

Self-Service – Lessons From Industry

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Abstract: Over the years, companies have employed a myriad of techniques in an effort to positively impact their bottom-line, while competing in a dynamic, fast-paced market without boundaries. These techniques have ranged from leveraging new media to growing their client base to outsourcing non-core organizational competencies to cheaper economies. The cost minimization path to profit maximization normally leads to the exploitation of the phenomenon of self-service, where service provision responsibility is transferred (partially or completely) to the service consumer. In exchange for the additional responsibility of partially or completely provisioning service, the service consumer has more flexibility engaging with the service, more ownership in the creation or delivery of the service, and more delivery options to choose from (i.e., inter-personal service or self-service). The resulting lowered transaction cost, diminishing provider expense, and service consumer empowerment seem to create a virtual win-win situation for all parties involved. However, the design of self-services and self-service technologies (SSTs) must also consider other implicit factors that can impact the kind of service experience a service consumer has and, ultimately, determines whether a self-service succeeds or fails. This paper provides an examination of the concept of self-service, discusses the implications of employing this concept and makes recommendations for its successful deployment and adoption.

Keywords: service, services, self-service, self-service technologies, lessons learned, SST, provisioning

1 Introduction

The importance and relevance of services research, management and leadership is taking on a new complexion in our technology and innovation-fueled society. It is no longer acceptable to deliver service offerings, for which the societal and technical ramifications have not been thoroughly thought out. For example, the push towards patient-centric healthcare has led to clinics recommending that their patients perform specific non-critical tasks, such as blood testing, with online medical service providers [3, 5].

Efforts such as these, even though they have organically evolved, need to incorporate the lessons learned from the many prior self-service deployments that have successfully (and not so successfully) been delivered in order to ensure that the positive benefits are consistently realized. This is particularly important in domains such as healthcare, where a minor error could be catastrophic.

The deployment of a self-service is a natural way to lower the operating expenses for a business. However, there may be other motivations, namely: to address a customer need, demand or pain-point, to build rapport with clients, to target emerging markets, or to offer a differentiating quality over the competition. Irrespective of the strategic rationale for deploying a self-service, great thought must be placed in 1) pinpointing one's primary long-term goal, 2) delivering a consistent message to one's market, 3) figuring out the most effective ways to make the customer experience as enjoyable (and or painless) as possible, and 4) evaluating the negative and positive impact of the self-service and using this information to refine the service.

What are the lessons that can be applied to the design and delivery of self-services that will result in a better balance between diminishing provider expense and more effective co-creation of value between provider and client? This paper seeks to address this question. We start by pinpointing the notions of service and self-service in sections 2 and 3. Examples of the self-service concept in action are presented in section 4, and we

outline the underlying assumptions of self-service (sections 5). Guidelines for deploying self-services are provided in section 6 and we conclude in section 7.

2 Service

A service can be defined as a task that one organization does for the benefit of and with another and themselves [6]. A service may be a process, standardized description, protocol or a negotiation of these base artifacts. A typical service requires participation and input from both the consumer/client and the provider, resulting in the co-creation of some valued asset. The client owns or controls some state that the provider transforms according to some agreement established between both parties that describes the negotiated terms of the interaction [7]. This agreement, also called a service agreement, is generally in the form of a contract (be it written or verbal) that describes what is to be done with respect to the enactment of the service. The enactment of a service is a process of transformation that results in a modification of the client's possessions, processes, or tangible assets.

Providers and clients may be individuals, firms, government agencies, or a myriad of different organizations of people and technologies, which may result in a complex network of value. For example, a financial services information provider, FinStat, which provides aggregate financial analysis data to the market may require local statistics from Tillco Mutual and Bank of Tulsie in order to co-create value for their clients. StoxFund, one of Finstat's clients, also provides a service to their investing clients Tom Morant and Harry Hornsby. Everyone in the network works in a myriad of ways to create value. At least one of these ways normally involves self-service deployment.

3 Self Service

Value that is collaboratively produced by provider and client materializes through a range of interactions from the client

simply providing input that the service provider uses to deliver the service (e.g. credit card holders providing unique identifiers to use a credit card company's call center), to the client carrying out some or all of the work involved in delivering the service [1].

In instances where the client is able to carry out a portion (or all) of the work involved in delivering the service (self-service), the client begins to turn to the service provider only if they have a question or run into a situation that is outside of the scope that they can address. In this case, the service provider re-inserts himself to address the issue at hand. The provider's innate intention is to transfer further skill and knowledge to the client so that they can handle similar situations themselves in the future. This phenomenon results in the service provider taking on the role of coach. As the amount of expertise transferred between provider and client in this self-service environment increases, a cognitive apprenticeship [2] emerges between the parties.

A prime example of this phenomenon is outsourcing, which refers to the delegation of activity that is not a company's core business to an external party that specializes in the management of that activity. General Autos (GA) is a car manufacturing company that has made a loss for the last three years and has decided to scale down its internal Information Technology (IT) department and outsource the IT systems that handle employee, payroll and partnership transactions to IBB in India. The production line and quality control IT systems are still maintained internally by General Autos. Initially, the GA IT staff spends considerable time with the IBB staff to familiarize them with their systems, tasks and procedures. After this transition period, IBB routinely handles the maintenance of employee data, the production of the bi-weekly payroll and the maintenance of information on GA's partners and their interactions with the auto company. In a special design project for a luxury line of concept cars, GA partners with a little known startup company, called Extreme Designs (ED). For this partnership, ED needs to be intimately involved in the production and quality control of the new car. This interaction requires that IBB interact with GA's IT department to learn the process to handle this special case. In this scenario, we see two instances of the apprenticeship paradigm. Initially, when the services were being outsourced and then again when a specialized situation, unfamiliar to IBB, came up. These types of interactions are often seen in self-service deployments in the corporate world today.

Whether the self-service is designed such that the client takes on a small portion or all of the work, considerations are made by both the service provider and client when determining whether to deliver (in the service provider's case) or use (in the client's case) a self-service model or technology.

From the perspective of the service provider, in most cases, the decision to deliver service using a self-service model or through a self-service technology is done in an effort to cut costs and focus on functions or processes that are core to the business. A popular un-named Scandinavian-based retail outlet, for example, revolutionized the furniture business by employing a self-service model in which customers select, transport and assemble furniture components themselves. As a result, this company was able to reduce the cost of labor needed to transport, assemble, and maintain furniture for their customers,

enabling them to focus on providing its customers with high quality low cost furniture options.

From the perspective of the client, the decision to use self-service technology is based on depends on a multitude of factors. Clients use self-services that are convenient (e.g., self-service gas pump), that provide easier access than personalized offerings can (e.g., online banking systems), that are easy to use, and that work as expected delivering reliable outcomes [4]. The implications of these factors on the design of emerging self-services are profound because of the ramifications of these motivators. Self-service represents a fundamental shift in the nature of services, whose importance will only continue to grow as the use of self-service becomes more widespread.

4 Self-Service In Action

In this section, we will provide examples of self-service used in industry; presenting varying ranges of service provider and consumer work sharing, and extracting the lessons learned from the design and delivery of these self-services.

4.1 Banking

The banking industry was one of the first industries to leverage and promote the self-service concept. From the ATM to online banking, this industry has leveraged and incorporated a number of technologies that allow the client to become a virtual teller for the bank, carrying out transactions for their account in much the same way a teller would. A prominent example is in the use of an ATM machine. A banking client can insert their card, enter their PIN number, select the account they would like to withdraw from, enter the amount they would like to withdraw, and receive cash in hand. All activities that decades ago were done by a teller on their behalf. Furthermore, the client has a choice of using an ATM or accessing their account online to do more complex transactions such as paying bills or transferring money from one account to another.

Several types of skills and knowledge must be acquired and applied as the client participates in these interactions. For the ATM example, the client must be able to read the ATM or computer terminal's screen and understand the commands as they move from screen to screen, i.e. there is an assumption of literacy. They must be able to recall their pin number and user identification, which is especially important when engaging in online banking. They must learn and be comfortable with the user interface. From the client's perspective, the value lies in not having to travel to a branch, wait in lines, or fill out paperwork in order to manage their accounts. As such, the value a client derives from managing his accounts is worth the sacrifice of learning the pre-requisite skills and applying the knowledge necessary to interact with the ATM and online banking systems. From the bank's perspective, fewer tellers are required to service clients, resulting in reduced operating costs and thus, a decrease in overhead.

However, the perceived benefits of service delivery diminish when the client's needs involve more complex transactions. For example, if a client needs to acquire a cancelled check written more than three months ago, they cannot use the ATM or online banking system to complete this transaction. Their local branch may not be able to help either; as it is policy in most bank branches to delete records of cancelled checks past six months. In this circumstance, the client must call customer service,

provide the dates of the checks they are looking for, wait for a list of check numbers and amounts that correspond to those dates to be sent to them through the postal mail, call customer service again to provide them with the actual check numbers, and then wait for the cancelled checks to be sent to them through the postal mail. This process could take weeks or even months to complete and involves the client having to not only call customer service multiple times, but also wait in order to have the transaction completed.

4.2 Healthcare

Exorbitant healthcare costs have led patients and hospitals to establish new models of healthcare delivery. Recently, a plethora of online healthcare planning and service provision firms have emerged. Hospitals and hospital groups see the benefit in reducing their expenses by outsourcing some of their non-critical operations, and patients are drawn to lower healthcare expenses.

However, in a sensitive services industry, such as healthcare, this form of self-service has to be carefully evaluated before widespread adoption. When the accurate performance of an activity may lead to a decision that has death as a possible consequence, the expectation on the correct and reliable execution of this self-service now has a higher level of significance than in other sectors. This highlights the fact that this alternate model to self-service, which closely resembles the current model for the outsourcing of non-core business activity, makes assumptions on both the end-consumer, who now directly interacts with the outsourced agent, and the provider itself.

The assumptions on the outsourced agent are that they are as knowledgeable and competent on the process they are undertaking as their equivalent healthcare entity. In addition to this, they are expected to dependably execute this process in the correct manner and communicate the results to the consumer in a user-friendly manner.

The client, or patient in this case, is expected to have enough knowledge to weigh her options, balancing the cost and reputation metrics for each agent and choosing a reliable service agent. Also, the patient is assumed to have enough insight to evaluate the quality and interpret the output from the agent objectively.

The implications on the initiating healthcare provider include creating mechanisms to handle the verification of the results presented to them from the client and incorporating the modification of the clinical workflow to accommodate the removal of the outsourced activity from its system. Similar situations exist in other industries where self-service is being organically rolled out due to cost pressures.

4.3 Retail

The retail industry has long recognized that increased profitability can be significantly impacted by minor adjustments in the production and delivery assumptions and processes.

Today, major furniture outlets, like the popular un-named Scandinavian-based retail outlet previously mentioned, have eliminated the assembly process and outsourced this activity to their clients. The remarkably reduced cost of un-assembled furniture, versus their higher-quality assembled competitors, may be considered by clients as an important factor in the buying process. However, the change in the delivery model of

these products makes fundamental assumptions on the expertise of the prospective buyer.

The most basic assumption is that the client is able to read and understand the instructions necessary to assemble the piece of equipment. The second is that the consumer has the necessary physical tools, whether it is physical strength, power tools or an extra pair of hands. The third assumption is that the client can correctly execute the instructions and create the desired result. The 'once-internal' process, which was the domain of the manufacturer (and its associated obvious risks), move outside the manufacturer's sphere of influence. The risk of injury to a furniture builder, the risk of producing a sub-optimal product and the risk of losing time in the production process are transferred to the end-consumer. The company has not only lowered its overhead in terms of production costs, but also reduced the associated liabilities, which further lowers operating expenses.

However, the separation of a process from a well established production chain or system may have unidentified or unintended repercussions. For example, for an experienced furniture installer, she may acquire more and more knowledge over time that can help her to figure out what components are needed to construct a particular piece. This knowledge will allow her to go to the provider's supplier and get the constituent parts. This reduces the provider's revenue stream and (slowly) transforms the consumer into the provider's competition.

There are also internal processes in an organization that will become streamlined to facilitate the removal or outsourcing of a process. These streamlined procedures are normally geared at the average consumer. The buyer with an unusual case may become more easily dissatisfied because there may be very little mechanisms in place, if any, to expediently handle her issue.

These are some of the concerns that warrant further discussion.

5 Core Self-Service Assumptions

Four major assumptions revealed from our discussion of self-services, both in theory and in action.

5.1 Minimal Skill Set

Self-service makes the assumption that service consumers have a minimal set of skills and knowledge that will allow them to be able to use the self-service and create value from its use. Consumers are expected to possess general cognizance and understanding of the tokens used and the actions required of them. For example, in the case of ATMs, one must be able to carry out certain actions like insert their card, etc. and utilize the additional services it provides (transfers, balance inquiries, etc.). As another previously cited example is self-service technologies for healthcare, where one must be able to access certain information about their condition, etc. For users without those skills and knowledge, there is a learning curve that must be overcome.

5.2 Service Use Comprehension

Self-service assumes that service consumers understand the process(es) they are engaging in well enough to be able to get the result they want and create the kind of value they expect. In this context, comprehension relates to the possible states of the system, negative and positive outcomes and the conclusions to

be derived from each process. For example, self-service technologies in healthcare assume that the user will be able to execute the process of identifying and selecting a doctor accurately and will correctly understand the feedback. For those users who are not successful at interacting with or in the process, additional support may be needed.

5.3 Internal Workflow Impact

The decision to design a self-service or self-service technology has an impact on other services and processes that intersect with the self-service. The example of the consumer who needs a copy of a cancelled check past six months provides an excellent example of the impact of self-service on other processes. In this case, the bank assumed that the user's need for cancelled checks does not exceed three months as a direct consequence of streamlining its internal operations to cater to the needs of the self-service majority. As a result, the customer who needed a check that is past six months may have a service experience below expectations.

5.4 Balancing Provision and Competition Creation

While self-service provides the benefit of lower overhead cost for the service provider and flexibility and diversity in choice for the service consumer (amongst many other benefits), there is the potential for danger that may not be immediately visible at SST design or deployment time. In order to actively co-creates the value a self-service yields, the service consumer must have access to the processes involved in enacting that self-service including their operation, the order in which they are carried out, their interdependencies, etc. As a result, if the service consumer learns enough about the processes, skills, and knowledge involved in the creation of value from that service, then they may be able to fully implement the service for themselves without the service provider's participation; thus, becoming a competitor of the service provider.

In some cases, this state may be a desired one, but in others, the result may be an unacceptable loss of revenue to the service provider and decreased market presence. From the perspective of the service provider, approaches to minimizing the impact of this scenario must be considered and possibly enacted before a serious problem develops. One technique that the provider may employ would be to invest in research and development that gets incorporated into its product line. This would provide a stream of continual innovation that would push the boundaries of what can be replicated through offering new services.

These assumptions hint to useful guidelines for practitioners.

6 Guidelines

In light of our previous discussion of self-service and its implications, designers of self-service must keep several issues in the front of mind when designing self-service technologies.

6.1 System Exposure

How much of the process should be revealed to the consumer? The answer to this question will be different for each service provider and designer of a self-service technology. The answer will also have unexpected impact in terms of market share, appeal and innovativeness of the self-service or SST in

the marketplace. We have already discussed in section 5 the idea that exposure to enough of one's process(es) could lead to the service consumer becoming a competitor in the same marketplace as a service provider. As such, it is important for designers of self-service and SSTs to be in the position to continuously innovate their self-service offerings and SSTs, either by creating new self-services, expanding the offerings or options of current SST to the current marketplace, or customizing and extending SSTs to attract new niche markets.

6.2 System Impact

There must also be greater attention paid to the impact that a self-service or SST will have on the provider's processes as a result of implementing a self-service or SST, where there was once interpersonal service. An understanding of current processes and practices must be acquired and viewed both pre- and post- implementation. Many processes impacted by this change may have to be reorganized or optimized for the new business workflow. While implementation of a self-service or SST may result in lower costs, fewer processes, and more efficient organization, attention not paid toward the impact of SST on other processes has the possibility of negatively impacting the self-service experience. This tends to be the case in exceptional circumstances that may not occur as frequently, but that have just as great an impact on a service consumer's experience and overall perspective of a self-service.

6.3 Service Assumptions on Skill Set

Designers of self-service and SSTs should also always keep in mind the learning curve that clients, as well as those responsible for maintaining a self-service or SST, must navigate to have a good self-service experience. The same also applies to the core information that users have to acquire when in order to effectively utilize SST. This factor may greatly impact the uptake, integration, and ultimate success of a self-service or SST.

6.4 Service Support – Failures, Exceptions, etc.

From the users perspective, as well as the service maintainer's perspective, self-services or SSTs that are poorly designed, unable to recover when a service failure occurs, or result in unexpected outcomes because they don't work as designed create a less than positive self-service experience and are less likely to be used repeatedly (or at all) by users.

Designers of self-services or SSTs must think about the kinds of service failures that may occur and design recovery mechanisms and ensure that the self-services or SSTs are designed in such a way that the outcomes the designer and user expects are the outcomes that the user experiences. Designers must also include support for those who will be charged with maintaining self-services and SSTs; be it in the form of training, coaching between designers and self-service maintenance personnel, or early employee adoption programs launched by the service provider.

7 Conclusion

This paper provided an examination of the concept of self-services, provided examples of its use, extracted the assumptions made in a diverse number of industry instances and presented

guidelines to be considered when developing and deploying new self-service technology.

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