SWARM Engineering

Food Supply Chain Management Made Simpler

Every Wednesday morning, the planners at a food supply chain company dreaded the mass of spreadsheets, emails, and post-it notes awaiting them in the office. For the next few hours, all five members of the team would huddle together to figure out the next week's purchases and the various transportation options to match a constrained supply to the inventory demands at their U.S. distribution centers, for more than thirty separate, perishable products. With trillions of possible combinations and options, it seemed like they needed superpowers to figure out the best result and simplify the complicated process they were handling. Yet this was the task they faced every week, and while a solution was always found, there was that constant feeling that "something more could have been done." Perhaps with a few more hours, they could have discovered a better outcome.

After thorough market research, the food supply chain company came across SWARM Engineering, an organization promoting a unique school of thought. As opposed to other solution providers that would suggest a hard-coded AI-based solution, SWARM offered a different approach. "We trust in the power of cognitive computing over AI as it is far better at augmenting human decisions instead of making decisions for them," states Anthony Howcroft, Co-Founder and CEO of SWARM Engineering. He believes that rather than proposing a plan, a cognitive solution should recommend a plan and allow the user to modify it according to their requirements and knowledge. After adopting SWARM's cutting-edge software, the inbound logistics team at the food supply chain organization could figure out how to track every kind of product and its associated transportation costs—within a single minute as compared to hours. What's more, they could seamlessly deploy the software and reap desired results without prior cognitive computing expertise. Along with efficiency, the solution also saved them hundreds of thousands of dollars.

But what best describes SWARM? Today, customers choose accessibility over complexity when it comes to technological solutions.

Anthony Howcroft

The key is to incorporate the software in a way that helps the business owner leverage the solution to overcome their challenges without requiring any technological prowess. SWARM, an innovation-driven company, aims to simplify the use of cognitive computing and advanced machine learning across food supply chain organizations. SWARM's mission is to enable companies to maximize the efficiency of their supply chain at affordable price points, using their existing team members' skills and knowledge. "With our next-generation cognitive computing system, we provide a no-code solution to our customers, enabling them to tackle issues in the food supply chain and logistics without any knowledge of data science, machine learning, or a degree in maths," says Howcroft.

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All their customers need to do is define the challenge. And after being presented with the solution, they literally have to click a few buttons while SWARM's advanced software runs all the complex AI algorithms and neural networks. "Customers largely care about the end-results," adds Howcroft. By deploying their first-rate cognitive software, SWARM solves a myriad of issues such as load planning in logistics, product blending, supply/demand forecasting, yield optimization, pricing, inventory demand plans, or network design decisions. SWARM can utilize an expansive range of modern algorithms to solve combinatorial problems and provide a holistic solution. It helps eliminate food waste, reduces environmental damage, improves food quality and freshness, and delivers substantial cost savings to the participants—all the while being user friendly.

On an equal note, SWARM takes a unique approach toward client onboarding. The company implements a modeling tool to capture an overview of their client's key constraints and metrics. Extracting the metadata from that model, SWARM maps the data to a curated library of algorithms. It helps them to check if there is a suitable solution concerning the challenge. And if there isn't, SWARM has enough information from the metadata to rapidly find an algorithm and plug it into the backend system to come up with a solution. Thereafter, the company provides a dynamic dashboard to the end-user that lets them simply run the solution.

Owing to their dynamic software that saves costs and reduces waste on a massive scale, SWARM has understandably established itself as one of the most prominent players in the food supply chain solution market. Building on that reputation, Howcroft wants to utilize the maximum potential of cognitive computing to augment the reaches of the food supply chain in the foreseeable future. He believes, in a pandemic-ridden world, severed with political hostility and societal disruptions, food supply chain companies need to be superheroes to be able to feed the world, overcoming all hurdles. "We want to equip all those superheroes with incredible powers using some of the next generation offerings scheduled to be rolled out this year," concludes Howcroft. CR