AI and Supply & Demand Planning
What you need to know

Integrating AI technology into supply chain operations helps SMEs gain a competitive edge and future-proof their business against disruptions. With supply and demand software enhanced by AI functionality, businesses can meet customer demands with agility, speed, and precision.

Table of Contents.

Key takeaways of AI integration into supply and demand planning

Supply chain agility
Enhanced with AI functionality, supply and demand planning software empowers SMEs to respond quickly to market changes, fostering supply chain agility. By improving decision-making and optimizing inventory management, these SMEs thrive in a dynamic marketplace, enhancing their competitiveness.

Future-proofing supply chains
It's not only about understanding the pivotal role of AI in supply chain operations, it's also about being committed to integrating the software into one's business. Understanding this role is crucial for businesses to respond effectively to disruptions, enhance collaboration, and unlock value from their own data to drive profitability and growth.

Software selection criteria
When evaluating software, businesses should prioritize factors like their inventory's current state, cost, scalability, integration capabilities, and data security, ensuring seamless integration and maximum ROI in their supply chain operations.

Netstock's vision and commitment
Netstock is dedicated to leveraging AI technology to deliver tailored supply and demand solutions, enabling businesses worldwide to achieve the perfect supply chain and future-proof their operations against uncertainties.

Consumer demand is reshaping market dynamics, making AI technology integration indispensable. Software offering AI functionality is a critical driver for enhancing supply and demand planning processes, guiding businesses toward achieving the perfect system for their supply chains.

Netstock aims to **harness the value of AI technology** to deliver meaningful supply and demand capabilities for SMEs worldwide. By offering tailored solutions, Netstock helps move customers closer to achieving the perfect supply chain: having the right inventory available at the right time and place to meet demand.

AI functionality can unlock opportunities within your inventory, improve demand planning accuracy, reduce costs, and drive overall profitability. **This guide will explore how AI is reshaping the speed and accuracy of supply and demand planning.**

1. Artificial Intelligence
Why it matters to your business

The key to supply chain success is better **visibility**, **adaptability**, and **speed** to market.

With ongoing pressure from supply chain disruptions, inflation, and mounting competition, you may wonder how software incorporating AI will benefit your business, what its impact will be on your supply and demand planning, or why you should invest in software offering AI functionality.

Introducing technology that offers AI functionality presents a promising solution for businesses to be better prepared to manage change, enhance efficiencies and customer satisfaction, and improve profitability.

Driving business success with AI

Adapt to market changes

AI technology analyzes vast amounts of data and identifies trends. This helps businesses quickly respond to change and adjust supply and demand planning. The key is speed and accuracy—to ensure the continuity of supply, manage inventory levels, adjust production schedules, or reroute logistics, you need software that offers AI functionality. With this, you can meet demand on time without incurring more expenses or compromising sales.

Improve decision-making

AI tools are user-friendly and intuitive, enabling teams across various roles to leverage them for improving supply chain processes. AI technology provides real-time insights into supply chain performance, allowing businesses to monitor key metrics, identify bottlenecks, and make timely adjustments to reduce stock-outs and excess inventory.

Enhance team collaboration

AI functionality enhances collaboration by providing a unified data analysis and decision-making platform. By breaking down silos and enabling cross-functional communication, AI fosters alignment and synergy, leading to more effective supply chain planning and execution. This ensures all stakeholders can contribute to business success.

Respond to disruption

When supply chains face disruptions, you must decide how to quickly respond and implement a plan. AI functionality helps businesses create predictive models to anticipate and mitigate disruptions. This proactive approach ensures operational resilience and continuity during unexpected events.

> *With the help of Netstock, I was able to assess the impact of the Red Sea issues on our lead times and quickly made decisions to reroute a container to ensure we met our demand.*
> **T2**

Read More

Enhance forecasting accuracy

Machine learning (ML) technology enhances demand forecasting by analyzing data sources such as historical sales, market trends, and external factors. This comprehensive analysis detects subtle patterns and correlations, leading to more accurate predictions of demand fluctuations. By reducing forecast errors and minimizing stock-outs, businesses can optimize inventory management, improve customer satisfaction, and achieve cost savings.

Save time and resources

AI functionality quickly resolves supply and demand issues, offering the speed and visibility needed to stay profitable and competitive. Use the resources saved from reducing stock-outs and excess inventory to optimize other areas or invest in new products.

> 66 *What typically took a full day to work out the right orders to place, with Netstock, we create an order within an hour.*
>
> **Rutland**

Read More

Unlock opportunities in your inventory

AI-powered algorithms can dynamically adjust inventory levels based on real-time demand signals, minimizing excess inventory while ensuring product availability.

Let's look at Netstock's Opportunity Engine™, for example. This AI-powered tool is designed to analyze all inventory data in all locations, quickly anticipating potential problems and providing recommendations in real-time. This enables Netstock users to respond and rectify issues, such as potential stock-outs or growing surplus stock, **long before they become problems.**

> 66 *The granularity of the Opportunity Engine allows us to take targeted actions and develop tailored strategies for each store, taking into account the varying demands and customer preferences across different locations.*
>
> **Harvey Norman**

Did you know?
Netstock's AI Opportunity Engine

- Over **278k opportunities** have been served to users since its launch in June 2023.

- Approximately **every 90 seconds,** Netstock serves an opportunity to a customer somewhere in the world.

Netstock Opportunity Engine ™

Watch Video

2. Supply and Demand Planning Understand your reality

Understanding your business's inventory needs is crucial, and typically, **there are three levels:** inventory control, management, and optimization. Each level deals with different aspects of your inventory and has its role to play. Consider factors such as inventory size, supply chain complexity, and business objectives while selecting a plan that best suits your business's requirements. By determining the proper control, management, or optimization level, your business can operate more efficiently, save money, and achieve tremendous success by implementing appropriate strategies and tactics and supply and demand planning software.

Let's examine each level.

Inventory control

Involves the systems and processes used to track and manage inventory levels accurately. This typically includes using an ERP system as the central hub for recording inventory transactions. The primary objective of inventory control is to ensure the accuracy of inventory counts and transactions. It provides real-time insights into the quantity of products available in stock at any given time. Inventory control is a crucial base for determining the optimal inventory levels needed to meet demand and operational requirements. For example, if the ERP system shows 73 units of widgets in stock, the goal is to ensure there are indeed 73 units physically present in the warehouse.

Where AI intersects

AI functionality in your software can help clean ERP data at the inventory control level by using machine learning to identify and correct inconsistencies, errors, or duplicates in inventory records. This improves data accuracy, leading to better inventory tracking and management.

Inventory optimization

Focuses on identifying and establishing the optimal levels of inventory a business should maintain. It goes beyond merely monitoring inventory quantities and aims to balance inventory by minimizing inventory costs and maximizing customer service levels. The process involves analyzing data from the inventory control system to perform various tasks, including demand planning, item classification based on importance and value, setting stocking policies, assessing risks, and determining safety stock levels. The outcome of inventory optimization is a model providing recommendations on the ideal inventory levels for each item to achieve desired service levels while minimizing costs. For instance, if the ERP system indicates 73 units of widgets in stock, the optimization process may suggest the optimal level is 55 units, considering factors such as demand forecasts and service level objectives.

Where AI intersects

AI functionality will provide the answers you need by analyzing data to predict demand accurately, identify trends, and dynamically optimize inventory levels, minimizing costs and improving supply chain efficiency.

Inventory management

Serves as the link between inventory optimization and inventory control.
It encompasses the tactics and processes needed to execute the optimized inventory levels within the business operations. Key inventory management responsibilities include translating the optimized inventory levels into the ERP system or business operations, generating recommended orders, monitoring inventory levels, and promptly addressing exceptions or imbalances. Exception management and opportunity identification are critical components of inventory management, allowing businesses to respond to discrepancies between actual and optimal inventory levels quickly.

Where AI intersects

AI-assist tools are excellent for helping people in organizations quickly optimize their inventory levels. They can create purchase orders on demand and identify opportunities with the highest impact on achieving goals. By troubleshooting stock issues with planners or buyers, these tools make tasks quicker and easier, freeing up people's time to focus on strategic improvements for the overall business direction.

3. Data's role in AI Shaping tomorrow's technology

Data quality is paramount for any technology to deliver accurate recommendations. One of the biggest challenges with supply and demand planning solutions is your output will only ever be as good as the quality of data you put into it. As the saying goes, "garbage in, garbage out." Planning on bad data won't provide the flexibility and adaptability to propel your business forward.

> " *What used to take weeks to refresh and review our data now takes a fraction of the time and allows us to make more timely decisions.*
>
> **Zhik**

Read More

How can you improve data quality?

Data quality is crucial to ensure accurate, timely, and reliable data. Consider assigning dedicated team members to maintain data accuracy, conducting regular quality assessments and audits, and providing training on best data entry practices. Setting clear data governance policiesand using technology for data validation and cleansing is vital for significantly enhancing data quality.

Your business should look at:

Gathering data from the right sources: review data against other sources and establish the sources you want to use for your data collection.

Reducing the volume of data entries: review and reduce the processes requiring manual data entries. This will drastically reduce errors.

Reviewing access: limit the number of team members with access to specific data. This will help prevent any errors from occurring.

Regular monitoring: the dedicated data team should regularly review and fix data inaccuracies and record changes made.

Here are a few data measures to consider regarding your inventory

- Items with zero cost
- Items with negative cost
- Items with no supplier
- Items with zero lead times
- Invalid Bill of Materials (BOM) link

- Invalid Supersession links
- Overdue purchase/works orders by days overdue
- Overdue sales orders by days overdue

Unlocking value with your data

Unlocking value with your own data isn't just about collecting data; it's about extracting actionable insights and driving meaningful outcomes. By investing in supply and demand planning solutions enhanced with AI functionality, you can quickly transform your data into a strategic asset that fuels innovation and enhances decision-making.

How Netstock turns your data into actionable decisions

With Netstock's Opportunity Engine, the technology quickly works through the customer's data to identify the opportunity and notify the customer that:

1. They may be sitting with too much excess in a particular warehouse

2. They will experience a stock-out of a specific product in a particular warehouse

The AI tool takes things a step further. It recommends what action the customer should take.

Be prepared for more

Once the opportunity is successfully actioned, the customer can vote. If they like the suggested opportunity, the AI tool will learn more about customer preferences, making the Opportunity Engine a vital asset for supply and demand planning. It's as easy as 1-2-3.

You may now ask "how can I trust these recommendations?"

Netstock's software is meticulously designed to work with **your data** to analyze historical patterns, review inventory movements, and understand the intricacies of your supply chain operations. By leveraging your data and employing advanced analytics, the software provides actionable insights tailored to your needs and challenges.

4. Selecting Software
Best practices to follow

Incorporating AI into your supply chain isn't just an added feature; it's now a fundamental requirement. It's increasingly seen as standard practice when considering software purchases today.

Imagine having a digital ally that sifts through data, predicts trends, and perfectly fine-tunes business operations, enabling your business to flourish at your fingertips. Supply and demand planning software with AI functionality offers the potential to transform how your business operates, giving you a competitive edge in the market. However, with many software vendors mentioning they too offer AI, it's important to know which parts of the software actually offer AI functionality. This helps ensure the software is truly helpful in meeting your daily supply and demand tasks and supporting overall business goals.

But there's a catch! Not all AI-powered software is equal.

Selecting the right software isn't just about ticking boxes; it's about understanding your business's unique journey, what you aim to achieve, and how this choice can fuel profitable growth. Let's look at the critical aspects of selecting software for your supply chain operations.

Where does your business stand today?

Think of your business's journey like a road trip. Whether you're just pulling out of the driveway with your inventory management or cruising down the freeway as a market leader; knowing how far along you are is crucial when selecting software with AI functionality.

Recognizing how mature your business is can help you gain valuable insights into its readiness to embrace software effectively. Focusing on foundational inventory management practices and building a powerful data infrastructure may be essential prerequisites for businesses in their early stages before diving into AI implementation. More mature businesses may be better positioned to leverage AI to drive continuous improvement and innovation within their supply chain operations. Align your software investment strategy with your business's maturity level to ensure seamless integration, maximum ROI, and sustained competitive advantage.

The cost and scalability of AI-powered software

It's a case of "adapt or die"! If you implement the right supply and demand planning software in your business, you should fully understand the ROI of the investment.

The supply chain industry has faced unprecedented challenges recently, from the blocking of the Suez Canal to the impacts of a global pandemic, the conflict in Ukraine, disruptions in the Red Sea, and the collapse of the Baltimore Bridge. These events have underscored the importance of being better prepared to remain resilient in your supply chain operations.

It's essential for business owners to have:

Complete visibility of their inventory.

Use tools that help collate complex data quickly and accurately to flag problematic areas instantly.

Implement an effective demand and supply planning solution to help you stay on top of your inventory game!

When choosing software with AI functionality, the cost is significant. However, consider long-term value beyond the initial price tag. Evaluate the total cost of ownership, including implementation, customization, training, and ongoing maintenance. Scalability is key, ensuring the software adapts to your business as it grows. It should accommodate changes without compromising efficiency.

Integration capabilities

Seamless connectivity and data flow across your business's existing systems and applications are essential for driving efficiency and informed decision-making. Before you start the software implementation process, spend time collating all the necessary information to ensure you successfully execute the data migration process according to your project plan.

You will want to get a solid grasp on what data lives where in your ERP system. Ask yourself these questions:

- Does receiving customer orders allocate or reserve stock for the order?

- What is the cost price, and is it the latest or average cost?

- Information on MOQs and order multiples imposed by suppliers.

- How are lead times set or calculated. Are they at the supplier level or a location product level?

- Is a Bill Of Materials (BOM) used? Are the links up to date?

- Are there any open purchase orders?

- Stock on hand (is this the physical stock on hand, or the net available stock after subtracting back orders, manufacturing kit shortages, pick notes for items in the invoicing process, etc.?)

When selecting software for your business, prioritize solutions offering integration capabilities and enable easy interoperability with your ERP, CRM, and other essential systems.

Incorporating AI to analyze data

Incorporating AI to analyze data sets AI-powered software apart from traditional software. Evaluate the software's AI capabilities, including machine learning, predictive analytics, and automation. Assess how effectively the AI algorithms can analyze data, generate insights, and drive actionable recommendations to optimize business processes and outcomes.

Additional functionality

It's not just about AI functionality. It's important to consider the additional functionality the software offers. Can it perform advanced reporting, predict stock a year in advance, forecast up to 24 months, or measure supplier performance? Ensure the software has features and functionalities that align with your industry and specific business needs.

Excess Redistribution

Software that offers AI functionality can help ensure excess inventory doesn't recur and help businesses redistribute it. Beyond the fundamental AI capabilities such as machine learning and predictive analytics, businesses benefit from features addressing specific pain points and challenges Netstock's Excess Redistribution functionality includes capabilities designed to optimize inventory levels, reduce excess stock, and enhance supply chain efficiency.

Redistribution potential

Location	Product count	Quantity	Value
Turnerville	48	3,964	153.0k
Mississippi	61	2,675	72.0k
East Fred			

Mississippi

Product	Source Location	Status
Concrete coat — Stocked out	West Boyceview	Excess stock
Lamp — Stocked out	North Jeffrey	Excess stock

Did you know?

Incorporating ERP + your data + Netstock = Highly optimized balanced supply and demand

Netstock has pre-built integrations with the widest range of ERP integrations in the market, automatically transforming raw data into predictive insights for confident decision-making. Through predictive modeling layered on top of real-time ERP data, Netstock provides focused visibility and actionable planning, forecasting, and ordering insights.

Sage   Acumatica The Cloud ERP

Microsoft Dynamics 365   ORACLE NETSUITE

SAP BusinessOne   Cin7 Core

myob   palladium BUSINESS SOLUTIONS

Explore our Integrations

> *Navigating the complexities of inventory management and supply chain planning has long been a challenge for SMBs, exacerbated by the turbulent macroeconomic conditions and supply chain disruptions of recent years. At Netstock, we understand managing inventory levels is a balancing act and optimizing inventory to meet demand efficiently is of critical importance for businesses. With the launch of Excess Redistribution, we are providing SMBs with unprecedented visibility and flexibility to strategically manage their inventory, ensuring goods are where they need to be and when, ultimately enhancing customer satisfaction.*

Barry Kukkuk,
CTO and Co-founder

Onboarding and Learning & Development (L&D) Support

Picture this: You've invested in software with AI functionality to enhance supply chain operations. But your investment may stay within its potential with the proper support and guidance. That's where onboarding and learning & development (L&D) support come into play - the essential ingredients for maximizing the value of your software investments.

At Netstock, we understand the significance of smooth onboarding and robust L&D support. Our **Learning Academy** is a testament to our ongoing commitment to empowering users with the knowledge and skills needed to succeed in inventory management.

> *The videos and training are so good and well structured that they sorted out 90% of the concerns and questions. This boosted user confidence, and because of this, users started experimenting, knowing they couldn't break anything. As a result, they became more proficient.*

Tarsus Distribution

Read More

When evaluating software vendors, looking into the onboarding process, training materials, and support resources is vital! Look for software offering comprehensive training programs tailored to different user levels and learning styles. From beginner tutorials to advanced workshops, diverse training materials ensure your team can quickly adapt to the new software and harness its full potential.

And, it's not just about the content: it's about how it's delivered!

User-friendly interfaces, interactive modules, and engaging learning experiences are essential for keeping your team motivated and engaged throughout the learning process. Netstock's Learning Academy offers intuitive platforms and tools, making learning accessible and enjoyable.

Watch the Netstock Learning Academy Video
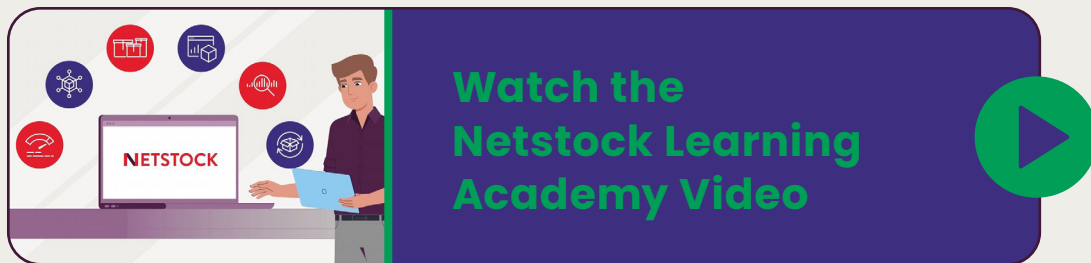
Customer support: Driven by industry professionals.

Responsive and knowledgeable support teams can make all the difference in overcoming challenges and maximizing software adoption and efficiency. These experts bring valuable industry-specific insights that can help tailor the software to your unique business needs, ensuring a smoother and more effective implementation process.

Netstock offers an **AI Help Assistant.** This innovative tool combines Artificial Intelligence with our extensive knowledge base to provide quick, accurate answers to customers' support questions.

Key features include:

- **Fast responses:** Leverages AI and our comprehensive knowledge base to deliver prompt and precise answers.

- **User feedback integration:** Allows users to share feedback to enhance content and improve the learning experience.

- **Effortless access:** Quickly find top articles and related content for immediate insights.

- **Continuous updates:** Ensures content is always current and relevant.

When selecting supply and demand planning software, look for additional tools like the AI Help Assistant. These tools enhance your experience by providing efficient support and access to valuable information, ensuring you get the most out of your software.

Data security and compliance

AI significantly impacts cyber security, offering both advancements and challenges. AI can enhance security teams' efficiency by allowing them to analyze vast amounts of data more quickly, potentially preventing attacks before they happen. However, the same technology also empowers adversaries, making cyber-attacks more sophisticated.

AI can be used to create persuasive social engineering and phishing attempts, making it harder for individuals to identify and avoid threats. Human error remains a significant vulnerability in supply chain security, underlining the importance of ongoing education, training, and data compliance measures to combat evolving threats enabled by sophisticated technologies like AI.

Netstock is ISO 27001 certified, which validates our commitment to our customers' high-level data security policies and procedures. Netstock will participate in regular follow-up audits to ensure it maintains a high information security standard.
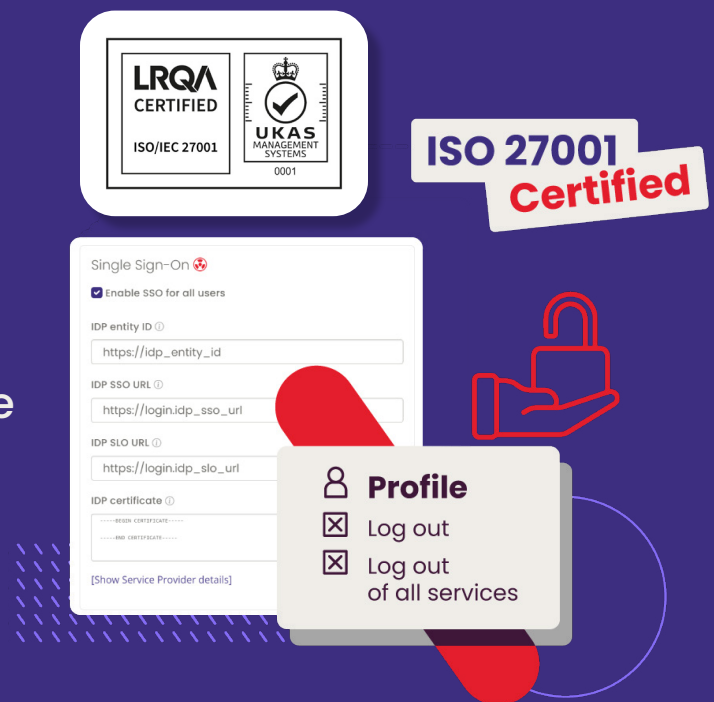
66 By achieving the ISO 27001 certification, we can emphasize to our customers that we treat their information with the utmost care. Customers trust us with sensitive information about their business, and this achievement shows that we are one of the few companies in the industry that takes our customers' trust seriously.

Barry Kukkuk,
CTO and Co-founder

5. Boost Supply Chain Operations
# Future-proof your planning

Everyone could use more money in the bank, extra time to focus on other aspects of their work, or reduced stress levels. The only way SMBs can tackle uncertainty in today's market is to always be prepared. It sounds simple and logical; however, how often have you been caught explaining to customers that their stock will be late? Or when you've experienced an unexpected increase in demand, and the possibility of sourcing the stock on time is keeping you awake at night?

The right software quickly unlocks visibility and insights, empowering calm, accurate inventory decisions.

With supply and demand planning software infused with AI technology, you're armed with the right tools to...

Manage risk proactively

Demand and supply planning software can proactively identify and mitigate risks before they escalate into major disruptions. By analyzing historical data, market trends, and external factors, the software provides early warning signs of potential problems and provides predictive recommendations so you can plan today to ensure everything is still 100% on track for tomorrow.
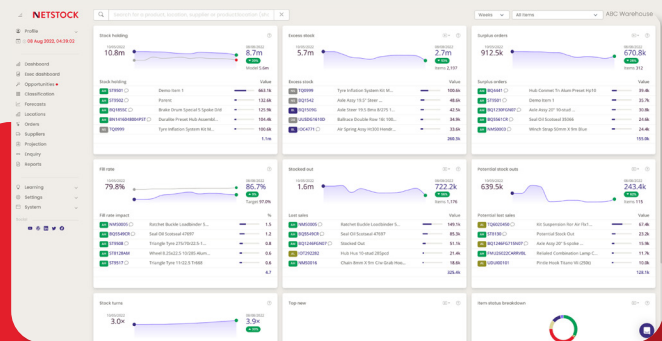
Netstock provides a single-view dashboard providing **complete visibility of your inventory.** The dashboard monitors inventory KPIs and prioritizes the top five most urgent issues requiring your attention. Netstock also enables you to stay ahead of supplier risk by monitoring supplier performance and automatically adjusting safety stock levels in line with supplier risk.

Experience continuous improvement

Leveraging machine learning algorithms to adapt and evolve over time contributes to a system that's continuously improving. By analyzing performance metrics and feedback data, AI systems can identify areas for optimization and automatically adjust strategies to achieve better outcomes.

Netstock's ML-based causal event forecasting feature estimates the impact of promotions on new items or customers by utilizing grouping attributes in its ML training, improving accuracy with each experience. This technology learns from past promotions by comparing actual outcomes to expected ones, considering product, customer, and other factors to understand event impacts.

Unlock cash from inventory

By optimizing your current inventory and minimizing excess stock, you'll unlock valuable cash hidden within your inventory. Through meticulous analysis of demand patterns, lead times, and inventory holding costs, AI algorithms pinpoint opportunities to reduce excess inventory, free up working capital, and enhance cash flow. This strategic optimization of inventory levels ensures capital is deployed efficiently, enabling businesses to channel resources into growth initiatives, debt repayment, or quicker responses to market opportunities.

Netstock Excess Redistribution functionality optimizes existing stock by analyzing inventory levels across multiple locations to ensure you don't incur excess or stock-outs. The functionality identifies surplus stock and allows you to seamlessly redistribute it to where it's needed most. You can transfer surplus stock seamlessly between locations, whether it's from one location to many or from many locations to one. Once you've selected the destination, an automated transfer order is created in your ERP.

See Netstock's Excess Redistribution in Action

Future-proof your planning:

By harnessing advanced forecasting capabilities, you can anticipate shifts in demand, optimize inventory management, and stay ahead of the competition. This strategic approach not only enhances operational efficiency but also positions your business for long-term success in an increasingly competitive landscape.

With Netstock, you can forecast and plan inventory confidently in advance. You can seamlessly forecast 24 months of inventory and plan for extended lead times. You can also predict inventory levels 12 months in advance based on data currently in Netstock, such as stock data, item forecasts, and inventory policy settings. With greater supplier visibility, you can provide a projected forecast for up to 12 months, strengthening supplier relationships.

6. Planning for Tomorrow
Gain a competitive edge with Netstock

If you want your business to remain relevant and profitable for years, you need to stay updated with advancements in supply and demand planning trends. By introducing software with AI functionality into your supply chain operations, you gain a competitive edge to future-proof your business against uncertainties.

> Integrating artificial intelligence is a fundamental aspect of Netstock's ongoing product roadmap. We aim to harness the value of AI and apply it responsibly to deliver meaningful supply and demand capabilities to our customers. Our mission remains being committed to empowering our customers with the best-in-breed solutions so they can be market-ready, agile, and profitable.
>
> **Barry Kukkuk,**
> **CTO and Co-founder**