CASE STUDY: ICT FOR QUALITY MANAGEMENT AT REXCELL TISSUE AND AIRLAID AB, SWEDEN

Abstract

Rexcell, a large manufacturer of tissue and airlaid paper in Sweden, looked for new ways to organise and structure their quality management system (QMS) in order to meet demands from customers. Today, ICT help the company to ensure quality management throughout all processes within the company as well as provide a better overview of these processes. The company implemented an ICT based quality management system which allows employees to follow any process within the company from start to finish and see what steps to maintain quality are taken.

Case study fact sheet

Full name of the company:	*Rexcell Tissue and Airlaid Paper AB*
Location (HQ / main branches):	*Bengtsfors, Sweden*
Sector (main business activity):	*Production of tissue and airlaid paper*
Year of foundation:	*1874*
Number of employees:	*about 300*
Turnover in last financial year:	*1,2 billon SEK (~130 million EUR)*
Primary customers:	*Tabletop retailers, feminine hygiene product retailers*
Most significant market area:	*Tabletop products and feminine hygiene products*
Focus of case study:	*ICT for quality management*
Key words:	*ISO 9001, transparency of business processes*

Background and objectives

Rexcell Tissue and Airlaid Paper AB is a Swedish company manufacturing tissue and airlaid paper. 98% of the company's products are exported to other countries within the EU. The distance to the USA is deemed to be too great for business there to be profitable, as shipment costs would be too expensive.

On the European market, Rexcell has a market share of approximately 20% for both tissue paper and airlaid paper. Competition is intense. The company's strategy is focused on quality, thus it has to be in the frontline when it comes to methods for ensuring the quality of their products.

Rexcell manufactures tabletop and hygiene products. The company uses two different production techniques: tissue and airlaid. Tissue is used to produce high quality tabletop products such as tissue napkins. Airlaid is a technology used for developing products within feminine hygiene, wipes, tablecloths or napkins. With airlaid technology, firms usually manufacture products with a cloth-like texture.

Rexcell had specific instructions for quality management for each process and department within the company. These respective measures were described separately and kept in various binders in the different departments of the company according to the demands of ISO 9001:1994.

In December 2000, a revised standard ISO 9001:2000 for quality management systems was issued by ISO, the International Standards Organisation, called. Quality management systems to ISO 9001 standard provide an organisation with the means to fulfil customers' quality requirements, improve a company's capability to consistently provide products that meet these requirements, and ensure compliance with regulatory requirements. The system enables a company to show how quality is maintained in every process. Thus, the ultimate objective of such a system is to enhance customer satisfaction, while at the same time continuously improve the firm's performance.

Soon after ISO 9001 was developed, customers started to require that their suppliers had an ISO 9001 approved quality management system. Rexcell decided to keep up the certification according to the revised ISO 9001:2000 as well as for the revised ISO 14001:2004. Such demands called for changes in Rexcell's organisation of quality management, which led to Rexcell investing in an IT-based solution, "control-ES". Rexcell hoped that this new system would also provide an overview of the company's different processes and how they are all linked together.

e-Business activities

To meet the ISO 9001:2000 standards, organisations are required to show their quality management system process by process. Rexcell's old system made it difficult for customers and employees to have an overview of the company's processes.

Rexcell explored various solutions available on the market. Through another company, Rexcell discovered that there are attractive IT solutions, which provide a complete overview and explanation of all business processes, and how they are linked with each other. Rexcell decided this was the way to go forward and to invest in an IT-based quality management system of its own. The company purchased the quality management software called "control-ES" from Nimbus Partners.

Implementation

Control-ES was implemented in 2002. The whole implementation process took about three months. Consultants normally recommend that the implementation of an extensive quality management system should take about ten months, but Rexcell decided to take the risk and speed up processes. Five people within the company worked full time on the project during the implementation period. The company also contracted a consultant who trained staff how to use control-ES.

The cost of the software (i.e. the licence) and for the consultant amounted to approximately 200,000 SEK (about 21,700 EUR). Rexcell did not need to make any investments in additional hardware. The existing hardware architecture was sufficient to run the system.

The quality management system control-ES, is available to every employee via Rexcell's Intranet. This enables each to get a better understanding of how the marketing, sales, management decisions and product manufacturing are all linked together. Furthermore, instructions on how to solve problems in various situations are available for all and are easily accessed if needed.

A key feature of control-ES is that information concerning *all* quality management routines is easily accessible by every employee. If there are questions concerning any procedure, this information is easily accessed from the system. This includes practically everything: from how to clean a machine in the factory, to how to deal with customer complaints.

During negotiations, potential customers often come and visit the factory to see how the company works and how the paper is manufactured. Rexcell cannow present to its customers how quality is maintained, at and throughout each step of the manufacturing process. Rexcell also prepared and issued a pamphlet of eight pages, explaining in a simplified and transparent way how their quality is managed by every employee throughout different work processes.

The new quality management system is also used for following up on the company's results. In the system, success criteria can be specified, with key figures for measuring how well departments are doing. Departments have access to the system and can check whether they are "on track"; the system indicates the status by showing a green, yellow, or red field.

As noted earlier, when control-ES was implemented, five employees at Rexcell worked on the project full time. Now, a few years later, only one person works full time updating the information, informing and training staff in how to use it, and presenting it to customers.

Impact

The impact on sales which control-ES had for Rexcell is hard to quantify. The company states that it is a clear competitive advantage to have such a system, for it is often, if not always, a requirement from Rexcell's customers to have a quality assurance system in place, certified by ISO 9001 standard.

Peter Lundin, Rexcell Quality Manager notes that "… *while it is difficult to translate the value of this strategic move into either savings (e.g. in terms of effort in customer relations) or additional income, we believe without any doubt, that the investment was useful, if not absolutely essential to secure the company's position in the market. Customer relations have improved, simply because the company is now able to paint a clear picture of how it assures quality throughout every process, and show how quality management is a core company strategy. Our employees welcome the transparency of the system and they are interested in using it.*".

Another important merit of the system is its contribution to strengthen shared corporate values regarding quality issues. Employees have a better understanding of the processes within the company and, thus, how their own work contributes to the company's success. For example, factory workers are able to see how marketing of the company's product is linked to the delivery of the items they are manufacturing. This knowledge strengthens every employee's perception of their role in the company.

Overall, Rexcell says that its working processes have improved through using control-ES. All routines and work instructions are available on the Intranet and it is easier to follow up on performance relative to the company's goals and commitments to customers.

Lessons learned

Rexcell representatives say they have learned two important lessons from the implementation of this extensive quality management system:

- It adds great value to a company if all **employees fully understand the effect** their daily work has on the business of the entire company. From management to factory worker, all employees gain from knowing how the quality of their specific work impacts other processes within the company.

- It is important to **allow enough time** for the implementation of such an extensive system, as the project needs to be well anchored among the employees. Also, a company needs to allow for time to collect accurate information beforehand.

References

Research for this case study was conducted by Lisa Ståhl, Rambøll Management, on behalf of e-Business W@tch. Sources and references used:

- *Interview with Peter Lundin, Quality Manager, 21 April 2006*
- *Websites: www.rexcell.se, www.sis.se, www.iso.org*