Business Value in Complex IT Service Engagements: Realization is Governed by Patterns of Interaction

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Abstract

Mutually successful win-win outcomes in complex IT service engagements are by no means easy to achieve. Typically, provider and client represent complex organizational entities with multiple agendas and diverse stakeholders involved in long-term engagements. Unsurprisingly, new opportunities to create value arise; however, value propositions can fail to be realized, especially when the provider has fulfilled contractual agreements and yet the customer has expressed dissatisfaction. How do we explain this phenomenon, and more importantly, avoid its occurrence? In this paper we examine three IT service engagements through the lens of a conceptual model based on foundational service system concepts. Cross-case analysis reveals patterns of interaction that have the potential to increase, and in some instances, diminish value over time. Our approach identifies leading indicators that mitigate risk and increase benefit to both clients and provider, enabling IT service companies to take advantage of emerging opportunities that lead to greater value co-creation.

1. Introduction

Mutually beneficial, win-win outcomes in complex IT service engagements are by no means guaranteed. Provider and client are typically complex organizational entities, each with multiple agendas, diverse stakeholders and potentially hundreds of actors both human and non-human. Engagements themselves can unfold over periods of years, responding to events that are difficult to predict. It is no surprise, then, that value propositions can fail to be realized in ways that neither client nor provider expect. New opportunities to create value are also, however, likely to arise.

IT service companies have at their disposal, an arsenal of tools designed to help mitigate these sorts of risks, take advantage of emerging opportunities and even to catalyze opportunities that can lead to greater value co-creation. There are elaborate processes, from engagement through delivery, binding agreements such as Service Level Agreements and other governance mechanisms. Care is taken to nurture the client relationship. Yet, sometimes this is not enough. For instance, Service Level Agreements can be met (according to both the client and the provider), yet Customer Satisfaction can be “in the tank” resulting in contracts being terminated by the client.

What is missing, we ask. Where in the complex unfolding of a service engagement should we be looking for clues?

In this paper we review three IT service engagements through the lens of a conceptual model we developed to account for this complex unfolding. Case 1 results from a study of service quality. The service offering in this case involves the remote management of the client’s information technology. In this paper we focus on the part of the value proposition that sets the expectation that some client IT personnel will be able to focus on other, higher value work for the client. Cases 2 and 3 are service engagements in which the deliverables (a report in the first instance, and software in the second) are provided on time and to the satisfaction of the client. In both cases opportunities to create more value arise. In Case 2, the service provider comes up with an innovation that the client likes but does not adopt. In Case 3, the provider and client together come up with additional innovative features and the contract is renegotiated to reflect the changes. We say that in the second case the emergent business value is acknowledged but not realized, while in the third it is both acknowledged and realized.

In order to capture the similarity across these three examples (drawn from among others there is not room to discuss in this paper) we suggest a theoretical move. We propose separate but coupled dimensions of value creation: co-creating new configurations of resources that can potentially lead to value and the actual realization of value to the business. We use what we refer to as the Transactional-Interactional Model (TIM) to model aspects of the three cases described above to reveal systematic patterns of interaction that can be associated with increasing value and decreasing value. Such patterns, we anticipate, will ultimately lead to the
development of new leading indicators in complex IT service engagements. At the same time, we believe these three examples share common properties with many other service engagements; however that claim awaits further research.

While the case analysis and model development mutually informed each other to a great extent, we also drew on the substantial existing literature in services research. Accordingly, where the source data came from, how it was analyzed, where the model came from and how we re-analyzed the data by means of the model complicates any description of the methodology. Thus, in Section 2, we take the time to lay out how we went about the work described in this paper. In Sections 3 and 4 we turn to the model itself, first elaborating some of the key concepts, then providing a brief introduction to the formalism.

Finally, in Section 5, we turn to the three cases that illustrate the kind of phenomena the model can explain. Each of these descriptions is modeled in TIM and we describe the insights revealed. These examples are then followed up by a discussion (Section 6) which sheds light on how varying degrees of alignment or misalignment between transactional and interactional aspects of the service system can explain both positive and negative outcomes. Based on these insights, we argue this approach will make us better able to proactively detect problems and predict success or failure in complex service engagements.

This modeling effort not only adds to the theoretical understanding of service systems, but also reveals patterns of interaction that unfold over time, some of which have the potential to increase value and others to diminish value. Such an approach, we argue, provides a new domain in which to develop leading indicators that can mitigate risk and increase benefit to both clients and providers.

2. Data, Analysis, and Model Development

For this paper, we conducted a cross-case analysis from a range of actual service engagements carried out in a large IT company from early 2006 through early 2009. We solicited accounts from the researchers who conducted the primary research studies and development projects, resulting in a collection of 8 cases. Through these accounts, we conducted a guided reconstruction of various aspects of the service engagements including the extended stakeholder network and the accepted value propositions.

In constructing the analyses within TIM, we identified specific points, or states, in time during the service engagement: the initial state prior to beginning of service engagement; the expected state, representing the outcome(s) that both the service provider and client hoped for at the end of the service engagement; and the actual state, representing the actual outcome(s). In many instances, the actual outcomes fell below the expected outcomes. However, in a few instances—one of which is included in this paper—the actual outcome exceeded the expected outcome.

By comparing the cases using the language and notation of the model, a combination of patterns began to emerge. We provisionally tested these against categories coming out of the services literature—in particular Spohrer & Maglio’s identification of ten foundational concepts [7]—drawing from the guided reconstruction to more fully articulate the specific interactions shown in the examples. We drilled down on specific systems, technologies and processes, and queried the primary researchers to assess the connection of key stakeholders to the systems, technologies, and processes in each instance.

3. Situating Transactions and Interactions in Service Science

Following other researchers in service science [4], we take service systems to be dynamic configurations of resources—including people, organizations, shared information and technology—that create value when arranged into systems with other such resource configurations. Spohrer & Maglio [7] identify ten foundational concepts of service science: at the highest level is the concept of an ecology composed of entities, interactions, and outcomes. They attribute this decomposition to a general systems approach, citing Weinberg [9]. Entities are the aforementioned resource configurations; interactions are subdivided into value proposition-based vs. governance-based. Maglio et al. [4] articulate the main activities that make up a service interaction: proposal, agreement and realization.

In our experience (as shown by the examples below), realization of value is a non-trivial undertaking. Specifically, it appears that a great deal of interactional work is required (both before and after the fact) to realize the anticipated business value at the heart of a service agreement. Furthermore, the nature of this interaction seems to be qualitatively different from the exchange of value propositions and governance per se.

In this paper we seek to elucidate the dynamics of service systems in terms of the nature and importance of interactions to value realization. The significance of
service interactions as been focused on in the literature by Bitner et al. [1], Fitzsimmons & Fitzsimmons [3], Teboul [9] and others. Our examination of empirical cases led us to introduce the idea that service systems are constituted through two interacting sub-systems: the transactional and the interactional. We propose these sub-systems to be distinct yet more or less coupled—that is, able to exist in varying states of alignment even as each influences the other. As the notions of “interaction” and “transaction” may mean a variety of things, we first offer some comments to help the reader situate the principal distinctions we seek to make.

As mentioned above, our intention is to tease apart the conception of formalized value propositions (and the attendant notions of agreements, specifications and commitments) from the other, varied and ongoing processes of interaction taking place between client and provider. The former, which we locate within the transactional sub-system, are situated within organizational hierarchies and governance structures, and are constituted in enforceable contracts between provider and client. Here, responsibilities are generally stated in terms of roles and job functions, with outcomes specified by requirements and contractual obligations. Here too, is the representation of explicit exchange at the heart of any transaction.

The term “transaction” has also been used to describe the granular process of service delivery as well, for example by Fitzsimmons & Fitzsimmons [3]. In our usage, we seek to preserve the notion of a discrete occurrence involving a codified exchange posed in non-personal terms. We want, however, to draw out the formal language of value proposition embodied in service agreements between complex, organizational entities, while situating the bulk of what might otherwise be termed “relational” work in the interactional sub-system.

By “interaction,” we refer to the multiplicity of actual contacts necessary to realize the anticipated value from a service engagement. Such contacts, or interactions, take place between actual people, as individuals, and with specific instances of technology—whether these are targets of service delivery or ancillary supporting systems. (The rich variety of contacts we wish to encompass is, for example, similarly recognized by Bitner et al. in Service Blueprinting [1].)

Within the interactional sub-system, we include person-to-person interactions as well as person-to-technology interactions (and in some instances, technology-to-technology interactions, particularly when these span provider/client boundaries). It is important to note that, where in the transactional subsystem, expectations and commitments are codified and expressed in terms of roles and types, in the interactional subsystem these are in every instance enacted by specific individuals and technologies.

The delineation of these two sub-systems enables us to represent the theoretical distinction alluded to earlier between the co-construction of potentially valuable configurations of resources and the realization of actual business value. While the former occurs primarily in the interactional system, the latter is also contingent upon terms established in the transactional system. TIM is, first and foremost, a way of proactively assessing the alignment between these two systems to ensure value is realized from the interactional work that is performed. While indicators in the transactional system tend to be lagging—informing us of disappointment, unfulfilled expectations and damage done only after the fact—leading indicators potentially available in the interactional system can inform us of trouble before it’s too late. In this way, TIM is intended to become a predictive tool to support diagnostic efforts in ways that might complement and extend service system design techniques such as Service Blueprinting [1].

To underscore the criticality of the activities we locate in the interactional system to value creation, we turn to Richard Normann [5]. For Normann, service is co-productive value creation taking place between provider and client wherein both mobilize and deploy resources, engaging in decomposition and restructuring of their respective activities to achieve an optimum value/cost result. The reciprocal processes of decomposition and restructuring, which Normann dubs “unbundling” and “rebundling,” are aided by the dematerialization and “liquification” of many assets dramatically enabled in recent years by modern day information technology. However, when assets are primarily constituted in knowledge (as opposed to data, information or some other form), there is a limit to the extent to which dematerialization and unbundling can occur in the absence of interaction. Normann traces this to the partially-tacit nature of the relevant knowledge in many instances, which becomes visible only in performative, social situations:

“It is often only in interactive social processes within a given context, with a given cultural background and expectations network, and through procedures which in themselves may not have been coded and made explicit, that the tacit knowledge may express itself through action.” (5), p. 33)
With a focus on efficiency and cost savings as offerings become more routine and standardized, competition on the basis of cost alone is likely to result in a relentless drive toward commoditization. Seizing opportunities to innovate with clients and constellations of stakeholders, on the other hand, can lead to more profound value creation:

“[…] more radical and interesting type[s] of value constellations are those which identify economic actors and link them together in new patterns which allow the creation of new business that did not exist previously, or which more or less radically change the way certain types of value are created. Here we are not talking about a simple reallocation of existing activities between a set of actors, but of constructing a new, coordinated set of activities resulting in a new kind of output—not just a more efficiently produced traditional output.” ([5], pp. 106-107)

For Normann, participants in value-creating co-production must take a non-zero sum approach with the objective of identifying and mobilizing relevant, underutilized resources wherever they may lie. Too often, actors in business settings interact implicitly from a zero-sum, win/lose perspective, or do not take one another’s interests, objectives and constraints fully into account. Interactions are often viewed as too messy, too varied and too unsystematic (read: unpredictable) to merit the kind of modeling effort we propose here. Yet, the more we examine how value is actually created, the more we think this necessitates we try.

4. Description of the Transactional-Interactional Model (TIM)

The conceptual model we introduce here attempts to account for the rich value of the interactional space and to demonstrate the dynamic, and often complex, process of value creation and realization. We see this as coming about through the intersecting of two loosely-coupled sub-systems, depicted below as orthogonal planes in Figure 1. (This is to suggest how the two systems may operate in a coincident manner while remaining distinct in important ways.)

Looking first at the transactional sub-system, entities are composed of dynamic configurations of resources: People, Processes, Technology, Information. These are represented by their corresponding upper case letters (P, Pr, T, I). Recall that in the transactional sub-system, these are types of resource, not actual instances of people, processes, technology and information. The actual instances appear in the Interactional sub-system, and are represented with lower case (p, pr, t and i).

Entities are represented as nodes in a network and are designated as being associated with either the client or provider. Entities are connected through exchanges, which are represented by (directed) arcs. Entities connected through exchange in the transactional system are the model’s way of representing value propositions.

Now let us focus on the interactional sub-system. To represent this system we use symbols that correspond to actual people, technologies, processes and information. Provider side people (p_p) interact with client-side people (p_c). Provider side people can interact with their own technology (t_p) and that of the client (t_c). Technologies of either client or provider can interact with each other.

Interactions themselves accumulate valences for both the client and provider over time, in that they are seen as positive or negative. Further, the perspectives of the client’s and provider’s resources can be different and thus are shown separately. Sets of interaction emerge over time and have outputs, which we have called “seeds”. Seeds are configurations of resources whose value may be realized at some later point in time.

The two sub-systems are coupled by means of ties, or “tethers”. Resources in the transactional sub-system are tethered to specific resources in the interactional system (represented in Figures 2-4 by connecting lines), that is, they can have stronger and more lasting connections. If a key resource in the transactional sub-
system is not tethered to a resource co-constructed in the interactional sub-system, business value is not realized. Conversely, if a resource generated in the interactional sub-system is tethered to a resource in the transactional sub-system, its value is realized. These two conditions are represented by arcs, or lack thereof, between nodes in the two systems.

In particular, two of the examples below show a lack of tethers between the transactional and the interactional sub-systems, which reflects that value is not being realized according to expectations and/or undesirable patterns prevail in the sets of interactions. Either condition means that the seeds—the potential sites of value creation—are not being generated, or are being generated at too high a cost in terms of amount of interaction required.

In the three examples that follow, we take two “snapshots” in time: one that represents the state of play when the service level agreement is signed and the service engagement begins, the second at a point where the engagement is being re-evaluated, renegotiated or ends. The changes between the two “snapshots” provide explanation of what fell apart and why and what improvements were perceived to result in value realization and why.

5. Modeling the Cases

In this section we use TIM to model the three cases identified in the introduction in some detail. They are representative of cases in which deals that made perfect sense on paper somehow managed to falter in implementation, cases in which substantial work was performed that failed to track the needs and expectations of some key stakeholder, or which foundered on unforeseen problems with things like access rights or ownership of intellectual property. On the flip side, we have seen instances where emergent insight and potentially valuable seeds co-constructed by client and provider have led to actually-realized value that exceeded the up front expectations of both.

The key determinant has been the relationship between the terms (not always fully articulated) in which value is conceived, anticipated and recognized by key stakeholders at certain decisive junctures, and the way in which myriad interactions at multiple levels occur before, during and after these points in time. It is the essential attributes of these patterns of interaction that we have begun to formulate, regularize and systematize that we set out below.

Case Number 1 as described and represented below shows how explicit agreements—represented in the transactional sub-system—fail to be realized in the interactional sub-system. This illustrates the underestimation of interactional requirements needed to realize business value. The second and third cases illustrate how what happens in the interactional sub-system produces seeds of potential value. The second case exemplifies the class of problem where the value of those seeds remains unrealized while the third shows a successful instance in which the seeds of value are realized in the transactional sub-system at a later time. These examples (described and represented below in terms of the TIM model) each point to challenges common to service engagements, including the way in which actual engagements often fail or succeed.

5.1. Case 1: Underestimation of interactional requirements—service level agreements and client satisfaction

In this case an IT services provider has developed a new outsourced IT services offering. Designed especially with smaller and mid-size enterprises in mind, the offering enables the unbundling of aspects of server management from businesses IT departments. Specifically it offers remote server monitoring and management with tiered options of service, allowing clients to choose the extent of service they require, from simple monitoring to a fuller package of repairs and upkeep to be performed by the service provider. The provider, nonetheless, stops short of fully taking over and running of the server management. The offering promises to enable clients to redirect some of their own resources to other matters of business and strategic import to their firm.

Early versions of the offering exemplify a particular class of problem which can be illuminated through the lens of the model proposed here. Specifically, this was a case in which the formal, contractual terms were met once the service was launched, and yet client dissatisfaction remained. In other words, the specific service level agreements (or SLA’s) were all “green”—that is, no red lights or even cautions in the technical service were identified—and yet some early clients expressed continued dissatisfaction, with one even canceling their contract.

What happened? While the reasons are surely numerous, one particularly salient factor stands out: indications suggest that clients expected to feel greater relief from deployment of the service. They expected a higher level of support enabling them to expend less
time and energy than they did previously from managing their own IT operations.

As noted above, the offering was directed toward small and mid-sized businesses where IT staff often fulfill a range of functions and where bringing in specialized and targeted IT support can be cost prohibitive. The provider’s offering promised to lessen the required time and attention (i.e., resource investment) that IT staff on the client side would need to dedicate to monitoring, and (if those options were contracted) repair of the system. This, however, was not fully realized. The client was required to provide someone to either accomplish or assist in accomplishing response to trouble alerts, recognize change requirements, and play a role in the repair. The assumption in the offering was that the time the person spent “just sitting around” waiting for something to go wrong could be recouped by the client for other, more relevant work. They could be relieved of that more “tedious” work since they would be notified by the provider if something went wrong.

In fact several clients felt they were thus receiving insufficient relief from their IT duties to warrant the service. Furthermore, as the service provider’s role was to be accomplished remotely (that is, the provider attempted to unbundle and rebundle its own resources to reap additional value), many reported an increase in coordination costs and in unsatisfactory service interactions. So while technically the provider successfully provided the services agreed to, client satisfaction declined.

The provider’s response to these challenges hints at key elements of our proposed model. The provider responded by iterating on the design of the solution not by changing the technical specifications of the solution or redefining the SLA’s but by assigning additional coverage to the client by personnel on the ground and by investing greater time and attention to setting the expectations of the client. As illustrated in Figure 2, both of these fixes point to the increased density and realignment of person-to-person interactions. While the client expected their person-time to be greatly reduced, instead new required interactions kept the same or may have even increased (e.g., > 0.5) the demands of the client. The provider, too, found that they needed to add in unaccounted for person-to-person interaction (p ∈ p) time. These factors lead to missed expectations and a perception of the failure of realizing the promised value. This illustration suggests that the underestimation of interactional work could indicate a likely failure to realize business value.

5.2. Case 2: Seeds of value constructed but value unrealized—a team’s work remains unused

In some instances, work in the interactional system results in the creation of seeds that are deemed potentially valuable by both parties, but whose actual business value goes unrealized. For example, in the second case we consider involving an IT services company, a development team wants to design and develop a major new feature in an existing tool. They engage another team to conduct a study to understand how users interact with the tool in its current state as well as how users would make use of the new feature. Over many months, that team conducts interviews with those users to understand their use of the tool and observes those same users as they interact with the tool. What they discover is that users do not use the tool in the ways that the development team intended. Furthermore, the team uncovers that the new feature the development team wants to design do not align with the way users actually interact with the tool, making use of the new feature unlikely. In fact, the team uncovers and recommends changes to the tool that could be made that would align it more with the way users actually interact with the tool, and that would require significantly less investment in implementation time, resources, and money.

The team shares their findings with the developers. Upon hearing that the study uncovered misalignment between the new feature and the way
users actually engage with the tool, the development team reveals that when they engaged the team, they’d hoped that the study would show that designing this new feature would be the best investment—as they have already made a commitment to another division of the company to develop and implement the new feature. While they acknowledge that the team’s findings are valuable in that they uncovered an unexpected outcome as well as made recommendations for better alignment with the target user group, none of those findings or recommendations is actionable. The business value of these findings and recommendations goes unrealized because a commitment to developing and implementing the new feature has already been made.

Figure 3 depicts the transactional and interactional sub-systems shown from both the provider’s perspective as well as the client’s perspective. In the expected state, the transactional sub-system depicts that the client’s information will be transformed. In the interactional sub-system, both the provider and the client expect that the provider’s people will have access to the client’s technology (i.e., the current tool) and people (i.e., the users), the outcome of which will be a transformation of the client’s information (i.e., an understanding of how users interact with the tool in its current state as well as how users would make use of the new feature). However, the actual state shows that from the client’s perspective, their information was not transformed, as they were unable to act on the recommendations or seeds articulated by the provider.

In fact, the client unbundled the information they wanted to be transformed by the provider through the explicit expectation of gaining an understanding of the user from the tacit expectation that the transformed information would support the commitment the client had already made to their client. As the client did not rebundle both the explicit and implicit expectations, only the explicit expectation was formalized in the service agreement. After the transformational work had been done and seeds produced, the additional implicit expectation emerged. Subsequent events prevent the seeds to be incorporated into the value proposition, which meant that the value of the “seed” remained unrealized.

5.3. Case 3: Seeds of value constructed and value realized—additional opportunities identified and made use of

Customer Support Representatives (CSRs) in call centers interface with numerous customers every day, encountering a plethora of problems and engaging in real-time problem resolution. Consequently, the daily routine of interacting with customers under strict time constraints creates a stressful environment that contributes to the high turnover rate of CSRs.

Moreover, it is difficult, if not impossible, for each CSR to remember all the different service level options and solutions for multiple problems per product release, and possess expertise for every product, especially when dealing with hundreds of customers on a daily basis. Each time a new version of a product is released, CSRs encounter a new set of problems with unique solutions. Though CSRs work in a central location, real-time customer support emphasizes the number of problems resolved in the shortest timeframe possible which impedes CSRs ability to share their expertise among the community of CSRs.

Having recognized the challenges that CSRs face in a traditional call center environment, the service provider in Case 3 initiates a proposal for the Custom Call Flow Framework (CCF) service application, an automated business process authoring environment for incoming customer calls in a traditional call center [2]. The CCF service application enables CSRs and call center managers to author call flow scripts that provide step-by-step resolution of customer reported issues concerning software releases, hardware defects and other purchased products and services. These scripts reside in a database that the call center community can access at any time to aid in real-time problem
resolution as CSRs interact with customers and augment training sessions for customer support personnel [2]. Both capabilities increase the collective intelligence of the call center community, and positively impact the call center’s ability to resolve customer issues quickly and increase customer satisfaction, three attractive value propositions to the client entity.

In Figure 4 we depict the TIM model of the CCF application which illustrates the seeds being created between the client and service provider entities as a result of the transactional and interactional subsystems. The original contractual agreement between the service provider and customer outlined 35 feature requirements for the CCF service application [6]. To assist with the development efforts and increase the likelihood of client acceptance of CCF, the service provider (p_p) engaged the client in the process (P_r) of bi-weekly meetings where the service provider demonstrated feature requirements using subsequent prototypes over a period of six months [6]. Note that the client, in the expected state does not explicitly recognize that the client will be using a process of prototyping and revising of requirements. Meanwhile, the bi-weekly meetings ensured that the value proposition described in the contract matched the client’s expectations in terms of desired functionality of the CCF service offering.

The process of developing multiple prototypes to demonstrate the 35 feature requirements for CCF is analogous to the process of unbundling the original proposition. Client evaluation of each prototype made visible the customer’s expectations concerning desired functionality of CCF, thus matching the 35 original feature requirements. However, client expectations reveal that the client is no longer satisfied with the original value proposition of T and desires additional functionality. Hence, the client identifies additional value propositions (i_c = 33 additional requirements) that are delivered in the rebundled value proposition T+ of the CCF application. The process of aligning the service provider’s resources with the needs of the client transforms the original proposition (T) into a new implementation of CCF (T+), an act of engaging both the client and service provider in co-creation of value. The interactional sub-system accommodated dense coupling between the service provider and client in the context of evaluating the various prototypes (t_c) and positively influenced realized value propositions. As a result of the aligned transactional and interactional systems, the customer accepted the CCF service application, generating a realized value proposition.

6. Discussion of the Transactional-Interactional Model (TIM)

In the examples above we see how a number of the features of the TIM model are manifest in actual service engagements. Most importantly, we see how the realization of value anticipated at the point of agreement and acceptance of value propositions in the transactional sub-system is critically dependent upon what transpires in the interactional sub-system. In the first example, an offering that made sense on paper—i.e. that appeared to constitute a compelling value proposition agreed to by both client and provider—foundered when it turned out that the necessary rebundling required substantial (and unaccounted for) additional interactional work from both parties. Whatever the impact on the provider, from the client’s side, failure to realize the relief they had anticipated led to substantial dissatisfaction, and indeed in one instance cancellation of the contract.

In the second example, the provider team delivered a new information resource that satisfied the terms of the value proposition negotiated with the client, but that could not be utilized by the client because of their prior commitments to other stakeholders. In the third example, truly novel and emergent value—i.e. above and beyond anything anticipated in the initially agreed-upon proposition—was co-constructed through
interaction between provider and client, culminating in substantially greater value realized by both parties.

In all three examples, provider and client engage in unbundling and rebundling of resources and activities intended to enhance their ability to create value. In all three, the provider brought specialized knowledge to bear on behalf of the client, and thought they had satisfied the value propositions that had been agreed to. However the degree to which win-win outcomes were achieved (and to which satisfied clients resulted) differed dramatically. Indeed, only in the third illustration was there a truly satisfactory, win-win outcome.

Clearly there was more interaction taking place between client and provider during the realization phase of the CCF Framework engagement. However, we argue that it is not simply the fact of more interaction, but additionally the nature of the interaction that decisively impacted this engagement for the better. This helps us put a finer point on what we mean by alignment between the transactional and interactional sub-systems. That is, a state of alignment requires that the objectives, goals, constraints and commitments of each party are clearly and accurately understood by both. This increases the likelihood that products of co-construction—“seeds,” the nucleation sites of nascent value creation in the interactional sub-system—will be consistent with the objectives and advance the interests of both parties. Such outcomes are likely to be more readily taken up into the transactional sub-system, thereby realizing business value.

This also recalls Normann’s framing of the importance of tacit knowledge—that is, knowledge that remains implicit (and therefore inaccessible to the transactional sub-system) until the demands of a social and interactional context create opportunities for it to become visible and accessible to other parties. In the third illustration, the CCF Framework, the fact that frequent interactions occurred around prototypes created just such an opportunity. Prototypes allowed the development team to make visible their techniques and capabilities, and enabled the client to bring to bear their deep understanding of call center requirements, to jointly glimpse possibilities and co-construct novel feature/requirement pairings that none of them would have thought to ask for (or offer) otherwise. We see here the true power of co-constructive interaction to enable the realization of greater value from service engagements, and of prototypes—vivid and specific expressions of future possibilities—as particularly effective alignment-inducing mechanisms.

Finally, taken together, these examples bring to the fore the issue of expectations and the fact that, while the explicit terms of the value proposition/agreement that reside in the transactional system constitute binding fulfillment conditions, they may be only a partial expression of what the client hopes—indeed expects—to realize from the service engagement. In every case, the TIM modeling activity recounted above conveyed additional insight into the client’s expectations based on their extended stakeholder network in the transactional sub-system. Similarly, developments in the interactional sub-system were more readily understandable in terms of when enhanced value was realized, vs. opportunities missed, effort wasted and potential value left sitting on the table. In an environment in which clients have choices and the forces of commoditization are ever present, simply meeting the exact terms of a service agreement may not be enough, and anything less than complete satisfaction (of implicit or nascent wants as well as explicitly articulated needs) may put the provider at risk. Similarly, the ability for both parties to foresee roadblocks and accurately assess the interactional work required to realize anticipated value will be essential to achieve win-win outcomes in complex IT service engagements.

Next steps in this research include advancing the model development by further elaborating the entities as well as the coupling and tethering relationships in the interactional system, and marrying these to a computational model. This will allow the impact of a new service design, such as the offering in the first illustration, to be evaluated (according to something on the order of a conservation principle for interactional work) for unintended consequences that might otherwise undermine client satisfaction. It would provide a framework for a team such as that in the second illustration to probe and clearly understand the criteria and objectives of the engagement flowing from the client’s commitments to their own network of stakeholders. In the case of the successful outcome in the third illustration, a deeper understanding (and a compact record) of the motivations and fulfillment conditions involved may help the provider consolidate these value-creating interactional patterns into reproducible offerings, thereby enhancing their competitive position with other clients and across their business. This will then be tested and expanded to examine additional classes of service challenges, both within complex IT engagements and ideally, to other service system contexts.
7. Conclusions

Our goal in this paper was to use the emerging TIM model to explain how, in service system interactions, we can distinguish value-creating patterns of interaction from value-diminishing patterns of interaction. This has not only theoretical applications—elaborating understandings of service system dynamics—but significant practical ones as well.

If we are able to detect these patterns earlier in a service engagement clients and providers alike would be able reduce risk and increase benefit in any current service engagement. The provider could also detect patterns that would inform operational improvements on their side to enhance service quality. Similarly such understanding can inform both business strategy and design of services.

The key, we argued, is to model service system dynamics in terms of two loosely coupled sub-systems: the transactional and the interactional. Value propositions and the realization of business value reside in the transactional system. The interactions among resources reside in the interactional system. The interactional system can "get ahead" of the transactional system as when "seeds" emerge. Their early detection can provide the opportunity to better manage value co-creation in real time. Similarly, tracking the fit between the value proposition modeled in the transactional system and the unfolding interactions, will provide "early warning" that things are out of step. We believe that continued investigation will provide more grist for leading indicators, resulting in better managed service engagements and improved client satisfaction.

8. References


