

# ABB Industries: Implementing SAP's ABC

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**ABSTRACT:** ABB Industries was told to implement activity-based costing (ABC) for costing in their consolidated reports sent to ABB Group, their parent firm. To meet this need, they chose to implement ABC using SAP's R/3. For two of nine product lines, parallel ABC was developed. Unfortunately, the version of ABC needed to generate financial statements, operational ABC, would not be available until a later release of the software. While ABB Industries waits for the next release, key personnel associated with the implementation are being offered alternative internal and external opportunities. Further, in order for ABB Industries to implement the operational ABC, the entire firm must implement a new version of SAP's R/3.

## INTRODUCTION

In September 1998, Markus Venetz was putting the finishing touches on a success story, which SAP had requested. Markus's story traced ABB Industries' successful implementation of SAP's ABC module, CO-ABC, as part of the ABB Industries' implementation of SAP's R/3, version 3.0. All that Markus needed now was for his boss, CFO Armin Scherer, to sign off on the story before he sent it to SAP. Their meeting also would help decide how ABB Industries would proceed in the future and what it needed to implement SAP's operational (where ABC is used to generate costs for the financial statements) ABC, which was available in R/3 4.0a and higher.

ABB (also referred to as ABB Group) required all its diversified companies to implement ABC (activity-based costing). From the different options available, ABB Industries (one of the ABB companies) chose to implement ABC using SAP. According to SAP, ABB Industries was one of four companies as of June 1998 to implement SAP's parallel (where ABC is used to cost processes for estimation purposes) ABC module (CO-ABC), and ABB Industries was the first to fully implement it.

## ABB GROUP AND ABB INDUSTRIES

ABB Group is a worldwide firm focusing on electrical engineering, made up of 1,000 companies. Although ABB Group has been known essentially as a power equipment manufacturer, as noted by the current CEO, Goran Lindahl, ABB Group is increasingly moving toward becoming "a more knowledge-based and service-oriented company."

ABB Group was the result of a merger of Swedish and Swiss companies. ABB AB in Stockholm and ABB AG in Baden, Switzerland each owned 50 percent of ABB Asea Brown Boveri Ltd., Zurich, Switzerland, which is a holding company of ABB (Group). Each of the parent companies is listed on various stock exchanges in the United States and Europe.

In 1996, ABB employed almost 215,000 people in over 140 countries and had annual revenues of almost \$34 billion. Resulting net income before taxes was over \$1.2 billion with a return on equity of 22.2 percent. In 1997 ABB employed about 213,000 employees and revenues of over \$31 billion. 1997 net income before taxes was \$572 million, with a return on equity of 10.3 percent.

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Percy Barnevik, former CEO, and current Chairman of the Board of Directors of the European continent's biggest family conglomerate ABB Group, has been called Europe's most successful international manager by *The Economist* (1997). According to Barnevik, the organization structure was the key to ABB's success. In 1998, ABB employed a matrix organization structure with dimensions based on geographic regions and business segments. ABB was made up of four geographic segments (Europe, Middle East and Africa, the Americas, and Asia). A manager headed each geographic segment. ABB had four different business segments, power generation, power transmission and distribution, industrial and building systems, and financial services, each with a segment manager. In addition, the four business segments were broken into 37 business areas. Each business area had its own manager. Each business area was responsible for implementing its own worldwide strategy with regard to business planning, production, and production development. Each geographic region was also managed on a country-by-country basis. Further, within each country there were different geographical regions. For example, in Switzerland there were four different regions, each with a manager. The current organization structure is illustrated in Figure 1.

ABB Industries was located in Switzerland. In terms of geographic segments, ABB Industries was a part of the "European," "ABB Switzerland," "Third Switzerland (CH3)" segments. In addition it was in the "Industrial Automation and Drives" (IAD) business area (Figure 1). ABB Industries had revenues of 641 million Swiss francs in 1997. ABB Industries was international, with roughly 60 percent of their employees in Switzerland, 20 percent in Germany, 8 percent in Italy, 2 percent in Austria, and 12 percent elsewhere. ABB Industries built nine different product lines, including drives and power electronics, building materials, mining and mineral industries, converters, printing industries, electronics production, arc furnace installations, electrical machines, products and plants, and drive products, which each had a different product line manager. ABB Industries manufacturing

**FIGURE 1**  
Based on ABB Industries Document

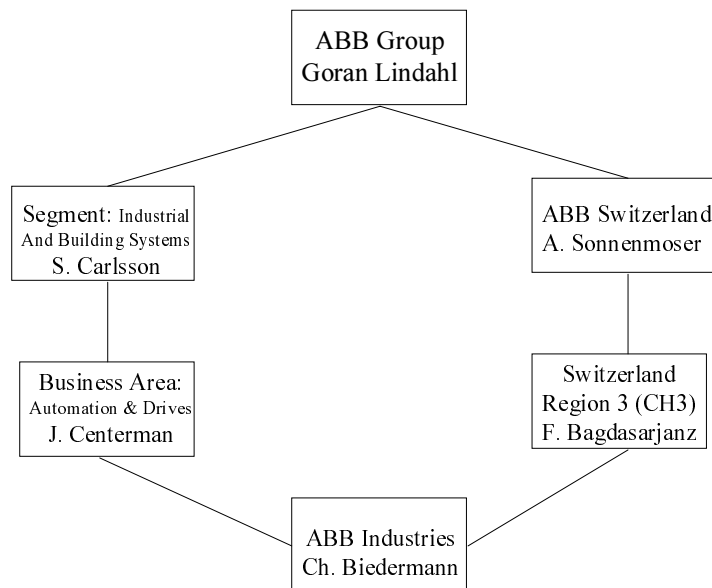


ABB Group Organization Structure

consisted of three relatively closely located Swiss locations, Turgi (775 employees), Dattwil (435 employees), and Birr (379 employees), each with different products and processes. Turgi built drives and power electronics; electronics production; and converters. Dattwil developed products for three industries, including building materials, mining and mineral industries; printing industries; and systems and service for drives and control technology. Birr built electrical machines.

### ERP SYSTEMS AND SAP'S R/3

SAP's R/3 was the largest selling enterprise resource planning (ERP) system. SAP is one of the "big five" ERP systems that included BAAN, J.D. Edwards, Oracle, and PeopleSoft. Other systems include SCALA, IBS, and Syteline. SCALA is primarily for smaller firms. IBS is popular in Scandinavia, and is primarily used for its accounting and financial capabilities. Syteline is a business-specific ERP.

ERP systems can integrate most of a firm's transactions into a single system, facilitating integrated planning of an enterprise's resources. An indication of the breadth of SAP's R/3 version 3.0 is signaled by the diversity of modules that it contains: FI—Financial Accounting, CO—Controlling, EC—Enterprise Controlling, TR—Treasury Management, PS—Project System, PP—Production Planning, PM—Plant Maintenance, SD—Sales and Distribution, HR—Human Resources, and MM—Materials Management.

SAP and the other ERP systems focus on processes, rather than traditional functional activities. Within SAP, processes cut across different functional areas. For example, procurement integrates a number of functional areas, such as inventory (which decides on a need for particular goods), purchasing (which actually arranges for the acquisition of materials); accounts payable (which pays for the goods); receiving (which receives the goods); and others.

Implementation of SAP (and other ERP systems) requires an integration of certain "best practices" choices to establish the processes and document flows that are used in the system. Best practices capture the best way of executing processes and information flows. For example, firms must decide how information should flow and how to document procurement. Purchasing originates a purchase order; receiving originates a receiving memorandum, etc. Best practices are not independent; best practices in one module must integrate with best practices in other modules. Because of their focus on best practices, ERP systems are seen as reengineering enablers. For example, implementation of SAP has been referred to as "forced reengineering" (Hammer 1997) and "the electronic embodiment of reengineering" (Gendron 1996).

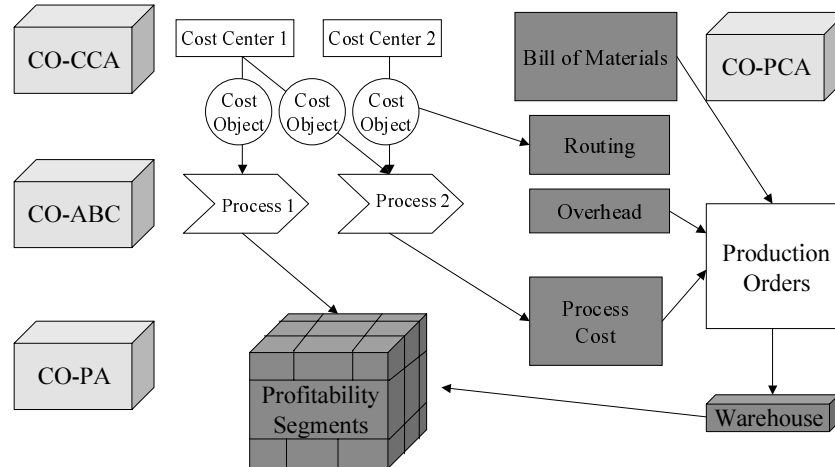
### ABC AND ABC IN SAP'S R/3

An important feature was the ability to implement activity-based costing (ABC). ABC attempts to assign indirect costs to cost objects, such as products, based on activity levels of particular types of indirect costs.<sup>1</sup> The activity or activities that are seen to "cause" a cost to increase or decrease are referred to as "cost drivers." For example, costs of the activity "generating request for proposals" are likely to be related to the number of requests for proposals that are generated. Determining "causation" can be a difficult process that typically requires gathering information on the specific activities in order to understand what costs drive that specific process. As a result, identifying cost drivers requires understanding the particular activities and processes being investigated. Rather than "bolt-ing" on a non-SAP solution to R/3, ABB Industries had chosen to implement SAP's ABC.

SAP's ABC submodule, dubbed "CO-ABC," is a part of the control module (CO) that focuses on cost accounting and profitability analysis activities (Figure 2). CO-ABC employs a model of organizational processes and flows with three different organizational objects: cost centers, activity

<sup>1</sup> Generally, a cost object is anything that accumulates costs, such as a finished good or inventory item that is used in developing a finished good.

**FIGURE 2**  
Based on ABB Industries Documentation



types, and processes. Cost centers are where costs are accumulated and captured as part of SAP's "CO-CCA" (Cost Center Accounting) component. Costs are distributed from cost centers to activities and from activities to processes in CO-ABC. For example, "Purchasing" might be a cost center with activity types, including "Request Proposals" and "Invoice Verification." Similarly, "Invoice Verification" could be related to different process types including "Production" and "Assembly." Different activity types are associated with different best practices. As a result, the choice of best practices determines which activities will be available for costing purposes in the system. Ultimately, product costing is accomplished in "CO-PCA" (Product Costing Analysis) where costs are matched to cost objects. Profitability of different cost objects is computed in SAP's "CO-PA" (Profitability Analysis) based on inputs from CO-ABC and CO-PC. As illustrated in Figure 2, in CO-CCA, costs are allocated from cost centers to cost objects. In CO-ABC, cost objects are allocated to processes. From the processes, CO-PA allocates costs to different profit centers. Finally, CO-PCA assembles costs from cost objects routed to the factory, processes, bill of materials and overhead, and sends those costs in the form of finished goods to the warehouse. Those costs can then be assigned to profit centers as they use or sell them.

SAP's CO-ABC, introduced in 1995 and used in R/3's<sup>2</sup> version 3.0 provides the ability to perform "parallel" ABC (SAP 1995). Using parallel ABC, indirect costs are attached to processes, not to cost objects. For parallel ABC, the ABC functions "in parallel" to the regular cost allocation approach, providing an approach to estimate costs of processes. The regular or traditional costing approach that allocates costs to cost objects, using direct labor or materials as a basis, is used to create the financial statements. ABC is not used for financial statements. As a result, using information provided by the parallel system, a manager could compare the costs computed using ABC to those generated by the traditional costing system. In parallel ABC, ABC is not used for costing only planning and comparison. ABC is used in "parallel."

<sup>2</sup> SAP's R/3 is very complex, so a complete description of it in a document of this type is impossible. However, a number of references are summarized in the Appendix.

However, costing and profitability analysis were not fully integrated until version 4.0 in 1998. With 4.0 it also became possible for allocating costs to sales and distribution (SD) orders. SAP's R/3 version 4.0 extended version 3.0's capabilities to do ABC. It allowed development of an operational ABC-based standard costing model (SAP 1998), where costs can be assigned to cost objects. As a result, rather than using traditional cost accounting allocation processes, indirect costs can be allocated using ABC-based allocations. Financial statements can be directly generated using ABC-based approaches. The operational approach allows the use of ABC for costing purposes. Q# 4

### ERP SYSTEMS AND REPORTING FOR ABB GROUP

Within ABB Group there is not a common ERP system used by each of the companies. Historically at ABB Group, as is common in decentralized companies, investment decisions on systems are made independent of other ABB companies. However, in 1997, ABB Infosystems in Sweden, one of three corporate information technology companies contained in ABB Group, conducted a study of the available ERP systems for ABB Group. ABB Infosystems, while considering ABB's unique requirements, recommended five different systems for purchase by ABB Group companies: J.D. Edwards, SAP, BAAN, IBS, and SCALA.

Although there is substantial variation of systems within the ABB Group, monthly reporting and consolidation is done using a single system: ABACUS. ABACUS is not generally linked directly to individual company accounting systems. Instead, five working days before month-end, data is due at headquarters. Data from each company in ABB is gathered either as a single company or in a consolidated form, as part of a subgroup of companies. Information is coded so that data can be consolidated or selected from any view of the matrix organization, e.g., country, region, segment, business area, or business unit.

With ABACUS there is rapid availability of information. One day after month-end, consolidated data is available for various management and boards. In addition, ABACUS functions as a data warehouse, providing the ability to store multiple years of data for the analysis of trends. Further, ABACUS provides the ability to accommodate multiple currencies, a necessity when you do business in over 50 countries.

### ABB GROUP: ABC

ABB's "Activity Based Costing—Closing Cycles Project" (ABC-C) started officially in November 1995 with a launch letter "Faster, Better, Cheaper—ABB goes for ABC," signed by Percy Barnevik, at the time he was CEO of ABB. According to an ABB letter, the main objectives of the ABC-C project were to analyze/optimize company processes, thereby achieving substantial savings, and to improve the calculation of products/orders through better assignment of indirect costs based on an integrated activity-based costing system.

As noted in the letter:

The project has two distinct stages:

Stage 1: Process analysis and optimization (includes the closing cycle process).

Stage 2: Calculation/cost accounting with ABC in an "integrated system."

The bulk of the implementation/execution is being done in the companies/countries with a small Central Project Group in Zurich doing the framework/principles to apply, as well as giving consulting and education assistance.

Stage 1: to be terminated by all companies by the end of 1998.

Stage 2: to be implemented by all companies by the end of 2000 (= starting January 1, 2001).

Three years later, on March 26, 1998, a memo was sent out from ABB Zurich, signed by Goran Lindahl, indicating:

A recent status revision has revealed that with the present resource allocation, the project stages will not meet the ... deadlines. The Executive Committee has therefore reconfirmed the great importance of this project and that sufficient resources will have to be set aside to enable it to meet its deadlines.

The resources will primarily come from the countries ... but the Regions/Central Project Group will do their best to assist if shortages arise.

On August 1, 1998, ABB's ABC implementation was announced in *The Economist*:

ABB is shifting to ... ABC ... if a customer wants, say a power plant that needs lots of tailoring, ABB can estimate the costs accurately before making a bid, and avoid losing money on the deal. An even bigger advantage is the information that ABB has gained from the review process itself, which began in early 1996 ...

For example, once they began to define the inspection process as a discrete activity and to pay attention to its costs, many ABB divisions began to ask why they were spending so much money inspecting materials from their most reliable suppliers, which already have excellent controls ... in other words, ABB spent three years rethinking its business, rather than turning it over to programmers. "Had we done it the other way around," says Volker Hevler, the project's manager, "we would have failed. You can't start running at the finish line."

#### **ABB INDUSTRIES: SAP**

In November 1994, a committee consisting of ABB Industries' CEO (Ch. Biederman), CFO (Armin Scherer), and each of the nine product line managers chose SAP to replace a set of legacy systems. SAP was chosen because it offered the opportunity to integrate across the firm, generating improvements in effectiveness and efficiencies. Roughly two years later, on January 1, 1997, ABB Industries went live after a "big bang" implementation of SAP's R/3 3.0.

#### **ABB INDUSTRIES: SAP'S ABC**

In July 1995, Armin Scherer, the "father of ABC at ABB Industries," hired Markus Venetz to implement SAP's ABC. Markus had written a diploma paper on ABC and graduated from the University of Zurich, in Economics in June 1995. As noted by Markus Venetz:

We started the project in September 1995. After having defined the concept, we built up ABC know-how and implemented a prototype in CO-ABC. Since we were the first company to use ABC in SAP we had to train ourselves in CO-ABC to get the necessary know-how ... ABC has now been implemented in SAP R/3 3.0 for two divisions.

In February 1997, one month after going live with SAP's R/3, ABB Industries completed implementation of SAP's parallel activity-based-costing module in the two divisions, also using SAP's R/3 version 3.0. For that implementation, ABB Industries chose to implement SAP's ABC in Birr and Turgi for one set of products in each location, focusing on electronics production and electrical machines. Each of those two product lines was process-based, and had substantial indirect costs. For example, production employed large amounts of capital machinery that generated correspondingly large amounts of depreciation. ABB Industries' other seven product lines were not implementing ABC primarily because they had a project focus, where employees kept detailed time records. These time records were used as a basis of assigning costs. As a result, it was felt that the direct labor hour information could be used to allocate any indirect costs and thus, there was no need to implement ABC for those production processes.

At the conclusion of the implementation, Scherer was concerned.

One of the primary reasons that we choose SAP to implement ABC was because SAP said R/3 would do ABC for financial statement purposes.

Unfortunately, at this time, only the parallel version was available for R/3 3.0. As a result, the current implementation would not meet the requirements of ABB Group.

### **IMPLEMENTATION: ORGANIZATIONAL MODELING AND CHOOSING COST DRIVERS**

CO-ABC requires development of the organizational cost model, choice of the cost drivers, maintenance of the model, and periodic review of the cost drivers.

#### **Organizational Cost Modeling**

In order to match costs to activity types and processes, as noted earlier, CO-ABC employs an organizational model of cost centers leading to activity types and from activity types to processes. However, this organization model was not fully or formally recognized in ABB Industries' existing organizational structure or captured in the implementation of SAP's traditional cost accounting system. As a result, ABB Industries found it necessary both to find and identify activity types, processes, and process owners in order to build the organizational model for CO-ABC. As noted by Markus, "It would have been helpful if SAP had been implemented before the ABC model."

For each of the two divisions that used ABC, ABB Industries' managers were provided with information about the resulting organizational model and corresponding flow of costs. Managers could use the resulting model to reengineer the production processes. In particular, those processes with multiple cost sources, or activity types with multiple cost centers were suggested as targets for reengineering. Implementing single inputs to processes potentially could streamline operations.

#### **Choosing Cost Drivers**

After processes were identified, the ABC implementation was dependent on the process owners to provide an analysis of cost drivers for each activity type. As noted by Markus:

There is a great deal of uncertainty in peoples' minds as to what the new system will mean to them. Sometimes they try to give you the information that they think will make them look the best. However, in order to implement ABC we need the actual cost drivers.

Markus worked with the different products in ABB Industries to develop cost drivers that would meet the corporate requirement for ABC. Ultimately, ABB Industries chose activities as cost drivers for almost 70 processes identified in their analysis of the production of the two product lines chosen for implementation. A list of some sample activity cost drivers for five processes is given in Exhibit 1. The process involved Markus meeting with process owners, watching how the processes worked and trying to map drivers into measurable items. This analysis was done before implementation of R/3, so it was done without analysis as to what data was available from R/3 to help with the analysis.

As Scherer noted, choice of the activity bases had to be done very carefully. In some cases, processes draw costs from multiple cost centers. Different allocation bases provide different costs to different cost objects. Since different bases resulted in different costs, different inferences about profitability and pricing could be made. As a result, there was always a danger that an activity basis could bias one cost center, activity, process, cost object, or product in favor of another, i.e., ABC can be misused.

After ABB Industries' decided to implement R/3, the plan was to derive the cost driver information for CO-ABC from LIS. Much of the data used by SAP for measuring activity levels comes from the Logistics Information System (LIS) component of SAP. LIS accumulates data about transaction

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**EXHIBIT 1**  
**Some Sample Processes and Activities**

<b>Process</b>	<b>Activities</b>
<b>Procurement</b>	
Strategic Supply Management	None
Inquiry Process	Number of Inquiry Positions
Procuring	Number of Order Positions
Interests on Materials	None
<b>Production/Assembly/Testing</b>	
Continuous Process Optimization	None
Carrying Out Sales and Operations Planning	None
Master Data Maintenance	Number of new or modified material master/work centers/routes
Converting a Planned Order (into production order or purchase requisition)	Number of created PO's and Requisitions
Administration Production	Number of Released POs
<b>Forwarding</b>	
Planning Forwarding	None
Forwarding Standard	Number of Sendings
Forwarding with Letter of Credit	Number of Sendings with Letter of Credit
Forwarding and Packaging for Hazardous Materials	Number of Sendings with Hazardous Materials ...

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volume, such as number of invoices or purchase orders. As a result, LIS summarizes transaction volumes that can provide the basis of many of the cost drivers.<sup>3</sup>

However, the data captured by LIS reflects the activity measures ultimately generated as part of the specific SAP implementation's choice of best practices. Unfortunately, as noted by Markus, ABB Industries' LIS does not have activity information for all of the activities that were part of the CO-ABC design. Some of the best practices implemented do not capture activity measures that were initially chosen for use in CO-ABC. For example, number of customer visits may be seen as the primary cost driver in some marketing activities. However, that information is not available in ABB Industries' LIS. As a result, in some cases, either customizing/programming of new statistical key figures in LIS was necessary or additional activity information had to be generated using other approaches in order to provide a measure of cost activity. For example, in some cases process owners were required to make manual counts as to particular activity levels in order to establish the cost drivers. After completion of implementation of SAP's CO-ABC in R/3 3.0 and choice of cost drivers, Markus noted:

We decided to implement ABC in version 3.0 in order to get some experience with the two divisions and with SAP CO-ABC ... we now have experience with analyzing process costs and handling process volumes.

<sup>3</sup> The logistics module focuses on managing production from the purchasing to sales to distribution. As a result, the LO-LIS (logistics information system) within SAP R/3 captures information from production to distribution. LIS captures information from each of the components, including SD, PP, MM (Materials Management), PM (Plant Maintenance), and QM (Quality Management), and provides an integration function for those applications.



### **Activity and Organization Cost Model Maintenance**

The resulting organization model was used for a year in order to capture activity levels for each of the processes. Activity levels (e.g., number of purchase orders) formed the denominator used in generating the estimated costs per activity transaction, used in the following year. At the end of each year the organization model could be revised to account for changes in processes or activity counts. In those situations where reengineering had occurred or other changes were made, representations of the organization model cost centers, activity types, and processes, or flows among them also could be changed. As a result, changes in the organizational model often required changes in the activity bases because of changes in activity counts or reestimation of activity levels.

### **SUCCESS FROM CUSTOMER FOCUS AND BUSINESS BENEFIT**

As Markus thought about the implementation, he felt that ABB Industries' approach of "customer focus" and concentrating on the business benefit was critical to ABB Industries' successful implementation.

#### **Customer Focus**

The customers for the ABC information were the business managers of the cost centers, activities, and processes. A customer focus was aimed at providing information to those customers in order to help them optimize their business processes using information generated from the ABC analysis. ABC was seen as a tool to not only enable cost reduction, but also provide input to process management that could lead to cycle time reduction and quality improvement. ABB Industries was concerned with top performance and with continuous improvement in the areas of time, quality, and cost—"Faster, Better, Cheaper." Ultimately, the goal was process optimization.

#### **Business Benefit**

Not all product managers were interested in using ABC. As noted by Markus, "Managers must see a business benefit with the system," otherwise the ABC results that were developed would not be used. Just telling cost center managers that "the SAP system needed particular information in order to be implemented" was not enough to get managers out of their important day-to-day issues and concerned with specific SAP implementation issues. Cost center and process managers needed incentive to help with the implementation. As a result, it was critical that ABB industries provided explanation of "business benefit" to the managers whose processes were being assessed with ABC.

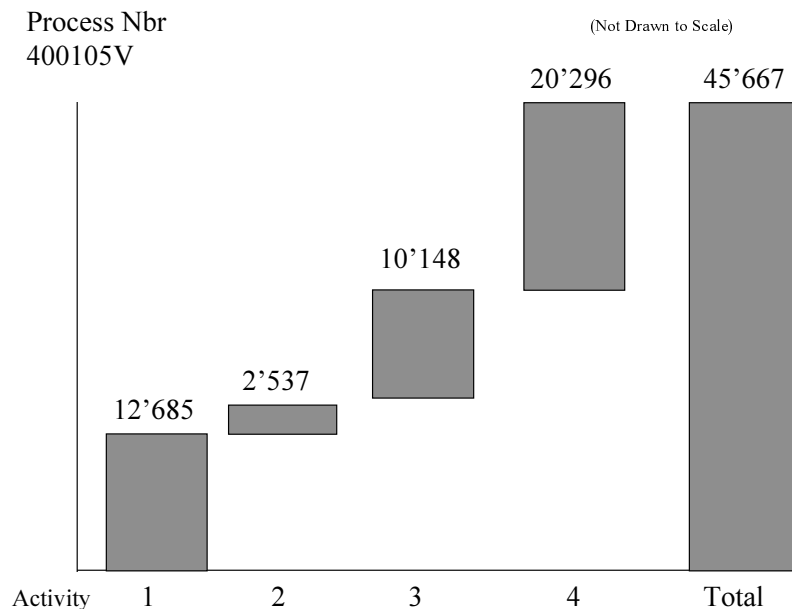
In an effort to have ABB Industries managers see a business benefit, Markus provided numeric information to the managers regarding cost-driver-based costs for each activity, process, and cost object. Those activities and processes with large costs could then be identified and managers' efforts could focus on reengineering those processes. However, perhaps development of a pictorial approach to summarizing cost information was the greatest help for managers to see the possible benefit of potential process changes. An example of the pictorial summary of costs provided to managers, developed for illustrative purposes, is provided in Figure 3. The example summarizes total cost across each activity used in the process, making it easy to identify which activities had the largest cost.

### **ABB INDUSTRIES' PARTNERING WITH SAP**

After finding that CO-ABC would not meet their financial reporting needs, ABB had decided to partner with SAP to extend the ABC component in R/3 3.0. As a result, ABB Industries had been in communication with SAP about changes that would be desirable for ABC at ABB Industries. As noted by Markus Venetz in March 1998:

**FIGURE 3**  
**Pictorial Summary of Costs**  
**Based on ABB Industries Document**

**SAP Modules and ABC**



In 1997 we started the ABC-calculation project in order to generate ABC related income statements ... In this context, we have had good cooperation with the CO-ABC development team of SAP itself.

Scherer was concerned that ABB Industries effectively was doing development work for SAP. However, Scherer also noted that the primary advantage of having SAP develop the system in concert with ABB Industries was that it would be designed to meet ABB Industries' specific needs.

Scherer remarked that it seemed that SAP was functional in its development efforts, with different SAP module development teams having limited communication with each other. As a result, ABB Industries' efforts to implement ABC with operational capabilities had been frustrated by SAP's efforts to integrate those capabilities into R/3. It would not be until the next version of R/3 that necessary ABC capabilities would be implemented.

**GOING WITH R/3 VERSION 4.0b**

SAP's next release of R/3 was version 4.0b, and ABB Industries was considering upgrading their firm from 3.0. As noted by Markus in March 1998:

This year we want to get experience with the implemented ABC in ... the divisions, analyze the other divisions, implement their cost drivers in SAP, and finally prepare the whole company for the switch/migration to R/3 4.0b (or 4.5a).

In the first quarter of 1998 SAP made version 4.0b available. That new version of R/3 included certain changes in capabilities, including operational ABC. As noted by Markus in March 1998, "We currently have online access to SAP release 4.0b (development system)."

Given access to version 4.0b, Markus and M. Krumm (who took a consulting position with Arthur Andersen in August 1998) developed a version to test SAP's new ABC module. Their implementation was designed to model value flow at ABB Industries, using ABC. The prototype had four different processes, as summarized in Exhibit 2. The version had been demonstrated to others in ABB to illustrate how the new ABC module worked. This had led to many questions directed to Markus from managers at other ABB Companies as to how they could implement SAP's CO-ABC. Further, an enhanced version of R/3, release 4.5a was due out in November 1998, with additional features, including the ability to generate financial statements using ABC-based costs.

#### WHERE FROM HERE?

Unfortunately, as noted by Scherer, "We still can't use ABC to develop costs for the financial statements." Had ABB focused too much on ABC and not enough on ERP? Had ABB Industries focused too much on ERP and not enough on ABC?

Operational ABC had not yet been implemented in spite of the SAP implementation. As a result, in the fall of 1998 just prior to Markus going on his honeymoon, Scherer and Venetz looked ahead at what would be done after Markus's return. ABB Swiss headquarters in Zurich had planned on implementing SAP R/3 version 4.0b or 4.5a in what was to be called "Superpilot." Superpilot was scheduled for completion in late 1999. Markus would be spending 50–60 percent of his time in Zurich, working on the ABC component in Superpilot. These developments led Markus to note that "I think that ABC will be fully implemented, in operational form, at ABB Industries, on time, by the end of 2000."

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#### EXHIBIT 2

##### Swiss ABB: Value Flow ABC within SAP

#### Main Business Processes

##### **Make to Stock Production for Motors that are used within the Flex. palatizers**

- Manufacturing
- Equipment
- Soldering
- Washing
- Disposition
- Purchase Order Handling

##### **Offer Processes, including Offer Engineering**

- Writing Tender
- Rework Tender
- Offer Engineering
- Price Inquiry by Vendor
- Work on Orders Received

##### **Project Management**

- Start-up Engineering
  - Engineering System Handling
  - Project Management
  - Purchase Order Administration
  - Sales Order Administration
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## APPENDIX

### SAP'S R/3 SELECTED RESOURCES

It is impossible to generate a detailed description of SAP's modules in a document of this sort. However, there are a large number of available references that contain more information.

An executive summary is provided in Norris et al. (1998). For detailed description, see, e.g., ASAP Consulting and Blain (1996, 1998). For drill down into particular modules, including FI and CO, see Blain and ASAP Consulting (1998), Hart (1999), Rockefeller (1998) or Teufel et al. (2002); HR, see ASAP et al. (2000), Production and Planning, see ASAP Consulting and Haubner (1999), and for SD, see Blain et al. (2000) and Williams and Yates (2000).

In addition to the addition of ABC capabilities discussed above, the primary concern in this case, some of the major changes between R/3 3.x and 4.x (in particular, 4.6) relate to:

- Development of "SAPscript" for version 4.6 (SAP Labs 2000b). SAPscript forms provide an "intuitive" approach to do most common tasks (e.g., moving/adding fields, printing company logos etc.) used to change forms.
- Changes in system administration for version 4.6 (SAP Labs 2000d).
- Changes in authorization issues (SAP Labs 2000c).
- Use of pre-configured clients (SAP Labs 2000b).
- Ability to provide employee self-service (SAP Labs 1999a).

Since these other changes do not directly relate to the material in the case, they are not discussed further.

### SELECTED RESOURCES

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