

2020
embedded
VISION
summit®

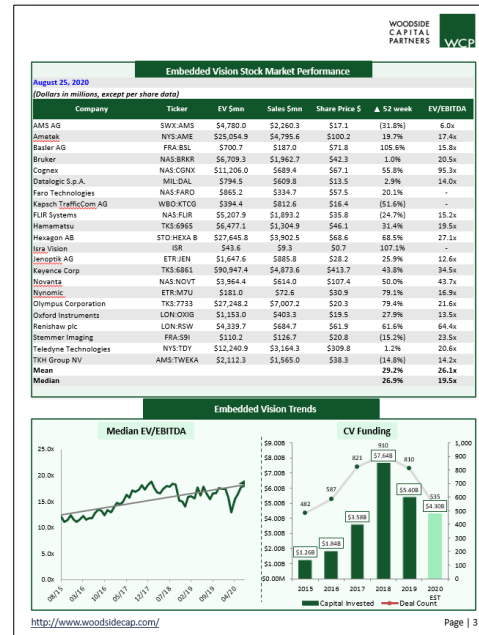
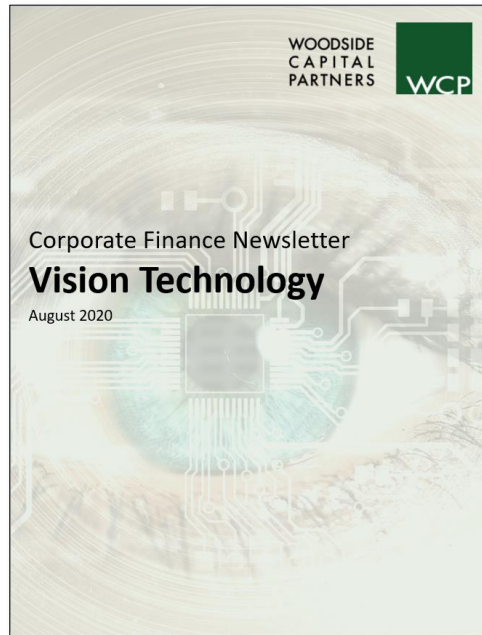
Embedded Vision: Where's The Money?

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Woodside Capital
September 15, 2020

WOODSIDE
CAPITAL
PARTNERS



Introduction to WCP



WOODSIDE CAPITAL PARTNERS WCP

1H 2020 Notable Investments

Deal Date	Company Name	Investors	Deal Stage	Deal Size	Primary Industry	Business Description
06/30/20	Natoo, Israel	Fusion Technology, Hoxi Hal Precision, Ke Telem	Series B	\$10.0	-	Developer of nanotechnology based X-ray emitters designed to generate digital X-ray images.
07/13/20	Shady, United States	Andersson Horowitz, NP, Playgroup Global	Series C	\$100.0	-	The company's shares use cameras and proprietary computer vision technology to recognize and avoid objects.
07/26/20	Sight, Israel	Clu Biotechnology Industries	Later	\$71.0	-	The company offers a medical platform for diseases using a digital microscopy and computer vision algorithms.
09/16/20	Page, United States	Breyer Capital, Goldman Sachs	Series B	\$50.0	-	Developer of computational pathology module platform for rapid diagnostic stratification and cancer detection.
05/06/20	Scandit, Switzerland	Alcatel, OV, Swisscom	Series C	\$30.0	-	Platform is built on computer vision and ML technologies, enabling users to have cost-effective retail automation.
07/24/20	Matterport, United States	Later	Later	\$52.4	-	Developer of an immersive 3D media platform designed to enable 3D and Virtual Reality (VR) models.
04/10/20	Nexar, United States	Corner Ventures, Mosaic Ventures, National Media Ventures	Series C	\$52.0	\$186.7	The company's AI dashboard application employs machine vision and sensor fusion algorithms to analyze surroundings.
04/29/20	Miso Vision	Mosaic Ventures, New Enterprise Associates	Series B1	\$53.0	\$450.0M	Developer of augmented reality products and platform intended to invent the future of computing.
01/14/20	Tarant, Israel	Edgely, Mosaic Ventures, Veritas Group	Series C	\$80.0	-	The company's platform uses computer vision, data science and deep learning algorithms to make informed decisions.
06/16/20	Divido Technologies, United States	Andersson Horowitz, Presidio	Series B	\$25.0	\$42.5	Developer of motion recognition and artificial intelligence solutions.
07/26/20	Adventus, Switzerland	Insight Partners	Series A	\$17.1	-	Developer of an AI-based software designed to understand human behavior in the physical world.
07/06/20	Actix Surgical, United States	ARTS Ventures	Later	\$15.0	\$46.0M	Developer of a hardware-agnostic surgical software designed to prevent errors.

1H 2020 Notable M&A Transactions

Deal Date	Acquirer	Target	Transaction Value	EV/Revenue	EV/EBITDA	Description
06/26/20	Amazon.com (NASDAQ:AMZN)	First Sensor, Germany	\$1,300.0	-	25.60x	Developer of an autonomous mobile robotics that includes self-driving vehicles, control systems, AI and a ride-sharing service all designed to improve urban mobility.
03/12/20	TE Connectivity	Optics Bakers, Liechtenstein	\$337.8	2.60x	12.25x	The company's business focuses mainly on the development, manufacture, and distribution of customer-specific optical and non-optical semiconductor sensors and sensor systems.
01/20/20	Microsoft (NASDAQ:MSFT)	Optics Bakers, Liechtenstein	\$300.0	2.10x	12.25x	The company's optical coatings and components include filters, mirrors, prisms, micro-optics, and optical coatings for precision optics.
04/04/20	Amey (NASDAQ:AMEY)	Lumical, Canada	\$71.1	-	-	Provider of photonic simulation software, enabling designers to predict light's behavior within complex structures and systems.
07/07/20	Microsoft (NASDAQ:MSFT)	Orion Systems, United States	-	-	-	Developer of an artificial intelligence-based video analysis platform designed to offer a better approach for handling unstructured data.
03/07/20	Leiditex	Vaporion, Israel	-	-	-	The company's technology utilizes deep learning and computer vision algorithms resulting in accurate and reliable detection and classification systems.
06/10/20	DFW Capital Partners, Investec	Deep Vision AI, United States	-	-	-	Developer of computer vision technology intended to help turn visual content into real-time analytics.
05/19/20	Koch Industries	DeiVision, Canada	-	-	-	Developer of image technology intended to deliver high-resolution images inside oil and gas wells.
04/10/20	Edge Case Research	Tennet, Germany	-	-	-	Developer of computer vision technology intended to provide accurate geo image data.
03/10/20	Matterport	Arady, United States	-	-	-	Developer of an AI-driven production platform for the motion picture and television industry.
03/25/20	Nokia (NYSE:NOK)	Dexon Technologies, U.S.	-	-	-	Developer of next-generation photonic integrated circuit technologies and services for a broad range of telecom and telecom applications.

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- M&A, strategic partnerships, and corporate finance advisory
- Focused on emerging growth technology companies
- Founded in 2001: over \$8 billion in transaction value
- Offices in Silicon Valley, London, Shanghai, Zurich
- Dedicated Vision Tech corporate finance practice

Embedded Vision and Visual AI Industry Map

Systems & Solutions



Agriculture



Communications &
Networking



Consumer & Mobile



Defense & Aerospace



Healthcare



Industrial



Media & Entertainment



Office Automation



Retail



Security & Surveillance



Transportation

Enabling Technologies



Components

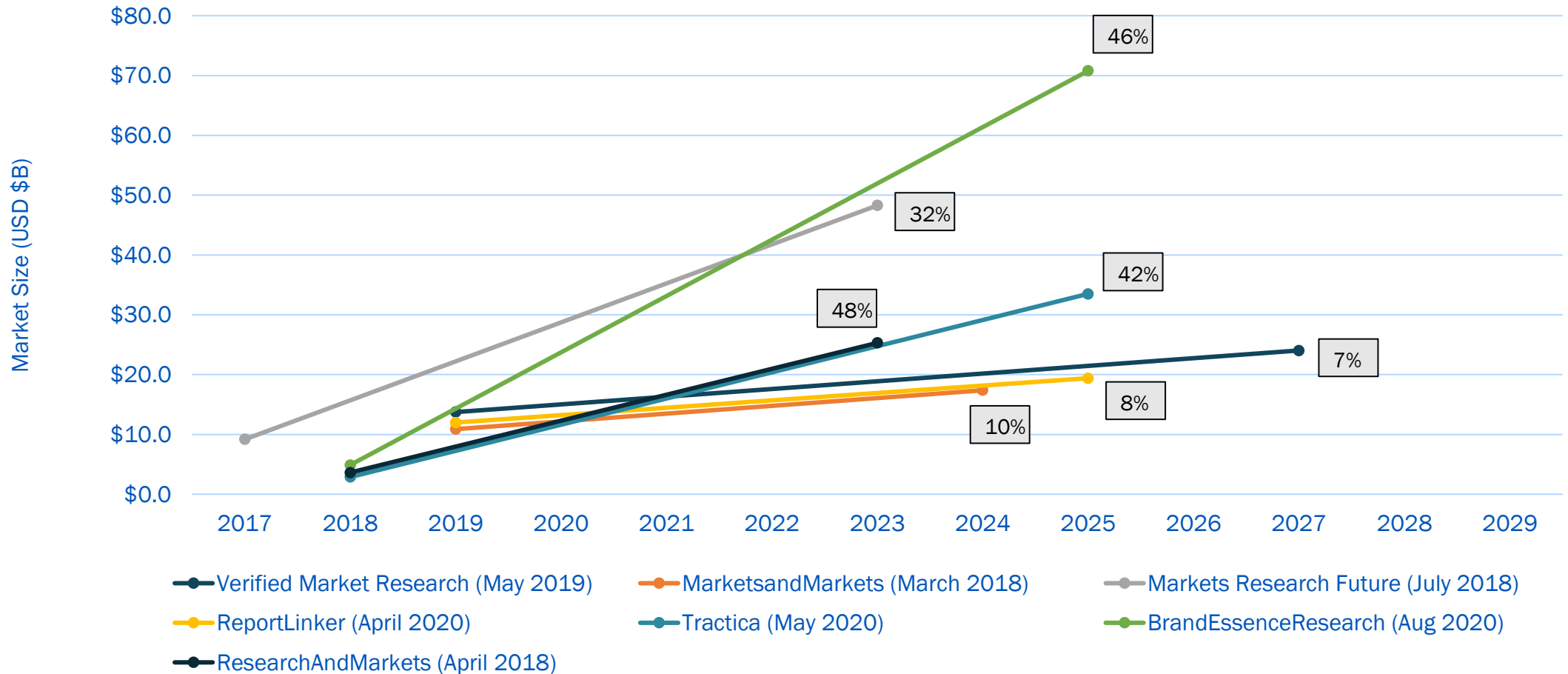


Enabling Services and
Tools

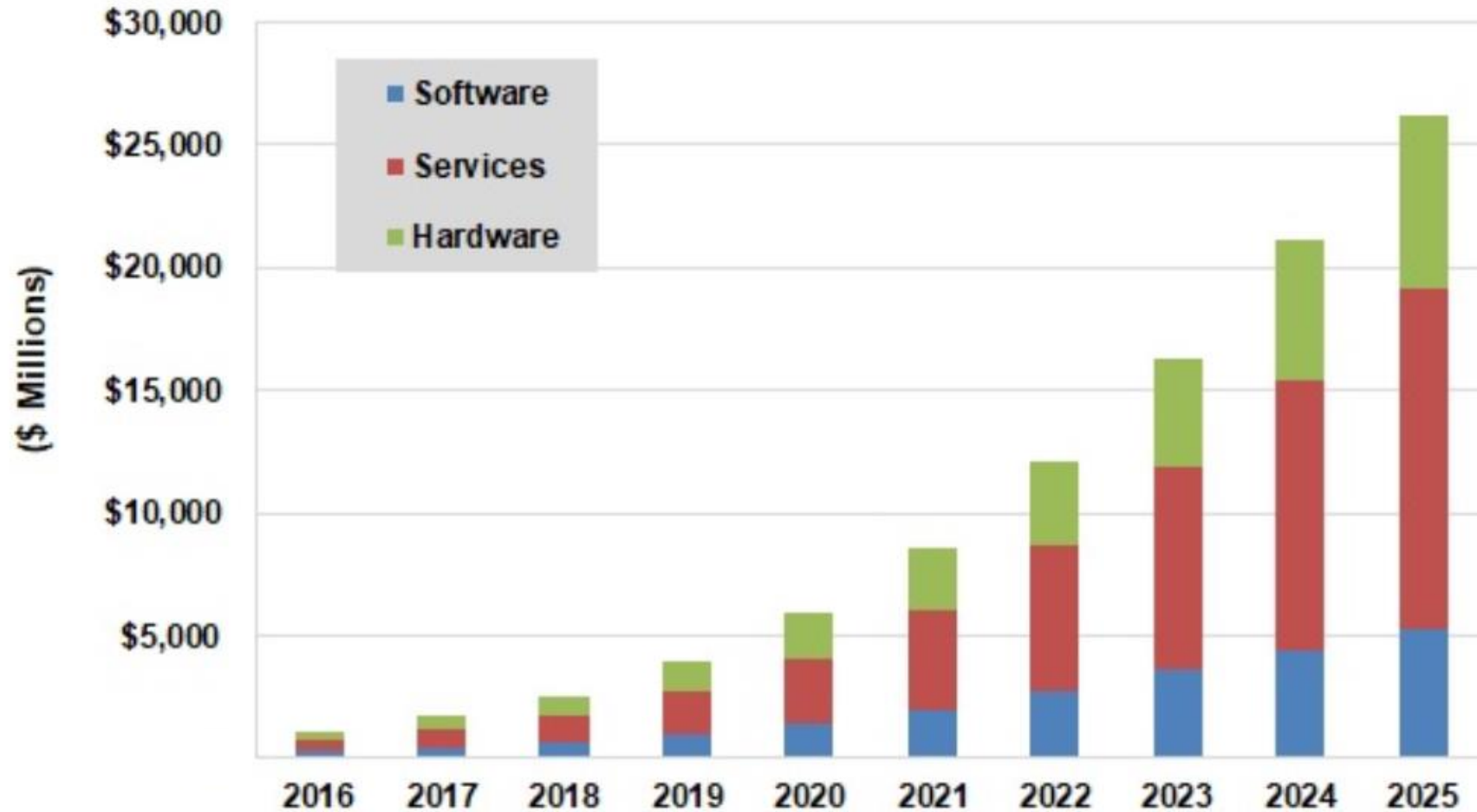


Subsystems

Computer Vision Market Growth Forecasts

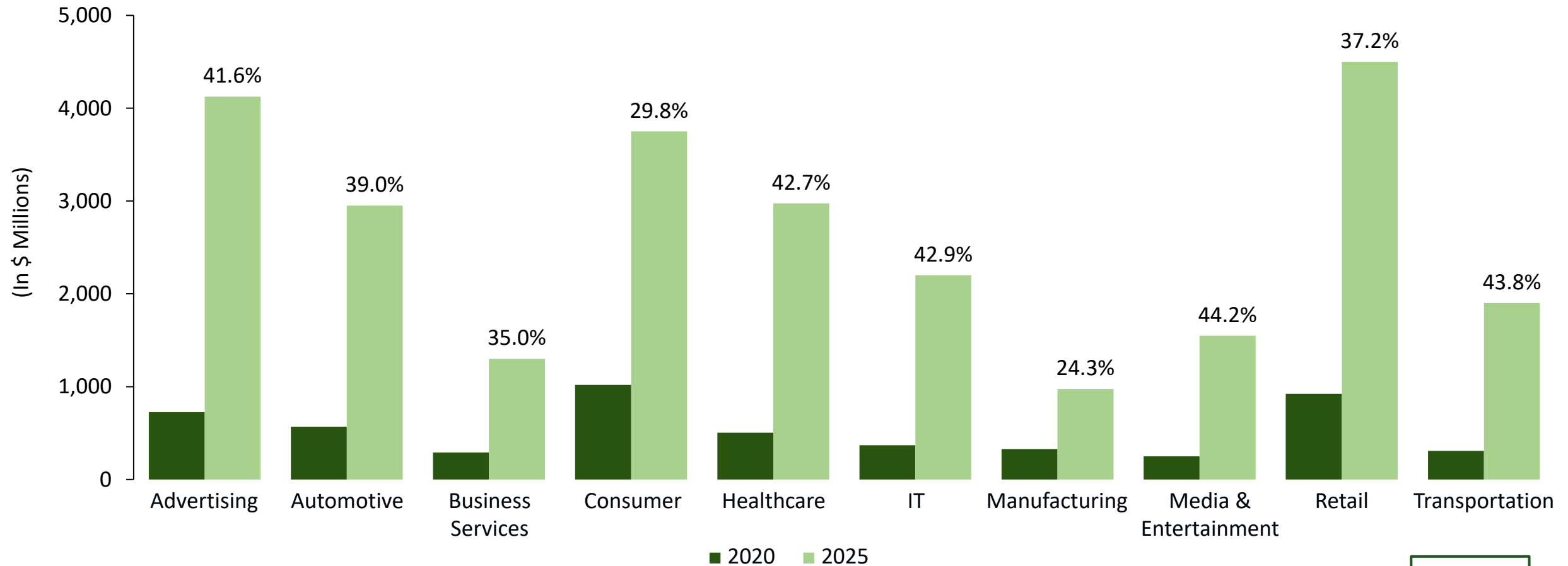


Computer Vision Total Revenue by Segment, World Market: 2016-2025

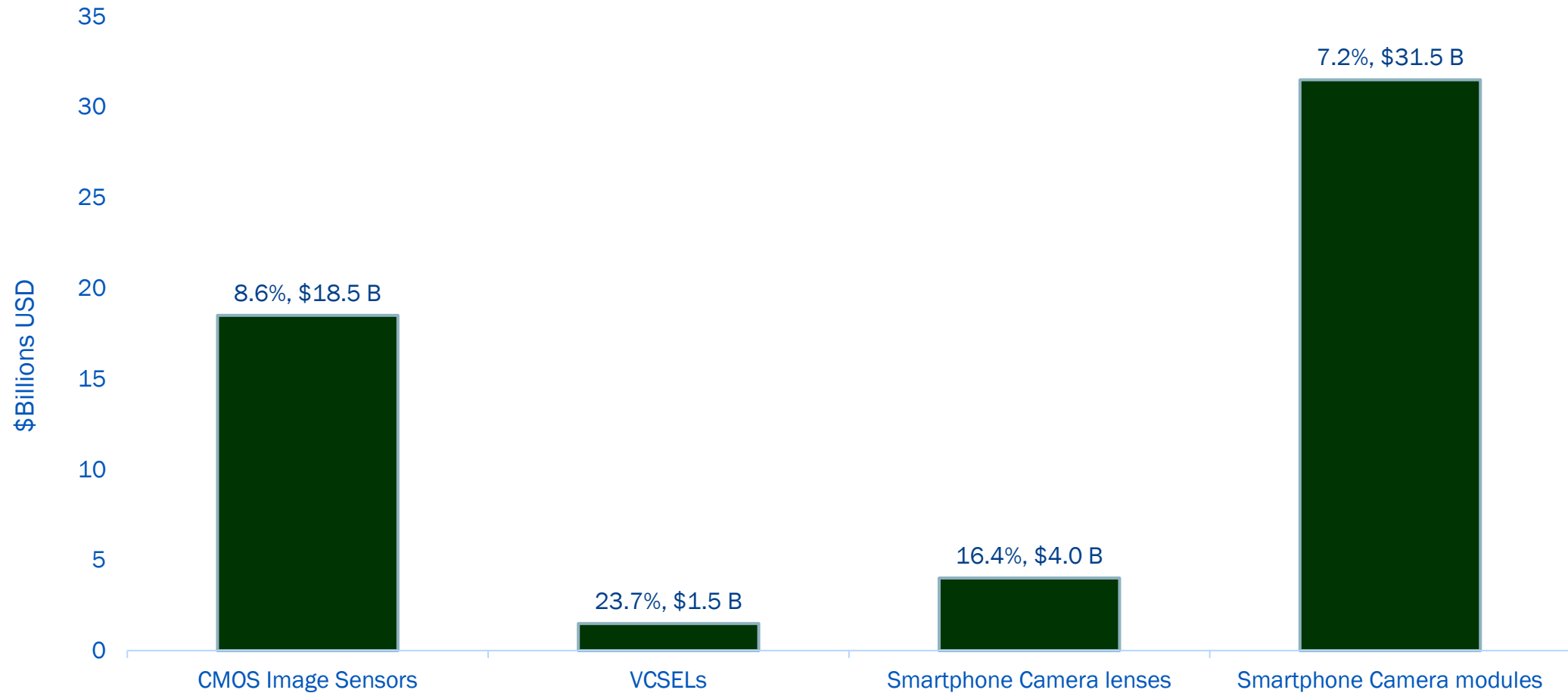


Computer Vision Software Revenue by Industry

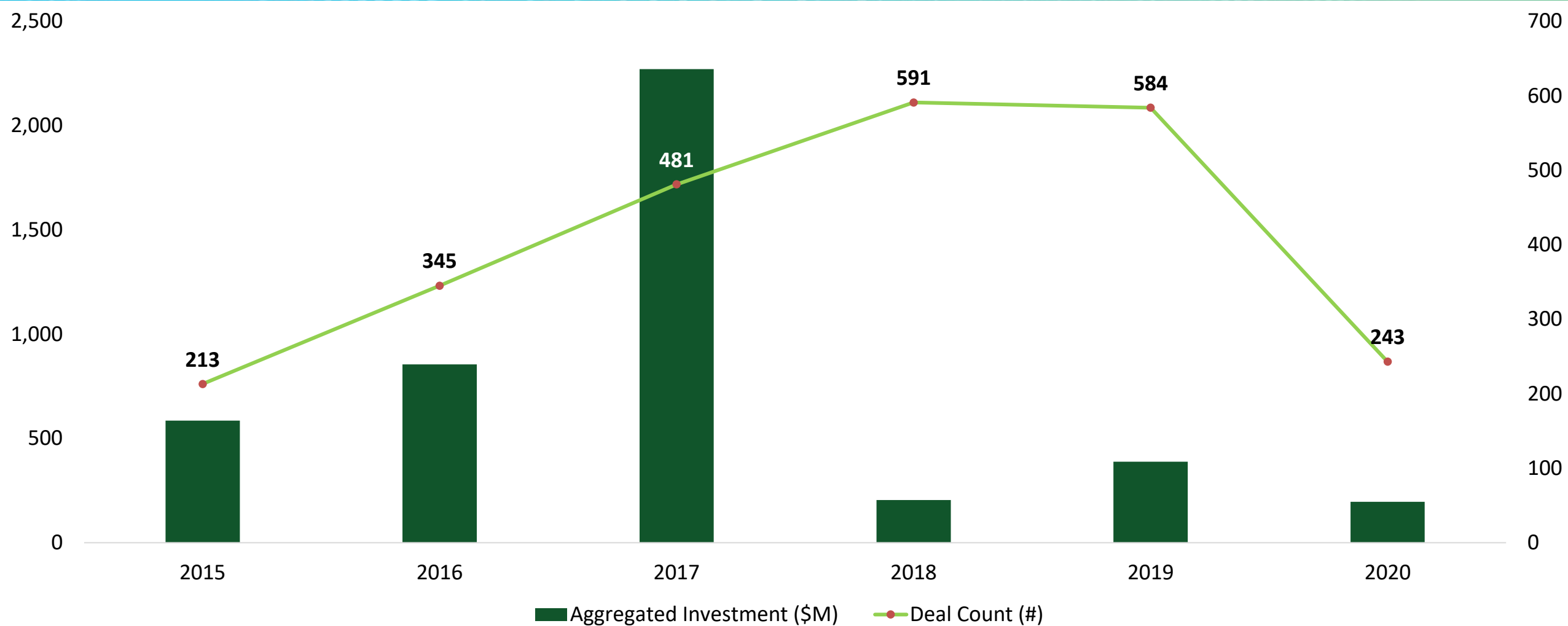
World Markets, 2020 and 2025



Embedded Vision Enabling Components 2020, Revenue in \$Billions USD

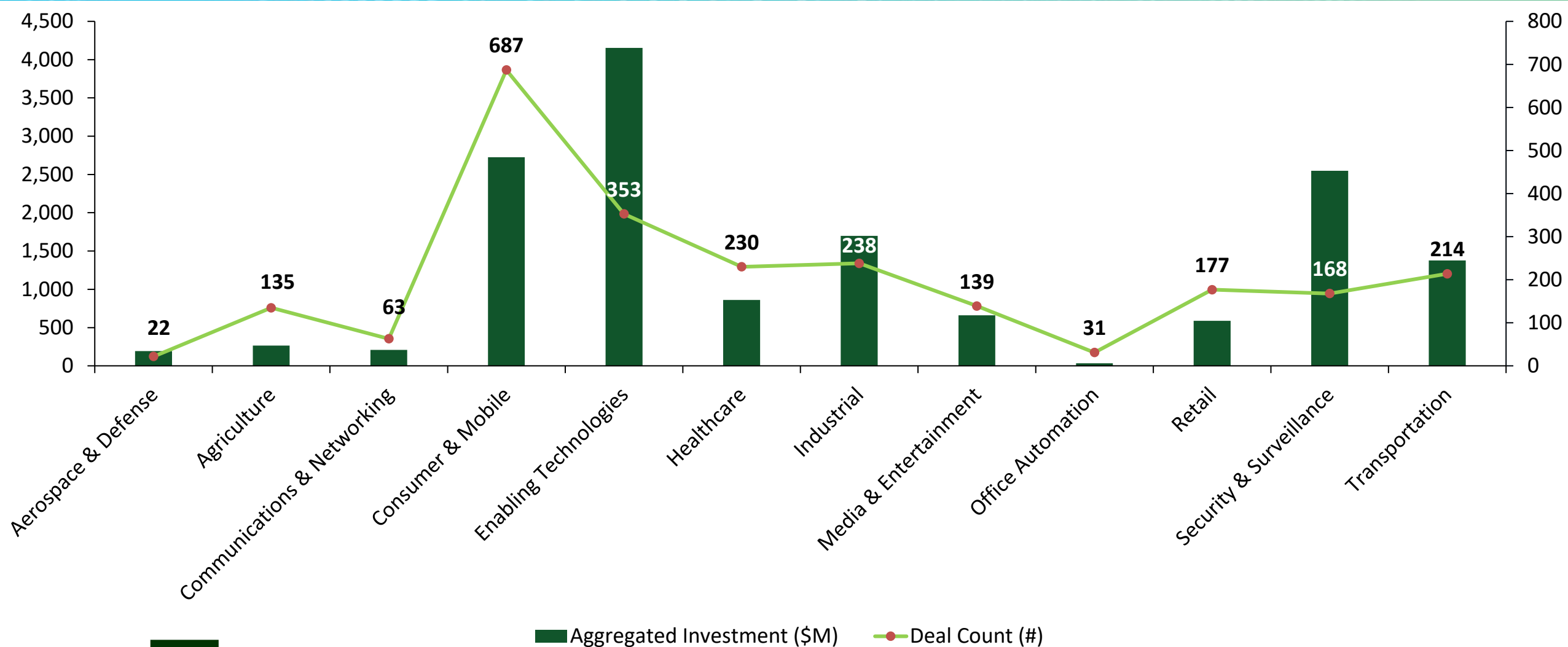


Venture Investments in Computer Vision Companies 2015-2020



Computer Vision Investments by Industry

World Markets: 2015 – 2020


















Best Funded Private CV Companies

Company Name	Year Founded	Location	Total Raised (\$M)	Description	Industry Sector
SenseTime	2014	Beijing, China	\$2,866	Provider of AI solutions used in computer vision and visual technology	Enabling Technology
Face++	2011	Beijing, China	\$1,008	Developer of a facial recognition technology aimed at providing compact, powerful and cross-platform virtual detection solutions	Security & Surveillance
TuSimple	2015	San Diego, CA	\$407	Developer of self-driving technology intended to improve the safety and efficiency of the trucking industry	Transportation
Moviebook	2009	Beijing, China	\$400	Developer of intelligent image production technology used in education, entertainment, and media industries	Media & Entertainment
YITU	2012	Shanghai, China	\$385	Developer of artificial intelligence technology used in the fields of smart cities, smart medical, and smart commerce	Industrial
Berkshire Grey	2013	Lexington, MA	\$327	Developer of a materials handling system designed to automate omnichannel fulfillment for enterprises serving connected consumers	Industrial
Interface Security Systems	1995	Earth City, MO	\$255	Provider of electronic security products and integrated security systems	Security & Surveillance
Bright Machines	2018	San Francisco, CA	\$229	Developers of an automation software designed to help businesses to meet the growing demands of manufacturing	Industrial





















Best Funded Private CV Companies

Company Name	Year Founded	Location	Total Raised (\$M)	Description	Industry Sector
Hudl	2006	Lincoln, NE	\$227	Provider of a sports analysis software intended to study and improve athlete performance	Consumer & Mobile
PlusAI	2016	Cupertino, CA	\$200	Developer of self-driving technology intended to offer large scale autonomous commercial fleets	Transportation
Aibee	2017	Beijing, China	\$175	Provider of total AI solutions to empower and upgrade vertical industries in vertical industries	Industrial
Nauto	2015	Palo Alto, CA	\$174	Provider of an AI technology intended to improve the safety of commercial fleets today and the autonomous fleets of tomorrow	Transportation
Skydio	2014	Redwood City, CA	\$168	Developer of AI-powered drones intended to make the power of flight a trusted and useful part of people's everyday lives	Security & Surveillance
Matterport	2011	Sunnyvale, CA	\$168	Developer of an immersive 3D media platform designed to establish 3D and VR models as a primary medium for re-imagining the world	Consumer & Mobile
Intellifusion	2014	Shenzhen, China	\$142	Developer of full stack AI Technology Platform and artificial intelligence chips intended to digitalize the physical world	Security & Surveillance

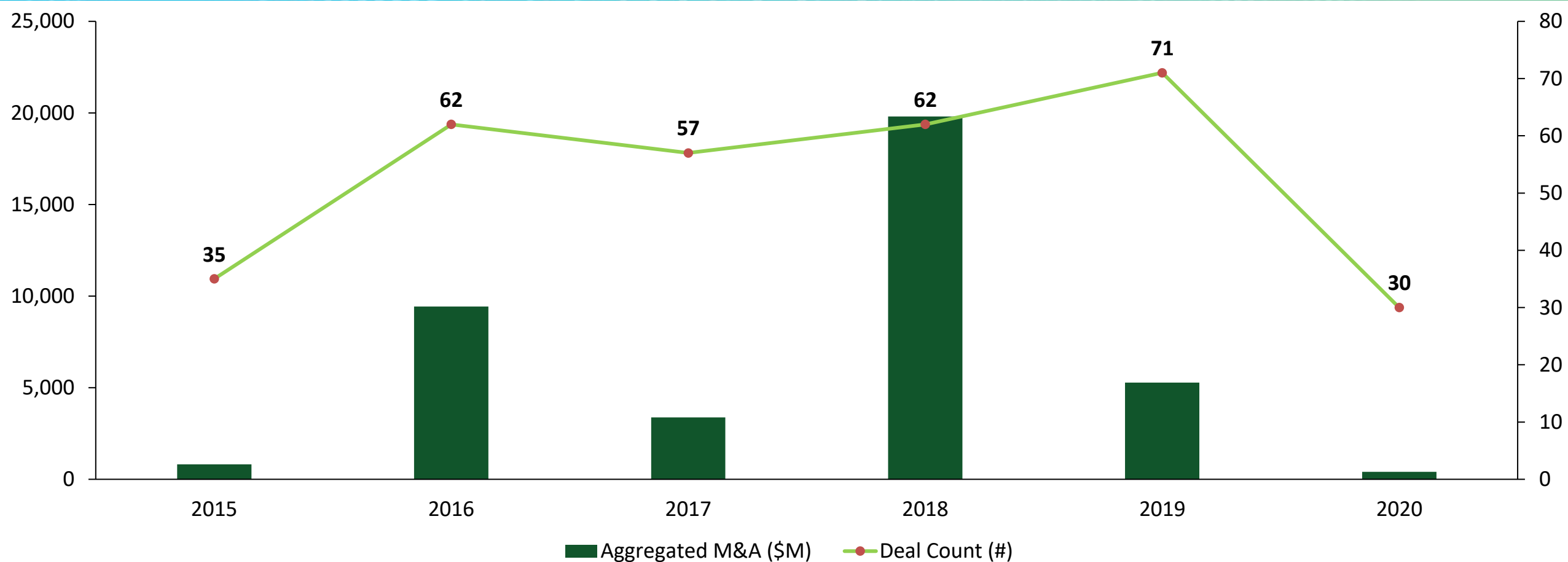
Most Active Corporate Investors

VC Firm	AUM (\$M)	# of Investments in CV	# of Portfolio Companies in CV	Representative Investments		
	\$1,300	125	65	 N/A	 N/A	 \$40.2M
	\$4,500	81	33	SCANDIT \$70.0M	Orbital Insight \$50.0M	 \$50.0M
	\$1,500	63	38	SCANDIT \$70.0M	samasource \$14.8M	 \$16.0M
	\$225	58	32	 \$2.9M	Orbital Insight \$20.0M	 \$3.0M
	\$1,000	54	24	 N/A	 N/A	 DEEPIVISION \$1.4M

Most Active Venture Investors

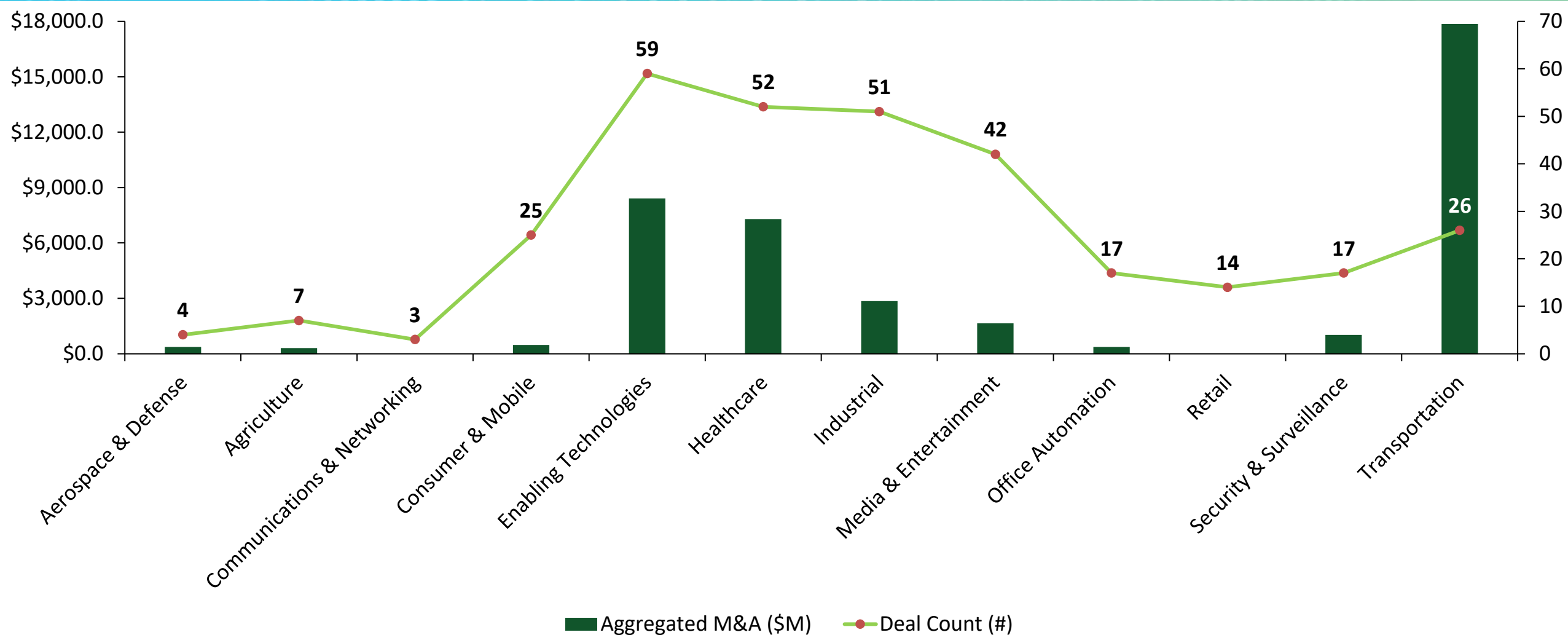
VC Firm	AUM (\$M)	# of Investments in CV	# of Portfolio Companies in CV	Representative Investments		
	-	86	64	 FLEXIV N/A	 NATIX N/A	 DARVIS N/A
	\$773	34	22	 glisten \$0.2M	 MDacne \$2.4M	 PEGRAM \$0.2M
	\$2,500	23	6	 OPENSOURCE \$30M	 Orbital Insight \$50M	 matterport \$40M
	\$1,105	22	15	 STRUCTIONSITE \$10M	 Simplifai N/A	 SmileDentistry N/A
	\$24,000	20	7	 mojo \$51M	 BG \$263M	 Aquabyte \$10M

Acquisitions of Computer Vision Companies 2015-2020



Computer Vision M&A by Industry

World Markets: 2015 – 2020



Notable Computer Vision Acquisitions 2015 – 2020

Company Name	Deal Date	Acquirer	Deal Size (\$M)	Valuation/ Revenue	Valuation/ EBITDA	Description	Industry Segmentation
Mobileye	4/01/18	Intel	15,300.0	-	-	Developer of collision avoidance system designed to reduce vehicle injuries and fatalities	Transportation
Habana Labs	12/16/19	Intel	2,000.0	-	-	Developer of fabless semiconductor intended to offer purpose-built artificial intelligence processing	Enabling Technologies
ISRA Vision	6/24/20	Atlas Copco	1,132.0	7.49x	19.04	Isra Vision AG provides image processing systems mainly in the field of 3D machine vision, particularly 3D robot vision	Industrial
Argo AI	7/12/19	Ford	1,000.0	-	-	Developer of artificial intelligence software designed to offer self-driving technology	Transportation
Avigilon	3/28/18	Motorola Solutions	974.0	2.38x	13.66x	Developer of advanced video surveillance and analytics technology products designed to issue alerts in real time when a person, object or vehicle of interest is detected	Security & Surveillance
Heptagon	1/24/17	ams	855.0	9.50x	-	Manufacturer of high end optical packaging and micro-optics sensors for smart devices	Enabling Technologies

Notable Computer Vision Acquisitions 2015 – 2020

Company Name	Deal Date	Acquirer	Deal Size (\$M)	Valuation/ Revenue	Valuation/ EBITDA	Description	Industry Segmentation
Cruise	5/16/16	General Motors	581.0	-	-	Manufacturer of advanced self-driving vehicles	Transportation
nuTonomy	11/21/17	Aptiv	454.0	-	-	Developer of an autonomous driving software designed to power tomorrow's driverless fleets and to radically improve the safety, efficiency, and accessibility of transportation in cities worldwide	Transportation
Movidius	9/05/16	Intel	392.2	-	-	Developer of computational image-processor chips and software for connected devices	Enabling Technologies
L3 Harris Corporation - Night Vision Unit	4/05/19	Elbit Systems	350.0	-	-	L3Harris is a defense contractor that provides products for the command, control, communications, computers, intelligence, surveillance, and reconnaissance market.	Aerospace & Defense
Apical	5/18/16	ARM	350.0	12.62x	31.82x	Developer of imaging and embedded computer vision technology	Enabling Technologies
Blue River Technology	9/12/17	Deere & Company	305.0	-	-	Developer of a next generation smart agriculture equipment designed to offer an alternative to chemical intensive agriculture	Agriculture

Notable Computer Vision Acquisitions 2015 – 2020

Company Name	Deal Date	Acquirer	Deal Size (\$M)	Valuation/ Revenue	Valuation/ EBITDA	Description	Industry Segmentation
Cognex	7/07/15	AMETEK	160.0	-	-	Developer of surface inspection devices using software based vision systems	Industrial
Lakesight Technologies	11/28/18	TKH Group	159.2	-	-	Operator of a holding company focused on providing machine vision systems	Industrial
Magic Pony Technology	6/20/16	Twitter	150.0	-	84.38x	Developer of machine learning technologies intended for visual processing	Media & Entertainment
Letgo	3/25/20	OfferUp	120.0	-	-	Developer of a mobile platform designed to facilitate buying and selling of local goods	Consumer & Mobile
AI Factory	12/26/19	Snap	114.6	-	-	Developer of AR products based in San Francisco, California	Media & Entertainment
CANVAS Technology	4/10/19	Amazon	100.0	-	-	Developer of computer vision technology designed to provide end-to-end autonomous transport of goods that can power both indoor and outdoor driving	Transportation

Notable Computer Vision Acquisitions 2015 – 2020

Company Name	Deal Date	Acquirer	Deal Size (\$M)	Valuation/ Revenue	Valuation/ EBITDA	Description	Industry Segmentation
Point Grey Research	11/04/16	FLIR Systems	259.2	-	-	Manufacturer of visible imaging and machine vision cameras	Enabling Technologies
Blackmore	5/23/19	Aurora	230.0	-	-	Developer of lidar imaging technology designed to support analytic software for autonomous vehicles	Transportation
Adept Technology	10/23/15	Omron	200.0	3.69x	-	Provider of vision-guided robotics systems and services	Industrial
Magisto	5/28/19	Vimeo	200.0	-	-	Developer of a smart video editor application designed to transform unedited videos and photos into short movies	Media & Entertainment
Xnor.ai	1/08/20	Apple	200.0	-	-	Developer of machine learning software models designed to work with applications for retail analytics, drones, automotive, industrial automation and smart cameras	Enabling Technologies
Omron Microscan Systems	10/02/17	Omron	164.1	-	-	Manufacturer of precision traceability and inspection solutions for the packaging, medical and electronics industries	Industrial

Notable Computer Vision Acquisitions 2015 – 2020

Company Name	Deal Date	Acquirer	Deal Size (\$M)	Valuation/ Revenue	Valuation/ EBITDA	Description	Industry Segmentation
ZOLOZ	9/13/16	Ant Group	100.0	-	-	Provider of a mobile transaction authorization service through eye vein biometrics attained using the native camera on mobile devices	Consumer & Mobile
Drive.ai	6/25/19	Apple	77.0	-	-	Developer of an artificial intelligence (AI) based self-driving technology designed to make autonomous vehicles safer	Transportation
ZooZ	7/23/18	PayUMoney	75.00	-	-	Developer of a mobile payment platform designed to maximize payments performance	Industrial
Body Labs	10/03/17	Amazon	70.0	-	-	Developer of artificial intelligence application designed to create 3D avatars from everyday 2D imagery	Consumer & Mobile
Stroom	12/04/19	Frontdoor	65.0	-	-	Developer of on-demand customer support and collaboration platform intended to provide instant support through mobile and web	Consumer & Mobile
Vuforia	11/03/15	PTC	65.0	-	-	Developer of a vision-based augmented reality software platform designed to connect the physical world with digital experiences	Industrial

- The overall market for computer Vision was valued at USD \$2.9B in 2018 and is expected to reach USD \$33.5B by 2025 at a CAGR of 42% during the forecast period (Tractica, 2020)
- While all verticals are expected to see strong growth, the largest markets for CV over the next 5 years are expected to be consumer, healthcare, automotive, retail, and advertising
- As computer vision goes horizontal, we expect to see significant value being created by companies using CV to solve specific problems as opposed to generic software tools
- Within enabling technologies, primary beneficiaries will be suppliers of components for mobile and edge-based vision systems – low power, high performance processors, image sensors, and VCSELs
- In automotive, NVIDIA and Intel (Mobileye) dominate the processor market but are being chased by Ambarella, Qualcomm, and 60+ AI semiconductor startups
- China continues to lead the world in terms of investment in CV startups and patents filed for AI and CV.

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