



# LOGISTICS TECH IN CHICAGO

A fast-growing vertical within the TD&L industry capitalizing on Chicago's historic strengths, evolving technology, and a global supply chain crisis.

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# Executive Summary



Chicago's Transportation, Distribution, and Logistics (TD&L) industry is one of the nation's largest, and a significant pillar in our local economy. The metro area boasts the nation's number one port by value, the largest intermodal facility, the most TD&L firms in the U.S., and the nation's second largest TD&L workforce.

Significant pressures — including changing consumer preferences for e-commerce and a global supply chain crisis — have accelerated the need for innovation in the TD&L industry. Simultaneously, new technologies and a wave of growth capital availability create the conditions for the **Logistics Tech** vertical to take off.

## Key Takeaways

1. Chicago's Logistics Tech economy demonstrates formidable growth. Chicago is also home to multiple key industry players, and more growth capital — venture capital, private equity for growth, and corporate venture capital — is being attracted as these companies grow larger and more valuable.
2. Chicago is a market of choice for corporate relocations and expansions in Logistics Tech.
3. The metro area offers a unique blend of strengths: a maturing venture capital ecosystem, a connection to the powerhouse TD&L industry, and a diverse talent pool.
4. Despite significant growth in investment and market dominance, there are opportunities in developing underrepresented vertical segments, retaining tech talent, and providing more support for early-stage growth.

The Research Center offers a deep dive into Chicago's Logistics Tech ecosystem, especially as it performs within World Business Chicago's economic development focus areas — including access to capital and talent

Chicago has an opportunity to be the nation's leader in Logistics Tech. This issue of the Chicago Business Bulletin illustrates Chicago's Logistics Tech's remarkable ecosystem performance, and opportunities to drive additional growth.

## Fact Sheet



Chicago's TD&L industry is one of the nation's largest, generating **\$24B annually** in output, and employing over **260K** individuals.



Chicago's Logistic Tech vertical consists of **six WBC-defined segments**, with over **100** locally headquartered companies that employ over **34,000** individuals.



Chicago's Logistic Tech vertical saw an **802% increase in growth capital** investment — venture capital, private equity for growth, and corporate VC between 2019 and 2021 — the highest among peer cities.



In 2021, there were **five** mega-rounds (\$100M+ deals), while median post-deal valuation increased to **\$190M** from \$50M in 2020.



Chicago's Logistic Tech ecosystem currently consists of **five unicorns** and **two publicly held companies**.



In Q1 2022, Logistics Tech firms raised **\$420M in growth capital**, an increase of **211%** over Q1 2021.

# Logistics Tech Defined



## What is Logistics Tech?

Logistics Tech is the market for software and hardware solutions that integrate emerging technology into the logistics industry to improve operations. Logistics Tech is nested within the broader Transportation, Distribution & Logistics (TD&L) industry.

For example, a Logistics Tech firm could offer:

- a software platform connecting truckers to shipping platforms
- a last-mile delivery service using drone technology
- blockchain technology to record cargo transactions
- autonomous trucks

Seemingly straightforward, the Logistics Tech market is difficult to comprehensively size. The vertical is highly segmented, offering a range of products to meet the needs of consumers and the traditional logistics industry.

Furthermore, the Logistics Tech market often overlaps with other industries or verticals, including Supply Chain Tech, Mobility Tech, and the traditional logistics industry, as firms develop technologies in-house.

In this analysis, the World Business Chicago Research Center includes firms where the primary product offering is a part of the Logistics Tech market.

## Logistics Tech is a sizable share of Chicago's growth capital ecosystem.

As of 2022, there are over 100 Logistics Tech companies headquartered in Chicago, 63 of which have raised over \$3.7B in growth capital since the late 1990's.

In 2021, 25 companies raised **\$1.38B in growth capital** funding through 26 deals — over 14% of all growth capital raised in Chicago in 2021. As of Q1 2022, four companies have already raised **\$420M in growth capital**.

**\$1.38B**

Growth capital raised in 2021

**802%**

Increase in growth capital over 2019

**170+**

Number of firms with a presence in Chicago

**158**

Active patents held by headquartered companies

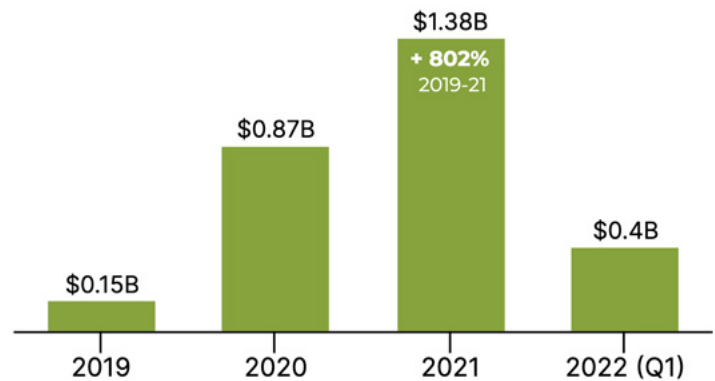
**34,000+**

Employment in 2021

**5**

Unicorns (\$1B+ valuation)

### Logistics Tech growth capital, 2019-21:



Sources: Pitchbook Data, Inc • Moody's Analytics



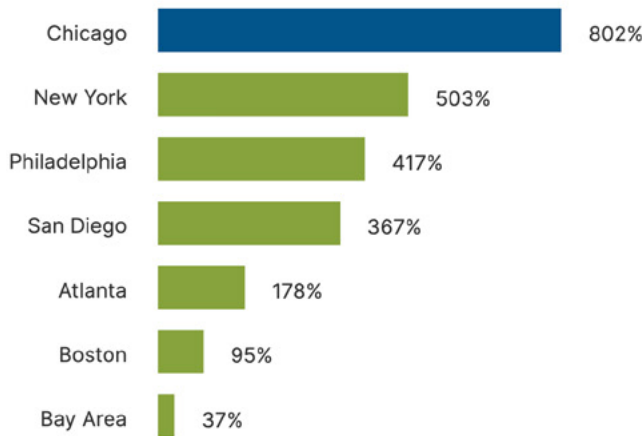
# Chicago's Logistics Tech Ecosystem is Diverse and Fast-Growing



## Chicago has seen the most Logistics Tech growth in the U.S.

Growth capital investment in Logistics Tech has increased 802% between 2019 and 2021, most among comparable venture capital and TD&L ecosystems.

### Change in Logistics Tech growth capital among top ecosystems\*, 2019-21

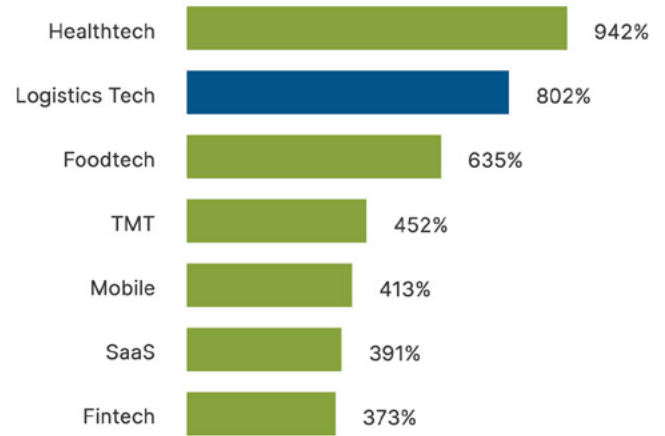


\*Excluding Detroit, which saw a major outlier deal of \$4.7B in 2021

## Logistics Tech is one of Chicago's fastest growing verticals.

Within Chicago's venture capital ecosystem, Logistics Tech proves to be one of its fastest growing larger verticals.

### Top growth verticals, 2019-21 (Verticals with \$500M+ growth capital investment in 2021)



## Chicago has several big Logistics Tech companies.

### Chicago's declared Logistics Tech unicorns:

2022	
Loadsmart	
2021	
Bringg	Project44 • ShipBob
2015	
Uptake	

### Chicago's top five VC-backed Logistics Tech firms by amount raised, with most recent deal:

<b>Uber Freight</b> \$550M early stage VC funding, Q4 2021	<b>Loadsmart</b> \$200M Series D funding, Q1 2022	<b>Project44</b> \$420M Series F funding, Q1 2022
<b>ShipBob</b> \$200M Series E funding, Q2 2021	<b>FourKites</b> \$100M Series D funding, Q1 2021	

Sources: Pitchbook Data, Inc

# Chicago's Logistics Tech Ecosystem is Diverse and Fast-Growing



## Chicago's Logistics Tech vertical is tilted towards software and freight, with areas for growth.

Chicago's Logistics Tech industry is well represented in freight tech, having captured 77% of growth capital in 2021 through eight deals. Additionally, while a few companies blended software with hardware applications, virtually all companies raising growth capital in 2021 offered software as a primary product.

Growth in freight tech in Chicago is dominated by mega-deals: Loadsmart, Project44, FourKites, and UberFreight all completed \$100M+ rounds in 2021, complemented by a mega-round in e-commerce — ShipBob.

### There are opportunities for growth.

Chicago's Logistics Tech landscape is tilted towards software-based connection platforms, but lacking in other areas. Underrepresented segments include hardware-based applications — including sensors, drones & eVTOL logistics, or autonomous trucks — and blockchain applications.

Growth capital raised by segment	2019	2020	2021
Freight tech	\$95.3M	\$704.6M	\$1.06B
Warehouse tech	\$0.7M	\$1.1M	\$8.6M
Last mile delivery	\$4.3M	\$91.2M	\$31.7M
Sensing, telematics & hardware	\$1.3M	\$1.5M	\$30.7M
Other e-commerce	\$4.5M	\$68.0M	\$205.5M
Other supply chain software	\$56.3M	\$20.2M	\$40.5M

Additionally, while there were four warehousing tech deals in 2021, the average deal size was just \$2.9M — well below freight tech's average deal size of \$151.3M. Finally, while Chicago boasts the nation's number one airport by trade value, few Logistics Tech firms focus primarily on air freight.

## Logistics Tech is a sizable share of Chicago's growth capital ecosystem.

The total number of investors in growth capital deals for Chicago-based Logistics Tech firms nearly doubled between 2019 and 2021, despite the number of deals increasing by only two.

More Chicago-based investors are participating in Logistics Tech deals, and investing more: in 2021, 19 Chicago-based investors channeled \$1.96B into companies, a 368% increase over 2019.

	2019	2020	2021
Total deal count	24	25	26
Total investors	46	90	80
Chicago-based investors	16	15	19
Investment from Chicago-based investors	\$419.4M	\$439.3M	\$1.96B

Sources: Pitchbook Data, Inc

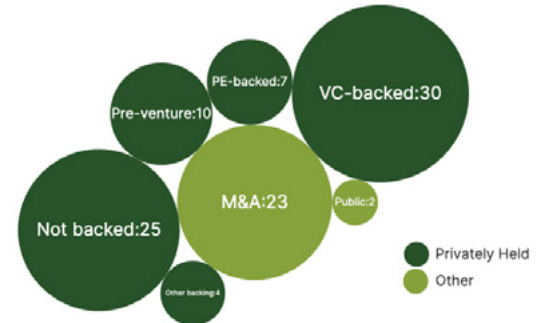
# Chicago's Logistics Tech Ecosystem is Skewed Towards More Mature Firms



## Venture capital is more likely to be later-stage, while not all Logistics Tech firms are backed by growth capital.

There are fewer Logistics Tech firms in the pre- and early-stage venture capital universe: of the 26 growth capital deals in 2021, 11 were late-stage VC, eight were early-stage VC, and seven were pre-VC deals. Similarly, **median post-deal valuation increased from \$50.2M in 2020 to \$190M in 2021.**

Company count by ownership and backing



## More Chicago firms are acquiring than being acquired.

Acquisition of Logistics Tech firms is an important tool for acquirers to fold in new technologies, capabilities, and customers. This activity illustrates a different type of growth in Chicago's Logistics Tech ecosystem, and suggests there are more mature companies in lieu of early-stage firms seeking an exit.

Since 2015, 13 firms in Chicago have been acquired by 13 companies worldwide, with two of those acquisitions occurring in 2021 alone.

However, since 2015, **20 firms in Chicago have acquired 35 Logistics Tech companies, with nearly a third of those acquisitions occurring in 2021 alone.** Acquirers range from industry titans, like Boeing, to unicorns like Project44, Uber Freight, or Loadsmart. Just two of the acquisitions by Chicago companies were located in Chicago.

## Nationally and locally, more Logistics Tech firms are going public.

Chicago has produced five publicly held companies in the Logistics Tech universe, although three have since been taken from public to private ownership:

**Current:** Fast Radius (SPAC merger, 2022), John Bean Technologies (2008)

**Former:** GrubHub, Telular, and Echo Global Logistics

GrubHub's 2020 acquisition by Just Eat Takeaway expanded the latter's U.S. presence, while Echo Global Logistics' and Telular's acquisitions by private equity gave them more flexibility in growth and technology development.

Although Chicago is about on par with the rest of the nation for the proportion of Logistics Tech firms which are publicly held — 2.0% vs 2.7% — Logistics Tech firms are more likely to be public. Less than 1% of all firms regardless of industry are publicly held.

Sources: Pitchbook Data, Inc



# Chicago is a Market of Choice for Expansions & Relocations



## 14 Logistics Tech companies made a pro-Chicago decision in 2021.

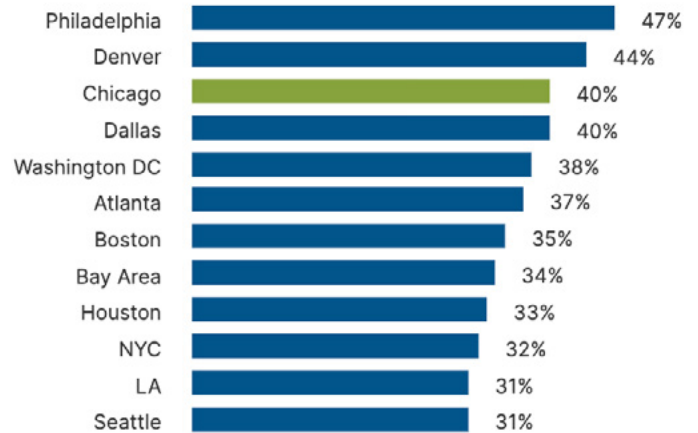
Chicago is a location of choice for expanding or relocating Logistics Tech firms, often after raising significant venture capital funds. While firms may develop their platforms in mature, software-focused VC ecosystems — for example, three of the five unicorns were involved in accelerator programs in the Bay Area, — Chicago is an ideal location to scale and connect with customers within the TD&L industry.

In 2021, 20 of the 173 “pro-Chicago\* decisions” identified by World Business Chicago were in the logistics industry, with 14 of those in Logistics Tech. Combined, these companies raised over \$3 billion in growth capital in the preceding two years.

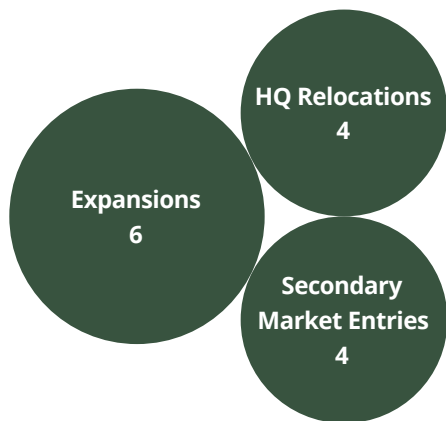
\*City of Chicago, not including greater metro area

## Chicago is also a key market for secondary offices.

There are nearly 150 logistics tech companies with a presence in the Chicago metro area, of which 40% are secondary, non-headquartered offices.



### Logistics Tech pro-Chicago decisions in 2021 by type:



#### Originating locations include:

Montreal • Istanbul • Pittsburgh • San Diego • New York

### Notable, recent pro-Chicago decisions:

#### FarEye

After raising \$100M in Series E VC funding, FarEye, a New Delhi-based last-mile logistics firm, announced Chicago as its U.S. headquarters.

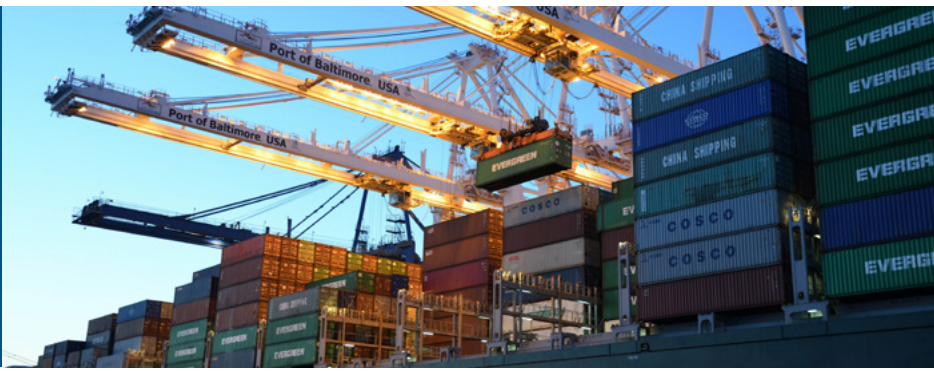
#### Loadsmart

After raising \$90M in Series C VC funding in 2020, freight tech firm Loadsmart moved its headquarters from New York to Chicago. In early 2022, Loadsmart reached unicorn status with a \$1B valuation.

Sources: Pitchbook Data, Inc



# What's Driving Growth in Logistics Tech?



## Nationally, three conditions have affected demand for advanced technologies in the TD&L industry:

### 1. Emerging technologies, including blockchain

Advanced, overlapping technologies are key to driving innovation and cost-savings in Logistics Tech. As complementary technologies evolve through injections of growth capital, they can be leveraged in logistics-related technologies.

For example, utilization cases range from the use of blockchain — which brings transparency to the supply chain — to drones — which provide a new method of delivery.

### 2. An increase in growth capital availability

2021 was a banner year for growth capital — venture capital, private equity for growth, and corporate VC — deployed across the U.S. Investment in companies increased 122% from 2018 to \$426B in 2021, while the number of deals also increased.

Not only did the median deal size increase 65% to \$4.4M in 2021, the number of investors also increased 34% to nearly 20,000.

### 3. Changing consumer patterns and a global supply chain crisis

Consumers are buying more goods, and spending more on e-commerce, necessitating increased capacity and efficiency in the TD&L sector.

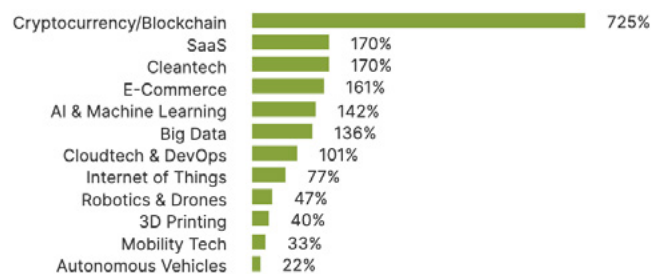
**9.4%**  
Increase in e-commerce spending between Q4 2020 and Q4 2021, reaching **\$218.5B**.

**13%**  
Increase in containers passing through the Port of Los Angeles between 2018 and 2021, reaching **10.7M in 2021**.

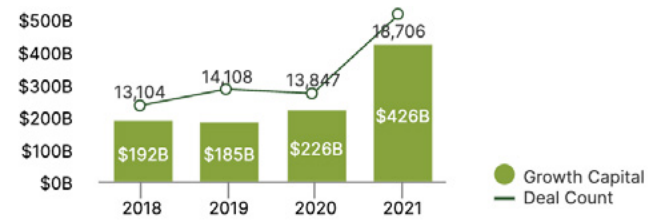
The COVID-19 pandemic shifted consumer patterns: with increased time at home, online shopping and spending on goods increased several-fold. In Q4 2021, U.S. e-commerce spending increased 9.4% from the year prior. In the first few months of the pandemic, Amazon reported selling 57% more goods than the year prior. This shift in consumer patterns overwhelmed ports, magnifying other supply chain disruptions, like workforce shortages and container availability.

Sources: Gamio, Lazaro and Peter S. Goodman (2021, Dec. 5). *How the Supply Chain Crisis Unfolded*. The New York Times. Pitchbook Data, Inc • The Port of Los Angeles, 2021 Container Statistics • U.S. Census Bureau, Quarterly E-Commerce Report

#### Overlapping vertical growth, 2019-21



#### National growth capital and deal count, 2018-21



# What's Driving Growth in Logistics Tech?



## Locally, Chicago's established and growing TD&L economy is an opportunity for firms to cluster around customers, ideas, and talent.

As the Logistics Tech segment grows in response to macro pressures, it makes sense for firms to cluster around customers, ideas, and talent in Chicago.

Chicago's Logistics Tech segment is just a small slice of the region's overall TD&L industry. The nation's crossroads, Chicago is a leader in moving freight via air, rail, and truck. Of the top 25 third party logistics providers, 23 have a presence in Chicago; Chicago is also home to Centerpoint Intermodal Center, the nation's largest intermodal facility.

Chicago's TD&L industry is also capitalizing on the global supply chain crisis and additional pressure on seaports, especially as some firms have shifted to shipping by air. O'Hare International Airport, already the number one airport by trade value pre-pandemic, saw an increase in trade by 40% in 2021 when compared to 2020.

## Chicago is creating momentum as a hub for logistics and supply chain innovation.

Chicago's TD&L ecosystem is actively looking towards the future: Chicago is home to a growing number of programs focused on developing supply chain and logistics technologies, including **1871's Supply Chain Innovation Lab**.

Innovation centers help firms grow: 14 known Logistics Tech firms have gone through accelerator programs since 2014, including several now-unicorns. This program builds on a recognized need in the ecosystem to support early-stage startups: although a couple of Logistics Tech firms got their start with local programs, most did so elsewhere in the nation.

### Notable incubator programs Chicago-based Logistics Tech firms have participated in:

- **Y Combinator:** ShipBob (2014), Tovola (2016)
- **Plug and Play Supply Chain & Logistics:** Project44 (2018), Autobon (2019)
- **Polsky Center:** LeafyQuick (2019), OjaExpress (2019)

**\$24B**  
GDP for the Chicago metro area's Transportation and Warehousing industry in 2021, projected to grow **21%** by 2026.

**16K+**  
TD&L firms located in the Chicago metro area, the **highest in the nation**. Over **260K** are employed in the TD&L sector.

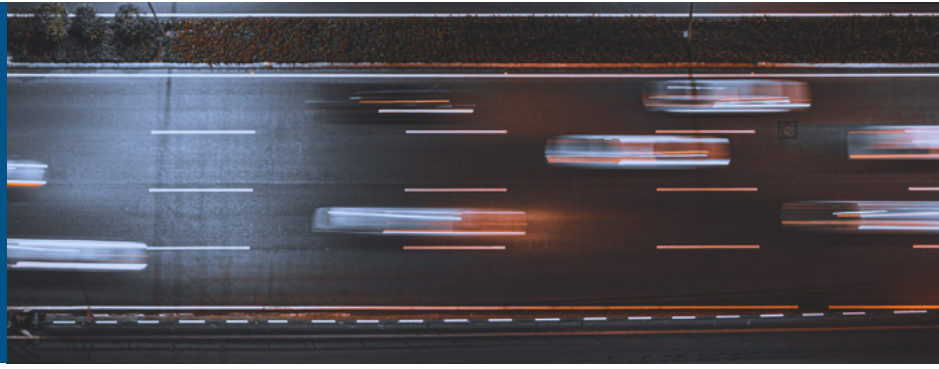
**\$305B**  
Trade by value through O'Hare in 2021, making it the nation's **#1 port by value**.

### Innovation Program Spotlight: Supply Chain Innovation Lab at 1871

In partnership with Accenture and World Business Chicago, the Supply Chain Innovation Lab is a first-of-its-kind 12-month program that spans the full startup maturity curve, connecting early- and growth-stage founders to corporate partners.

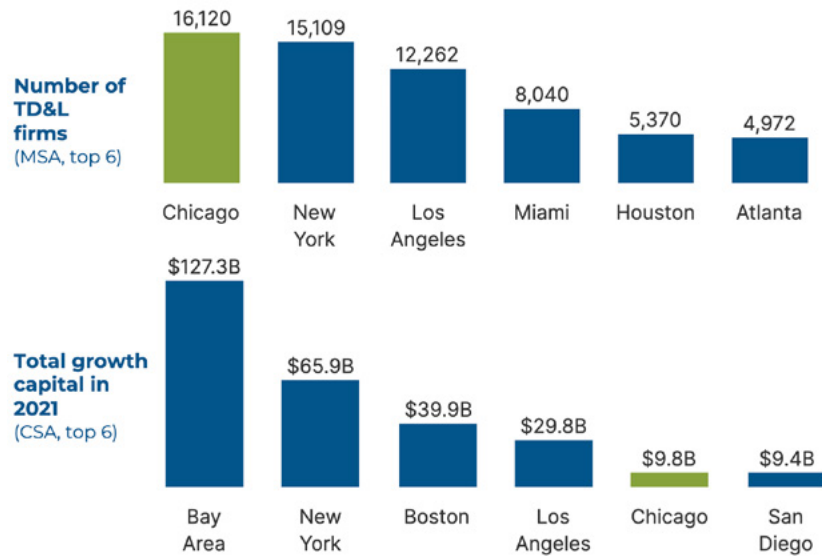
Sources: Pitchbook Data, Inc • U.S. Census Bureau, Foreign Trade • Moody's Analytics • U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

# Why Chicago for Logistics Tech?



## Chicago offers a sweet spot as both a mature logistics hub and a top growth capital ecosystem.

Chicago offers a top-five ecosystem for both the TD&L industry and total growth capital investment.



### Co-location advantages

Firms are incentivized to locate in top ecosystems for several reasons:

#### TD&L industry

- Proximity to more B2B and B2C customers
- Knowledge development, including more direct access to issues facing the TD&L industry
- Talent with knowledge of the TD&L industry

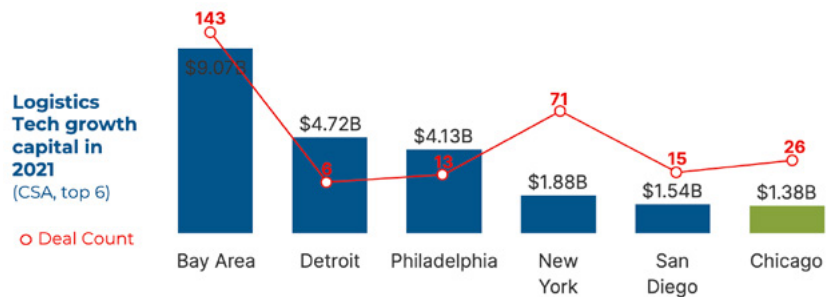
#### Startup ecosystem

- Easier access to capital at all stages of the startup lifecycle
- Proximity to innovation hubs
- Tech talent, and generally more talent in supporting roles (sales, management, etc.)

## However, there are opportunities for more investment.

Despite having one of the largest TD&L ecosystems in the U.S., Logistics Tech companies still struggle to attract capital compared to the Bay Area or New York — both of which have more investment and deals.

Chicago also trails Detroit and Philadelphia, both of which saw mega-deals of \$1B+ in 2021.



Sources: Pitchbook Data, Inc • U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages



# Why Chicago for Logistics Tech?

## Chicago offers the right talent pool: there are substantial concentrations of workers in both tech and logistics, as well as sales and operations occupations.

Chicago's Logistics Tech ecosystem employs over **34,000** individuals. Employment spans five categories: tech, sales, logistics operations, engineering and business operations (including management, HR, finance, and marketing).

Although Chicago lags peer cities in the total number it has a higher concentration of computer occupations in the TD&L industry.

Category	2021 employment*	Chicago's national rank	Turnover rate	Concentration**
Tech	125,759	8th	40%	0.95
Logistics operations	33,784	3rd	49%	1.26
Business operations	505,014	4th	51%	1.17
Sales	267,179	3rd	60%	1.14
Engineering	32,906	3rd	27%	0.98

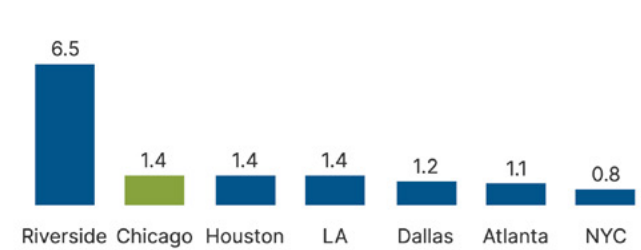
\*Full metro area employment for a curation of top SOC 5-digit occupations employed by major Logistics Tech firms.

\*\*Concentration: 1.00 is equal to US average; above/below 1.00 is above/below the US average.

### Total number of computer occupations in the TD&L industry



### Concentration of jobs in the TD&L industry per 100 computer occupations (any industry)

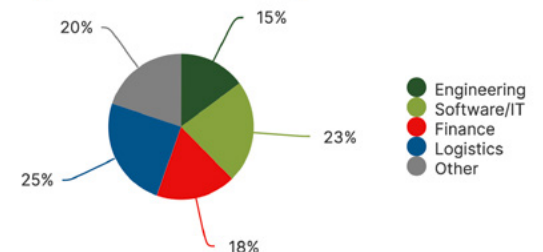


## Logistics Tech founders have connections to the Midwest.

Chicago's status as a hub for Midwestern university graduates make it a breeding ground for Logistics Tech company foundings. Nearly 24% of founders attended a Midwestern university, including the founders of three unicorns and one publicly held company.

Logistics Tech founders also come from industries with significant employment in Chicago, including finance and logistics.

Logistics Tech founders' backgrounds:



Sources: Pitchbook Data, Inc • Emsi Burning Glass – economicmodeling.com



# Challenges in Chicago's Talent Pool



## Hiring for key Logistics Tech positions is competitive, despite the Midwest being a major talent producer.

Although Logistics Tech is comprised of a diverse set of occupations, technical and managerial roles still prove difficult to hire for. In particular, software developers experienced a hiring gap: for every six jobs posted, one employee was hired.

Chicago lags behind other major metro areas — like the Bay Area and New York — for talent attraction and retention. Despite the Chicago area graduating nearly 8,000 computer science students each year, the software developer talent pool has only increased by about 4,500 in the past five years — making Chicago ninth in the U.S. for this talent.

### Software Developers

**9,835**

Average Monthly Postings

**1,732**

Average Monthly Hires

### Sales Managers

**3,718**

Average Monthly Postings

**672**

Average Monthly Hires

### Logisticians

**784**

Average Monthly Postings

**340**

Average Monthly Hires

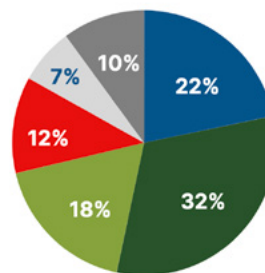
## Logistics Tech is less diverse than the broader TD&L industry.

Although employment in Chicago's TD&L industry is notably diverse, Logistics Tech more closely mirrors Chicago's Information or Business & Professional Services industries. The disparity is even more acute considering Computer Occupations, where just 16% of workers are Black or Latino. While representation of women is better — 43% of employees are women — just eight percent of Logistics Tech company founders are women.

Talent from the TD&L industry, a historically more representative workforce and the most significant source of talent for Logistics Tech, could help make the vertical more diverse.

At six of the top Logistics Tech companies, a substantial portion of talent comes from the traditional TD&L industry, as well as universities. These originating industries could provide a more diverse talent pool.

Industry	% White	% Black	% Latino	% Women
TD&L	53%	22%	19%	33%
Information	67%	12%	10%	40%
Business & Professional Services	69%	7%	10%	40%
<b>Logistics Tech*</b>	<b>66%</b>	<b>10%</b>	<b>13%</b>	<b>43%</b>



- Logistics Tech talent origination**
- Other Logistics Tech firm
  - TD&L
  - Other Tech
  - Business & Professional Services
  - Universities
  - Other

Sources: Emsi Burning Glass – economicmodeling.com

# Findings



## Key Takeaways

### 1. Logistics Tech is fast growing by growth capital investment, both in Chicago and nationwide.

There is remarkable momentum in Chicago's Logistics Tech market. With an increase of growth capital investment of 802% between 2019 and 2021, it is the fastest growing in the U.S. Within Chicago's venture capital ecosystem, Logistics Tech proves the fastest growing large vertical behind healthtech.

### 2. Chicago offers a blended, "just right" ecosystem for Logistics Tech companies' business needs.

Firms can find what they need here, including customers, capital, and talent. Chicago is a national TD&L industry leader, while also offering a sizable and growing VC ecosystem. Similarly, Chicago offers a groundswell of talent in both the logistics industry and tech occupations, as well as sales and supporting office functions.

### 3. Logistics Tech firms in Chicago are more likely to be in freight tech, and later-stage VC.

Chicago's market landscape is dominated by several software-based, freight tech firms with large valuations. These firms attract massive amounts of capital, but overshadow a slight dearth of early-stage and pre-venture firms, as well as hardware-focused and other underrepresented segments.

### 4. Chicago is a market of choice for expanding or relocating Logistics Tech companies.

Proximity to Chicago's TD&L industry attracts companies that may have been founded elsewhere. Originating locations include both mature startup ecosystems — where software companies may have easier access to capital and tech talent — and smaller ecosystems that lack the right business requirements. Chicago is also a market of choice for international companies setting up U.S. headquarters.

### 5. There is incredible opportunity to cement Chicago's position as a Logistics Tech hub.

Chicago is home to some of the vertical's biggest names, this coupled with the accelerated growth in the ecosystem provides tremendous opportunity for growth and increased inclusivity:

- **Supporting firms in early venture stages**, in part by developing Chicago as a Logistics Tech innovation hub. Efforts are soundly underway with 1871's Supply Chain Innovation Lab.
- **Developing underrepresented segments**, such as drones, autonomous trucking, and freight tech as it relates to air trade.
- **Capturing more — and more diverse — tech talent.** Chicago lags peer cities, despite producing an adequate number of computer science graduates.



## About

World Business Chicago is Chicago's public-private economic development agency. Our mission is to drive inclusive economic growth and job creation, support businesses, and promote Chicago as a leading global city. Our vision is to ensure that all Chicagoans prosper.

## The Research Center



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