

From Logistics to Supply Chain Management with SAP

The Survey to supply chain maturity and application of mySAP SCM in Dutch companies

From Logistics to Supply Chain Management with SAP

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Introduction

What is the quality and maturity of the supply chain processes in Dutch companies that use software solutions of SAP to support these processes? How satisfied are Supply Chain managers of these companies with these processes? And last but not least, which functionality of SAP is used to support the supply chain processes? These were the main questions for a survey that Capgemini together with SAP has carried out in April 2006.

The survey was restricted to the most important areas of SCM, namely Demand and Supply Planning, Production Planning and Scheduling, Production control, Warehousing and Performance management. In total 75 companies participated in the web-based survey, consisting of 54 questions. The respondents of the survey were mainly Supply Chain managers. Many different industry sectors are represented by the companies that were invited to participate: most important are the Chemical, Pharma, Machinery, High-Tech, CPG and Wholesale industries. The annual turnover of the companies varied from 50 to more than 1000 million Euro; two-third of the companies has a turnover between 100 and 400 million Euro, which is a good representation of companies that use SAP applications.

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1 Management summary

What is the quality of the supply chain processes in Dutch companies? Each company has a focus on reducing stocks, improvement of service levels and lead time reduction. But are the supply chain processes designed in such a way that these goals are achieved?

The goal of the SAP SCM survey was to gain a clear understanding of the present supply chain processes, the use of SAP functionality and opportunities for improvement. In an increasing competitive market, emphasis is on shorter product lifecycles, higher customer demands and a growing complexity by (internet-) transparency, outsourcing, tracking & tracing and collaboration.

The results of the survey are presented by means of the Supply Chain Maturity matrix. This matrix gives an overview of the large transformation that Supply Chain Management has made in the last decade, forced by increasing competition. The matrix distinguishes five maturity phases :

- Recognizing; problem identification
- Understanding; know where problems occur
- Managing; handle the problem areas
- Mastering; internal optimization
- Leading; external optimization, innovation

One example for these different phases: the sales forecasting process within a company or business unit can be lacking (which actually was at 17 % of the companies that participated) or be based on extensive collaboration with customers in a demand driven supply chain. This is an example of the first phase and the fifth phase for maturity in the sales forecasting process.

During the growth from Logistics to Supply Chain Management a company has to go through all the five phases, which explains the title of this whitepaper 'From Logistics to Supply Chain Management with SAP'.

The main conclusions of this survey

- An effective and efficient result of all logistic processes depends on a correct planning. This survey shows that in the several planning processes there are many opportunities for improvement. Especially the coordination and collaboration between different departments, customers and suppliers can be improved. For an accurate sales forecast, a formalized and structured forecasting process, in which Sales, Logistics, Marketing and Financial departments are involved, is a prerequisite. A reliable supply plan is depending on reliable input of internal (production, warehouse) and external suppliers. Collaboration between these partners creates transparency in the supply chain.
- Besides the coordination between the parties involved, the survey shows that reliable information is very important in demand and supply planning. All actors in the planning process must have fast access to unambiguous information, preferably from one source. However, as appears from the survey, not all planning processes are supported by a central planning system like mySAP SCM. Mainly in sales forecasting and production planning, MS Excel is used for off-line processes. A lot of time is spent later on retyping



“If the senior management of a company is not having weekly meetings discussing the status of their supply chains, its CEO should feel a cold chill running down his back,” says Karl Manrodt, Associate Professor at Georgia Southern University.

data in the SAP system. The prevention of double data entry is one of the most mentioned improvement areas. By using mySAP SCM all departments (including customers and suppliers) can gain access to consistent data and are informed real-time on changes in demand, stocks or supplies.

- The survey results show a great need for improved reporting and analysis possibilities. Many companies have set goals with regard to Performance Indicators, which are key to efficient management of the supply chain and partners involved. Companies in the Netherlands do measure KPI's, but these are not always used to manage the supply chain. Some of the most important KPI's are forecast accuracy, service level, inventory turnover and capacity usage.
- The analysis of the survey results shows that companies that have planning processes supported by mySAP SCM are more mature with respect to their supply chain processes. They are also more satisfied with their supply chain processes.

Development to a next phase in the Maturity Matrix often involves changes to the companies' organization, processes and IT-systems. Many implementations of Advanced Planning Systems have failed not for the functionality of the software, but for lacking business processes or organizational readiness.

Overall conclusion

The results of the survey have been analyzed to assess the supply chain maturity of the participants. This analysis shows that the most mature companies use the full functionality of my SAP SCM and are more satisfied with their supply chain processes. Most of the other companies are in the phase of the internal optimization of their supply chain processes. To develop to the next phases in the Maturity matrix these companies will have to invest in collaboration with business partners, central planning systems for integrated planning and accessible reporting.

2 Introduction to the survey

Supply chain management has a growing attention in many companies, and not only because it determines a large part of the costs. Well-performing supply chain processes are required for the realization of a high service level to satisfy the customer. Companies are constantly striving for optimization of the supply chain, internally as well as externally to achieve competitive advantages. IT enables this pursuit for supply chain excellence with new opportunities to improve the processes of integration and control of the supply chain.

The goal of the survey, with 75 participating companies in the Netherlands, was to gain an understanding of the present status of supply chain management and the use of the different modules of mySAP SCM. The results show the maturity in SCM, the way SAP is used and the improvement possibilities which are identified for the IT support of the supply chain processes. The results were analyzed per main supply chain process, turnover and industry sector.

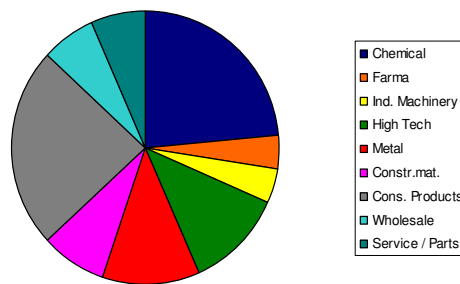


Figure 1. Participants per industry sector

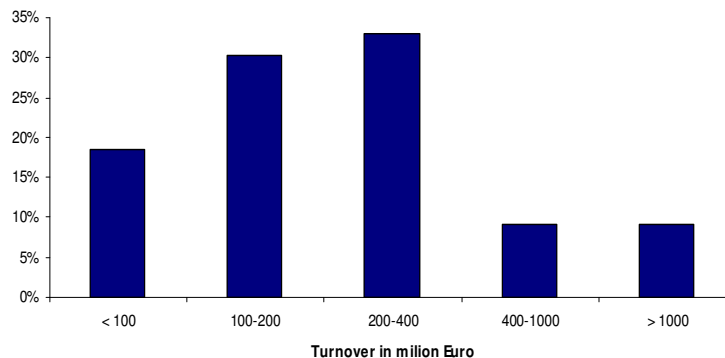


Figure 2. Participants per annual turnover

3 Processes, maturity and technology

The survey focuses on the most important supply chain processes. Each process has a different planning horizon as depicted in figure 3.

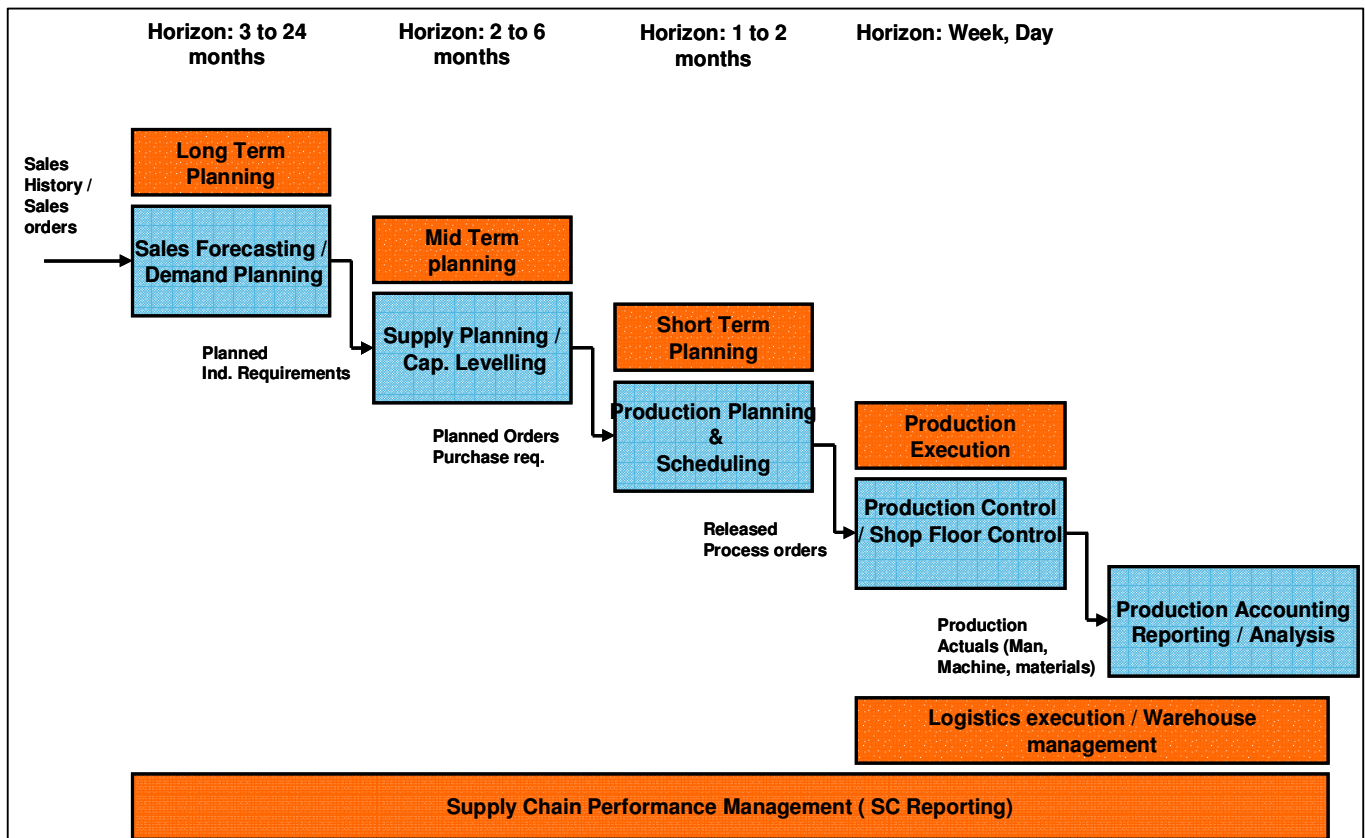


Figure 3. Important SC processes and their relationship

The supply chain process starts with *sales forecasting* or *demand planning*. With historical sales data and market information a long term sales plan is made for the next 12 to 24 months. Based upon this forecast in the *supply planning* process requirements for production and purchasing are generated and the required materials, capacity and stocks are allocated. *Production planning and Scheduling* processes optimizes the sequence of the planned orders and requirements for capacity. Also planned orders are checked on material and capacity availability when they are converted into production orders. The actual production process is supported by the *Production or Shop floor control* process. The day-to-day production is executed and managed, actuals are recorded. The main goods flow (inbound, outbound and supply to and from production) is controlled in the *Logistics execution* or *warehouse management* process.

Each main process has an own set of performance indicators. These KPI's provide management with required information on efficiency and effectiveness of the

supply chain processes. Not all industry sectors have value adding activities like wholesale and service parts companies; the focus for these sectors is on the management of stock levels and the inbound- and outbound goods flow.

In the survey, the total supply chain management area was split in six processes (the orange blocks in Figure 3), which are the backbone to represent the results. Within these processes five stages of maturity were identified. Each company was ranked for its maturity on each of the six processes. This created the basis for analysis of the supply chain maturity per industry sector and annual turnover category.

The supply chain processes are supported by the SAP software with different functionalities. The applicable denominations are mySAP ERP and mySAP SCM. The mySAP SCM functionality can be split up into:

- mySAP ERP : with modules Materials Management (MM), Production (PP) for the discrete industries and Production process (PP-PI) for the process industries and Logistics Execution System (LES) also known as Warehouse Management (WM).
- mySAP SCM : with the modules Advanced Planning and Optimization (APO), Inventory Collaboration hub (ICH) for support of VMI and other supplier-customer related processes using Internet portals, Event management and Extended Warehouse Management. Within the mySAP SCM, several industry specific functions are available.
- SAP Business Warehouse for the support of reporting and analysis.

4 Sales Forecasting / Demand Planning

4.1 Survey results

The implementation of a demand planning process that delivers accurate forecasts is a major challenge. Some of the obstacles organizations encounter in the area of forecasting are:

- inaccurate planning of promotions and marketing campaigns
- lack of measurement and evaluation of the forecast accuracy
- separate forecast processes with different tools
- lack of commitment from Sales & Marketing departments for forecasting as a business process

Most of the companies (5 out of 6) indicated they use a sales forecast as starting point for supply chain planning. The most occurring activities in the forecasting process are the internal collaboration with Sales and Marketing and the creation of annual budgets.

Sales and Account managers in general are focused on their budgets and have little affection with forecasting. They state: 'It's our task to sell and your task to deliver'. Some companies give bonuses to sales people related to their forecast accuracy.

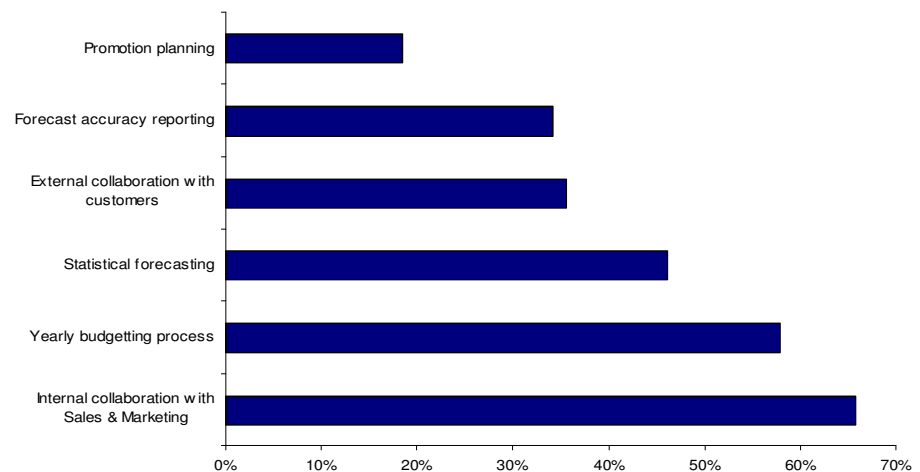


Figure 4. Overview of activities in the Sales Forecast process

When the results are plotted in the Maturity matrix for Sales forecasting, the conclusion is that 60 % of the companies have optimized their sales forecasting process internally. A smaller percentage of the participants is in the phase of external optimization by working together with customers on planning of promotions and product life cycles.

The majority of the participating companies (around 50%) has the following common characteristics in their demand planning: they use the sales forecast as input for supply planning, they have set concrete goals for the forecast accuracy and have a formal sign-off of the forecast during S&OP meetings. About 60% of the participants uses the forecast as the basis for the financial planning of turnover and profits. This

implies that in many companies the financial departments execute their own planning processes with no relationship to the forecast used for supply chain planning.

There is a strong relationship between the maturity of the forecasting process of a company and the satisfaction of the Supply Chain manager with the process itself. Companies in the upper middle segment (turnover between 400 and 1000 million Euro) rank best both in maturity as well as in satisfaction.

4.2 Present IT-solutions

The support from SAP functionality to the sales forecasting process can be mySAP ERP (Materials Forecast and Demand Management modules), mySAP SCM APO Demand Planning and mySAP CRM. In companies with a turnover until 200 million MS-Excel is often used next to SAP. This implies that results from one system often have to be copied to another. Not surprisingly, one of the most addressed improvement opportunities in the area of demand planning is the reduction of double data entry in different applications.

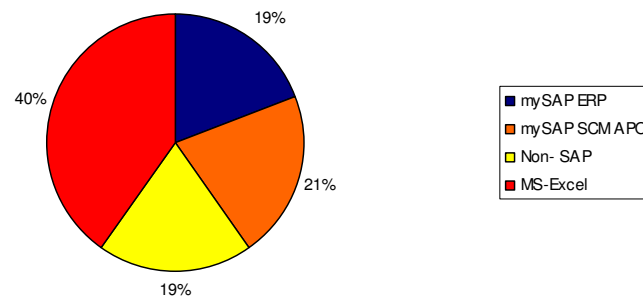


Figure 5. IT-solutions for sales forecasting

The results of the comparison between mySAP ERP and mySAP SCM APO on criteria of flexibility, functionality and user-friendliness show a clear favorable score for APO (see figure 6).

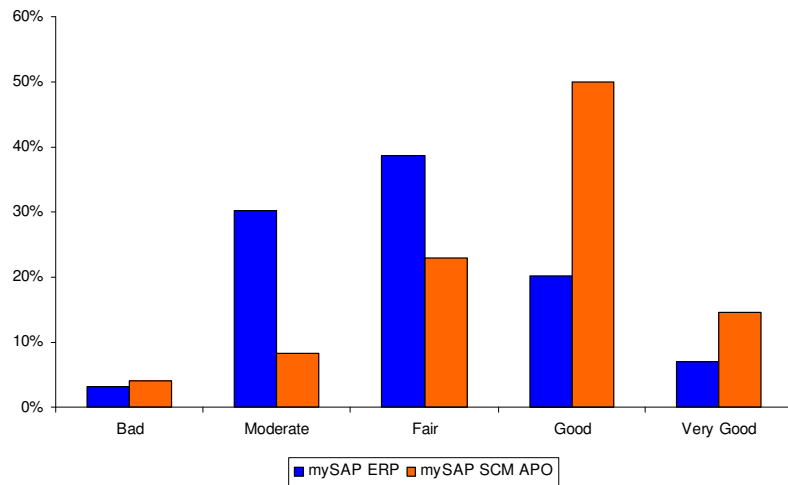


Figure 6. Comparison of mySAP ERP and mySAP SCM APO with regard to flexibility, functionality and user-friendliness

4.3 Improvement areas

In the sales forecasting process, many opportunities for improvement are identified by the Supply Chain managers:

- improvement of the link between the logistic and financial planning;
- better reporting and analysis tools;
- less manual retyping of data between applications;
- flexibility to perform forecasts on different levels;
- usage of statistical forecasting models.

4.4 Conclusions

For many companies sales forecasting is a well-known process. However the design of the process itself varies considerably between the different organizations. The survey shows that Supply Chain managers are convinced forecasting and managing the demand has a great influence on the logistical performance of a company. Better demand visibility and higher forecast accuracy will lower (safety) stocks levels and improve service levels.

What can be learned from the mature companies as best practices for sales forecasting:

- implement a standardized forecasting process;
- integrate 'islands of planning' and strive for a 'one figure forecast';
- support the demand planning process within one IT-system.

5 Supply planning

5.1 Survey results

The supply planning process converts the results of the forecast (Planned Independent Requirements) to requirements for internal production and external procurement. A distinction can be made between long term- and short term supply planning. The long term supply planning plans materials and capacities for the most important products of a company and creates a Master Production Schedule. On a tactical level, a Sales and Operations Planning process can be in place. For the shorter horizon, the Materials Requirements Planning is used which creates planned orders and purchase proposals based on existing production and purchase orders, master production schedule and inventory parameters.

More than 80 % of the companies have specific goals for service and inventory levels; most of these companies also report on these KPI's. There are large differences in results between the industry sectors: in the Wholesale and Service industry all companies use reports on the KPI's. In the sectors of Pharma, Industrial Machinery and Metal only one-third of the companies actually use these KPI's.

An automated availability check (ATP) is used at sales order entry in 70% of the companies. Supply network planning, in which more entities in a supply chain (plants, DC's) are planned in an integrated process is executed at 30 % of the companies, mainly in the wholesale and service parts sectors.

Overall, the satisfaction with the planning process is good to sufficient (related to efficiency and effectiveness) as shown in figure 7. Three out of ten Supply Chain managers are not really satisfied with the process; the main improvement opportunity that this group identifies is less manual retyping of data in different applications.

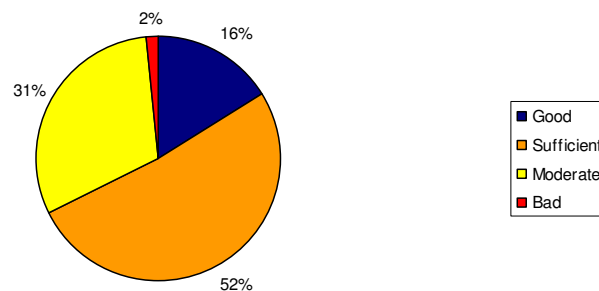


Figure 7. Satisfaction on the supply planning process

If we compare the results with the stages of the Supply Chain Matrix, most companies are in the phase of internal optimization of the supply planning process. Main activities are the creation of a long and mid-term planning with the goal to get control over the (internal) capacity and the supply of critical materials and services. Some companies are making the first steps in sharing information in the network and optimization across plant and company borders, but this is not yet generally applied as best practice.

Some companies have implemented SAP five to ten years ago. Although technical upgrades have been done, new functionality is not analyzed or implemented. In changing business environments, users often look for workarounds, unknown of the availability of the functionality in the SAP system

5.2 Present IT-solutions

One of the eye-catching results is that for long and mid-term supply planning processes, different IT applications are used next to each other. SAP ERP functionality of LTP (long term planning), S&OP or MPS/MRP are used together with MS-Excel. Companies that use the APO Supply Network Planning module for supply planning do not use any other applications besides the SAP BW for reporting. Exception reporting in SAP which supports the identification of bottlenecks in supply and capacity are used by 50% of the companies.

5.3 Improvement areas

Many opportunities for improvement are identified by the Supply Chain managers; the most important opportunities are better reporting and analysis support and improved visibility in the supply chain. The complete list is shown in figure 8 below. The improvement opportunities are not necessarily related to missing functionality in SAP; not all functions are implemented in all participating companies.

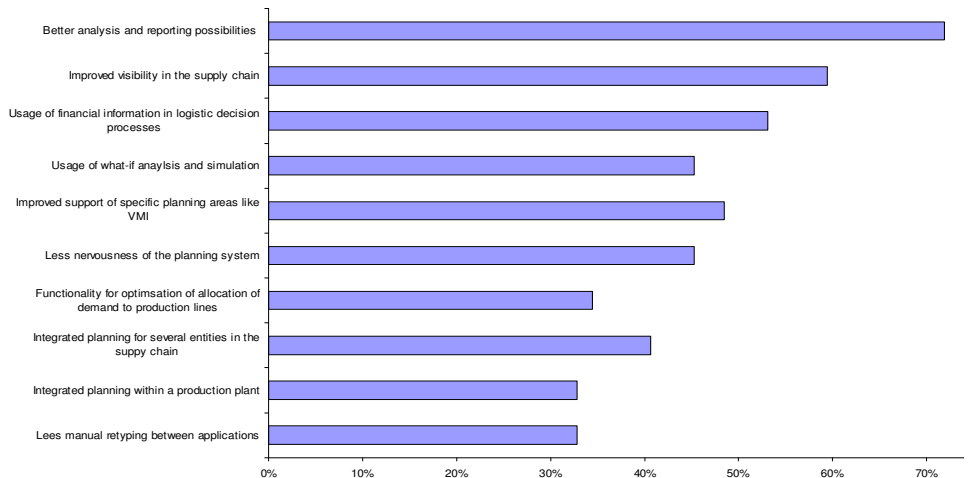


Figure 8. Which improvement opportunities are applicable in the supply planning process ?

5.4 Conclusions

Supply planning is the continuous process of matching demand with supply. Many companies are in pursuit for fast, accurate and easy to understand information on changing customer demands, backorders, production back-log, inventory levels and KPI's. This information must not only be based on the individual locations, but preferably based on the total supply network. The demand for network planning functionality is increasing; implementation of this functionality makes management of the total supply chain possible.

Very mature companies in the supply planning process have the following common characteristics:

- fully integrated IT-system for capacity and material requirements planning;

- centralization of the supply planning activities and collaboration with suppliers;
- well defined and clearly communicated KPI's on service- and stock levels.

6 Production Planning & Scheduling

6.1 Survey results

The production planning and scheduling process creates and optimizes a production plan based upon the MRP-generated planned orders, available materials and production capacity. The scheduling process aims at optimal loading of the available capacity based on set-up times, product characteristics and planned inventory levels.

All companies in the survey that have value adding activities are executing production planning and scheduling activities. Most important planning processes are sequence planning and finite capacity planning. In industry sectors where capacity is often a bottleneck (Chemical, Pharma, Consumer Products) a good sequence plan is essential. Measurement of the capacity utilization or the detailed Overall Equipment Effectiveness (OEE) is done in 60 % of the companies.

In half of the companies the availability check during sales order entry is not only done on materials, but also on capacity. In six out of ten companies a trade off is made between set-up costs and delivery performance. Conclusion is that many companies are on the right side of the maturity model: problem areas are dealt with and the focus is on internal optimization. The results of the survey for the different propositions on production planning are shown in figure 9.

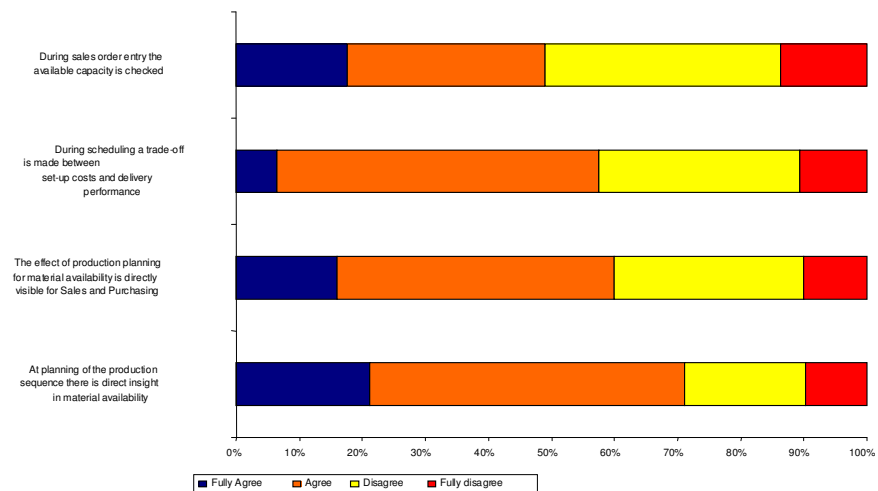


Figure 9. Propositions on production planning and scheduling

6.2 Present IT-solutions

In 50 % of the surveyed companies production planning and scheduling is done in mySAP ERP (the PP or PP-PI modules); only 10% of the companies use the APO module PP-DS or another specialized advanced planning tool for supporting this process.

In 30% of the companies MS-Excel is used as a tool. In this situation orders from SAP are downloaded in MS-Excel, where the planner makes a schedule and enters this schedule back into SAP. This can be a very error prone and time consuming process.

The ranking of mySAP ERP and APO PP-DS module shows that SAP APO is preferred with respect to functionality and ease of use for production scheduling (see figure 10):

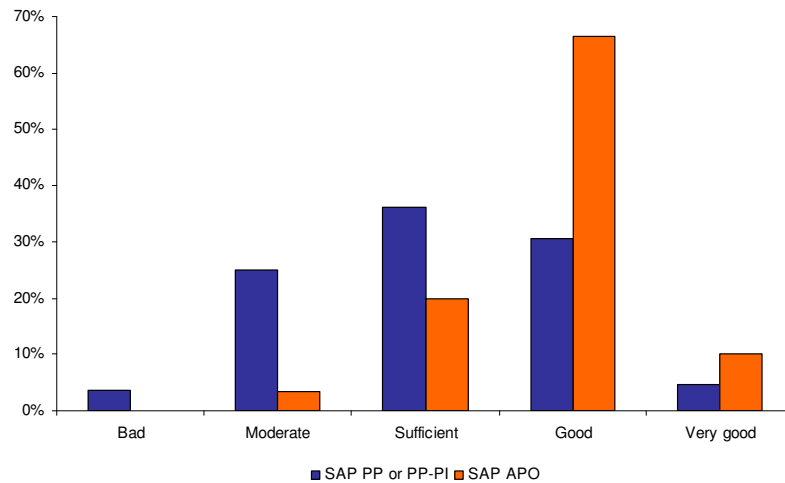


Figure 10. Ranking on functionality, flexibility and user-friendliness between SAP PP or PP-PI and SAP APO for production scheduling

6.3 Improvement areas

The most important opportunity for improvement with regard to IT-support for this process is the integrated material and capacity planning. This is standard functionality in APO. Also better decision support during the detailed scheduling process and real-time insight in the production progress and capable-to-promise functionality at sales order entry are often mentioned as improvement opportunities. The usage of an electronic planning board and simulation functionality are also on the list of the production planners.

In the survey, the participants were asked if they had any intentions to invest in IT-tools for the support of the scheduling process. Although lots of improvements were indicated, only half of the companies has plans for investments in IT in this area.

6.4 Conclusions and recommendations

Production planning and scheduling is an expertise where the decisions of a planner can have a large influence on the companies supply chain performance. Today in a lot of companies, much of the planning logic is still captured in separate tools or solely by the planner.

At companies which have a mature Production planning and scheduling process the survey shows:

- planning related information (routes, capacities, standard operating times, maintenance activities) is captured centrally in the IT system as much as possible;
- a consistent planning process in which information of all other supply chain processes is used is supported by a standard and integrated IT system.
- companies that focus on full capacity utilization, detail scheduling and reduction of set-ups have implemented APO PP/DS for support

7 Production control / Shop floor control

7.1 Results of the survey

The most operational part of a production site is the management and follow-up of the activities in the factory. The production plan is used for the release of the orders to the shop floor. The following main activities in this process are: the supply of raw materials, the recording of actuals, quality controls, goods receipt of the (semi-)finished materials and reporting. The more detailed actual data on man and machine hours and materials are reported, the better the analysis on efficiency and effectiveness of production.

What meets the eye when we compare the activities on the shop floor is the large number of companies that perform quality controls, both as in-process inspections as well as inspection of the finished product. Tracking (of the supply of batches) and tracing (of the receipt of batches) is possible in three out of four companies. Not surprisingly this activity is available in most of the companies in the sectors Chemical, Consumer products and Pharma. More than half of the companies register actuals for machine/man hours and materials on production activities and are therefore able to analyze variances and efficiency in production. Integration with maintenance activities on resources or machines is only implemented in one out of three companies.

Comparison of the results of the survey for production control with the phases in the Maturity Matrix shows that many companies are in the phase of internal optimization. Most opportunities for improvement are in the integration of the maintenance activities with production and the pursuit of a paperless production process. The strongly regulated production process in the Pharma sector becomes clear when maturity, SAP usage and satisfaction are compared for the different industry sectors (see figure 11).

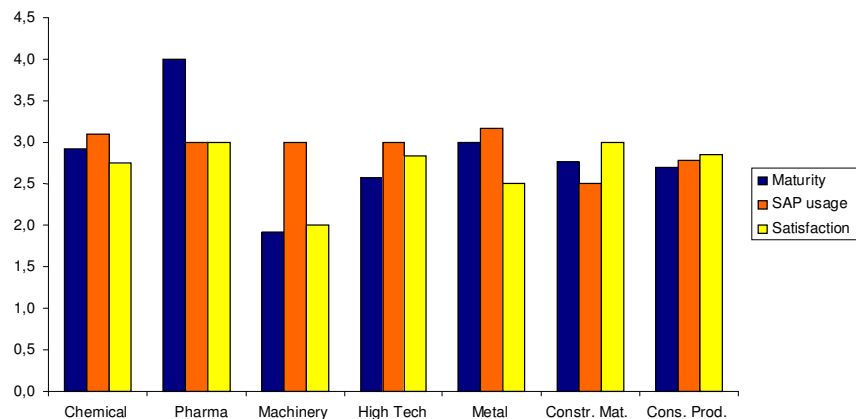


Figure 11. Score on maturity, SAP usage and satisfaction for the Production Control process across industry sectors

7.2 Present IT-solutions

For the support of the production control process the modules PP (production planning) and PP-PI (production planning for process industries) are used; in only 5% of the companies other applications are used. In a quarter of the companies interfaces have been developed between SAP and the Manufacturing Execution System; mainly in High Tech, Chemical and Consumer products sectors.

The restrictions and laws that have been issued in the last decennium have created many requirements for tracking and tracing. Pharma and Consumer products industries were obliged by strict legislation to have compliancy and a full traceability in their production. In mySAP ERP the QM and batch information cockpit functions support these tracking and tracing requirements.

The most implemented solution for quality control is the Quality management module of SAP with around 35% of the companies using this functionality. Other IT-solutions for quality control are the use of a custom-made application (20%) or the MES-system (15%). Only 8% of the companies use a separate Laboratory Information Management System and have developed interfaces to integrate this system with the SAP-system.

7.3 Improvement areas

Also in production control the need for better analysis and reporting tools is felt in two of the three companies. This can be explained by the survey result which shows that not all companies measure capacity usage (only 60%), WIP (47%) or operational efficiency (44%). More than half of the participants have expressed the need for better and more flexible transactions for recording of actual data (see figure 12).

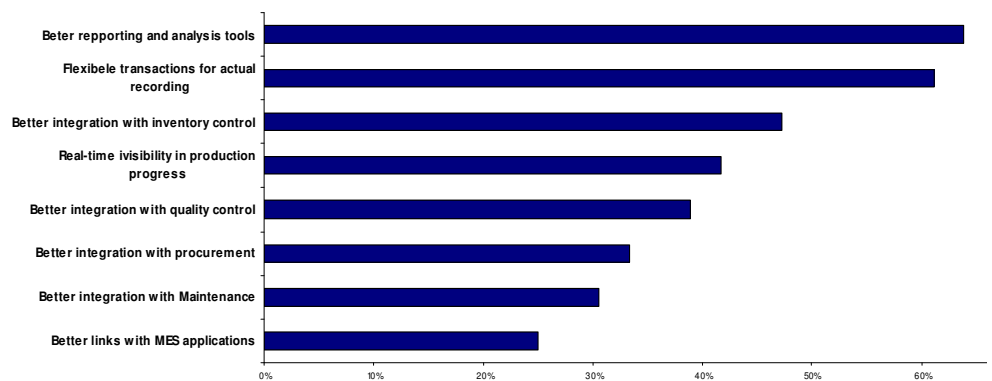


Figure 12. Opportunities for improvement for the Production Control process

7.4 Conclusions

The majority of the companies express their satisfaction with their production control as good to sufficient (related to efficiency and effectiveness). Some opportunities for improvement are:

- integration of production control with maintenance;
- usage of SAP BW for insight in production performance and uniform, standardized reports;

- more automated recording of production actuals or the implementation of flexible transaction for manual recording of actuals.

8 Logistics execution / Warehouse management

8.1 Results of the survey

In the logistics execution process the inbound- and outbound goods flow is registered, checked and provided with the right documents, packaging and labels. Stock movements related to production activities, like supply of raw materials and receipt of (semi-) finished materials from the production site are also part of this process. During the last years a lot of complexity has been added: customs regulations, repacking, customer specific packaging, extra guiding documents and transport registration are often new activities. With the use of barcoding, RF scanning and more recently RFID, new functionality has been added to the IT-applications in a warehouse. In logistics execution many managers have cost reduction, efficiency and optimization of the goods flow on their agenda. However, a very efficient warehouse does not automatically mean an excellent supply chain management. If too much focus is put on the execution, activities like demand and supply planning do not get the right attention.

It appears from the survey that nearly all companies execute quality inspection on inbound materials in the daily logistics execution. Another specific result is the high number of companies that have client or order specific packaging processes, mostly due to legislation, specific packaging, labels and documents. Other main activities are the registration of inbound and outbound transports, repacking of incoming goods before placement in the warehouse and the gathering and registration of data for tracking and tracing purposes.

A general conclusion in this survey is the fact that there is a strong positive relation between the supply chain maturity and the satisfaction on the supply chain processes. For the Logistics execution process, this statement is also related to the turnover of the companies: the larger the company, the more mature the logistics execution processes.

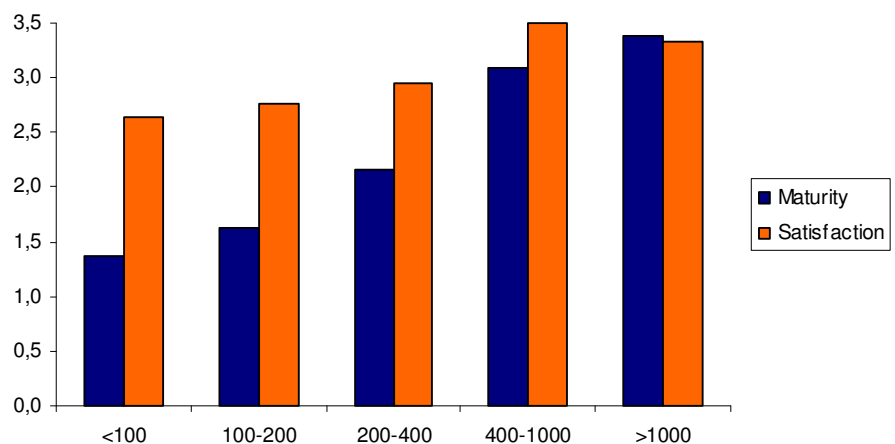


Figure 13. Maturity and satisfaction on logistics execution process related to turnover in millions

8.2 Present IT-solutions

About 30% of the companies uses SAP LES for warehouse management. The Logistics Execution System (LES) can be applied if a company has requirements for dynamic stock locations, barcoding, RF or optimization of warehouse activities. LES has been extended with new functionality the last years and can nowadays easily compete against best-of-breed WMS-systems. Not all companies have these requirements and use the MM and SD modules of SAP as their IT solution (26%) or custom-made functionality within SAP (32%). For tracking and tracing, transport planning, value added services and customs declarations some companies still use other SAP functions outside LES because these functions are added to LES only recently.

8.3 Improvement areas

The ranking of the different improvement opportunities are shown in figure 14 (see below). It is no news that in logistics execution processes a need exists for better support of reporting, analysis and planning. For improvement in planning of workload and warehouse activities there is an important precondition: it requires information of suppliers and many internal departments. The usage of barcodes and RF scanning is already common; many companies which do not apply this yet consider the use of these tools as an important opportunity.

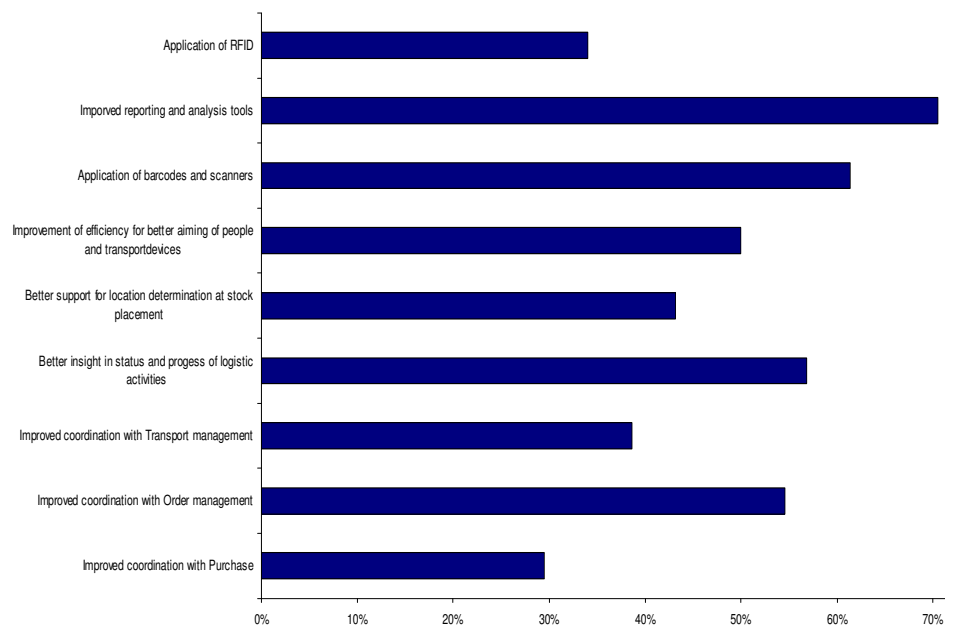


Figure 14. Improvement areas for IT-support in logistics execution

8.4 Conclusions

The logistic performance of many companies is measured on service level which often includes the ability to meet specific requirements from customers or from legislation in an effective way. Typing export documents in MS-Word again and again is not deemed as best practice.

For companies that score high on maturity have the following common best practices:

- planning of warehouse activities is done based on information of purchasing, suppliers, production and the order desks;
- usage of an integrated IT application (like SAP LES) for all activities in the warehouse.

9 Supply Chain Performance management

9.1 Results of the survey

Every supply chain process has its own key performance indicators (KPI's) for insight into the supply chain performance. The survey shows that all companies have one or more KPI's to measure and monitor processes; delivery performance, service levels and inventory levels are the most used indicators. For the supply chain processes in this survey, the participants were asked to list the most important KPI's:

- Sales forecasting : forecast accuracy (the reliability of the demand planning);
- Supply planning : delivery performance, service level and stock levels;
- Production control and Shop floor control : capacity utilization and Work-in-Process. More mature companies measure the Operational Equipment Effectiveness, a combination of equipment availability, quality of the output and efficiency;
- Logistics execution: the relation between the workload in a warehouse and the actual expenses for the logistics execution.

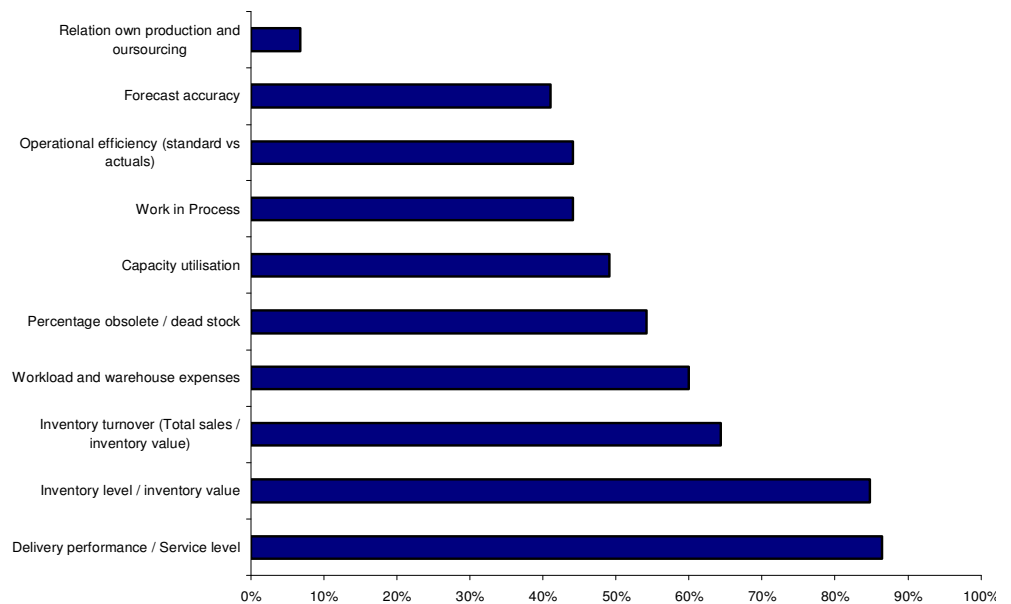


Figure 15. The most important KPI's for Supply Chain Management

9.2 Present IT-support

In all process areas of this survey, better reporting and analysis were high on the list of possible improvements. In mySAP ERP the Logistics Information System (LIS) is available; seven out of ten companies use these reports. SAP recognized years ago the need for improved reporting and new functionality was developed in the SAP Business Warehouse. For many indicators, the basis for the supply chain related reports in BW

has been the definitions of the SCOR (Supply Chain Operations Reference) model. This model is developed by the Supply Chain Council, an global organization in which many companies participate to set standards for supply chain processes, modeling of supply chains and definitions of performance indicators.

These definitions are required to have a clear understanding of the performance of a company. For example: if you ask about delivery performance, a lot of possible ways to measure this KPI are possible (based on customer request date, first available date or last determined date by the order department).

The KPI's as defined in the SAP BW solution provide a uniform, standardized and accessible reporting, which can be the basis for a Balanced Scorecard.

An analysis of the maturity and usage of SAP as support for supply chain reporting shows that in sectors Chemical, Construction Materials and Wholesales SAP BW is used most often. The High tech sector ranks best on maturity.

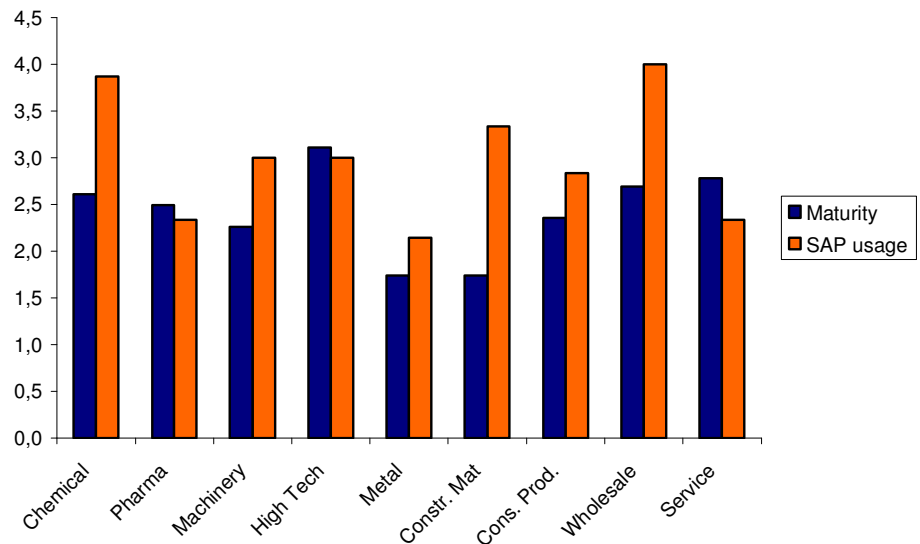


Figure 16. Maturity and SAP usage for Supply Chain reporting per sector

9.3 Conclusions and recommendations

For a professional organization of the supply chain within a company it is required that uniform KPI's are measured across all departments. Statements like 'our stocks are too high' or 'customers complain on our delivery performance' can be based upon quantitative analyses. A set of 10 to 15 KPI's is sufficient to get insight in the logistic performance of a company. The combined usage of LIS and BW reports are the best practices that are applied at companies that score best in maturity. The SCOR model can be used for the definition of the KPI's.



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