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YEARS AHEAD

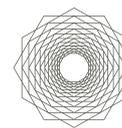


BUILDING A COMPETITIVE DEMAND PLANNING ORGANIZATION

AN EYEON WHITE PAPER

APRIL 2016

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1 INTRODUCTION: PLANNING DEMAND IN A DYNAMIC WORLD

For ages mankind has been fascinated by exploring ways to predict the future. Various crystal ball and other spiritual methods have been used to determine how the future would look like. Planning and forecasting are also at the very heart of the business processes of most industrial companies involving a variety of functional areas such as marketing and sales, finance and logistics. Forecasting and planning has been recognized by practitioners and academics as a key element in supply chain management. Companies are spending considerable time and resources improving the quality of the forecasting and planning processes and hence the quality of the output.

Whilst the basic principles of demand management remain unchanged today, rapidly changing market conditions require an improved skill set and correct organizational embedding to keep up to par.

HOW TO ORGANIZE?

Markets are becoming more unpredictable due to short product life cycles and a high rate of technological renewal, where new products frequently enter the market. Strong price erosion, changing distribution channels, shifting consumer behavior drives the need for promotions, tenders and spot deals which are also increasing demand variability and demand uncertainty. On the other side, IT applications offer more possibilities to gain insights into customer behavior and sense demand proactively (market developments, customer preferences) using social media like twitter, Facebook and Google. The demand planner plays a pivotal role in collecting information/data, challenging all inputs and processing this into a high quality forecast.

“Business requirements are changing. The rhythms and cycles of business have increased. Organizations want better decisions faster. As a result, organizations struggle to match the cadence of planning to the required cadence of the business.”

Lora Cecere – The Supply Chain Shaman - June 15, 2015

The key question is how to organize your demand planning activities to support your business objectives in the best way possible. It’s not just about achieving high forecast accuracy; it’s also about creating ownership and clear responsibility, about collecting, processing and sharing relevant demand information in an effective, efficient and fast way throughout the organization.

LEVEL OF CENTRALIZATION & REPORTING LINES

This white paper starts describing the forecasting and demand planning activities. In the subsequent section we describe two typical planning functions: the analyst or statistical forecaster and the demand manager. From an organizational perspective two choices have to be made: (1) the level of centralization and (2) the reporting line of the demand planning department.

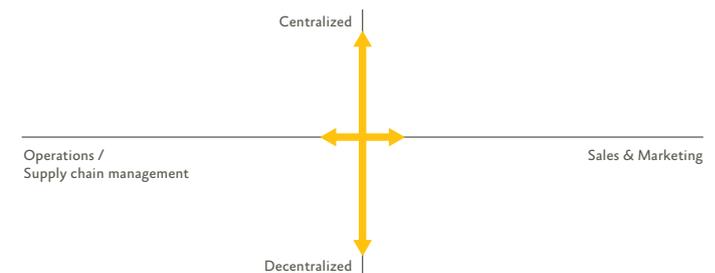
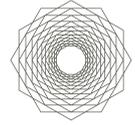


Figure 1: Demand planning organizational choices.

The white paper is concluded by providing insight into 9 design rules for building a competitive demand planning organization.

2 FORECASTING AND DEMAND PLANNING: SENSE AND RESPOND



The demand planner plays an essential role in supply chain management. The requirements of that position are driven by the setting-up of this process. In this section we will briefly introduce the demand management process and the key demand planning related activities.

DEMAND MANAGEMENT BUILDING BLOCKS

The demand management cycle includes the (1) internal and external collaboration to receive all relevant information and deploy actions (data collection), (2) generation of a forecast and plan, (3) alerting management to spot anomalies and (4) demand shaping to close the gap between realization and ambition. It is a continuous process in which the 4 sub-processes are mutually reinforcing (figure 2).

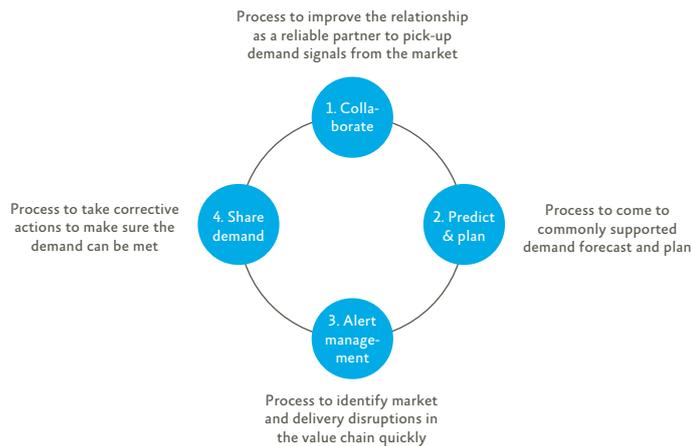


Figure 2: The 4-step demand management cycle.

Collaboration

It has to be arranged, in close cooperation with selected key customers, that a high quality demand signal is feeding the demand management process. This demand signal covers not just the forecast, but also the actual realization. The concept of information sharing over different stages of the supply chain has received quite some attention in academic and professional journals as 'collaborative planning'.

Research from Gartner in 2010 showed that collaboration and gathering demand insights from customers presents the largest gap between importance (74% think it is important) and effectiveness (44% think they are effective at it).

A measure to identify the level of collaboration in forecasting and planning is the collaboration index (Simatupang and Sridharan, 2005). This measure identifies the extent to which a company is collaborating with its partners in forecasting and planning. The index incorporates three important dimensions. The first dimension is related to information sharing and represents the level to which information is exchanged among supply chain partners. This information sharing can be done by several means, such as Point of Sales (POS) data, production plans, promotion plans, inventory levels or product roadmaps. Decision synchronization as a second dimension represents the level to which the supply chain partners mutually take planning decisions. Important choices are production start-up quantities (de Kok et al., 2005), material ordering quantities, priority settings and allocation of capacity alignment. The third aspect, incentive alignment, indicates the level to which companies have agreements on sharing the costs and benefits of the collaborative relationship. The way the negative and positive gains are fairly shared among the partners is a critical success factor for the success of the collaboration.

Forecasting and planning

In this step of the process the organization develops a critical aspect, namely, the forecast. The forecast provides an estimation of future demand volumes and values. The organization needs to determine a suitable forecasting approach including aggregation levels (SKU or product group, Sales Organization or Key account), time frames (frequency and time bucket), data elements (quantities, sales prices or margins.)

A proper forecasting strategy requires a deep understanding of the underlying demand characteristics. It is generally seen as advantageous to distinguish a limited number of categories based on a number of specific criteria (van Kampen et. Al., 2012). To mitigate poor forecasting performance due to a mixed portfolio in terms of sales pattern characteristics, Herrin (2007) and Milliken (2010) suggest a segmented forecasting approach. Differences in product life cycle, annual sales volumes, demand variability or events leading to demand spikes determine the forecasting policy. In order to create a classification, two simple questions need to be answered: how many classes are used and how are the borders between the classes defined?

At the first level, products are segmented according to (1) the phase in the product life cycle and (2) the distinction between regular and one-off demand spikes such as promotions or tenders.

The position of the product on the product life cycle is one of the decisive factors for the application of a specific forecasting approach. Forecasting is especially difficult when it concerns

2 FORECASTING AND DEMAND PLANNING: SENSE AND RESPOND

the introduction of new products and the phasing out of 'old' products. New products (NPI), mature products and end-of-life (EOL) products all require a specific approach. Sales actions such as promotions or tenders aim to create a substantial, short-term sales increase. These often one-off actions influence sales patterns and require a dedicated approach. The different forecast categories are represented in figure 3.

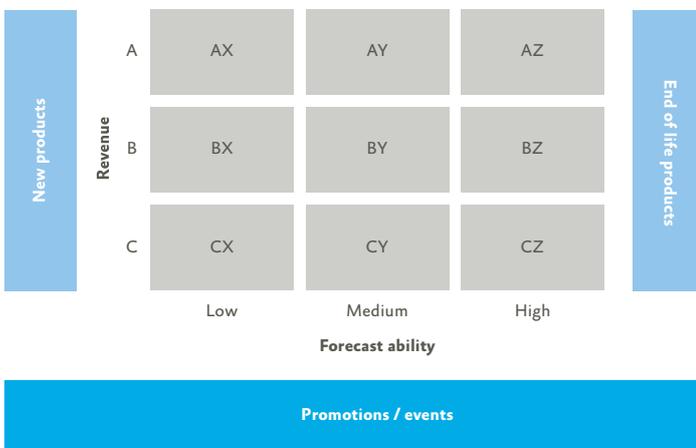


Figure 3: Forecasting strategy.

Alert Management

Alert Management is the process focused on the identification of changes that disturb the value chain. This process uses (advanced) analytics to support the selection, preparation and transformation of both structured and unstructured data in support of demand and supply synchronization. This includes identification of data anomalies for demand volatility reduction. A fast communication with internal and external partners in the distribution-channel-mismatches between forecasts and actuals allows companies to close the gap between ambition and realization.

Demand shaping

An organization's ability to reach sales projections while reducing costs and maximizing profits is dependent on the interaction between alert management and demand-shaping activities.

Demand shaping uses all available information for developing an optimized, balanced demand and supply plan that meets profitability targets and achieves customer satisfaction metrics. Demand shaping initiates actions to close the gap between financial and strategic ambitions, supply chain opportunities and actual sales. This process takes a proactive approach with regular alignment between all relevant business functions such as Sales, Marketing, Finance and Supply Chain.

Basically, every company has a number of tools to influence sales, including price (for example in the case of standard products), promotions (for consumer products), or by changing the product composition (in machine building). Whatever policy is applied, it requires a synchronized approach!

"Let's think of demand shaping like this: It is a process of ongoing negotiation; it is a perpetual conversation and it is not about what individual business leaders want and think they need. It is about realizing the company's most valuable and achievable business opportunities."

Jeanne W. Ross, director of CISR at the CIO Symposium in Cambridge, 2015.

KEY ACTIVITIES IN DEMAND PLANNING

The highly visible demand planning function interacts and leads at several points in the process. From generating the statistical forecast to incorporating the views of marketing, sales and finance in the enrichment process. Then there's the necessity of reaching outside company walls to, to ensure that all parties are in agreement about what the demand forecast should be. Demand planning activities support the 4 steps including:

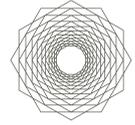
Collaborate:

- Assembling and analysing all data pertinent to creating the sales forecast (historical sales, market trends, seasonality, promotions, and eventually tier 1 account POS and inventory levels).
- Interacting with sales, marketing, and customer finance to understand demand forecast drivers.
- Utilizing a collaborative and consensus approach by working with Sales, Marketing and Customer Finance to obtain and ensure that current and accurate information is used for demand forecasts.

Predict & plan:

- Reviewing historical sales trends, researching demand drivers, preparing forecast data, developing statistical forecast models, and evaluating forecast results.
- Continuously improving forecasting techniques, method, and approach.
- Relating and measuring the impact of forecast accuracy.
- Conducting current and future forecasting analysis, insuring forecasting processes and methods are followed.
- Making recommended adjustments to forecast targets based on changes in demand and market trends.

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Alert management:

- Leading forecast and inventory planning meetings with Marketing Managers, reviewing recommended sales forecasts and inventory goals (emphasis on brand transitions, new product introduction, and promotions).
- Monitoring SKU levels and recommend SKU rationalization initiatives in the future.
- Providing input to the Supply Planning organization in developing inventory strategies on existing items, new products, and product phase-outs.

Shape demand:

- Closely coordinating and communicating customer action plans with supply planning.
- Prepare & support demand scenario analysis as input for demand shaping actions.

Generic:

- Maintaining documentation and standard operating procedures for demand planning processes and systems.
- Using and maintaining the Demand Planning software as the primary forecasting system tool.

Not all activities have to be performed by one demand planner and can be grouped in different functions. In the next section we will introduce two basic types of demand planning functions: (1) the forecast analyst and the (2) demand planner.

The demand planner: a man of all trades!

“Demand planners are kind of like weather forecasters -- they rarely get credit for doing their job correctly, and they're only noticed when they get it wrong. Nevertheless, it's vitally important that they get it right, or else severe -- and potentially disastrous -- supply chain glitches can occur.”

Dave Blanchart – Industry week – October 8, 2008

In generic terms we see two different sets of requirements. First, the analytical skill – based on past performance and some of the known factors affecting sales that is commonly known as the baseline forecast. This analytical planning role requires analytical expertise and planning knowledge that generally resides in the planning department within the supply chain department. Staff is often hired as demand analyst, forecast analyst or statistical forecaster. The key skills evolve around mathematical and econometric capabilities. This function is often referred to as forecast analyst, demand analyst of statistical forecaster.

The second skill set is actually the enrichment of the forecast: a fine-tuning of analysis and calculation including market knowledge on events, tenders, promotion plans and sell out information from customers that lead to shifts in demand plans and forecast patterns. Staff is hired as demand manager or demand planner. An EyeOn Benchmark (Aertsen et al 2010) has researched the required skill. The most important skill is to be able to be critical about the forecast information received and actively challenge the number(s) that the various sources of information supply. Next to that it is important to have a good business knowledge and have excellent communication skills. Figure 2 also shows that the most important skills are related to the behavior of a person, whereas analytical skills scores relatively low.

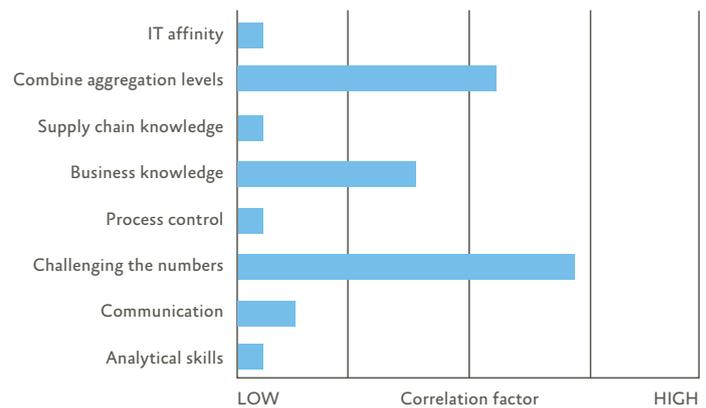


Figure 4: Demand planner skill set.

The key objective and required capabilities of the demand analyst and demand planner are summarized in table 1.

	Forecast Analyst	Demand Planner
Key objective	<ul style="list-style-type: none"> • Generate statistical forecast based on historical demand and other available data sources like Facebook, twitter, google or Point-of-Sales information. 	<ul style="list-style-type: none"> • Collect information and collaborate with other functions like Marketing and Sales, Finance and Operations to develop a final agreed demand plan.
Required capabilities	<ul style="list-style-type: none"> • Analytical skills and conceptual thinking, experience with structured problem solving • Managing large data sets 	<ul style="list-style-type: none"> • Challenge numbers at different aggregation levels • Business / market knowledge • Communication skills

Table 1: Key capabilities.

3 BUILDING A DEMAND PLANNING ORGANIZATION

The question on structuring the demand planning organization ultimately comes down to two major choices:

1. **Central versus decentral location of activities and responsibilities?**
2. **Is demand planning reporting into supply chain/operations or sales?**

In this section some considerations influencing these decisions are shared.

CENTRAL VERSUS DECENTRAL

One of the key questions in organizing the demand planning activities is which activities have to be performed de-centrally in a sales organization and which activities can be performed centrally in a region or even globally. Companies are struggling with the questions where to allocate which tasks. Research (Gartner, 2012) show three distinct organization models:

1. **Global centralized demand planning.** The demand planning function is responsible for the global demand plan. The majority of forecasting activities like the base line and forecast enrichment is executed by the central team. Managers and employees lower in the chain of command (local sales organization) are limited in the decision-making processes and can rarely change the demand plans.
2. **Regional demand planning.** The demand planning function is responsible for the demand plan for a specific region.
3. **Decentralized planning by market or brand.** Each country or local market has its own demand planning group. The responsibility for the final agreed demand plan and the related demand shaping activities is within the market.

Besides these archetypes organizations decide for a hybrid model:

4. **Hybrid form** where some functions like the generation of a statistical forecast is centralized and the enrichment part by the demand planner is decentralized to the local sales entity.

The benefits of a more centralized organizational structure are clear cut and to the point because that's exactly how the model is meant to be. There is little room for error which means the basic processes and more detailed operations are in place and economies of scale can be obtained. Centralized planning organizations can be extremely efficient. Expertise and execution are in close proximity to the business owners that define a company's mission, vision, strategy and set objectives for managers and employees to follow. Central demand planning eases reduction of judgment bias by using data, analytics expertise. The truth, however, is that when business is volatile, but driven by customer changes, downstream planning adds valuable judgmental insights to the demand plan.

The benefits of a decentralized organizational structure are in the array of increased flexibility and reaction speed. There is room for innovation and individual thought processes that could benefit the company as a whole or even one simple task. Decentralized planning organizations utilize individuals with a variety of expertise and knowledge for running various business operations.

Considerations for centralization

But what is the best solution for your company? In the remainder of this section we elaborate on the considerations and preconditions to centralize or decentralize a function.

A first critical element is **information quality**. Information quality determines the level of centralization. (1) The technology to collect, store and use tacit information like orders, point-of-sales data at a central point and (2) the level to which non-tacit knowledge like the opening and closing of retail outlets, competitive behavior on, for example price rebates, can be collected and stored centrally.

The more tacit and non-tacit knowledge can be stored centrally the higher the likelihood that this function will be centralized. As a result of this concept we see hybrid forms emerging where statistical forecasting is highly centralized using corporate tools and the enrichment of the base line forecast is executed in the local sales organization.

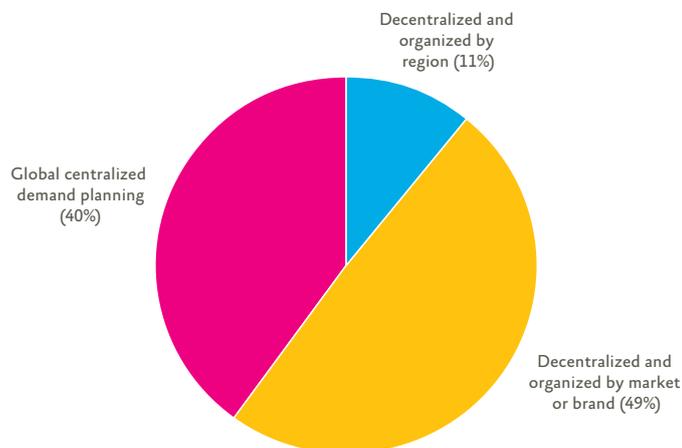
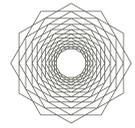


Figure 5: Centralization of demand planning function (Gartner, 2012).

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	Central	Local
Collaboration (collecting data)	<ul style="list-style-type: none"> Actual customer information can be obtained centrally due to automation and highly centralized customers. 	<ul style="list-style-type: none"> High level of uncertainty. Fast-changing environments require organic structures. A lot of tacit knowledge has to be obtained from sales staff.
Forecast generation	<ul style="list-style-type: none"> Those activities where local knowledge is not required (e.g. statistics for base line, regional promotions). One common IT tool is used. A push approach is used for Sales Planning. Products planned centrally and pushed to the market for sales. 	<ul style="list-style-type: none"> Those activities requiring quite some local knowledge (local product launches, local-for-local products, local promotions and tenders) A pull approach is used for Sales Planning. The market determines what product will be sold and in which quantity.
Alerting	<ul style="list-style-type: none"> Data is available in central system. 	<ul style="list-style-type: none"> Data on deviations is only available locally.
Demand shaping	<ul style="list-style-type: none"> Possibility to shape demand by regional or global actions with international Key Accounts. 	<ul style="list-style-type: none"> Direct relation to local sales managers is required to steer demand and discuss and agree possible actions.

Table 2: Information quality.

Key in executing a high-quality demand management process is the **availability of specialized knowledge**. With the growth of the available data, like point of sales or social media, it has become even more important to find highly skilled statisticians to prepare the best possible forecast (HBR, 2012). Talent attraction and retention are especially difficult when this knowledge is not important for your career within a company. Consider a company with complex demand-management challenges. Since it is rare for a statistician to have a clear career path to a senior executive position in this hypothetical company, a highly-trained individual is less likely to apply for a job with this company. This person will be more attracted by a company in which statisticians are valued as revenue generators. In smaller-sized firms, the amount of work available for this specialist is simply too low and he will get bored

and leave the company. A third-party forecast-services company is better suited to attract experts and to offer a challenging environment with a clear career path to retain these experts.

The more scarce specialized demand planning knowledge becomes the more likely that these activities will be centralized.

Size matters; in those cases where a demand planner is not fully occupied it can make sense to centralize the function in a (sub) region.

When economies of scale and therefore lower costs are the **key driver** for the design of the demand management process, this can be obtained by having the forecast performed by a central body. The forecast will be created by an expert using advanced statistical modelling techniques and using state-of-the-art tooling. Where responsiveness and flexibility are the main drivers it can be decided to put the demand planners close to the market.

In summary:

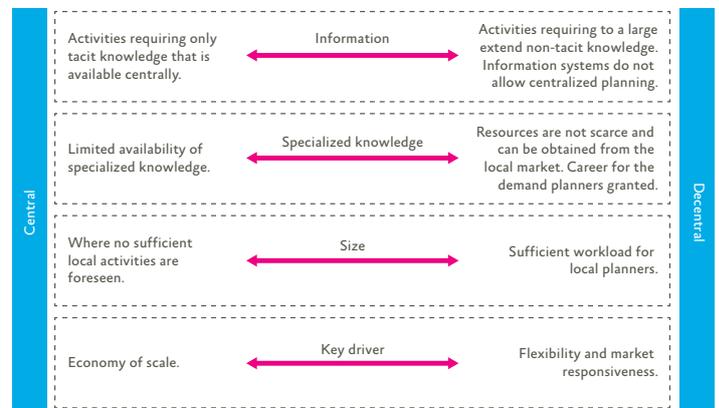


Figure 6: Considerations when deciding for centralizing the planning function.

Towards Centers of Excellence

The ultimate way of centralizing the demand planning function is the creation of a Demand Planning Center of Excellence. Today, many companies are considering to centralizing part of their supply-chain-management activities in a Center of Excellence. Statistical Forecasting and demand management activities often fall within the scope of such centralization, next to supply-chain network design and supply planning & inventory management.

A recent inventory by EyeOn in the High Tech, FMCG, Process and Life Science industry, asked companies to indicate to what extent they implemented (or considered setting up) a Center of Excellence for Forecasting and Demand Planning. Around 50% of the companies confirmed they have centralized part of the

3 BUILDING A DEMAND PLANNING ORGANIZATION

demand planning activity (or have concrete initiatives to move in this direction). The same research also listed the main business benefits companies expect to gain from organizing their demand planning function in a more centralized way (see also figure 6). Most companies expect that a Center of Excellence will support them in becoming more effective in making business decisions, due to:

- A simplified governance structure.
- Easier alignment of supply chain, financial and overall business goals.
- Process standardization.
- A more realistic demand plan (lower bias).
- Faster decision making in a faster changing world.

“Today organizations are eight times more likely to have a center of excellence than six years ago. However, the progress is slow. Most organizations are struggling with how to drive progress.”
 Research Supply Chain Insights LLC – May 2014

In general, Centers of Excellence can be built in multiple ways:

- Centrally, within the function
- As part of (x-functional) shared service centre
- Outsourced, to a specialized third-party service provider

The last option, outsourcing to a specialized third party, is a relatively new development. The decision to outsource a business activity is highly dependent on the criticality of that activity to the company (see figure 3). This also applies to knowledge-intensive processes, like forecasting and demand management. As a rule, companies do not outsource their core activity. However, enabling or supportive processes might be outsourced.

Recent research by Tilburg University and EyeOn (2015) assessed the business criticality of the forecasting and demand management process. It concluded that for many companies it is not seen as a core business process. Forecasting and demand management is classified as an ‘enabling’ or ‘supportive’ activity. The same research also explored why companies consider outsourcing part of their supply chain planning & forecasting activities and listed following main reasons:

1. Strategy to focus on core capabilities.
2. Realize cost reductions (FTE, Education, HR).
3. Create flexibility and scalability to increase responsiveness to market changes.
4. Get fast access to specific expertise & skills.
5. Build competitive advantage.
6. Drive Innovation and continuous business process improvements.

Especially the reason to get access to specific expertise & skills is growing in importance. Today companies already struggle to attract and maintain skilled demand planners. And this battle for talent is expected to become even fiercer in the coming years.

DEMAND PLANNER - PROFILE & SKILLS

Organizational choice also has an impact on the required skill set for the demand planner. Being a demand planner in a local sales organization or in a central role makes a difference. Understanding the differences is necessary in order to select the right candidates for the role and to be able to play to the strengths. What defines the different roles? The profiles mentioned here are archetypes described in a way that makes the distinction clear.

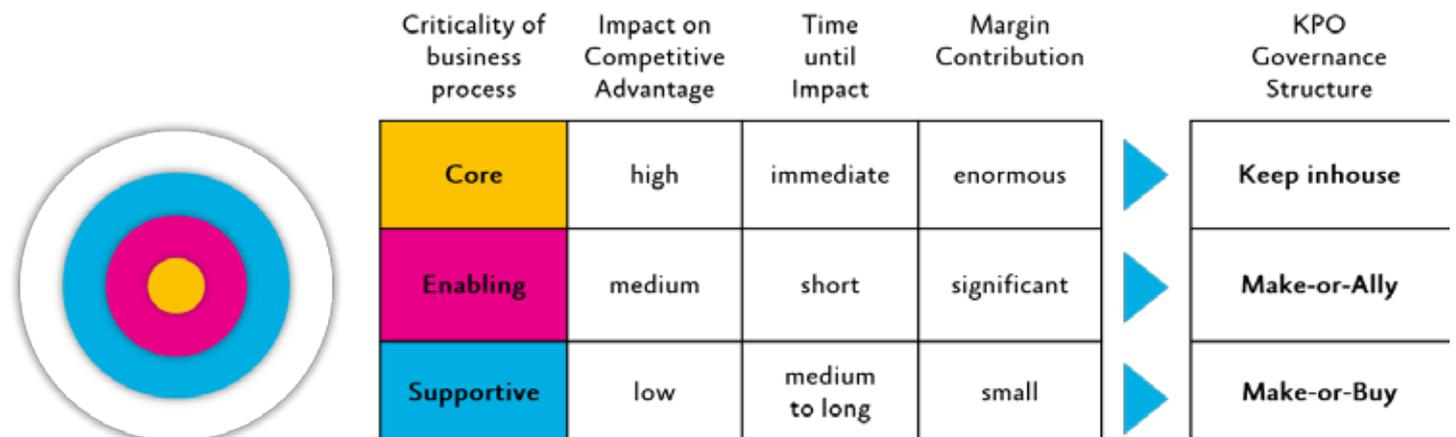
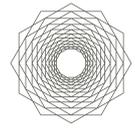


Figure 7: Outsourcing decisions.

3 BUILDING A DEMAND PLANNING ORGANIZATION



Central demand planner

A central demand planner is located in the headquarters, away from the daily sales hectic. It is a specialist role that requires limited business, product or market knowledge that is tacit or only available to those working closely with the customer, i.e. sales. The typical role includes tweaking the statistical baseline forecasts engines and managing the reporting of exceptions. The outcomes are handed over as a starting point to sales for review and judgmental input. After enrichment by sales, the central demand planner facilitates the demand review meetings by the individual sales organizations and challenges the numbers to ensure realism. The central demand planner consolidates all the sales forecasts in order to come to the one single, realistically achievable demand forecast. On an ad-hoc basis the central demand planner supports the global commercial teams in assessing business-strategic projects and or provides operational support. This might be, for example, during times of product scarcity when prioritization and allocation are required.

The ideal profile for a central demand planning role is young ambitious person with a higher-than-average affinity with data and analytics. However, first and foremost, he/she is able to communicate effectively; there is no way that a central demand planner can be effective, by purely dealing with statistics alone. Organizations with a central team are often larger and organizational charts are more complex, often a matrix. This requires awareness of political sensitivities and influencing skills. Is this a typical role for young potentials? Maybe! After some years of business experience, mainly to understand how to communicate effectively, they can be ideal candidates. Dealing with data and statistics is more natural to the younger generations. In terms of career path, it affords the possibility to see different parts of the business in a cross-functional environment: sales, marketing, supply chain, operations, and product management.

Local demand planner

A local demand planner is located in a local sales office, in the middle of the daily hectic. The role is often combined with a role in customer service / order desk or sales support. By the close proximity to account managers, sales representative and sometimes even in contact with the customers, the local demand planner knows the product, customers and markets well. His or her analytical skills stood out amongst the sales back-office team and were the reason of becoming the demand planner; "in the kingdom of the blind, the man with one eye is king". In many cases, the forecasting processes start with self-developed spreadsheets that include a kind of naïve statistical forecasting. Available customer forecasts (or sometimes even POS data) and customer information (e.g. listings and changes to that) are added to underpin the demand forecast. This forecast is discussed with

the account managers; the degree to which it is challenged is often limited. If the forecast drives availability planning and inventory ownership is not incentivized to the sales organization, it is in the common interest to ensure there is at least enough stock.

The typical local demand planner is seasoned in the profession, often with years of experience in the business. He or she is part of the local commercial organization and as such carrying a responsibility to serve their interest. This does not necessarily lead to the best forecasts.

In summary:

Local demand planner	Central Demand planner
Managing towards sales budgets / targets	Feeding S&OP for integral decisions
"One of the guys" for sales	"Outsider" for sales
Market/country specific	Cross market/country
Small organizational scope	Large organizational scope
Hierarchy	Matrix
Seasoned experience	Highly educated with ambition

Table 3: Local versus central demand planners.

SALES OR SUPPLY CHAIN, WHERE TO REPORT?

No matter where an organization fits the forecasting function in the organogram, there will be bias in forecasts and demand plans. Production staff tends to over-forecast because it results in fewer out-of-stock situations. But if production is evaluated on an inventory basis, they would tend to under-forecast. Sales staff has a tendency to under-forecast in organizations where sales incentive programs are tied to forecasts, but in general sales staff prefers to over-forecast to make sure products are available for timely delivery. For marketing people, it all depends on the specific situation. If the advertising budget is tied to sales and forecasts, they would prefer to over-forecast. Finance staff, in general, is risk avoiding and are conservative, but their mind-set may change when listed on the stock exchange. Taking into account the above, a demand-planning function within an independent supply-chain department does not provide all the answers either.

Support reliable decision making

Since a forecast is – by nature – always wrong, the question is not how to avoid the bias, but how to minimize it for clear and reliable decision making. Clear responsibilities and ownership helps to reduce the bias, companies want to embed demand planning & S&OP processes and related functions within the organization to avoid biased forecasting. However, planning relies entirely on the

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knowledge and competences of individuals involved in planning activities.

The question where the demand planning function fits in the organization can also be taken from a pure functional perspective and the targets and responsibilities held both by the sales and supply-chain department. As shown in table 4, companies make different decisions in formal reporting lines.

Company	Reporting in Marketing & Sales	Reporting in SCM / Operations
Head phone		Reduce bias inducted in the process by sales optimism
Toilet paper	Ownership of sales numbers and possibility to shape demand	
Semiconductor		Harmonize ways of working and reduce sales optimism (independent)
Biscuits	Support business development, promotion planning and out of home & retail collaboration	
Telephone equipment		Leverage analytic competences and reduce forecast cast independently
Surgical equipment		Analytical skills and business knowledge prevailing on sensing market opportunities

Table 4: Reporting line examples.

From the examples it shows that reasons for a specific reporting line depend on a number of reasons. Elements to organize demand planning within Marketing & Sales include:

- Demand planning reports directly to Marketing & Sales for the simple reason that Sales manages and owns the forecast. Organizationally, it is more efficient since the demand planner can directly communicate with Sales especially on sudden changes in market behaviour. Demand planning can focus on realizing the best mix as it directly gets input from the Sales team.
- Demand Planning is truly a cross functional effort within an organization, but it should start with Sales driving the need for better, more accurate forecasts and demand plans.

- Sales is closest to the external customer and has the best feel for the market demand.
- Sales is responsible for generating, improving and building-in the revenues / turnover of the organization. Demand planning functions as a sales back office to achieve their targets.
- The role of demand planning is essentially a sales function based on different forecasting models, however, its sole objective is to provide inputs to the supply chain and other stake holders.

Reasons to organize demand planning within Operations or Supply Chain include:

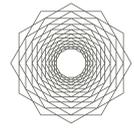
- Demand planning is part of integrated planning process that happens in the supply-chain function.
- Demand planning needs to take into account inputs of production, finance, procurement through the consensus / collaborative process that is brought in practice by the supply-chain.
- Keeping demand planning within the supply-chain helps to avoid blame games.
- Knowledge of statistical models is a core competence of supply-chain staff.
- Sales' perspective of demand planning is to get sufficient stocks, since they are not responsible for working capital. This may leads bias when demand planning reports into Sales.
- Demand planning should be executed in a function that is responsible for working-capital management, customer service and product availability. These responsibilities often reside is the supply-chain department.
- Planning process discipline performs better in the supply chain than in sales.

Clear accountability: segregation of duties

Demand-planning processes can operate fairly effectively in a variety of organization structures, but accountability for the demand plan in a demand-driven operation lies within Sales, as the demand plan is in most cases a responsibility requiring the commitment of Sales. In general this means that setting the baseline, demand sensing and demand enrichment are responsibilities where Sales at least validates the unconstrained demand. Other organizational models can work, but will hamper the accountability of Sales for the demand plan.

End-to-end planning responsibility and ownership, based on validated forecasts and demand plans, is in general owned by the supply-chain department as only the supply-chain can challenge independently and take a balanced and objective view of the demand forecast, without any influence of internal factors.

3 BUILDING A DEMAND PLANNING ORGANIZATION



The above conclusion is supported by a clear segregation of duties whereby Sales is responsible for establishing the demand plan (or at least providing inputs for this purpose) with the forecast accuracy as the main KPI. Supply chain is the main owner of the operational plan measured by product availability. With regard to segregation of duties, the supply-chain challenges the demand plan and forecast to integrate it in the operational plan. Demand support functions like statistical services and demand planning analysis and reporting can be integrated into the supply-chain function.

Planning organization - Segregation of duties is a key element		
Main planning responsibility		
Sales	Supply chain	Production
Forecast accuracy	Product availability	Efficiency
Demand gathering <ul style="list-style-type: none"> • Set the baseline • Enrichment • Demand shaping 	Demand planning services & control <ul style="list-style-type: none"> • Statistical services • Analytical and support services • Independently challenging the numbers • Linking pin between sales & production 	Supply & inventory planning <ul style="list-style-type: none"> • Capacity • Managing external supply & execution

Figure 8: Example segregation of duties leading to different reporting lines.

In general, demand planning reports into the local or cluster sales organization as close as possible to the market, while the end-to-end planning responsibility and ownership, based on validated forecasts demand plans, reports into the supply chain that can be organized on local, cluster or central organizational level.

4 NINE LESSONS WHEN ORGANIZING YOUR DEMAND PLANNING FUNCTION

Companies are in need for competent Demand Planners. The requirements for this function is so divers that you can wonder whether this person really exists! It calls for strong math and statistical skills, excellent cross-functional communication, a deep understanding of the market and requirements of Manufacturing, Logistics, Marketing, Sales and Finance.

In this whitepaper we describe the main demand planning activities and the related skill set. In general the activities are grouped in different functions: (1) the forecast analyst focusing on statistics and the baseline and the (2) demand planner focusing on enrichment and collaboration with other functional areas. The demand planning governance evolves around two main questions: where to locate the demand planning function and how to set-up the reporting line. There is no one-size-fits all answer, considerations like required information, availability of skilled staff, size, process or number ownership, and position in the process (driver or user) play a role.

6. Outsourcing the data processing and statistical baseline forecasting to specialized company is the ultimate degree of centralization: centralized over multiple companies.
7. When responsiveness and flexibility are the main drivers for an accurate demand plan, it can be decided to put the demand planners close to the market; it comes at the cost of lower economies of scale.
8. Since a forecast is – by nature – always wrong, the question is not how to avoid the bias, but how to minimize it by organizational design.
9. Demand planning processes can be operated fairly effectively in a variety of organization structures, but accountability for the demand plan in a demand-driven operation lies within Sales.

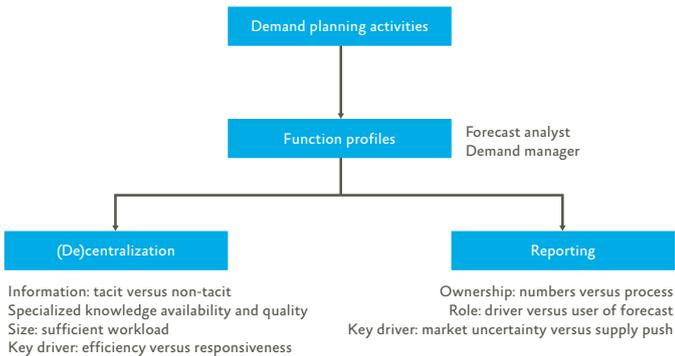
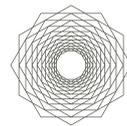


Figure 9: Organizational choices.

In general, the key takeaways can be summarized as follows:

1. Demand planning is not just about getting a high forecast accuracy; it's also about creating the right organizational conditions.
2. It is recommended to create two separate functions. A data-driven forecast analyst and a business knowledge, communication-driven demand planner.
3. The most important skill of a demand planner is to be able to be critical about the forecast information received and actively challenge the number(s).
4. Information quality determines the level of centralization: the more tacit and non-tacit knowledge can be stored centrally, the higher the likelihood that this function will be centralized.
5. Availability of specialized knowledge on data science and statistics is key. The shortage of data scientists is becoming a serious constraint to consider in organizing your demand planning process.



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ABOUT EYEON

In striving for success, large companies have to continuously struggle against growing internal complexity. We help our clients manage this complexity by designing, implementing and executing excellent planning processes as a discriminating factor for this success. In order to achieve this, we develop and share knowledge about top level planning and forecasting, with constantly demonstrable return on investment for our clients.

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