The Concept of Service Strategy Scorecard - an Integrated Approach for Lean Service Engineering and Service Improvement: Theoretical framework and implications for Service Science

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Abstract

The purpose of this paper is to delineate the development and the use of a so called service strategy scorecard in order to install an improvement cycle to measure service performance, to capture changes of customer and stakeholder requirements and to align service strategy with service processes. This provides a framework for handling service improvement and innovation in a new holistic and systematic manner.

For operationalizing the framework we use existing concepts and studies which already measured business strategies. A service strategy map based on the principles of a balanced scorecard is proposed to measure service performance, the execution of the service innovation strategy and to assess the interrelated dependencies between different aspects of important service design dimensions. The overall approach involves a service (re)engineering cycle based on literature review and on an iterative four-step problem-solving process, typically used in business process improvement.

1. Introduction

The field of service research can be divided into different streams. One is the new service development approach which is based on the focus of customer satisfaction and quality issues of services. The term is strongly linked to typical areas of marketing and was coined in the USA with the service design and service management model of Ramaswamy (1996). In recent years the “New Service Development Model” was developed by Edvardsson and Olsson, which focuses on service life cycle phases from idea management to implementation of a new service (Edvardsson / Olsson 1996)

Another stream is the development of a research discipline named **Service Engineering**. The term service engineering is defined by Bullinger et al. (2003) as “the systematic development of predominantly technical services by deploying engineering methods, practices and by using tools of the engineering design field”. The main focus of this concept is systematic development and a planned procedure in developing new innovative services. The approach can also be used to improve existing services and product service bundles.

Torney et al. (2009) presented a framework of reference for service development that is based on the definition of the term service engineering. This framework distinguishes between three aspects: activity dimension (individual stages of the service development process), service dimension (related to the constitutive service characteristics) and aggregation layer (dependent on the aim of the service development) (Torney et al, 2009).

Our concept of Strategy Scorecard refers on the framework of Kreuzer et. al. (2011) and follows the service engineering stream. The strategy based service engineering approach is based on a stage gate concept, illustrated in fig. 1, and a company specific toolbox of methods and management tools.

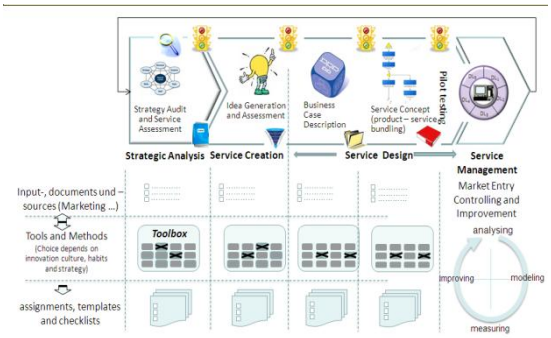

Figure 1: Strategy-based service engineering approach with its five phases - general overview (Kreuzer et al. 2011)

2. Five phases to new innovative services:

The following generic process is the outcome of a research project with pilot studies conducted with five local Austrian business partners between 2007 and 2009. The whole process follows the concept stage-gate system. (O'Connor, 1994; Scherer and Brügger, 2008). The service innovation process is divided into a number of stages:

1.) Strategic analysis
2.) Idea generating and idea assessment
3.) Business case description
4.) Service concept
5.) Concept testing and test marketing
6.) Service management

All these stages are defined by

a.) specific inputs (documents and results of the step before – e.g. market research, customer satisfaction survey etc.)
b.) a number or set of recommended methods and tools (SWOT analysis, customer contact circle, portfolio analysis, 9 Windows operator, etc.)
c.) and a specific outcome and deliverables (e.g. search box for targeted generating of ideas – phase 1, idea descriptions - phase 2, rough business case description phase 3, product and service model, process model, resource model, marketing plan – phase 4 etc.)

Between each stage, there is a quality control milestone and the selected service must pass before continuing to the next stage. The work itself is done in several stages and the gates ensure that the features of the future services fit the customer requirements.

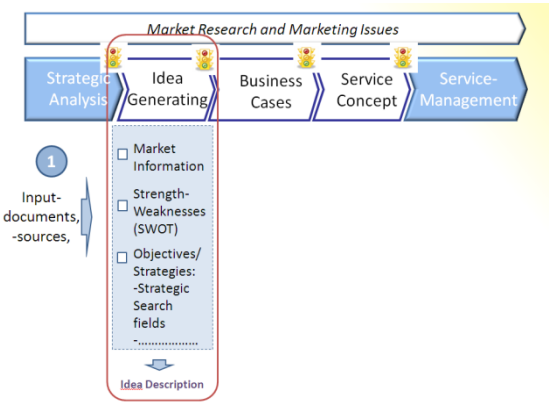

Figure 2a Procedure of stage 2 (step 1)

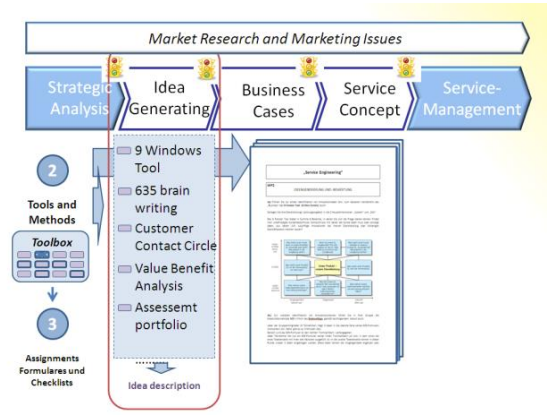

Figure 2b Procedure of stage 2 (step 2-3)

The successful implementation of new innovative services is the final step in a service engineering process and leads directly to the **service management** phase as part of the complete life cycle of service offerings.

Service management includes the implementation of the service into the (product-) service system, market launch, training the employees and service provider and other activities to achieve commercial success.

Furthermore in this stage a **continuous improvement cycle** should be installed. This framework will be described in detail in the next chapter.

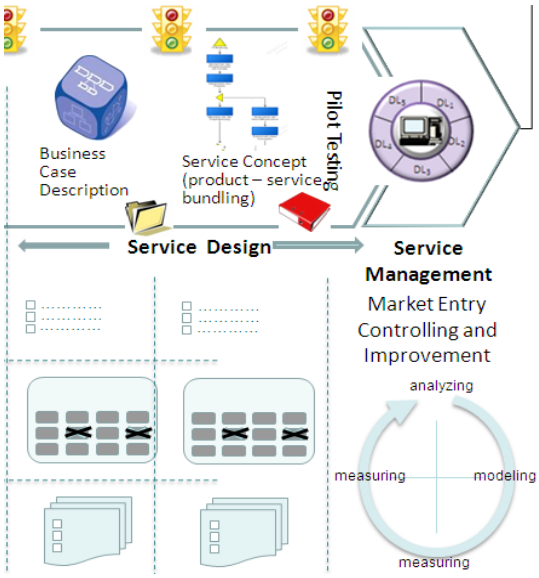

Figure 3: Service management with an integrated Continuous Improvement Cycle

3. The four step service (re)engineering cycle

The following four phases of the continuous improvement cycle in the service management stage are based on the Deming Cycle (Plan-Do-Check-Act), on our literature review and our own empirical research.

It is essential to start with a strategic view of service innovation. Thus in the first phase the current Service system is to be analysed. Analysing the service systems requires a systematic view.

The main question is whether the service portfolio really matches the organisation's goals and whether the planned service fits into the current product mix.

	Strategic Objectives			
Accompanying services	Raise revenue	Customer binding	Customer aquisition	Reduce costs
Logistic support		●	●	●
Integration into the value chain		●	●	●
Marketing support	●	●	●	
Sales support	●	●	●	
Employee training	●	●	●	●
Maintenance services	●	●	●	●
Sales support	●	●	●	●
Financial assistance	●	●	●	
Planning tools	●	●	●	
Promotion		●	●	
Trade forum	●	●	●	
User workshops	●	●	●	
Fair support		●	●	

Figure 4: Strategic fit of services - the right service strategy for each strategic goal.

Before starting this process in the first stage the current services offered have to be identified. By using the Customer Contact Circle method it is possible to chart the status quo of the service landscape while delivering new aspects and ideas for service extensions. (Harms et al., 2009)

This tool can be used both as an analysis method in the strategic analysis phase to map the whole service offer and as a tool for generating new ideas, which can be developed to new services by following the service engineering process.

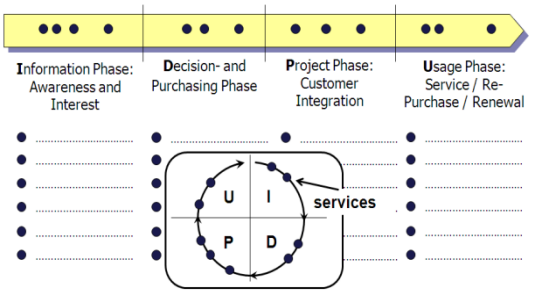

Figure 5: Customer Contact Circle (service offer) (Harms et al., 2009)

As fig. 5 shows the Customer Contact Circle can be divided roughly into four stages:

- **Information stage: Awareness:** When a prospective consumer is looking for solutions to satisfy specific needs. The potential customer is first exposed to your service system, e.g. when exposed to an ad or reading a review.
- **Decision and purchasing stage**: Now the customer is interested in purchasing your product/service. Examples include visiting the service provider or trying out the service.
- **Project stage:** The services are customised in consultation with the customer. The service provider or front-line employee must maintain a professional role and treat the customer with respect and dignity.
- **Service/re-purchase/renewal:** When a customer returns with a problem or with the intention to re-purchase/renew.

The Customer Contact Circle is a pragmatic tool to diagnose service offer bottlenecks from

the information phase to the usage phase of the service. (Harms et al., 2009)

Phase 1: Customer service requirements analysis

Step 0: Conduct the SWOT analysis by collecting internal and external factors which influence the service offer and identify and define the internal and external customers and stakeholders

Step 1: Select the most important requirements from the customer and stakeholder perspective to the service offer.

Step 2: Define and verify strategic goals for each stakeholder group (customer, employee, partner, supplier, bank, shareholder, media etc.): When examining each requirement search for the most important strategic goals. Seek to meet the real strategic goals and not the operative ones. The aim of each service offer is to reach or to contribute to the strategic goals of the company. Finally group similar goals into common aspects.

Step 3: Construct the service strategy map by boxing in the stakeholder-related strategic goals into the Balanced Scorecard, BSC dimensions:

- Financial perspective (shareholder, bank…)
- Customer and partner perspective (Customer segments, partner…)
- Innovation and learning perspective (employee, supplier…)

At this stage the process perspective will not be taken into account.

Phase 2: Process description and modelling:

Step 4: Identifying and defining the core service processes is vital to finishing the service strategy map and to finding the strategic goals for the process perspective.

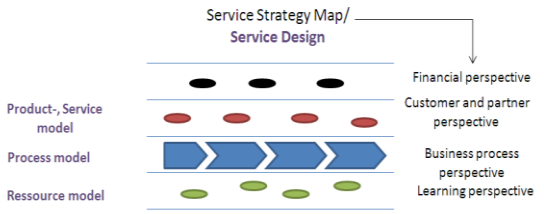

Figure 6: Service strategy map correlating with the 3 dimensions of Services

As it is shown in fig. 6 the customer and market perspective, the process perspective and the innovation and learning perspective are correlating with the 3 characteristic dimensions of services and so they are strongly linked to the product-, process- and resources model – the generated output in the stage of service design of the service engineering procedure (see also fig. 1).

Step 5: Then describe and visualise the crucial service processes by using service blueprints or other visualizing tools. Finally connect the strategic goals in order to show the cause and effect within and between the bubbles (strategic goals) on dimension 1 (financial perspective), 2 (customer and market perspective), 3 (process perspective) and 4 (innovation and learning perspective).

Phase 3: Service performance measurement

Then define performance indicators in order to measure the goals in each dimension of the service strategy map.

The measurement of the performance of processes can be classified as followed (Parmenter 2007):

- Key Result Indicators (KRIs) tell you what you have done in a perspective
- Performance Indicators (PIs) tell you what do to
- Key Performance Indicators (KPIs) tell you what to do to increase performance dramatically

The proceeding in defining the performance indicators is described in fig 7:

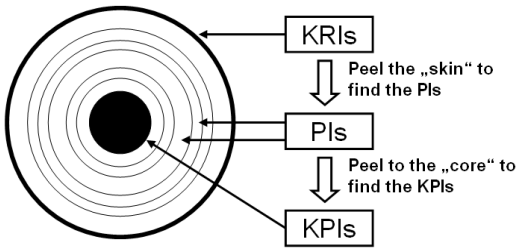

Figure 7: Defining performance indicators

The KRIs are used to describe the overall condition of how the process has performed (to which results did all the efforts lead).

PIs are used to find out, what are the single aspects who led to to these (KRI) result.

KPIs are a set of measures which represent the “core” and are critical for the success (current and future).

It is suggested by (Parmenter, 2007) to use a 10/80/10 rule in defining the relevant performance indicators: 10 KRIs, maximum 80 PIs and 10 KPIs.

After the comparison of planned and achieved Performance Indicators (KRI, PIs, KPIs) corrective action measures can be taken. It is recommended to implement permanent corrective actions.

Phase 4: Optimisation & service performance improvement

By the use of process optimisation tools such as **FMEA, QFD** (Akao, 1990) etc. a continuous improvement of services can be attained. The voice of the customer and the Touchpoint methodology (Schneider et al., 2010) can be used for the next stakeholder and customer analysis.

Finally check to ensure that all factors that may be causing mistakes in the process and customer dissatisfaction are included in the improvement program. The aim is to improve crucial services continuously. This continuous improvement service cycle should be an organic process and should be initiated at or by service engineering concept finalisation.

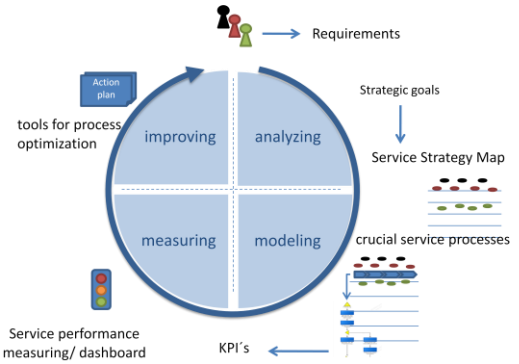

Figure 8: Continuous Improvement Cycle

It should also be continually updated as changes occur throughout the phases of service development.

The four step service engineering model can be regarded as a useful tool for implementing a systematic continuous improvement cycle in the company. It should be integrated in the overall service engineering procedure but can also be used as a standalone tool to measure service quality.

This procedure depicted in fig. 8 has especially been carried out from the pragmatic aspect of a lean development in SMEs. It delivers an approach which covers the main issues one need to be aware of in order to provide a systematic Service development/ engineering.

4. Conclusions and Future Research

Due to the fact that the framework incorporates the main service design aspects (service/product model, process model and resource model) it can also be seen as a Lean Service Engineering approach. The proposed procedure has especially been carried out from the pragmatic aspect of a “Lean Service Engineering” in SMEs. It delivers an approach which covers the main issues one need to be aware of in order to provide a systematic Service Engineering and can help SMEs to increase innovation, improve service quality and customer service (experience).

The service (re)engineering methodology can be regarded as a useful tool for implementing a systematic continuous improvement cycle to improve existing services and to identify new innovate services in a company. It can be integrated in the overall service engineering procedure but can also be used as a

standalone tool to measure service quality in the stage of service management.

The current framework provides a starting point for further research in order to deliver a successful proof of concept and to find criteria for determining approval/disapproval. So the aim of our further research is to apply the theoretical framework to case studies to illustrate the value of the framework in different service industries. As the main outcome from this research we expect to improve and adapt the concept of service strategy map for SMEs including further instruments SMEs commonly use. With the information gathered from the case studies a base service package for supporting SME´s in implementing service strategy maps will be created.

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