

## **Demand planner - the world's worst profession?**

How to support planners to the advantage of business, demand forecasting and supply chain?



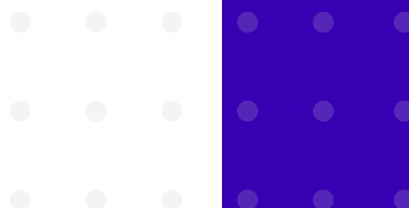
Demand planners play an important role in the optimization of a company's supply chain. They use a range of data, including marketing and sales data, to effectively estimate product demand over the long term. Their responsibilities include planning the demand, analyzing statistical data, and generating orders to suppliers.

In his analyses, the demand planner also checks demand forecasts and takes into account data provided by other parties to the process, including marketing representatives, S&OP (Sales and Operations),

and executives. Equipped with this knowledge and tools, he begins a journey during which obstacles usually arise. Difficult weather conditions, closed roads, or traffic jams can be easily compared to challenges encountered by the planner, e.g. minimal delivery requirements, goods shortages on the manufacturer's or distributor's side, or delays in deliveries. Bad weather or traffic setbacks, often occurring suddenly, require a series of corrective responses. Increasing speed where possible, finding detours, or changing the entire route altogether.

The same is true of demand planning - this is work carried out in a highly dynamic, volatile and unpredictable environment. Therefore, today there is a great need for companies and their staff to strengthen their competence in demand management. At the same time, they should be able to derive value from advanced data analysis software, which - like navigation while driving - can suggest the most optimal solutions, warn of anomalies, or suggest changes in the chosen path of action. All that while leaving the final decision-making - especially for the part of the business that cannot be automated - in the hands of experts.

The role of a demand planner is usually associated with retail and manufacturing. But these are not the only sectors where this function is needed. One example is the banking sector. All ATMs and cash deposit machines must be regularly inspected and analyzed for cash demand. The location of a given cash machine and the traffic volume occurring there at different times of the day are examined, as well as the number of banknotes and their denominations. Based on this, a supply plan is established that will minimize the risk of a particular ATM running out of cash.

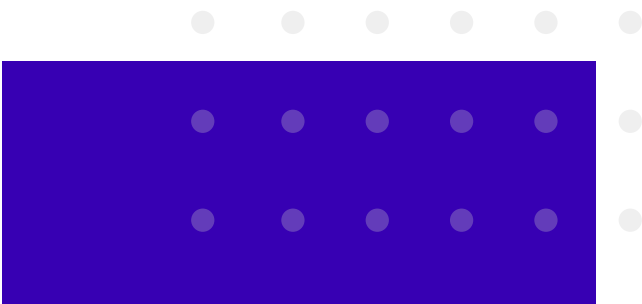


Be it manufacturing or retail, the work of demand planners is fundamentally no different. The main perceptible difference is the time horizon considered in the planning process. In retail, we usually deal with fast-moving goods. At the same time, there is typically no warehouse space to place larger orders. Stores are stocked overnight, even more so when it comes to fresh produce with a short shelf life. The division of products into categories is also an important aspect. Demand planner is responsible for a specific group of products and it is for that group that he analyzes sales and demand. Thus, the work of a planner who deals with goods with a long shelf life differs from that of someone responsible for vegetables or fruit that must be delivered daily.

In the manufacturing industry, as a rule, the number of products and their turnover is smaller. Logistics, delivery times, and production schedules become key challenges. The industry has a much longer supply chain, and ordering goods today means they will be delivered in three months at the earliest. It is also much more difficult to adjust forecasts when necessary. It becomes a problem to change them when an error is noticed as a result of an incorrect mathematical estimate or anomaly. Therefore, excess quantities of goods are often ordered for the sake of safety, which generates overstocks.

Notably, a person working as a demand planner does not need statistical or mathematical background. However, this job requires frequent recalibration and precise configuration of forecasting models several times a year - depending on the season, trends, as well as logistical, economic, and geopolitical changes. Each demand planner faces specific targets and KPIs. Their concern, among other things, out-of-stocks, forecasts accuracy, and fill rate, i.e. the rate of order fulfillment, which constitutes the difference between the quantity of goods ordered by the customer and the quantity of goods actually delivered to him. Lead time (the time it takes to deliver goods to the target customer) and inventory stock levels are also important.

It is worth noting that demand and sales forecasting must take two perspectives into account. One job is to generate forecasts in B2B companies (e.g., manufacturers), where the planner knows customers and their expectations. Assumptions and needs rarely change dramatically, so they can be predicted with high accuracy. In contrast, in retail companies selling in the B2C model, there are hundreds of thousands of customers. It is impossible to know each of them and predict their individual buying behavior. Therefore, in this case, characteristics and needs are first grouped, followed by the analysis of purchasing decisions of groups of customers rather than individuals. Thus, the forecasting process is subject to a greater risk of error.



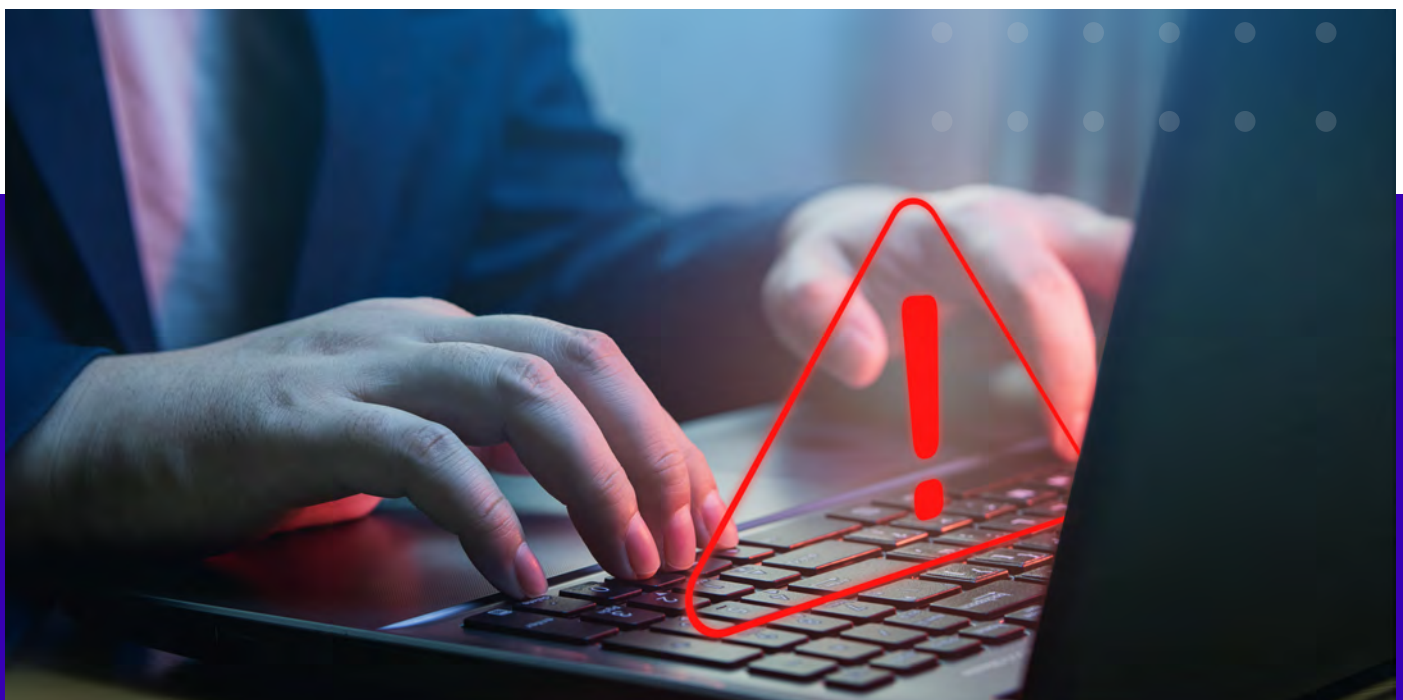
## Fighting fires

In the work of a demand planner, urgent matters are a daily occurrence, which in practice means “fighting fires”. In retail, there are times when demand is underestimated, and store shelves begin to run out of goods. In manufacturing, random or emergency situations crop up which have a huge impact on logistics and generate delays in deliveries, such as shortages of raw materials or semi-finished products, downtime on the production line, or the need to fix breakdowns in the machinery park. This leads to delays in implementing the production plan and difficulties in delivering goods to the buyer. All of these complications negatively affect the customer experience, which is crucial in any industry. Or they turn into money losses or penalties from customers.

Accordingly, the demand planner's priority tasks include analyzing critical, top-ranked SKUs and comparing forecasts with

store stock levels and daily merchandise turnover. This is an area where another potential fire may start. Unexpected changes in the pace of sales, too few (out-of-stock) or too many (overstock) products on the shelves in the store or warehouse, cause problems to pile up. The way to solve them is to complete a rush order to the supplier, but this path can be problematic.

After all, even if the supplier is flexible or the production line at the plant can be quickly retooled, while delivering the missing goods will undoubtedly “put out the fire”, it will also leave consequences behind. Thus, the relief may be only partial, as such an operation strategy significantly impacts profitability. Any change carries a cost, and the demand planner who decides to implement it takes responsibility for higher prices, which are covered by the end customer or the company itself (in the form of lower margins).



## Failure to meet obligations

The main tasks assigned to demand planners are the ordering of goods and the optimal management of supplies. To do this, the planner must perform a series of analyses, which means “paperwork” and “Excel work”, as well as mathematical work to look for trends, regularities, and anomalies.

This raises a legitimate question: what about other duties? How and when to perform them, if making accurate forecasts - especially without the support of ML-based advanced tools and systems - consumes a great deal of time and resources? With that workload on his shoulders, the planner spends long hours searching for and analyzing metrics, which often leaves him little time to make decisions e.g. about generating orders.

Ideally, a planner should receive forecasting data and make procurement decisions based on it. Today, still too often, before making a decision he must build models himself and then correctly analyze and interpret the forecasting data.

## Circling around the topic and looking for the bottom line

Imagine a situation in which a demand planner is responsible for forecasting sales of finished goods that need to be made of other products. Let us use an example from the baking industry.

The planner, responsible for ready-to-eat sandwiches, is unable to plan the demand for a specific number of sandwiches for a given day. His job is to break the sandwich down to its components - he must have the right quantity of bread rolls, tomatoes, pickles, ham, cheese, and lettuce. And while the finished sandwich goes on sale, the forecasts must include all its ingredients. The planner’s role, therefore, is to calculate the demand for ready-made sandwiches and, on the other hand, to create separate demand lists for bread rolls, tomatoes, ham, etc.

Importantly, the demand planner is responsible for generating forecasts regardless of whether and what quality of data he receives on sales, planned promotions, marketing actions, etc. As practice shows, the planner rarely receives this information because representatives of other departments do not want to provide rough, inaccurate data, especially if a lot of responsibility goes with it.

In the manufacturing industry, the demand planner is asked the question: “What should we produce?” And it does not matter if he has previously received sales or demand forecasts for any goods beforehand or not. This makes the planner feel torn and stuck in a limbo. He goes to the sales department to ask about the data, but in response he hears that it is difficult to estimate sales, because no one knows how the market will react to a new product, for example. The problem is that placing an order requires three months’ notice, and the person fully responsible for the wrong estimate is the planner.

A demand planner must therefore look for solutions and arrive at answers in non-direct ways. Instead of asking for specific numbers, he should ask different questions - about the target group of a particular commodity to be produced, the recipient and end customer of that product, and the promotional path. Building a story around the customer and the product allows the planner to make forecasts even without specific sales data.

### Running out of time, constant changes, and big costs

The demand planner's job is to generate orders to suppliers and create short-, medium- and long-term forecasts. For long-term forecasts, the number of unknowns can be particularly surprising. Therefore, the planner should keep his finger on the pulse and control the long-term forecasts in order to respond to the changing situation well in advance. On the other hand - he must keep in mind that every change is a cost. However, things are entirely different when he can use the support of advanced software that generates high-quality forecasts automatically based on AI and ML algorithms. Then it is possible to calculate demand or sales multiple times, taking into account different variables, scenarios and data, to ultimately get more accurate results.

In the FMCG industry, where there are thousands of SKUs, daily sales forecasting for each product based on analysis of receipt data is only possible with modern tools. Unless the company employs an army of

planners made up of hundreds of employees. That is why replenishment is usually done twice a week at most.

Meanwhile, it is not just about forecasting but also cost optimization. Hundreds of demand planners in a retail company are objectively more expensive than a single tool based on artificial intelligence and machine learning. Of course, this argument applies primarily to the FMCG industry, where lead times are short, the ordering process is complex, and the number of products is huge. Given those factors, hiring people to forecast manually is expensive. In contrast, automating the process brings tremendous benefits, including increased efficiency.

### Too many SKUs which makes qualitative forecasting impossible

A big challenge for the demand planner is the number of information and SKUs he has to process and check. He usually works in chaos, although he tries to prioritize the tasks. The problem also lies in Excel, where most of the planning is done. Currently about 80 percent of companies do their forecasting using Excel. Excel is flexible and easy to use, which makes it so popular. Using formulas, rules and filtering allows data aggregation and helps combining elements into a coherent whole.

For example: let us imagine that a planner is responsible for forecasts for five thousand products, for a hundred stores. As the data is changing and updating, with this volume of metrics and parameters the planner focuses primarily on the products that are either rotating the fastest or are the most profitable.

So he deals with 20 percent of products that bring in 80 percent of the revenue. By doing so, he overlooks the enormous potential that lies in the other products which he pays little attention to because he is pressed for time.



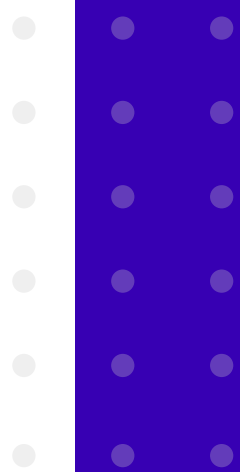
A demand forecasting platform based on artificial intelligence and machine learning takes much of the responsibility off the demand planner's shoulders. This relates particularly to the simplest tasks which are performed routinely. As a result, the planner gains more time for matters that require his special attention, competence, and creativity. He has more space to make crucial decisions that have a fundamental impact on the business.

The entire analytical process, the search for relationships and regularities, is entrusted to algorithms. The system takes over the repeatable tasks which are modelable with AI and ML. What is significant, it always leaves the possibility of interfering with the forecasts and making final decisions to the experts.

It is true that even with manual forecasting, demand planners have tools to make their work easier. The most popular one is Excel, which is quick to set up, easy to use, and flexible. Many companies also use business intelligence tools, which focus on aggregating sales data and combining information about products whose sales

are comparable, but lack predictive value. These tools also fail to eliminate the necessity of manual filtering and searching for regularities. While such solutions may work well for smaller companies with limited offers, they are insufficient for retailers with assortments of hundreds, thousands and tens of thousands of SKUs, and inadequate for the scale of their business.

In seeking to optimize the business, it is worth noting that advanced analytics solutions can process massive data sets and generate forecasts, store demands, and production plans for 100 percent of the products on offer. That is, instead of considering only 20 percent of the fastest-moving SKUs, you get a complete analysis of all products and product categories that generate 100 percent of revenue. This holistic approach to the entire business rather than a fragment of it, allows cash flow optimization and sales increase.





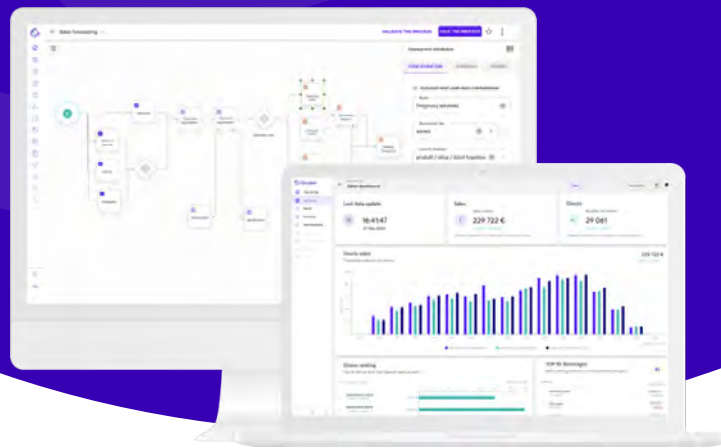
Occubee platform allows you to automatically collect sales data, train Machine Learning models, forecast sales and demand, and generate picking orders and orders to suppliers to optimally replenish stores and warehouses.

Based on data and Artificial Intelligence, Occubee allows to increase sales by increasing product availability in stores and the online channel.

Using Occubee improves the entire supply chain: from store replenishment, to optimal stock levels for offline and online sales channels, to orders to suppliers and production plans.

Short-term sales forecasts for each product and store individually are the starting point for the automatic generation of order picking lists in the warehouses. This makes it possible to optimally replenish the stores and avoid out-of-stocks and overstocks.

Medium- and long-term demand forecasts for the market are used to ensure optimum stock levels, optimize logistics or work in the warehouse and automatically generate orders for suppliers and plan production.



## Occubee | AI platform for Data-Driven Retail



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