

Geektime

Annual Report 2016: Startups and Venture Capital in Israel



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Best regards,

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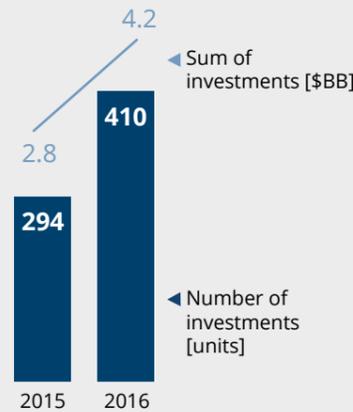
Credits

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Tel-Aviv
January 2017

Executive Summary

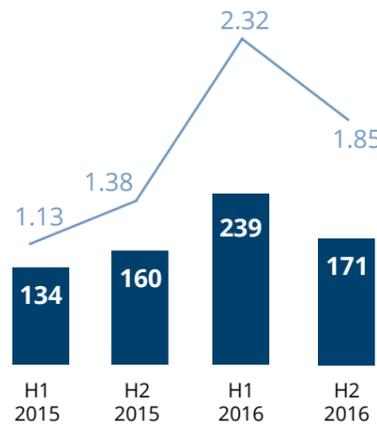
This is what 2016 looked like for startups and VCs:



But if you look closely...

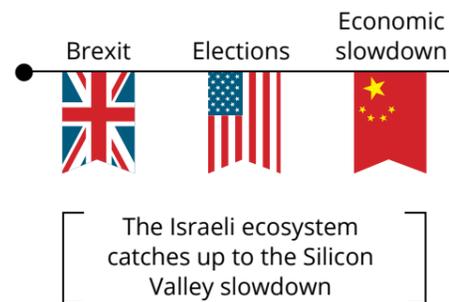
H1 2016 Rise

The first half of 2016 showed an all-time peak in the number and sum of rounds

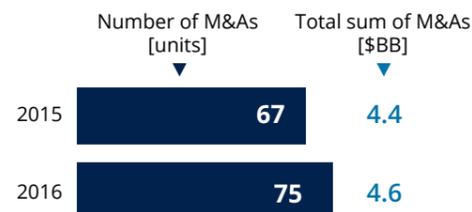


H2 2016 Slowdown

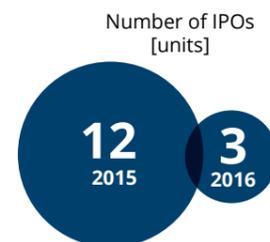
A decline due to political and economic events



M&As



IPOs



Sectors



Cyber Security

Alongside the rise in cyber security threats like ransomware and IoT security, we saw a deceleration of investments in H2 2016 and an 82% decrease in M&As in the sector during 2016. This indicates the sector has reached maturity and has lost its growth momentum.



Internet of Things (IoT)

IoT is one of the growing sectors in the Israeli startup ecosystem. We saw a 430% rise in the sum invested and a 143% growth in the number of investments. IoT M&As have increased 44% since 2015, amounting to \$288M. This validates the Israeli ecosystem as one of the strong leaders in the field and we predict it will continue to grow extensively in 2017 and beyond.



Adtech

Investment activity showed stagnation. There was a slight decline in the sum of investments and a 24% rise in the number of investments. This sector is way past its peak and we predict 2017 will be a year of rebirth for adtech. We believe younger startups will bring much anticipated innovation to this sector.



Fintech

Fintech showed tremendous growth in investments. There was a whopping 434% jump in the sum of investments, and a 200% increase in the number of investments. There was a 25% decrease in M&As, amounting to \$40M.



Transportation & Autonomous Vehicles

Transportation and autonomous vehicles grew significantly, especially the autonomous vehicles segment. It had a 346% jump in its sum of investments and a 114% increase in its number of investments. We are still 4-5 years from autonomous vehicles reaching maturity, and the sector is expected to grow until then.



Life Sciences

There was a slight move forward in the life sciences sector. While the number of investments jumped 42%, there was a 10% decline in the sum of investments.

Tech trends



Supply Chain and Logistics

Delivery and logistics are still a huge pain point. Many startups and established companies are trying to make it easier, faster, and cheaper to get a package to your doorstep using technology.



Human-Machine Interactions

The sector is moving from Natural Language Processing to Natural Language Generation, combining elements like tone, sentiment, timing, and visual cues to take the next big leap.



Fintech

As millennials become bigger consumers, their need for a banking and financial system that works the way they want and can support their demands properly is bankrolling innovation throughout the sector.



Internet of Things (IoT)

IoT is entering Industry 4.0, the industrial connected revolution. From power generators to assembly lines, everything is getting monitored, connected, and controlled remotely or automatically. This will become one of the biggest driving forces in IoT in 2017.

Methodology

Our report deals with Israeli startups only, including companies that are either located or registered in Israel, as well as companies that were founded in Israel and maintain their presence in the country.

Our report aims to reflect the reality of the Israeli market. Therefore the numbers shown in the report refer solely to primary deals. Second and third time exits and secondary IPOs, which distort the situation, aren't included in this report.

Our data is a combination of information given to us directly by investors and startups, publicly available information, and other inside media sources.

The proportion of investors and startups who responded positively to our request for information was extremely high. Still, not all investors are always eager to share information about their investments. In order to respect the investors' wishes, we are not disclosing specific details about investments that were not released to the general public; instead, we are showing aggregated data. At the same time, there may be some information gaps due to details that were not been disclosed to the public, or which was not shared with us.

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About Geektime

Geektime is the largest international tech blog located outside the U.S., focusing on global innovation and highlighting startups from across the world. Geektime uncovers news from around the world in English (Geektime.com), Vietnamese (Geektime.vn) and Hebrew (Geektime.co.il).

In addition to our in-house content, Geektime's large startup contributor network of 2000 opinion leaders around the world, provides a voice to non-U.S.-based startups, which comprise some 80% of the global startup market. We are their primary voice to investors, entrepreneurs, fellow geeks and tech enthusiasts, helping them cut through regional boundaries and compete in the global marketplace.

Since March 2009, Geektime has engaged the startup and technology world by providing them with their daily fix of news, updates, and articles on various topics in technology; quickly becoming a withdrawal inducing morning, afternoon and evening vice for its readers; even trumping coffee in many independent studies as the first thing tech inclined individuals must have before starting off their workday. Geektime boasts a reader base of more than 2,000,000 unique visitors a month around the world. These are die-hard tech lovers who know their startups, devices, and new technologies – and Geektime is their trusted source for everything tech.

In addition to covering the technology sphere, Geektime, based in Tel Aviv, Israel, also produces and hosts many of Israel's leading tech events, providing front and center media coverage of the latest and greatest coming out of the Israeli startup, IT and entrepreneurship scenes. Geektime has also offices in NY, Vietnam and is constantly expanding to new startup ecosystems.

Our Data Intelligence department is a unique team that focuses on data intelligence and analytics, with deep understanding and familiarity of both the hi-tech and startup industries worldwide. Our team of experts is a combination of engineers, economists, analysts and lawyers.

Introduction

2016 was a year of change for venture capital and startups around the world and in Israel.

We have seen the “end of the party” on high-value unicorn investment rounds and the first slowdown after years of a bullish tech market. Due to a record first half of 2016, we thought the Israeli startup ecosystem was safe from the effects of the global dip. We were wrong. Like every other Silicon Valley trend, the drop took its time. About 9 months after the decline hit Silicon Valley, we learned that even though we do not like to admit it, we are still part of the same world, just as every other country.

Economically, 2016 presented more than a few mind-boggling events. There was the Brexit vote, which wreaked havoc on the already financially unstable EU, and the tumultuous US elections which surprised most people. If that weren't enough, China and most emerging markets have shown a dramatic decline in growth, and China issued a standstill order to make Chinese investing outside of China much more difficult.

While it is easy to throw numbers on paper and celebrate another record year for the startup nation, we need to look closer at the numbers to understand that things are not how they appear to be. The slowdown is already here. We have seen the effects of the global economy and have learned that our fate is more attached than we thought to what is still the no. 1 startup capital of the world: Silicon Valley.

We will probably see the dip in investments continue and reach the lower level of the food chain: i.e., we expect a decline in the number of new startups that will launch in 2017. On the other hand, we expect a rise in the number of global companies opening up local offices. Whether through M&As or just hiring locally, the great talent and lower costs of operating in Israel are still a great attraction. Even though that cost gap is getting smaller each year, it is still wide enough to keep us attractive.

In the wake of rising costs, an engineering talent shortage, and global events, we anticipate a somewhat difficult year for the Israeli ecosystem. It will not be easy, but it is not all bad. The amount of new financing being raised by both new and older funds is expected to keep just enough fuel in the ecosystem and help us steady the flame for at least a few more years.

Whether or not we, as a country, will be smart enough to make the necessary adjustments to keep us in the startup game is all up to us.

A word from the industry



Lior Weizman

Startups & Developers Ecosystem Manager,
IBM Israel

" I believe that in 2017 we'll see AI and real-time analytics technologies leveraging and integrated within IoT solutions. Around 90% of information generated by sensors and devices is never collected or analyzed and more than 50% loses value within seconds. What matters to businesses is not collecting the (big) data but also the having the right speed of the insights. IoT startups will have to differentiate themselves with strong big-data and real-time analytics capabilities in order to be attractive to large enterprise clients, especially those targeting the transportation, retail, healthcare and the energy and utilities industries. Those will also be startups that we'll want to have in the next batches of IBM Alpha Zone."



Ronen Solomon

Chairman Of The Board,
Altshuler Shacham Benefits Ltd

" 2016 was a year of big financial rounds that absolutely dominated the headlines, as the industry has experienced exceptional growth in capital rounds in Israeli companies such as Gett (total funding \$400M) and Via (total funding \$100M). After the 2008 crisis that was hardly felt in the Israeli industry, a new generation of VCs has merged and during 2016 has finalized the fundraising stage and allowed "smart money" to enter the ecosystem. From my point of view we will see large scale M&As and IPOs in the Israeli market to the tune of over \$1B, during 2017. As a consequence of the 2016 market performance I forecast that it might be more difficult for companies to raise money (which might result in lower valuations) but potential corporate buyers are still here to stay and create new business routes, and Israeli VCs will reap the benefits of their investments."



Yifat Oron

CEO,
LeumiTech

" 2016 was a record year in terms of companies' fund raising. We witnessed the formation of new funds, side by side to the growing activities of the traditional Israeli funds. We saw new investment themes forming, most significantly the automotive technology sector. Hi-tech companies are growing in a much faster pace as well- with a total number of new companies established in the field reaching an unprecedented volume of more than 1,100 this year. Another notable increase this year is on the part of huge global technology and non-technology players entry to our local market, and the opening of research and development centers in our local Silicon Valley. We also see a trend by which Israeli technology companies are not rushing towards early exits, but rather chose to perform late stage rounds. The large amount of funding, and the high availability of money, allow these companies to function, grow and develop, and execute an exit later at a more mature stage of the company, and at higher prices. This increasing phenomenon is a validation that the industry is maturing."





Global startups and venture capital market overview

Leading sectors of 2016



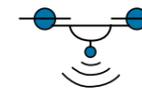
Autonomous vehicles



Artificial intelligence



Digital health



Drones



Virtual & augmented reality



Insurance tech

2016 was not an easy year for startups globally in terms of funding, M&As, and IPOs. Funding was not easy to come by and there were major layoffs, bankruptcies, cancelled deals, and a general decline in comparison to last year's records. We take a closer look at the trends of each of these startup ecosystem markets in the following section.

Funding

The first three quarters of 2015 showed remarkable growth in both the number of deals and the total amount of money that was invested. However, the fourth quarter of 2015 marked the beginning of a slowdown in the venture capital market that continues to impact us today. Since then and all through 2016, global VC funding activity stayed relatively stable but has declined significantly in comparison to the heights that were seen in Q2 and Q3 of 2015. On the bright side, there was a spike in the amount of money that was invested during Q2 of 2016. North America continues to lead the way in 2016 while other regions like Asia and Europe are still lagging behind.

There are numerous reasons for the moderation seen in the VC funding ecosystem. Fear over different political and economic events such as Brexit, the US elections, the stagnation of the Chinese economy and the rise in US interest rates have led investors to "sit on the fence" and see how the global economy reacts before taking

any actions. But these are not the only reasons for this dramatic drop in the number of deals in 2016.

2015 was a stellar year of mega funding events for companies known as "unicorns" (companies with at least a \$1B valuation). After a long period of time where investors spent large amounts of money on big late stage rounds, there was a deceleration. The general assumption was that some of these valuations were based more on unsubstantiated dreams of future development than on the actual success rates and business plans of companies. In short, companies were overvalued well beyond their actual worth. In 2016, investors showed increased caution and were less likely to take risks on smaller, early stage startups. There was still some VC funding activity in terms of unicorns and "decacorns" (companies with a \$10B or higher valuation), but to a much lesser extent. Among the unicorns who raised money this year were companies such as Uber, Snapchat, and Didi Chuxing. Another major trend is that corporations and their investment arms (corporate VCs) are now taking a

larger share of startup investments, mostly in growth-stage rounds. It is obvious that corporations wish to use the fast pace of the startup world to gain access to innovative tech solutions. Corporations want to stay relevant in the ever changing market.

There were several prominent global tech segments this year: autonomous vehicles, artificial intelligence (AI), digital health, virtual reality (VR) and augmented reality (AR), insurance tech, and drones. All of these fields have received more and larger funding rounds, showed a better rate of acquisitions, and had serious media attention. It seems that what unites all of these sectors is the feeling that they are about to explode and impact our day-to-day lives in a profound way. Other notable segments were smart homes and media. We saw that smart home products have finally reached the mainstream, while media subscriptions are rising due to the US elections and the fake news scare.



M&As and IPOs

We see a similar decline in M&As in 2016 as with funding in both the number of M&As and the sum paid for such liquidation events. While M&A activity subsided in 2016, it did show more calculated M&A deals. There were a few huge acquisitions such as SoftBank's \$32B acquisition of ARM, Microsoft's acquisition of LinkedIn for \$26.2B, and Verizon's acquisition of Yahoo for \$5B. But a lot of acquisitions were for a sum less than \$50M, indicating that these companies were bought mainly for their human capital and intellectual property (IP).

There are more M&As planned for 2017 than there were in the last four years. With valuations finally stabilizing on reasonable sums, bigger corporations and private equity firms are on the lookout for acquisitions. There are also signs for a public market recovery, such as a renewed interest in IPOs. Three tech IPOs in North America during 2016 marked this recovery — Appito, Trade Desk, and Twilio — who raised impressive sums and managed to show initial stock prices close to their pre-IPO valuations. In Europe, which usually is less dominant in this field, Nets A/S and Takeaway.com became public and were also successful. This happened after a few years where tech companies were reluctant to go public. It is important to note that even though we see an increase from last year, take under consideration the high level price-to-earnings ratio (which is now at its highest level since 2008). Due to the same concerns we mentioned earlier, we do not expect to see a rise in IPOs in 2017.



Leading investors

1

The rise of the non-traditional investor

In the last two years, we have seen many more investments by technology corporates and even non-technological ones. Car manufacturers such as GM and Volkswagen have joined the race to create fully autonomous vehicles, having realized they can't go at it alone and need the innovation and the fast pace of startups. Insurance companies like AXA and Munich RE are investing in early stage startups and others like Asurion are already acquiring startups to improve their service and product portfolio.

This change indicates that technology is becoming the driving force for all industries. While it started from the easiest places like enterprises and consumers, technology has become an important component even in more traditional sectors like vehicles, food and financial services. It is relatively easy to convince companies that they need better software or hardware; the hard part is convincing them to put their trust in robots in manufacturing. Almost every company that provides services or products realized they can improve and strengthen their process by using technology. We see farmers using big data and artificial intelligence to track crop growth, while medical institutes are finally ready to use big data to gain insights from their vast amounts of data.

While we saw the seeds of this trend planted during 2016, we will see them blossom in the next few years. This means we'll continue to see more and more non-traditional investors such as corporations in all the fields we've mentioned entering the startup investment and acquisition market.

2

Corporate investors

Over the last couple of years corporations and their venture arms have moved into the startup investment area and have joined and led many funding rounds as well as conducted acquisitions. The reasons behind this investment trend are numerous: corporations are trying to catch up with the fast pace of a competitive market.

Corporates are playing the long term game, they invest in startups not only for the fast financial benefits but also in order to fasten their own access to new innovations, connections in the industry, clients and a less expensive, quality workforce. Startups realize this is the path to gain access to deep pocketed investors.

While Google Ventures and Intel Capital have been the most prominent corporate investors in recent years, over the last year we've seen more and more entering the arena.

In Israel, we saw a couple of new corporate investors start investing in Israeli companies during 2016. Salesforce Ventures, the venture capital arm of CRM solutions giant Salesforce, made two investments: The first was in CoolaData, an event-based data warehouse in the cloud in a \$5.6M round. The second was Redkix, an email platform solution that scooped an impressive seed round of \$17M. Hearst Ventures and Saban Ventures also started investing in Israel and have brought a local partner on board in the last two years.

Israeli startups and venture capital market overview



Selected events in 2016

Major funding rounds



Gett:
\$300MM
Via:
\$100MM



Payoneer:
\$180MM



Voyager Labs:
\$100MM



Skybox:
\$100MM

Newly raised funds

OrbiMed:
\$307MM **Aleph:**
\$180MM

Pitango:
\$175MM **State Of Mind:**
\$75MM

TLV Partners:
\$115MM **OurCrowd:**
\$72MM

The year of the big funding rounds

One of the big funding rounds in 2016 was Volkswagen's \$300M investment in on-demand mobility platform Gett in May. The deal brought Volkswagen into the ride-sharing business and took Gett into the global autonomous car war. It also strengthens Israel's status as a leader in the autonomous vehicles sector. In November, Gett raised an additional \$100M from Russia's biggest bank, Sberbank.

But Gett wasn't the only Israeli mobility company to get a huge funding round. Via, a group ride-sharing startup, raised \$100M as well. Investors included Pitango Growth, 83North, Poalim Capital Markets, and C4 Ventures.

In October, money transfer startup Payoneer raised a \$180M Series E funding round. The round was led by TCV and previous investor Susquehanna Growth Equity. TCV also purchased shares from existing shareholders. In 2016, the company opened new offices in Japan, India, and the Philippines. It also acquired escrow startup Armor Payments in March.

Another important segment of the Israeli ecosystem received funding: artificial intelligence. Voyager Labs, which develops core technology with the capability to analyze billions of data points worldwide from multiple sources in real-time, raised \$100M. Investors included Horizons Ventures, OCAPAC Holding Company, Sir Ronald Cohen, and Lloyd Dorfman. The investment will help finance the company's solutions for the e-commerce and financial markets.

As always, the cyber security sector has been immensely successful in Israel. A testament to this was Israeli-American cyber security startup Skybox's \$96M late stage funding round.

This year, we saw an impressive amount of VCs raising big sums of money for new funds. Some of these funds specialized in individual sectors such as health care while others focused on specific stages.

The flourishing of new funds

In May, American-Israeli investment firm OrbiMed launched a new \$307M fund focused on 20 Israeli biotech companies. This is just one of several VCs who decided to put their money into this growing field. Aleph closed its second fund after raising \$180M. Their portfolio is already pretty diverse with companies like

HoneyBook, Life on Air (AKA Meerkat or HouseParty), shipping startup Freightos, seafaring intelligence Windward, insurtech company Lemonade, Nexar, and Colu. They also took part in the \$8M round in Israeli BI solutions startup Anodot, leading with a \$7.5M investment.

Pitango, a VC firm with \$2B under management, announced a new \$175M early stage fund in December. It is their 7th fund and is focused on the life sciences and IT, with a particular emphasis on enterprise infrastructure, AI, digital health, and IoT. It has already invested in one company, Graphcore, and two platforms, Haifa-based incubator MindUp, and investment platform i3 Equity Partners.

State Of Mind, a VC founded in 2015, raised \$75M for its first fund, which will invest in early stage startups. They have already invested in four startups: SpacePharma, Twiggle, Perception Point, and Cabara.

TLV Partners has finished raising money for a \$115M first fund. It plans to invest in enterprise software, fintech, cyber security, and IoT.

OurCrowd, an equity crowdfunding platform and VC, scored a massive \$72M Series C in September. This followed another venture round in March, where the company got \$10M from China's United Overseas Bank.

OurCrowd also launched a new \$50M digital health fund called OurCrowd Qure in November. It will invest in Middle Eastern companies at seed and Series A stages. The VC has recognized that digital health is one of the fastest growing sectors in terms of funding and M&A activity and decided to throw their lot into it. Given the complexity of health care delivery and markets, the aging of the global population and the acceleration of health demands, they believe that specific focus and experience is needed for a VC fund. Israel has become a compelling innovation hub for life sciences innovation, on par with top regions in the US and Europe.

In July, OurCrowd launched Radicle, a \$15M agricultural technology accelerator. OurCrowd has already invested in a few Israeli AgTech companies such as EdenShield and CropX.

In May, HP Inc. launched a corporate VC group called HP Tech Ventures. The fund will operate from two centers: Tel Aviv and Palo Alto and will focus on 3D, virtual reality, hyper-mobility, IoT, and smart machine sectors.

Other prominent new funds include Israel Biotech Fund (IBF), which raised \$100M for investments in Israeli biomed startups, and Russian VC Titanium Investments, which started a \$50M fund for Israeli startup investments.

Was 2016 another peak year for Israel?

"If you torture the data long enough, it will confess whatever you want it to"

Ronald Coase



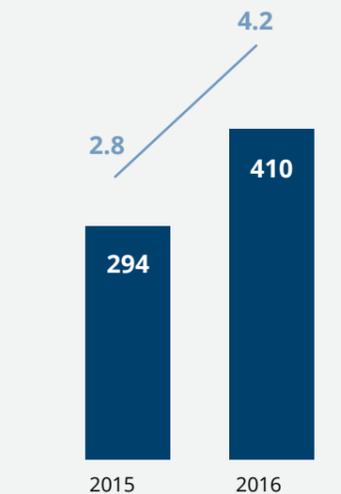
2016 startup funding in Israel

At first glance, it appears that unlike the rest of the world, startups continued to show growth and global players continued to show interest in the Israeli market. VCs raised new funds, big funding rounds, and supported quite a few M&As.

But if you look more closely and break down the year in two, you can see that the slowdown has reached our shores as well, and that we are not as immune to the effects of the global startup economy as most of the industry would like to think.

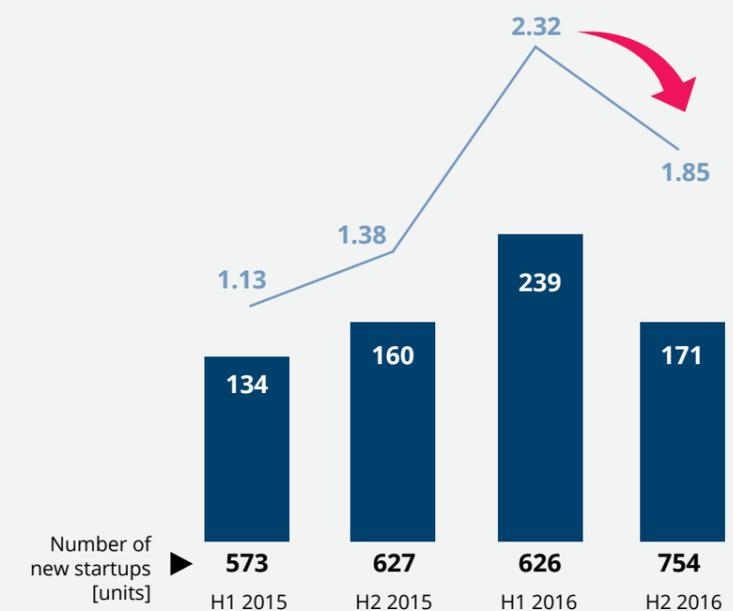
Number and sum of investments [2015-2016]

Yearly



— Sum of investments [\$BB]
■ Number of investments [units]

Half year



— Sum of investments [\$BB]
■ Number of investments [units]

2016 was more entrepreneur-friendly

2015 ended with 257 funding rounds that amounted to almost \$2.8B in total funding. 2016 presented impressive growth in comparison: There were 402 rounds, which raised a total of \$4.2B. This means there was a large jump of 50% in the number of rounds and a 50% increase in the amount of money that was raised.

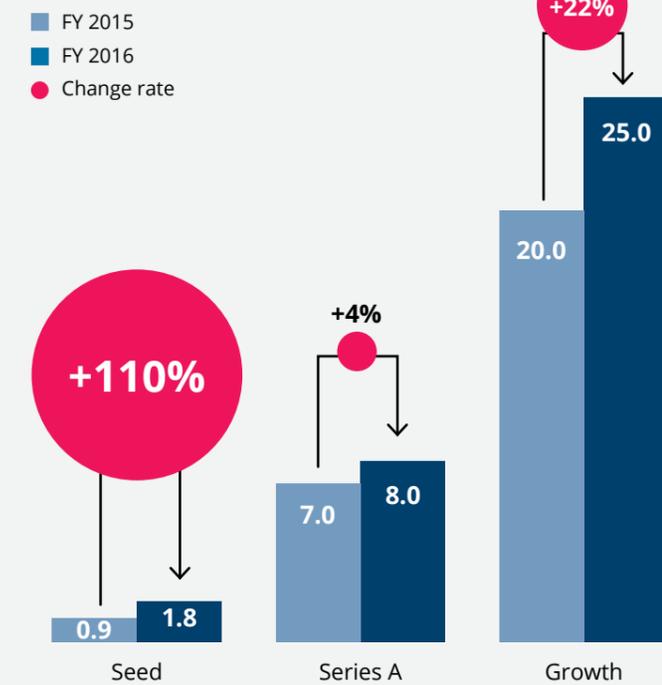
As a whole, 2016 was a much better year for investments in startups than 2015. This shows the continued growth of the Israeli ecosystem. Regardless of the upheaval in the VC industry during the end of 2015 and all through 2016, investors still put their bets on Israeli startups and innovations. This is remarkable given the fact that the world had seen a decline at the end of 2015 and did not truly recover throughout 2016.

The first interesting trend we can learn from the classifications of funding rounds is that there was an increase in the average size of both seed rounds and growth rounds.

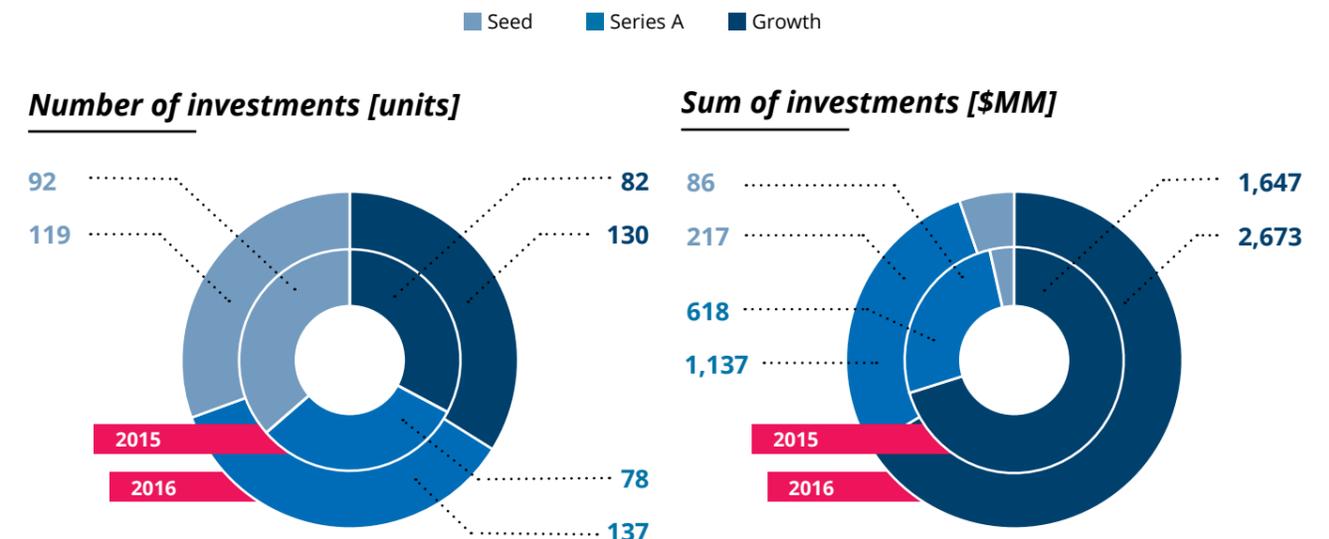
Although both the amount of seed rounds and the sum of funding in seed rounds have grown in the past year, the major change in the average size for seed rounds (a 100% increase from \$0.9M to \$1.8M in 2016) can be explained by the more "entrepreneur-friendly" approach that investors are taking following similar behavior from SV-based funds. In previous years, even early stage VC investors were eager to ask for liquidation preference at a relatively early stage. In the last few years, the competition for good deals in the valley caused investors to relinquish the more aggressive terms, with liquidation preference at an early stage being one of them. It took us a couple of years, but in 2016 we are starting to see the same trend with Israeli VCs. This causes rounds that were previously considered A rounds (with a liquidation preference) to be completed as seed rounds and therefore reflect bigger deal sizes for this stage.

The second trend we are seeing is growth in the average deal size for growth stage funding rounds. This trend shows continuity from 2015, where more money was available for late stage companies in order to help them grow a company here in Israel without them having to "leave" to raise money from US-based funds.

Average investment round by stage [\$MM]



Number of funding rounds and sum of investments change by company stages [2015-2016]



We are fashionably late to the end of the party

Back in the second half of 2015, SV investors called it “the end of the party”. Unlike the “RIP good times” of 2008, it is not another bubble. But it still symbolized a change of pace for the market, in terms of both investments and M&As. In Israel, we like to think our economy is “immune” from global effects, but just like any other Silicon Valley trend, the “end of the party” has reached the startup nation’s shores, and it only took a year for us to start seeing the consequences.

While the first half of 2016 showed a dramatic 45% growth in the number of funding rounds and a 70% growth in total funding raised in comparison to the second half, the second half has demonstrated the decline. While the first half of 2016 showed an all-time peak in the amount and sum of rounds — 231 rounds that led to \$2.32B — the second half had “only” 171 rounds totalling \$1.85B.

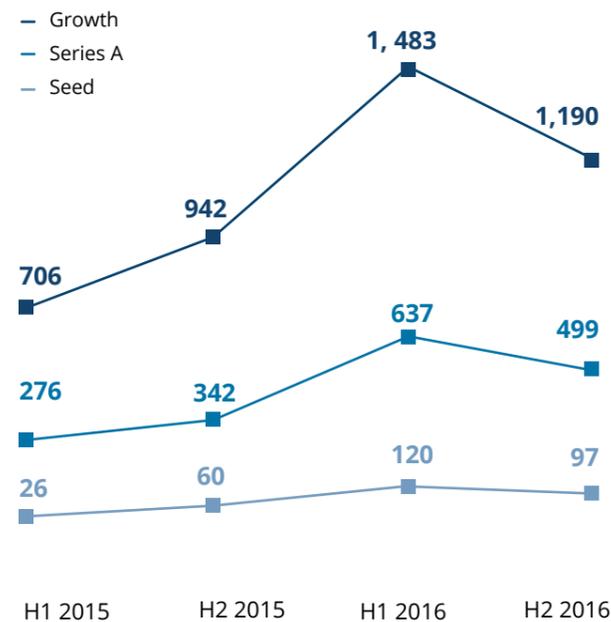
The second halves of the year are usually times with more investor activity, but in 2016 there was a 25% decline in the number of investments and a 20% decline in the sum amount of money raised during that period in comparison to the first half of the year.

This largely confirms our prediction from earlier this year, where we said that the Q4-2015 US “bubble burst” would in fact take its toll on the Israeli startup ecosystem, but that it would take 3-4 quarters to get here. As we noted before, although Israel likes to brag about its economy’s durability to global changes, we are not immune from the slowdown afflicting the US and the rest of the world.

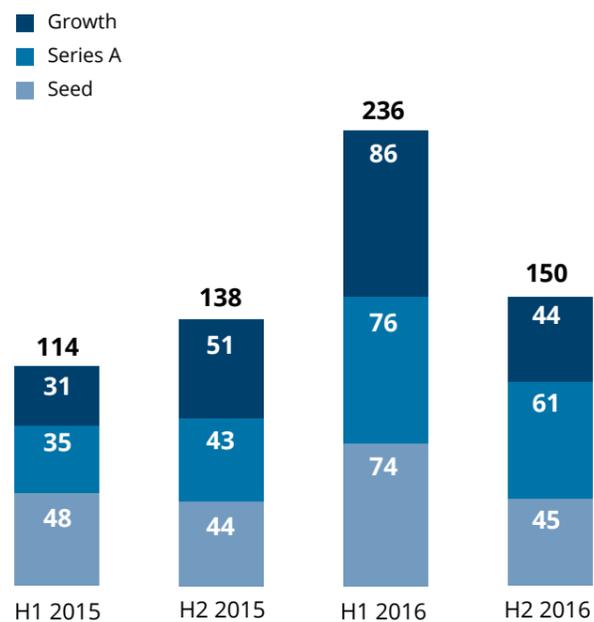


Number of funding rounds and sum of investments change by company stages [2015-2016]

Sum of investments [\$MM]



Number of investments [units]



2016 Israeli IPOs

There were a lot fewer IPOs in 2016 (only 3) in comparison to 2015 (12). This is another nail in the IPO closet and the final proof that IPOs have become a less desirable route to an exit for technology companies. Due to the substantial cost of keeping a company public, the exhausting and cumbersome processes involved, changes in regulations and of course, the option to raise money privately, many companies prefer other routes to grow and even liquidate early stage investors through buyouts.

If that is not enough, out of the 4 Israeli companies who tried to IPO in 2016, one failed, another one basically disappeared, and only two of them have actually managed to complete the process. The first half of 2016 saw two Israeli companies that turned to the capital market.

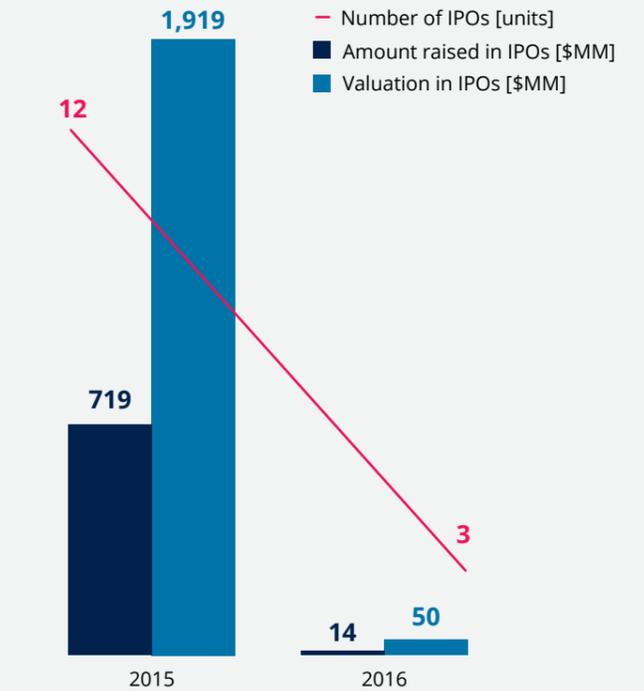
The first one, Trendit, a crowd behavior analysis and demographic trends company, turned to the London stock exchange and arguably raised a little more than \$4M on a \$12M valuation (which is much more suited for London’s market for smaller companies, AIM). However, later in 2016, the company had reported that most of the capital raised never reached its bank account and since July, the company is no longer traded.

In April, the secure data exchange broker SAFE-T started offering stocks at the Tel Aviv Stock Exchange (TASE). However, SAFE-T’s IPO never came to fruition.

A few months later, in August, Vonetize turned to TASE. The company, which develops premium content services and VOD platforms, raised \$4.21M at the Tel Aviv Stock Exchange in a \$26.33M valuation.

In November, HearMeOut, a social audio platform, became public in ASX (Australian Stock Exchange) while raising \$5M at a \$10.5M valuation. Although this was the first time an Israeli company set foot in the ASX, it appears that Israeli companies are now being courted by the ASX, with them hoping to see more Israeli companies down under.

Yearly number, valuation, and amount raised in IPOs [2015-2016]



Leading stock markets for Israeli IPOs [2015-2016]

	2015	2016
NASDAQ		ASX
AIM		LSE
TASE		TASE

2016 startup M&As in Israel

In 2016, Israeli startups scooped \$4.6B in M&A deals, just a small 4.5% increase from the \$4.4B in 2015. The number of M&As has also shown a slight increase from 67 to 75.

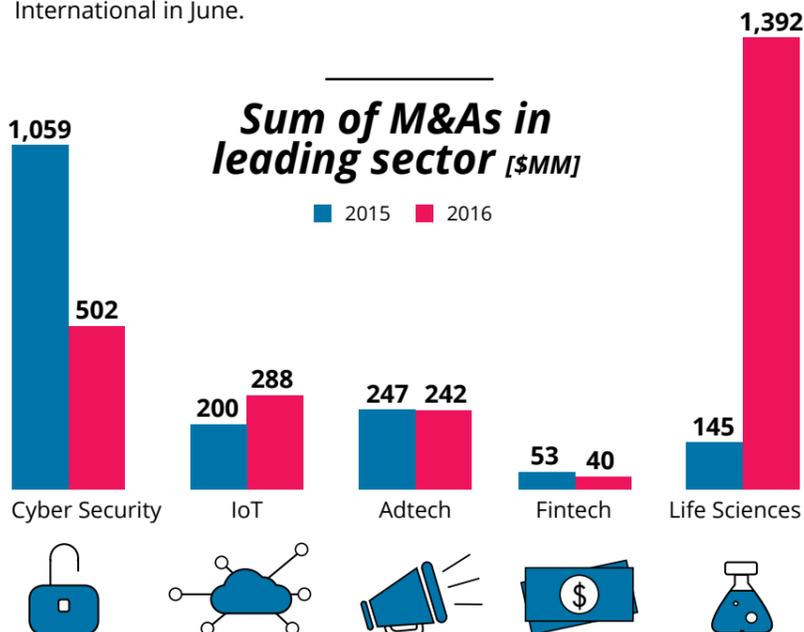
Just as we have seen with funding rounds, M&As in 2016 present a similar trend. While from a yearly perspective, we see an increase in both the number and sum of exits of Israeli startups compared to 2015, when you divide the year, you see the decline in the second half of 2016.

November saw the biggest exit of the year: Israeli valve repair device company Valtech Cardio was sold for close to \$1B to Edwards Lifesciences Corporation. In January, it became apparent that a previous acquisition attempt had failed. US company HeartWare canceled a \$860M offer due to "a different set of circumstances than when we first entered into the agreement."

Another medical device company, MIS Implants Technologies, was bought for \$375M by Dentsply International in June.

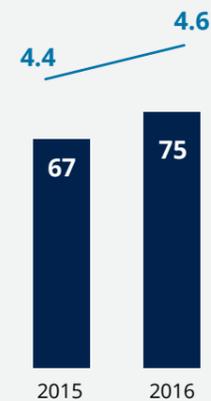
The second biggest M&A occurred when cloud computing giant Oracle announced it acquired Ravello Systems, which develops solutions to run applications smoothly in the cloud, for the sum of \$500M. Following the acquisition, Ravello's team joined Oracle's new development center in Israel, which focuses on cloud computing. This development center will also be part of Oracle's existing Israeli R&D center, which was established after they purchased Demantra in 2006. In April, PE firm Francisco Partners announced it had acquired SintecMedia for \$400M. SintecMedia sells solutions in affiliate revenue management, retransmission agreements, and other content and marketing businesses.

Another important corporate player who was involved in Israeli M&As this year was Cisco, who acquired two Israeli companies. It bought the two-year-old semiconductor startup Leaba for \$380M and cloud security startup CloudLock for \$293M. Another semiconductor company, Altair Semiconductor, was bought by Sony for the sum of \$212M.



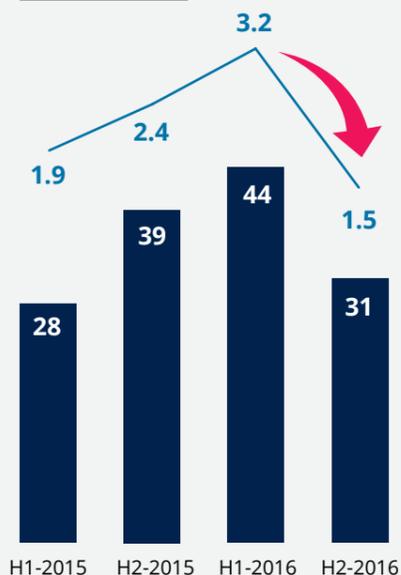
Number and sum of M&As [2015-2016]

Yearly



— Total sum of M&As [\$BB]
■ Number of M&As [Units]

Half year



Leading early stage investors in Israel

In our Early Stage Investors Index, we took into account data reflecting this level, such as the number of investments by each investor, the total amount raised in the rounds in which the investor participated, whether or not the investor made follow-on investments, and whether the investor led the financing round.

The leading investors in Israeli early stage startups in 2016 were Bessemer Venture Partners, Sequoia Capital, Shlomo Kramer, OurCrowd, and Magma Venture Partners.

The leader in this category is Bessemer Venture Partners. Bessemer manages more than \$4B of venture capital invested in over 130 companies around the world. It has been investing in Israel since 1992 and opened an office in Herzliya in 2007. It invested in a number of Israeli early stage startups during 2016 such as bob (Hibob), Clarity, Oryx Vision, otonomo, Prospera, and Kang Health.

* we consider pre-seed, seed and series A rounds as early stage investments

Early Stage Investors Ranking

2015		2016	
Carmel Ventures	100	Bessemer Venture Partners	100
OurCrowd	88	Sequoia Capital	96
Bessemer Venture Partners	63	Shlomo Kramer	82
Innovation Endeavors	61	OurCrowd	78
Magma Venture Partners	61	Magma Venture Partners	61

The Early Stage Investor Index reveals two interesting commonalities worth mentioning. Sequoia Capital, Shlomo Kramer, and Magma Venture Partners all invested in Indegy, which provides visibility and security solutions for industrial control networks. Most of these investors invested in transportation companies such as Oryx Vision, otonomo, Engie, and Innoviz Technologies. Both Bessemer and Magma rank among the top five early-stage investors for the second year in a row.

Leading growth stage investors in Israel

The Growth Stage Investor Index weighs relevant data for investments in companies in more mature stages. Among other things, we took into account the number of investments by each investor, the total amount raised in the rounds in which the investor participated, whether or not the investor made follow-on investments, and whether the investor led the financing round.

The leading investors in Israeli growth stage startups in 2016 were 83North, Pitango Venture Capital, Battery Ventures, Lightspeed Venture Partners, and Sequoia Capital. The leader in this category is 83North (previously Greylock Israel), which is a global venture capital firm with more than \$550 million under management.

* we consider series B and above rounds as growth stage investments

growth stage Investors Ranking

2015		2016	
Sequoia Capital	100	83North	100
Zohar Gilon	99	Pitango Venture Capital	72
Carmel Ventures	94	Battery Ventures	40
Spark Capital	79	Lightspeed Venture Partners	39
Bessemer Venture Partners	68	Sequoia Capital	34

The fund invests in exceptional European and Israeli entrepreneurs, across all stages of consumer and enterprise companies. 83North had several investments in growth stage companies including Applicaster, Payoneer, BlueVine, Celeno Communications, CoolaData, Logz.io, Playbuzz, and more. Only Sequoia Capital was ranked among the top five growth stage investor in both 2015 and 2016.



Leading angel investors in Israel

The Angels Investor Index weighs data for investments by private investors. The parameters weighed included the number of investments by each angel, the total amount raised in the rounds in which the investor participated, whether or not the investor made follow-on investments to existing portfolio companies, whether the investor led the financing round, the total number of M&A deals and amounts gained in those deals, and IPOs of the companies they invested in.

The leading angel investors in 2016 were Oren Zeev, Shlomo Kramer, Rakesh K. Loonkar, Mickey Boodaei, and Moshe Lichtman.

Shlomo Kramer, Mickey Boodaei, and Rakesh K. Loonkar again appear among the top five leading angel investors and tend to invest in the same companies. Moshe Lichtman is another recurrent angel investor in this ranking. Newcomer to the top five ranking Oren Zeev is probably the most prominent Israeli investor in Silicon Valley. He invests both in early and growth stage and currently serves as a board member at Houzz, Loop Commerce, Tipalti, Younow, Fortytwo, and Duda Mobile.

Angel Investors Ranking

2015		2016	
Shlomo Kramer	100	Oren Zeev	100
Rakesh K. Loonkar	65	Shlomo Kramer	93
Zohar Zlsapel	54	Rakesh K. Loonkar	55
Moshe Lichtman	41	Mickey Boodaei	55
Mickey Boodaei	36	Moshe Lichtman	39

Prior to that, he was a general partner at Apax Partners from 1995 to 2007.

This year Oren Zeev invested in companies including RedKix and Sealights, and was one of the investors in Kifi, which was sold to Google.

Liquidity (Issues and Exits) Ranking

2015		2016	
Viola Credit	100	Bessemer Venture Partners	100
Sequoia Capital	92	OurCrowd	82
Index Ventures	81	Peregrine Ventures	77
Carmel Ventures	53	INE Ventures	77
Gemini Israel Ventures	51	Sequoia Capital	70

Investors Liquidity Index

This index describes the extent to which a fund was involved in IPOs, mergers, and exits, in comparison with other active funds and investors. The index weighs the total number of and amount made from exits and IPOs of the companies in which the fund invested.

The leading investors in this ranking were Bessemer Venture Partners, OurCrowd, Peregrine Ventures, INE Ventures, and Sequoia Capital.

Again Sequoia Capital is the only investor to appear in both 2015's top five and 2016's. Sequoia previously invested in three companies that were acquired this year: Ravello Systems that was sold to Oracle Corporation for \$500M, Sintec Media that was sold to Francisco Partners for \$400M, and StreamRail that was sold to ironSource.

Leading corporate investors in Israel

The Corporate VC Index is designed to provide a status report of the investment arms in major companies. In contrast to ordinary funds, which invest in startups for the purpose of obtaining a large return on the investment as quickly as possible, the corporate funds also invest in companies as strategic investments, and in order to obtain preference in the use of the technologies of the companies receiving the investments. The index gives special weight to the following parameters: the number of investments by each fund, the total amount raised in the rounds in which the investor participated, whether or not the fund made follow-on investments, whether the fund led the financing rounds, and the total number of and amount made from the exits and issues the companies invested in.

The leading corporate VCs in 2016 were Qualcomm Ventures, SanDisk Ventures, Intel Capital, Salesforce Ventures, and Deutsche Telekom Capital Partners. Intel Capital is the only corporate investor to reach the top five for the second year running.

The Corporate VC Index

2015		2016	
Intel Capital	100	Qualcomm Ventures	100
Hewlett Packard Ventures	91	SanDisk Ventures	89
Comcast Ventures	60	Intel Capital	73
SanDisk Ventures	45	Salesforce Ventures	66
Verizon Ventures	39	Deutsche Telekom Capital Partners	51

The leader in this category is Qualcomm Ventures. It is the investment arm of Qualcomm Inc., a Fortune 500 company with operations across the globe. The group is focused on early to late stage investments in the fields of communication devices, wireless communications, infrastructure, wireless internet, telecommunications, media, and mobile sectors. Qualcomm Ventures invested in both Stratoscale and Weka.IO this year. Both of the companies provide services for enterprises.

Private Equity Ranking

2015		2016	
Viola Credit	100	GlenRock Israel	100
Tameres	32	Viola Credit	53
Israel Growth Partners (IGP)	24	Viola Growth	53
NewSpring Capital	21	Technology Crossover Ventures (TCV)	23
Blackstone	18	Susquehanna Growth Equity	23

Leading private equity investors in Israel

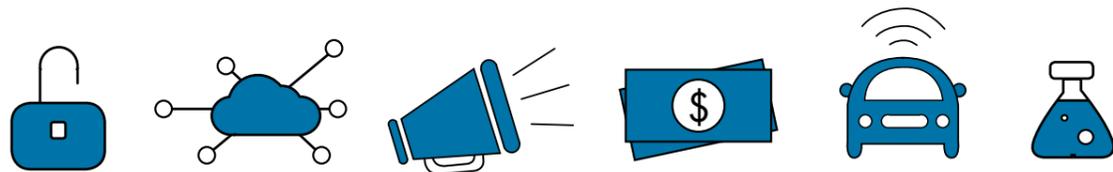
The Private Equity Funds Investment Index weighs a number of figures, including the number of investments by each fund, the total amount raised by the companies in which the fund invested, whether or not the fund made follow-on investments, whether the fund led the financing round, and the total number of and amount made from the exits and issues by the companies invested in.

The leading private equity investors this year were GlenRock Israel, Viola Credit, Viola Growth, Technology Crossover Ventures (TCV), and Susquehanna Growth Equity.

GlenRock invested in Karamba Security and other companies. They will benefit from being an investor in one of the Israeli companies that was sold this year for a significant sum. GlenRock Israel is a private equity investment company which was founded by Leon Recanati in 2003.

Only Viola Credit appeared among 2015's top five PE investors and 2016's ranking.

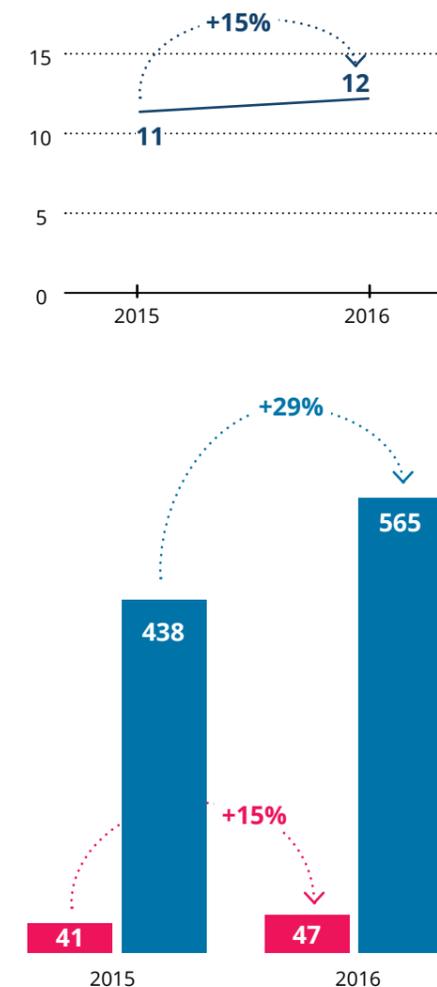
Leading Sectors



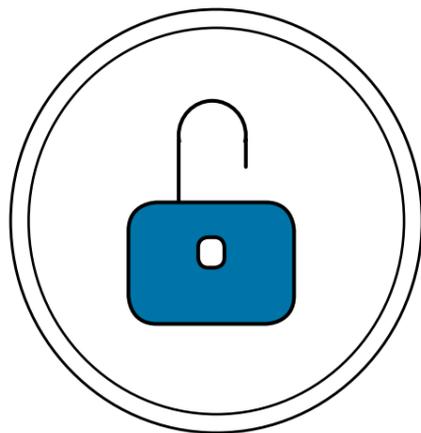
While reviewing this year's investments and exits, we decided to explore some of the sectors in more depth in order to focus on the most active and prominent sectors in the Israeli startup ecosystem. We did this to understand the trends and identify which sectors are growing or shrinking. Among those we have explored this year, you can find the usual suspects, including cyber security, IoT, adtech, and life sciences alongside newer and "hot" trend sectors such as fintech, transportation, and autonomous vehicles.

Average investment vs. number and sum of investments of cyber security companies [2015-2016]

— Average sum of investments [\$MM]
 ■ Number of investments [units]
 ■ Sum of investments [\$MM]



Cyber security



The global cyber security market is expected to grow from \$124B in 2016 to \$205B by 2021, according to the industry.

Alongside increasing enterprise and country level threats, this year we have seen the rise of a new type of attack called ransomware, which hijacks users' data, encrypts it, and asks for ransom to decrypt it. Ransomware attacks have increased both in strength and frequency and we are already seeing the first wave of solutions trying to mitigate this problem.

The second sub-sector that is rapidly growing is IoT security. The attack on DynDNS, which originated from tens of thousands of web cameras, has increased awareness of the millions of devices that are now becoming "connected" and can be used either as part of botnets and generate DDoS attacks or as leverage to incur physical damage: for example, to overheat a room by hacking a connected thermostat.

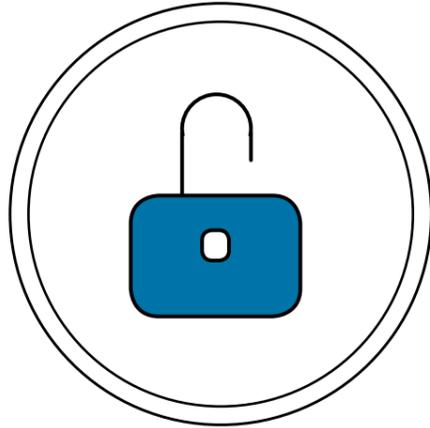
Cyber security, the crown jewel of the Israeli startup ecosystem, has continued to gain momentum, rising from 41 funding rounds worth \$438M in 2015 to 47 rounds worth \$565M in 2016. This represents a 13% rate of growth in the total amount of funding and 11% growth in the number of investments. It seems that investors just can't get enough of Israeli expertise in this field, which stems from knowledge partially acquired through experience in military intelligence units.

However, we also saw a significant decline in both the number of exits and total sum of acquisitions in 2016 in cyber security. In 2015, there were 14 M&As worth \$1.05B. M&A deals this year received almost half this amount of money, with 10 M&As worth \$502M. This is probably due to a saturated market and the fact that there probably weren't enough mature and successful companies to acquire. As expected, there is a big difference between the first and second halves of the year. In the first half, cyber security companies were

sold for a total amount of \$385M, while in the second half it was "only" for \$118M. In comparison, the last half of 2015 was the most successful six-month period in the last two years for cyber, bringing with it \$614M in earnings from M&As.

The biggest funding round in this sector this year was that of Israeli-American Skybox Security. The company has closed a whopping \$96M investment (which was partially a buyout for some early stage investors) from private growth equity firm Providence Strategic Growth, the growth equity affiliate of Providence Equity Partners. Skybox's solution acts as a command and control center for an organization's cyber security operations.

ForeScout is another company that reaped the benefits of what was a great year for Israeli cyber security companies. Cyber security startup ForeScout got \$76M in a Series G round led by Wellington Management



Leading investors in the cyber security field

2015		2016	
Sequoia Capital	100	Bessemer Venture Partners	100
Index Ventures	99	Ascent Venture Partners	83
Shlomo Kramer	63	Salesforce Ventures	83
Rembrandt Venture Partners	43	Cedar Fund	83
Hewlett Packard Ventures	43	YL Ventures	79

Company. This comes only a year after a \$30M Series F round. The company brought in \$125M in revenue through the end of 2015 and tripled its value in the last year and a half, culminating in a \$1B valuation. ForeScout offers enterprises and governmental organizations the ability to see devices when they connect to the network. ForeScout also lets users control these devices and orchestrate information sharing and operation among disparate security tools to accelerate incident response.

Team8, a VC fund that invests exclusively in Israeli cyber security startups, emerged out of stealth and announced their investment in Claroty as part of a combined Series A and B round. The primary backers of this \$32M round were Bessemer Venture Partners, Eric Schmidt's Innovation Endeavors, Marker, ICV, Red Dot Capital Partners, and Mitsui & CO., Ltd. Claroty was conceived to secure and optimize OT networks that run critical infrastructure. By extracting critical data and formulating actionable insights, Claroty provides visibility and brings clarity to OT networks.

Other major funding rounds included Zimperium, which raised a \$25M Series C to improve enterprise mobile threat protection. Lazarus Israel Opportunities Fund, Telstra Ventures, Sierra Ventures, and others participated in this round. This was another startup that raised a funding round just a year before. Fireglass, a provider of enterprise network security solutions, raised a \$22M Series A round from the likes of Singtel Innov8, Lightspeed Venture Partners, Norwest Venture Partners, Deutsche Telekom Capital Partners, and angel investors. LightCyber, whose Magna product uses machine learning to build a fuller picture of how a network should look and pinpoint real anomalies that can indicate a breach, raised a \$20M Series B round. Leading the funding round were investors Shlomo

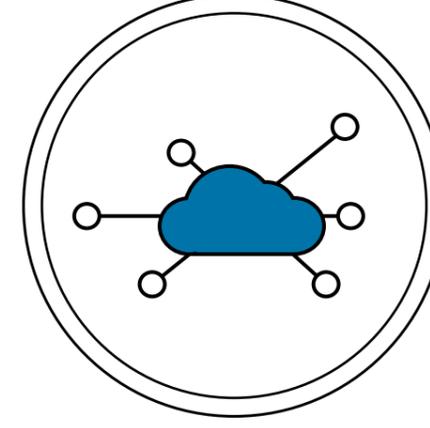
Kramer and Access Industries through their Israeli presence ClalTech.

There were two other \$20M rounds (which both raised Series B funding): Guardicore, a startup that provides network security solutions for software-defined data centers, received funding from Cisco Investments, Battery Ventures, and 83North. Another startup, LightCyber, identifies threats within corporate networks early in the attack life cycle from Battery Ventures, Glilot Capital Partners, ClalTech Amplify Partners, Shlomo Kramer, and Access Industries.

The common denominator in all those rounds is that each company has technology aimed to protect enterprises who might suffer significant financial losses and branding damage.

The leading investors in Israeli cyber security startups in 2016 were Bessemer Venture Partners, Ascent Venture Partners, Salesforce Ventures, Cedar Fund, and YL Ventures. All of 2016's top five investors are newcomers, displacing 2015's high rollers.

Bessemer Venture Partners invested in Claroty and was one of the investors in CloudLock, which was sold to Cisco. Ascent Venture Partners, Cedar Fund, and Salesforce Ventures were all investors in CloudLock as well. YL Ventures was an investor in FireLayers which was acquired by Proofpoint for \$55M. YL Ventures Fund held approximately 45% of the company at the time of purchase. It also invested in BlazeMeter.



Internet of Things (IoT)

IoT, declared the up-and-coming sector years ago, finally made its way into the mainstream. The IoT market is estimated to grow from \$160B in 2016 to \$662B by 2021, according to various estimates.

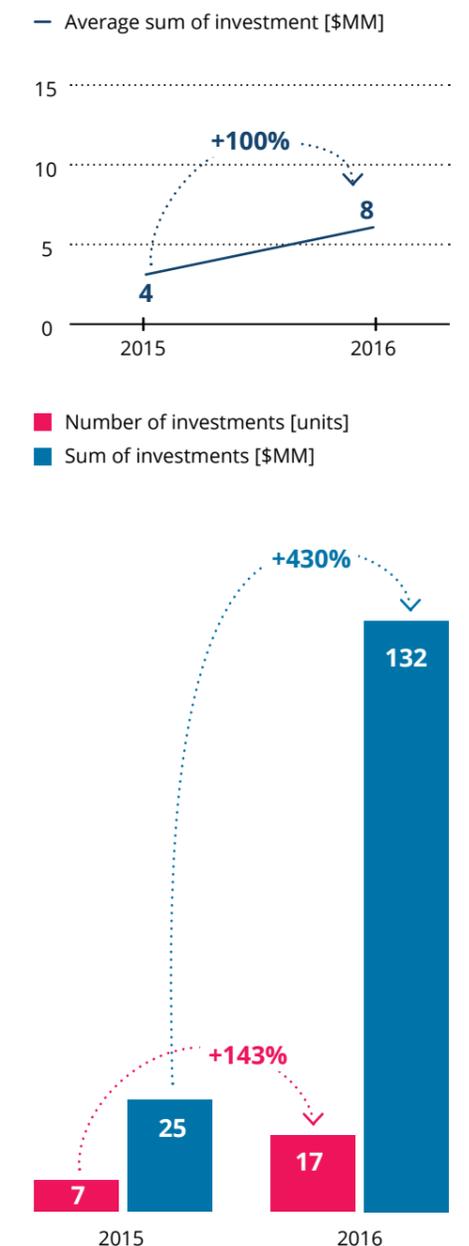
Israeli startups recognized this opportunity and seized it. This was one of the growing sectors in the Israeli startup ecosystem this year, with a staggering 428% growth in the total amount of money invested in IoT companies from \$25M to \$132M, as well as 143% growth in the number of investments in the field.

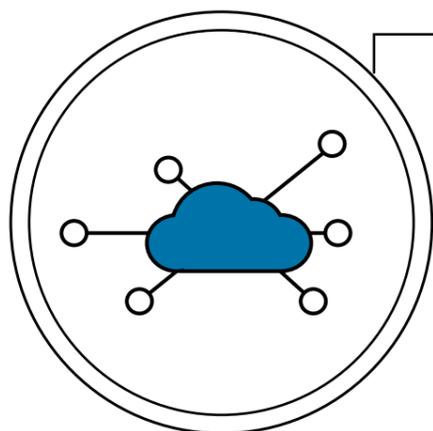
The IoT sector is also starting to show maturity, with 3 M&A deals in 2016 that totaled \$288M, an increase of 44% over 2015.

The biggest IoT investment in an Israeli company in 2016 was a \$25M Series G in EarlySense. EarlySense has introduced a continuous patient-monitoring solution designed to enhance patient safety and reduce risk for general care patients. EarlySense can be used by hospitals, healthcare systems, integrated delivery networks, and rehabilitation centers. This is not the usual IoT we've been accustomed to — it doesn't let you talk to your home refrigerator or AC but it is a contact-free, connected devices technology that helps improve people's lives. Investors included Pitango Venture Capital, Bank Hapoalim, and JK&B Capital.

Another big investment in the connected devices and IoT scene was a \$20M Series C investment in EyeSight Mobile Technologies. EyeSight brings computer vision capabilities to households globally with its standalone IoT and smart home solution, singlecue. China's tech group Kuang-Chi decided to invest in this technology, which revolutionizes how humans interact with devices, including cars, VR controllers, and smartphones.

Average investment vs. number and sum of investments of IoT companies [2015-2016]





Leading investors in the IoT field

2015		2016	
Pitango Venture Capital	100	Jerusalem Venture Partners (JVP)	100
Viola Credit	90	Bessemer Venture Partners	85
Infinity Venture Partners	90	BRM Capital	85
Greylock Partners	90	SanDisk Ventures	85
Carmel Ventures	90	SK Ventures	85

we see that investors recognize that if this technology wants to grab a foothold in the world, it must become attractive to consumers first.

There were not a lot of IoT M&As in 2015 or 2016 (1 and 3, accordingly). There was a 44% increase in the amount of money gained from them from \$200M in 2015 to \$288M in 2016.

Altair Semiconductor was sold to Sony for \$212M. TowerSec was sold to Harman for \$75M. Dojo-Labs, a cyber security startup, was sold to BullGuard for \$700K.

The leading investors in Israeli IoT startups in 2016 were Jerusalem Venture Partners (JVP), Bessemer Venture Partners, BRM Capital, SanDisk Ventures, and SK Ventures. Just like with cyber security, all of 2016's top five IoT investors are hitting the top rank for the first time.

Jerusalem Venture Partners (JVP), the leader in this category, was founded in 1993 and has raised over \$900M to date and helped build over 90 companies. JVP focuses its investment in the spaces of digital media, storage and infrastructure, enterprise software, and cyber security. As mentioned above, they've invested in Unispectral's \$7.5M round. They are also one of the investors in Altair Semiconductor which was bought by Sony for the sum of \$212M.

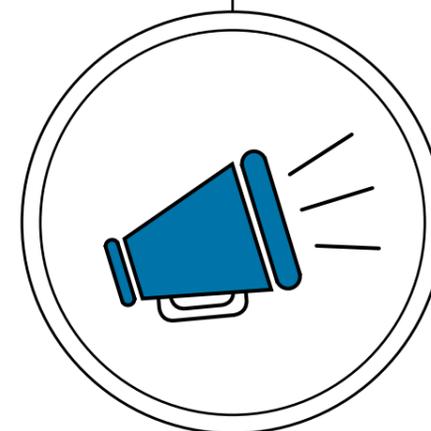
Pixie got a \$18.5M Series B round from OurCrowd, Cedar Fund, and Spark Capital. Pixie's technology offers an IoT tagging platform for locating objects. Their mobile app utilizes the camera and overlays real-time, augmented reality (AR) indications of where an item is located. Users can also receive alerts when a tagged item is left out of packing.

Neura received a \$11M Series A from Pitango Venture Capital, AXA Strategic Partners, Liberty Israel Venture Fund, and Lenovo Group. Neura's technology recognizes behavior patterns and creates actionable triggers from IoT data. Neura helps people use data collected by their devices for purposes that directly benefit them, while safeguarding their personal information.

Other rounds include Unispectral's \$7.5M round, which raised financing from investors such as Jerusalem Venture Partners (JVP), Robert Bosch Venture Capital, Samsung Catalyst Fund, and Momentum Fund. Unispectral's technology includes an optical lens and image processing software powerful enough to turn any smartphone into a hyperspectral sensor, potentially allowing cameras to analyze the chemical components of almost any object from a distance without having to collect physical specimens.

Corsica Innovations has developed LEAF, a plug-n-plant system that automatically grows medical plants and food. It can be controlled remotely with the user's smartphone. In the growing field of cannabis tech, it managed to get a \$2M seed round from CJV Capital, Advanced Nutrients and a variety of angels.

Most of these funding rounds were given to companies that offer IoT solutions to individuals, not businesses. Although the current top adopters are businesses,



Adtech

The adtech field has been in decline in the last couple of years. It is a struggle to find a place in a market that has been overrun by Google and Facebook. The power of banners has declined dramatically due to adblockers and more sophisticated users. Therefore, it is not surprising that there is a dearth of big rounds in adtech. The majority of the funding is going to young companies who are trying to disrupt the field with new technologies such as content personalization and VR. This argument is validated through the investment data, which shows an increase in the number of investments while the total money raised in adtech almost stayed the same.

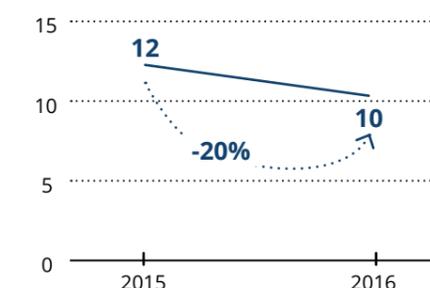
Investment activity reflected this stagnation in 2016 and showed a lack of movement in comparison to other sectors in the ecosystem that are blooming. That said, there is still active interest from investors, just a bit less. In 2015, there were 25 funding rounds that accumulated \$309M. However, in 2016 there were 31 funding rounds that scooped \$301M. This represents a small 3% drop in the sum of money gained from investments in this field, but a 12% rate of growth in the number of rounds. This coincides with the global trend of "calmer" rounds that represent actual valuations instead of inflated ones.

Goldman Sachs invested \$50M in Kaltura, a provider of an open source online video platform. The round did not include follow-on investments from current investors, but the company says that the Sachs round is a prelude to an IPO.

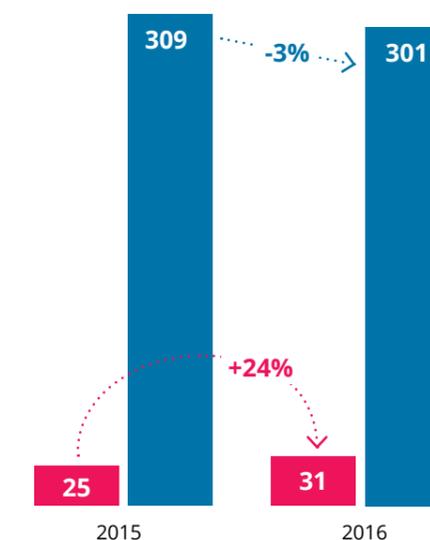
Outbrain, the famous content discovery platform, raised \$45M in a move that is opposite to that of Kaltura. The round appears to be a vote of confidence as the company quietly pushes off from a long-planned IPO.

Average investment vs. number and sum of investments of adtech companies [2015-2016]

— Average sum of investments [\$MM]



■ Number of investments [units]
■ Sum of investments [\$MM]

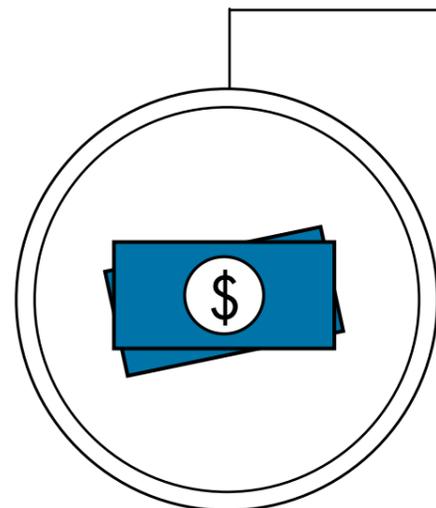


Adtech M&A activity again shows stagnation, with 7 M&As in 2015 and 8 in 2016. There was a slight drop in the amount of money gained from adtech M&As in 2016 (\$242M) in comparison to 2015 (\$247M). The leading investors in Israeli adtech startups in 2016 were Carmel Ventures, Marker, Innovation Endeavors, Spark Capital, and 2B Angels. Marker is the only investor to appear in both 2015's top five adtech investors and 2016's.

Leading investors in the adtech field

2015		2016	
Zohar Gilon	100	Carmel Ventures	100
83North	84	Innovation Endeavors	88
SAIF Partners	74	Marker	88
Moshe Lichtman	67	Spark Capital	77
Marker	55	2B Angels	75

Carmel Ventures, the leader in this category, is a venture capital firm that invests in Israeli early stage companies and builds global companies. Carmel was involved in three big adtech funding rounds: Outbrain's \$45M Series G, SundaySky's \$30M Series D, and Playbuzz's \$15M Series C.



Fintech

Financial services continued to be disrupted in 2016. Traditional banks, lenders, and asset managers are being gradually replaced by online and mobile financial services, peer-to-peer lending, and robo-advisors. Bitcoin's blockchain is changing the way cross-border payments and securities exchange hands, largely due to a fast growing mobile market and a mostly underbanked population in emerging markets. The financial sector appears ready to embrace the technology behind the blockchain in hopes of achieving faster transactions with more transparency, a key factor in an untrusting and sensitive industry. Insurance tech shows great promise since insurance is an old-fashioned, cumbersome process that almost cries out to be digitized and for the removal of the middleman: the insurance salesperson.

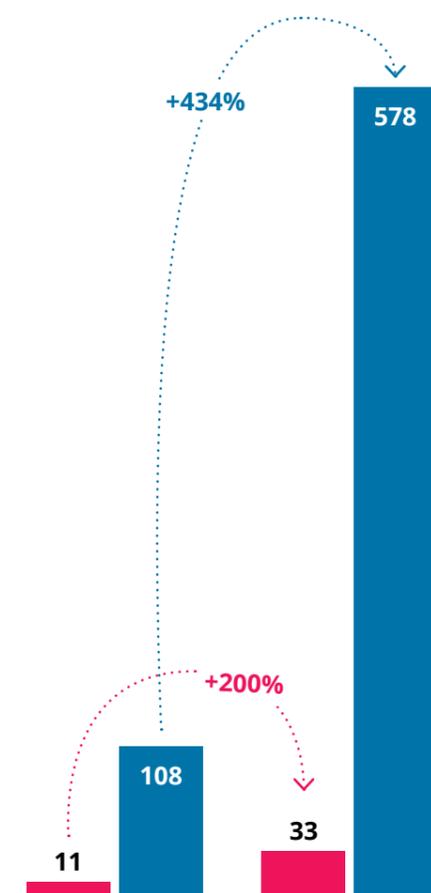
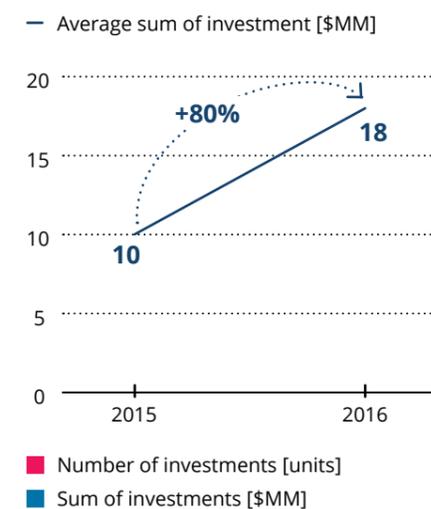
For all these reasons and more, fintech has seen a high level of investment activity in recent years and especially this year.

Israeli fintech startups did not go unnoticed in this blaze of fintech investment enthusiasm. In 2016 alone, fintech investments in Israel have grown by a whopping 434% to \$578M in 33 funding rounds from \$108M in 11 funding rounds in 2015.

There were two M&A deals in this sector in 2016, the same number as in 2015. cVidya, which provides revenue analytics solutions for telecom service providers, was sold to Amdocs for the sum of \$30M in January. Sling Payments, which offers mobile payments for Micro-merchants, was sold to Avante for \$10M.

However the sum of money in those M&A deals in 2016 was \$40M, which shows a decrease in comparison to \$53M in 2015. We believe this

Average investment vs. number and sum of investments of fintech companies [2015-2016]



decrease is due to the effect of the famous decline in the second half of 2016. Given the importance of this sector on the global level, we doubt it will see further decline next year in the Israeli ecosystem.

Payoneer landed a colossal \$180M financing round led by Technology Crossover Ventures (TCV) and included previous investor Susquehanna Growth Equity. Payoneer provides a cross-border payments platform that gives fast, flexible, secure, and low-cost solutions for businesses and professionals in both developed and emerging markets.

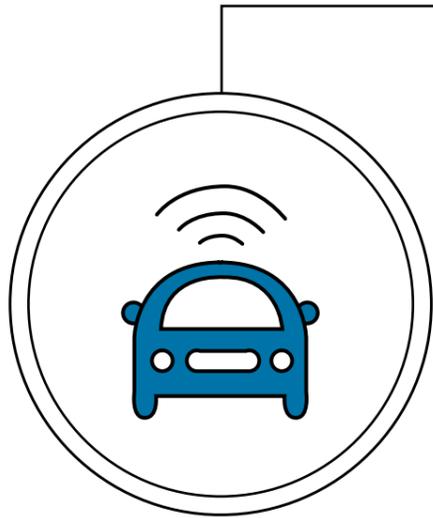
BlueVine managed to raise two funding rounds — Series C and D financing — garnering a sum of \$90M from the likes of Rakuten, Silicon Valley Bank, Citi Ventures, Menlo Ventures, 83North, and Lightspeed Venture Partners. BlueVine is an online invoice factoring company that helps small businesses overcome their short-term cash flow challenges.

Behalf got a \$27M round from Viola Growth. This is another fintech company that caters to the financial needs of small businesses. Behalf is an alternative financing provider, specializing in working capital credit for small business customers. It helps increase sales and improve cash flow by enabling merchants to offer instant point-of-sale financing and flexible repayment terms on almost any product or business service needed to run a business.

Leading investors in the fintech field

2015		2016	
Khosla Ventures	100	83North	100
Spark Capital	75	Sequoia Capital	64
Founder Collective	67	Carmel Ventures	52
Blumberg Capital	66	Lightspeed Venture Partners	50
Carmel Ventures	60	Susquehanna	49

The leading investors in Israeli fintech startups in 2016 were 83North, Sequoia Capital, Carmel Ventures, Lightspeed Venture Partners, and Susquehanna. 2016 saw a complete shake-up in the top five fintech investors ranking, relegating 2015's leaders to lower rungs on the ladder. 83North, which we've introduced in previous rankings, invested in several fintech startups this year. Payoneer's huge Series F of \$180M and the two BlueVine funding rounds that totalled almost \$90M and also Simplee's \$20M Series C round.



Transportation and autonomous vehicles

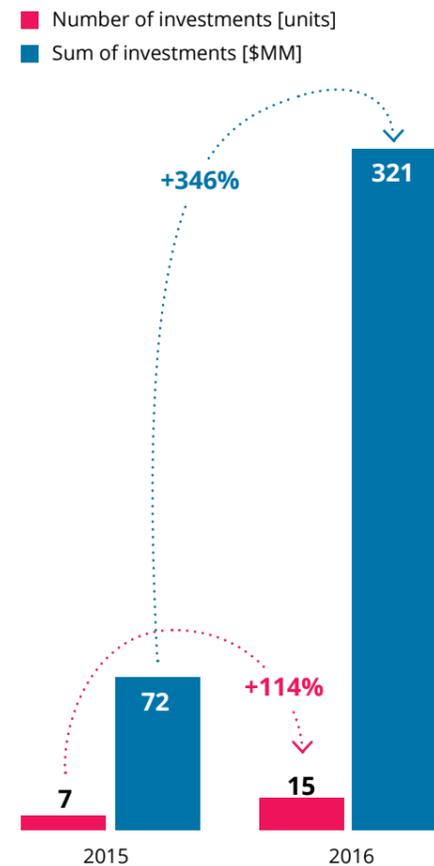
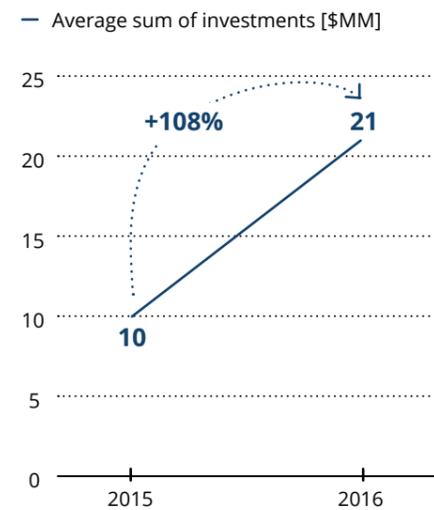
This sector has seen tremendous growth in the last year due to the increased belief and need for solutions such as ride-sharing, connected cars, and autonomous vehicles.

The growth in this sector in the Israeli ecosystem during 2016 was truly remarkable. In 2015, there were only 7 funding rounds that raised \$72M, while in 2016 the jump was to 15 rounds garnering \$321M. This represents a 114% jump in the number of investments and a 346% jump in the amount of money gained.

Gett continued to storm its way into becoming one of the world's biggest on-demand taxi and ride-sharing startups out there. In May, Volkswagen invested \$300M in the company. This also brought Gett into a global autonomous car war. In November, Russia's biggest bank Sberbank gave the company another \$100M in a debt financing round. Already an investor in Uber, Sberbank doubles down on transportation with a major credit line in Gett. The money is said to be slated to help further the company's expansion, which already operates in over 100 cities.

There were two other investments in Israeli ride-sharing startups this year: Via and Juno. Via, which we have mentioned before, makes life easier for transportation managers by optimizing vehicle utilization, enhancing customer service, simplifying driver workflow, and improving cost control. Via's technology allows passengers to conveniently share their ride, providing on-demand transportation on a mass scale. It got \$100M in Series C funding.

Average investment vs. number and sum of investments of transportation & autonomous companies [2015-2016]



Juno is a ride-sharing platform that operates in New York City. It charges drivers commissions that are 60-65% below the competition. It received a \$30M round from Singulariteam and angels to help it compete with ride-sharing Uber.

The global autonomous vehicles market will reach approximately \$40B by 2025. Different Israeli companies help tackle important aspects of this world: cyber security, computer vision, machine learning, AI, vehicle communications and mapping, energy, and manufacturing.

Karamba Security raised seed and Series A rounds, garnering a sum of \$5M from YL Ventures, GlenRock Israel, and Fontinalis Partners. Karamba Security Ltd offers Carwall, an autonomous cybersecurity solution for connected vehicles. Carwall integrates seamlessly into a vehicle's engine control unit (ECU) and provides multiple security layers to automatically seal automotive software against cyber attacks. Combined with Argus Cyber Security, which raised a \$26M Series B last year, it seems that Israel is on its way to become a leader in this field.

Israeli autonomous vehicle companies also excel in providing advanced sensors that help autonomous vehicles "see" the world around them and use data and analytics to gain environmental perception. This year, we have seen significant sums being invested in these kinds of companies.

AutoTalks received a \$25M investment from Magma Venture Partners towards the end of the year. It has become a world leader in V2X (vehicle-to-everything) communication technology. Recently, it produced the world's first automotive-grade chipset ready for series production. The technology analyzes data transmitted by the on-board processing units of nearby vehicles in order to warn drivers of any imminent danger and communicate with transportation infrastructure.

Innoviz snagged a \$9M Series A round from Vertex Ventures Israel, Magma Venture Partners, Amity Ventures, Delek Motors, and Zohar Zisapel. Innoviz develops key technologies for autonomous driving, including smart 3D sensing, sensor fusion, and accurate mapping and localization. Their first product (currently in development) is a High Definition Solid State LiDAR (HD-SSL) with best in class performance and significantly lower cost and smaller size than existing solutions.

Oryx Vision got a \$17M Series A round from Bessemer Venture Partners, Maniv Mobility, and Trucks VC.

Leading investors in the transportation and autonomous field

	2015	2016	
Ervington Investments	100	Volkswagen Group	100
Hearst Ventures	57	Expansion Venture Capital	91
Expansion Venture Capital	57	Hearst Ventures	60
83North	57	Pitango Venture	60
Pitango Venture Capital	57	83North	60

Oryx Vision develops solid state depth vision solutions for autonomous vehicles. Based on a radically innovative depth-sensing technology, it is the first and only answer to the range and resolution vision requirements of fully autonomous driving.

In the last two years, there still have not been any M&A deals of Israeli startups in the field. But that is logical for two reasons: ride-sharing and transportation startups manage to get substantial revenues from customers. They do not necessarily want to get acquired when they can scale-up. In addition, autonomous vehicles is still a "young" field in Israel and in the world. It shows a lot of promise but it might take some time until we see acquisitions in this field like GM's purchase of Cruise Automation for \$1B in March 2016 and Uber's acquisition of Otto.

The leading investors in Israeli transportation and autonomous vehicles startups in 2016 were Volkswagen Group, Expansion Venture Capital, Hearst Ventures, Pitango Ventures, and 83North. Expansion Venture Capital, Hearst Ventures, and Pitango Ventures were also among the top five investors in 2015.

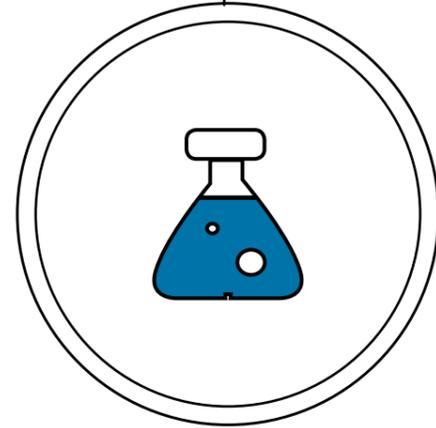
It's fairly easy to understand how Volkswagen Group grabbed the first place of our index since it invested \$300M in Gett, the taxi and ride-sharing app. The Volkswagen Group is a German multinational automotive company. It designs, manufactures, and distributes passenger and commercial vehicles, motorcycles, engines, and turbomachinery and offers related services including financing, leasing, and fleet

management. Recently it entered the race for the fully-autonomous car with its investment in Gett.

But let's take a closer look specifically at autonomous vehicles investors. There is a reason that investors are flocking to invest in this field. Autonomous vehicles, also called driverless or self-driving vehicles, can navigate and overcome obstacles without the assistance of a human handler. Numerous technology companies, vehicle manufacturers, and ride-sharing companies are collaborating in order to develop autonomous vehicles and supporting technologies. Over \$4B has been invested in the autonomous car industry since 2011, more than \$2.4B in 2016.

This is why many of today's Israeli startups' technologies are intended for use in those vehicles — and why there are a lot of investments in them. In this category, we find the most prominent investors are GlenRock Israel, Magma Venture Partners, YL Ventures, Bessemer Venture Partners, and Maniv Mobility. Magma was the only top five investor two years in a row in this ranking in 2015.

The leader in this category is GlenRock Israel, which invested in vehicle-to-vehicle communication technology startup Autotalks as a part of a \$25M Series C round and



in Karamba Security, which provides an autonomous cyber security solution for connected vehicles as part of a \$2.5M Series A round.

Life sciences (medical devices, digital health, and biotechnology)

The global life sciences sector has been much more prominent in the startup and venture capital ecosystem in recent years. The growing needs of aging populations, the need for digitalization of outdated systems, and the accumulation of vast quantities of data have all contributed to the need for innovation in this sector.

In Israel, it appears that there is a slight move forward in this sector. There were 61 funding rounds in 2016 that raised \$453M in comparison to 43 rounds in 2015 that got \$505M. Medical devices, digital health, and biotechnology are all sub-segments that received more funding than those in the life sciences sector.

Heart device company V-Wave raised a massive \$28M Series B in a round led by Johnson & Johnson Innovation (JJDC). V-Wave's flagship technology is the unidirectional shunt system. It is designed to alleviate high left atrial pressure (LAP), a direct cause of congestive heart failure (HF). It is implanted transvenously (up the veins with a device that snakes into the heart's left atrium). Biotechnology-based company ImmunArray develops in-vitro

diagnostic tests based on its iCHIP microarray technology platform. It received a \$10M Series B round from Exigent.

There were slightly more M&As in 2016 (7) than in 2015 (5), but there was a big rise in the amount of money gained. In 2015, M&As in this sector produced only \$145M but in 2016, it was an impressive \$1.392B.

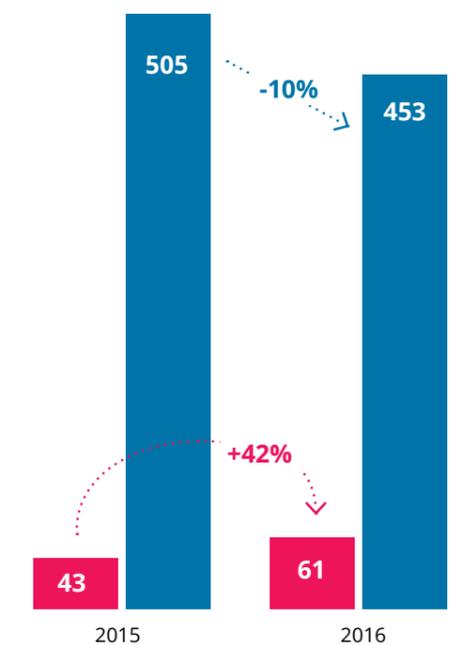
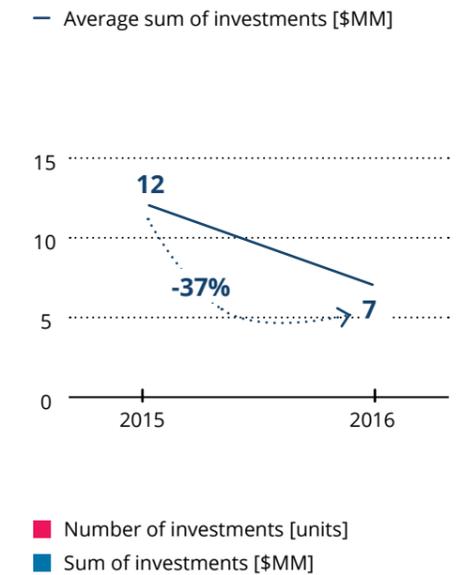
The leading investors in Israeli life sciences startups in 2016 were Peregrine Ventures, INE Ventures, GlenRock Israel, OXO Capital Ventures and Pontifax. Pontifax is the only investor to appear in both 2015's top five life sciences investors and 2016's.

Peregrine Ventures had two exits this year from its portfolio: NLT Spine, which offers minimally invasive spinal surgery technology, was sold to SeaSpine in August and Valtech Cardio was sold to Edwards Lifesciences for \$990M in November. Peregrine also participated in the \$15M Series C round of CartiHeal, alongside Johnson & Johnson Innovation, Accelmed, and Access Medical Ventures, and invested in other Israeli medical device companies.

Leading investors in the life science field

	2015	2016		2016
Pontifax	100	Peregrine Ventures		100
Office of the Chief Scientist of Israel - OCS	76	INE Ventures		100
OrbiMed	68	GlenRock Israel		82
Arkin Holdings	60	OXO Capital Valve Ventures		77
Zohar Gilon	46	Pontifax		17

Average investment vs. number and sum of investments of life sciences companies [2015-2016]



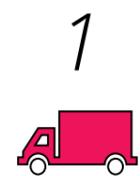
What can we expect in 2017?

Global instability

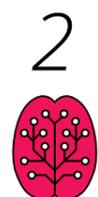
Economically, 2016 presented more than a few mind-boggling events. There was the Brexit vote, which wreaked havoc on the already financially unstable EU, and the tumultuous US elections which surprised most people. If that weren't enough, China and most emerging markets have shown a dramatic decline in growth.

Considering that much of the world's economic growth since 2008 has come from emerging economies, and mostly China, the fact that the Chinese government has issued a standstill order will make the lives of Chinese investors who are interested in taking money out of the country much very difficult. Due to all of these factors, we expect to see a dramatic drop in Chinese investments in Israel and anywhere outside of China next year.

4 Tech trends



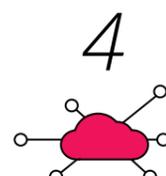
Supply chain and logistics



Human-machine interactions



Fintech



Internet of Things (IoT)

1. Supply chain and logistics



While shopping online has become common practice, delivery and logistics are still a huge pain point that needs to be solved. There are many startups and just as many established companies trying to make it easier, faster, and cheaper to get a package from a distribution center to your doorstep with technology, not just people and vehicles.

A good example of how logistics technology is changing our day-to-day lives is Amazon. In 2012, Amazon bought a small warehouse automation company called Kiva for \$775M. Today, Amazon uses approximately 45,000 robots in its warehouses and the number keeps growing. It plans to use drones to deliver packages and self-driving trucks for bigger shipments. It wants to cut the middlemen like UPS and FedEx but as we'll soon see, these companies have other plans.

Big logistics corporations have started acquiring and investing in startups in recent years in order to respond to this demand. UPS and FedEx have all been a part of this trend and are the most active investors in it. 2016 saw an additional spike in investments and acquisitions in this field in comparison to 2015. The biggest investment of the year was a \$1.5B private equity investment in Cainiao, a logistical platform for the Alibaba marketplace.

UPS acquired Marken, a patient-centric supply chain startup in the life sciences sector, and invested in reverse-logistics startup Optoro as part of a \$30M Series D round. Optoro applies algorithm-based analytics to determine where the retailer will best recoup its losses on unwanted items. This investment will help improve transportation and disposition of returns and excess inventory. It also participated in Deliv's \$28M Series B funding round. Deliv is a crowdsourced same-day delivery service for large national, multi-channel retailers. Other UPS investments included a \$16M Series A in Peloton Technology and a \$15M Series B in Roadie. FedEx acquired TNT Express, one of the world's largest express delivery companies with a global reach to 200 countries, for approximately \$4.6B.

Israel has already sunk its teeth into the logistics industry. Israeli company Freightos acquired WebCargoNet, a Spanish air cargo rate management provider. Freightos is a sales automation platform for the logistics industry. Freightos' SaaS technology allows freight forwarders and carriers to manage contracts and automate the quotation and sales process from their own website. It has raised \$22.7M to date.

Other Israeli logistics startups include Caja Systems, which uses sophisticated software and robots to quickly implement automation technology in standard warehouses; CartaSense, a wireless monitoring company for pharma and agricultural logistics; and SimpleOrder, an online inventory and order management software company that recently raised a \$2.75M Series A round. Israel also has several public companies in the supply chain and logistics industry: Micronet (fleet integration and workforce management), Better Online Solutions (RFID and supply chain solutions) and Unitronics (automated parking and logistics solutions). All of this is a testament to Israel's growing power in this domain.

Relevant sectors to be affected:

- Robotics - for warehouse management and delivery.
- Drones - for deliveries.
- Machine learning and AI - towards warehouse and delivery management.
- Autonomous vehicles - for delivery management from the warehouse to the doorstep.
- E-commerce - for continued improvement in both the speed and reliability of deliveries, which will make the transition to online shopping easier for more people.



2. Human-machine interactions

Human-machine interactions are something the entire tech world has been obsessed with in the last five years. From personal assistants to voice recognition, chatbots, and NLP, we saw some incredible wins in 2016 with Amazon's Alexa, Google Assistant, and even Microsoft's Cortana all unleashing the power of voice-activated interfaces. Facebook has put a strong emphasis on Messenger chatbots. These technological advancements are being used by very diverse industries from healthcare to sales and marketing, to finance and e-commerce. For example, there were quite a few investments in life sciences startups that rely on human-machine interactions this year. These included Deep Genomics, Lumiata, and twoXAR. In the sales industry, companies such as Sudo, which enables employees to talk to their company's CRM system, received seed funding to continue developing AI and bot assistance. In October, Samsung acquired Viv Labs, a startup founded by the creators of Apple's Siri. Viv Labs is an AI and assistant system that is open and can accommodate external plug-ins written to work with the assistant. It can also handle more complex queries.

These are merely a few examples, but we still have a long way ahead of us. To move further along in this field, there was rigorous investment and M&A activity in 2016.

Israel has about 50 startups just in the bot field: Some of them develop actual bots, while others serve bot developers or platforms for bot development. Many Israeli companies have chosen to create Slack-based startups, including ONDiGO, which integrates with Salesforce and provides real-time insights. LawGeex scans legal contracts and present defects or suspicious sections, while Digital Robotix helps startups find relevant investors and angels. In June, we saw the first Israeli bot startup acquisition: Meekan. It develops a scheduling bot for the Slack calendar. It was bought by Swiss company Tamedia AG, which owns the brand Doodle.

We believe that we will continue to see a race towards innovation in human-machine interactions, starting with the move from Natural Language Processing to Natural Language Generation combining elements like tone, sentiment, timing, and visual cues to take the next big leap. We also see tremendous activity in the space both from big companies as well as young startups, which will lead to meaningful M&A activities in this market.

Relevant sectors to be affected:

- Machine learning and NLP platforms - as part of the AI platform.
- Chatbots - relating to customer service.
- E-commerce - with respect to customer service, virtual sales representatives.

3. Fintech

Fintech is big and will only grow. As millennials become bigger consumers, their needs for a banking and financial system that works the way they want and can support their demands properly is bankrolling innovation throughout the sector. In the last few years, we have seen most fintech innovation aimed towards the consumer-facing side of businesses. In 2016, this switched toward optimizing and building better back-end mechanisms to support a faster, more efficient service and product. We expect this trend to continue in 2017.

The leading sub-sector in fintech is insurance tech, which is already seeing a big jump in investments and will likely experience increased M&A activity next year. Several important phenomenon we have witnessed are the digital currency and blockchain

movements (formerly referred mainly as bitcoin), which are starting to pick up. Putting bitcoin aside for a second (even though its value has skyrocketed in the last few weeks), this year marked a silent adoption of blockchain technology as the largest financial institutions in the world started actively testing ways to integrate it within their money-moving logistics chain. Even though we will not see any countries acknowledging bitcoin as an actual currency (although with Trump, you can never know) anytime soon, the technology around it is on the rise and we can expect great things.

Investors in this field include banks such as Citigroup and Goldman Sachs, financial service firms such as American Express, and traditional VC investors like Transamerica Ventures. Some of the biggest fintech rounds this year included the \$1.2B investment in Chinese Lu.com and the \$1B investment in JD Finance, a subsidiary of e-commerce giant JD.com. Other prominent investments supported insurance technology, such as health insurance company Oscar's \$400M funding round and Clover Health's \$160M Series C round. Robo-advisor Betterment and alternative lender Affirm both raised \$100M rounds.

In Israel, we saw the rise of insurance tech investments with two major funding rounds: The first was a \$34M Series B round invested in Lemonade, an insurance app powered by artificial intelligence and behavioral economics. The second was a big \$13M seed investment in Next Insurance, whose online platform facilitates simplified, fast, and transparent insurance search and enrollment for small- and medium-sized businesses.

Relevant sub-sectors to be affected:

- Financial marketplaces - for lending, real estate, and investments.
- Money management - apps and services that help sync financial accounts, track spending and savings, and invest with minimal effort.
- Insurance tech - which will offer new and improved digitized insurance services replacing the middleman and old fashioned insurance services.
- Bitcoin/blockchain/digital currency - which will create financial transactions that can be performed without needing a credit card or central bank.

4. Internet of Things (IoT)

Everyone has been talking about IoT for almost a decade. It is vast and diverse and holds many opportunities for disruption. It includes connected cars and homes, drones, wearables, healthcare, industrial IoT, energy, retail, and smart utilities. Everything is getting connected nowadays. While the last few years have been mostly about our homes and consumer facing products, this year marked the starting point of what we call industry 4.0, or the industrial connected revolution. From power generators to assembly lines, everything is getting monitored, connected, and sometimes even controlled remotely or automatically, and this will become one of the biggest driving forces in IoT in the next couple of years.

On the consumer side, we expect our washing machine will be able to talk with our refrigerator pretty soon and tell it exactly how nice and warm it feels. But between here and there, there are some important things that need to happen so we can feel comfortable enough to have all of those machine-to-machine discussions within the sanctity of our home. The biggest one of those is to make sure that the devices we put in our homes are safe, both from affecting any kind of damage to us or our home and



from unwillingly being a part of a widespread botnet attack (like the one that happened earlier this year with the DynDNS attack).

The IoT market's most prominent investors are Intel Capital, Qualcomm Ventures, GE Ventures, and Andreessen Horowitz. In 2016, we saw a few huge deals such as Jawbone's \$165M Series F round. And Jawbone wasn't the only wearables company to receive funding this year: Gesture control armband maker Thalmic Labs also scooped a \$120M Series B, smoking cessation wearable company Chrono Therapeutics got a \$48M Series C, etc. Other investments in the IoT sector were in Metromile (\$103M Series D), C3 IoT (\$70M Series D), and Ecobee (\$35M Series B).

Israel is already showing great promise in this field with VC-backed companies such as EarlySense, EyeSight Mobile Technologies, Pixie, and Neura. We also have a host of younger up-and-coming IoT startups like 3DSignals, which develops an acoustics-based predictive maintenance technology for avoiding unexpected machine failure. It also seeks to improve industrial firms' yield and income by maximizing machine up-time using advanced machine learning techniques. Both are in the booming industrial IoT segment.

Another strong IoT sub-sector is cyber IoT. Karamba Security and ForeScout, for instance, are both car-related cyber security IoT companies that raised funding rounds. SuperCom, a public company since 2006, offers a suite of solutions for secure IoT connections.

Relevant sub-sectors to be affected:

- Connected homes - to assume control and automation of lighting, heating, ventilation, air conditioning, and security, as well as home appliances.
- IoT cyber security - to create secure web, mobile, cloud, network services interfaces, and infrastructures.
- Industrial IoT (Industry 4.0) - for manufacturing, industrial lines, and smart machines.

