

Mastery

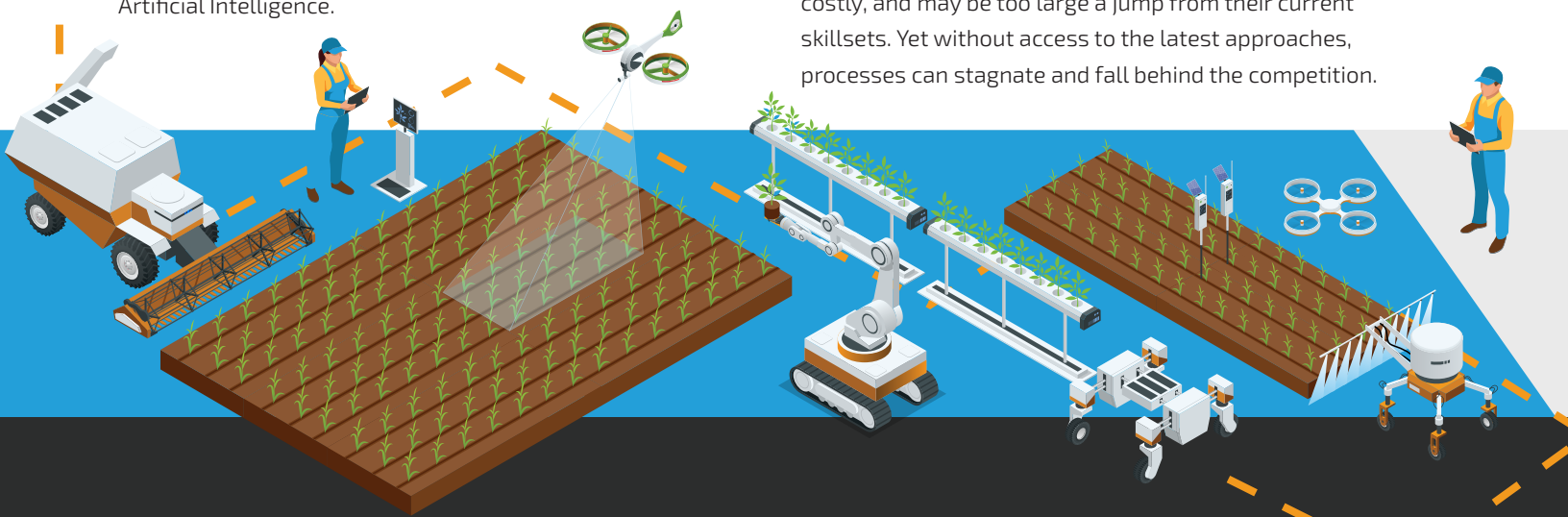
Instantly become a
subject matter expert



Challenge

In the world of agri-food, complex planning tasks require expert knowledge to be completed efficiently and profitably. Whether it's managing logistics in a highly disruptive environment, successfully planning consolidation or expansion of facilities, or integrating sustainability metrics into core sourcing decisions, businesses need expert knowledge of both their industry domain and the latest advances in operational research, machine learning and Artificial Intelligence.

Fresh academic approaches and machine learning algorithms are continually being developed, and operational staff in organizations cannot be expected to understand the nuances of every new algorithm. In fact, for most companies, a large proportion of relevant academic research is never referenced, an invisible mountain of possibility that is too complex and time consuming to conquer. Upskilling staff to understand this high level of technical knowledge is costly, and may be too large a jump from their current skillsets. Yet without access to the latest approaches, processes can stagnate and fall behind the competition.





Typical Approach

When businesses identify a specific problem that requires an advanced solution that contains AI, Machine Learning, or operational research, they frequently look to buy an application that has an inbuilt, pre-coded algorithm.

This is because any in-house skills may be hard to find, and those available are likely to be overwhelmed with a backlog of projects. Before long, organizations can find themselves with multiple applications which they must try to leverage and integrate to gain one holistic view of the truth. Even worse, the algorithms will rarely be updated by the application vendors, which means they quickly become legacy, either because they have been superseded by later

approaches or simply through the usual drift and degradation that occurs because of changing market conditions and organizational changes. One company acquisition or new product introduction could transform the required approach in an area such as logistics.

For example, a firm could launch a sku that is delivered in a much smaller pack-size, that is sold via different channels. Without retraining the underlying algorithm, results may suffer a steep decline. Businesses quickly find themselves behind the curve and at risk of being outrun by competitors. When the solution becomes obsolete, customers find they need to invest again, and the costly, inefficient cycle continues.



SWARM Solution



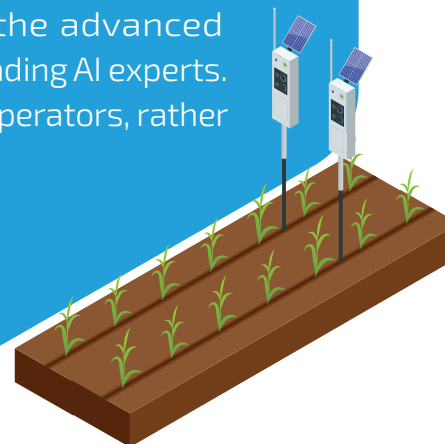
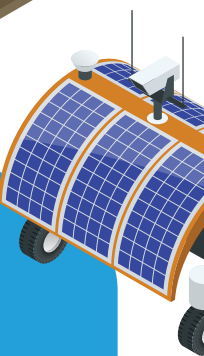
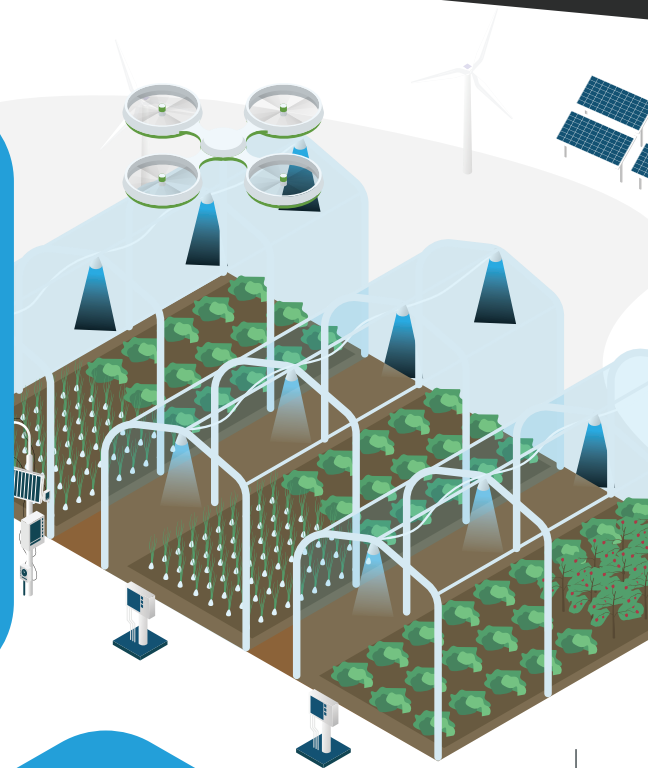
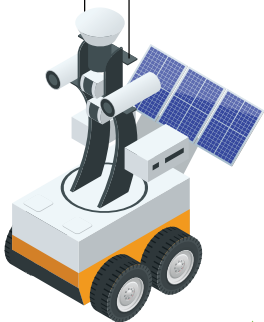
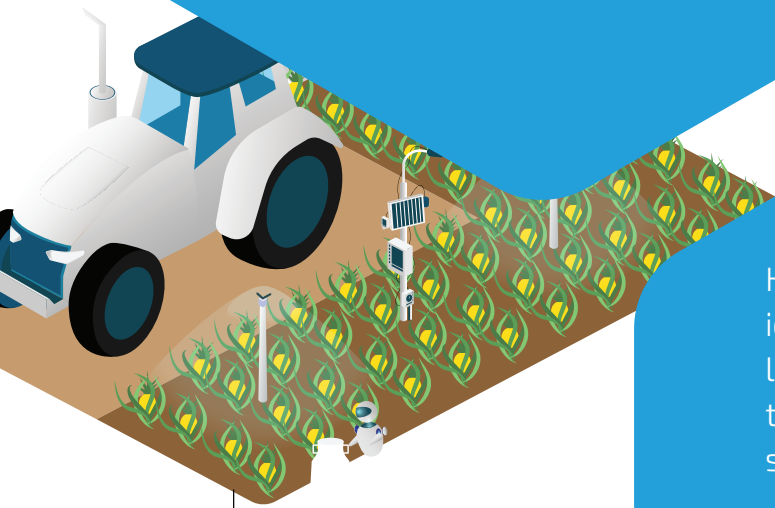
SWARM provides operational staff at agri-food organizations with the capability to clearly define a problem, and find the most efficient solution, whatever the best academic approach.

By providing a curated library of algorithms from different classes of operational research, AI and machine learning, SWARM can deliver a masterful solution that uses cutting edge techniques. No deep expertise in math or software development is required to define or deliver the solution.

Cost Savings

Human skill and expertise is reserved for the identification of problems within the business, leaving the management and enhancing of the algorithmic solutions to the SWARM software platform.

This frees time and energy for people to focus on critical questions and tasks in their organizations, safe in the knowledge that they have mastery over the advanced approaches developed by leading AI experts. The software works for the operators, rather than the providers.



Which AI superpower do you need?

Precognition

see the future

Telekinesis

move physical objects at will

Mastery

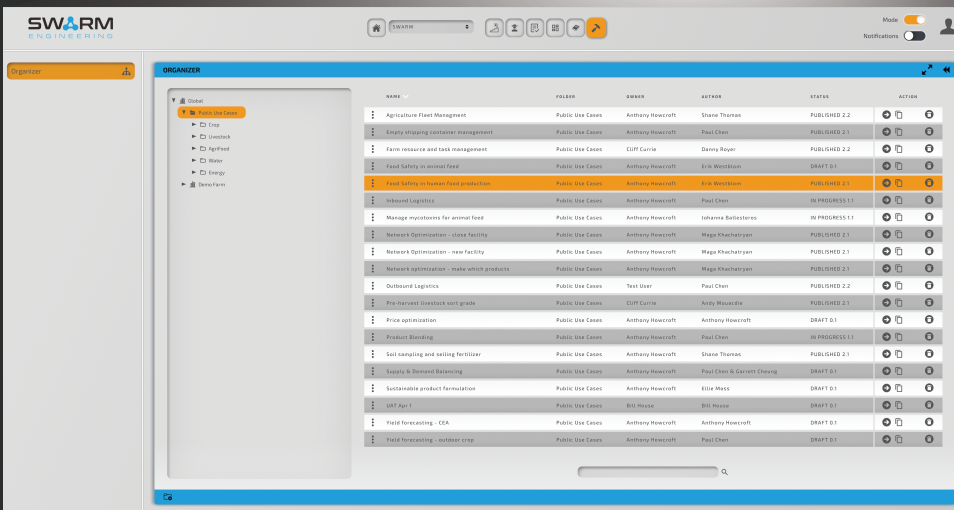
become an expert on a topic instantly

Telepathy

understand what others are thinking

Adaptability

cope with any disruption



NAME	PUBLISHER	SWARM	AUTHOR	STATUS	ACTION
Agriculture Fleet Management	Public Use Cases	Anthony Howcroft	Shane Thomas	PUBLISHED 2.2	🔍 🗑️
Empty shipping container management	Public Use Cases	Anthony Howcroft	Paul Chen	PUBLISHED 2.1	🔍 🗑️
Farm resource and task management	Public Use Cases	Cliff Corrie	Darryl Royer	PUBLISHED 2.2	🔍 🗑️
Food Safety on animal feed	Public Use Cases	Anthony Howcroft	Eric Westlock	DRAFT 0.1	🔍 🗑️
Food Safety on human food production	Public Use Cases	Anthony Howcroft	Eric Westlock	PUBLISHED 2.1	🔍 🗑️
Inbound Logistics	Public Use Cases	Anthony Howcroft	Paul Chen	IN PROGRESS 1.1	🔍 🗑️
Manage importations for animal feed	Public Use Cases	Anthony Howcroft	Johanna Bellatoris	IN PROGRESS 1.1	🔍 🗑️
Network Optimization - close facility	Public Use Cases	Anthony Howcroft	Raja Khachatryan	PUBLISHED 2.1	🔍 🗑️
Network Optimization - new facility	Public Use Cases	Anthony Howcroft	Raja Khachatryan	PUBLISHED 2.1	🔍 🗑️
Network optimization - make which products	Public Use Cases	Anthony Howcroft	Raja Khachatryan	PUBLISHED 2.2	🔍 🗑️
Outbound Logistics	Public Use Cases	Yael Usher	Paul Chen	PUBLISHED 2.2	🔍 🗑️
Pis-harvest livestock with grade	Public Use Cases	Cliff Corrie	Andy Mousader	PUBLISHED 2.1	🔍 🗑️
Pipe optimization	Public Use Cases	Anthony Howcroft	Anthony Howcroft	DRAFT 0.1	🔍 🗑️
Product Blending	Public Use Cases	Anthony Howcroft	Paul Chen	IN PROGRESS 1.1	🔍 🗑️
Salt sampling and selling fertilizer	Public Use Cases	Anthony Howcroft	Shane Thomas	PUBLISHED 2.1	🔍 🗑️
Supply & Demand Balancing	Public Use Cases	Anthony Howcroft	Paul Chen & Garrett Cheung	DRAFT 0.1	🔍 🗑️
Sustainable product formulation	Public Use Cases	Anthony Howcroft	Ellie Meek	DRAFT 0.1	🔍 🗑️
UAT App 1	Public Use Cases	Bill Hesse	Bill Hesse	DRAFT 0.1	🔍 🗑️
Yield forecasting - CCA	Public Use Cases	Anthony Howcroft	Anthony Howcroft	DRAFT 0.1	🔍 🗑️
Yield forecasting - outdoor crop	Public Use Cases	Anthony Howcroft	Paul Chen	DRAFT 0.1	🔍 🗑️

Users can utilize multiple algorithms across a range of operational research, machine learning, and artificial intelligence solutions without having to define the mechanics of how they work. They simply define the challenge they wish to solve. SWARM continually tests and adjusts solutions to ensure the results are the best that can be achieved. This ensures the right solution for a process, even as organizational and market conditions evolve, and processes mature.

See how SWARM can help your organization
swarm.engineering/start

SWARM is a solution engine for the agri-food supply chain that saves costs, reduces waste, and delivers environmental benefits. SWARM is structured around a curated market of algorithms for key supply chain processes. We provide an easy way for business users to define problems, and rapidly match them to advanced solutions without the users needing to do any software coding, or have any knowledge of advanced AI, or machine learning. SWARM is democratizing AI for the agri-food supply chain.

