

# Standardisation and Knowledge Management in Services

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(Received May 25, 2011; Accepted June 5, 2011)

## INTRODUCTION

This article will explore mutual relations between standardisation, knowledge management and services. The occasion for this research was given by Shell Global Delivery Services (GDS), a process-oriented service organisation within Shell. As part of its staffing policy, this organisation tended to hire a number of young graduates (approximately one-two each month). This meant that the organisation had to train a small number of staff on a more or less permanent basis. Therefore, GDS had to deal with the question which knowledge and skills needed to be available to facilitate the various process steps that took place in providing the services. Management of GDS had the idea that standardisation could enforce the improvement of service quality and support the facilitation of knowledge in service delivery.

GDS's problem concerns the relations between the concepts services, standardisation and knowledge management. The goal of the paper is to explore these relations. From a business point of view, knowledge management and standardisation can be used to support service delivery. Therefore, we will first examine these two support relations. Then we will explore the interrelations between the three concepts using the Shell case. We end this paper with a discussion of our findings.

## GLOBAL LITERATURE REVIEW

### Standards for services

Traditionally, standardisation had mainly been used in technical environments and different frameworks exist for technical surroundings. However, some service sectors like libraries and the financial service sector have a tradition of standardisation as well. In general, standardisation in service sectors has increased in the last decade (Barthet, 2005; Blind, 2003; DIN, 2002).

Characteristics of services include intangibility, simultaneity, heterogeneity and perishability

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(Avlonitis, Papastathopoulou & Gounaris, 2001; De Jong et al., 2003; Rathmell, 1966; Wolak, Kalafatis & Harris, 1998; Zeithaml, 1981). These characteristics at first sight question the feasibility of standardisation, because standardisation concerns the creation of agreed-upon solutions for repeatable situations (De Vries, 1997). More in particular, the decisive role of employees and customers in the service delivery process can hinder the applicability of standardisation, because it is up for dispute to which extent people and their behaviour can be and should be standardized. However, De Vries (1999) has shown that standards may be feasible in service sectors and may concern service organisations, employees, service delivery, service results, physical objects supporting the service delivery, workrooms, and (back office as well as front office) communication. His model has formed the basis for an international guide on services standardisation (ISO/COPOLCO, 2004). This guide provides a checklist of topic areas for which standards might be developed. In our case we apply it to company standardisation.

### Knowledge management for services

‘Knowledge can be defined as a fluid mix of framed experiences, values, contextual information, and expert insights that provides a framework for evaluating and incorporating new experiences and information’ (Davenport & Prusak, 2000). In a business context, knowledge is the ability to carry out a certain task: the task of providing meaning to data. Knowledge is used to form new information from data (Weggeman, 1997). Knowledge can be tacit or explicit (Nonaka, 1994), individual or organisational (Brown & Cook, 1999; Nonaka, 1994), and external or internal (Cyert & March, 1963; Menon & Pfeffer, 2003).

The service characteristic of heterogeneity is related to human involvement in the service delivery (De Jong et al., 2003; Nonaka 1994; Zeithaml, 1981). This characteristic is important to determine if a service is knowledge intensive or not, because knowledge cannot exist without a human being.

### Interrelations between services, standards and knowledge management

From the above it can be concluded that services may be supported (or affected) by standards and knowledge management. Conversely, the services themselves influence standards and knowledge needed. Moreover, the concepts of standards and knowledge management may be interrelated.

### CASE: SHELL GDS

The relations between the three concepts have been investigated by means of a case study. The case concerns two departments within Shell Global Delivery Services (GDS): Local Shared Services (LSS) and International Transfer Services (ITS). Both departments deliver transactional administrative HR services, but the type of service differs. LSS delivers services for all the

local employees in the Netherlands, ITS for expatriates that are transferred to Shell locations worldwide.

Shell management decided to initiate standardisation in LSS and ITS to reduce cost (10% / year), harmonize processes, improve efficiency, enable implementation of a shared service concept, enhance transparency of services, and capture knowledge. The latter is important because GDS has been growing the recent years and has recruited a lot of young employees. As these new employees will probably apply for other jobs and will be replaced by others, it is important to capture knowledge.

### Research Approach

The implementation of standardisation within the two departments has been investigated. Therefore, the case is an example of company standardisation. Data for our research came from documentation (e.g., procedure guides, process descriptions, partnership agreements), interviews with key people (e.g., managers, team leads and employees of both departments), and several questionnaires. Unfortunately, because of length constraints of this paper, we had to delete the description of the implementation of standardisation in the two departments and we have to jump to the case analysis.

### CASE ANALYSIS

The main difference between the possibility to standardize processes of LSS and ITS is formed by the fact that LSS had only interfaces with businesses located in the Netherlands and, therefore, had to deal with processes related to Dutch legislation. ITS had interfaces with businesses located worldwide and had to take into account foreign legislations. Thus, more variety existed in the processes of ITS and communication with Shell businesses was more difficult due to language, time-zone and cultural differences. This influenced the interaction between the three concepts.

### Standards $\leftrightarrow$ Services

#### *Standards $\rightarrow$ Services*

Standards set for different entities related to the service (ISO/Copolco, 2004) influence the efficiency and quality of the service process and the resulting services. We can distinguish between:

1. The influence during the standardisation project (the development of the standard);
2. The influence of the final standard.

Sub 1: Both at LSS and ITS, the standardisation projects led to a critical investigation of existing processes in the delivery of services. This either confirmed that these satisfied or it indicated

possibilities for improvement. In the latter case, standardisation has influenced the portfolio of services delivered by a service organisation and/or their quality level. Furthermore, the interfaces with the involved parties were discussed and responsibilities of each party were determined.

Sub 2: Standards had the following influence on services processes:

- *Increase of transparency of service delivery* for own employees and involved parties, by describing process steps.
- *Improvement of efficiency and quality of service delivery* because employees know better what to do, especially due to standard templates.
- *Clarity in case of exceptions/ flexibility*: Standardized work procedures define what to do in which regular situation. Most of the times, a standard states that in case of an exception, the manager or team lead has to decide about the follow-up. This means implicitly that there is a standard for exceptions. In this way, standards improve the degree of flexibility in service delivery.
- *Better training and education*: It is easier to provide training and education for a transparent and standardized service process. ITS developed a new introduction tool that is based on the process descriptions. Subsequently, training and education can improve the quality of the employees and of the delivered services.
- *Making tacit knowledge explicit*: Knowledge about the service process has been captured in standards. On the long term, this knowledge has to be shared, evaluated and can lead to service improvements.

*Conclusion*: standards but also the standardisation project itself influenced service processes in a positive way.

#### *Services → Standards*

The type of the service influences the need, if any, for standards and the characteristics of these standards. The case study described administrative HR services in which the output of the services is more or less identical for the end consumer.

- *Customers*: The customers of GDS (HR departments within the Shell Business and individual employees) have the same requests but data differ per request. This made it possible to introduce mass customisation: delivering tailored services using standard service delivery processes including standard interfaces between GDS and its customers.
- *IT*: The IT tools include standard templates at the interface between service provider and customer.
- *Content*: The input for services can differ per customer or supplier. For services like implementation of terms and conditions or query handling, it was not possible to standardize the input. Shell has standardized its policies for terms and conditions on general lines. Per business these policies were further standardized. Therefore, it was possible to standardize the back-office process, because the supportive IT-tools for the service are standard. At the front service, the input itself could not be standardized, but it was possible to standardize the interfaces for input delivery (by email, telephone, letters, and templates).

- *Culture*: The culture of the service organisation determined the standardisation approach and the types of standards to develop. Especially experienced employees considered standardising work processes rather as an insult than as a means to improve quality.

*Conclusion*: the nature of the service influenced the possibilities of standardisation. In this case the services are customized, but also show a lot of similarities which makes standardisation feasible.

## Services $\leftrightarrow$ Knowledge management

### *Services* $\rightarrow$ *Knowledge management*

The role of employees, and sometimes also customers and suppliers, in service processes determined the knowledge required, depending on aspects of the delivery process like the type of service, labour intensity and involved systems.

*Conclusion*: The amount and the type of knowledge required for service processes depend on the nature of the service.

### *Knowledge managements* $\rightarrow$ *Services*

Knowledge forms an "ingredient" for the service process because knowledge is necessary to execute tasks of the service process. When the knowledge process is not facilitated, employees do not know where to search information or who to approach for required knowledge.

- The type and complexity of knowledge in the knowledge process determined the type of communication. In case of tacit knowledge, it was necessary to communicate face-to-face, via telephone or chat, then there is a need for interaction between people. In case knowledge is complex, face-to-face knowledge sharing turned out to be more efficient, because non-verbal communication and supporting drawings to demonstrate things are possible. When knowledge was more explicit, interaction between people in the service process was less necessary, knowledge could then be made available by databases, intranet or folders.
- GDS has facilitated the knowledge process during service delivery in several ways:
  - Open floor offices facilitate knowledge sharing face-to-face.
  - Software has been implemented to store source documents and keep documentation up-to-date, and to provide links to other departments and intranet sites where information is available.
  - IT tools like Shell msn, email or video conferencing facilitate knowledge sharing with people on different locations.

*Conclusion*: Good "knowledge management" facilitates service processes because sharing or applying knowledge can be done more efficiently. Moreover, the type of knowledge influences the way of communication within the service processes. Therefore, knowledge management influences the services in either a positive or negative way.

## Knowledge management $\leftrightarrow$ Standards

### *Knowledge management* $\rightarrow$ *Standards*

When knowledge is explicit or can be made explicit and needs to be applied many times, it can be laid down in a standard. This can be seen as a form of knowledge conversion: from tacit to explicit knowledge (Nonaka, 1994).

- GDS used IT tools for sharing, capturing and applying knowledge. These tools contain standard interfaces which, subsequently, facilitated the development of standard work instructions.
- The team members of LSS developed their process descriptions by applying their knowledge on how the process can be best carried out to achieve efficient service delivery. In this way tacit knowledge was captured in standard process descriptions and, subsequently, shared and applied.

*Conclusion:* In case of a need to use knowledge several times, standards may be a solution. Then, the type of standard depends on the knowledge need.

#### *Standards → Knowledge management*

A standard contains explicit knowledge. Developing a standard forces the organisation to make explicit choices about, for example, objectives, responsibilities, authorities and procedures. This will influence collecting, storing and sharing of knowledge and, thus, knowledge management.

- GDS developed an introduction tool for new employees which set the standard for their introduction period. The knowledge base of a new employee is built up in a consistent way and every new employee starts with the same input. This is expected to facilitate the next phases in the knowledge process, because by means of basic knowledge it is easier to share and apply knowledge to deliver services.
- Certain standards were incorporated in the software used to support HR, which facilitated working with the software and made it easier to access, share, capture and apply knowledge for service delivery.

*Conclusion:* Standards influence knowledge management because standards contain knowledge and can facilitate particular phases of the knowledge process.

## CASE DISCUSSION AND CONCLUSIONS

The empirical research has confirmed the assumed relations between the three concepts:

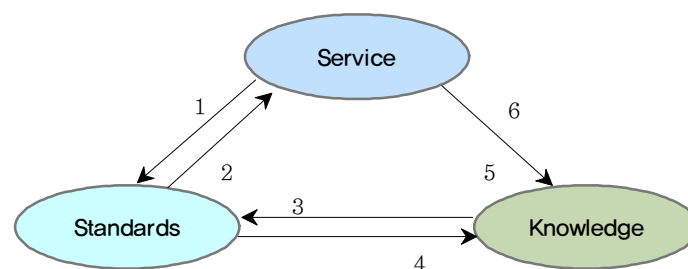


Figure 1. Interaction between the concepts of service processes, standards and knowledge processes

- *An interrelation between the three concepts of service processes, knowledge management and standards:* The nature of the service stipulates the link between the three concepts. In case that the service is frequently delivered, routines have been developed for service delivery (implicit standards). Management has the option to manage these routines by means of standardisation. In that case, the standards to be developed are influenced by the characteristics of the service and of the type of required knowledge. Standards make tacit knowledge more explicit and, consequently, the interaction between service and knowledge processes changes. Moreover, standards used in the service delivery process diminish the role of tacit knowledge.
- *Dynamics between 3 cross- belts of relations*
  - *Standards  $\Leftrightarrow$  Services:* The character of the service determines the possible objectives for standardisation. The type of service indicates which standards can be implemented and then standards impact service delivery.
  - *Services  $\Leftrightarrow$  Knowledge management:* The type of service determines the required knowledge. However, the way how knowledge is managed determines also the quality of the service process. Therefore, the more knowledge is essential in service delivery, the more need for conscious knowledge management.
  - *Knowledge management  $\Leftrightarrow$  Standards:* Standardisation enhances the transparency of service delivery, which is of help in analyzing required knowledge. In the case the service organisation has decided to deliver certain parts of the service in a more or less standard way, current tacit knowledge might be made more explicit by writing work instructions and checklists. For the more specialized (tailor-made) parts of the service process, knowledge sharing, capturing and application is more complicated. In the case work procedures are developed, these standards may facilitate the knowledge process and then the influence of the knowledge on standards decreases. Therefore, an extinguishing dynamic exists between the knowledge process and standards. Evaluation of knowledge as well as standards should ensure that standards are changed or even withdrawn when necessary. The phases of standards development, implementation and evaluation can be interrelated with the phases of knowledge management. Knowledge processes may be supported with (IT) tools with standardized features.
- *The six relations:*
  1. The nature (degree of simultaneity/heterogeneity) of the service influences the possibilities of standardisation.
  2. Standards and also the standardisation project itself influence service processes. Due to standards, services can be more transparent and as result can be delivered more efficiently.
  3. The type of knowledge influences possibilities for development of standards and the need for repetitive usage of knowledge offers possibilities for developing standards.
  4. Standards contain knowledge and can facilitate phases of the knowledge process.
  5. The type and nature of the service determines required knowledge.
  6. Good knowledge management facilitates service processes because sharing or applying knowledge can be done more efficiently. The type of knowledge influences the way of communication within the service processes.

## RECOMMENDATIONS

### Management of service organisations

Management of service organisations should think about the nature of the service and the balance between standard and tailor-made services. When the service has a repetitive character, certain routines will be in place already, consciously or unconsciously. A challenge for management is to manage these patterns because the concepts of services and standards are strongly related. When management decides to manage these routines and develop standards, they should be aware that this decision will have consequences for the role and location of knowledge in the organisation and, therefore, knowledge management is needed as well.

### Future research

The following areas for future research can be proposed:

- Based on this exploratory study, propositions about the interrelations between the three concepts can be formulated which can be tested in new case studies in other service organisations.
- Standardisation can change working routines and, therefore, it is important to examine the concept of routines and changes in routines, connecting HR literature, standardisation literature and literature on change management.
- The case study showed that culture of the organisation can play a role in the way people (employees) react on a standardisation process and how the process of reaching a standard should be organized. The impact of cultural differences on the process of developing a standard and on the implementation may be further investigated.
- This research has reviewed knowledge from a management perspective. A more social perspective can give more information how people handle knowledge.
- A disadvantage of standardisation can be rigidity. The case gave no reason to pay attention to this but nevertheless future research may include this topic.

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