

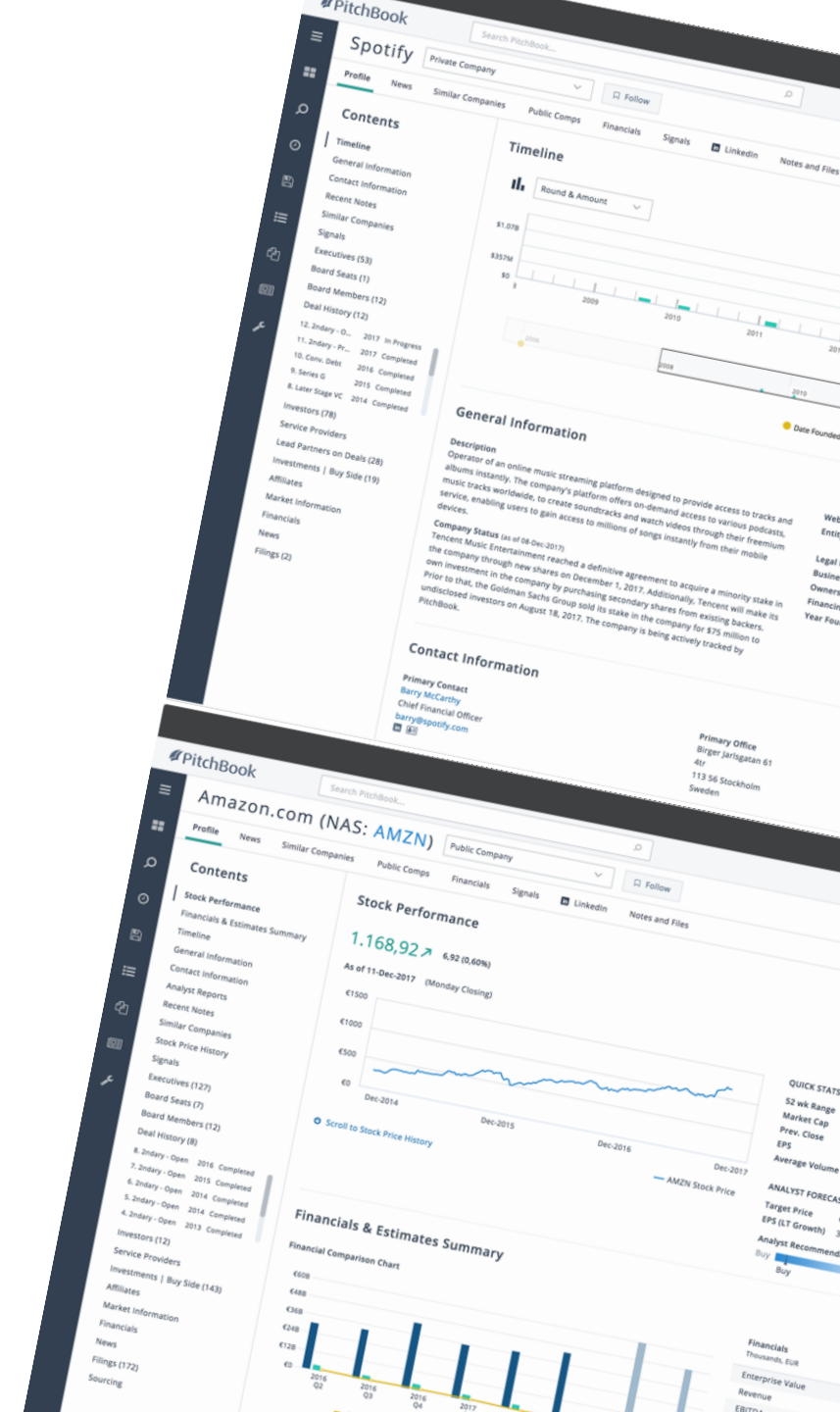


WEBINAR

PitchBook's Emerging Technology Research: Artificial Intelligence & Machine Learning

PitchBook: The leading resource for private and public market analysis

PitchBook is a financial technology company that provides data on the capital markets to help professionals discover and execute opportunities with confidence and efficiency. We collect and analyze detailed data on the entire venture capital, private equity and M&A landscape—including public and private companies, investors, funds, investments, exits and people. Our data and analysis are available through our suite of products (the PitchBook Platform), industry news and in-depth reports.



Presenters



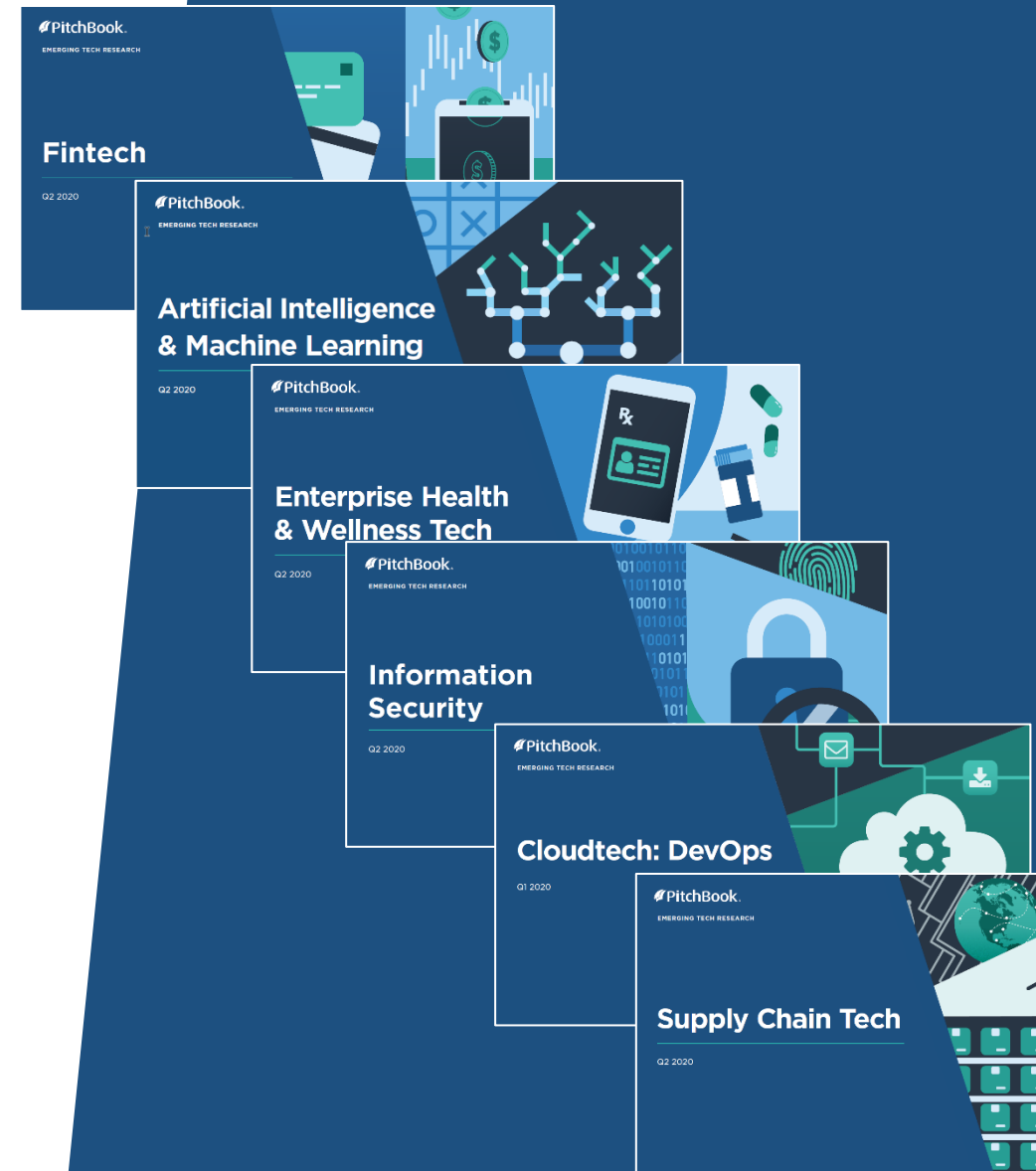
Paul Condra

Lead Emerging Technology Analyst, PitchBook



Brendan Burke

Senior Emerging Technology Analyst,
PitchBook



Expanded Coverage of AI & ML Vertical

- Coverage of AI platforms, chips and machines
- AI business model and adoption trends
- 2,652 segmented companies



This Webinar Will Cover

1

PitchBook's
segmentation of the AI
& ML VC ecosystem

2

Opportunities and
investment trends in AI
& ML

3

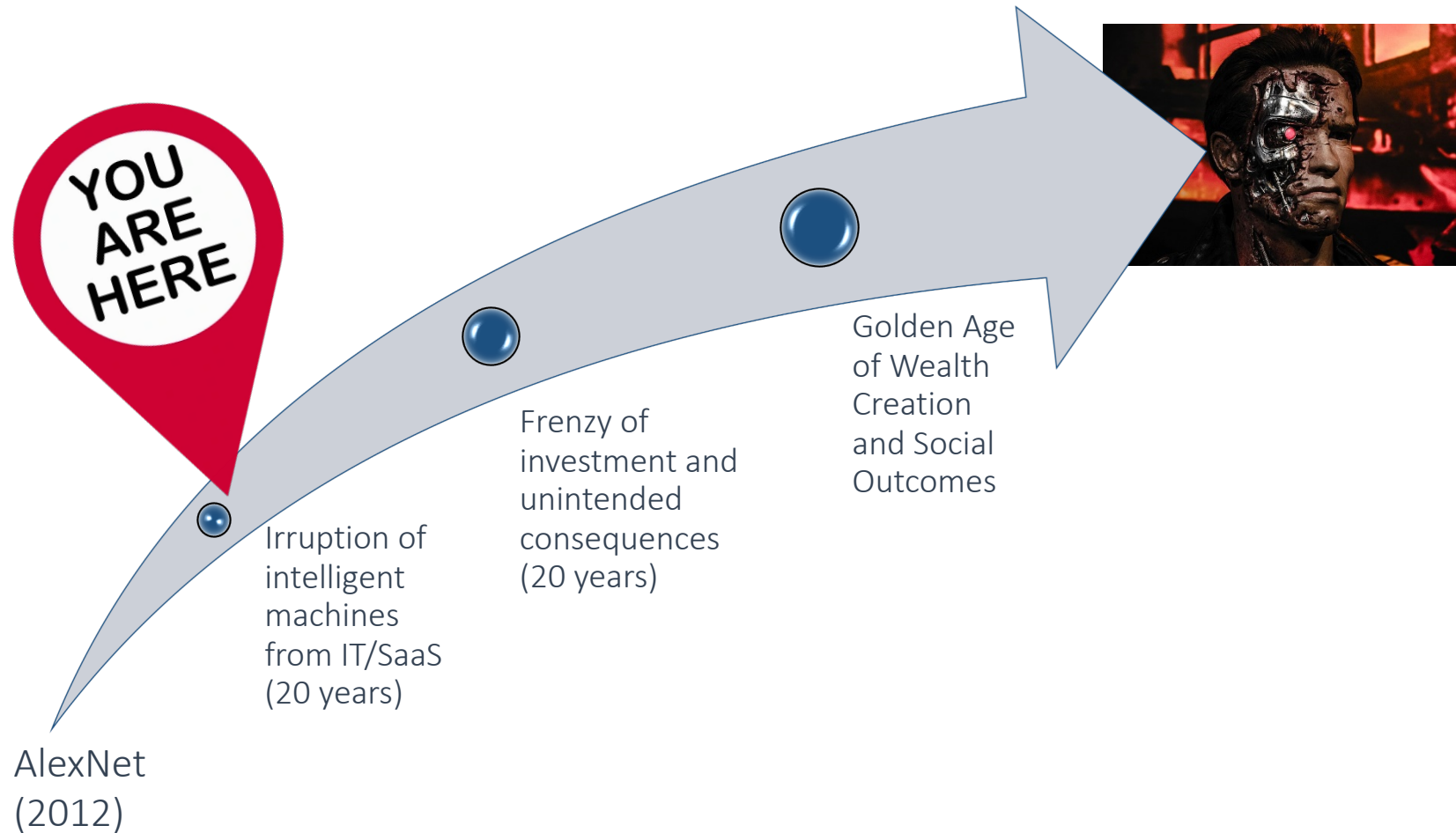
Outlook for recent
technical
developments in AI &
ML



AI & ML Vertical Overview

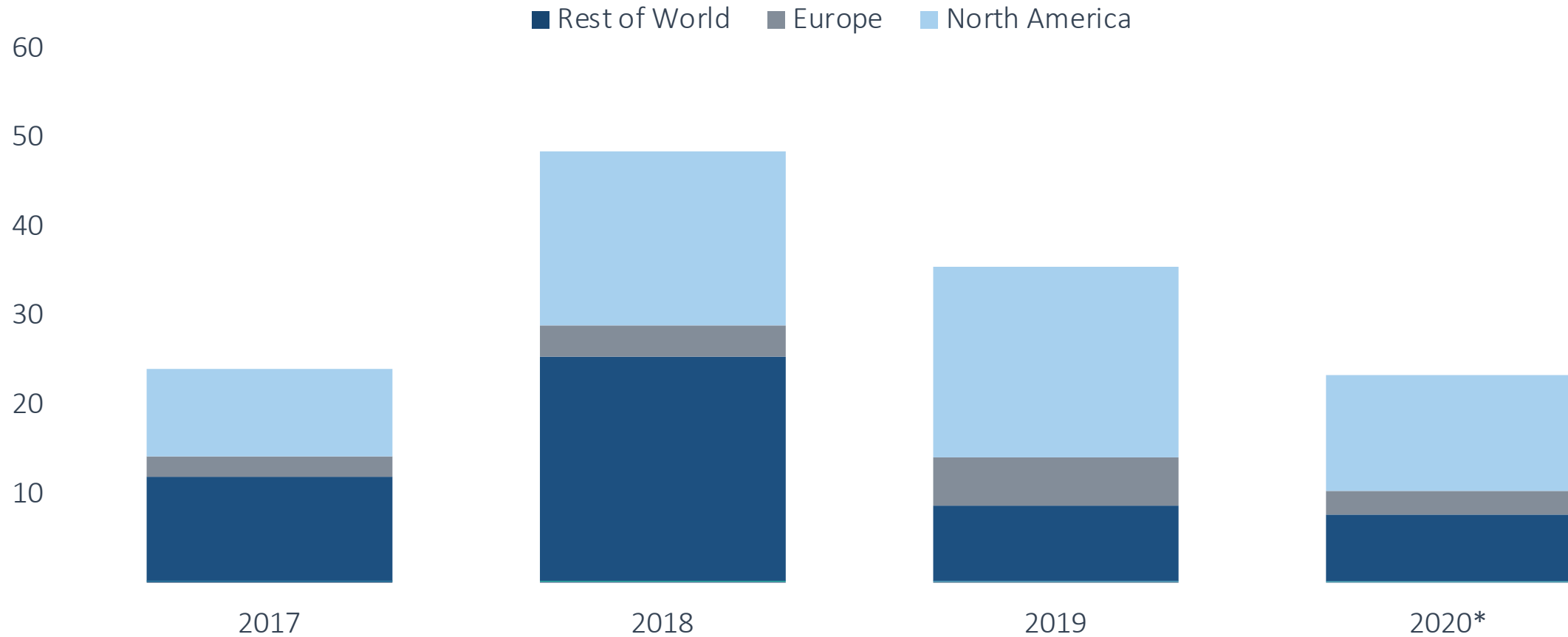
AI in a period of emergence from information technology

Outlook for AI's emergence as a technological paradigm



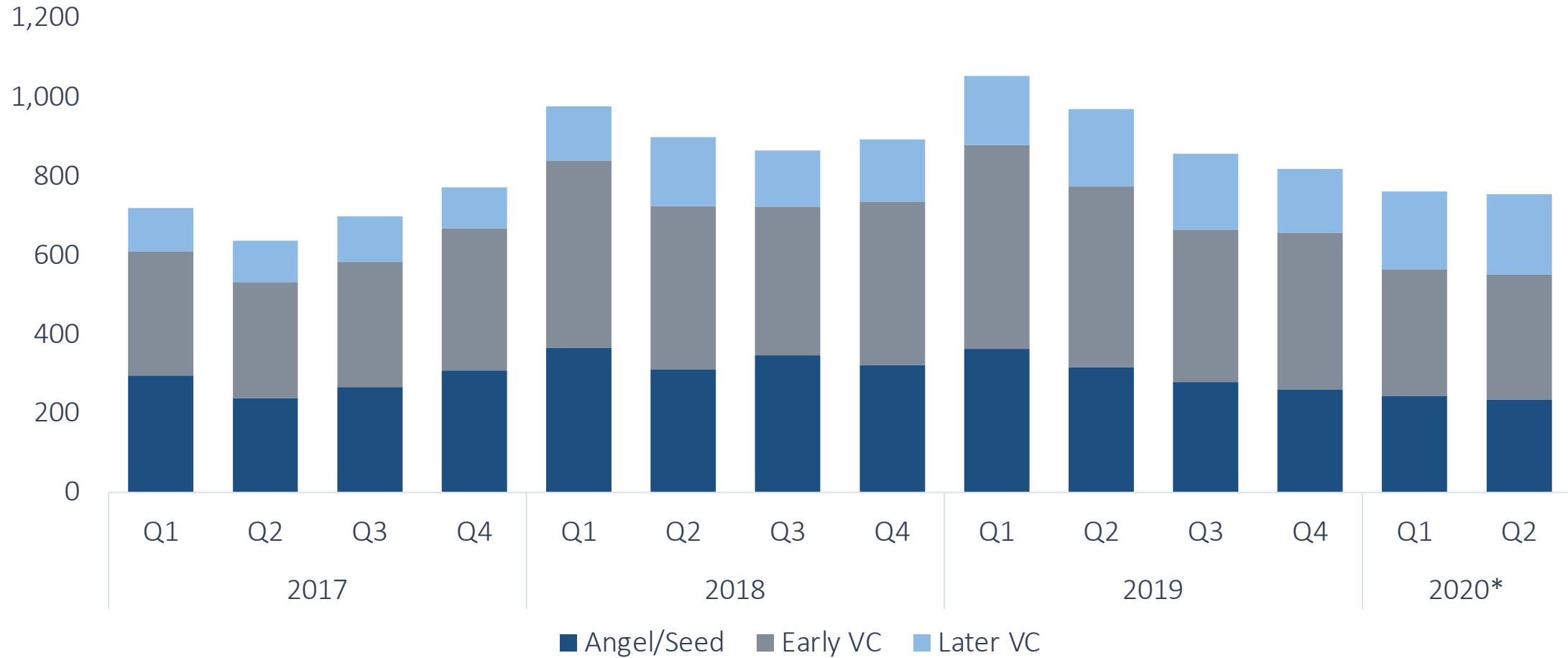
Bipolar VC investment landscape experiencing volatility

Global VC Deal Value (\$B) by Region (2017 – H1 2020)



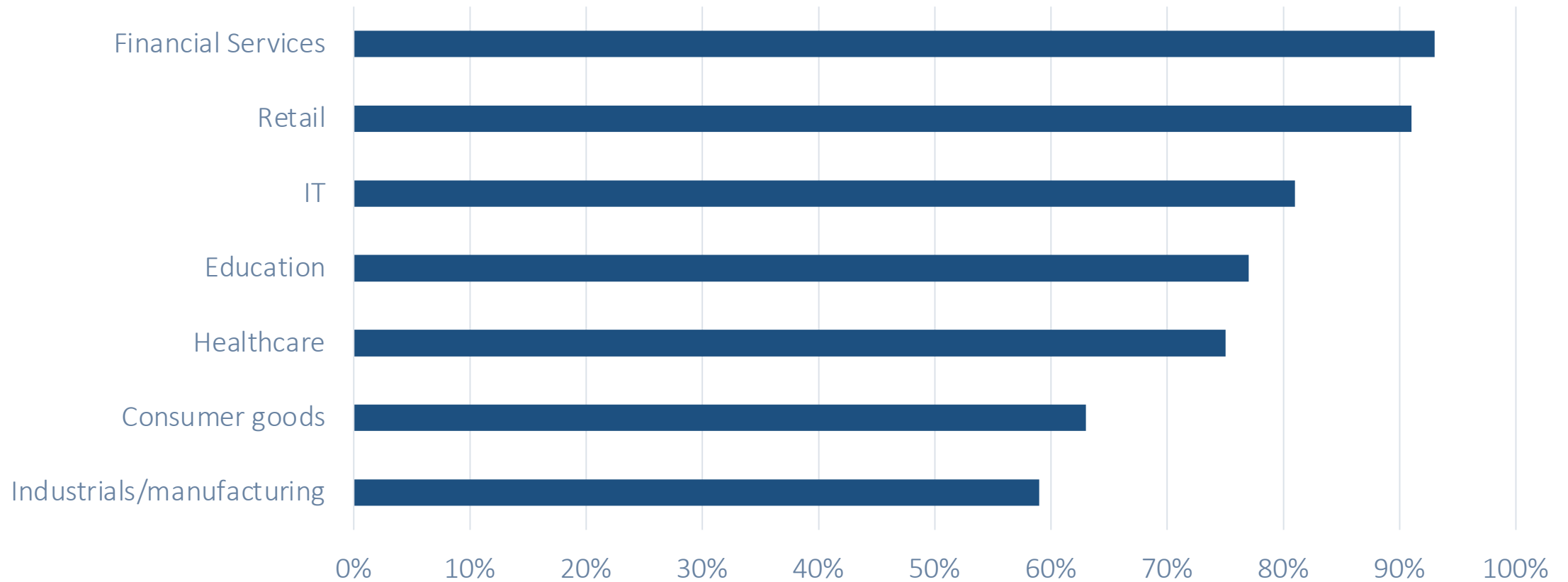
COVID-19 compressing angel/seed and early stage deal counts

AI & ML VC Deal Count (#)



AI adoption encouraged by automation accelerating across industries

Percentage of companies planning to accelerate automation initiatives due to COVID-19



Source: Bain IT Buyers Survey, April 2020

Poll Question: Which industry do you perceive to be most susceptible to disruption from AI & ML over the next 1-3 years?

- Education
- Financial Services
- Healthcare
- IT
- Industrials/Manufacturing
- Retail
- Transportation
- All industries equally

Vertical Overview

AI-integrated companies are beginning to achieve outlier revenue growth and exits

Recent IPOs of AI & ML integrated companies*

Company	Segment	Subsegment	Category	EV (\$B)	Revenue Growth YoY	EV/Trailing Revenue
Bill.com	Vertical Applications	Financial services	Payments	\$6.6	50.8%	54.7x
CrowdStrike	Vertical Applications	IT	Information security automation	\$22.2	92.7%	36.7x
DataDog	Horizontal Platforms	AI transformation platforms	AIOps	\$26.1	83.2%	59.7x
Lemonade	Vertical Applications	Financial services	AI Insurtech	\$3.5	199.1%	42.8x
Zoom Information	Vertical Applications	IT	Sales & marketing automation	\$19.0	103.3%	62.4x

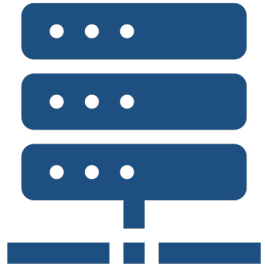
*As of July 2, 2020



Opportunities by Segment

Segmentation of AI & ML Vertical

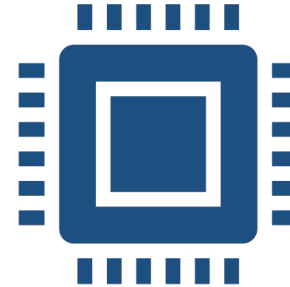
Horizontal Platforms



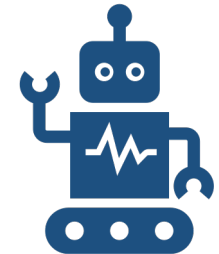
Vertical Applications



AI Semiconductors



Autonomous Machines





Horizontal Platforms

Horizontal Platform Categories

AI Core

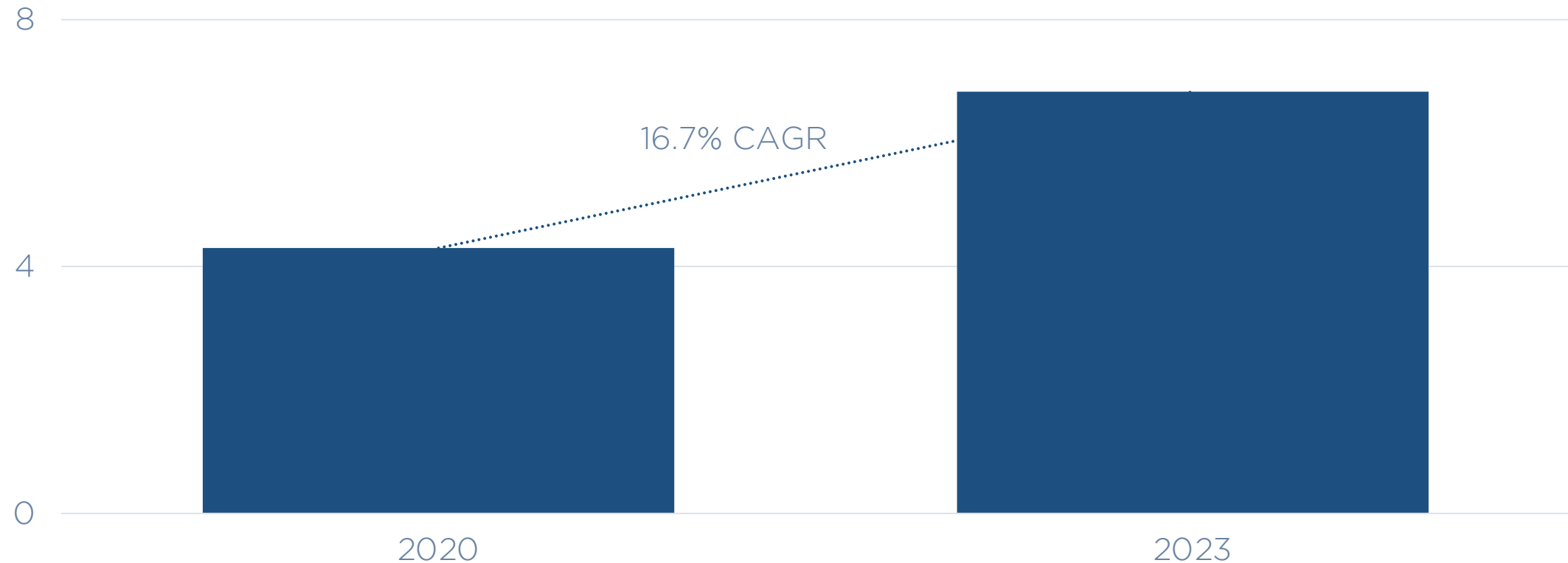
Computer Vision

Natural Language Technology

AI Transformation Platforms

\$4.3 billion market in AI & ML Core Platforms in 2020

Horizontal Platforms Market Size (\$B)



Platform startups can remove roadblocks in ML deployment



Streamlit

\$91M post-money valuation
In Series A

tection

\$20M Series A from a16z and
Sequoia Capital

CALYPSO

\$13M Series A from Paladin Capital
and Lightspeed VP

AutoML

Hyperparameter
optimization, data
pre-processing, and
model architecture
selection for citizen
developers

MLOps

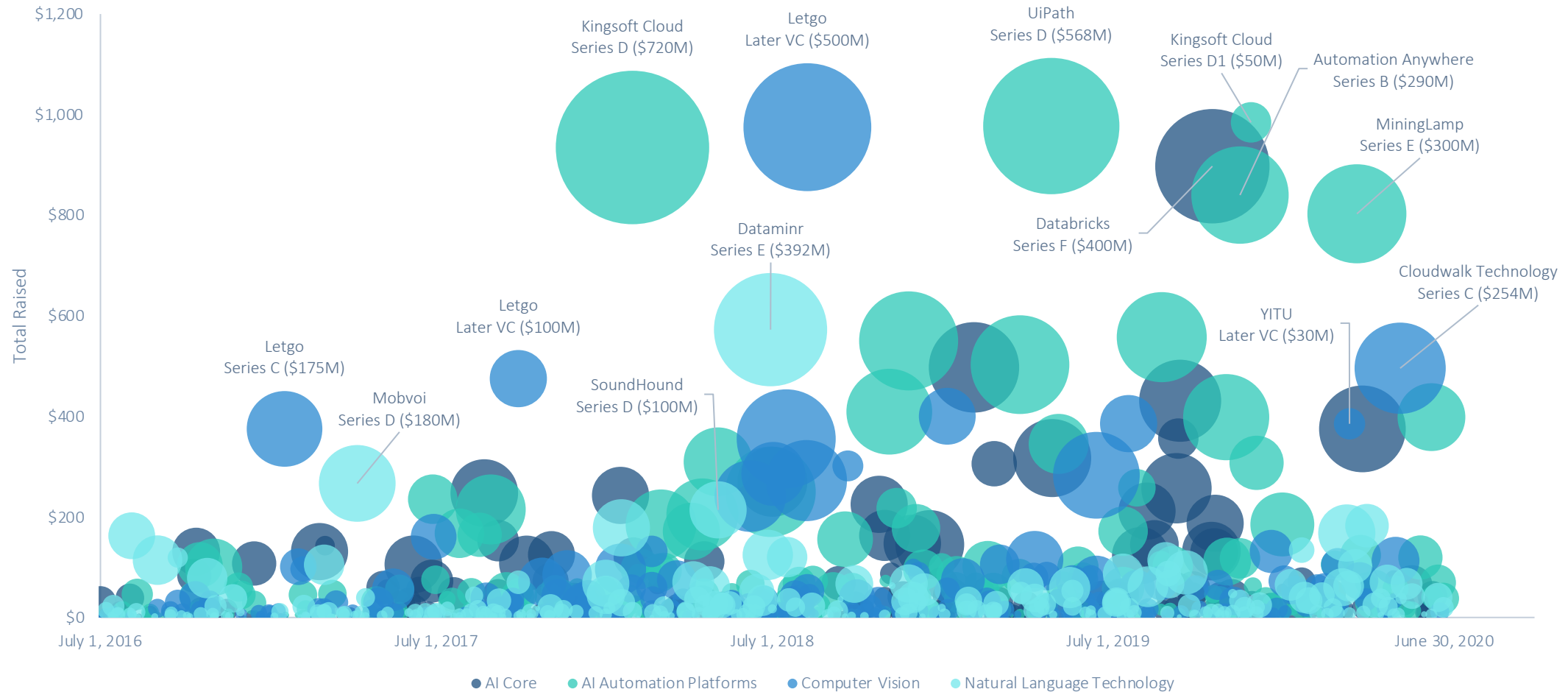
DevOps tools for ML model
deployment targeted at data
scientists

MLSec

Application security for ML
models to block data
poisoning, model theft, and
reverse engineering

Horizontal Platforms

VC investment driven by AI-integrated RPA and Computer Vision





Vertical Applications

Vertical Applications Categories

Financial Services

Healthcare

Consumer

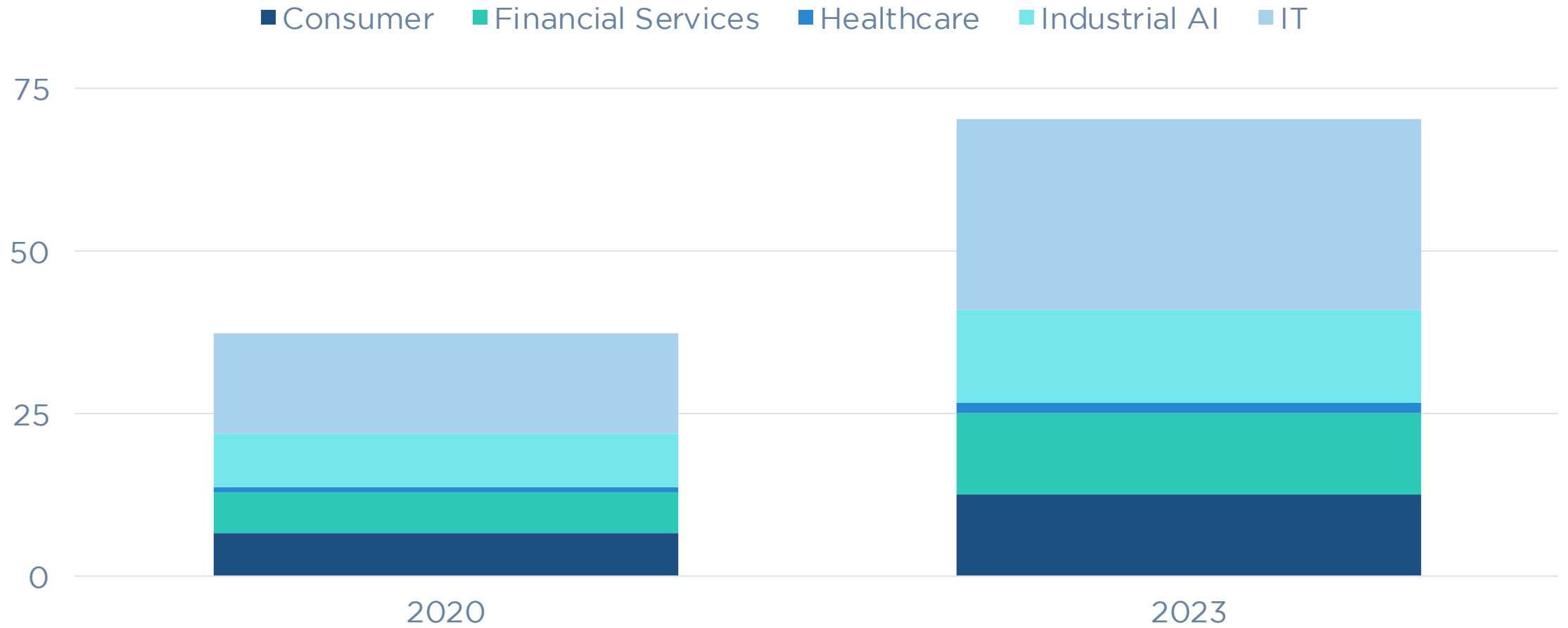
Industrial

IT

- HR
- Information Security
- Infrastructure Management
- Legal Automation
- PropTech
- Sales & Marketing
- Software Development

Vertical Applications

\$37.3 billion market in Vertical Applications in 2020



Platform startups can remove roadblocks in ML deployment



\$1.7 billion IPO in July 2020
4 years after founding

Computational Biology

Automation of cellular
composition experiments to
improve industrial materials
and drug discovery

The logo for people.ai, with the word "people.ai" in white lowercase letters on a dark blue rectangular background, which is centered within a larger teal rounded rectangle.

people.ai

3.4x valuation-step up in Series
C led by ICONIQ Capital

RevOps Intelligence

Integrates sales, marketing,
and customer success with a
single IT backend and set of
common KPIs

The logo for riskified, with the word "riskified" in black lowercase letters. The "i" is replaced by a green checkmark-like symbol.

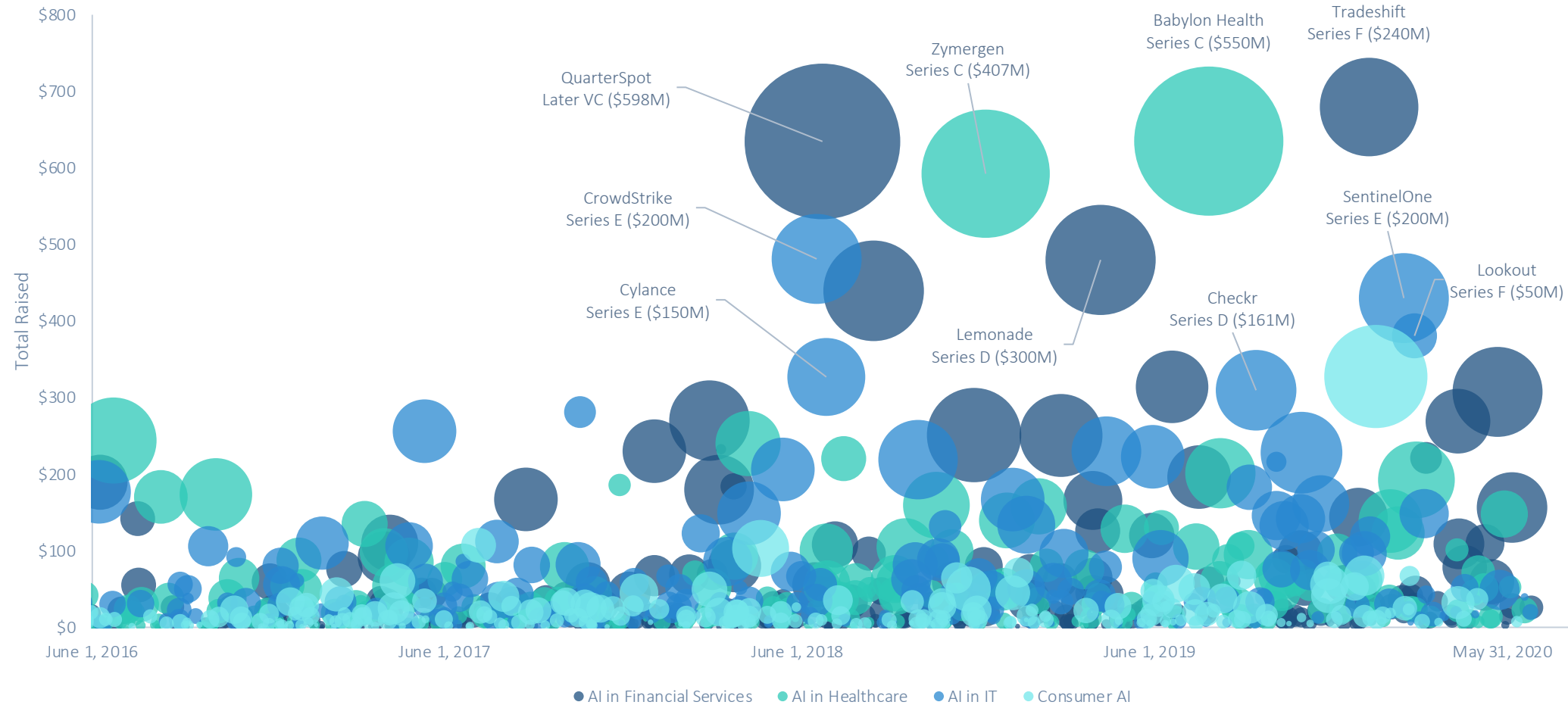
riskified

4.2x valuation step-up in Series E
led by General Atlantic

Fraud Prevention

SMB customers receive 'chargeback
guarantees' if vendor ML models
fail to catch fraud

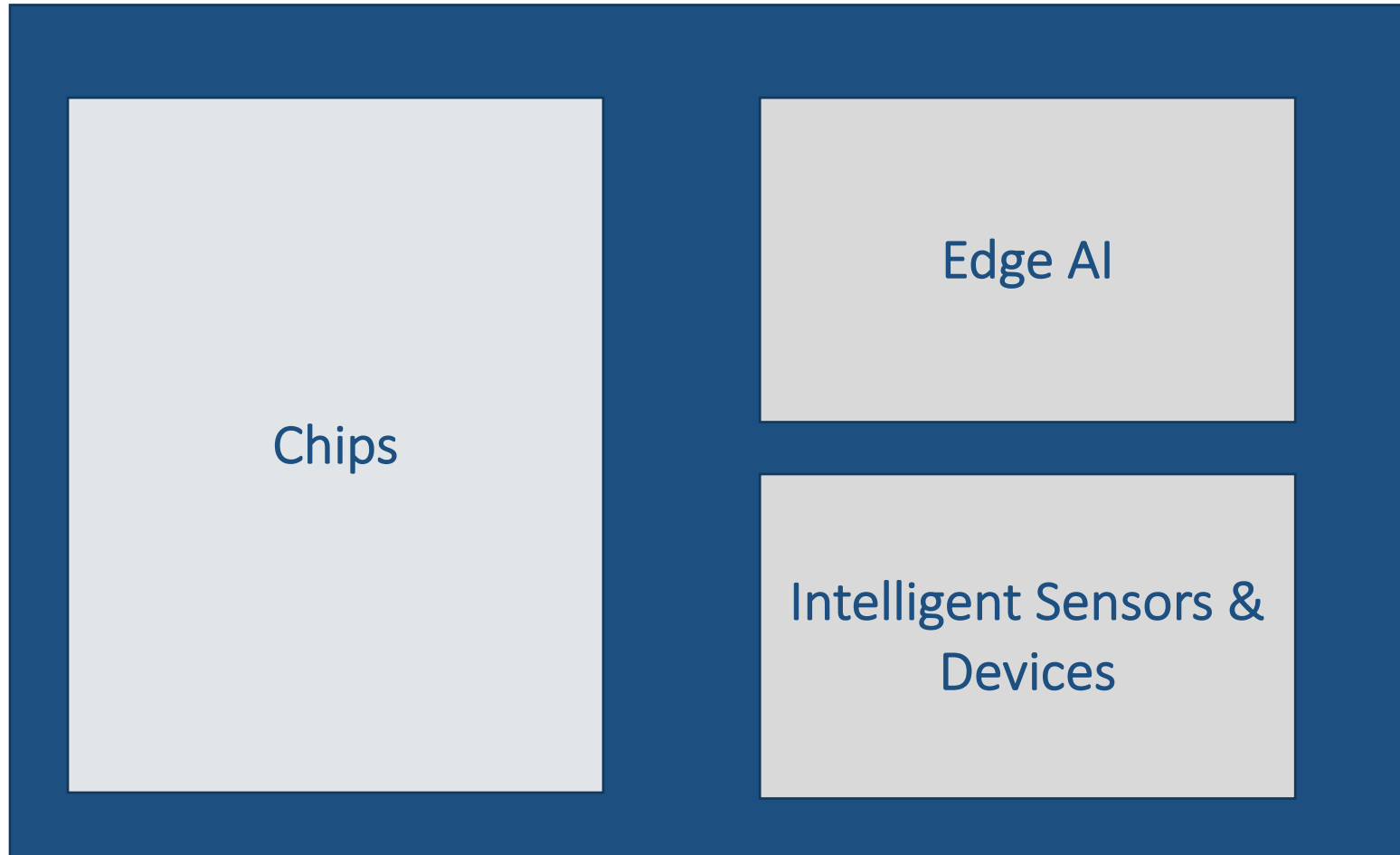
Information security and healthcare achieving high deal sizes



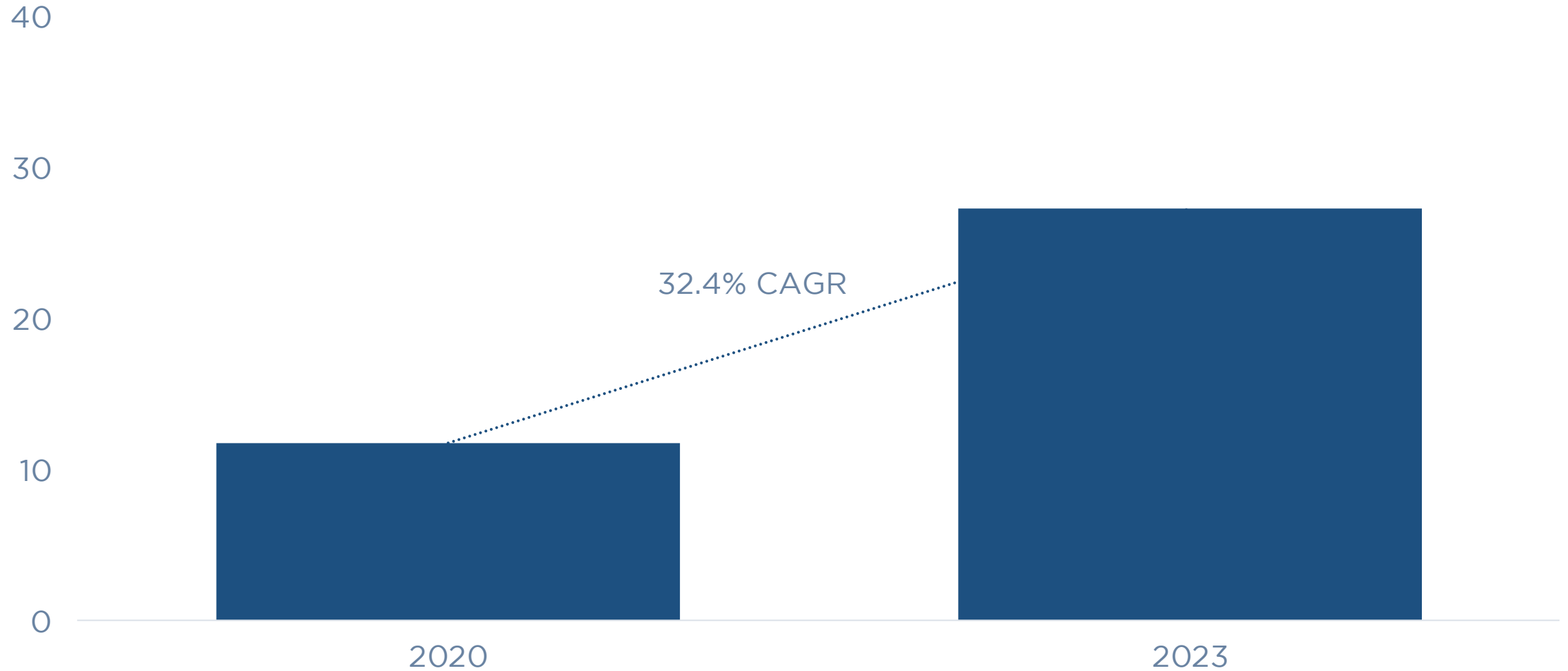


AI Semiconductors

AI Semiconductor Categories



\$11.7 billion market in AI & ML Semiconductors in 2020



Startups are optimizing chip architecture for AI models



Adoption accelerating in 2020



\$214.8 million Series B pre-money valuation



\$200 million acquisition by Apple 3 years after founding

AI Inferencing FPGAs

Up to 10x more efficient and comparable in speed than GPUs for inferencing when produced at the same node

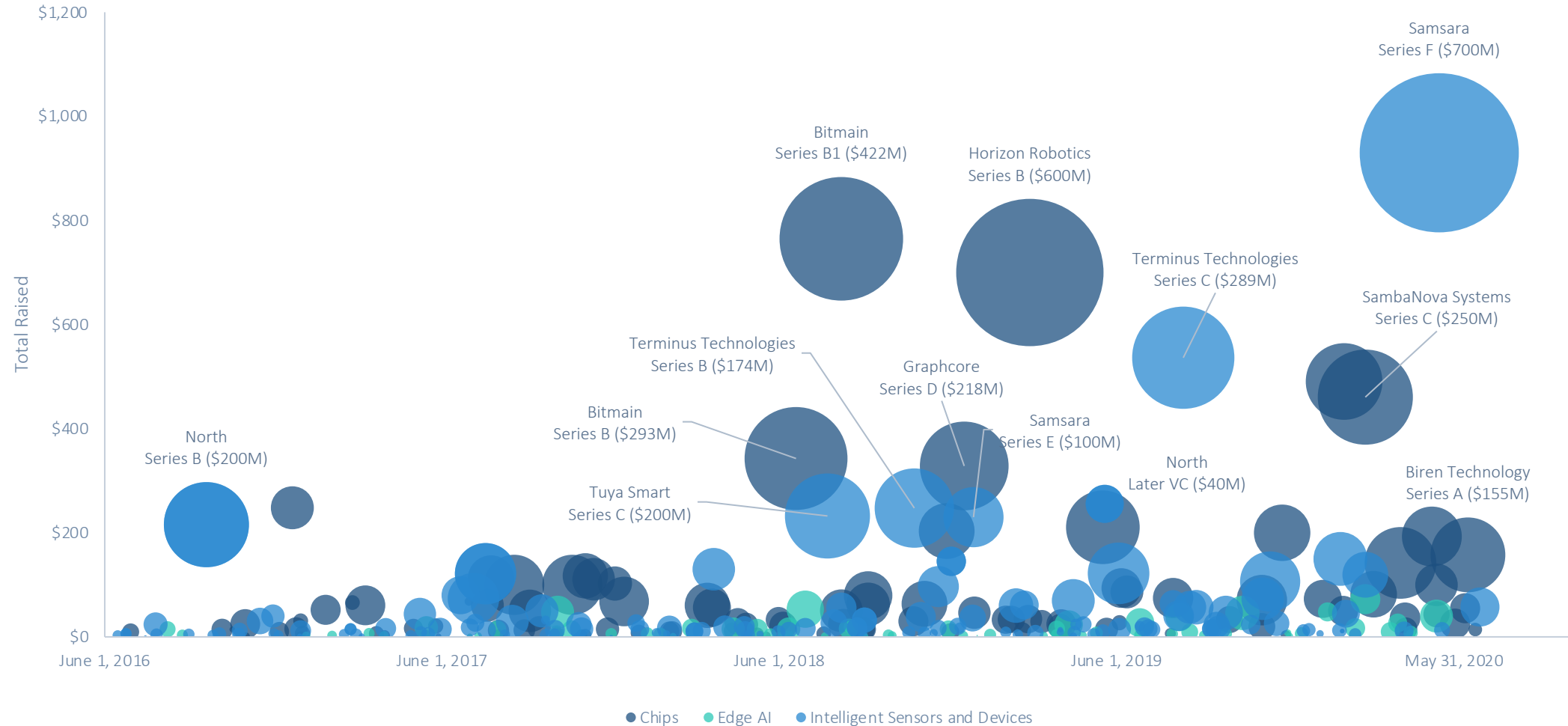
Neural network ASICs

High efficiencies based on hardwired circuitry that cannot be configured by developers after production

TinyML

Compressed ML algorithms can unlock value for common IoT use cases

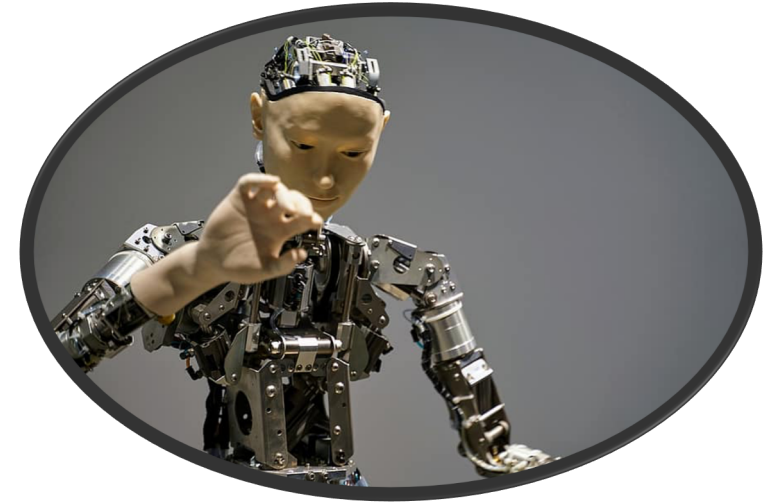
Few recent AI chip mega-deals suggest barriers to entry



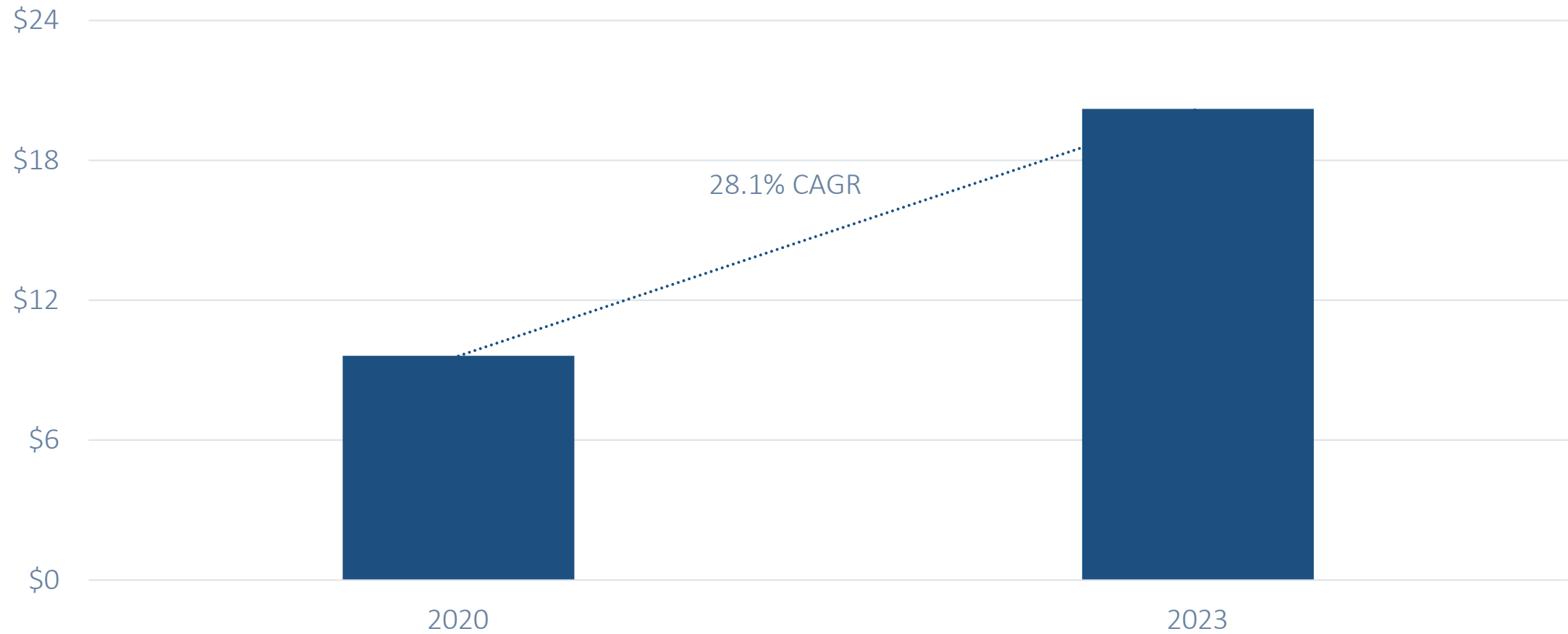


Autonomous Machines

Autonomous Machine Categories



\$9.6 billion market in Autonomous Machines in 2020



Autonomous Machines Opportunities



\$50.5 million Series A led by Founders Fund

Alternative AV Datasets

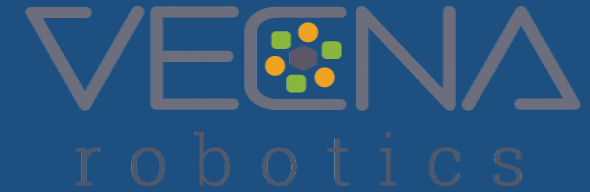
Climate, human behavior, stray objects, and the built environment datasets can be used to generate their own self-driving models

COVARIANT.AI

\$200.0 million Series B pre-money valuation

Human-present robotics

Simulations of camera-based perception in virtual environments can enable cobots to interact with humans

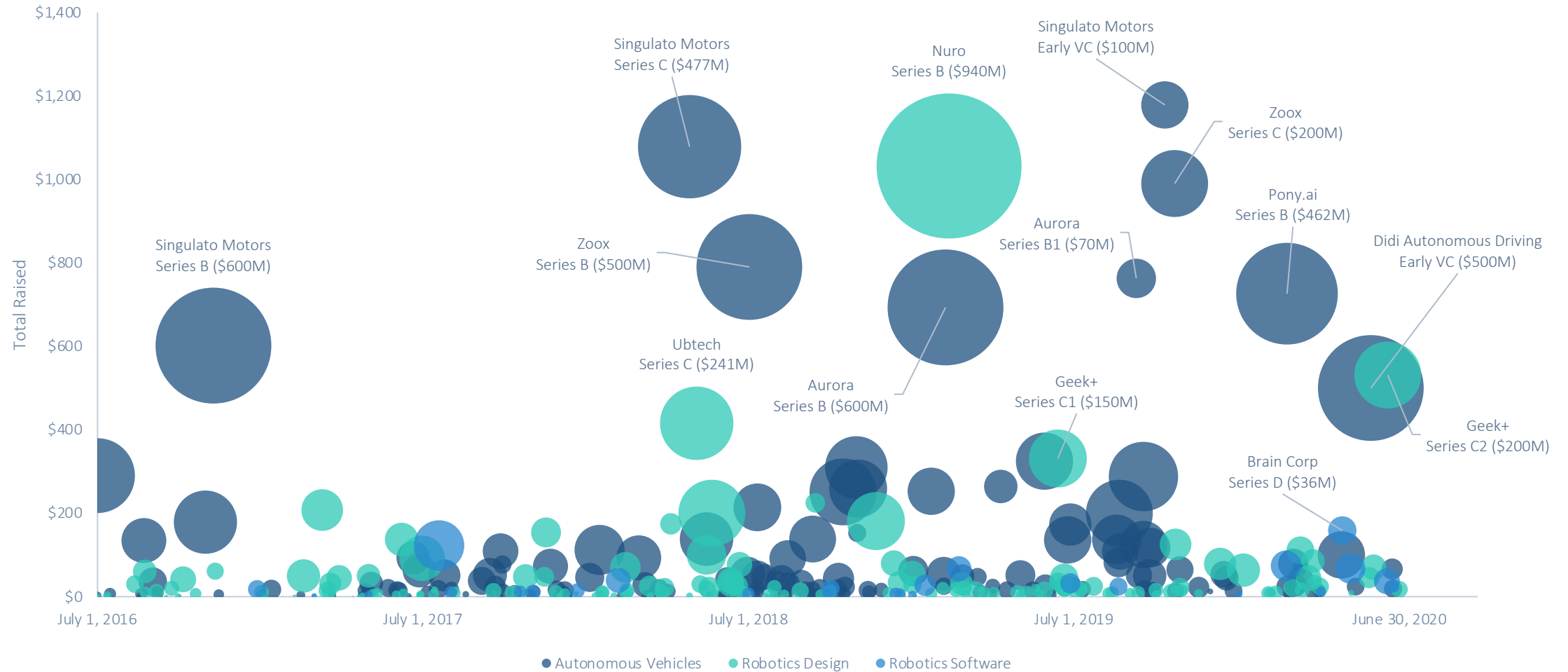


3.9x valuation step-up in Series A1 led by Blackhorn Ventures

Autonomous mobile robots

Mobile robots can bridge the manual labor-intensive gap between brick-and-mortar stores and last-mile delivery

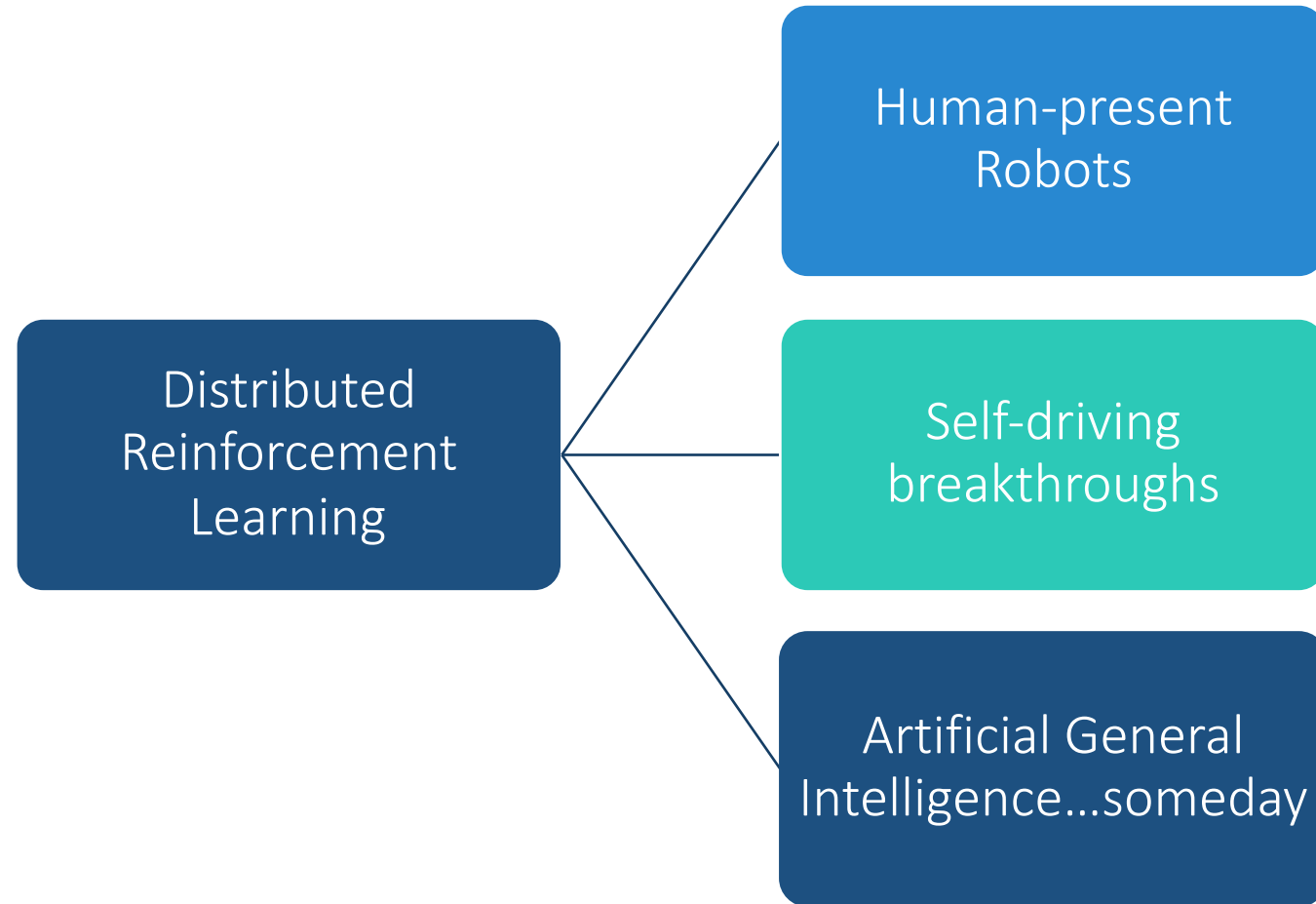
Robotics lagging autonomous vehicles



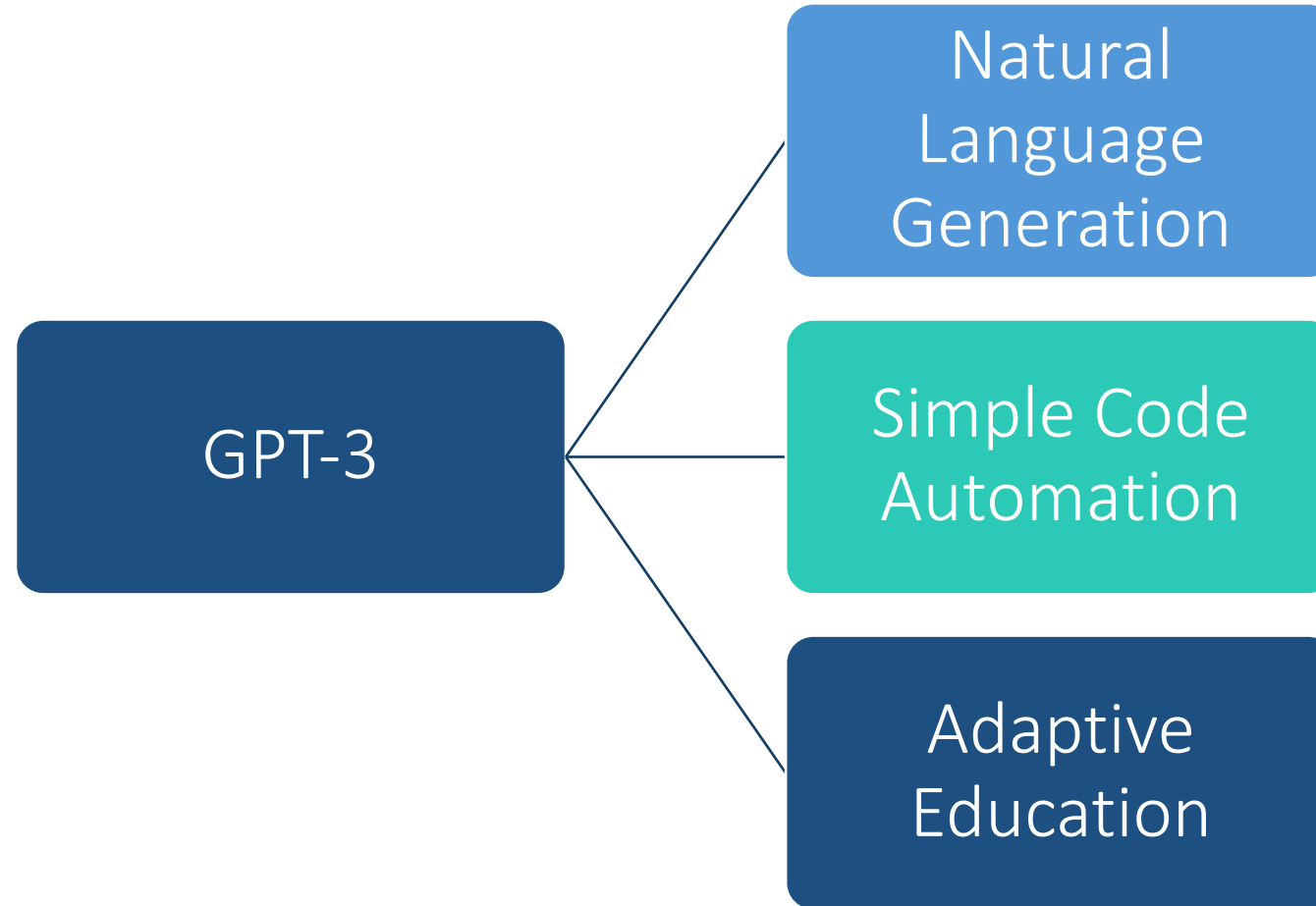


Outlook

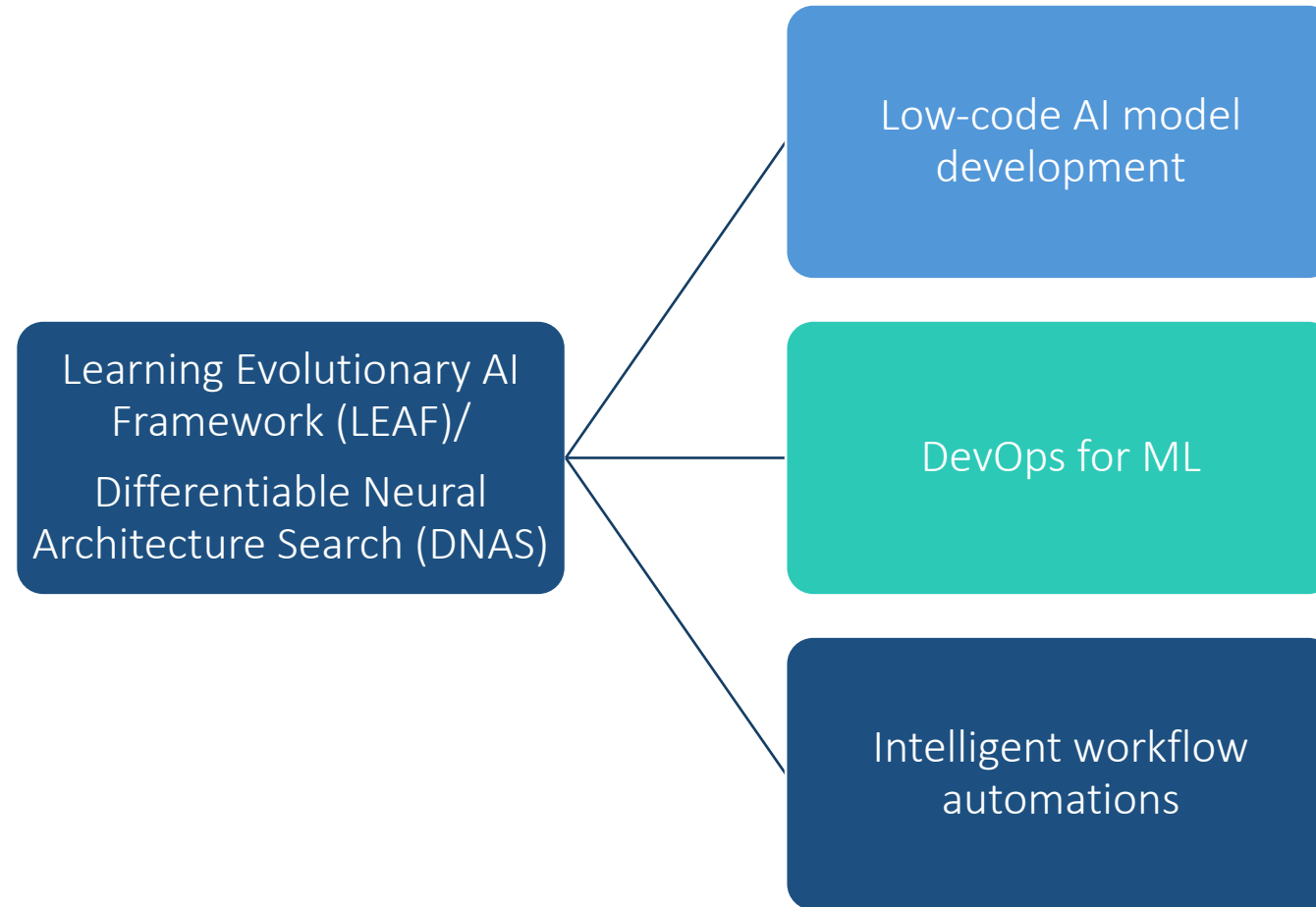
Domain Randomization for Reinforcement Learning



Large Language Models



AutoML





Questions?

