

# Adaptability

Cope with any  
disruption



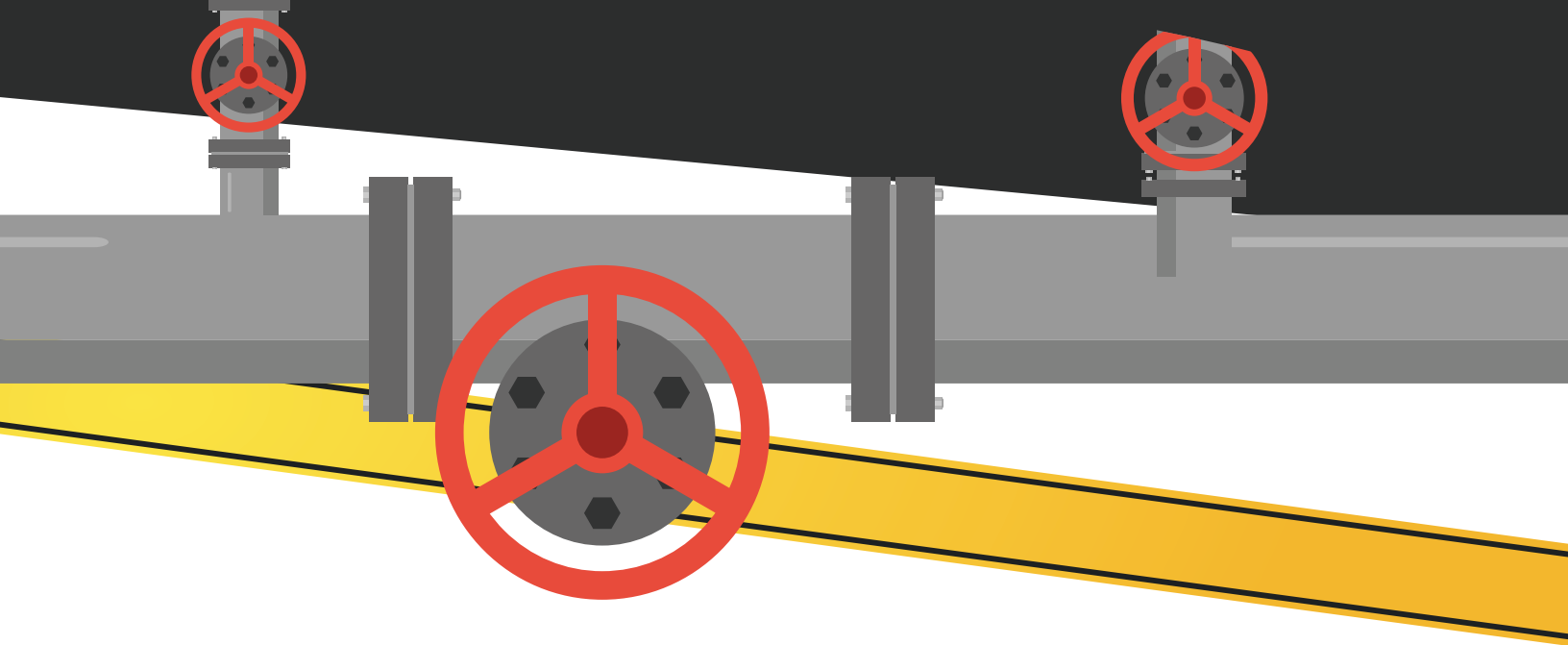
## Challenge

A supply chain is like a finely tuned machine that runs sweetly on a good day, but most days we throw new problems at it, and watch it cough and splutter.

We see transportation issues of every type – ports closed by industrial action, truck drivers calling in sick or simply taking better paid assignments at short-notice, airports closed because of extreme weather conditions. Then there are the supply issues; an outbreak of a fungal disease in the greenhouse, a

broken irrigation pipe, a third-party supplier that can't fulfill a critical order. These are all compounded by fluctuating demand, as our customers change their plans at the last moment and expect us to respond or risk losing their business. Operational teams spend their days managing these variabilities, working hard to keep the supply chain running as effectively as possible, even as it leaks money, kicks out ever more carbon, and try to find cost-effective ways to cope with the waste products that fall out of the process.





## Typical Approach

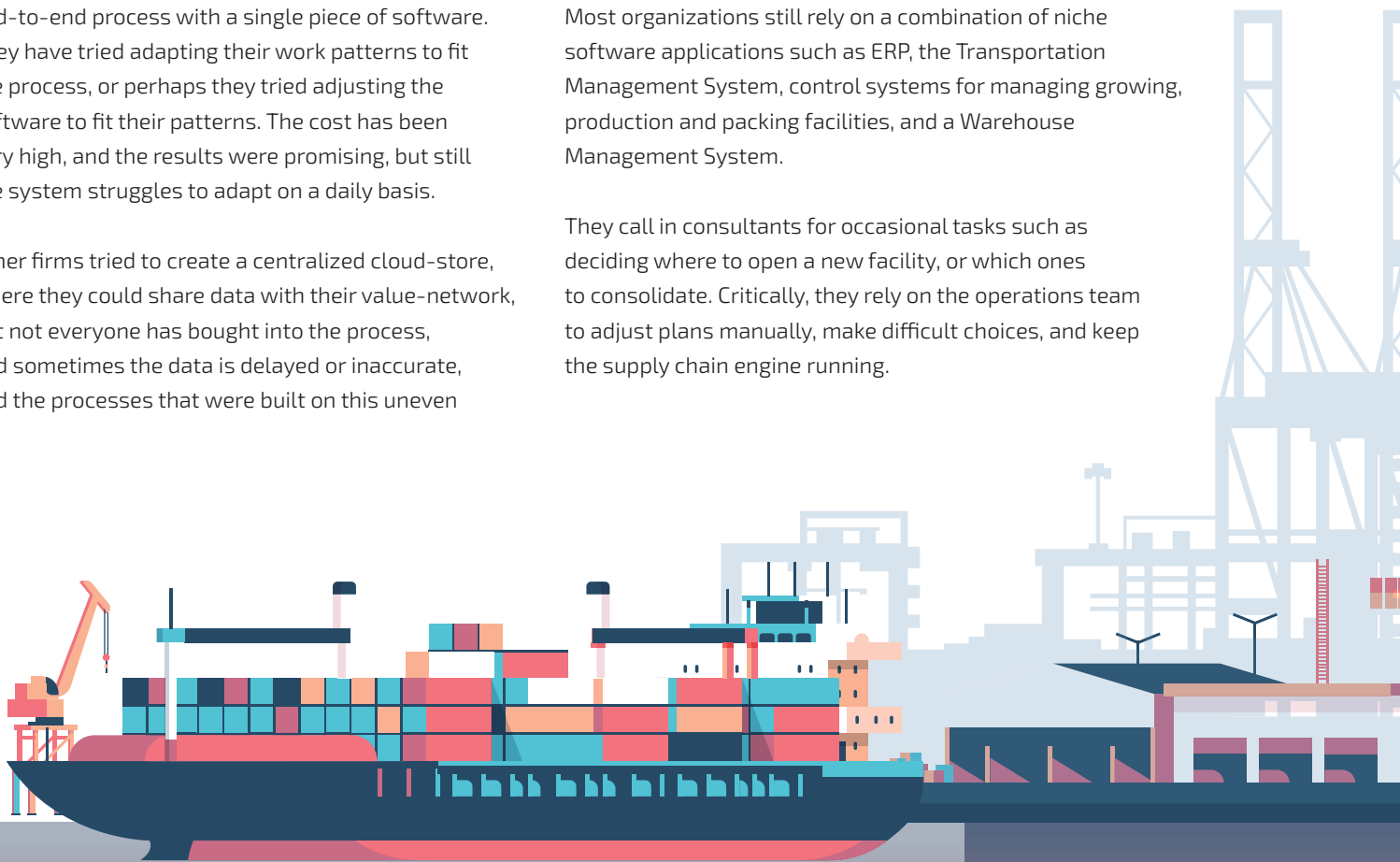
There have been many valiant attempts to improve the supply chain, with varying degrees of success. Some organizations have attempted to roll out an end-to-end process with a single piece of software. They have tried adapting their work patterns to fit the process, or perhaps they tried adjusting the software to fit their patterns. The cost has been very high, and the results were promising, but still the system struggles to adapt on a daily basis.

Other firms tried to create a centralized cloud-store, where they could share data with their value-network, but not everyone has bought into the process, and sometimes the data is delayed or inaccurate, and the processes that were built on this uneven

foundation have crumbled, and become another element that needs care just to maintain.

Most organizations still rely on a combination of niche software applications such as ERP, the Transportation Management System, control systems for managing growing, production and packing facilities, and a Warehouse Management System.

They call in consultants for occasional tasks such as deciding where to open a new facility, or which ones to consolidate. Critically, they rely on the operations team to adjust plans manually, make difficult choices, and keep the supply chain engine running.



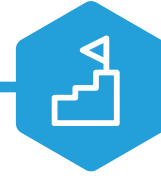
# SWARM Solution



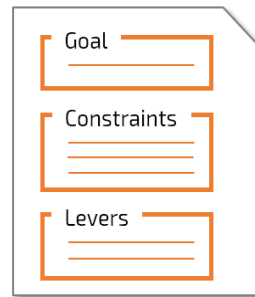
SWARM is based on a multi-agent architecture which is nature's way of designing highly adaptable systems.

Think about how ants or bees can forage and bring food back to their nest, no matter what unexpected obstacles are put in their way.

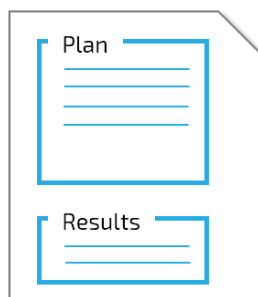
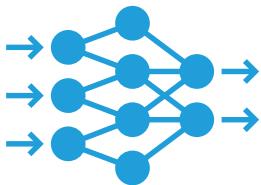
The interaction of many smaller agents within a guided framework is a powerful way of solving problems. It is also how neurons collaborate in your brain!



The key to adaptability is not to have a fixed operational process, but instead to focus on a clear goal for what you need to achieve, while understanding the constraints and levers, i.e. the things you can change which will affect the results. SWARM lets business users rapidly capture this type of knowledge in a simple way and share with others for comment and refinement.



By focusing on the desired outcome rather than the steps to achieve it, business users allow the SWARM software agents the freedom to find the best solution within the constraints. This can involve the use of different algorithms, workload patterns, or aggregations of behaviors. The plans are open so the business user can still edit and adjust the tasks until they are ready to execute.



## Cost Savings \$\$\$



Which AI superpower do you need?

## Precognition

see the future

## Telekinesis

move physical objects at will

## Mastery

become an expert on a topic instantly

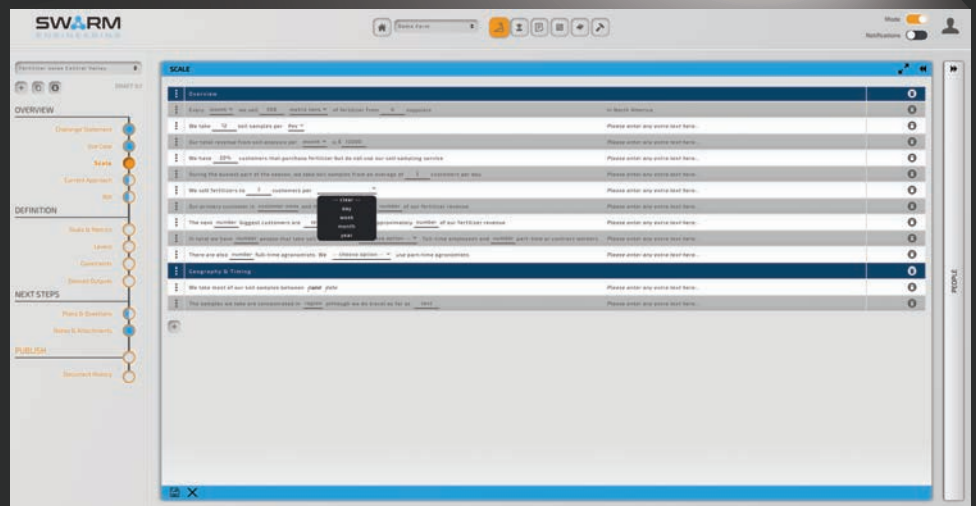
## Telepathy

understand what others are thinking

## Adaptability

cope with any disruption

With SWARM's multi-agent architecture you're equipped to handle disruption by focusing on the ultimate goal, rather than a fixed operational process that struggles when conditions change. SWARM works by separating the problem definition from the solution, so when the market or local environment alters, the process will automatically adapt under your guidance, to reach the desired outcome.



See how SWARM can help your organization  
[swarm.engineering/start](https://swarm.engineering/start)

SWARM is a solution engine for the food supply chain that saves costs, reduce 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.

