

How To Choose the

Best Capacity Planning Strategy

for Your Manufacturing Needs

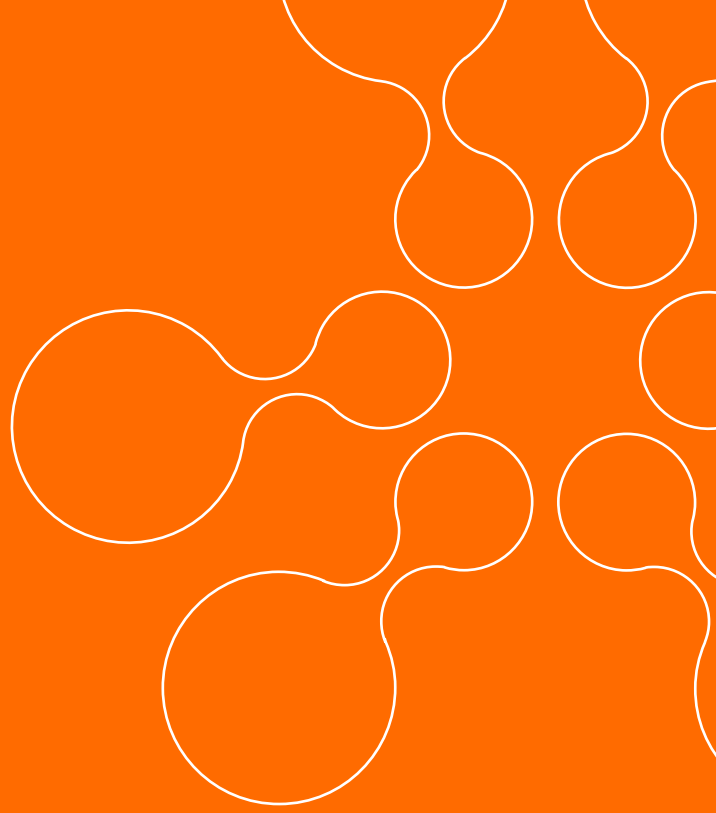


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Capacity Planning for the Win

Productivity fuels manufacturing success. But, in addition to labor shortages, supply chain fragility, and geopolitical volatility, the ongoing productivity crisis has manufacturers scrambling for solutions.

Over the past decade and a half, manufacturing productivity has barely budged with just 0.5% average annual growth, according to [McKinsey](#). But not all are feeling the pain: leading manufacturers operate at over five-times the productivity of lagging manufacturers.

With labor, supply chain, and other challenges largely beyond the control of manufacturers, the solution lies within. Optimizing production through operational visibility and a clear understanding of manufacturing capacity creates an efficient plan that keeps customers happy and manufacturers profitable.

This complex coordination is termed capacity planning, and it's crucial for fulfilling customer orders on time to minimize costs, maximize profits, and drive productivity. And, to make it easy, today's modern capacity planning solutions offer drag-and-drop speed and simplicity for greater agility to meet every need.



>5x

“Productivity advantage enjoyed by leading manufacturers”

McKinsey. “Rekindling US productivity for a new era.”
February 16, 2023

It's 2023; Drop the Post-Its and Spreadsheets

Choosing the right manufacturing capacity planning strategy depends on understanding customer demand and manufacturing capabilities in real-time, even as they are in constant flux. Clearly, relying on sticky notes, spreadsheets, and emails adds friction and confusion that faster, more agile, more responsive competitors have long overcome. A modern, connected capacity planning solution is table stakes for those looking to outpace the pack.

Capacity Planning

noun *ca-pac-i-ty plan-ning* (ka-pa-sa-tē pla-nin)

: the process of determining the resources manufacturers need to meet the demand for products.

Capacity planning is the process of determining the resources manufacturers need to meet the demand for products. Capacity planning is necessary for successful supply chain management, production scheduling, and inventory management.

Capacity planning generally includes three main elements: **equipment, labor, and products**. Many factors must be accounted for in a capacity plan, such as the types of products being produced, equipment utilization, employee availability, and the number of machines available. These factors are calculated to ensure manufacturers have the capacity to meet forecasted demand.

Without an effective capacity planning strategy, manufacturers are impacted directly on the bottom line. You'll either:

- Not produce enough resulting in late or short shipments,
- Produce too much and be forced to sit on inventory that you are paying for, or
- Produce the wrong products that result in waste or rework.



Capacity Planning Strategies Explained

There are several capacity planning strategies that manufacturers use to ensure that they can effectively meet demand. Each strategy has benefits and drawbacks that must be considered before implementation.

DRIVER-BASED CAPACITY PLANNING STRATEGIES

A driver-based capacity planning strategy relies on always having access to the products, workers, and/or equipment necessary to deliver products in a way that meets customer expectations. It requires manufacturers to have:

- **Robust connections with suppliers** so that when a new order arrives, the necessary raw materials and components never delay customer deliveries.

- **Flexible workforces with a wide range of skills**, so workers can easily shift across production lines or production can be scaled up or down as needed.
- **Access to equipment, storage, and logistics resources** needed to manufacture and deliver whatever products are currently in demand.

Benefits of a driver-based capacity planning strategy include inventory optimization and better responsiveness to demand shifts. Drawbacks include the potential for idle machinery and workforces, as well as the investments necessary to shift production as required.

Driver-based:

Always having access to the products, workers, and/or equipment necessary.



TIME-BASED CAPACITY PLANNING STRATEGIES

A time-based capacity planning strategy allows you to plan capacity around today's needs or tomorrow's expectations. Capacity plan then either lags, leads, or matches real-time demand.

- **A lag capacity planning strategy** stretches existing capacity to its current limit, then expands capacity as demand increases. Manufacturers then delay capacity expansions (and investments!) until they have demand.

- **A lead capacity planning strategy** increases capacity based on forecasts and before demand increases. This capacity planning strategy involves a significant upfront investment in resources to prepare for a future increase in demand.

- **A match capacity planning strategy** is the middle ground between lead strategy and lag strategy and adds capacity incrementally based on current demand.

Benefits of these time-based capacity planning strategies come from the flexibility to schedule investments alongside broader financial or corporate goals. Drawbacks include being unable to meet customer expectations, tying up resources in large capital expenditures, or trying to optimize capacity planning investments to match fast-changing markets or fickle customers.



Time-based:
Plan capacity around today's needs or tomorrow's expectations.

Agile:

Shift capacity to match demand, market, and sales data.

AGILE CAPACITY PLANNING STRATEGIES

An agile capacity planning strategy shifts capacity to match demand, market, and sales data. It strives to eliminate manual guesswork, instead adding capacity just before it is required based on real-time demand and sales forecasts. The success or failure of agile capacity planning relies on the quality of the predictions from forecasts.

For very complex environments that deal with historical trends, seasonality, and even promotions the sales team may conduct, a more sophisticated supply and demand planning solution such as [ketteQ](#) can provide even greater nimbleness to an already agile strategy.

Think of agile capacity planning as a middle ground between every other strategy but customized to align with unique manufacturing and business goals, constraints, and capabilities. You're making data-driven decisions so may also use a combination of capacity planning strategies across customers, markets, or production lines.

Of course, you need accurate, timely data to make the best data-driven decisions.

Benefits of an agile capacity planning strategy include better matching of investments with expected demand, connecting investments with profitability so

manufacturers can make more effective decisions, and better guidance for sales and marketing teams to target more lucrative markets. As indicated above, drawbacks include the need for more data from more areas of the manufacturing business and to have more confidence in that data.



Capacity Planning in Action: Northeast Lantern



Since 1987, Northeast Lantern has been manufacturing and selling handcrafted lighting fixtures. Like many small manufacturers, the company relied on too many spreadsheets and manual processes for capacity planning, resulting in unnecessary complexity. Old technologies and inconsistent methods created more obstacles to growth and prevented the company from getting a firm grasp on engineering, inventories, and reporting.

With Rootstock, Northeast Lantern could access its cloud-based data from anywhere, minimize onsite hardware investments, and abandon its spreadsheet-heavy manual processes. Even moving more than 25,000 SKUs from spreadsheets to Rootstock was a breeze, with Northeast Lantern's president,

Chris Heal, calling the data load "relatively painless."

Today, Northeast Lantern makes daily use of Rootstock Cloud ERP for scheduling and capacity planning, engineering, shop floor, inventory transaction management, purchasing, requisitions, work orders, sales order processes, and more—all formerly manual and time-consuming processes.

"We recently started sharing one of the [Rootstock] dashboards in the break room so the employees can see orders that are scheduled that week, what has already been shipped, any overdue orders, and work orders completed by week," added Almon.

Read the complete Northeast Lantern customer story to learn about its move to Rootstock Cloud ERP.

"We had no visibility to see how demand was interconnected at a part level. Rootstock helped us connect the sources of demand and increase our production efficiency."

Dustin Almon, Operations Manager at Northeast Lantern

Tips for Choosing the Right Capacity Planning Strategy

No matter which capacity planning strategy you choose, it can only be effective if it's matched to the manufacturing goals and capabilities. But, as economic uncertainty continues, your strategy will need the ability to deal with continued change. Capacity plans will shift quickly, and your capacity planning strategy must be able to maintain pace.

To be effective, manufacturers need a modern capacity planning solution that integrates upstream and downstream data from supply to sales, provides deep and comprehensive insights, and then produces accurate demand forecasts. A cloud-based ERP system centralizes data, including production, sales, field service, inventory, and finances, onto one platform that's accessible from anywhere.

Remember to choose a capacity planning strategy that enables flexibility and speed. For manufacturing organizations in fast-changing markets, it is critical to become more agile and respond to changes in capacity, demand, or market landscape quickly.



Improve Strategic Capacity Planning With Rootstock Cloud ERP

Rootstock Manufacturing ERP is an all-in-one system built on the Salesforce Platform with intuitive production and capacity planning features. Rootstock provides drag-and-drop scheduling and capacity planning, helping teams immediately identify and fix shortages and overloads with a click and other features to help automate production management. Stay on top of demand, respond to changing market trends quickly, and save resources with Rootstock Manufacturing ERP.

Learn more about [capacity planning solution capabilities](#) and watch an [8-minute Demo of Rootstock Production ERP](#).

Rootstock Software® is a worldwide provider of Manufacturing Cloud ERP on the Salesforce Cloud Platform. When combined with Salesforce CRM and Service Cloud, Rootstock ERP offers manufacturing and supply chain organizations a single platform to grow and manage their businesses.

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