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Supplier Relationship Management In Practice (SRM Practice)

The structural transformation of modern societies (e.g. aging of population, mobility), as well as continuously increasing market dynamics (e.g. mergers, technological advancement) induce healthcare organisations, more than ever, to reduce their costs while enhancing service delivery at the same time. Although labour costs constitute the major share of the total costs of a medical treatment, there is still a high economic potential in improving expenditure on products and services.

Supplier Relationship Management (SRM), understood as an approach to systematically managing an organisation's interactions with the companies that supply products and services to it, can help to reduce costs and enhance quality of service delivery. However, since hospital buying agents were only expected to attain the best price for the needed goods in the recent past, the trust between the buyer and the supplier is weak and the relationship is antagonistic. Therefore, and in contrast to industries with intense competition like for example the automotive or the consumer electronics industry, SRM has not yet received much attention in healthcare academia and practice.

Although the adoption of electronic services saves the costs of the preparation and transmission of paper requests and invoices and eliminates costly, time-consuming errors from manual data entry by connecting ordering systems with production systems, only 38 percent of the German hospitals implemented an electronic purchasing order and 35 percent an electronic invoice. In Switzerland, the origin of the authors, no such evidence exists so far, but considering the similarities between the health systems the adoption rate should be more or less at the same level. This ratio is diminutive compared to the aviation industry where 85 percent of the organisations actively use e-procurement in their daily business. Between 35 and 40 percent of hospital supply related costs are caused by handling and processing material and purchasing orders. In competitive industries this amount is less than 10 percent.

Some evidence suggests that this is going to change. To some extent hospital purchasing departments already are stipulated to contribute to revenue increases and to knowledge acquisition. Hence, the role of the supplier who was formerly considered to be an opponent (e.g. within price negotiations) will change to a business partner who contributes an added value to the hospital and therefore needs to be better involved in terms of cooperation, coordination, and communication.

Services for SRM

As we believe that SRM consists of both technical and social components, a holistic approach is needed. On the one hand, our process framework for SRM consists of the prevalent business and management processes to handle supplier relationships:

- Governance, i.e. development and implementation of a sourcing strategy, monitoring and controlling of the defined targets and work practices, and reaction and change of plans in case disruption;
- Strategic sourcing, i.e. initiation, negotiation and stabilisation of a supplier relationship; and
- Operational procurement, i.e. determination of the needed goods, ordering the requested goods, and settlement of trading.

On the other hand, the framework includes supportive processes that are crucial for social and technical networking:

- Human resources, i.e. recruiting of new professionals, development of the present staff, evaluation of the capabilities and performance of the present staff, and reward in case of satisfactory performance; and
- Infrastructure and IT-Services, i.e. documentation of enterprise architecture, alignment of IT capabilities with business needs, optimisation of information and material flows and renewal of the infrastructure.

Software services for SRM are used to process and disseminate information within and between organisations and thus support the accomplishment of the defined processes. However, people are still needed to make sense of the processed data and to 'integrate' the information of non-digital channels (such as voice communication by telephone or typing of hand-written forms).

For Customer Relationship Management (CRM), that is technical and social capabilities that help a hospital manage customer relationships in an organised way, different types of computer-based information systems exist (e.g. patient database). Comparably, there is also a differentiation in SRM.

Analytical SRM (brown circles, figure 1) aim at storing, analysing, and applying knowledge about suppliers and personnel dedicated to manage the supplier's relationship. For this, typically performance management and decision support tools (e.g. business intelligence, on-line analytical processing, statistical tools, data warehousing, data mining) are used.

The purpose of collaborative SRM (green cicles, figure 1) is to improve the quality of supplier collaboration, and, as a result, increase supplier performance and reliability. E-Collaboration tools (e.g. collaborative forecasting and planning), E-Contract management tools, E-Auctions, E-Tendering, and E-RFx tools (e.g. electronic request for information, quotation, and proposal) fall into this category.

Operational SRM (blue circles, figure 1), commonly referred to as E-Procurement, includes all necessary tools for ordering and conclusion of a contract such as payment, invoice verification. Typical examples are plan-driven purchasing and desktop purchasing tools (e.g. E-Catalogue), E-Payment, supplier selfservice, and supplier portals.

Alongside analytical, collaborative, and operational SRM, other tools are needed (pink circles, figure 1) to support activities, which are not in the core of procurement. For instance, search engines to retrieve all kinds of internal and external information related to sourcing, inventory control systems to build the crucial bridge to the logistics department and requester of goods, business process modelling and enterprise architecture solutions for visualising, simulating and analysing different structural aspects of the purchasing department, personnel administration systems for managing workforce related information, finance and controlling systems to define targets and supervise the achievement of objectives, enterprise content management systems to dispense all kind of documentation or enterprise resource planning (ERP) systems that include application modules for the finance and human resources aspects of a hospital.

SRM in Swiss Hospitals

The implementation of SRM in Swiss hospitals is still in the fledgling stages. Therefore the case study at hand simply presents a first field report. Nevertheless, it can provide guidance for other hospitals when implementing SRM and helps to get a better understanding of the importance of SRM in day-to-day business of a purchasing department.

With an average of 31,000 inpatient and 161,000 outpatient treatments and about 4,800 employees the hospital under study is one of the largest in Switzerland. Every day, 950 orders were handled by the purchasing department, either by phone or by fax. So, the great part of a buying agent's labour time was used to (manually) process these orders. In 2006, the purchasing department manager decided to implement SRM as an organisational and technical response to the actual drawbacks. Thereby two major objectives should be attained: first, cost of supplies should be reduced through better prices and second, not only should the procurement process be optimised but the overall logistical processes from ordering to in-house delivery in order to actively contribute to the health service delivery of the hospital.

Strategic Sourcing: Enabling Demand Pooling Through E-Collaboration

In order to accomplish the first objective and because of the close margins for price negotiations of a single hospital, a purchasing association (with three other hospitals) was founded. One major problem, however, was the comparison of products, prices, and suppliers since they had differently administered master data. In order to make the data comparable and to pool the demand of the four hospitals for the joint sourcing of defined materials, a common terminology was needed (see figure 2, relationship 1).

However, the development of a proprietary terminology can result in a lengthy debate about field names and properties, etc., and boost the cost for deployment and maintenance. Therefore the purchasing managers decided to implement an off-the-shelf, ecollaboration tool that classified items neutrally, and free of manufacturer-specific terms (relationship 3). Thereby the transparency about product prices, trade allowances, and consumption was enhanced. Today, this improved information basis is actively used when negotiating with suppliers (relationship 2). At the same time, the implementation of the ecollaboration tool lead to a simplification of the structures of the product master data and to a reduction of the cost for administration as this is done by the software-producer.

Operational Procurement: Use of an Online Product Catalogue for In-house Ordering

With the aim of optimising efficiency of the overall logistical processes two major deficiencies were addressed within the project. First, to ease the buying agents of unprofitable work (e.g. to manually process the incoming paper-based orders from the wards) the ordering procedure was automated as much as possible. Thus, the entire in-house ordering procedure was outsourced to the wards (relationship 7). For this purpose, an online product catalogue was implemented, which contained all product data with the hospital- specific denomination of the items (relationship 5), since this was one of the key requirements to ensure the acceptability of the new solution. To guarantee the consistency of the neutral, as well as the hospital-specific product master data, a synchronisation mechanism between the two databases was needed (relationship 4). On the other hand, simplicity of handling was another essential requirement. For this reason, the whole ordering procedure on the part of the wards had to be effected on a simple web browser.

Second, to enhance the overall logistical process, an interface to the ERP system was implemented (relationship 6). As the incoming goods are registered in the ERP, an important feedback loop for the sourcing process was automated which formerly was done by hand. Due to better information about the reliability of suppliers, stock management was improved and the delivery of the needed goods was accelerated. However, another essential feedback loop – the factual use of the requested material within the medical treatment – still remains unconsidered.

Resulting Benefits of the Project

By implementing the above mentioned SRM-tools several benefits for both the purchasing department and the wards have been generated:

- With the constitution of a purchasing association (and with the corresponding implementation of the e-collaboration tool) data quality is enhanced and transparency of prices and variety of products of the different hospitals is obtained;
- By using off-the-shelf software for communication with suppliers unnecessary media breaks were eliminated;
- Due to the implementation of an interface between the online catalogue and the ERP, the parts of the process (from ordering to the registration of incoming goods) could be digitised, thus media breaks are avoided again. Moreover buying agents could be deployed for more beneficial tasks. By using an online product catalogue the search for determined products is significantly simplified. Furthermore,

extensive add-on information about products, suppliers etc., is available. This facilitates the comparison of products, reduces the rate of purchasing errors and enhances the order pattern. In addition, most purchasing orders can be placed within the same application by simply using a web browser. Thereby costs for education are being significantly reduced; and

- Manual ordering is cut down to a minimum. After the implementation of a desktop purchasing tool, more than 80 percent of the in-house orders are processed electronically. Hence, nursing staff has actual information concerning the status of the order and in most cases the order is placed within the same day.

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- Conclusions

Although today's reason for implementing SRM is mostly driven by cost-savings and efficiency increase propositions, substantial improvements in efficacy and quality in different hospital departments can be achieved. By exchanging product information with other hospitals, the purchasing department under study has made the first move to establish strategic aspects of SRM. The availability of comprehensive and up-to-date product information can definitely enhance the bargaining power of the hospital's purchasing department. By improving the in-house ordering procedures, sustainable benefits in terms of efficiency, efficacy and quality of the functional procurement were obtained, as 80 percent of the former paper-based orders are now processed electronically.

Perceptions are vital in healthcare; the opinions of the various actors are key to the success of any effort for change and industrial approaches to procurement are rather unusual. A significant success factor when implementing the new online product catalogue was its simplicity (i.e. using web technology) and the utilisation of the wellknown, hospital-specific denomination of the items instead of a new terminology. Furthermore, when looking at the entire healthcare material management, most benefits will certainly emerge through the centralisation of procurement and logistics by intensification of the collaboration between the hospitals and through outsourcing of certain activities to the supplier (e.g. vendor managed inventories, cross docking). However, this will cause new problems and will need advanced knowledge of both managerial and technical nature.

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