness around new service conception.

5.2 A Description of the Model and Its Three Components

The model presented in **Figure 4** ("A Temporal Model of Mindful Interactions Around New Service Conception") is a response to the research question, How do library administrators conceive new services? This model depicts library administrators – that is, people who set goals and make strategic decisions on behalf of a library or a large program or division within a library – not as people who (as mostly portrayed in the literature) facilitate the conception of new services, but rather as people who conceive them directly. More specifically, the model posits that the innovative library administrator continuously identifies new customer needs and new potential external solutions through seven types of mindful interactions. At the same time, she tries to match unmet customer needs with potential external solutions in order to produce a *new service concept* that is ready for implementation.

The model shown in Figure 4 is composed of three major components: the mindfulness of three categories of content (i.e., the library's mission and major goals, unmet customer needs, and potential external solutions); mindful interactions yielding new customer needs and potential external solutions; and the matching of unmet customer needs with potential external solutions. In the remainder of this section I describe these components and illustrate each one with examples taken from Chapter 4.

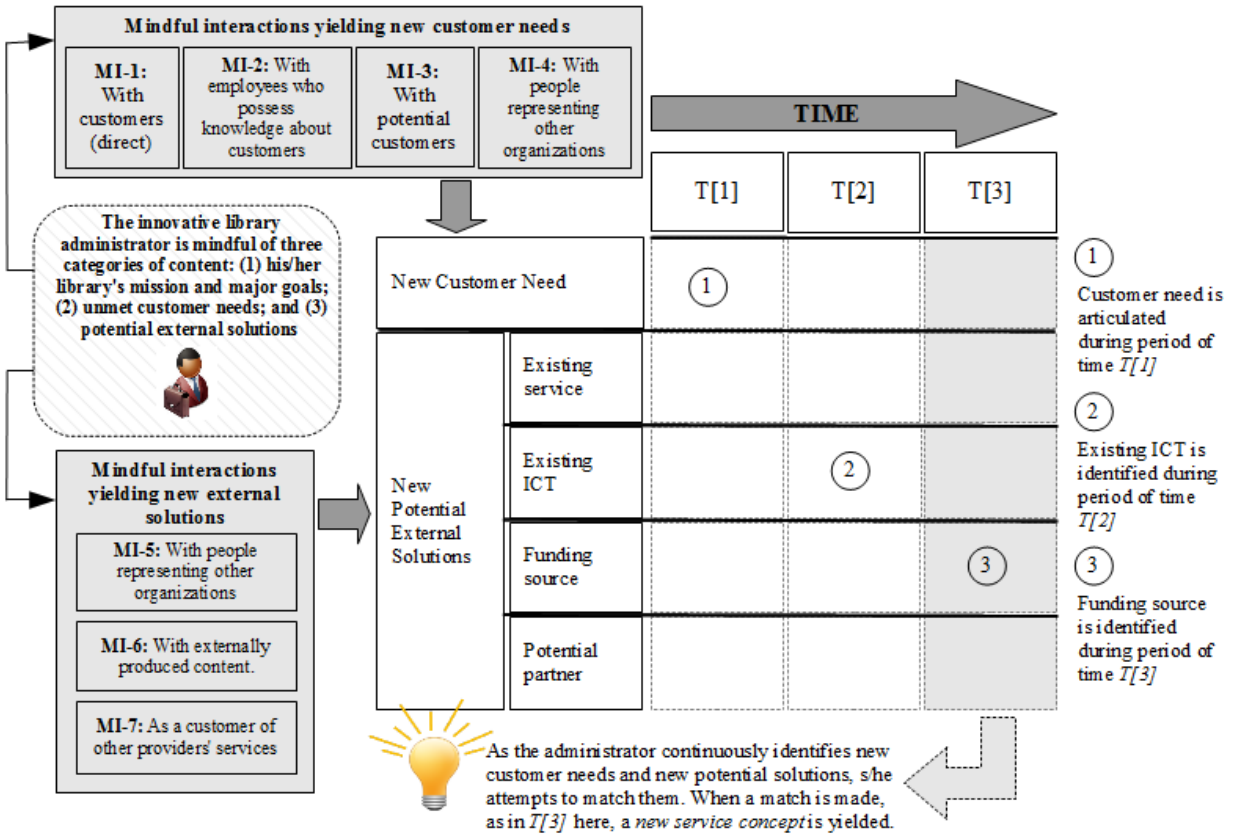

Figure 4: A Temporal Model of Mindful Interaction Around New Service Conception

5.2.1 Mindfulness of Three Categories of Content

As shown in Figure 4, the innovative library administrator brings to certain interactions (i.e., MI-1 through MI-7) a mindfulness of three categories of content, each specific to her organization: (1) the library's mission and major goals; (2) unmet customer needs; and (3) potential external solutions. Each of these categories of content mindfulness is discussed and illustrated with examples in turn.

Mindfulness of the library's mission and major goals. One of CCPL's Branch Services Director stated that *"innovation is always [pursued] in the context of mission, vision, and the larger host community"* (CCPL-9). In other words, innovation efforts within an organization are structured in large part by the organization's mission and major goals. Without this structuring, the

innovative library administrator – that is, the library administrator who successfully produces new service concepts – would not be able to select or identify the new customer needs and/or new potential external solutions that best fit the organizational mission; moreover, she may be unable to filter out those needs or solutions that are irrelevant or relatively unimportant.

The innovative library administrator must do more than merely comprehend her organization's mission and major goals, though. Rather, she must be mindful of them as she engages in the *interactions* shown in Figure 4 (and discussed below). For example, CCPL's Youth Services Director was mindful of one of CCPL's Six Priorities – namely, to "maximize youth potential" – while assessing the effectiveness of CCPL's Homework Centers with branch-level employees (MI-2). As a result, the Youth Services Director formulated a new customer need (i.e., children need a library summer camp). Similarly, CLRC's Executive Director was mindful of a key item from CLRC's vision statement – namely, to provide cost-effective services to members – while working *"on the side"* as a consultant for the Rochester Regional Library Council (RRLC). Through her work for RRLC and with non-members as potential customers (MI-3), she formulated a new customer need (i.e., non-member libraries want reduced delivery costs).

Mindfulness of unmet customer needs. As noted in Section 4.3, satisfying customer needs is the service provider's principal function. Accordingly, the innovative library administrator works continuously to identify new customer needs *and* to satisfy or meet those needs. In order to identify the external solutions that will satisfy an unmet customer need, though, the innovative library administrator must keep the need in mind as she engages in interactions yielding new potential external solutions (i.e., MI-5, MI-6, and MI-7 in Figure 4).

For example, in 2004 or 2005, CCPL's Executive Director determined that many customers would like to be notified by text message of the availability of requested library items. At that time, she was told by CCPL's IT Director that the IT Department lacked the capability to provide the service. Then, at some point in mid- to late-2005, and with the unmet customer need still in mind, the Executive Director was introduced to a representative of Velti, a telecommunications provider. During their conversation (MI-5) she deduced that Velti could provide the envisioned service.

A second example involves MYLS' conception of its cybermobile service (Section 4.2.14). In April or May 2009, *"an RFP came down from the [New York State Library's] NYLINE listserv."* The RFP had been issued by the New York Library Association (NYLA), which had been charged with administering the Broadband Technology Opportunities Program (BTOP) and allocating funds authorized by the American Recovery and Reinvestment Act (ARRA) of 2009. Mindful of the need for a cybermobile that could replace the recently discontinued bookmobile program, the Director saw in the RFP (MI-6) a funding opportunity.

Mindfulness of potential external solutions. A potential external solution is an external resource that – from the library administrator's perspective, at least, *could* help satisfy one or more customer needs. (The four potential external solution types – the existing service, the existing ICT, the potential partner, and the potential funding source – are defined in Section 4.3.) Just as the innovative library administrator must keep in mind unmet customer needs in order to identify external solutions that can satisfy it, so, too, must the innovative library administrator keep in mind, during certain interactions (i.e., MI-1, MI-2, MI-3, and MI-4 in Figure 4) potential external solutions in order to identify new customer needs that can be satisfied by them.

For example, CCPL's Executive Director kept in mind an existing ICT (i.e., mobile Internet technology) while engaging directly with customers (MI-1); as a result, she formulated a new customer need (some customers want to receive library notifications by text message). And MYLS's administrators kept in mind an existing service (i.e., cybermobiles) while interacting with customers (MI-1) and branch-level employees (MI-2), with a new customer need (customers need cybermobiles, not bookmobiles) being the result.

5.2.2 Mindful Interactions Yielding New Customer Needs and New Potential External Solutions

The previous section (i.e., Section 5.2.1) demonstrated that innovative library administrators at each of the three case sites maintained mindfulness of three categories of content. The innovative library administrator must do more than merely maintain content mindfulness, though. Rather, while engaging in the interactions shown in Figure 4, she must maintain content mindfulness *and* cognitive-flow mindfulness (e.g., "How is this conversation relevant to our need to provide services in non-traditional locations?"). In other words, the innovative library administrator must be mindful of the potential within an interaction for implied or explicitly stated new customer needs and potential external solutions *while keeping in mind certain content*. By being mindful in both regards at the same time, she is better able to articulate the relationship between new information and existing knowledge.

For example, while meeting with members of the Cuyahoga County Board of Commissioners (MI-5), CCPL's Executive Director was mindful of the meeting's potential for engendering an external solution for an unmet customer need she had kept in mind, namely, the need for a library summer camp for children. By maintaining content mindfulness (of the unmet customer need) and cognitive-flow mindfulness (of the meeting's potential), she realized that

Temporary Aid to Needy Families (TANF) funds administered by the Board could, if awarded to CCPL, be used to fund the summer camp for children (i.e., Camp Cuyahoga).

Another example involves CLRC's "affiliate membership" service. While talking to a representative of a for-profit, industrial hygiene company (MI-3), CLRC's Executive Director was mindful of the conversation's potential for engendering a new customer need that would help CLRC accomplish its mission to "serve as an information and expertise resource" for central New York. (This mission was the content of which she was mindful.) Her mindfulness of content and cognitive flow led her to formulate a new customer need, namely, that non-members want certain library services.

5.2.3 The Matching of Unmet Customer Needs with Potential External Solutions

"*Innovation is like a jigsaw puzzle, [with] certain pieces in place… How can we put the puzzle together?"*
– CCPL's Youth Services Director (CCPL-3)

In each of the two examples presented in the preceding section (i.e., Section 5.2.2), an administrator maintained mindfulness of content (e.g., a customer need) and mindfulness of her cognitive flow (e.g., a meeting's potential for engendering a new external solution) in order to identify (1) an external solution that could help satisfy an unmet customer need or (2) a customer need that could be satisfied by potential external solutions. As illustrated in Figure 4, these identification efforts are part of a *matching process*. When the innovative library administrator successfully matches an unmet customer need with external solutions that can satisfy it, a ready-to-implement service concept is yielded.

While the matching of unmet customer needs and potential external solutions can involve mindfulness, many matches are made without it. In many instances, the matching process is fairly straightforward, such as when there is a customer need for which the set of solutions is

obvious and attainable, or when there is an existing service for which the customer need is implied. Indeed, there are a handful of examples from the cases – including CCPL's By Kids for Kids program, Homework Centers, and toy lending service – in which an administrator is made aware of an existing service through which the customer need is implied.

It is also worth noting that the innovative library administrator's *match options* – that is, the unmet customer needs and potential external solutions for which a match is being sought – tend to change over time. Some are forgotten as other options become more salient, while others are decisively jettisoned upon being deemed infeasible, unsalable, or unimportant. Still others serve as options for a fairly long period of time.

The new service concept matching process can be illustrated through the case of CLRC's Central New York Heritage (CNYH) digitization service (Section 4.2.12). Here, the process began when CLRC administrators learned about New York Heritage (NYH), a service offered by the New York Library Association (NYLA) that allows authorized contributors to upload digitized, historically significant materials to a publicly accessible web site. The administrators soon decided that many of their customers would value such a service. Over the next several weeks, the administrators assembled a panel of digitization experts (as a potential partner) to help further develop the idea of a digitization service for central New York. Finally, the administrators identified a funding source (i.e., a Library Services and Technology Act (LSTA) grant) that enabled them to match the three external solutions (i.e., NYH as an existing service, the panel of experts as a potential partner, and the LSTA grant as a funding source) with the customer need (to upload/post digitized materials). In this case, it should be noted, mindfulness only played a part in yielding the LSTA grant as a funding source: while mindful of the customer need (as content), the administrators also were mindful of the potential of their interaction with

externally produced content (MI-6) – namely, an RFP for LSTA funds – for engendering a new solution (i.e., an LSTA grant).

5.3 Discussion

The model presented in Figure 4 serves as an attempt to explain at a conceptual level how library administrators conceive new services. The model posits that innovative library administrators continuously identify new customer needs and new potential external solutions through seven types of mindful interactions. At the same time, they try to match unmet customer needs with potential external solutions in order to produce a new service concept that is ready for implementation.

The model raises two major questions, though. First, why do certain problems become salient to the innovative library administrator? Libraries have limited resources, and people have cognitive limitations, so the administrator can only keep in mind so many unmet customer needs and potential external solutions. (CCPL's Executive Director referred in one interview to a *"short list"* of unresolved priorities.) But which ones? The data suggest that three factors help determine a customer need's salience.

The customer need's fit with the library's mission and major goals. For example, CCPL's Executive Director made job seekers' need for a one-stop web portal a priority because one of CCPL's Six Priorities is to "put Cuyahoga County back to work."

The existence of known external solutions that can readily address the customer need. The need for mobile library services (via cybermobiles) became salient to MYLS' Director when federal funds became available. Similarly, the need for homework assistance for children became salient to CCPL administrators when Temporary Aid to Needy Families (TANF) funds became available.

The timing of the customer need vis-a-vis the innovative library administrator's dynamic agenda. After identifying MetroHealth Medical Center as a desired location for providing library services, CCPL's Executive Director waited more than a year to contact MetroHealth's President to inquire about securing space for a new branch library. Why was there a lapse between the time this customer need was first identified and the time it compelled action? The reason given by CCPL's Executive Director was simply that she and her colleagues finally "*got around to it*." In other words, other unmet customer needs (and other concerns) were simply a higher priority.

Along similar lines, why do innovative library administrators keep in mind certain potential external solutions that do not immediately address any unmet customer needs? The data shed very little light on this question. Indeed, findings suggest only that innovative library administrators see certain external solutions as being *"the wave of the future"* (e.g., CCPL's Executive Director and mobile Internet technologies) and/or somehow applicable to their conception of future librarianship.

The second major question raised by the model is the question of whether the same model would have been produced without the CLRC and MYLS cases. After all, CCPL is widely renowned as an innovator, and ten of the 14 new service concepts examined in this study were produced by its administrators. Upon closer inspection, though, we see that there was evidence of mindful behavior in the production of MYLS' new service concept (i.e., the cybermobile) and in the production of CLRC's three new service concepts. Thus, while it is likely that mindfulness aimed at conceiving new services is more common in public libraries such as CCPL – that is, in large, well funded, consolidated libraries with a strong organizational culture – data from this study suggest that such mindfulness can be maintained by administrators in smaller, poorly funded libraries with different organizational structures (e.g., a cooperative, a consortium)

and/or fragmented organizational cultures (such as at MYLS).

This claim begs to be qualified, though. The data also show that MYLS' new service concept and all three of CLRC's new service concepts were yielded only after an external funding source was obtained. In contrast, four of CCPL's 10 new service concepts were yielded without one (i.e., they drew only from general operating funds). For libraries such as CLRC and MYLS, the reality is that very few new services can be developed and delivered without grant monies or without a mechanism within the service for generating revenue. This does not mean that the administrators of these libraries should stop trying to innovate, or should stop being mindful of new service possibilities, but rather that (1) they must be mindful, perhaps to a greater degree than their counterparts at better-funded libraries, of an interaction's potential for engendering an external funding source, and (2) they may not be able to devote as much time to identifying new customer needs and potential external solutions. Instead, much of their time must be devoted to ongoing financial challenges or, as at MYLS, to problems associated with organizational dysfunction.

6 LIMITATIONS, IMPLICATIONS, AND FUTURE RESEARCH

This study aimed at developing foundational theory on the most salient gap in the service innovation, new service development, and library innovation literatures, namely, how new services are conceived. The model that emerged from an interpretive study of three case organizations and 14 new service concepts depicts library administrators as active producers of new service concepts. Through seven types of mindful interactions they identify new customer needs and new potential external solutions on an ongoing basis. At the same time, they try to match unmet customer needs with potential external solutions in order to formulate a ready-to-implement new service concept.

For some new service concepts, this matching process is straightforward, such as when there is a new customer need for which the set of potential external solutions is obvious. The matching process is not straightforward, though, when a library administrator lacks (1) a solution for an unmet customer need or (2) a customer need for a compelling external solution that has been identified. Where these conditions are present, the library administrator may benefit from keeping in mind during certain interactions the need for a solution to her customer need or for a customer need to which her solution applies. By engaging in interactions mindfully, the production of a new service concept becomes more likely.

The remainder of this chapter is organized into four sections. After discussing the model's limitations in Section 6.1, I outline the model's implications for research (Section 6.2) and for practice (Section 6.3). The chapter concludes in Section 6.4 with a brief discussion of the possibilities for future studies which make use of the model.

6.1 Limitations of the Model

While many of the limitations associated with the present study's design and methods were noted

in Chapter 3, four limitations of the model described in Chapter 5 merit brief discussion here. The first of these limitations was implied in Chapter 3 but is sufficiently important to warrant explicit consideration: given that the human ability to recall past events is limited (e.g., Nisbett and Wilson, 1977), the degree to which the model depicts events as they actually happened depends on the stories told by participants and, in particular, on the sequence of events in their stories. Indeed, future studies aimed at developing the model also will face this limitation. Perhaps what is needed, to the extent possible, are studies that make extensive use of direct observation to study participants as they engage in interactions. One of the basic problems for empirical studies of new service conception is that activities surrounding the endeavor are rarely documented. The exception to this rule might be e-mails that shed some light on interactions, but the reluctance of many participants to share e-mails, or their inability to retrieve them, effectively prevents the researcher from making use of them.

A second major limitation of the model involves an omitted construct, namely, internal solutions. The model posits that innovative library administrators engage in mindful interactions in order to identify new customer needs and new potential external solutions; these customer needs and external solutions are then matched in order to produce a new service concept. But what about *internal* solutions? Are internal solutions (e.g., the employee expertise, ICTs, business processes, general operating funds) not part of the matching process described in Section 5.2.3? Are they not kept in mind during the seven types of interactions identified in the model?

Internal solutions *are* part of the matching process, of course, and the data imply that administrators routinely keep them in mind while trying to identify new customer needs and new external solutions. Indeed, the model would likely be improved by the integration of internal

solutions. Internal solutions were omitted from *this* study, however, because the data revealed that library administrators – even those at Cuyahoga County Public Library (CCPL), where there was evidence of slack resources – often must go outside the organization to obtain the resources needed to produce a new service concept. Accordingly, the model serves in part as a means of emphasizing the importance of external resources to the process of new service conception.

A third limitation of the model is that it explains not how libraries conceive new services, but rather how *library administrators* conceive new services. Thus, the innovative efforts undertaken by non-administrators in libraries are not considered. While there is little doubt that librarians and other staff who routinely interact with customers also help produce new service concepts, an inquiry into their efforts in this regard was beyond the study's scope. Ultimately, a model of mindful new service conception by these workers should be integrated into the model presented here.

A fourth and final limitation of the model is that it does not say how innovative library administrators learn how and when to be mindful. Do some individuals tend to be more mindful than others? If so, why? Is mindful behavior partly a function of one's temperament or personality, or one's passion for his work? Is mindfulness aimed at conceiving new services learned over time? If so, how? To what extent does mindfulness entail the exercise of discipline? Can mindfulness be taught? If so, are there best practices for teaching it? While the answers to these questions have important implications for the model and its application, the work needed to produce them exceeded the study's scope.

6.2 Implications of the Model for Research

The model described in Chapter 5 has major implications for the library innovation and new service development domains and for cross-domain work on individual mindfulness in an

organizational setting. Each of these areas of inquiry is discussed briefly in turn.

Library innovation. While library innovation has been the subject of infrequent inquiry (e.g., Drake and Olsen, 1979; Katsirikou and Sefertzi, 2000; Deiss, 2004), the library innovation literature had not been reviewed systematically until this study did so. The major product of this review (see Section 2.3) is a five-item typology of library innovation studies: (1) case studies of innovation by and in libraries; (2) studies presenting a proof-of-concept for a new technology or managerial practice conceived by a library; (3) studies that identify and promote innovative uses of an existing technology; (4) studies (or articles) in which an expert offers advice on library innovation; and (5) critical and conceptual studies of library innovation.

The library innovation domain as a whole was found to be largely atheoretical, a finding supported by the dearth of studies that can be included in the fifth category. The typology's second category – studies presenting a proof-of-concept for a new technology or managerial practice conceived *by a library* – is an especially important discovery in that it yields evidence that (1) libraries *do* conceive new-to-the-market services and (2) library administrators are direct producers of these innovations, and not just facilitators. Indeed, this category of studies informed the study's research question.

This study also contributes to the library innovation literature through the model itself. In short, the model posits that the innovative library administrator continuously identifies new customer needs and new potential external solutions through seven types of mindful interactions. At the same time, she tries to match unmet customer needs with external solutions in order to produce a new service concept that is ready for implementation. As discussed in Section 5.3, administrators in resource-challenged libraries can still be mindful of new service possibilities, but they must also be mindful, to a greater degree than their counterparts at better-funded

libraries, of an interaction's potential for engendering an external funding source. Moreover, they may not be able to devote as much time to identifying new customer needs and new potential external solutions.

Finally, the study contributes to the library innovation literature by suggesting that library innovation is driven not only by new information and communication technologies (Drake and Olsen, 1979; Katsirikou and Sefertzi, 2000), customer input (Scupola and Nicolajsen, 2010, Lu and Guo, 2009), and strategic plans (Deiss, 2004), but by two other catalysts as well: first, by existing services offered in non-library markets (e.g., By Kids for Kids); and second, by potential partners. An example of the latter driver can be seen in CCPL's library orientation and digital services for teen parents (Section 4.2.5), in which CCPL first identified a potential partner (i.e., Help Me Grow of Ohio) before formulating a customer need requiring resources from the partner.

New service development. As noted in Section 2.1, the new service development (NSD) domain is concerned primarily with how service providers produce successful new services. To this end, NSD researchers have focused the bulk of their efforts on developing a normative, multi-stage model of NSD. In this model (see Figure 1, page 11), NSD comprises a "back end" (i.e., service system design and implementation) about which much is known and a "fuzzy front end" (i.e., idea generation and development) about which little is known. As Dimov (2007, p. 717) put it, "perhaps the main deficiency of this research is the conceptual collapse between a first insight and the idea that ends up being implemented." The model described in Chapter 5 can be seen as filling, or at least beginning to fill, this very gap.

Individual mindfulness in an organizational setting. The model draws from concepts advanced by Weick and Sutcliffe (2006) and Weick and Putnam (2006) to apply a reconceptualized notion

of individual mindfulness – that is, the concurrent maintenance by an individual of organizationally-influenced *content mindfulness* and *cognitive-flow mindfulness* – to the context of new service conception by library administrators. The contribution to extant work on individual mindfulness in an organizational setting is thus twofold: first, the reconceptualization itself, which extends Weick and Sutcliffe's (2006) and Weick and Putnam's (2006) concepts; and second, the articulation of the role played by individual mindfulness (as reconceptualized) in *creating knowledge* (in the form of a new service concept) by making novel associations between the content about which one is mindful (e.g., a fact, an opinion, or a proposition) and new information.

6.3 Implications of the Model for Practice

The model has two major implications for library administrators. First, the model demystifies library innovation's "fuzzy front end" while providing a language for talking about library innovation. Using the model, library administrators can see that new service conception entails the concurrent maintenance of content mindfulness (i.e., mindfulness of the library's major goals, of unmet customer needs, and potential external solutions) and cognitive-flow mindfulness during interactions aimed at identifying new customer needs and new external solutions. In addition, they can see that a new service concept is yielded by matching external solutions with the unmet customer needs they can satisfy. If library administrators can understand this process and the meaning of key terms, then they may be able to produce more and/or higher-quality new service concepts.

The second major implication for practice is that the findings behind the model generally reinforce what many library administrators may already believe, namely, that external solutions – and particularly partners and funding sources – are essential to the production of many, if not

most, new service concepts. Fortunately, though, there is also evidence of mindfulness by administrators in resource-challenged libraries (see Sections 4.2.12, 4.2.13, and 4.2.14). The mindfulness maintained by these administrators led to three ready-to-implement new service concepts, including one concept (CLRC's "affiliation membership" in Section 4.2.13) designed to generate revenues.

6.4 Future Research

The model developed in this study affords several opportunities for application and further development. First, and as discussed in Section 6.1, the model would likely be improved by the integration of *internal* solutions as a construct. Second, and also discussed in Section 6.1, a model of new service conception by libraries (and not just by library administrators) must take into account the innovation efforts of non-administrators, and especially librarians and other staff members who routinely interact with customers.

Third, subsequent studies could apply the model to (and test it in) other library administration contexts. Researchers also could apply the model to other service provider contexts, especially those with similar characteristics (e.g., public agencies and non-profit organizations, information service providers. These studies may in turn be able to identify (1) additional types of external solutions and/or (2) additional interaction types through which administrators identify new customer needs and new potential external solutions.

Finally, the model could be augmented with research into how mindfulness can be learned and taught, and with research into how library administrators and other service innovators know how and when to be mindful. If mindfulness aimed at conceiving new services can be learned and practiced, then the model's implications for practice become considerably stronger.

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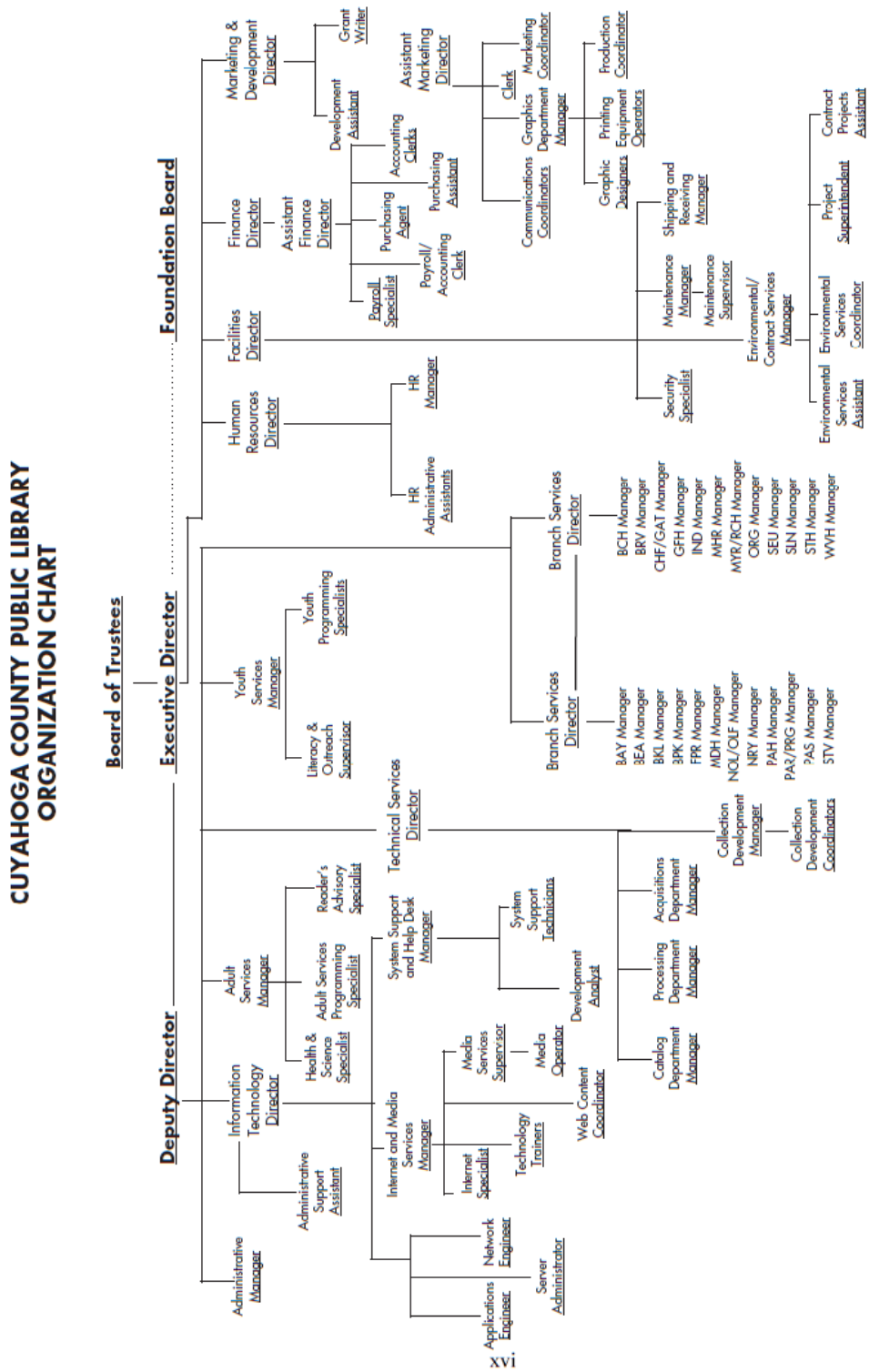
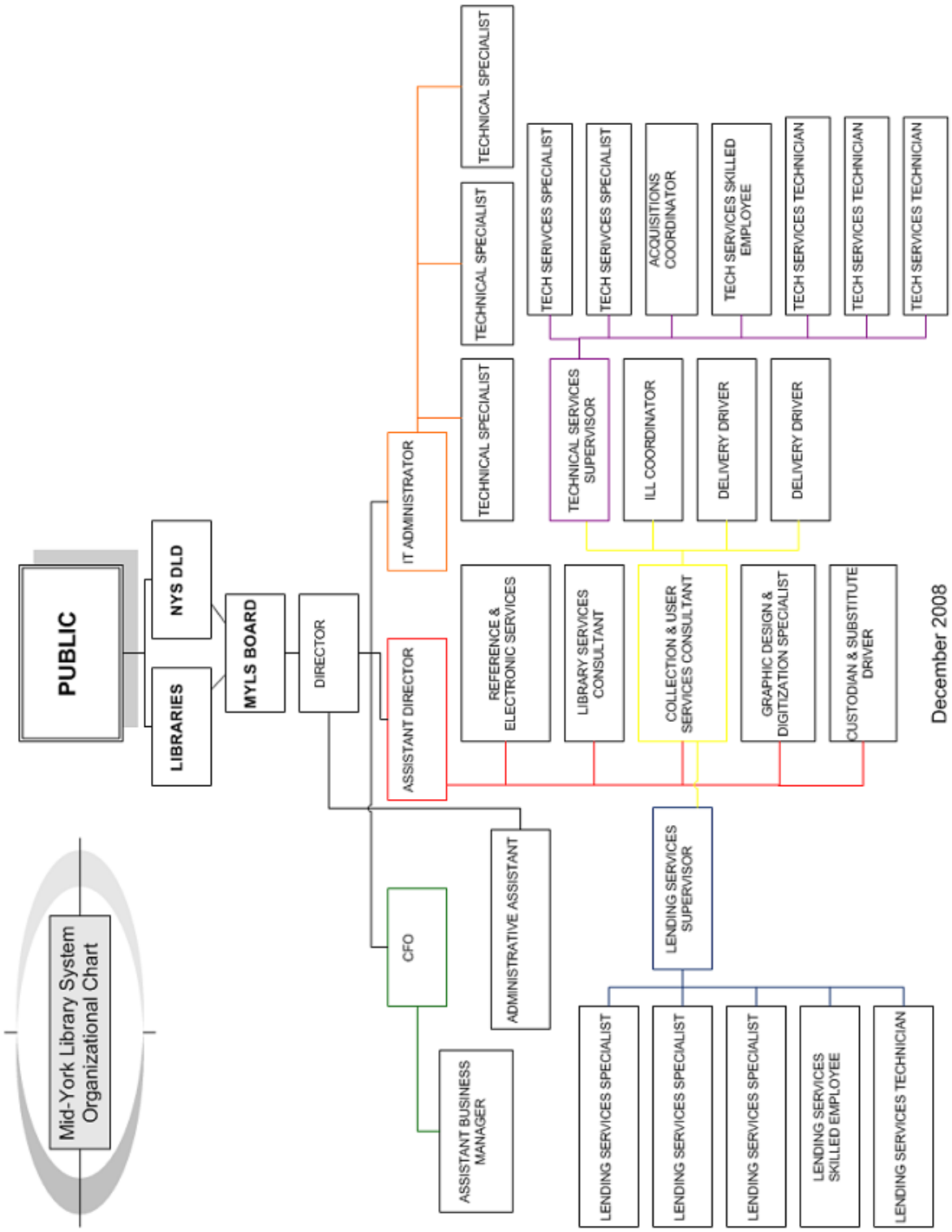
Appendix A: Organizational Chart for Cuyahoga County Public Library



Appendix B: Organizational Chart for Mid-York Library System



Appendix C: Letter of Approval from Syracuse University's Institutional Review Board

SYRACUSE UNIVERSITY
Institutional Review Board
MEMORANDUM

TO: Michelle Kaarst-Brown
DATE: May 21, 2009
SUBJECT: **Submitted for Expedited Review-Determination of Exemption from Regulations**
IRB #: 09-147
TITLE: *How and When are ICTs Used in the New Service Conception Process? Toward a Theoretical Narrative*

The above referenced application, submitted for expedited review has been determined by the Institutional Review Board (IRB) to be exempt from federal regulations as defined in 45 C.F.R. 46, and has been evaluated for the following:

1. determination that it falls within the one or more of the five exempt categories allowed by the organization;
2. determination that the research meets the organization's ethical standards.

This protocol has been assigned to exempt category **2** and is authorized to remain active for a period of five years from **May 19, 2009** until **May 18, 2014**.

CHANGES TO PROTOCOL: Proposed changes to this protocol during the period for which IRB authorization has already been given, cannot be initiated without additional IRB review. If there is a change in your research, you should notify the IRB immediately to determine whether your research protocol continues to qualify for exemption or if submission of an expedited or full board IRB protocol is required. Information about the University's human participants protection program can be found at: http://www.orip.syr.edu/humanresearch.html. Protocol changes are requested on an amendment application available on the IRB web site; please reference your IRB number and attach any documents that are being amended.

STUDY COMPLETION: The completion of a study must be reported to the IRB within 14 days.

Thank you for your cooperation in our shared efforts to assure that the rights and welfare of people participating in research are protected.

Diane S. Young, Ph.D.
Chair

Note to Faculty Advisor: This notice is only mailed to faculty. If a student is conducting this study, please forward this information to the student researcher.
DEPT: Information Studies, 218 Hinds Hall **STUDENT: Joe Rubleske**

Office of Research Integrity and Protections
121 Bowne Hall Syracuse, New York 13244-1200
(Phone) 315.443.3013 • (Fax) 315.443.9889
orip@syr.edu • www.orip.syr.edu

Appendix D: Informed Consent Letter Presented to Study Participants

Consent Form: "How and When Are Information and Communication Technologies (ICTs) Used in the New Service Conception Process?"

My name is Joe Rubleske and I am a doctoral candidate at Syracuse University's School of Information Studies. I am inviting you to participate in a research study on which my doctoral dissertation is based. Your involvement in the study is voluntary, so you can choose to participate or not. This consent form will explain the study to you. If you have any questions, or would like to know more about the study, please call me (315-289-8380) or e-mail me (jrublesk@syr.edu). My doctoral advisor, Dr. Michelle Kaarst-Brown, can also be contacted by e-mail (mlbrow03@syr.edu), and the Syracuse University Office of Research Integrity and Protections (ORIP), which approved this study for use with human subjects, can be contacted by telephone (315-443-3013) or e-mail (orip@syr.edu).

In brief, I am interested in learning more about how information and communication technologies (ICTs) are used in what is called the 'front end' of the service innovation process in public libraries. In service innovation's front end, people generate, screen and refine new service ideas and develop and articulate new service concepts. Very little is known about how ICTs are used for these tasks. This research aims at filling this gap.

If you agree to participate, you will be asked to discuss your thoughts on your involvement in the process through which a certain new service was conceived. Questions will include (but will not be limited to) the following:

- Do you remember when you first heard about the idea for [the new service]? Who did you hear about it from? What did he/she/they say about it?
- How did you get involved with the idea? Was your role in its development defined, at least initially?
- Can you describe the first bit of work you did with/on the idea?
- Which information and communication technologies (ICTs) did you use for this first bit of work? Any others?
- Can you describe the work you did next? [Etc.]
- Are there other aspects of the service conception process that I should know about?

You will be encouraged to provide as much detail as possible in your answers to these questions. You will not be critiqued in any way on your responses, as the aim of the interview is to learn about the process of new service conception in your organization, not to evaluate you or your colleagues.

During the course of the interview I will prepare (on paper) a timeline of events based on your responses. At the conclusion of the interview you will be asked to review this timeline and edit or add to it as you see fit. Taken together, *the interview and this timeline co-construction is expected to last roughly 60 minutes*. With your consent, the interview will be recorded and then transcribed. Once transcribed, the recording will be destroyed.

You may also be asked to (1) answer any follow-up questions I may have for you in the days and weeks (not months) following the interview and (2) review a short narrative I write about the service innovation process you were involved in. *It is estimated that you will spend between 90 and 180 minutes on this study over a 2- to 3-month period*.

All information you provide me will be kept anonymous and confidential unless you indicate otherwise. This means that by default your name will not appear anywhere except in my master list of participant codes, and no one will know about your answers except me. And to protect anonymity in articles I write and in presentations I make, data will be aggregated for themes and pseudonyms will be used. If you are willing to be quoted, I will verify the quoted information with you prior to its publication.

There are many benefits to this research. In academic terms, it will benefit (1) researchers who are interested in the potential value of ICTs in supporting and improving service innovation and (2) library services researchers. In terms of practice, this study will inform managers of service organizations – and particularly public libraries – who want to review and improve their service innovation process. Ultimately, I hope to produce a best-practices report about using ICTs to support and improve the service conception process in public libraries. You can receive a copy of this report if you request it.

In closing, the risks to you for participating in this study are minimal, as your confidentiality will be maintained through the life of the study. If at any time you no longer wish to be involved in the study, you have the right to withdraw. This decision will not reflect negatively on you or your organization.

Thank you for your help on this study.

All of my questions have been answered and I wish to participate in this research study.

Yes ☐ No ☐

I ☐ give / ☐ do not give my permission for interviews to be recorded.

In the event that any of my quotations are used in articles, primers or book chapters…

☐ I would like my identity concealed

☐ I give permission for my identity to be revealed

_____ _____

Signature of participant Date

_____

Print name of participant and organization name

Appendix E: Curriculum Vita for Joe Rubleske

Joe Rubleske
Doctoral Candidate/Adjunct Instructor
School of Information Studies at Syracuse University
Telephone: 315-289-8380 // E-mail: jrublesk@syr.edu

Dissertation Research

A Temporal Model of Mindful Interactions Around New Service Conception (defended on 29 June 2011)

Research interests: service innovation; library innovation; library administration; organizational contexts; interpretive research

Education

(In progress) **Ph.D. in Information Transfer** from the School of Information Studies, Syracuse University, 2003 to present

- Title: *A Temporal Model of Mindful Interactions Around New Service Conception*
- Defense date: 29 June 2011
- Keywords: library innovation; service innovation; public libraries; library administration; new service conception

M.Pl. in Planning from the School of Public and Environmental Affairs (SPEA), Indiana University at Indianapolis (IUPUI), 1993 to 1995

- Concentration in Urban Planning
- Master's thesis involved construction of 'cognitive maps' of beliefs about interlocal financing constructed from interviews with government officials and business executives

B.A. in Political Science from the College of Arts and Sciences, Indiana University at Bloomington, 1989 to 1993

Teaching

Courses taught

- Organizational Behavior for Information Professionals (undergraduate course in Spring 2011, Fall 2010 and Fall 2009)
- Knowledge Management (graduate course in Spring 2010)
- Management Principles for Information Professionals (graduate course in Spring 2007, Summer 2007 (online), Fall 2007 and Spring 2008)
- Presented guest lectures on (i) XML use, (ii) concepts in indexing, (iii) effective collaboration in team-based projects and (iv) field research practices

I wrote three pedagogical case studies for use in courses in Syracuse University's Global Enterprises Technology minor degree program (copies available on request):

- How Are Credit Card Transactions Authorized and Settled? A Case Study Briefing (for IST439: Enterprise Technologies)

- Centralizing and Automating Corporate Treasury: The Case of Cash Forecasting (for FIN300: Financial Systems Architecture)
- Migrating from Paper Checks to E-Payments: Challenges for Suppliers (for a proposed course on IT-enabled change)

Refereed Publications

Rubleske, J., Kaarst-Brown, M. and Strobel, T. (2011). How do public library administrators generate and evaluate ideas for new services? A proposed model based on evidence from Cuyahoga County Public Library. *Proceedings of the 73rd Annual Meeting of the American Society for Information Science and Technology (ASIS&T).*

Garcia-Murillo, M., MacInnes, I. and ***Rubleske, J***. (2010). Virtual worlds in higher education: a policy simulation. *International Journal of Networking and Virtual Organisations*, 7, 5, 415-432.

Rubleske, J. and Kaarst-Brown, M. (2009). On the prospective value of ICTs to new service conception. In *Proceedings of the 15th Americas Conference on Information Systems (AMCIS)*. Atlanta, GA: Association for Information Systems (AIS).

Kwasnik, B., Chun, Y., Crowston, K., D'Ignazio, J. and ***Rubleske, J***. (2006). Challenges in creating a taxonomy for genres of digital documents. In *Proceedings of the 9th International Conference of the International Society for Knowledge Organization*. Bonn, Germany: International Society for Knowledge Organization (ISKO).

Rubleske, J. (2005). How can Web genre metadata improve information access to large digital collections? *Canadian Journal of Information and Library Science*, 29, 3, 381.

Nunn, S. and ***Rubleske, J***. (1999). Pricing the use of public rights-of-way. *Public Works Management and Policy*, 3, 4, 304-316.

Nunn, S., Warren, R. and ***Rubleske, J***. (1998). 'Software jobs go begging, threatening technology boom': computer services employment in U.S. metropolitan areas, 1982 and 1993. *The Professional Geographer*, 50, 3, 358-371.

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Rubleske, J. and Lindsey, G. (1997). USEPA waste disposal shareware: Purdue University and USEPA (1988-89). *The Journal of Environmental Education*, 28, 2: 22-24.

Book Chapters

Crowston, K., Kwasnik, B. and ***Rubleske, J.*** (2009). Problems in the use-centered development of a taxonomy of web genres. In A. Mehler, S. Sharoff, G. Rehm and M. Santini (Eds.), *Genres on the Web: Computational Models and Empirical Studies*. Dordrecht, The Netherlands: Springer.

Crowston, K., ***Rubleske, J.*** and Howison, J. (2005). Coordination theory: a ten-year retrospective. In P. Zhang and D. Galletta (Eds.), *Vol. 1: Human-Computer Interaction in Management Information Systems: Foundations*. Armonk, NY: M.E. Sharpe, Inc.

Conference Presentations

How Do Public Library Administrators Generate and Evaluate New Service Ideas? A Proposed Model Based on Evidence from Cuyahoga County Public Library. ASIS&T, Pittsburgh, PA, ***25 October 2010***.

Idea Development as Organizational Practice: Preliminary Evidence from Eight Nascent IT-Intensive Services. OASIS Workshop (IFIP 8.2), ICIS, Phoenix, AZ, ***14 December 2009***.

(*as second author with M. Kaarst-Brown and R. Southwick*) Symbolic Roles of the IT Field Researcher: Integrating Change, Power and Researcher Challenges. OASIS Workshop (IFIP 8.2), ICIS, Phoenix, AZ ***14 December 2009***.

On the Prospective Value of ICTs in the New Service Conception Process. The 15th Americas Conference on Information Systems (AMCIS), San Francisco, Calif., ***7 August 2009***.

(*Poster*) Toward a Model of Determinants of Web Platform Adoption by Complementers. iConference 2008, Los Angeles, CA, ***29 February 2008***.

Towards a Model of Determinants of Web Platform Adoption by Complementers. iConference Doctoral Consortium, Los Angeles, Calif., ***28 February 2008***.

Towards a Model of Determinants of Web Services Platform Adoption. Web 2007 (SIGeBIZ), ICIS, Montreal, Canada, ***9 December 2007***.

Building a Corpus of Genre-Tagged Web Pages for an Information-Access Experiment. Colloquium on Web Genres, Corpus Linguistics 2007, Birmingham, U.K., ***27 July 2007***.

Negotiating Change in Architectural Firms: 3-D Modeling and Its Disciples, Buyers, Bet-Hedgers and Naysayers. OASIS Workshop (IFIP 8.2), ICIS, Milwaukee, WI, ***10 December 2006***.

This Is Not a Game! Activity Theory and Knotworks in Second Life. Connections 2006 (aka The 12th Annual Great Lakes Information Science Conference), Syracuse University, Syracuse, N.Y., ***21 May 2006***.

Learning from Virtual World Simulations: A Policy Application. The 11th Annual Sloan-C Conference of Asynchronous Learning Networks, Orlando, Fla., ***18 November 2005***.

Can Genre-Based Metadata Improve Information Retrieval? Connections 2005 (aka The 11th Annual Great Lakes Information Science Conference), McGill University, Montreal, Quebec, ***15 May 2005***.

'Webbed' Cities and Development of the National Information Highway: The Creation of World Wide Web Sites by U.S. City Governments. The 27th Annual Urban Affairs Association Conference, Toronto, Ontario, ***April 1997***.

Computer Service Employment in U.S. Metropolitan Areas, 1982 and 1993. The 26th Annual Urban Affairs Association Conference, New York, ***April 1996***.

Conference Sessions Chaired

"Social and Organizational Aspects of IS," track at OASIS Workshop (IFIP 8.2), ICIS, Phoenix, AZ, 14 December 2009

"Organizational Issues in IS," mini-track at the 15th Americas Conference on Information Systems (AMCIS), San Francisco, Calif., 7 August 2009

Doctoral Consortia

iConference, 28 February to 1 March, 2008, Los Angeles, CA. Submission title: *Toward a Model of Determinants of Web Platform Adoption by Complementers*.

OCIS (Organizational Communications and Information Systems SIG), **Academy of Management**, 4-8 August, 2007, Philadelphia, PA. Submission title: *Commercializing User Innovations in the Age of the 'Mash-Up': Machinima as a Test Case for Design Search Theory*.

Grant Proposals Authored

"Toward a Theory of ICT Use in the Development of New Service Ideas." Submitted in August 2010 to the Science, Technology and Society (STS) Program of the NSF's Social and Economic Sciences (SES) Division for a Doctoral Dissertation Research Improvement Grant. (Declined)

Non-Refereed Publications

Nunn, S. and ***Rubleske, J.*** (1999). *An Analysis of Retail Development in the Indianapolis Inner City*. Indianapolis, IN: Center for Urban Policy and the Environment.

Rubleske, J., Lindsey, G. and Beecher, J. (1998). *Indiana-American Water Company (IAWC) 1997 Customer Perception Survey: Methods, Results and Findings*. Indianapolis, IN: Center for Urban Policy and the Environment.

Rubleske, J. and Nunn, S. (1998). *Pricing the Use of Local Public Rights-of-Way: The Development of a Compensation Model for Indiana Local Governments*. Indianapolis, IN: Center for Urban Policy and the Environment.

Wittman, J. and ***Rubleske, J.*** (1998). *Contaminant Source Inventory of the Indianapolis Water Company Wellhead Protection Areas*. Indianapolis, IN: Center for Urban Policy and the Environment.

Quinet, K.D., Nunn, S. and ***Rubleske, J.*** (1997). *Street Lighting and Crime: An Assessment of the Near Eastside of Indianapolis*. Indianapolis, IN: Center for Urban Policy and the Environment.

Rubleske, J. and Przybylski, M. (1997). *Indianapolis Regional SBDC 1995 Client Impact Survey*. Indianapolis, IN: Center for Urban Policy and the Environment.

Nunn, S., Przybylski, M. and ***Rubleske, J.*** (1996). *Business Firm and Employment Structure of Hendricks County and the Indianapolis International Airport Area, 1994*. Indianapolis, IN: Center for Urban Policy and the Environment.

Rubleske, J. and Lindsey, G. (1996). *Local Authority for Managing Storm Water at the Watershed Level*

in Indiana. Indianapolis, IN: Center for Urban Policy and the Environment.

Rubleske, J. and Lindsey, G. (1996). *The Wetland Initiative Project: Evaluation and Final Report*. Indianapolis, IN: Center for Urban Policy and the Environment.

Klacik, D., Przybylski, M. and ***Rubleske, J.*** (1995). *USA Group: Economic and Fiscal Activity in Central Indiana, 1991-1994*. Indianapolis, IN: Center for Urban Policy and the Environment.

Nunn, S. and ***Rubleske, J.*** (1994). *Indianapolis Metropolitan and Central Indiana Regional Economic Development Study: Parts 1-4*. Indianapolis, IN: Center for Urban Policy and the Environment.

Other Awards and Honors

✓ Received in Spring 2011 the Outstanding Teaching Assistant award by the Syracuse University Graduate School

✓ Selected to the Curriculum Development Group in support of the joint partnership between JP Morgan Chase and Syracuse University's School of Information Studies (2008-9)

✓ Awarded funding via Research Assistantships from Fall 2003 through Spring 2011 by the School of Information Studies at Syracuse University

✓ Funded under US-NSF IIS Grant #04-14482 from August 2005 through May 2007 ("Building a Corpus of Genre-Tagged Web Pages for an Information-Access Experiment")

✓ Voted to the Ph.D Committee by doctoral colleagues for the 2004-5 academic year

✓ Led a successful campaign to obtain funding (US$20,000) from the Indiana Association of Cities and Towns (IACT) to survey public rights-of-way pricing schemes and recommend approaches that municipalities can take to increase revenues

✓ Awarded Master's funding through research assistantships from Fall 1993 through December 1995 by the Center for Urban Policy and the Environment at IUPUI

✓ Indiana Planning Association *Best Student Planning Research Award* for graduate student team (1995)

Academic Service

Reviewer of papers submitted to iConference (2011), ICIS (2009), ECIS (2009), the OCIS Division of the Academy of Management (2008), IFIP WG 8.2 on Information Systems and Organizations (2007-8), HICSS (2007) and ACM's SIGCHI (2007).

Conference Chair, Connections 2006 (aka The 12th Annual Great Lakes Information Conference), 19-21 May 2006.

Judicial Board, School of Information Studies, Syracuse University, September 2005 to August 2006.

Ph.D. Committee (elected), School of Information Studies, Syracuse University, September 2004 to August 2005. Reviewed and evaluated applications to the doctoral program; involved with deliberations on related administrative concerns.

Work Experience – Non-Academic

Senior Research Analyst, Research and Statistics Section of the Wisconsin Department of Workforce Development, Madison, Wisconsin, July 2002 to June 2003

- Served as a lead analyst in a unit organized in part to assess the efficacy and equity of initiatives related to Wisconsin's Welfare-to-Work (W-2) program
    - Most studies examined complex relationships between client variables (e.g., race, gender, education, income), program variables (e.g., assistance type, assistance tenure) and outcomes, and were made more challenging by the need for temporally sensitive analyses of assistance programs with changing requirements
- Worked with other senior analysts to develop requirements for (and test) data warehouses and 'business intelligence' systems based on transactional and operational data

Programmer/Analyst, Bureau of Communication, Wisconsin Department of Natural Resources, Madison, Wisconsin, February 2000 to June 2002

- Served as a database designer on an IS team charged with developing a web-based enterprise application for an ISO 14000-compliant Environmental Management System (EMS)

Independent Contractor, Madison, Wisconsin, September 2001 to May 2003

- Subcontractor to studioNDN in the development of Flash- and SQL Server-based web sites and the preparation of user documentation

Work Experience - Academic

Graduate Research Assistant, School of Information Studies, ***Syracuse University***, Syracuse, New York, August 2003 to May 2009

- JP Morgan Chase – Syracuse University Joint Partnership: *Curriculum Development in Global Enterprise Technology*, January 2008 to May 2009
    - Charged with developing several case studies for courses in the new Global Enterprise Technology degree program
    - Prepared two working papers: (i) *Service Science: An Overview and Implications for an Interdisciplinary Curriculum* and (ii) *Toward a 21st Century University-Industry Partnership: The Case of Syracuse University and JP Morgan-Chase*
- Research Project: *Can Genre-Based Metadata Improve Information Retrieval?* May 2005 to December 2007
    - Principal investigators: Dr. Kevin Crowston and Dr. Barbara Kwasnik
    - Through Fall 2007 I conducted an experiment I helped design in which participants conduct web browsing tasks through a (control) topical hierarchy or (experiment) genre-based hierarchy
    - For the first phase of the larger study, I conducted 50+ think-aloud sessions with journalists, K-12 teachers and aeronautical engineers in their capacity as web users/searchers
- Research Project: *Curiosity and Sustained Engagement for Learning Center* (CaSE-LC), August

2004 to May 2005

- Served as assistant to the principal investigator (Dr. Ruth Small) of a multi-institutional, multi-disciplinary catalyst program devised to build partnerships and design a research agenda pursuant to a proposal for a $25 million NSF-sponsored Science of Learning Center

- Information Institute of Syracuse (IIS), August 2003 to August 2004

  - Principal investigators: Dr. R David Lankes and Dr. Joanne Silverstein
  - Assisted in developing virtual reference software (QABuilder 2.0) for the Information Institute of Syracuse (IIS) by articulating business needs and conducting user testing
  - Developed and managed two database-integrated web sites and implemented and managed a weblog for the Student Using the National Science Digital Library (SUNSDL) project

Research Associate, Center for Urban Policy and the Environment, ***Indiana University***, Indianapolis, Indiana, January 1996 to May 1999

- Served as principal and supporting investigator on more than 40 research projects in areas such as economic development, public works, public finance, municipal planning and more.
- Co-authored research was published in 20+ Center reports and four refereed journals (see above)