

The future of work in manufacturing

What will jobs look like in the digital era?

PREDICTIVE SUPPLY NETWORK ANALYST

PREDICTIVE SUPPLY NETWORK ANALYST

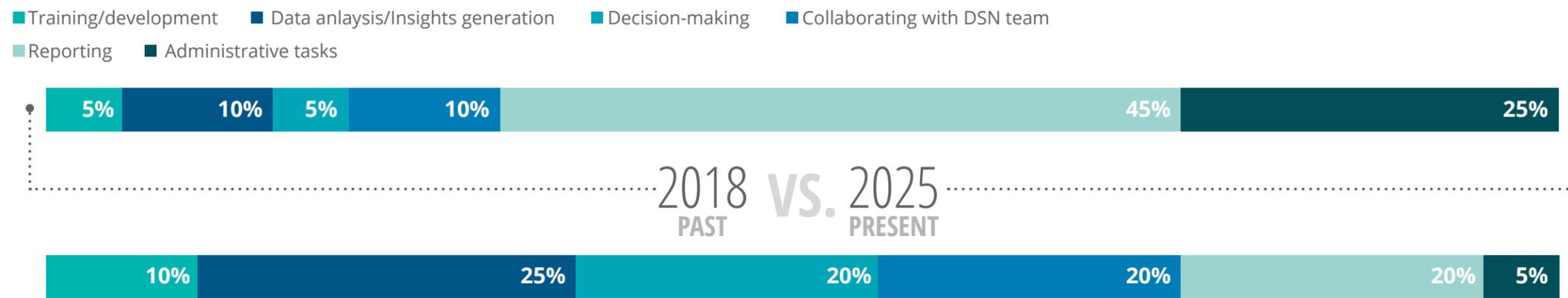
Summary

Predictive supply network analysts play a strategic role in the digital supply network (DSN). With a portfolio of digital tools, these analysts generally rely on machine learning and cognitive computing, instead of “gut feel” and static reports, to identify opportunities for calibrating demand and supply. The results enable them to maximize performance based on metrics, including customer satisfaction, productivity, and margins. Because many day-to-day decisions are automated, these analysts can focus on changing algorithms that reflect exceptions or developing situations. More importantly, they have an eye to the future, making decisions intended to give their business a competitive advantage. The analysts apply enduring human skills such as complex problem-solving, problem sensitivity, creativity, and judgment to make decisions that augment and refine the recommendations of the tools they use. These analysts typically spend more time working with cross-functional teams that, together, power the DSN. To keep refreshing their digital skills as new capabilities emerge, predictive supply network analysts rely on smart learning assistants to help them master exponential technologies.

Responsibilities

- Evaluates recommendations from the predictive system, such as scheduling and material orders, and makes final decisions
- Identifies market opportunities and proposes collaborative forecasts to customers based on analysis and insights from machine learning and artificial intelligence (AI) tools
- Delivers results against key performance indicators, such as out-of-stocks, inventory cycle times, and asset utilization, ensuring that customer service-level agreements have been met
- Works collaboratively with engineering, production, and logistics to calibrate demand and supply, and eliminate any disruptions or delays

Time spent on activities





JAMIE SANCHEZ

PREDICTIVE SUPPLY NETWORK ANALYST

Olsen Pumps & Valves Co. | Milwaukee, WI

Predictive supply network analysts are a connected and integrated part of the broader DSN at their organization. Skilled in data sciences and big data modelling techniques, they typically use digital tools along with their innate human skills, such as complex problem-solving, to move materials and finished goods through the DSN for just-in-time deliveries.

Experience

Predictive supply network analyst

Olsen Pumps & Valves Co. *Jan 2024–present | 2 years 6 months*
Develops forecast models; analyzes market demand patterns to maximize material availability, minimize inventory hold-up costs, and meet market demands

Analytics gig worker | Online analytics competition enthusiast

Various online platforms *Jun 2022–Dec 2023 | 1 year 6 months*
As a recent analytics postgraduate, further enhanced knowledge by working on freelance projects and participating in online analytics competitions

Senior supply chain planner

Craft Flow Systems Co. *Jan 2019–May 2022 | 2 years 5 months*
Point of contact for the purchase, production, logistics, and sales department; was the first to use data analytics to predict supply needs

Supply chain planner

AirClean Inc. *Jun 2015–Apr 2021 | 2 years 7 months*
Worked with the procurement function to shortlist material vendors and negotiate contracts; helped the inventory team with manual daily inventory counts and with creating spreadsheets; also helped the sales team analyze current sales data and project customer demand based on historical sales data

Education

University of Wisconsin

Graduate certificate in advanced analytics (online)
2021–2022

University of Wisconsin

Bachelor of science, supply chain
2011–2015

Skills and endorsements

- ERP · 396
 Endorsed by **Jennifer** and **Carter**, who are highly skilled at this
- Demand analytics · 188
 Endorsed by **Lucas**, who is highly skilled at this
- Inventory optimization · 181
 Endorsed by **Jennifer** and **Lucas**, who are highly skilled at this
- Network planning and optimization · 176
 Endorsed by **Melissa**, who is highly skilled at this
- Replenishment analytics · 95
 Endorsed by **Melissa** and **Ryan**, who are highly skilled at this
- Logistics and warehouse management · 85
 Endorsed by **Hemant**, and **Akkub**, who is highly skilled at this
- Analytics · 79
 Endorsed by **Melissa**, who is highly skilled at this
- General tech fluency · 68
 Endorsed by **Jennifer** and **Ryan**, who are highly skilled at this
- Visualization · 73
 Endorsed by **Akkub** and **Melissa**, who are highly skilled at this

Other certifications

- **EdX**
Analytics and supply chain
- **OpenLearnOrg**
Blockchain in supply chain

TOOLBOX

THE TOOLBOX SUPPORTS THE WORKER AS A WHOLE—IN ACHIEVING EXTERNAL OUTCOMES SUCH AS PRODUCTIVITY AS WELL AS INTERNALLY FOCUSED ONES SUCH AS DECISION-MAKING AND LEARNING.

Productivity



Venus

AI-powered, voice-enabled digital assistant provides a conversational interface for all productivity-related tasks, from scheduling to finding answers to questions and checking the status of products and projects.



DSN Tower

A primary digital platform for managing the complex and distributed digital supply network. It surfaces relevant information from all the connected supply chain applications across the enterprise and provides a customized interface by role and experience.



CrowdWise

This online dashboard collects textual data from all the social websites a company uses for feedback, complaints, and issues using text mining and web scraping. It then creates word clouds and, with the help of perception mapping, highlights the customer sentiment around the company's products and services.



VirtuMeet

This AR smart-glass conference room with AI capabilities allows global partners to meet and collaborate, overcoming the barriers of physical separation. With built-in AI, AR screens can present short bios or other relevant information about attendees as the user pans across their faces.



Share Smart

An enterprise social and mobile technology tool that helps in sharing digital 3D designs and images as digital files to improve the collaboration necessary to build a new product, supply network configuration, or assembly line right the first time.



Rosetta

An AI-based real-time language translator that listens to speech, converts it into text, and then translates that into the desired language, enabling collaboration among different regional markets.



VizWizard

A visualization tool that can create graphs and infographics with minimal text inputs from the user. It is also capable of creating topline results based on information available in charts.

Decision-making



Smart Dash

A visual display that presents data, live information, and analysis from multiple sources to facilitate informed decision-making.



Envision

This tool uses machine learning to identify potential problems as well as opportunities to devise solutions that make a positive business impact.



RealConnect

This application enables an engineer to seamlessly interact with suppliers, partners, customers, and the broader ecosystem.



Sixth Sense

A tool that incorporates machine learning, cognitive computing, and AI to detect macro trends in the broader environment.

Learning



Career Coach

This personal bot performs strength assessments and understands the broader talent situation at the company. It uses AI to suggest different career pathways and coordinates with the SkillsPro training course to create programs for users to accomplish their pathways. It also links in real time to the talent management system at the company to alert the user of job openings and opportunities for advancement.



SkillsPro

This smart learning assistant helps digital twin engineers refresh existing skills as well as learn new and emerging skills. Its conversation mode shares tips and tricks about the tools/techniques that an engineer has learned recently. When synced with an engineer's project planner, it shares a list of skills to be learned for implementation in upcoming projects.

A DAY IN THE LIFE

07:00 AM

While preparing her breakfast, Jamie says, "Hey Venus, what's on my calendar today?" Jamie's virtual personal assistant reads out her morning schedule and priority tasks that need to be completed, along with a personal reminder of her meeting with Chan, a friend from her analytics certificate course.

07:15 AM

As Jamie picks up her car keys to leave for the office, a pop-up from her wellness manager app reminds her about her fitness goals and, as the office is three miles away, suggests that Jamie cycle there. Eager to meet her goal, she goes for it.

08:00 AM

Jamie reaches the office and asks Venus to check her into her workspace as she exits the elevator. Soon after the check-in, Smart Dash activates, presenting Jamie with live information from all the suppliers, including an inventory of current materials and estimated time to receive additional materials. Smart Dash also flagged some deliveries that might get delayed due to weather disruptions. Jamie starts sorting the deliveries based on the supplier profile her program created from live predictions based on proximity to the disruptive weather conditions. Smart Dash collects all the actions taken by Jamie and sends the inputs to Share Smart, which alerts all the involved stakeholders, helping them plan accordingly.

09:30 AM

As Jamie leaves for a coffee break, Venus informs her about a few calendar invites from suppliers, who want to discuss the current weather delay alerts. Jamie asks Venus to send RealConnect invites to all the partners for an 11 a.m. meeting.

10:00 AM

Jamie opens the Envision app to further analyze and fine tune the information she received from Smart Dash. She uses Envision to make a decision on procurement and the future supplies she will need for the scheduled production runs. With the help of DSN Tower, Jamie shortlists the suppliers she will contact for the immediate demands and the warehouses that will be used for categorizing and storing the products before distribution. She also downloads the final report of all the recent transactions for an upcoming meeting.

11:00 AM

Jamie logs into her VirtuMeet for the global stakeholder meeting. Thanks to Rosetta, her real-time translator, the discussion goes smoothly. She has a productive 90-minute meeting during which all the production- and distribution-related tasks are finalized. With the help of Sixth Sense, deciding the delivery and production dates is seamless. However, a few production plans need to be updated as per the discussion. Share Smart captures all the information and discussion points of the meeting and shares the minutes of the meeting with all the participants.

01:30 PM

Back at her desk, Jamie's virtual career coach presents her with a performance scorecard on how she managed the meeting and lists a few skills that she needs to learn for her career progression. Jamie asks Venus to look for upcoming classes on "stakeholder management" and enroll her in the earliest class as per her calendar.

02:00 PM

Jamie logs into her CrowdWise account to check customer feedback and complaints, and generates a report. She uses VizWizard to perform text analytics and generate the graphs for over 300 messages she received, to share the findings with her manager.

04:00 PM

After her discussion with the manager, Jamie shares the VizWizard report with her team, highlighting all the issues and growth/declines in the trends. The status report helps them to more easily plan and make production-related decisions.

05:00 PM

As Jamie wraps up for the day, her wellness manager flashes the daily stress report and informs her to enjoy the evening and unwind. Venus, taking the hint, books a table for two at Jamie's favorite restaurant for a relaxing dinner with her partner.

Deloitte.

Insights

Sign up for Deloitte Insights updates at www.deloitte.com/insights.

 Follow @DeloitteInsight

Deloitte Insights contributors

Editorial: Rithu Thomas, Abrar Khan, and Blythe Hurley

Creative: Molly Woodworth, Emily Moreano

Promotion: Nikita Garia

Cover artwork: Lucie Rice

About Deloitte Insights

Deloitte Insights publishes original articles, reports and periodicals that provide insights for businesses, the public sector and NGOs. Our goal is to draw upon research and experience from throughout our professional services organization, and that of coauthors in academia and business, to advance the conversation on a broad spectrum of topics of interest to executives and government leaders.

Deloitte Insights is an imprint of Deloitte Development LLC.

About this publication

This publication contains general information only, and none of Deloitte Touche Tohmatsu Limited, its member firms, or its and their affiliates are, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your finances or your business. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser.

None of Deloitte Touche Tohmatsu Limited, its member firms, or its and their respective affiliates shall be responsible for any loss whatsoever sustained by any person who relies on this publication.

About Deloitte

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. In the United States, Deloitte refers to one or more of the US member firms of DTTL, their related entities that operate using the "Deloitte" name in the United States and their respective affiliates. Certain services may not be available to attest clients under the rules and regulations of public accounting. Please see www.deloitte.com/about to learn more about our global network of member firms.