# Overview

SWARM Engineering optimizes key processes in the supply chain for food & agriculture companies to rapidly deliver operational efficiencies and cost savings of 5-30%.

#### PROBLEM

Traditional supply chain and logistics problems such as *the travelling salesman* are hard to solve but relatively easy to define. The number of real-world problems of this type is accelerating as we add more sensor data and variables to our organizational knowledge. While algorithmic solutions exist, they are hard to understand and difficult and expensive to implement for most organizations. Finding the *best* algorithm can also be challenging, especially given the pace at which new approaches are appearing. While many niche vendors are embedding AI algorithms into their vertical solutions, these are often out-of-date within months – yet remain in place for years.

### SOLUTION

SWARM provides a simple way for business users to define problems, in their terminology/language, and rapidly match these to solutions. The business user does not need any knowledge of coding, advanced AI, or machine learning. We achieve this via a cloud-based SaaS that is a next generation cognitive computing system, structured around a multi-agent approach that utilizes a curated market of algorithms.

#### **TARGET MARKETS**

In all cases, we look for areas where the customer is spending time to consider complex data in order to make business decisions with high cost (or revenue) impacts. Often these decisions are challenging because of multiple combinatorial options and we find planners' choices can be constrained by ease of management rather than business value, e.g. choosing load plans based on pre-determined lanes, rather than finding the most efficient and effective plans across all zones. Our target market sectors include:

- Food producers: grain, rice, dairy, egg, meat & poultry
- Citrus & produce growers and co-ops
- Ports and Container Shippers
- Transportation & Logistics firms



Anthony Howcroft CEO



Andy Mouacdie Chief Revenue Officer



Shiyi Pickrell Chief Data Scientist

The executive team has deep experience of building and growing multiple enterprise software startups in data, process and machine learning, with successful exits including IPOs and trade sales. All three Clevel executives spent 5+ years at Microsoft

## **TARGET ROLES**

Our typical entry point into a company is a C-level executive, such as the COO, or for major enterprises it may be the Head of Innovation/Strategy. These are the individuals tasked with finding opportunities to make substantial cost savings within their organizations. From experience, we have found that C-level sponsorship is important to project success. Subsequently, we are frequently connected with the relevant line-of-business leaders, such as VP Supply Chain or VP Logistics, who have day-to-day knowledge of the challenges and operational considerations.

									Ç	D	-			
ad Plan West 🔹									• 🗙					
RAMETERS														
x Weight 43,000		EXCLUDE CUSTOMER +												
x Paliets 21									12 Sunflower					
		Albertsons -Express	81922	20-101FR		0.50	Birmingham		92600 El Ad					
		Beatties	81905	RK22	5	1.20	Temecula	CA	Capitano Sn					
		Bee-better	81906	2011435	360	1.00	San Francisco	CA	221 The Ave					
	S	Kroger	81920	4091-9011	1200	3.50	Phoenix	AZ	Main Street					
TROL	DATA PREPARATION	Koger	82001	4035-2104	<b>850</b> 225	2.00	Smaldon Seattle	UT WA	200t A. B	Ľ	Si			
Preparation	REPA	Kroger Paul's MBS	82002	3152-8460 0F8-201	125	0.75	Los Angeles	CA.	UCLA Cam	RESULTS	SISATVNV			
	ATA P	Piggly-Wig	81913	90-7855-R	48	2.00	Atlanta	GA	24 Peachtr	2	×			
	8	Piggly-Wig	81915	91-3007-5	72	3.00	Pendville							
		Piggly-Wig	81916	91-3250-R	224	a.75	Pendville		WARM					•
		Trader Joe's	82004	RGG890	1400	3.75	Rancho SM	EN	GINEERING					-
			81919	2014-12	1200	3.50	Irvine							
		Vons	81921	2015-15	2400	6.00	Los Angeles	Load P	an West 🔹	•	•		ANALYSIS	•
			81928					_						
								PARAM	IETERS				Deliveries	Deglet Links Wayning Dealers Wayning
								MaxW	eight 43,000					United Development
								Max Pa	llets 21				Metrics	Norada U.A. Louisde States
								Num S	tops 4					e atimes former and
													Routes	Arcian Stee Stee Stee Stee Stee Stee Stee Ste
														Trail annual and
						,				NOL			Trends	
typical	i end	'-user is a	pla	nne	r, w	no		CONTR	OL	DATA PREPARATION	55	5	Irends	On the converte of the
ises SWARM's modern UX to manage									Data Preparation		INPUTS	RESULTS		ten bei
														C Laying
						-		Results						
heir process, with data fed to/from								Analys	• (0.12)					Experimentary and the second s
			-					33						
victina	svste	ems. Wha	1t 119	ed t	to tr	nkp							For additional analytics.	

## **CUSTOMERS**

hours of human effort can be accomplished in a few minutes

SWARM has shown substantial savings in a range of optimizations across the food supply chain and has secured our first enterprise customers in 2020.

- Major US herb grower/co-op: 5-8% weekly savings on inbound logistics
- Food logistics: \$20M+ annualized savings in logistics costs for enterprise in year one
- Plant-based dairy producer: reduced load planning effort from 5 hours to minutes
- US food producer: \$700K saving in load planning on a \$2.2M spend
- Grain blending: \$3M annual savings for international grain management company
- Container management: \$15M additional revenue to port via increased throughput

Learn how SWARM could positively impact your business. Contact us for a free consultation. Andy Mouacdie: +1 949 283-1627 andy@swarm.engineering