

# Value Orchestration Platform: Model and Strategies

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With the establishment of sophisticated logistics and the rise of information technology, new service businesses, whether real or virtual, have become increasingly important. One common characteristic of these service businesses is that they have two layers: At the top layer, customers and providers interact with each other and co-create new values, while the bottom layer invites customers and providers to "get on the interaction process." It facilitates and orchestrates new value co-creation by inviting and matching customers and providers. We call this layer value orchestration platform.

Though the essential idea of value orchestration platform dates back several decades and its traditional examples include credit cards and shopping malls, brilliant success of new service businesses such as eBay, Rakuten and Apple App store is certainly due to the function at the value orchestration platform level. Indeed, the Apple App store is, for example, interested in inviting as many users and appropriate developers as possible onto it, but it takes no physical or full legal "possession" of the software it distributes.

The purpose of the present paper is to model value co-creation process and value orchestration platform as a hierarchical service system from service science perspective, and, then, to argue value orchestration management strategies in terms of them, by referring to recent typical businesses. To achieve the purpose, we first examine several major perspectives from which service has been argued so far and clarify our research position in service science. Then, we propose a process model of value co-creation consisting of four phases, i.e., co-experience, co-definition, co-elevation and co-development. Finally, by developing value orchestration platform model and relating it to the process model, we argue three management strategies for orchestrating value co-creation, i.e., involvement, curation and empowerment strategies, all of which should be heavily supported by ICT.

The concept of value orchestration platform is not only for explaining about new service business models. It would also give us insights about public and volunteer services. To demonstrate it, we will argue a role of the model in Japanese local revitalization and earthquake disaster reconstruction contexts as well.

**Key Words:** Service System Modeling, Value Co-Creation Process, Value Orchestration Platform

## 1. Introduction

The past decade has seen two-sided platform business model flourishing, especially in online marketplaces. In the model they connect tens of thousands of providers (sellers) to millions of customers (buyers), while they have never exerted much control over buyer-seller interactions or owned the goods sold through their sites (Hagiu et al., 2013). One reason of prosperity of the business model is, of course, the success of marketplaces like eBay, Rakuten and Taobao. Another is that two-sided platforms look financially more alluring than resellers. These marketplaces usually take a cut from each transaction. As a result, their operating costs are low and their percentage margins are high.

The essential idea of two-sided platform dates back several decades, and its traditional and well-known examples include credit cards and shopping malls (Refer to Table 1).

Table 1. Some Examples of Two-sided Platform

Service	Two-sided Platform	Customers	Providers
Credit Card	VISA	Customers	Restaurants, Hotels
Shopping	Shopping Mall, e-commerce	Buyers	Tenants, Sellers
iPhone App	Apple App Store	Users	App Developers
Portal/search site	Google	Web surfers	Advertisers

The present paper claims that two-sided platforms, whether real or virtual, have another common characteristic of service businesses; that is, they have two layers (Figure 1). As shown in Figure 1, at the top layer of the value co-creation process, customers and providers interact with each other and co-create new values. The bottom layer invites customers and providers to "get on board." It facilitates and orchestrates new value co-creation by customers and providers, but leaves the control of the process entirely in the hands of providers and sometimes of customers as well. We call this layer the value orchestration platform.

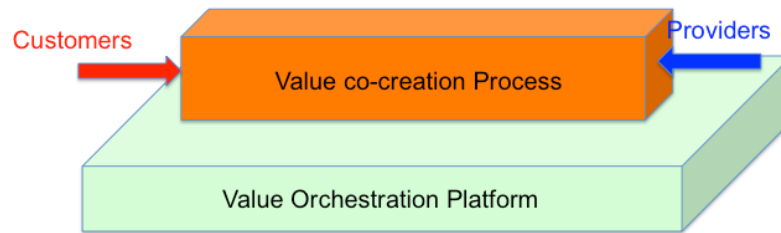


Fig. 1 Value Co-Creation and Value Orchestration Platform

Value orchestration platform encourages customers and providers to interact with each other and to co-create new values often using information and communication technology (ICT).

This paper proposes a model of the value co-creation process and value orchestration platform from service science perspective, and then discusses value orchestration management strategies by referring to current typical businesses. We will also argue a role of the model in Japanese local revitalization and earthquake disaster reconstruction contexts to demonstrate generality of it.

## 2. Value Co-creation in Service Science Perspective

While the concepts of, interests in, and approaches to service are quite diversified among the disciplines, service science is an emerging area of study that draws on decades of pioneering works in the research area of service marketing, service operations, service management, service engineering, service economics, and service computing (Spohrer and Maglio, 2008), (Cambridge, 2008), (Barile and Spohrer, 2010).

Service science defines service as a phenomenon observable in the world in terms of a service system with value co-creation interactions among entities (Maglio and Spohrer, 2008) (Ng and Maull, 2011) by taking a bird's eye view of various perspectives in which service system entities can be people, businesses, non-profits, government agencies, and even cities.

As a specialization of systems sciences (Spohrer, 2009), service science tries to shed light on a scientific approach to understanding social value and identifying propositions that can be formulated and theories that can be empirically tested (Barile and Spohrer, 2010).

The goal of service science is to promote innovation in service and increase service productivity. Innovation is a key to productive service and is born from the intersection of different types of knowledge. To this end, promoting an interdisciplinary approach is crucial to the field, since measuring value co-creation is complex and involves many rational and experiential dimensions.

Whatever value is co-created, Rintamaki et al. (2007) identifies four layers in value in service, i.e. economic value (e.g. focus on price), functional value (e.g. focus on solutions), emotional value (e.g. focus on experience) and symbolic value (e.g. focus on meanings). The four dimensions of value reflect the spectrum from utilitarian to hedonic value, which is a widely accepted categorization (Smith and Colgate, 2007). From the customer perspective, economic and functional value represent often key criteria when assessing service offerings, and meeting these criteria represents a prerequisite for buying. The role of emotional and symbolic criteria is more subjective and often represents a substantial value added to the core service offering. In many cases, emotional and symbolic value may be the true drivers for customer's decision making, although economic and functional value are used for argumentation.

### **3. Four-Co-Phase Model of the Value Co-Creation Process**

To open up the concept of value co-creation, we identify value co-creation interaction as an active, creative, and social process based on collaboration between the provider and customer. It is a form of collaborative creativity of customers and providers that is used to enhance the organization's knowledge-acquisition processes by involving the customer in the creation of meaning and value, although it is often initiated by the provider.

Such collaborative value co-creation often requires greater efforts on the part of both customer and provider than does a traditional market interaction. People on both sides must think about what they want to get out of a cooperative relationship. Customers need to trust the provider to not misuse the information they provide or unfairly exploit the relationship. Providers need to actively manage customer expectations about how the relationship will evolve. Providers must provide capabilities for co-creation and also receive the tools and training necessary to efficiently co-create.

However, it may be too simple to assume that both sides know about the other's preference, expectations, or capabilities when participating in the collaborative process. Rather, they may or may not need to learn about each other to share internal models (mental models). This consideration leads us to the idea of service as a dynamic interaction process in which customers and providers are mutually learning and collaborating by co-experience.

Now, we propose a new model called the "Four-Co-Phase Model of the Value Co-Creation Process" (Refer to Figure 2) (Galbrun and Kijima, 2009).

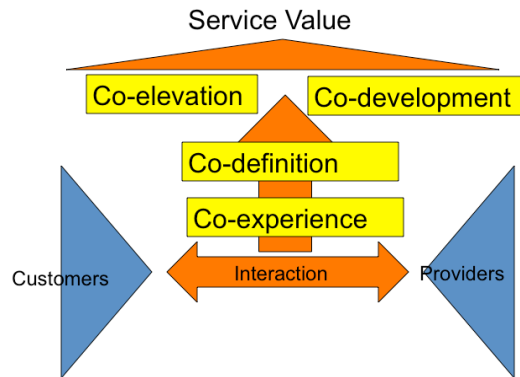


Fig. 2 Four-Co-Phase Model of Value Co-Creation

The model explicitly defines service as a value co-creation interaction between customers and providers and identifies four phases that occur in the process. The first two phases, co-experience and co-definition, are relatively short-range concepts for describing service appreciation, while the final two phases, co-elevation and co-development, refer to the long-range activities necessary for service innovation.

#### A. Co-Experience of Service

When participating in the collaborative value co-creation process, customers and providers may have little or no idea about the other's capabilities and expectations. Hence, rather than reducing the gap between the needs and seeds, by co-experience, the provider and customer may need to share an internal model to co-define a mutual understanding about the service.

#### B. Co-Definition of the Shared Internal Model

By interacting with each other, the customer and provider may learn about the other's preference, capabilities, and expectations so that they may co-define and share a common internal model. Satisfaction for both sides is generated by the co-experience of the service and the co-definition of a shared internal model.

For example, at a sushi bar, through conversation the chef recognizes a customer's preferences, mental and physical condition and appetite, while the customer learns about the day's specialties and seasonal fish. If they are able to share a common internal model (i.e., understand the other's preference, capabilities, and expectations), then both are satisfied or have created new value. This is a typical process of co-experience and co-definition.

### C. Co-Elevation of Each Other

In general, a system is defined as a pair of a set of entities and sets of relationships among entities. Hence, it is relevant to relate the value co-creation process to the entities of the service system as well as to the relationships among them. We call the former co-elevation, which focuses more on value co-creation led reciprocally by provider and customer in the system. Co-elevation is a zigzag-shaped spiral process of customer expectations and provider abilities. Higher expectations of service by intelligent and literate individuals lead to higher-quality service and greater social values (needs-pull). High-quality service, in turn, increases customer expectations (seeds-push).

### D. Co-Development of Value

On the other hand, we call the latter “co-development” because it pays attention to the co-innovation generated by simultaneous collaboration between provider and customer. Co-development of service innovation is usually carried out in the context of customers evaluating and assessing the value and providers learning from customer responses. Collaborative improvement of Linux software by anonymous engenderers and developers is a typical example of co-development.

## **4. Value Orchestration Management Strategies**

Now, we shift our attention to the value orchestration platform and its three management strategies, i.e., involvement, curation and empowerment strategies.

### **4.1. SIPS: INVOLVEMENT STRATEGIES FOR ATTRACTING CUSTOMERS AND PROVIDERS**

Platform orchestrator is, primarily, concerned with the methods to involve appropriate customers and providers in the platform and to vitalize interactions between customers and providers. Hence, strategies for the platform to attract and involve customers and providers to maximize profit are crucial. Indeed, one of the advantages of an online value orchestration business such as e-commerce is that they have no limitations on the number of customers who can participate.

A cycle of Sympathize, Identify, Participate, and Share and Spread (SIPS) is useful for identifying how customers and providers become interested in a platform. It generates interest among customers and the provider toward co-experience and co-definition phases.

SIPS proposes that the trigger for customers and providers to become interested in a service system is their having

sympathy toward it. Presently, people are connected with each other through SNS such as Facebook and Twitter. They communicate through rather subjective comments about what they experience, and the comments that gain a certain level of sympathy for being useful and interesting spread quickly throughout these media platforms. As a result, the media triggers sympathy to, for example, a shopping mall and leads to its identification as an interesting place. In SIPS, participation does not necessarily mean purchase of some products or services. Rather, it emphasizes that the experience would lead to sharing and spreading through a common internal model.

#### **4.2. VALUE CURATION STRATEGY**

While strategy for involvement of customers and providers focuses on how to attract customers and providers to the platform, value curation is essential for the platform to encourage customers and providers to co-elevate and co-develop.

Curation can be defined as a highly proactive and selective approach of value orchestration that collects, selects, analyzes, edits, and reexamines the content and meaning of existing products, service, and information on customers and providers to provide a new interpretation of and a new meaning to them. Based on the newly developed interpretation and meaning, it facilitates a value co-creation process involving customers, providers, information, and technology.

To collect information, sufficient technology and methodology is necessary for scooping up appropriate information from an enormous amount of data on the Internet and databases. To provide a new interpretation of the information, it is necessary to combine human intelligence with technology to evaluate, understand, and process data; dig out information and value from that data; and visualize what the data indicates. Blending new content while filtering and managing other useful information is a productive and manageable solution for providing prospective customers with a steady stream of high-quality and relevant content.

#### **4.3. EMPOWERMENT STRATEGIES OF STAKEHOLDERS**

Empowerment is another aspect of value orchestration, particularly for the co-elevation and co-development phases. Specifically, this refers to how a platform empowers customers and providers so that each side finds the other attractive and both are motivated to interact with each other. Customers are empowered by lifting up their aspiration level, while providers are empowered by referring to their capability of providing service.

For example, Rakuten seems keen on its balanced empowerment at the co-elevation phase. By employing sophisticated search methods and social media such as Twitter, they deliver useful information to each customer, i.e., empowering the customer by personalizing service on individual basis. Due to this, a customer becomes more interested in Rakuten as he/she would know when it has anything he/she wants. At the same time, using a super database, they conduct cross-business analyses and predict user behavior. The relevant results are forwarded to the merchants for empowering them.

These three strategies are directly related to particular phases of the value co-creation process. Indeed, involvement strategy deals with co-experience and co-definition phases in particular, while empowerment targets co-elevation and co-development phases directly. The following matrix should be helpful as a checklist to get appropriate actions for value orchestration inspired (See Table 2). For example, by using it we could discuss what curation means for co-experience phase in a specific context.

Table 2 Value Orchestration Strategy Matrix

		Value Co-creation Process			
		Co-experience	Co-definition	Co-elevation	Co-development
Value Orchestration Strategies	Involvement	Getting on co-experience and co-definition process			
	Curation			Re-examining content and meaning of existing information and putting a new interpretation	
	Empowerment			Promoting co-elevation and co-development process	

## 5. Local Revitalization and Earthquake Disaster Reconstruction

In this section, to show some generality of the value orchestration platform model, we will apply it to wider contexts. Indeed, we try to argue local revitalization movements in Japan and earthquake disaster reconstruction since March 2011 in terms of the value orchestration platform.

### 5.1 LOCAL REVITALIZATION

Local revitalization is one of the most critical issues to boost the Japanese economy and has been tackled for many years by the central government as well as local government agencies. Local areas possess various local resources. However, it is not easy to utilize these resources to create a new service for revitalizing the local economy. First,



difficulties in conducting a market survey, engaging in product planning and development, acquiring the necessary expertise for pioneering market channels, developing a human network, raising necessary funds, and securing appropriate human resources are often encountered. Second, there can be a lack of information about markets outside the local area as well as a lack of developed human networks. Thus, it is more difficult to evaluate the worth of local resources and apply them to new approaches. Because of these factors, it is difficult to complete certain tasks such as establishing local brands and increasing the value of local resources throughout the region. Third, considerable effort is often expended in developing a new product or service, but later there is a dearth of resources or a lack of creative effort dedicated to publicity and promotion activities. Often, the publicity and promotional activities of government institutions and trade organizations are not focused on informing consumers. Rather, there is a tendency to observe the principles of fairness or trade rules, which become the criteria for promotion.

Government agencies often try to take initiative in orchestrating value, but the task is not easy. Most of them have too much pride to collaborate and find a common objective, and some are too busy with events and festivals to look at a holistic picture of the economic and social re-vitalization of the area.

For instance, the Suwa-Okaya area located near Suwako Lake in the center of Honshu, Japan's main island, is not only a big industrial cluster consisting of more than 2,000 small and medium-size advanced precise machinery companies and factories, but is also rich with local resources. In Suwa City, we can find not only an industrial cluster of precision machinery companies but also cultural resources such as the Suwa Lake, Tateshina Plateau, Fujimi Plateau, and Kami Suwa/Shimo Suwa hot springs. In addition, we can find edibles and drinks such as eel, miso, and Japanese sake. Large-scale public events such as the Onbashira Festival and the Suwa Lake Fireworks Festival are also held here. These local resources are utilized for activities to revitalize the local area by autonomous organizations, trade organizations, NPOs, local groups, and individuals. However, each organization performs these activities independently, with hardly any effort spent in uniting its activities with those conducted by other organizations.

So far, local government agencies have tried to activate and initiate collaboration among stakeholders, but top-down intervention has often failed to work properly. The cities, towns, and villages in the Suwa area have a common historical background. However, despite their geographic proximity, there is very little collaboration among industry, commerce, and events. In addition, the organizations and individuals involved in various local revitalization activities have not sought cooperation with industries, agencies or other organizations lying outside

the local area.

For over a couple of years, we have engaged in a project for developing an area-based information platform (a project for constructing a platform for sharing and disseminating local information) for delivering and sharing local information about the area according to the value orchestration platform model. According to our experience, when we implement value orchestration management strategies for local revitalization, we essentially need to embed the functions of the platform (i.e., involvement, curation, and empowerment) in the value co-creation process.

For this embedding, we need a "service system producer" to design the area as a service system and take initiative to activate a positive feedback cycle of value co-creation. We identified three roles for the producer.

The first is a role of taking the initiative to attract and involve appropriate people inside or outside the system by showing unique ideas and directing them to a shared future. The role is called "idiot." The term is a direct literal translation from Japanese to emphasize he/she thinks outside the box. The second is a role of calmly analyzing the present situation using various data and information from the viewpoint of a disinterested party. We call the role "outsider." The third is a role of implementing necessary activities and breaking free from the past. The role may be called "youngster," although it has nothing to do with physical age.

The three roles expected from "service system producer" correspond to roles of curator. Indeed, curators are people involved in promotion and publicity of others' interests, and they freely involve themselves in activities of information dissemination.

Another important observation is that for local revitalization, it may be inadequate to involve all the stakeholders in the system during the first stage, even though local government agencies usually set up an executive committee by inviting numerous stakeholders from various categories. Rather, it works better if, at the beginning, only highly motivated producers who play the roles of "idiot," "outsider," and "youngster" decisively take maneuverable strategies, and then they get others interested parties to follow them.

Therefore, by using the platform for sharing and disseminating local information, curators use the value of local resources for activities aimed at the revitalization of the local area from their own viewpoints. They achieve this revitalization by finding, grouping, organizing, sharing, and curating information for dissemination in line with consumer feelings.

## **5.2 EARTHQUAKE DISASTER RECONSTRUCTION**

The previous section argues from viewpoint of value orchestration platform that for local revitalization introducing and/or generation “service systems producers” responsible for curating new values is most crucial.

In contrast, for reconstructing the Fukushima area heavily damaged by earthquake, tsunami and nuclear disaster in March 2011, we can see implementations of involvement and empowerment strategies are more pressing issues.

For more than two years since the disaster the central and local governments anyway put higher budget priority to the area reconstruction and have poured huge amount of various resources. According to the experience so far, it is most essential to involve all relevant stakeholders from the local people to potential volunteers and get them on the platform. However, in reality, some local people, especially the elderly who have lived isolated from other family members, are sometimes not treated properly, ignored or attracted very little care, even though it is certainly not intentionally for most cases. By identifying who relevant stakeholders are and what needs and aspirations they have, the platform is required not only to invite them but also to provide self-motivation towards the future. Besides financial supports and huge budgets, interaction and communication with other various stakeholders including relatives, friends, volunteers, NPOs and governmental officers plays a key role for recovery. In this context, involvement strategy is essential.

Empowerment of stakeholders is also really necessary. For example, quite a many people such as fishermen were forced to abandon their hometown to change the job after the disaster. They truly need to learn new skill and profession to survive.

## **6. Conclusion**

In this paper we introduced a comprehensive framework consisting of two new models of the value co-creation process and value orchestration platform.

The process model of value co-creation opens up the concept of dynamic value co-creation and identifies four phases in it: co-experience, co-definition, co-elevation, and co-development. The value orchestration platform models a platform on which customers and providers are orchestrated and facilitated such that they can interact and co-create new values. Combining these two models, we discussed three management strategies for orchestrating value co-creation, that is, involvement, curation, and empowerment strategies.

The concept of value orchestration platform is general enough to explain various service systems. We discussed recent and urgent local revitalization issues as well as the earthquake disaster reconstruction in terms of the platform model. We pointed out that in the former cases curation is relatively essential, while in the latter case involvement and empowerment strategies for politicians, bureaucrats, local people and volunteers to support the

local people are rather crucial.

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