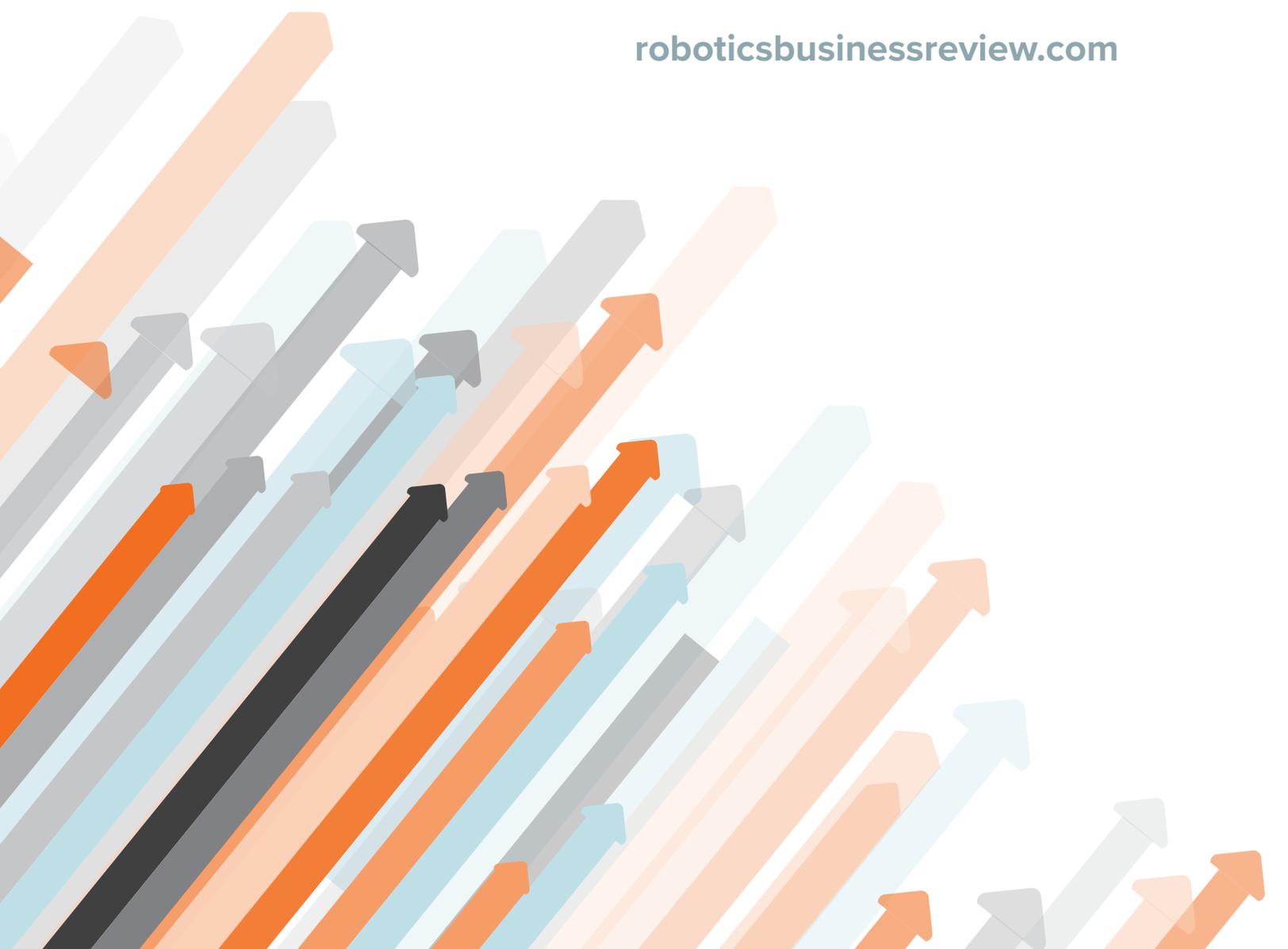




THIRD QUARTER
**TRANSACTIONS
REPORT 2017**

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Tech Transactions Slow in Q3 2017 — Except for SoftBank

By Jim Nash

The third quarter of 2017 was sedate -- almost boring -- in terms of transactions among automation companies, unless your name was Masayoshi Son, the CEO of Japanese technology conglomerate SoftBank Group Corp.

Son's acquisitions team [continued to piece together](#) deals for a sprawling network of firms, something it has been doing a lot of over the past two years. More on this in a moment. A wider look at corporate financings reveals that the technology sector as a whole seemed to have lost the scent for deals in the third quarter.



SoftBank's Masayoshi Son isn't waiting for market corrections for aggressive moves on automation companies.

It's almost like Son is the only tech investor who didn't get the memo about waiting for multiples to rebalance.

According to a [quarterly report](#) by research firm Mergermarket, deal value and deal count have been on a roller coaster since 2012 -- rising aggressively, peaking, and plummeting.

The total value of tech deals closed climbed from \$137.7 billion in 2012 to \$419.3 billion in 2015 before stalling. Deal value was almost unchanged last year, and has totaled only \$175.7 billion so far this year. Deal count has followed the same dromedary curve.

Mergermarket research also found this unusual factoid: Even when grouping technology financings with entertainment and telecommunications deals, less than half of contracts signed in the first three quarters of this year originated in the U.S.

In its third-quarter venture funding report, [Crunchbase noted](#) a troubling trend for investors.

Crunchbase analysts confirmed that mergers and acquisitions (and initial public offering) numbers were “lackluster.” Yet at the same time, late-stage and “stabilizing early-stage” funding is up. Late-stage venture funding in particular hit its highest total in 15 months, according to the analysts.

This dynamic turns the tables on venture capitalists, who historically have controlled or influenced virtually all aspects of a startup’s existence. VC partners almost universally want a quick return on their business investment, usually through the sale of the company or the company’s public offering. From a startup’s perspective, an acquisition or IPO changes who holds the leash, and not always for the better.

Now, instead of entrepreneurs pulling at the end of their VC’s leash, partners find themselves tied to cash-rich, independent-minded entrepreneurs. In fact, exits from the VC cocoon can be postponed for years or longer.

SMALLER DEALS TRENDING

Looking at the third quarter, professional services giant PricewaterhouseCoopers [highlighted](#) a continuing investment shift toward smaller deal values. This is true even in software, a perennial sector for optimistic valuations.

PwC sees lower valuations as one possible factor influencing subdued M&A and IPO activity. The numbers just are not as attractive right now.

In our deal analysis for the quarter, all of the billion-dollar-plus automation closings involved hardware — supported by advanced software, to be sure — but principally hardware. (The same was true of most of the smaller deals.) The third quarter's biggest purchase, the \$31 billion buyout of chip-designer ARM Holdings by SoftBank, is a good example.

SUMMER HEAT

Using that as a jumping-off point, let's look at the acquirer of the quarter. July was full of robotics acquisitions for SoftBank. It went public with a plan to buy U.K.-based ARM, which sells licenses for its designs. The buyout closed in September. Half of ARM-designed semiconductors already go into mobile devices, and the chips would be a good foundation for the nascent Internet of Things.

SoftBank paid a 43% premium for ARM, [according to](#) *The Financial Times*. That's extravagant, but then Son stridently asserts that the so-called Singularity — when artificial intelligence rivals human intelligence -- is a mere generation away. It appears he wants to be in a strong position when it happens.

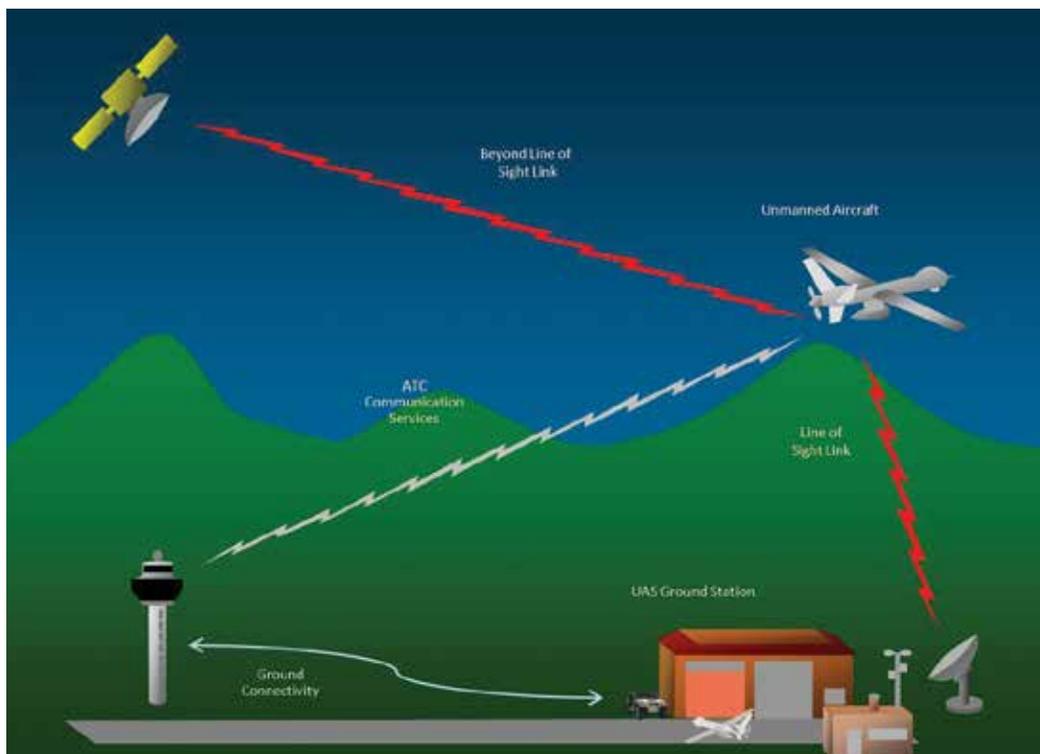
The company's Vision Fund bet again on the Singularity in July, leading a \$114 million placement into Brain Corp., which writes BrainOS, AI software that makes conventional commercial vehicles more autonomous. Qualcomm Ventures also participated in the investment. (Since then, Qualcomm has been fending off a hostile takeover bid by Broadcom.)

SoftBank led another midsummer investment into AI products. It was joined by South Korean, Japanese, and other investors in placing \$33 million into Taiwanese startup Appier. The company writes code that helps support complex business decisions.

Again in July, SoftBank took a stake of less than 5% in iRobot Corp., best known for its robotic household vacuum cleaners. Estimated at about \$120 million, the deal could be viewed as a vote of confidence in iRobot after it divested itself of its military and security business. An activist investor in 2016 demanded the sale.

SoftBank's Vision Fund led a \$200 million financing round into Plenty Inc., the current darling of indoor agriculture. Joining with the fund in July were, among others, venture funds founded by Alphabet Inc.'s executive chairman Eric Schmidt and Amazon founder Jeff Bezos.

Rockwell Collins helped design hardware to enable ground-based drone pilots to send data via radio towers.



In addition, SoftBank [co-led](#) a \$159 million round of financing into Nauto Inc., a maker of AI-infused transportation technology. Greylock Partners was co-lead. Also joining in were General Motors Ventures, Draper Nexus, insurer Allianz Group, BMW iVentures, and Toyota AI Ventures.

AEROSPACE AND AUTONOMOUS VEHICLE INTEREST

Of course, SoftBank wasn't the only company paying a billion dollars or more for robotics players doing the quarter.

Multinational conglomerate United Technologies Corp. paid \$30 billion for Rockwell Collins. The [new purchase](#) is being combined with United Technologies' aerospace systems unit, and will be called Collins Aerospace Systems.

The aerospace unit's product list is long, and it includes autonomous vehicles, while Rockwell Collins focuses on vehicle information systems including heads-up displays. The long-anticipated news immediately spurred vocal industry concerns that United Technologies paid too much for a component maker in decline.

In September, Northrop Grumman [pledged](#) \$7.8 billion to buy Orbital ATK. Both companies design and build defense technologies, and the purchase is an example of accelerating industry consolidation.

Orbital is on the leading edge of aerospace robotics. In 2016, Orbital announced it would be the prime contractor for NASA in building an autonomous in-orbit system that can build large structures in space.

Down on Earth's surface, Baidu Inc. has [committed](#) \$1.5 billion to fund 100 projects designed to accelerate the development of driverless vehicles. The Chinese Web services company announced its so-called Apollo Fund at the same time as the second iteration of its open-architecture software for autonomous driving.

Also, Swiss robotics giant ABB Group paid \$2.6 billion for GE Industrial Solutions, a unit of General Electric. The acquisition had more to do with picking up an under-performing competitor than with automation, as Industrial Solutions is in the electrification sector.



ST Engineering Expands Robotics Portfolio by Acquiring Aethon

By Mike Oitzman

In June, Singapore Technologies Engineering Ltd., or ST Engineering, announced its intention to acquire Aethon Inc. and add Aethon’s mobile logistics robots to its ST Kinetics division.

Prior to this announcement, Aethon sold its MedEx pharmacy product to software vendor [Inmar Inc.](#) in Winston-Salem, N.C.

The materials handling and logistics robotics market will grow to \$75 billion by 2027, [predicts IDTechEx.](#)

About the \$36 million [acquisition](#), Aethon President and CEO Aldo Zini said, “We’re now part of a multi-billion-dollar company. The resources and capital to really grow and accelerate are fantastic now, and we’re going to take advantage of it.”

The merger provides several synergies for the two companies:

- › ST Engineering provides a global footprint for Aethon distribution.
- › ST Engineering opens up the Asia-Pacific region for Aethon, starting with Singapore.
- › Aethon brings a solid and mature mobile robot technology to the ST Kinetics portfolio.

“We’re going to grow the Aethon business both here and in the Asia-Pac countries as well as in Europe,” [Zini told Robotics Business Review](#). “Aethon will continue to operate out of Pittsburgh and will grow. We will join forces with our colleagues in STK to capitalize on our opportunities.”

“We will also continue to innovate with the investment from STK, and look at expansion into other applications and markets,” he said.

ST ENGINEERING BENEFITS FROM MOBILE ROBOT PIONEER

Pittsburgh-based [Aethon](#) is one of the early pioneers in the autonomous mobile robot market. Its platform is used in more than 150 hospitals worldwide. Aethon has continuously innovated in this market, evolving a robust platform and became the dominant mobile robot supplier for healthcare applications.



An Aethon TUG at work in a hospital.

Another innovation is Aethon's Cloud Command Center, which enabled its support team to help program systems, remotely monitor the operation of robots in the hospitals, and quickly recover the systems if there was an error.

"In the healthcare market, our customers never wanted to be robot experts, so we developed the cloud command center as a solution to support robots in the field," said Tony Melanson, vice president of marketing at Aethon.

FROM THE HOSPITAL TO THE MANUFACTURING FLOOR

Over the past two years, [Aethon](#) has expanded its reach and product line to serve applications on the manufacturing floor. At the 2015 Automate show, the company first demonstrated its [TUG](#) T3 platform with a heavier payload and omni-directional wheels. This new system was ideally suited for the heavier payloads in manufacturing applications as well as cart transport use cases.

"IN MY OPINION, WE HAVE MORE EXPERIENCE THAN ANY OTHER VENDOR IN TERMS OF AUTONOMOUS MOBILE ROBOTS. WE HAVE A PLATFORM THAT CAN SCALE FROM LIGHTWEIGHT CAPACITY TO VERY HIGH PAYLOADS. WE HAVE A NAVIGATION SYSTEM WHICH IS SUPERIOR TO MANY OUT IN THE MARKET TODAY. OUR TECHNOLOGY IS SOLID; IT'S PROVEN. WE HAVE CERTAIN CAPABILITIES THAT OTHERS DON'T HAVE." — ALDO ZINI, PRESIDENT, AETHON

"Two years ago, we weren't even in the industrial space, and now we have multiple customers here in the U.S. and around the globe," noted Zini.

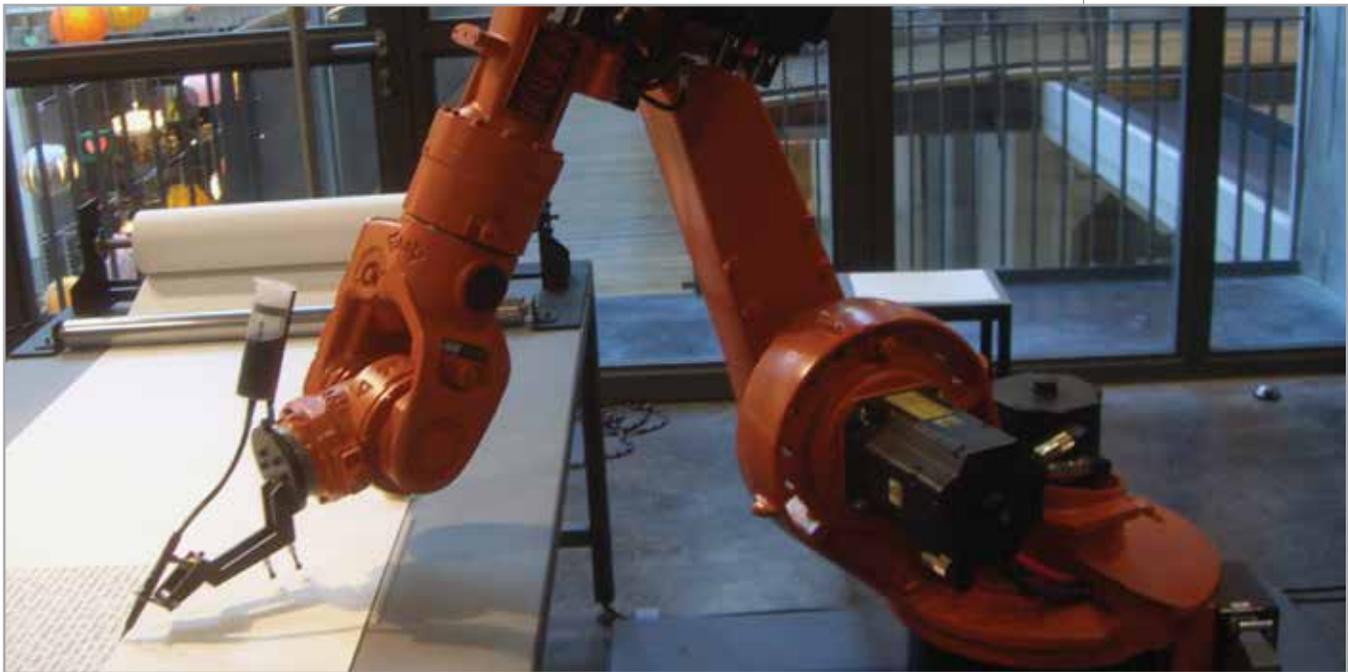
"This speaks for itself about how the industrial market is responding to our technology."

[As Aethon expanded](#) globally, it reached out to defense supplier [ST Engineering](#) as a potential channel partner in Asia and other regions. The relationship soon expanded as both companies realized the potential of combining forces.

ST Engineering is a \$4.97 billion (SGD \$6.8 billion) public company with a broad portfolio. The Singapore-based company was already on the investment path to grow its fledgling robotics division. ST Kinetics has been developing robotics market for a while, and its first product is an autonomous shuttle bus.

The addition of Aethon to its product family provides ST Kinetics with immediate credibility in the mobile robotics market along with a large installed base. The transaction is expected to close in the third quarter of 2017.

The bottom line for Aethon is that through the acquisition, it now has the ability to execute on a robust product roadmap. With the capital assets and broader resources of ST Kinetics, Aethon can now leverage both companies' experience and market leadership to grow their business.



Chinese Robot Market Growth Remains Strong, Says STM Report

By Georg Stieler

The Chinese robot market has been the largest one in the world since 2013. Despite the already high sales level, robot sales rose again by 30% last year. The International Federation of Robotics expects that China will be responsible for 40% of the worldwide demand by 2019.

[STM's newest research](#) supports this assessment. The growth momentum will continue in 2017 and beyond, according to experts from leading foreign and Chinese robot manufacturers, component suppliers, and systems integrators.

Rising labor costs and a still low level of automation, as well as the increasing abilities of intelligent and [collaborative robot](#) solutions, will fuel this growth — not to mention the [ambitious goals](#) of the Chinese government.

3,400 COMPANIES, BUT WHO IS REALLY RELEVANT?

At the same time, the market is still very fragmented and [intransparent](#). According to the Chinese Ministry of Industry and Information Technology, the number of companies in the robotics sector has risen from just under 300 to more than 3,400 since 2012.

Many of them are small companies with limited prospects for the future. However, powerful players from the traditional mechanical engineering industry or dynamic Internet companies are still entering this field.

In our comprehensive research, we have identified and analyzed the relevant manufacturers of industrial robots in China. STM found that there are 27 manufacturers of robots in China that have a significant size and noteworthy technological capabilities.

We have also considered 12 other companies that are not producing in China.

FOREIGN MANUFACTURERS DOMINATE; DOMESTIC MANUFACTURERS COMPETE IN SIMPLE APPS

Foreign manufacturers are still responsible for about 70% of Chinese robot sales. Local robot producers pick up, albeit from a small base. Sales of the leading seven indigenous robot manufacturers grew by an average of 36.7% last year. Of the seven leading foreign manufacturers in China, the figure was 26.6%.

However, the strong growth of domestic producers was also driven by extensive subsidies. The majority of their robots are simple handling devices, even the proportion of six-axis robots has steadily grown over the past three years. Local manufacturers are competing in [low-margin applications](#) such as loading and unloading, and increasingly in simple welding applications.

Foreign manufacturers are working on concepts for intelligent flexibility, as well as simpler and safer usability.

Market observations: Collaborative robots

Collaborative robots (Cobots)



Introduction: Cobots belong to multi-joint robots and all have over 5 axes. Cobots have differences with traditional articulated ones in terms of load capacity, size, precision, speed and ease of use/programmability. They will usually stop, when they meet a certain resistance.
Universal Robots achieved most cobot sales in China in 2016, with ~1,000 units.

Expected future growth rate
> 50%

"It is expected that in the next years, affordable collaborative robots, which do not necessarily comply with EU and US machine and safety standards, will achieve a dynamic growth that can be well over 50% p.a. in China - depending on market availability."
— Head of R&D of a global Top 4 robot manufacturer

Foreign cobot vendors			Domestic cobot vendors		
Company names	Cobot names	Price per unit	Company names	Cobot names	Price per unit
ABB	YuMi	> USD 40k	AUBO	(Smokie) i5	~USD 15k
KUKA	LBR iiwa 7 and 14	> USD 60k	Han's Motor	Elfin	USD 10~25k
Fanuc	CR-35iA, 4A, 7iA and 7iAL	> USD 80k	Elephant	V1	~USD 10k
Yaskawa	Motoman HC10	N/A	Quanta storage	TMS	N/A
Universal Robots	URS, UR10 and UR3	USD 20~45k	Siasun	Flexible 7-Axis	N/A
Rethink Robotics	Baxter and Sawyer	USD 25~30k	Triowin	T5	N/A
Comau	AURA	N/A	STS	Youbao	N/A
Bosch	APAS	USD ~90k			
Denso	Cobotix	N/A			

Companies worth noticing

Aubo just starts to manufacture in 2017

Bosch APAS has not been sold in China yet. But it plans to enter with certain discount on the price.

Sources: Various; STM research, interviews & analysis



COMPREHENSIVE DESCRIPTION OF INTEGRATORS

Over 80% of the sales in the Chinese robot market are conducted through system integrators. They are important sales channels for suppliers of automation products, as well as for manufacturing companies that are looking for the right partners to implement their automation projects on site.

We estimate the total number of companies in this area in the low four-digit range. While most of them are small and very specialized firms, there are others with several thousand employees. Some of them have already set up offices in Europe and North America to be closer to their suppliers and to serve their international customers, including German automobile groups, overseas.

In our database, which is based on years of work experience in the Chinese robot market, we have described the 300 most relevant robotics system integrators in China.

Due to the fact that China is responsible for over 70% of the world's production of computers, communication equipment and consumer electronics, there are unique competencies for complex production solutions for this area. The same might happen for production solutions for batteries, as the country is trying to position itself as the lead market for e-mobility.

LACK OF NATIVE KEY COMPONENTS IS SUPPOSED TO BE REDUCED

The Chinese robotics industry is still suffering from a lack of powerful key components such as controls, servomotors, and reducers. Accordingly, an average of about 70% of the production costs of domestic robots is currently being passed on to foreign suppliers. Due to their comparatively low unit numbers, local robot manufacturers also have significantly higher purchasing prices than internationally leading companies.

According to the plans of the National Manufacturing Strategy Advisory Committee, this is supposed to change in the foreseeable future as a result of the development of strong domestic suppliers. It remains to be seen how fruitful these efforts are.

OUTBOUND M&A WILL CONTINUE, PARTNERSHIPS WILL OPEN NEW POSSIBILITIES

With the acquisition of [German robot manufacturer KUKA](#), Midea was responsible for one of the most spectacular acquisitions for China last year. In February 2017, the company took over the majority of Israeli specialists for Motion Control Servotronic.

Although we already see that tighter capital controls from the Chinese side have an impact on the outbound M&A activities, we expect that strategic deals that are consistent with the Beijing objectives will continue to be approved.

In May, Midea also announced that it would join the Japanese robot manufacturer Yaskawa to [enter the nursing robots business](#). The Chinese robot market is profiting from the know-how of the Japanese, who in turn benefit from Midea's market access.

The boundaries between industrial and service robots are blurring — a phenomenon that we will be able to observe more often in the future.

STRONGEST GROWTH IN COLLABORATIVE ROBOTS AND AGVS

The overwhelming majority of our interlocutors are confident that the sales targets of the Chinese government for the 13th Five-Year Plan will be more or less achieved. The amendment to the funding guidelines for a more sustainable development of the domestic robot industry announced at the beginning of February 2017 will accelerate the market adjustment. However, it is expected that this process will take several years.

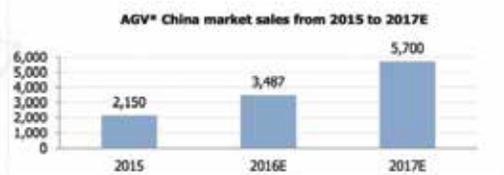
The strongest growth is expected in the segment of low-cost, collaborative robots with ease of use; partly with integrated machine learning and machine vision skills. Depending on market availability, growth rates of more than 50% per year could be achieved while starting from a low level.

Market observations: AGVs (Automated Guided Vehicles)

AGV (Automated Guided Vehicle)



AGVs started to gain attention only recently due to the increasing demand for intelligent transportation



AGV introductions

- AGVs are a type of Wheeled Mobile Robots. Equipped with an automatic guided electromagnetic or optical device. It can travel along guided paths with its safety protection and various transportation functions. The three main technologies of AGVs are hinge structure, engine split technology and energy feedback design
- AGVs are widely used in automotive, 3C, logistics, etc. industries for moving, handling, etc. applications
- More, several AGVs can form a flexible logistics system to comply to the complicate logistics requirements from production process

Market development

- Over 80% of the AVG market is occupied by domestic manufacturers, leading ones including Siasun, KSEC and Machinery Technology Development. This is mainly due to their price advantages - the foreign AGV products are generally over twice the price of the domestic ones
- In 2015, the size of the Chinese AGV market was around 500 million RMB, with an average price around 230,000 RMB per unit
- Currently, there are around 80 AGV domestic vendors (while there are around 200 AGC providers) and less than 10 AGV foreign vendors have a presence in China;

* Here the sales of AGV do not include AGCL, which are moving robots similar to AGV but with simplified functions i.e. only simply carrying without self-loading and other complex functions
Sources: ORIA, STM research, interviews & analysis



Strong growth is also expected in the area of automated guided vehicles (AGVs). Both the automotive and electronics industries as well as the growing e-commerce sector require more efficient logistics solutions.

Due to the increased use of collaborative robots in assembly processes, we expect that the electronics industry in particular will gain in importance as a sales market. However, the automotive sector will remain the most important target sector for the time being.

DEVELOPMENTS IN CHINA ROBOTICS WILL AFFECT THE GLOBAL MARKET

China's manufacturing sector needs to modernize to remain competitive internationally. The upgrade is also an integral part of the government's "Made in China 2025" [strategy](#).

Foreign technology is needed for the technological upgrade of China's manufacturing sector. It is an attractive market for leading [foreign industrial automation companies](#), and some of them are deploying their newest technologies in China. Smaller foreign automation vendors are following these examples. Do not forget the aggressive outbound M&A strategies of Chinese robot firms and their innovative potential.

For all these reasons, Chinese robot developments will shape the industry globally. The sheer size and the competitiveness of its market are driving technology and business-model innovations by both foreign and domestic companies. Companies that succeed here will leverage their strengths in other markets.

Despite a widespread lack of local know-how, uncertainty concerning quota goals for its domestic companies or obscure new cybersecurity laws, China is still likely to become a global lead market in [smart manufacturing](#) and the robotics industry.

Robotics Transactions, Q3 2017

Company	Investor, partner, acquirer	Amt. (millions \$)	Transaction Type	Date	Industry, Technology
F. Robotics Acquisitions Ltd.	MTD Products		M&A	7/2/17	consumer, mowing
Xometry	BMW, GE	15	investment	7/2/17	manufacturing, 3D printing, AI
Fastbrick Robotics	Caterpillar Inc.	2	investment	7/3/17	construction, infrastructure
Keymile Group	ABB		M&A	7/3/17	energy, communications
Kitt.ai	Baidu		M&A	7/5/17	consumer
UVeye	Ahaka Capital	4.5	investment	7/5/17	vehicle inspection
Honeybee Robotics	Ensign-Bickford Industries		M&A	7/6/17	aerospace, defense
Global Brain Corp.			investment	7/7/17	industrial IoT
Mazor Robotics Ltd.	Driehaus Capital Management LLC	3.4	investment	7/8/17	healthcare, surgical
Investify	Hamburger Sparkasse (Haspa)		investment	7/10/17	finance, AI
	Toyota	100	investment	7/11/17	autonomous vehicles
Halli Labs	Google		M&A	7/12/17	AI
Metamoto	Motus Ventures	2	investment	7/12/17	transportation, simulation
Slamtec	Chinese Academy of Sciences Holdings	22	investment	7/12/17	transportation, sensors
Geek+ (Beijing Geekplus Technology)	Warburg Pincus	60	investment	7/13/17	logistics
Smartvid.io	Autodesk	7	investment	7/14/17	infrastructure
Aethon Inc.	Singapore Technologies Engineering Ltd.	36	M&A	7/17/17	supply chain
Desktop Metal	New Enterprise Associates, Google Ventures	115	investment	7/17/17	manufacturing, 3D printing
Increff	Sequoia Capital, Grey Orange Robotics	2	investment	7/17/17	supply chain
Makeblock	SoftBank	60	M&A	7/17/17	education
NOVAerial Robotics Ltd.	Global UAV Technologies	0.3	M&A	7/17/17	aerial drones
Reach Robotics	Korea Investment Partners, IGlobe	7.5	investment	7/17/17	consumer, AR
Embark	Data Collective	15	investment	7/18/17	transportation, self-driving trucks
Brain Corp.	SoftBank Vision Fund, Qualcomm Ventures	114	investment	7/19/17	transportation, AI
Miso Robotics	Acacia Research	3.1	investment	7/19/17	retail, food
Nauto	SoftBank, Greylock Partners	150	investment	7/19/17	transportation, AI

Robotics Transactions, Q3 2017

Company	Investor, partner, acquirer	Amt. (millions \$)	Transaction Type	Date	Industry, Technology
Plenty	SoftBank	200	investment	7/19/17	vertical agriculture
SkySafe	Andreessen Horowitz	11.5	investment	7/20/17	security, anti-drone
Graphcore	Atomico	30	investment	7/21/17	AI, manufacturing
Intuition Robotics	Toyota Research Institute	14	investment	7/21/17	healthcare, assistive
Rebound Technologies	Closed Loop Ventures		investment	7/21/17	waste processing
6 River Systems Inc.	Norwest Venture Partners	15	investment	7/25/17	supply chain, mobile robots
iRobot Corp.	SoftBank	>120	investment	7/25/17	consumer
Momenta.ai	Daimler, NIO Capital	46	investment	7/25/17	transportation, self-driving cars
Prospera	Qualcomm Ventures, Cisco	15	investment	7/25/17	agriculture, IoT
Vicarious	Khosla Ventures	50	investment	7/25/17	AI, machine learning
Autotalk	Toyota, Sumitomo Mitsui Banking	40	investment	7/26/17	transportation, communications
Robopolis SAS	iRobot	141	M&A	7/26/17	consumer, vacuums
Precision Planting	AGCO		M&A	7/26/17	precision agriculture
Kuaile Zhihui	Qiming Venture Partners	10	investment	7/27/17	education
LeddarTech	Osram	101	investment	7/27/17	mobile robots, lidar
On the Move Systems	Robotic Assistance Devices	0.25	M&A	7/28/17	security
Vibrotech SrL	Marchesini Group		investment	7/28/17	industrial automation
Atlas Dynamics		8	investment	7/31/17	aerial drones
Aerobotics	4Di Capital, Savannah Fund	0.6	investment	8/1/17	agriculture, drones
Common Sense Robotics	Aleph VC, Innovation Endeavors	6	investment	8/1/17	supply chain, delivery
Zero Zero Robotics	Snap	150	M&A	8/1/17	consumer, drones
KB Medical SA	Globus Medical		M&A	8/3/17	healthcare, surgical
Pilatus Unmanned	Measure		M&A	8/3/17	aerial drones as a service
	Rewired	100	investment	8/3/17	machine vision
Auris Medical Robotics	Coatue Management	280	investment	8/4/17	healthcare, surgical
Preferred Networks Inc.	Toyota Motor Corp.	94.7	investment	8/7/17	transportation, IoT
Oryx Vision	Third Point Ventures, WRV	50	investment	8/8/17	transportation, lidar
Duke Robotics		15	investment	8/9/17	security, military
Granular	Dupont Pioneer	300	M&A	8/9/17	agriculture, software
Academy of Robotics		380	investment	8/10/17	logistics

Robotics Transactions, Q3 2017

Company	Investor, partner, acquirer	Amt. (millions \$)	Transaction Type	Date	Industry, Technology
Emerging Technology Advisors	Cloudreach		M&A	8/10/17	education, machine learning
Trexo Robotics Inc.		0.12	investment	8/10/17	healthcare, exoskeleton
Autonomous Robotics Ltd.	Thalassa	30	investment	8/15/17	
HDS Global	Ingram Micro	10	investment	8/15/17	supply chain
Sewtec Automation	Endless LLP	28.31	investment	8/15/17	manufacturing
SharkNinja			investment	8/16/17	consumer, vacuum
TuSimple	Nvidia, Sina	20	investment	8/16/17	transportation, AI
Scyfer	Qualcomm Technologies		investment	8/17/17	AI
Ambient Intelligence Technology	Beyond Next Ventures, Mitsui Sumitomo Insurance Venture Capital, SMBC Venture Capital, Freebit Investment	1.93	investment	8/22/17	underwater drones
Databricks	Andreessen Horowitz	140	investment	8/22/17	AI
Dragon Innovation	Avnet		M&A	8/22/17	manufacturing, IoT
Five Lakes Automation LLC	Jenoptik		M&A	8/22/17	manufacturing
Cambricon	Alibaba, Lenovo	100	investment	8/23/17	manufacturing, AI
Sheppard	Wabco	145	M&A	8/25/17	supply chain, self-driving trucks
Amplero		17.5	investment	8/29/17	machine learning
Mazor	Medtronic	40	investment	8/30/17	healthcare, surgical
Tass International	Siemens		M&A	8/30/17	transportation, simulation
C&R Robotics			failure	8/31/17	
Epica International Inc.	Partners for Growth	5	investment	8/31/17	healthcare, manufacturing
EZ-Robotics			failure	8/31/17	
Robotic Assistance Devices	On the Move Systems		M&A	8/31/17	security
Robotic Drilling Systems	Nabors Industries	11	M&A	8/31/17	energy
Sky-Futures	Mitsui & Co.	4	investment	8/31/17	drone inspections
ARM Holdings	SoftBank Group	31000	M&A	9/5/17	manufacturing, IoT
Five AI	Lakestar Capital	35	investment	9/5/17	transportation, self-driving cars
Metawave	Khosla Ventures, Motus Ventures, Thyra Global Management	7	investment	9/5/17	transportation, perception
OpenSpace	Lux Capital	3	investment	9/5/17	machine vision
Prowler.io	Cambridge Innovation Capital	13.2	investment	9/5/17	transportation, AI

Robotics Transactions, Q3 2017

Company	Investor, partner, acquirer	Amt. (millions \$)	Transaction Type	Date	Industry, Technology
Rockwell Collins	United Technologies	30000	M&A	9/5/17	aerospace
Aras	GE Ventures, Silver Lake	40	investment	9/6/17	manufacturing, IoT
Acutronic Robotics	Sony Innovation Fund		investment	9/7/17	manufacturing
Agrible	Maumee Ventures, iSelect Fund	9.7	investment	9/7/17	agriculture, software
Airobotics	BlueRun Ventures China, Microsoft Ventures, OurCrowd.com	32.5	investment	9/7/17	energy, security, drones
Blue River Technology	John Deere	305	M&A	9/7/17	agriculture
Innoviz Technologies	Delphi Automotive, Magna International	65	investment	9/7/17	transportation, lidar
MIT	IBM	240	investment	9/7/17	AI R&D
Roobo	Seven Seas Partners	53		9/7/17	consumer, home robots
Adaptive Methods	L3 Technologies		M&A	9/8/17	security, undersea
Shuwei	Fosun RZ Capital, Jiguang	7.7	investment	9/8/17	consumer
Specim Spectral Imaging	Bocap SME Achievers Fund	4.2	investment	9/8/17	materials handling
Ekso Bionics Holdings Inc.		34	investment	9/9/17	healthcare, exoskeleton
Microscan Systems Inc.	Omron	157	M&A	9/9/17	manufacturing
B-TEMIA Inc.	Wistron		investment	9/12/17	healthcare, wearable
iotaMotion	National Institutes of Health	1.4	grant	9/13/17	healthcare, assistive
Ori Systems	Khosla Ventures	6	investment	9/13/17	consumer, furniture
Furhat Robotics	Balderton Capital, LocalGlobe	2.5	investment	9/14/17	education, healthcare, retail
Grit Labs	Pitch	30	M&A	9/14/17	B2B, AI
Reactive Robotics	MTIP MedTech Innovation Partners AG, High-Tech Gründerfonds, Bayern Kapital and TQ-Group	2.5	investment	9/14/17	healthcare, therapeutic
Samsung Automotive Innovation Fund	Samsung	300	investment	9/14/17	transportation, fund
Tonbo Imaging	Walden Riverwood Ventures	17	investment	9/14/17	defense, machine vision
Ocean Aero	Lockheed Martin		investment	9/15/17	security, energy
Cambridge Medical Robotics	Cambridge Innovation Capital, LGT Global Invest, Escala Capital, ABB Technology Ventures, Watrium	26	investment	9/18/17	healthcare, surgical
Orbital ATK	Northrop Grumman	7800	M&A	9/18/17	aerospace, security
Ushr Inc.	Forte Ventures	10	investment	9/18/17	transportation, software

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Humatics Corp.	Fontinalis Partners	18	investment	9/19/17	transportation, software
Mazor Robotics	Biondo Investment Advisors LLC	0.675	investment	9/20/17	healthcare, surgical
Neato Robotics	Vorwerk		M&A	9/20/17	consumer, vacuum
Invert Robotics	Powerhouse Ventures	1.3	investment	9/21/17	
Apollo Fund	Baidu	1520	investment	9/22/17	transportation, fund
General Electric Solutions Unit	ABB Ltd.	2600	M&A	9/22/17	
JingChi	Qiming Venture Partners, Nvidia	52	investment	9/25/17	transportation, self-driving cars
IAM Robotics	NewGen Capital	0.5		9/25/2017	supply chain
Cainiao Smart Logistics Network	Alibaba Group	800	investment	9/26/17	logistics
Mazor Robotics	Columbia Partners LLC	1.85	investment	9/26/17	healthcare, surgical
SimplyInsight	Zoom.ai		M&A	9/26/17	process automation, AI
Drive.ai	Grab	15	investment	9/28/17	transportation, self-driving cars
Kinova Robotics	Fonds Manufacturier Québécois S.E.C. II; KTB Network Co., Foxconn; and BDC Capital	25	investment	9/28/17	manufacturing, cobots

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Robotics Business Review (RBR) provides business intelligence for the global robotics industry. Whether you're investing in, developing or purchasing robotic solutions, RBR provides an unparalleled view into this rapidly growing market so you can stay informed, do your job better and be competitive.

RBR members have full access to our growing company index including insights on RBR50 companies, insider interviews, whitepapers, industry reports, podcasts, webcasts, and financial reporting.

Our members span the robotics ecosystem and use RBR to:

- › Stay up to date on global trends and areas of growth and development in robotics
- › Know where to invest their time, money and resources in robotics
- › Cut through noise and hype to support better business decision-making and stay ahead of the competition
- › Scout for new markets, opportunities, technologies and potential partnerships
- › Gain intelligence on the people and companies at the forefront of robotics innovation

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