STATE OF THE INDUSTRY
Supply Chains 2022

Good Company

SAP.iO
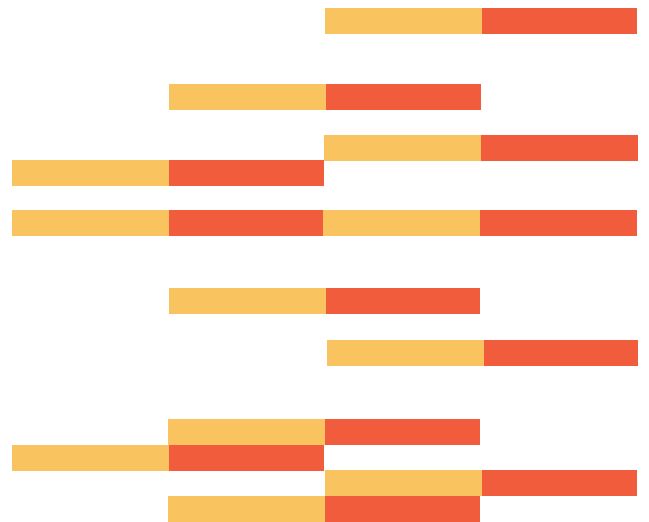
Introduction

About this report
In the following pages, we will give you a quick snapshot into the ever-changing field of supply chain, whose current state is being impacted rapidly by a variety of factors, from consumer behavior to agriculture and mobility. The moment we have been waiting for has come: sustainability and offsetting our carbon footprint is front and center for large organizations. In strategy, in research and development, and all across the supply chain – sustainability is an integral pillar for a successful and innovative future; just ask PepsiCo and ABinBev. We at SAP.iO, the innovation arm of SAP, an enterprise software company that helps clients build resilient supply chains, and Good Company, a Mission-Driven VC fund based in Tel Aviv, Israel, have mapped out the latest technologies and hottest trends that are shaking up the supply chain sector.

We invite you to utilize this report to stay up-to-date on the latest trends, validate your current and future investments and ventures, and for those of you who are building out your own resilient supply chain, be inspired.

About SAP.iO
SAP.iO is SAP's strategic business unit to incubate, accelerate and scale startup innovation and explore new business models for SAP. Since 2017, SAP.iO has helped 330+ external startups and internal ventures both start and scale their businesses while enabling thousands of SAP customers to access innovation.

SAP.iO Foundries is SAP's global network of equity-free startup accelerators that are the fastest way for founders to launch a relationship with SAP. SAP.iO Foundries provides technical and go-to-market support to help startups integrate with SAP and accelerate their entry into a curated inclusive ecosystem whose offerings can be easily accessed and deployed by SAP customers. SAP.iO currently has 10 Foundries located in San Francisco, New York, Berlin, Munich, Paris, Tel Aviv, Singapore, Tokyo, Bangalore, and Shanghai.
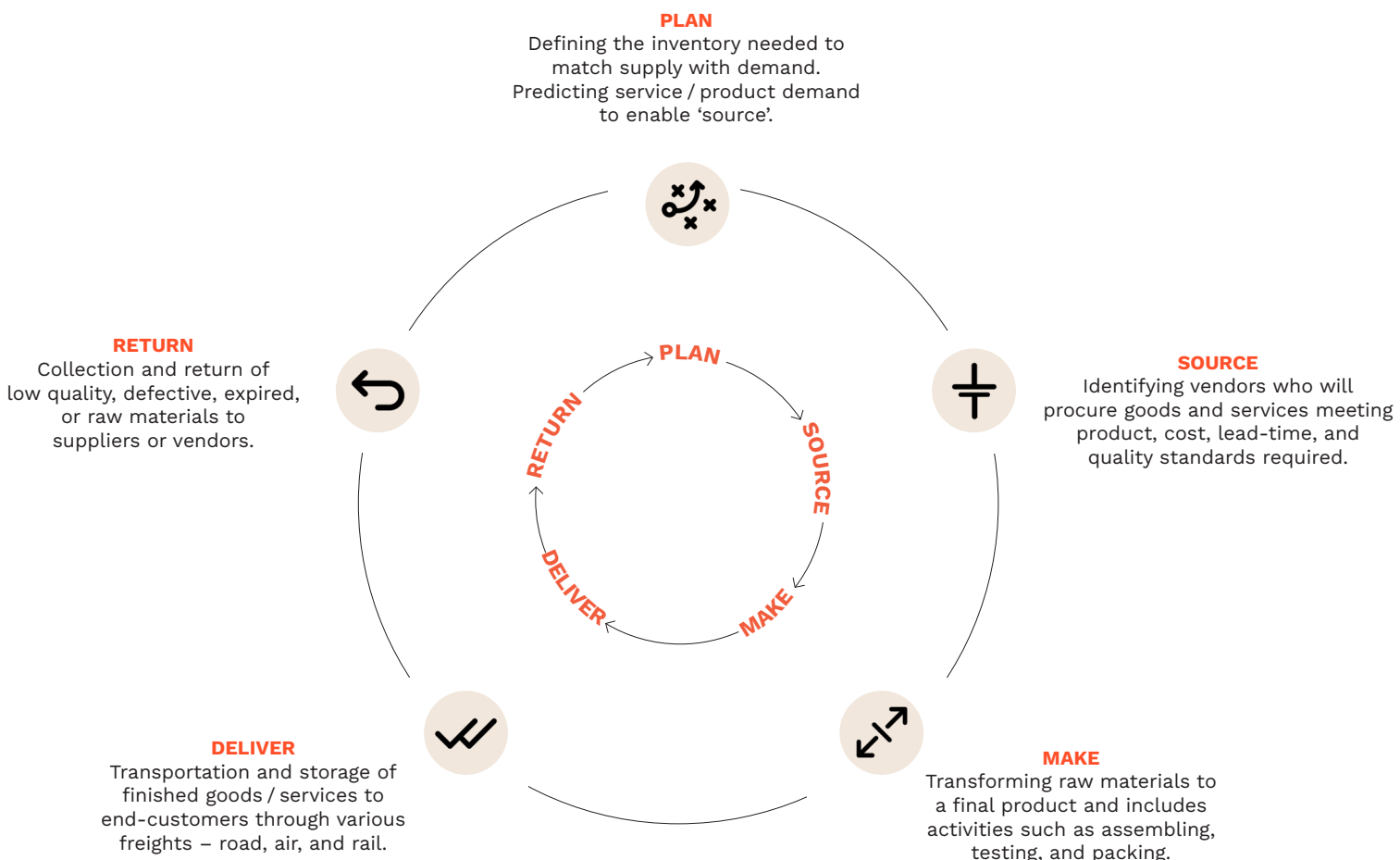
About Good Company
Good Company is a Mission-Driven VC based in Tel Aviv, Israel. GC is investing in early-stage, software-centric companies that leverage technology to solve the world's biggest problems. GC has developed a method to "reverse engineer venture capital" by partnering with multi-national corporations to deeply understand the market needs in areas like Agriculture, Future of Work & Education, Circular Economy, Digital Health and more.

The Future of Supply Chains is Going to Be Circular, Sustainable, and Visible

Supply chains today are more critical than ever. Fragmented supply chains and a global pandemic drive organizations to react for today and solve for the future. The magnitude of the problems became evident when 95% of Fortune 1000 reported supply chains disruptions during the pandemic[1].

From the fuel to run our cars to the food on our plates, each product in its life cycle travels by air, land, or water. The story of supply chain is the story of human development. With the logistics industry alone estimated at $8.6T[2] and rising at a 7.25% CAGR by 2030[3], the potential is immense.

The future of supply chains is circular, sustainable, and resilient. Preparing for a changing physical environment and an ethical chain will require a revamp of every stage, from design to collection.

PLAN
Defining the inventory needed to match supply with demand. Predicting service / product demand to enable 'source'.

SOURCE
Identifying vendors who will procure goods and services meeting product, cost, lead-time, and quality standards required.

MAKE
Transforming raw materials to a final product and includes activities such as assembling, testing, and packing.

DELIVER
Transportation and storage of finished goods / services to end-customers through various freights – road, air, and rail.

RETURN
Collection and return of low quality, defective, expired, or raw materials to suppliers or vendors.

[1] Supply chain disruption, In the eye of the storm (Accenture, 2020)
[2] Logistics industry worldwide (Statista report, 2021)
[3] Logistics Market Information Report: By Transportation Type (Market Research Future, 2021)

"The past two years have revealed the need for resiliency in the supply chain. SAP is helping companies to realize this by helping them increase agility to sense, predict, and respond to market developments, combine manufacturing automation with business execution, and become more sustainable by maximizing reuse and minimizing waste of materials from design to operations."

Franz Hero, Global Head of Digital Supply Chain Development at SAP

"Sustainability is an extremely important topic for us. Investors, consumers, and regulators are on the lookout."

Anna Farberov, General Manager, PepsiCo Labs, Global Venture and Innovation

Future Trends
Time to Build Resilience

From Linear to Circular: The Future of Products

With global population growing yearly at a 1% rate[4], designing, building, collecting, and reusing is at the core of how we prepare for the future. Balancing the preservation of our lands, oceans, and natural resources for generations to come with matching consumer demand will be key.

> Ab InBev has launched **this** project to tackle waste reduction.

Sustain the Chain: Seaborne and Road Freight Emission Challenge

The race for green growth is on. According to Gartner, 54% of customers will only do business with companies practicing environmental sustainability[5]. Seaborne trade represents 3% of global emissions, emitting 300 million tons CO_2 [6] per year and growing at 2.4% (between 2022 to 2026)[7]. Road freight emitting 5% of global emissions[8] and is expected to grow by 90% in 2050, compared to 2020[9].

> Check out Maersk's **approach** to decarbonizing ocean transport.

Enter the Metaverse: Digital Twins

From product design to manufacturing, digital twins will bring collaborations to another level. Supply chain lead times and transparency are about to cash in, as consumers could better track and react to delays and labor working conditions.

> See how BMW and NVIDIA **partner** to change vehicle development

Trust 2.0: Decentralized Trust Through Blockchain

Visibility and agility across the entire supply chain will play a primary goal for organizations. Capgemini found that a mere 6% of all companies report full visibility across their supply chain and are prepared for a crisis[10].

> Merck securing medicines' supply chain through **blockchain**

Age of Prediction: Machine Learning and Supply Chain Optimization

Identifying new patterns in data has the potential to revolutionize any industry. Supply Chain is no different. From predictive asset maintenance and supplier performance tracking to automated quality inspections and improved forecasting. Cost savings and customer satisfaction awaits those who take the leap.

> UPS uses **predictive analytics** to gain flexibility at scale

Man and Machine: Automation

With the explosion in the e-commerce industry worldwide and the demand for efficient operations, the logistics automation market alone is expected to grow at a 12.4% CAGR by 2026[11]. From trucks to warehouses to ships and ports, automation is revamping every step in the chain.

> Walmart **transforms** its warehouses with automation technology

[4] World Population Prospects: The 2019 Revision (2019, UN DESA)
[5] Reinventing Supply Chain for the Future (2021 Gartner Future of Supply Chain Survey)
[6] Green corridors: A lane for zero-carbon shipping (December, 2021 | McKinsey)
[7] Review of Maritime Transport 2021 (2021, UNCTAD)
[8] Charting global shipping's path to zero carbon (January, 2022 | McKinsey)
[9] Transport sector CO2 emissions by mode in the Sustainable Development Scenario, 2000-2030 (2022, IEA)
[10] International Transport Forum Outlook 2021, figure 5.8 (2021, OECD: ITF)
[11] Fast Forward: Rethinking supply chain resilience for a post-COVID-19 world (2021, Capgemini)
[12] Logistics Automation Market – Growth, Trends, COVID-19 Impact, and Forecasts (2021 - 2026) (2021, ReportLinker)

−3.8%

is how much seaborne trade shrank due to COVID-19 in 2020[14]

80,000

truck drivers shortage in the US[15]

11,642

supply chain disruptions worldwide in 2021. A staggering 214% increase compared to 2019[16]

50%

of supply chain organizations will invest in AI and advanced analytics by 2024[17]

9,000,000,000,000

tonne-kilometers of freight worldwide[13] carried on railroads in 2021

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[13] The top 8 supply chain technology trends (Gartner report, 2022)
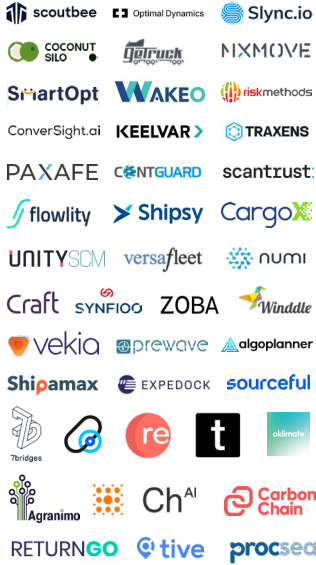[14] Logistics industry worldwide (Statista report, 2021)
[15] Review of Maritime Transport 2021 (2021, UNCTAD)
[16] Number of supply chain disruptions worldwide from 2019 to 2021 (Statista report, 2022)
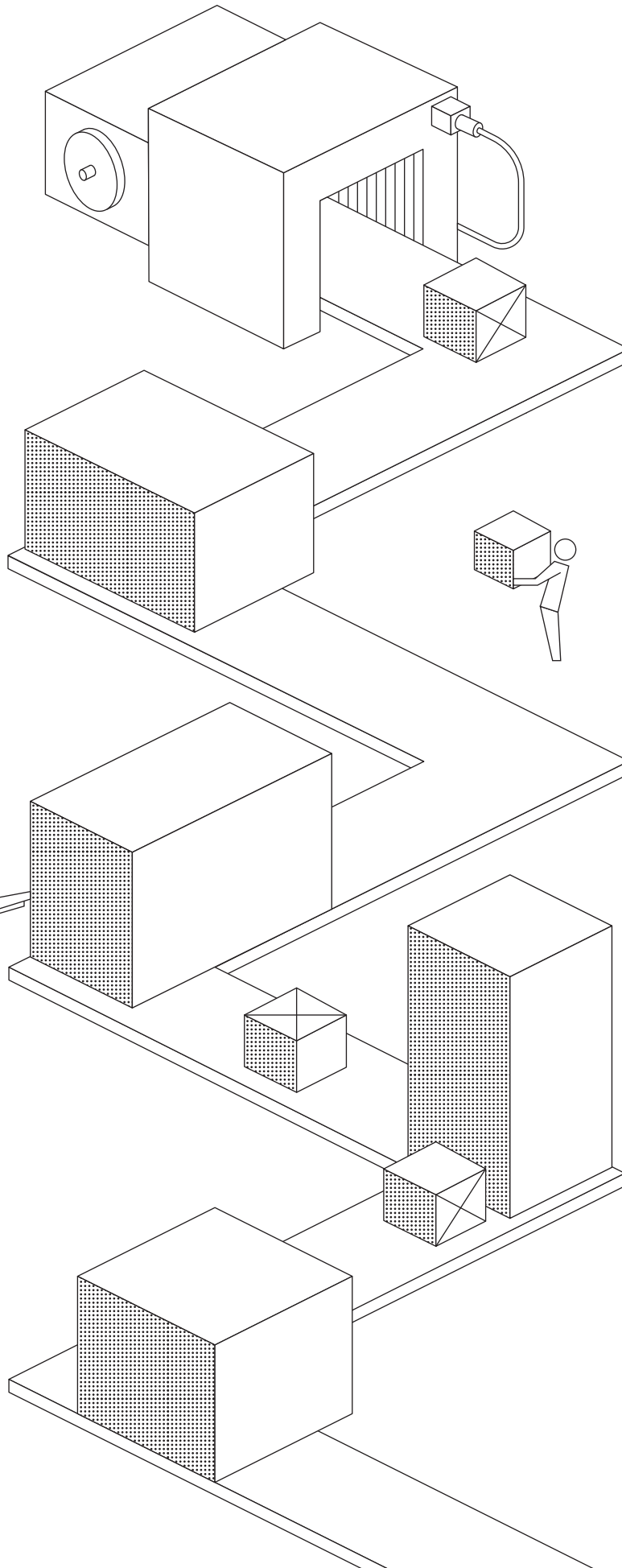[17] The American Trucking Associations (ATA) (2021)

Industry Map

Business planning and resiliency

scoutbee · Optimal Dynamics · Slync.io
COCONUT SILO · goTruck · MXMOVE
SmartOpt · WAKEO · riskmethods
ConverSight.ai · KEELVAR › · TRAXENS
PAXAFE · CONTGUARD · scantrust
flowlity · Shipsy · CargoX
UNITYSCM · versafleet · numi
Craft · SYNFIOO · ZOBA · Winddle
vekia · prewave · algoplanner
Shipamax · EXPEDOCK · sourceful
7bridges · re · t · aklimate
Agranimo · ChAI · Carbon Chain
RETURNGO · tive · procsea

Last-mile delivery

TRACKONOMY · TradeLink · interplai
OPTIWAYS · a · coco · LOGINEXT · o
NEMODATA PREDICTION MADE POSSIBLE · udelv · fleeti
RYDE · UL UNMANNED LIFE · swop
TULU · Flirtey · SHIPPEO
FLYTREX · PER ANGUSTA
MATTERNET · wise · GROUND Intelligent Logistics · revers.io
parcelperform

Transportation management

FOURKITES · Logmore · cargomatic
ADNAVEM · equilibrium · nuvo cargo
Terminal49 · FREIGHTOS · zencargo
OFLOAD · LADINGO · EXPLORATE
SHIPWELL · TRADELANES · project44
forto · Lizee · shypple
Beacon · portcast.io · CARGOLEDGER
vector.ai · O4S · E
nwo.ai · GRAINCHAIN · Bringoz

Warehousing and fulfillment

aifora · LOCIX · CAJA
everstox · Cargamos · Prediko
Fabric · Hive · GIDEON BROTHERS · Bionic HIVE
Flowspace · Ottonomy Inc · CLEARPATH ROBOTICS
boxbot · nimble · Outrider
RIGHTHAND robotics · stockly · X SYSTEM
Grabit · fetch robotics · FAST TREK · IAM ROBOTICS
UNBOX ROBOTICS · BOTSYNC · D
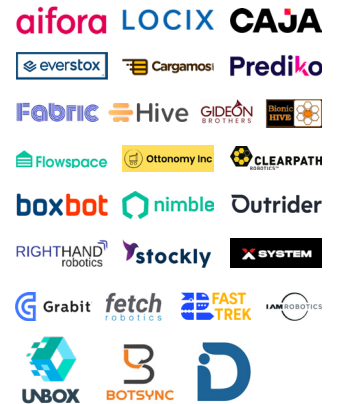
Company Highlights
Good Company and SAP.iO

TULU provides a full and unique solution for accessing shared products to all occupants of the residential building using advanced technology. TULU designs and fits out a TULU room in a space provided by the building, customizes the proprietary TULU app. The outcome is a new way of living, encouraging more responsible consumption, reducing the cost of living in the city, and consistent with the trend to smaller and smaller living spaces.

ReturnGO is an AI-driven return management platform that already serves more than 500 merchants to solve the problem of costly product returns and its associated wasted product – a major pain in the e-commerce world.

Procsea builds a simple, robust and sustainable fresh food industry by connecting businesses together through technology. The software is used by large retailers and wholesalers to help them streamline sales and purchasing processes while improving data exchanges and products traceability.

GrainChain is solving the biggest problems facing supply chains. Our blockchain and IoT-based suite of products allows all participants to trace, verify, and exchange commodities from field to market. GrainChain has offices in the US, Mexico, Central America, and is expanding into South America.

NWO.ai is an intelligence amplification platform that harnesses machine learning techniques and human metadata to identify global cultural shifts early and throughout the lifecycle of trends, across various sectors, ranging from consumer products to global war & conflict.

ChAI predicts raw material prices through a combination of AI and alternative data. Our goal is to assist purchasing and finance teams at global manufacturers with exposure to commodity prices to understand market volatility, manage their price risk and thereby reduce costs.

Winddle offers a unique end-to-end and agile approach of sourcing and supply chain management, unifying data & streamlining collaboration between all teams and partners, from order to delivery. The platform is used by companies in Retail, Luxury and Industry, with more than 3800+ connected suppliers.

"Progress requires bold ideas and deviation from the norms. You have to think outside the box and beyond the boundaries while aiming for validity today and soundness tomorrow."

Ezgi Barcenas, Chief Sustainability Officer, AB InBev

Startup Map Appendix
Business Planning & Resiliency

Name	HQ location	Stage	Total funding
7Bridges	London, UK	A	$20.4M
Agranimo	Santiago, Chile	Seed	$2.5M
Aklimate	London, UK	Unknown	$125K
Algoplanner	Tel-Aviv, Israel	Seed	Unknown
ChAI	London, UK	Seed	$1.9M
Carbon Chain	London, UK	Seed	$125K
CargoX	Ljubljana, Slovenia	Unknown	$7M
COCONUT SILO	Seoul, South-Korea	Pre-Seed	$470K
Contguard	Hod Hasharon, Israel	A	$11.5M
ConverSight.ai	Indianapolis, Indiana, USA	Seed	$7M
Craft.co	San Francisco, California, USA	A	$10M
Expedock	Palo Alto, California, USA	Seed	$7.6M
Flowlity	Paris, France	Unknown	$1.1M
GeTruck	Kfar Saba, Israel	Unknown	Unknown
Keelvar	Cork, Ireland	A	€16.8M
Mixmove	Oslo, Norway	A	Unknown
numi solutions GmbH	Munich, Germany	Unknown	Unknown
Optimal Dynamics	Queens, New York, USA	A	$22.8M
PAXAFE	Milwaukee, Wisconsin, USA	Seed	$3.2M
Prewave	Vienna, Austria	Seed	Unknown
Procsea	Lausanne, Switzerland	A	$10.9M
Responsibly	Copenhagen, Denmark	Pre-Seed	$2M
ReturnGo	Herzliya, Israel	Seed	$6.45M
Riskmethods	Munich, Germany	B	$24.3M
Scantrust	Lausanne, Switzerland	B	$5.8M
scoutbee	Berlin, Germany	B	$76M
Shipamax	London, UK	A	$9.5M
Shipsy	Gurgaon, Haryana, India	A	$7.7
Slyc.io	Roanoke, Texas, USA	B	$75.9M
SmartOpt	Istanbul, Turkey	Seed	Unknown
Sourceful.com	Manchester, UK	Seed	$12.2M
Supertrace	London, UK	Seed	Unknown
Synfioo	Potsdam, Germany	A	$2.8M
Tacto	Munich, Germany	Pre-Seed	Unknown
Tive	Boston, Massachusetts, USA	A	$16.9M
Traxens	Marseille, France	C	€21.5M
Unity SCM	San Jose, California, USA	Pre-Seed	$2M
Vekia	Lille, France	B	€14.4M
VersaFleet	Singapore	A	$3.5M
Wakeo	Paris, France	A	$13.1M
Winddle	Paris, France	Unknown	Unknown
Zoba	Boston, Massachusetts,USA	A	$15.5M

Startup Map Appendix
Transportation Management

Name	HQ location	Stage	Total funding
Adnavem	Göteborg, Sweden	Unknown	$4M
Beacon	London, UK	B	$65M
Bringoz	Tel Aviv, Israel	Seed	Unknown
CargoLedger	Amsterdam, NL	Pre-Seed	Unknown
Cargomatic	Long Beach, California, USA	B	$55.8M
Emerge	Scottsdale, Arizona, USA	B	$172.5M
Equilibrium Logística	Florianópolis, Brazil	Seed	R$1.5M
Explorate	Brisbane, Australia	A	A$8.6M
Forto	Berlin, Germany	C	$343.4M
Four Kites	Chicago, Illinois, USA	D	$201.5M
Freightos	Miami Beach, Florida, USA	C	$118.3M
GrainChain	Mcallen, Texas, USA	A	$10.7M
Landigo	Hod Hasharon, Israel	Unknown	$1M
LIZEE	Paris, France	C	$2.6M
LogMore	Jyväskylä, Finland	Seed	$4.9M
Nuvo Cargo	New York, New York, USA	Unknown	$37.8M
nwo.ai	New York, New York, USA	Seed	$3.5M
O4S	Gurgaon, India	A	$9.5M
Ofload	Sydney, Australia	A	A$7.3M
Portcast	Singapore	Unknown	$3.2M
Project44	Chicago, Illinois, USA	E	$817.5M
Shipwell	Austin, Texas, USA	B	$47M
Shypple	Rotterdam, NL	A	€27.7M
Swyft	Toronto, Ontario, Canada	A	$20M
Terminal 49	San Francisco, California, USA	Seed	Unknown
TradeLanes	Oakland, California, USA	Seed	$6M
Vector.ai	London, UK	A	$17.9M
ZenCargo	London, UK	B	$66.4M

Startup Map Appendix
Warehousing

Name	HQ location	Stage	Total funding
aifora GmbH	Düsseldorf, Germany	A	€10M
BionicHIVE	Gan HaDarom, Israel	A	Unknown
Botsync	Singapore	Unknown	Unknown
Boxbot	Oakland, California, USA	Seed	$9M
Caja Systems	Binyamina, Israel	Unknown	Unknown
Cargamos.com	Mexico City, Mexico	Seed	$12.3M
Clearpath Robotics	Kitchener, Ontario, Canada	C	$76M
Dexterity	Redwood City, California, USA	B	$196.2M
everstox	Munich, Germany	A	$26M
Fabric	New York, New York, USA	C	$336M
Fast Trek	Stockholm, Sweden	Unknown	Unknown
Fetch Robotics	San Jose, California, USA	C	$94M
Flowspace	Los Angeles, California, USA	B	$46.5M
Gideon Brothers	Zagreb, Croatia	A	$36.5M
Grabit Inc.	Sunnyvale, California, USA	B	$21M
Hive	Berlin, Germany	A	$43.8M
IAM Robotics	Pittsburgh, Pennsylvania, USA	Unknown	$21M
Locix	San Bruno, California, USA	B	$11.1M
Nimble Robotics	San Francisco, California, USA	A	$50M
Ottonomy Inc	Santa Monica, California, USA	Pre-Seed	$1.3M
Outrider	Golden, Colorado, USA	B	$118M
Prediko	London, UK	Pre-Seed	$500K
RightHand Robotics	Somerville, Massachusetts, USA	Unknown	$53.3M
Safety Logistics	Gyor, Hungary	Seed	$213.7K
Stockly	Paris, France	Seed	$6M
Unbox Robotics	Bangalore, India	A	$9.1M

Startup Map Appendix
Last-Mile Delivery

Name	HQ location	Stage	Total funding
Airmee	Stockholm, Sweden	A	$27.9M
Coco	Santa Monica, California, USA	A	$61.5M
Fleeti	Dakar, Senegal	Seed	$1.2M
Flirtey	Reno, Nevada, USA	A	$16.2M
Flytrex Aviation	Tel-Aviv, Israel	C	$60.3M
Ground	Koto, Tokyo, Japan	Unknown	$36.2M
Interplai	Ann Arbor, Michigan, USA	Seed	$2.1M
LogiNext	Jersey City, New Jersey, USA	B	$49.6M
Matternet	Mountain View, California, USA	B	$31.1M
Nemodata	Tel Aviv, Israel	Unknown	Unknown
Onfleet	San Francisco, California, USA	A	$18.9M
OptiWays	Herzliya, Israel	Unknown	Unknown
Parcel Perform	Singapore	A	$21.5M
Per Angusta	Lyon, France	Unknown	$5M
Reverse.io	Paris, France	Unknown	$6.4M
Ryde	London, UK	Seed	$4.4M
Shippeo	Paris, France	C	$67.9M
SimpliRoute	Santiago, Chile	B	$11.2M
Skyports	London, UK	A	£6M
Swoopin	Paris, France	Seed	Unknown
Trackonomy Systems	Santa Clara, California, USA	Unknown	$38.8M
TradeLink	Munich, Germany	Seed	Unknown
TULU	New York, New York, USA	A	$18.8M
udelv	Burlingame, California, USA	Seed	Unknown
Unmanned Life	London, UK	Unknown	$2.5M
Urbantz	Brussels, Belgium	A	€15.7M
Vox Technologies	Tokyo, Japan	Seed	Unknown
Wise Systems	Cambridge, Massachusetts, USA	C	$73.1M

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