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Dynamic Service Framework Approach to Sustainable Service Value Shift Applied to Traditional Japanese Tea Ceremony

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Abstract--In order to plan new services, one needs to understand not only the related technologies and products, but also the value sense and concepts of individual and institutional customers, their behavioral patterns, as well as the background social system. Especially with hospitality, entertainment and art services, the historical background, hospitality culture and regional traditions often sustain and enhance the value of service for the customer. This paper applies a modern dynamic multidisciplinary framework to study the historical shift and present sustainability of traditional services. The framework facilitates the analysis of service value and service shift trends by placing and tracing individual services in a service domain space according to two major axes: classification in a "needs level"-"service using place" hierarchy proposed earlier by the author, and the degree of customer participation. The dynamic framework is applied, in the context of recent achievements of structural anthropology, to the historical shift around the 16th century of Japanese traditional tea ceremony, attempting to gain insight applicable to the sustainable innovation of modern hospitality, entertainment and art services.

I. INTRODUCTION

Similarly to the manufacturing sector, building specific core competences is of primary importance for the competitive power of any business from the service sector. A powerful core competence is the achievement of high customer needs satisfaction. Customer satisfaction has to be achieved by overcoming the obstacles arising from the simultaneity between providing the service and its usage, and therefore service business planners need to focus on the participation of customers.

Vargo and Lusch [37] summarized the role of customer in the new service-dominated business logic as a "co-producer", "primarily an operant resource" and "active participants in relational exchanges and co-production". All the more this can be said of new services, which are inevitably established in a hypothesis-trial approach, with the service contents progressing narrowly linked to customer impressions [21].

Because of the essentially intangible character of services, shared service conceptualization has been shown [22] of primary importance for sharing vision of new services introduced by multiple business players. We think that, in order to cope with the service intangibility, the scope of potential new services and manufactured products expansion should consider the inherent shift of service value.

Typical core competences on which sustainable traditional service are built often include historical background, regional traditions and institution culture. This is especially true for traditional hospitality services providing accommodation, dining-out, entertainment, and socializing venues, and their study gives valuable keys for enhancing modern services by clarifying the need or value shift for the customer.

For example in the Japanese traditional tea ceremony, there are important concepts "the way of tea" such as "one opportunity, one encounter" or "harmony, respect, purity and tranquility". These concepts contain hidden important clues to rethinking typical service features such "intangibility" or "simultaneity". Thus, in studying service innovation it is imperative to take into account cultural aspects in order to develop a rich collection of precedents as reference points in a roadmap [26] of potential new services. One such reference point with centuries of proven sustainability is traditional Japanese tea ceremony, which we study based on a dynamic service framework approach focusing on the shift of service value.

This paper aims to accomplish the following. In Sec. II we detail the scope of the study along with a brief review of related studies. In Sec. III, we propose a framework facilitating the analysis of service value and service shift trends according to the SCHM diagram and co-creation phases. In Sec. IV, we discuss historical features of Japanese tea ceremony in the context of service value. Section V validates the proposed framework shown as applied to the value shift in the services provided by tea ceremony practitioners around the 16th century. Section VI introduces the general service providing & using model (SPUM) as implemented in the tea ceremony, as well as the implications for the processes of service innovation, development and roadmapping. The final Sec. VII contains the conclusions and outlines the work to be done in the future.

In anthropological studies tea ceremony has been characterized as a refined way of social communication based on the habitual practice of enjoining food and drinks, and on the skills ("waza" in Japanese) of traditional Japanese art performers [8]. It may not be appropriate to directly compare it to modern service-sector industries, but it is insightful to rethink and place it in the scope of service business because of the proven century-old sustainability of this practice as one of the cultural fundaments of modern Japanese life.

II. RELATED STUDIES

The quest for service innovation exposed the need to systemize the growing body of service-related knowledge, leading to the advent of "service science" loaded with high expectations [30].

For example Tschirky proposed the framework of

"Innovation strategy formulation process", which distinguishes between normative, strategy and operational level of management [28], [32], [33]. This concept has been applied to a framework focused on developing service innovations (Figure 1). It emphasizes the fact that any development of products or services reflects the constitution of the corresponding company culture, being a dominating constituent of the normative or policy level of management. In this respect, developing and providing services in Japan may represent a unique situation, since it can rely on a set of service-relevant cultural values which characterize in particular the Japanese society.

On the strategic level, four main processes take place: the

ongoing process of business (technology) intelligence process, and the processes to develop technology & innovation strategy, to develop promising strategy projects and to implement these strategy projects. On the operational level, three processes are essential: The process aimed at identifying service-relevant needs, the actual process of developing service and/or product innovations and the process of providing developed services.

In pure product development, development and production processes are overlapping. In contrast, in service development, the development process and the providing services process inevitably are arranged in series, since "service production" and service provision are identical.



Fig.1 Example of service innovation structure

Around the same time K. Nakamura and A. Kameoka [22] have been aiming to build methodology to enable service planners to provide new service value responding to new customer needs in the near future based on a shared service concepturization. These studies may be placed as one of the methodologies which break down the "Business Intelligence" in "Strategy level" into two processes: Process 1 "Identifying Needs" (e.g. "SCHM method") and Process 2 "Developing Service Innovations" ("service roadmapping") in the "Operational level" in Figure 1.

Regarding Process 1, Nakamura [18] expanded the scope of service presented by Kameoka [12] by including the support of goal achievement for the respective service segment (individuals, organization, social infrastructure) and proposed the SCHM model ("Service Classification Hierarchy referred from Maslow's theory"). Later Kameoka et al [12] proposed a new scheme introducing a new independent layer of services between the market and product layers to pay attention to the "convergence of technology and service" together with Ikawa and Kondou[7]. In this study we focus on the details of the service layer and its relation to other layers on the service roadmapping in Process 2.

Regarding the studies of service value creation, we focus on the concept of customer role as "co-producer" [37], the service value creation process and the customer value of service, understood as the total of value provided by the product itself, value of the product-related service, and individual value added by the customer [12].

Thus, the purpose of this research is to make possible for policy makers or service planners to identify needs and develop innovative services within Processes 1 and 2 from Figure 1, taking leads from the dynamic shift of customer value in traditional services of proven sustainability. Developing a model for representing the value of service and its dynamic shift, our study is aiming to build roadmapping methodology able to identify and plan future sustainable services by integrating historical insights gained from the related culture. Thus this approach is based on part of the normative level of the service innovation structure described in the Figure 1.

III. THE THREE AXES OF THE SERVICE VALUE MODEL

A. Description of Axes

Because the intangibility of service already mentioned, it is important to consider the place where the service is being used, while coping with the perishable feature of service in the provided point. On the other hand, as a consequence of the simultaneity of service delivery and usage discussed earlier, service quality depends on the service's adaptation to the service needs in respect to both providing and usage. It is necessary to continually trace the dynamic shift of service needs. As service users have higher degree of participation as compared to buyers of manufactured goods, the potential for service value being added by the user is more dependent on the details of user participation.

Based on these general considerations, service value is best discussed in a three dimensional service value domain with the three axes of "Service usage place", "Service needs level", and "Degree of customer participation"

(1) Axis I: Service usage place

In the Knowledge creation model theory of Nonaka [23], [24], several kinds of "Ba" (Japanese for "place") where knowledge is created are identified: individuals, groups, organizations, environment (eco-system). Further "Ba" is classified by two axes: the "individual – group" axis and the "direct (face to face) – indirect (virtual)" axis. Similarly, we express the service usage place on one axis consisting of individual / group / organization / infrastructure / society. In such a way one can clearly distinguish B2C / B2B / B2M (for nonhuman machines) / B2G (for public government).

(2) Axis II: Service needs level

It has been observed in the past [11] that the needs of society and its various components can be classified in a way similar to the needs of individuals. Taking advantage of this analogy, we have tried to classify the needs level of various service users before [19] according to Maslow's needs hierarchy theory [16], [17]. As his theory assumes that needs shift upwards and does not account for the interaction of multiple needs, various modified theories were proposed later. In our study his theory is used as the ordinate axis for placing various service needs such as existence / safety & health / belongings & affection / self-activation.

(3) Axis III: Degree of customer participation

The "intangible" service is often attached to a related

"tangible" product in order to clarify the added customer value of the product. In these cases the customer value is thought to be the total of "product value" provided by product itself, "service value" provided by addition of the productrelated service, "individual added value" attached by customer as shown in Figure 2 [12].



Fig.2 Phases of Customer Participation for Value Generation Process

The figure presents four phases of customer participation in the generation of customer value:

- a phase of *value provided* through the providing of product or related service from provider to customer,
- a phase of *value adapted* through the variation in the service contents or service channel according to customer needs,
- a phase of *value co-created* through joining of customer as co-producer for generating new attached value,
- a phase of *value autonomous* through customer's autonomous creation of his own individual value towards his favorite hobbies or volunteering service work.

As an example for these phases we will use mobile telephone services.

When a service user purchases a portable telephone and a related service contract, he attains the product value of many convenient functions for mobile telecommunication, and the service value enabling him to use the voice communication or mail delivery services. The "value delivered" phase up to here is provided by a portable telephone service company.

Next, the service value is enhanced through customizing the individual use functions such as adding web service for individuals and/or groupware service for enterprises. This is the phase of "value adapted" to customer needs.

We think it is significant that as a result of this value generating process users and providers can collaborate on the value of service, by tuning installed functions to customer's daily life and business such as e-tickets, e-money for cashless transactions and e-tag as identification tool for safety and security [5]. This is the phase of "value co-created" for adding customer value.



Fig.3 The plane composed by I-axis and II-axis

Internet web usage has enhanced mobile phone services in various ways. If the web contents are dependent on not-forprofit collaborative activities based on advanced user's needs, such as "Wikipedia" web service, we have an example of "value autonomous" for emerging customer value. This phase is possible to trigger so-called "democratizing innovation".

B. The meaning of planes in the service value domain

(1) The axis I - axis II plane

The plane composed by axis I (service usage place) and axis II (service needs level) has possibility to show the distribution of the relationships between usage place and needs level of various services. Here we have found Maslow's needs theory for individual needs to apply similarly to groups, organizations, and social infrastructure [19]. This plane enables comparison of value domain among similar service businesses or stages of an evolving service. Such a representation may be suitable for developing targeting strategy by business players planning the introduction of new service. One of the authors has found this plane useful for service classification, comparison and typification.

(2) The axis II – axis III plane



Fig.4 The plane composed by II-axis and III-axis

The plane constituted by axis II (service needs level) and axis III (degree of customer participation) can show the distribution of the relationships between needs level related to various services and the respective degree of customer participation. The distribution of various services in this plane tends to be grouped around a characteristic monotonically increasing line, because services tend to be more physical or simple at lower service's needs levels and become more mental or sophisticated for advanced needs levels. Still, packaged services such as tour packages or general service outsourcing are located at rather high needs level while still belonging to the lowest "value provided" group of value creation. On the other end, not-for-profit or volunteer disaster response services are located rather low on the needs level scale but at the same time in the highest "value co-created" or "value autonomous" categories of value creation.

The analysis of this plane indicates, e.g., the significant position of package and disaster response services in solving the problems caused by the intangibility or simultaneity of service. The Axis II – Axis III plane presentation has a potential for suggesting fusion strategies of product and service, as well as flexible strategies for satisfying various customer needs levels.

(3) The Axis III – Axis I plane

The plane constituted by axis III (degree of customer participation) and the axis I (service usage place) has also a lot of potential for visualization of important relations. It shows how the degree of customer participation differs for the various service usage points.

Indeed, individual users generate more easily "value autonomous" or "value co-created" than organizations or infrastructure. The trend seems to be that the larger the usage place, the more restricted into the "value provided" or at best "value adapted" phase the degree of customer participation.



Fig.5 The plane composed by the III-axis and the I-axis

But even if the usage place of service is a "group" or "organization", still individuals join to develop new service according to the group or organization rules, e.g. in the Wikipedia project. In a corporate environment, too, services may be realized based on externally supplied packages originally generated by means of knowledge management tools, so that such services may be regarded as "value cocreated". Thus, in a sense, such services get realized in a virtual network environment.

The Axis III – Axis I plane has potential for planning the enhancement of customer value of conventional non-IT services and for considering expansion strategy of service domain by fusion with IT related services.

C. Three-dimensional representation

Once the position of service is identified on each axis, one can indicate the service value in the three-dimensional space composed of the three axes as shown in Figure 6.



Fig.6 Proposed three-dimensional representation

If there are any changes with time or other factors in a particular service, identifying the service position on the three axes along with the respective trends presents the shifting state of the service. Observing the shift direction one can analyze its cause, and consider the consequences for the realization of services.

IV. HISTORICAL FEATURES OF JAPANESE TEA CEREMONY IN THE CONTEXT OF SERVICE VALUE

In this section we discuss the historical features of Japanese tea ceremony [15], [27] in the context of generated service value, in order to be able later to identify the place of Japanese tea ceremony among other traditional and modern services, as represented in the three-dimensional service value model from Section III.

A. Typical terms for explaining tea ceremony and the relationships to the service concept

We will focus on the concept of "Chaji" as realized generally in tea ceremony.

Chaji is a formal tea gathering during which the host serves food (Kai-seki) in addition to making two kinds of tea (Koi-cha and Usu-cha) to the guests invited in advance by him/her according to a prescribed custom and performed in a tea room (Cha-shitsu).

The host implicates symbolic meaning in his/her behavior and in the various utensils for making tea during the Chaji. The guests need to reflect the implicated meaning aiming to infer the host's hospitality. Furthermore, from the combination of hanging scroll and utensils the guests may feel the shift of seasons, inferring the changes of human life, and may perceive and experience cosmological rhythm and order together with their host [31].

Thus the Chaji has the aspect of collaborative activity between the host and the guests. Based on the aspect, the typical terms of tea ceremony are summarized as follows:

Conceptual terms in tea ceremony	Japanese pronunciation	Kanji-style
"harmony, respect, purity and tranquility"	Wa, Kei, Sei, Jaku	和敬清寂
"one opportunity, one encounter"	Ichi-go ichi-e	一期一会
"host three-quarter, guest one-quarter"	Teishu Sichibu ni Kyaku Sanbu	亭主七分に客三分
"building up the seated-as-one experience"	Ichi-za konryu	一座建立
"a mountain place within the city"	Shi-tyu no san-kyo	市中の山居

TABLE 1. TYPICAL CONCEPTUAL TERMS IN JAPANESE TEA CEREMONY

- "harmony, respect, purity and tranquility"(Wa, Kei, Sei, and Jaku): main spiritual principles of Chaji to be built through mood cooperation between host and guests, in which people go in friendly mood ("Wa") enabling mutual communication ("Kei") through pure minds ("Sei") in a cool and calm manner ("Jaku");
- "one opportunity, one encounter" (Ichi-go ichi-e): a

conceptual term reminding the host that each tea meeting is unique, that is "one chance in a lifetime", to do one's best to achieve superior hospitality; the historical background is the struggle of Japanese coping with the medieval turbulent "Warring States Period" (15 - 16th century) aiming to built mental community ("Ba") [25] by acquiring one's own "habitus" [4] ("kata" in Japanese) [8] towards peace of mind to reclaim trust among people;

- "host three-quarter, guest one-quarter" (Teishu shichibu ni kyaku sanbu): a conceptual term referring to the host doing his best to make tea for the guests, and implying that the guests are worth of the effort; The successful experience depends heavily upon "how guests act out their parts as guests".
- "building up the seated-as-one experience" (Ichi-za konryu): a conceptual term expressing the shared feeling of participating in the Chaji having one mind, creating one atmosphere and building new friendship among the participants; this term was first expressed in the "Fushi-Kaden-sho" written by Zeami, an establishers of Noh, another traditional art performer.
- "a mountain place within the city" (Shi-tyu no san-kyo): a conceptual term about the significance of tea rooms in the city, such as the typical medieval city of Sakai, where tea ceremony had its roots; the city tea huts are thought to have the cultural background of having been deliberately introduced to bring contrasting rural elements in city houses, as opposed to the religious centrifugal orientation from city to suburb and then to mountain.

In the context of service, "one opportunity one encounter" is related to the intangibility and perishability of service features, while "harmony, respect, purity and tranquility" is related to the simultaneity and heterogeneity. These terms suggest the mental attitude coping with the similar features in tea ceremony and services in general.

The combination of these two mental attitudes, along with the participation of guest (customer) described by "host threequarter, guest one-quarter" make possible to achieve unforgettable experience through the interaction to host and guests. Last but not least, the value co-created in the Chaji is accomplished by sharing a significant experience and place ("Ba") built for both host and guests and included in the "building up moments inside tea house together" principle. As the environment for such co-creation, the space described by "a mountain place within the city" becomes a place of unordinary impressions and relaxation.

B. Historical shift of tea ceremony in respect of customer value: pursuit of the unusual and approach to ceremony and entertainment

Tsunoyama [36], reproducing a note by the Portuguese Rodriguez who visited Japan in the final stage of the "Warring States Period", writes: "The greatest entertainment are various drinking parties. At such parties a lot of food and liquors are served, followed by enjoying music and dances. Then, pure hot water with rice bowls, later seasonal fruit are provided. Finally tea is served to indicate the ending of the party." Suzuki [31] writes that the separation of general drinking parties and tea drinking as an independent ceremony with its specific tea rooms has evolved as the original way of treating guests, later emerging into a ritual. The timing was in the middle of the 16th century, mainly in Sakai city. Before that time, tea used to be made in another room. Early tea ceremony was called "tea in the hall" (Den-cyu no cya) and used to be carried into the party room like any other food. Later, making the tea became a host duty performed in front of the guests. Early tea ceremony went first two a "tea in the hall" stage, until finally reaching the classical "wabi cya in the hut" initiated by Sen-no-rikyu. In the "wabi" tea, the tea ceremony went further apart from usual tea drinking and became codified into self-awakening meditation.

After Sen-no-rikyu, since the end of the 16th century, powerful feudal lords (daimyo) such as Oribe or Enshu supported great tea ceremony as a form of entertainment or socializing with lot of hospitality and elaborate ritual. This trend has been continuing to the modern age. In the process, tea ceremony became an entertainment art, and the new tea ceremony experts were not professional performers anymore, but mostly daimyo or common people. The relationship between host and guests changed, too. While the status of guests was generally perceived as superior to the host, guests became to feel equal with the host because the host was making tea in front of them to gradually refine the tea making techniques, with both participants coming nearer in the small closed hut. This equal relationship is thought to have internalized the host-guest relation in the "mental way of tea" (Kokoro no Cha-no-yu) under influence of religious faith. The equality in tea ceremony became to be valuated beyond social status and position, to the extent that tea huts used to have hangers on the outside for the samurai to leave their swords there before entering. In this and other respects, tea ceremony has been changing and experiencing influences not only from Japanese traditional aesthetic feeling and Shinto religion, but also from medieval Buddhism and free modern urban spirit [38].

V. TEA CEREMONY IN TERMS OF THE THREE-AXES MODEL

The historical shift of Japanese tea ceremony is better understood if expressed in terms of the three axes service value model. In this Section this shift is presented focusing on axis III (Degree of customer participation), and the plane defined by axis I (Service usage place) and axis II (Service needs level), in addition to considering the general shift in the three axes service value space as introduced in Chapter III.

A. Tea ceremony and the degree of customer participation (axis III)

A defining element of the historical change of tea ceremony described in chapter IV was the shift of relationship between host and guest, manifested as gradual increase of degree of customer participation. In the case of tea ceremony Chaji, the various possible degrees of customer participation in value generation have specific features shown in Table 2.

Degree of customer participation in Value Generation	Related contents of tea ceremony Chaji	
Autonomous	Enjoying by imagination / autonomous entertainment	
Co-created Service & mental satisfaction produced together by host and guests		
Adapted	Service adaptation made possible by the equivalence between host and guests	
Delivered	Product "tea" - making tea by using tea hut	





Fig.7 Degree of customer participation vrs. value generation

Accordingly, the shift or process in Chaji can be presented in more detail as relation of degree of customer participation and value generation as shown in Figure 7. The result of such analysis is shown in Table 3. Similar pattern of customer participation shift in value generation can be identified not only in the historical shift of Chaji, but also in the evolution during each person's own learning process of Chaji as a for m of traditional Japanese artistic performance [8].

B. Chaji evolution in the axis *I* – axis *II* plane (service usage place versus service needs level)

The historical shifts towards pursuing the unusual, ceremony and entertainment in Chaji evolution is best understood in the framework of the axis I – axis II plane (service usage place versus service needs level as described in chapter IV). This shift is shown in Figure 8 with S1,S2 and S3 signifying the various development stages of service value contained in Chaji (Table 4).

Elements of Customer Value and its Shift	Related contents of Chaji in tea ceremony	Typical stages of Chaji condition
Added Value by Customer	 b. Chaji as ceremony -> autonomous creation a. Mental satisfaction -> co-creation with guests 	-> S3
Service Value	 c. Interaction with guests -> mutual enhancement b. Performing Chaji in front of guests -> adapted to guests a. Making tea -> Service value provided 	-> 52
Product Value	b. Tea made and delivered from another rooma. Tea as product	-> \$1

TABLE 3	VALUE CREATION BY SHIFT OF CUSTOMER PARTICIPATION	IN CHAIL
TIDEE J.		11 4 0111 101

a, b and c refer to the shift of each value as indicated in Fig.2

S1, S2 and S3 are explained in sections B and C

TABLE 4. EVOLUTION OF CHAJI IN TERMS OF SERVICE USAGE POINT AND NEEDS LEVEL

Development stage	Features of Chaji and Si symbol (service usage point, service needs level)	
\sim mid 16 th century	Provided in usual room	-> S1 (Individual, Belongings / stability)
mid 16^{th} century ~	Pursuit of the unusual in a tea hut	-> S2 (Individual, Social esteem/growth)
late 16 th century	Great ceremony for entertainment	-> S3 (Group / Organization, Comfort / growth)



Fig.8 Historical shift of "Chaji" in I axis I - axis II plane (Service usage place versus service needs level)

C. Tea ceremony evolution in three-dimensional model representation

Combining the analysis from A and B above, the shift of tea ceremony service value can be displayed in terms of the full three axes model, as shown in Figure 9. The individual scales of each axis in the model proposed in Figure 4 are introduced, and the coordinates of the S1, S2 and S3 stages of tea ceremony are chosen as shown in Figure 9, following the discussion in A and B. This method follows an earlier paper, which analyzed modern contemporary services [21].

TABLE 5. EVOLUTION OF CHAJI IN TERMS OF THE THREE AXES MODEL OF SERVICE VALUE

Development stage	Features of Chaji -> Si symbol (service usage point, service needs level, degree of customer participation) -> Si(Axis I data, Axis II data, Axis III data) scaled by each axis	
~ mid 16 th century	Guests > Hosts (as servant)-> S1 (Individual , Belonging / stability, Provided) -> S1(1.0, 2.5, 1.0)	
mid 16 th century ~	Guests = Host (in small tea hut) -> S2 (Individual, Social esteem/growth, Adapted to co-created) -> S2(1.0, 4.0, 2.5)	
late 16 th century	Ceremony / Entertainment -> S3 (Group / Organization, Comfort / growth, Co-created) -> S3(2.0, 3.5. 3.0)	



Fig. 9 The historical shift of "Chaji" in the service value space

The axis I coordinates vary in the range from "individual" (1.0) to "group" (2.0), those for axis II in the range from "belonging" (2.5) to "growth or esteem" (4.0). Axis III uses data for the S1, S2, and S3 points chosen to represent the transition experienced by tea ceremony in the 16^{th} century as summarized in Table 3.

Figure 9 shows the three stages (S1, S2 and S3) mapped on the three-dimensional model with the historical shift indicated by the arrows. Such a figure visualizes the shift of customer value conditions. One can understand at a glance the place of service usage, service needs level, and degree of customer participation, as well as backtrack the historical evolution of tea ceremony Chaji. Furthermore it provides insight for the people engaged in sustaining and enhancement of various contemporary services to reflect on the cause of transition and change in the service value domain.

VI. THE SERVICE ASPECT OF CHAJI WITHIN THE GENERAL SERVICE FRAMEWORK AND ITS IMPLICATIONS FOR CONTEMPORARY SERVICE INNOVATION

The value of each service is realized by service elements, which can be presented by a SPUM (Service Providing & Using Model) framework [19]. In this section we outline the SPUM framework for Chaji and its insights for service innovation.

A. Service realization framework of Chaji

The SPUM framework based general realization scheme of Chaji is shown in Figure 10. In Chaji the host (the service provider) treats the guests (service users), including a main guest ("guest of honor"), with refined hospitality mind and skillful coordination of tea utensils (service contents) through traditional behavior and ritual of making tea and preparing the inside and outside of the tea room (service channel)[35]. The host usually undertakes in advance directly invisibly to the guests elaborate preparations for setting-up the tea room (service usage place), preceded by a waiting room ("machiai") and a garden leading to the tearoom ("ro-ji") (service infrastructure).

Here, tea utensils ("cha-dougu"), hanging scrolls ("kakejiku") and flowers ("hana") are attached symbolic meaning, which complements the intangibility of hospitality service with metaphors or metonymy [2], [13], [34]. The host can increase and refine the level of treatment by altering the combination of guests and acquiring traditional Japanese or Chinese culture knowledge, enhancing deeper understanding of symbolic meanings.



Fig.10 General scope of "Chaji" as service

Rich merchants in Sakai city, where tea ceremony originated, or art pursuing samurai daimyos (playing the role of service managers) [9], [10] often adopted the host as a permanent teacher ("sa-tou") in a mentorship-like relation in order to disseminate tea culture within their families and

domains. Moreover, the guest of honor played not only the role of a main customer (principal service user) but also was a representative (as service agent) of all guests interacting on their behalf with the host. Thus, the main guest was a sort of manager for the service users towards value co-creation between host and guests, as implied in the "Ichi-za konryu" concept introduced above.

Each of the service elements from the SPUM framework of Chaji has been varying across the ages coping with the changes in the service value domain. This is how, based on the traditional background of Chaji, tea ceremony emerged as one of now-a-days most essential cultural services for Japanese, providing a valuable example of hospitality service with centuries long track record of sustainability.



Fig.11 An example of structured search for innovation based on the tea ceremony metaphor

Fig. 11 illustrates a workshop tool that allows developing ideas for service innovations using the tea ceremony metaphor. It consists of a matrix which differentiates on the one side the various customer activities before, during and after the product application. On the other side, the four tea ceremony principles and their interpretation are distinguished. This way, a large number of discussion fields are created that allow – for each one of them – brainstorming discussions focused on answers to the question: "How can our company make our customers feel like being the guest of honor of a tea ceremony?"

B. Implications for service roadmapping

Our understanding for the relationship of service framework and roadmapping is shown in Figure 11.

In order to get insights to future services as necessary for service roadmapping, it is very important to study and recognize the historical shifts in value domain in the related service, not forgetting intangible service features such as satisfaction of mental needs and participation of customer. That is, a studying and telling the story of past tradition is necessary for developing the services of the future. The service domain shift model is beneficially applied mainly to the upper layers in the developing of the service roadmap.

The SPUM diagram can clarify the elements of the service

whose shift is studied, displayed in the service domain model. The analysis of these diagrams contributes to the design of the lower layers in the service roadmap.

VII. CONCLUSION AND FUTURE RESEARCH

This paper is breaking new ground in developing service innovations. Core of this approach is relating the content and the quality of rendering and developing services of companies to traditionally deeply rooted values of the Japanese culture. In fact the tea ceremony can be considered to represent an event consisting of rendering a service at an extraordinary high level of guest awareness. This analogy is well justified since in the Japanese word "kokyaku" (顧客) for "customer" contains "kvaku" (客) meaning guest". In other words: The practice of tea ceremony is a formidable expression of service culture based on collective and personal values that characterize the Japanese way of life since centuries. For such reasons, the highly challenging task to create and maintain a true service culture within an organization is facilitated in Japan, since employees joining a company a priori exhibit a service-minded behavior reflecting inherited service-related social values. This situation contrasts with Western cultures which rather favor individual- than relation-centered attitudes.



Fig.12. Integration proposed framework with service roadmapping

With this broad perspective in mind, the paper proposes a concrete procedure on how to transform the service-related cultural values of the Japanese society into a company's beneficial service performance. It consists of a three-axis framework including service usage place, service needs level and degree of customer participation, and applies the new framework to study the historical shift of service value delivered by traditional Japanese tea ceremony. The analysis points to the possibility of integrating the proposed framework into the roadmapping process of new services.

It cannot be denied that the analogy between the historical evolution of tea ceremony and contemporary business models in the service sector has been pursued a little too eagerly. Nevertheless we feel that, for services where essential elements of art value can be abstracted, our approach is a step in the right direction towards identifying the full extent of service value.

Further research that needs to be done should possibly include: anthropological approach [2], [13] to service value and its shift including identifying common value structures for traditional and modern services; studying the art of hospitality ("motenashi") of traditional tea ceremony culture with its potential for enhancing the hospitality aspect of the entire service industry [36]; new methodologies to provide an adequately framework for effective introduction of modern systems such as information and robot technologies towards sustaining and enhancement the quality of life in the near future, while sustaining traditional culture.

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