

Think Services

Supporting manufacturing companies in their move toward services

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Abstract

This paper discusses the use of Service Design to support manufacturing companies in a shift towards services. It uses a program of knowledge exchange for small medium enterprises (SMEs) conducted at Lancaster University, as a case study to investigate and illustrate the role Service Design can play in traditional product centred companies. Through investigation of the concepts and implications of the new service dominant paradigms, the authors suggest how designers can facilitate a reframing process, within manufacturing SMEs, leading to a new understanding of value that can ultimately activate a company transformation.

KEYWORDS: servitisation, service innovation, service design

1 Introduction

Thirty years ago Richard Chase and David Garvin (1982) were proclaiming: “tomorrow’s leading manufacturing companies will be the ones whose managers unleash the service potential of their factories” (p. 68). They explained a ‘Service Factory’ as a company moving its focus away from how well it builds products, to how well it serves its customers before and after the production of goods. In line with this vision, today the trend for manufacturing organisations to move ‘downstream’ is a well-known and studied phenomenon (Baines et al., 2008).

This paper describes a knowledge exchange program for manufacturing SMEs to introduce Service Thinking and Service Design to support 'servitisation' processes. It illustrates how the workshops series and design exercises provided an initial basis for companies to reframe their understanding of value co-creation.

2 Servitisation

The process of integrating service offerings was originally defined by Vandermerwe and Rada (1988) as 'servitisation' and described as the increasing offering of "fuller market packages or 'bundles' of customer focused combinations of goods, services, support, self-service and knowledge" (p. 314).

The motivations behind servitisation are generally described in terms of economic, strategic and market opportunities (Mathieu, 2001a). In economic terms, services represent a continuous and more stable stream of revenue with higher profit margins. Services are also perceived as a competitive lever, more difficult to imitate than products or technology. Finally, services are considered as a significant component influencing purchasing decisions, with the potential to generate more stable and longer relationships with customers (Mattheiu, 2001b).

Servitisation is not an easy process and it can take various degrees and forms. The move towards services requires a 'strategic intent' for an effective implementation. Richard Chase (1981) described it as a continuum, moving from pure products to pure services organisations. Depending on the starting and target point in this continuum and on the strategic relevance of this evolution, companies may face different challenges and may need to embark on significant organisational transformations. Oliva and Kallenberg (2003), considering organisations selling durable manufactured products, have been describing four main stages: 1) consolidating product-related strategies; 2) entering the installed based service market; 3) expanding the relationship-based services; 4) expanding the process-centred services; 5) taking over end-user's operations.

When companies consolidate their value added service offering, they focus on improving efficiency and service quality, but the focus is still on the products. The shift to a 'installed based service' market requires a shift from product-centred manufacturing to service centred organisations. This shift is generally supported by the set up of a service team that creates and manages the new service infrastructure and provision. The next possible transition is then the shift from a

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'transaction-based' to a 'relationship based customer interaction', where the companies create maintenance based service contracts that require different pricing and risk management strategies. The closeness with customers grows when companies decide to move from a product-oriented service to an 'end user's process oriented service'. Here companies use their knowledge and skills in product development and management, to ensure that clients can optimise their processes and the use of their machines. This last shift requires "intimate knowledge of the clients' operations and how the service will support core activities" (Matthieu, 2001a: 40). These 'advanced service strategies' require more proactive approaches to service development. The knowledge developed in these processes can allow companies to potentially take over the management of specific operations within the client organisation.

2.1 Challenges and costs

When entering a service market, manufacturing companies have to consider additional costs and challenges, in addition to the benefits afforded. Valerie Mathieu (2001b) describes two main kinds of costs: competitive and political. Integrating service offerings means entering into the service-providing competitive field; in this field companies have to consider the threat of more experienced service providers and distributors, and have to convince their customers of the value of their offerings. Companies have to make strategic use of their brand value and have a deep understanding of their products in relation to their service offerings, or they may create partnerships or acquire other companies in order to gain more visibility and strength. In addition, companies also need to face internal conflicts. Matthieu described servitisation as a political process that needs to build consensus across the organisation. This consensus is generally reached by the establishment of subcultures in the form of service units. Entering a service field also requires significant changes in the organisational structure. As Gebauer et al. (2008) suggest, "to exploit the opportunities of services successfully, manufacturing firms have to establish the appropriate alignment between the external environment, service strategy, and factors of organizational design" (p. 20). Depending on the service strategy managers may need to change and adapt several factors in the organisation, not least its corporate culture. A service culture is significantly different from a product centred culture. As Levitt (1977) described it, service companies think

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humanistically, while manufacturing companies think technocratically. The integration of service provision requires an overall shift from a product-centred organisation to a customer-centric one (Galbraith, 2002). This can happen only when managers realise that their main assets are people (Matthieu, 2001a).

3 Service Thinking

The change process in becoming more customer-centric implies a change in the way companies think about themselves, their identity and their position in the market. Challenging the existing worldview and belief system can have a transformational impact (Levy, 1986). The authors describe 'service thinking' as the potential driver for this transformation and 'service design' as a methodology that can support and guide companies through this process. Service Thinking as a framework and strategic tool for innovation has its roots in a new way of thinking about value that affects the way products and services are conceived:

1- *From value added to value co-creation and value-in-use*: In a traditional industrial mindset, value is conceived as embedded in physical products. Consumers are instead perceived as 'destroyers of value' as they use and consume the goods they've been offered. In an alternative and contemporary view of value, consumers actually co-create value by interacting with producers and other partners (Ramirez, 1999). In this view, value is not in the object or person, but 'resides [...] in the actions and interactions which the acquired resource makes possible or supports' (p. 51). Similarly, researchers from IBM have brought the attention back to the notion of *value-in-use* or utility value instead of the notion of *value-in-exchange* that has since been the basis for the science of economics. 'Value in use' suggests that 'there is no value until an offering is used - experience and perception are essential to value determination' (Vargo and Lush, 2006: 44). Value-in-use is inherently relational and experiential.

2. *From units of output to mutually satisfying interactive processes*: the change in the interpretation of value implies a change in the description of products and services themselves. When value is recognised in the process of use, the focus shifts from the units of output. A service, therefore, represents "the process of doing something beneficial for and in conjunction with some entity, rather than units of outputs—immaterial goods- as implied by the plural 'services'" (Vargo and Lush, 2008). Goods are then interpreted as aids to the service-provision. The

original dichotomy between products and services is resolved by proposing a higher-order concept of service. Norman and Ramirez (1993) describe products or services as *frozen activities*, manifestations of the relationships among the actors in value creating systems, and therefore generally defined as *offerings*. Here services are described as a conceptual framework within which to think in a different way of value creation (Ramirez, 1999).

3. *From individual actors to value creating systems*: if value exists only when customers do use the offering, companies can only offer 'value propositions'. Value propositions work as connector and resource integrator within a service system. Here the strategic focus is no longer on individual activities, but on the overall *value creating system*. Within this, different economic actors can work together to co-produce value (Normann and Ramirez, 1993). In this scenario, value-in-use can be extended to the concept of 'value in context'.

The consequences of this emerging service dominant framework for traditional manufacturing companies can be described as the need to:

- look for value creation in different contexts and forms outside the companies' boundaries and adopt the customer's perspective;
- reframe value propositions around the processes and interactions that generate benefit for the customer's own activities (value in use);
- develop the ability and willingness to look at the value networks (value in context) and customers' overall practices in a proactive way in order to identify new opportunities for innovation.

4 Service Design and Service Thinking

Thinking in terms of services has been a recent evolution in the practice and theory of Design as a discipline also. Service Design developed as an answer to a changed economy in the '90s, considering services as a possible and necessarily new object of design. Since its first articulations Service Design has been adopting a customer centric approach, focusing on the interactive and relational character of service quality (Pacenti, 1998). By focusing on the interactivity dimension, Service Design has identified service experiences as a central area of design intervention. The capacity to deeply understand users' experiences and the contexts of service provision and use is at the core of

service designers contributions to service innovation (Meroni and Sangiorgi, 2011). In this sense service designers propose a 'outside-in' approach to innovation, that focuses on where value is actually co-created.

By focusing on people's experiences and practices, designers adopt what Galbraith (2002) defines as 'convergent thinking'. This asks what the best combination of offerings is, that can fully satisfy customer's needs, rather than multiplying the possible uses of existing products. As Kimbell (2011) noticed, service designers seem to look at services as fluid arrangements of human and not-human artefacts, rather than a fixed intangible unit. This ability to think in terms of solutions helps to break down barriers for novel collaborations and considers value at the centre. With the intent to understand the wider context influencing service interactions, designers have adopted the concept of 'information ecology' (Nardi and O'Day, 1999) to services, introducing the idea of 'service ecology'. Mapping out service ecologies is a way of identifying unnoticed opportunities and resources to reframe service configurations and interactions. The authors propose that the capability to creatively look at where value lies could be applied to support companies embarking in a 'servitisation' process. As suggested by Hartevelt and Raaijmakers (2011), this capability can be used at a project level and at a business level. Similarly Junginger and Sangiorgi (2009) describe different depths of service design projects in an organisation moving from redesigning service interactions, towards challenging existing fundamental assumptions to potentially activating a transformational journey. Based on these considerations, a series of three workshops were developed with the aim of translating Service Thinking and Service Design into knowledge exchange activities, which would initiate manufacturing SMEs into this particular approach to innovation, and to evaluate the effectiveness of this programme.

5 Innovation through Improved Service & Design

ImaginationLancaster organised and delivered in collaboration with the Institute for Entrepreneurship and Entrepreneurial Development (IEED), a workshop series for manufacturing SMEs located in the North West of England aiming to make Service Design more visible and understandable. The workshop series was delivered as an element of the Innovation for Growth (IFG) project, which is part-funded by the European Regional Development Fund. IFG offers advice and

support to embed innovation within the business and management processes and practices of 300 North West SMEs. The workshop series was also part funded by the Design Council Grant, that covered the fees of two designers, Gavin Maguire (Engine) and Steven Johnson (The Hub), that participated in the development and delivery of the events. This workshop series was articulated in three half days events that were aiming to provide SMEs with the knowledge and some practical tools to integrate service thinking and service design into their businesses. As a support to the workshops, companies were provided with a booklet detailing the main concepts, case studies and practical tools, and with access to a wiki space, from which they could download tool formats and record any thoughts, questions or feedback. Of the 14 companies who participated in the programme, nine represented traditional manufacturing SMEs, while five represented knowledge based professional services. At the end of the three events, two companies had the opportunity to work for a month with 2 postgraduate Masters design students to implement part of their action plan.

5.1 Workshop 01: The Role of Service Thinking in Product Orientated SMEs

The first workshop, facilitated with Steven Johnson, aimed to help companies to understand how Service Thinking could increase competitiveness and improve customer relationships. The session comprised an introductory lecture on Service Thinking, a presentation of The Hub's work, and three exercises that looked at the elaboration of value propositions based on a new understanding of value:

- *Tool 01: From Function to Benefits*: The aim was to translate a list of functions into a list of benefits for customers. Companies were asked to look at and think about their own offering from the customer perspective.



Figure 1 Workshop participant filling an Experience Blueprint

- *Tool 02: Experience Blueprint*: companies were asked to map a well-known process, and then to visualise the related customer activities, both visible and invisible. By understanding the customer journey and context of use companies could unveil opportunities to better support clients' work (value in use).

- *Tool 03: Resources Map*: this tool was used to map the resources used by the company and the client during their interactions, and to then imagine resources used by the clients in their context of use (value in context). This exercise aimed to illustrate how companies could make their offering more compatible, synergetic, complementary or integrated with the client's own resources.

5.2 Workshop 02: Customer Centred Innovation

This second workshop, facilitated by Gavin Maguire, aimed at introducing companies to Service Design methods for identifying and defining new or improved service offerings. The session comprised an introductory lecture on Service Design, a presentation of Engine's work and three exercises. These looked at elaborating customers' profiles and journeys to re-think the companies' offerings in relation to clients' needs and experiences.

- *Tool 04 - Customer types*: companies were asked to identify and list Customer Types in their clients' portfolio to better design offerings that fit their clients' needs and behaviours;



Figure 2 Companies completing their Customer Journey Maps

- *Tool 05 - Persona*: companies were asked to articulate one of their customer types into a persona, which is a fictitious character created to represent different types of users. This exercise illustrated how a well-developed persona could be used to focus conversation on the needs, goals and behaviours of real users, or could support the evaluation of design decisions and specifications;

- *Tool 06: Customer Journey Mapping*: companies were asked to develop a Customer Journey Map based on the developed persona. Once the journey was mapped the companies were asked to track the positive or less positive encounters and to develop ideas on how to improve negative ones.

5.3 Workshop 03: Service Development and Action Planning

This last workshop aimed to develop emerged opportunities into refined concepts and generate plans for implementation. The session comprised an introductory lecture about service development and three main activities aiming to illustrate how to quickly develop and evaluate emerged ideas into more refined service concepts. An action plan on how to implement ideas and tools in their company was then developed and presented by each participant.

Tool 07 – Service Design Principles: companies were required to write down five Service Design Principles rooted in the company's service strategy and based on their insights into customer needs;

Tool 08 – Pitch Card: 'Pitch cards' are a quick way to start fleshing out ideas as

they emerge from a brainstorming session. Companies had to summarise benefits and potential for each idea;

Tool 09 – Ideas Scorecard: with the Ideas Scorecard companies compared the relative merits of different ideas based on key criteria that have been created by the company itself.

5.4 Participants feedback and action plans

A selection of companies was interviewed before the workshops to look at their service dimension, level of customer focus and design awareness. These aspects were then evaluated at the end of the workshops to present any changes in their understanding or strategies. Also after each workshop, the authors summarised notes on questions and feedback from companies on the wiki space to document reactions to concepts and exercises. Finally companies were asked to fill in an action plan form and present it in front of a video camera. The key concepts that companies wanted to implement were:

- a more customer focused approach to their businesses, moving from a passive to a more proactive way to investigate their customers' context of use;
- a more effective way to recognise and communicate the value they currently create for their clients looking at their offering from the customers' perspective;
- segment their customers using the persona tool to better develop their offering, balancing resources with benefits, and specify their service packages;
- a systematic approach to service innovation, as they were mostly familiar with product design and didn't know that 'such a thing as Service Design did exist'.

Most of the participants suggested that they planned to disseminate within their businesses what they had learned during the workshop programme and would set up a team to go through the methodology again and develop further their findings. Some companies identified the need for operational changes, for example, the need to redesign their communication materials; others highlighted the need to set up a different and more customer centred innovation process; whilst others suggested the need to re-think the service strategy and the mindset of the organisation, moving from a manufacturing centred culture to a service or product *plus* service culture. This in particular was seen as a significant challenge as the participants realised that before selling their services to clients, they

needed to sell this approach internally. The strategy some companies described was the one to create a dedicated service design team that could apply the suggested tools and initiate a cultural shift in the wider organisation.

6 General considerations

This workshop program was particularly successful and well received. Companies manifested the need for more design training and would have liked further support in their implementation plans. Workshops appeared to have been effective in introducing a new way of thinking and a more systematic and customers centred approach to service innovation.

The challenges of servitisation, as described in the literature review, were all clearly present and articulated by SMEs participants in their comments and implementation plans. All these challenges could be summarised in the need to move the organisation from a product focused to a customer centred and service focused approach and strategy. The tools and activities provided tangible means to start a process of reframing the understanding of their identity, offerings, competences, innovation processes and market strategies around a new description of value. As part of this reframing process, companies aimed to develop capabilities to better investigate how customers create value in their practices, generate service ideas and packages able to support these practices, communicate their value in an effective way, generate dedicated service design teams able to convince the leadership of the value of this new approach.

These workshops therefore were able to provide the seed for possible radical transformations, but the research team was not able to follow companies in their implementation and document how the new knowledge and tools were actually applied. Also the authors realised how this exchange program could have been further developed with interdisciplinary contributions on issues such as pricing strategies, business model development and organisational change.

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