Geektime Research presents:

Geektime Annual Report 2018

Startups and Venture Capital in Israel

January 2019

Geektime

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DIVERSIFIED ISRAELI TECH INDUSTRY

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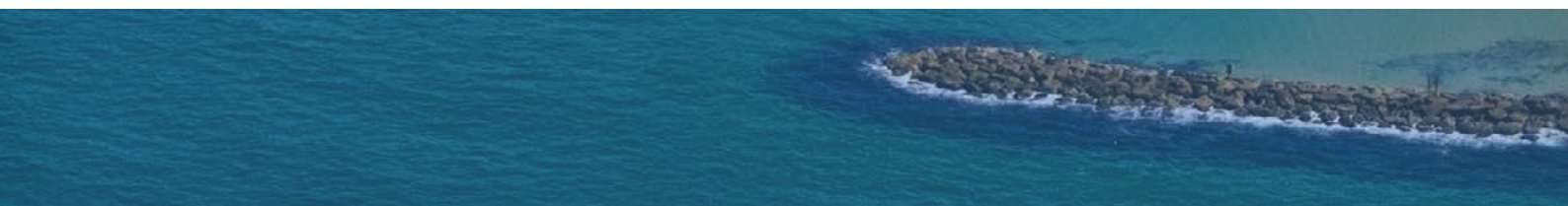

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Methodology

In this report, we sought to combine our own in-house capabilities and complement them with as many outside sources as possible (data, expertise and opinions). Accordingly, we approached each chapter differently.

The global chapter is based on our in-house research from open sources and databases, amalgamated with raw and cumulative data provided by PitchBook, later to be analysed by our team. The Israeli chapter consists of data gathered by us with the help of many local industry heroes. We relied on our sources, used OSINT and HUMINT combined with our own database. The diversity chapter was researched and written with the assistance of the Power in Diversity initiative and the help of Dr. Galit Desheh. The predictions chapter was the trickiest. It is based on extensive reading, talking to some very smart people, inside information regarding technological and regulatory advancements all bound to a (hopefully) coherent text by some of our best and brightest.

In this report, we attempted to focus only on first deals, omitting transactions such as public to private post-IPO M&As and secondary buyouts. In addition, in the Israeli chapter, we attempted to showcase only companies with a meaningful connection to Israel, such as ones with Israeli headquarters. Additionally, in our company and transaction focus paragraphs, we chose only a few examples that exemplify something of importance.

Furthermore, as in any economic transaction, there were islands of missing data: some due to the wills of the sides involved and some resulting from other circumstances. Additionally, we honestly tried to avoid bias and think that even if the population is not fresh and pure (as any dataset is), one can still use our report to understand the general trends in the market and get real value from our work.

We are truly sorry if we unintentionally omitted one (or more) of the amazing, hard-working, brilliant projects that made a splash in 2018 and want to assure you that it was not done on purpose. If we missed something, if we made a mess, please tell us, and we will try to make amends.

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About

Geektime

Geektime is the largest tech platform in Israel, focusing on global innovation and reporting on the Israeli startup ecosystem. In addition to our in-house content, we are the primary voice for investors, entrepreneurs, fellow geeks and tech enthusiasts, helping them cut through regional boundaries and compete in the global marketplace.

Since its birth in 2009, Geektime has become the key startup and tech media outlet in Israel, providing our audience 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. Geektime boasts a reader base of more than 2,000,000 monthly visitors with a massive social media presence. These are die-hard tech lovers, entrepreneurs, C-level managers and developers who know their startups, devices and novel technologies — and Geektime is their trusted source for everything tech.

Beyond 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.

As part of our mission to become the hub for everything high tech, Geektime has launched the first Israeli employer branding platform, "Geektime Insider", and a walk-through guide for accelerators for the Israeli community, named "Geektime Accel".

About Geektime Research
Our research department is a unique team that focuses on data intelligence and analytics, with a deep understanding and familiarity of both high tech and startup industries worldwide. Our team of experts consists of techies, analysts and lawyers, with decades-long experience in tech, research, regulation and everything nice.

Introduction

Welcome to our Geektime 2018 Annual Report.

We take pride in working hard to bring you, our readers, the most accurate and up-to-date data we can. This meticulous, everyday, year-long team effort was performed with the utmost respect for all the people in the ecosystem who worked thousands of hours to keep a dream growing – and with a lot of love for the ecosystem itself.

We truly hope that our spreadsheets will serve as the music sheet for the Israeli ecosystem orchestra and help its piccolos (the pretty little startups), the string section (the established businesses) and the heavy percussion (the giants dictating the pace of the industry) make 2019 a year-long, well-tuned, perfectly-timed, harmonic, emotionally satisfying experience.

So… what did we have last year?

We started the year with a crypto crash and finished the year with a… crypto crash. That made a great many smart people who confused wishful thinking with cold analysis to eat their hats over New Years Eve. Unfortunately, that also made others lose their jobs and/or a lot of money, watching their dreams shatter against the cruel rocks of post-hype reality. We must also give a shout-out to our friends in Venezuela and their ingenious leader, Maduro, who succeeded in making a state fiat less stable than a post-bubble crypto, coercing Venezuelans to unload their hard-earned Bolivares (not very) Fuertes, stabilizing crypto wallets all around the world.

Now for some good news. Globally, we saw several mega billion dollar deals, with dozens of deals worth more than $100M, a considerable percentage of which came from transportation-related companies. Getting from one place to another suddenly seems very important. Curtis Mayfield's "Move on up" might become the official hymn of the sector.

The Israeli scene had some good local news even without the 2017 Mobileye deal (we still shake with excitement when we reminisce). Investment was up. Several very promising projects launched. New people with new energy joined our local industrial club. The world seemed to agree with the optimism as international juggernauts came to play with us.

At the outset, 2019 appears to be extremely promising, sending waves of cautious optimism about the future. Unlike most of 2018, where IPOs stagnated, the year ended with anticipation of several of the largest-ever tech IPOs, including some from the transportation sector. After the December 2018 SEC filing, for example, Uber should break a long drought of tech unicorn IPOs. Lyft, Uber's biggest competitor, is also preparing for a future IPO – as they say, when it rains, it pours. Super tech IPOs on steroids should keep coming with Pinterest, Slack and possibly Airbnb looking to IPO in 2019.

It will be interesting to watch the effects of the massive IPOization on the global markets. However, it will be even more intriguing to see how this will affect the tech world: We will particularly watch out for its impact on funding and the advancement of various tech sectors.

Together with the December stock slump and the changing dynamics between the world's largest economies, 2019 will likely not bore anyone in the tech world. China seems to be at least the second most important country in the tech world (after Israel?). The country has become a tech superpower in the last several years, arousing enthusiasm in some while making others worried. Generally, as we all know, the Chinese word for crisis is 熱麵條, so we'll just have to wēijī and see.

Yours,
Geektime Research Team

A Word from the Industry

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In light of inflation and volatility in the markets, we expect to witness the slowdown to continue during 2019, such slowdown will effect the investments as well as acquisition transactions.

While companies and organizations are relentlessly seeking to open paths to capital, we have sensed in the past year, that IPOs are becoming more and more complex due to regulatory requirements, operational effectiveness, risk management and investor relations.

Having said that, we believe that the curiosity and strengthening involvement of the Chinese activity in the local market, shall include investments and acquisitions in Israel and will continue to grow during 2019.
Moreover, we are expected to continue to see a billion dollar exits.

RONEN SOLOMON
Chairman Of The Board, Altshuler Shacham Benefits

2018 was an excellent year for Israeli high-tech, which continued to thrive. We believe that in 2019, the high-tech will continue to be Israel's main growth engine.

Despite the uncertainty arising from the international markets - and the Israeli high-tech is sensitive to changes originating in the global arena - all signs show that Israeli high-tech is robust (Israel currently has almost 8,000 active technology start-ups - more than any other country outside the US. Israel is a world leader in terms of R&D spending as a percentage of the economy. It's top in both the number of start-ups and engineers as a proportion of the population, and it's first in per capita venture capital investment. Israeli high-tech exports hit a record high and we witness a beginning of a shift from a "start-up nation" to a "scale-up nation" - the ability to grow into significant global companies, both as part of larger companies or as companies based in Israel.

Israel's edge in innovation is illustrated by the country's number two ranking on the subject in the World Economic Forum's Competitiveness report. For the first time, Israel was ranked in the top 20 places in the competitiveness index and is the only new country that has managed to break into the ranks of 20 leading economies.

However, it is unwise to rest on laurels. There are some difficult challenges facing Israeli high-tech today. First and foremost, global competition. Many countries around the world have found that they must promote technology innovation if they wish to remain relevant to the knowledge economy of the 21st century. Not surprisingly, many of them are working to reproduce the successful Israeli model.

Another challenge is the severe shortage of technological manpower. To date, some 10,000 high-tech engineers are missing and the current shortage may increase in the near future, which could be a major barrier to the growth of start-ups and established Israeli technology companies.

In addition, we must increase investment and encourage scientific research in Israeli universities in order to maintain scientific and technological leadership and to promote first-rate research in strategic areas.

Israeli high-tech is in a fascinating period, but also challenging, which requires special efforts. The rate of development of transformative technologies is unprecedented. Artificial intelligence (AI) and Machine Learning (ML) technologies affect all areas of our lives and change entire industries quickly. While Israeli high-tech is on the rise, technological activity is becoming more and more global. All the players in the hi-tech arena - the government, the business sector, the academia, the defense industries and the education system - must join forces in order to preserve the technological leadership that constitute the Israeli innovation ecosystem that has given rise to a unique environment, within which the Israeli entrepreneur flourishes and thrives.

DR. ESTHER LUZZATTO
Managing Partner,
The Luzzatto Group

Numerous studies indicate that diversity in the ranks of management, development teams, strategic and other company units increase creativity, groundbreaking thinking and the likelihood of success. Microsoft strives to create a work environment that has a wide range of people, concepts and ideas. The company's Diversity and Inclusion policy enables the development of solutions that suit the needs of people around the world.
This policy is one of the cornerstones of the company's values and a fundamental part of its culture and business strategy. Microsoft deeply believes in changing the world with the technology it produces, enabling any society and every person to achieve more. This is also a key mantra it bestows upon its employees.
Microsoft is committed to recognizing that human diversity is not only a moral value but also a business need and diverse work groups are key to the company's success.

Nowadays any discussion regarding diversity and inclusion begins with a worried discourse regarding the shortage of skilled technological personnel with high administrative and managerial potential. There is no doubt that the Israeli high tech ecosystem has been suffering for a number of years from the growing gap between the number of startups, global development centers, growth companies and international companies launched in the country, and the ability to fill all the required positions.

The growing scarcity of technological manpower is shaping the Israeli and global high tech industry. It affects development, wages and terms of employment, stability, priorities and, of course, creativity, innovation and pace of technological advancement.

But do the high numbers of open positions reflect a real lack of talent? What is the source of this shortage? Does this partly stem from the lack of diversity in the high tech ecosystem, a homogenous space with a stereotypical worker in mind? Does the field currently have the tools to integrate diversity for organizational development or for professional and business growth?

How can technological organizations in general, and startups in particular, transform to be diverse and inclusive, and how can employees and managers cope with internal differences that naturally result from increased diversity?

In the 2018 Geektime annual report, we have included a diversity chapter that, for the first time, examines what is happening in the world and in Israel in the field of diversity in high tech. It offers a glimpse into the practices and perspectives of various organizations
and models.

The worldview guiding the Power in Diversity initiative argues that diversity and inclusion are processes that need to be done with diligence. Also, they need to be implemented with a deep understanding of the complexities that arise with each step, matching the relevant tools and the ability to recognize the value of such a disruptive process, in the positive sense of
the word.

The right way to carry out diversity and inclusion processes is to thoroughly examine the professional, organizational and business value that these processes bring to the high tech ecosystem, which is known for pivots, noise and agility. These are all the right ingredients for the success of diversity and inclusion, from startups to growth companies to tech giants.

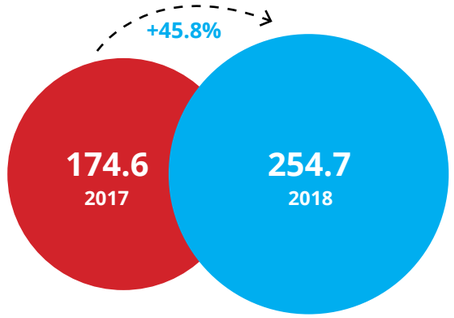
DR. GALIT DESHEH
Director,
Power in Diversity

Global Activity

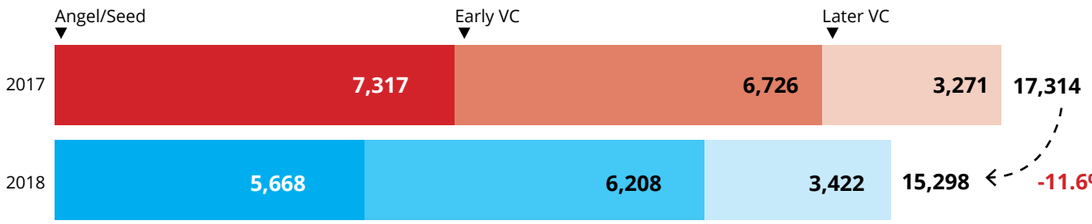
- 46% more investment, 65% more per funding round in VC-backed deals in 2018.
- Fewer, Bigger and Later: There were fewer rounds than in 2017. However, the rounds were larger and at later stages.

Global VC Activity

Sum of investments [$B]



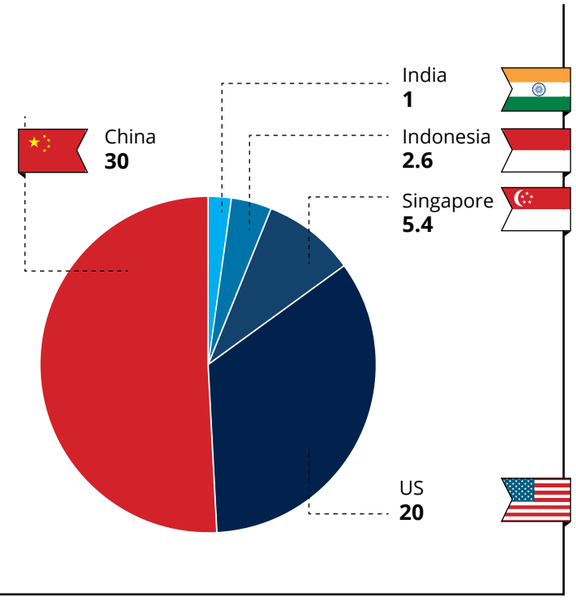
Number of investments [units]



$1B Rounds and Higher

- Among the billion dollar rounds, China and the US had 6 each.
- Chinese companies led with almost $30B, followed by the US with $20B.
- Transportation and software were HOT in 2018. During the year, there were 5 software ($19B) and 7 transportation ($18B) related rounds, which add up to a combined 70% of the count and 63% of the total funding from billion dollar rounds.

2018 VC Rounds Sum Higher Than $1B by Country [$B]

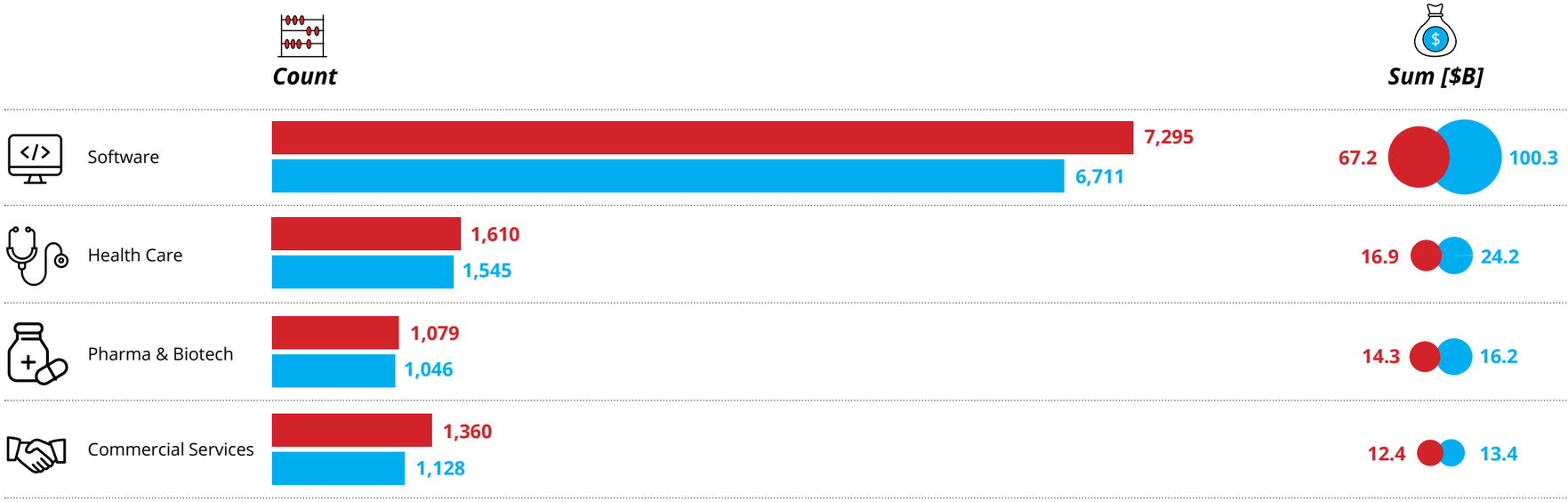


Leading Sectors

- None of the sectors had more deals in comparison to 2017, with several declining by double-digit percentages.
- But all sectors except for media raised more total funding in 2018 than in 2017, with software and energy showing the most impressive growth.

Global VC Activity by Sector

2017
2018

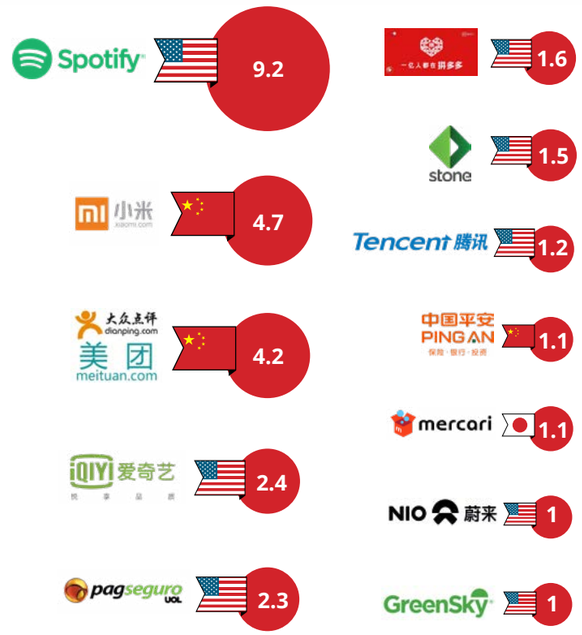


Executive Summary // Global

IPOs $1B and Higher 2018

- NASDAQ was the most active ground for billion dollar IPOs with 8, totaling $20B, followed by Hong Kong with 3 mega IPOs that brought in $10B.
- Spotify was the biggest IPO, with $9.2B, followed by Xiaomi and Meituan-Dianping, both for more than $4B.
- Japan had one representative with Mercari's $1.1B Tokyo IPO.

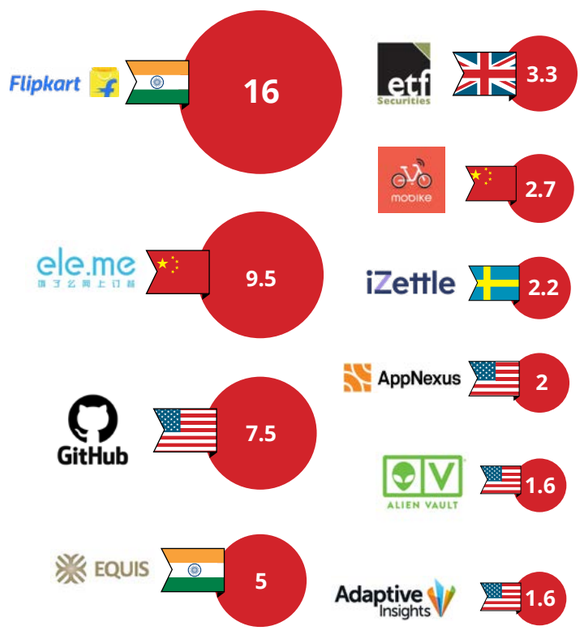
2018 IPOs $1B and Higher by Country [$B]



Higher than $1B M&A Deals 2018

- Unlike in the VC rounds, India had an impressive M&A year. Flipkart, acquired by Walmart for an impressive $16B, and Equis Energy bought for $5B are two of the biggest tech deals of the year.
- The Chinese ELE.ME had a $9.5B deal.
- GitHub was bought by Microsoft for $7.5B.

Higher than $1B M&A Deals 2018 [$B]



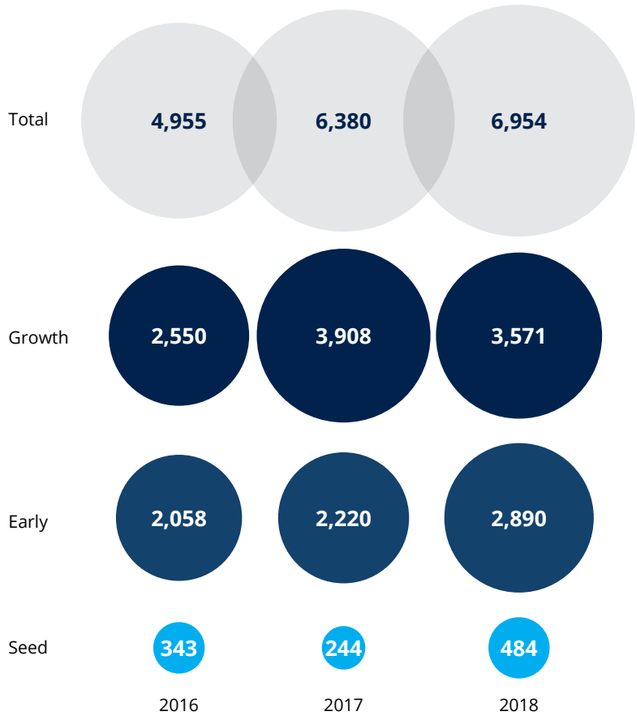
Israel

Israeli VC Round Activity

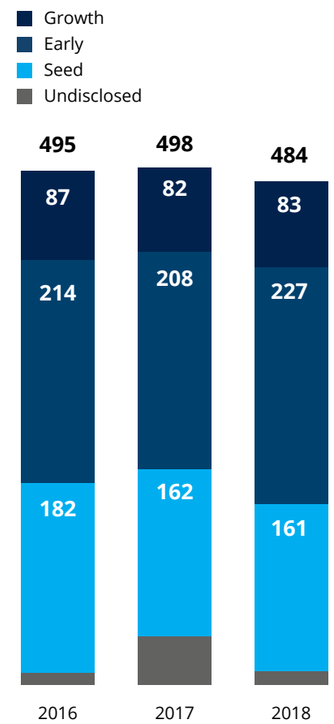
- The number of funding rounds in Israeli high tech in 2018 was 484 and the sum of those rounds $6.95B.
- Total sum grew by 9% from 2017 and by 40% from 2016.
- Seed rounds stayed the same in number in 2017 and 2018 (-0.6% than 2016), however doubled in sum.
- The number of early rounds was higher (9.1%) and received more funds (+30.2%).
- Growth rounds suffered a decline of 8.6% in sum despite a slight rise in number of rounds (1.2%).

Investment Sum and Number of Rounds in Israeli Startups in 2016-2018

Sum [$M]



Number of Rounds

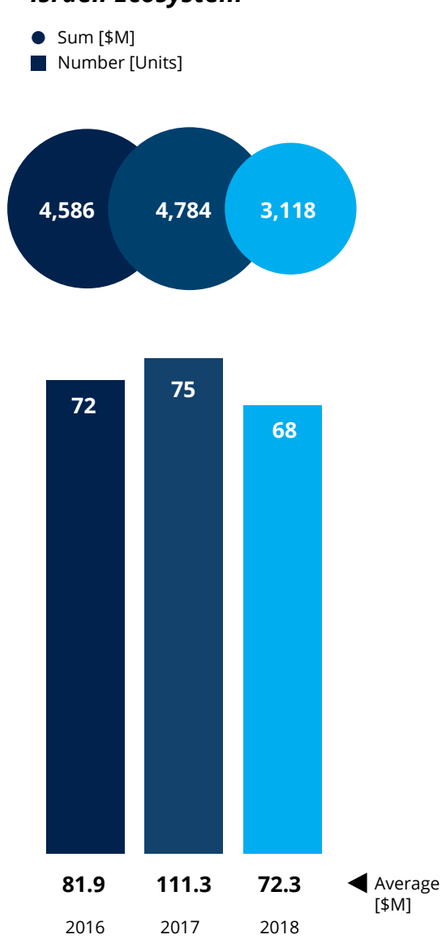


Executive Summary // Israel

M&As

- There were 68 M&A deals, worth $3.1B. A 9% decrease in M&As count this year.
- There was a significantly lower deal average, of $72M per M&A; 35% lower than 2017.
- The most notable deals of the year included Datorama, EPD Solutions, Sygnia and Perfecto Mobile.

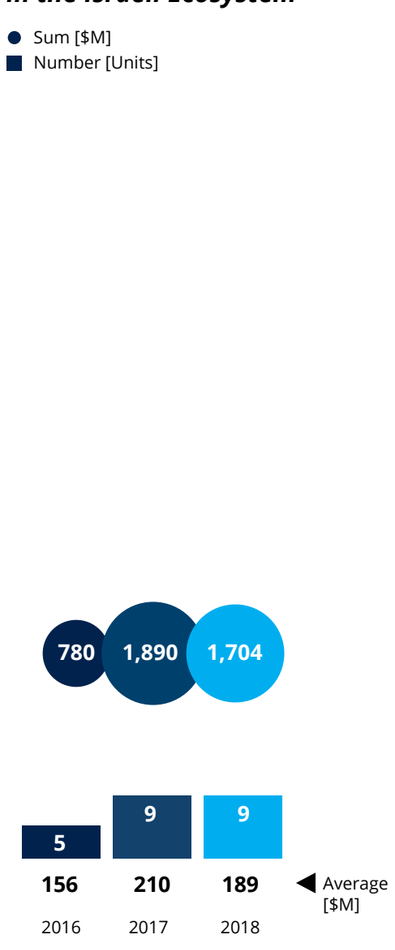
Number and Sum of M&As in the Israeli Ecosystem



Mega Rounds

- There was a stagnation in the number of mega rounds (9), whith a 10% decrease in total mega round sum.
- The average mega deal dropped to $189M, a 10% decrease.

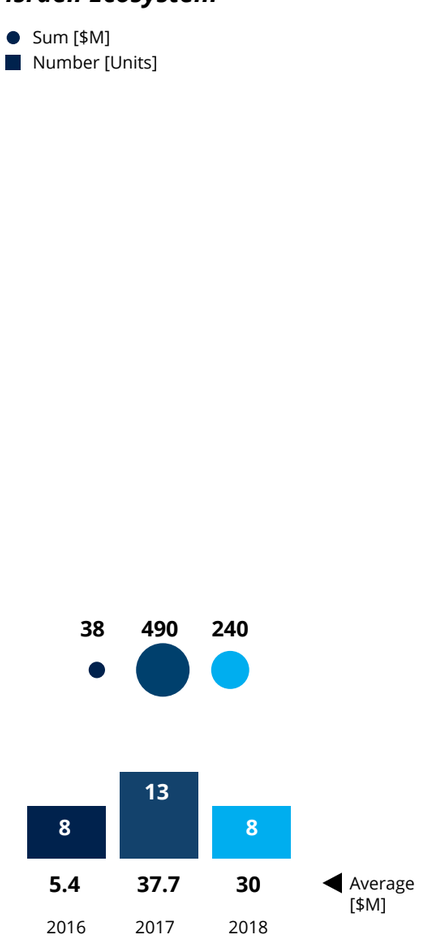
Number and Sum of Mega Rounds in the Israeli Ecosystem



IPOs

- In 2018, 8 IPOs occured, a 38.5% decline from 2017.
- The sum of IPOs was $240M. A 51% decline in IPO sum from the heights of 2017.
- The most notable IPOs belonged to Gamida Cell, LogicBio and Sol-Gel.

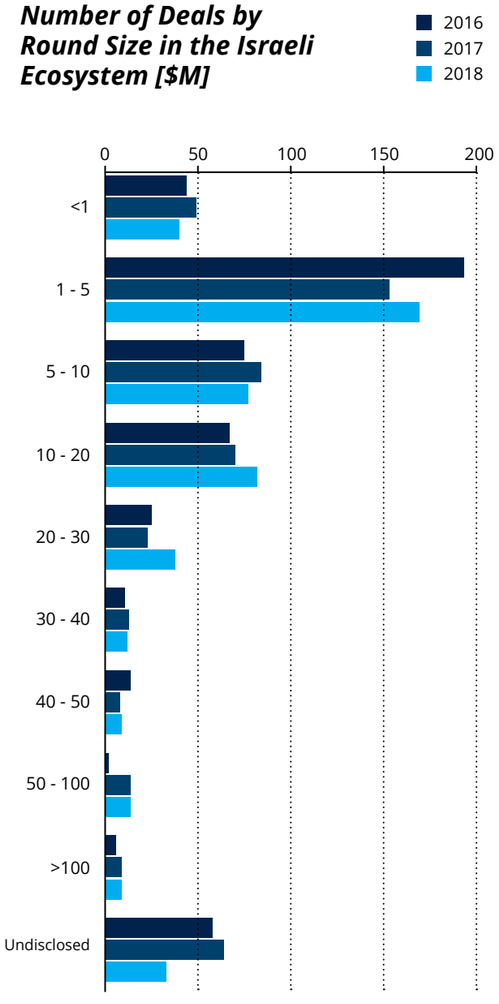
Number and Sum of IPOs in the Israeli Ecosystem



Distribution by Round Size

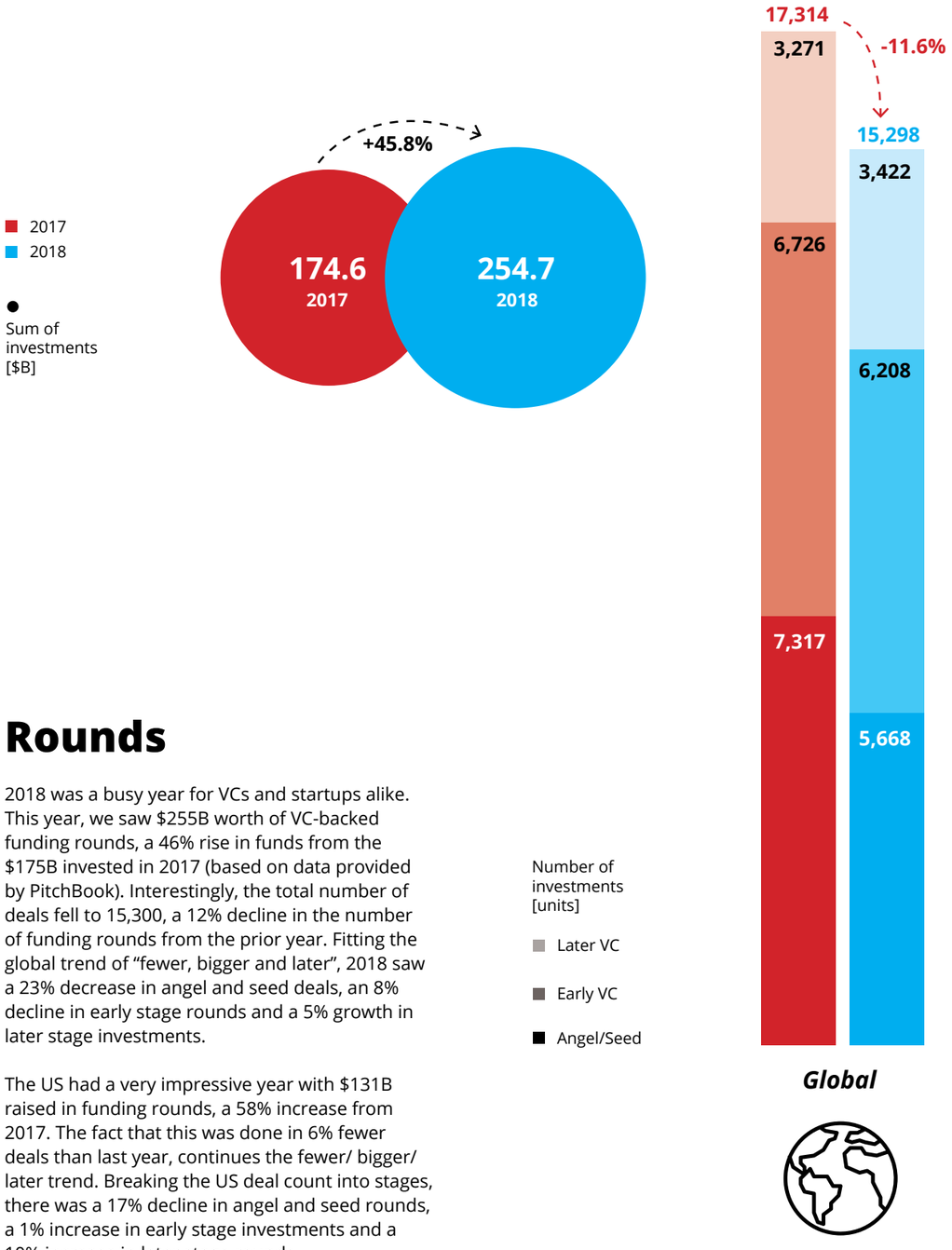
- The distribution of rounds was similar to previous years, with the median in the range of $1M-$5M.
- There was a slight increase in rounds summing $10M-$30M.
- The highest rounds of over $50M stayed the same as in 2017.

Number of Deals by Round Size in the Israeli Ecosystem [$M]



Global Market Overview

Graph 1.1:
VC Activity 2017-2018 Global, US, Europe and Asia - Pacific



Rounds

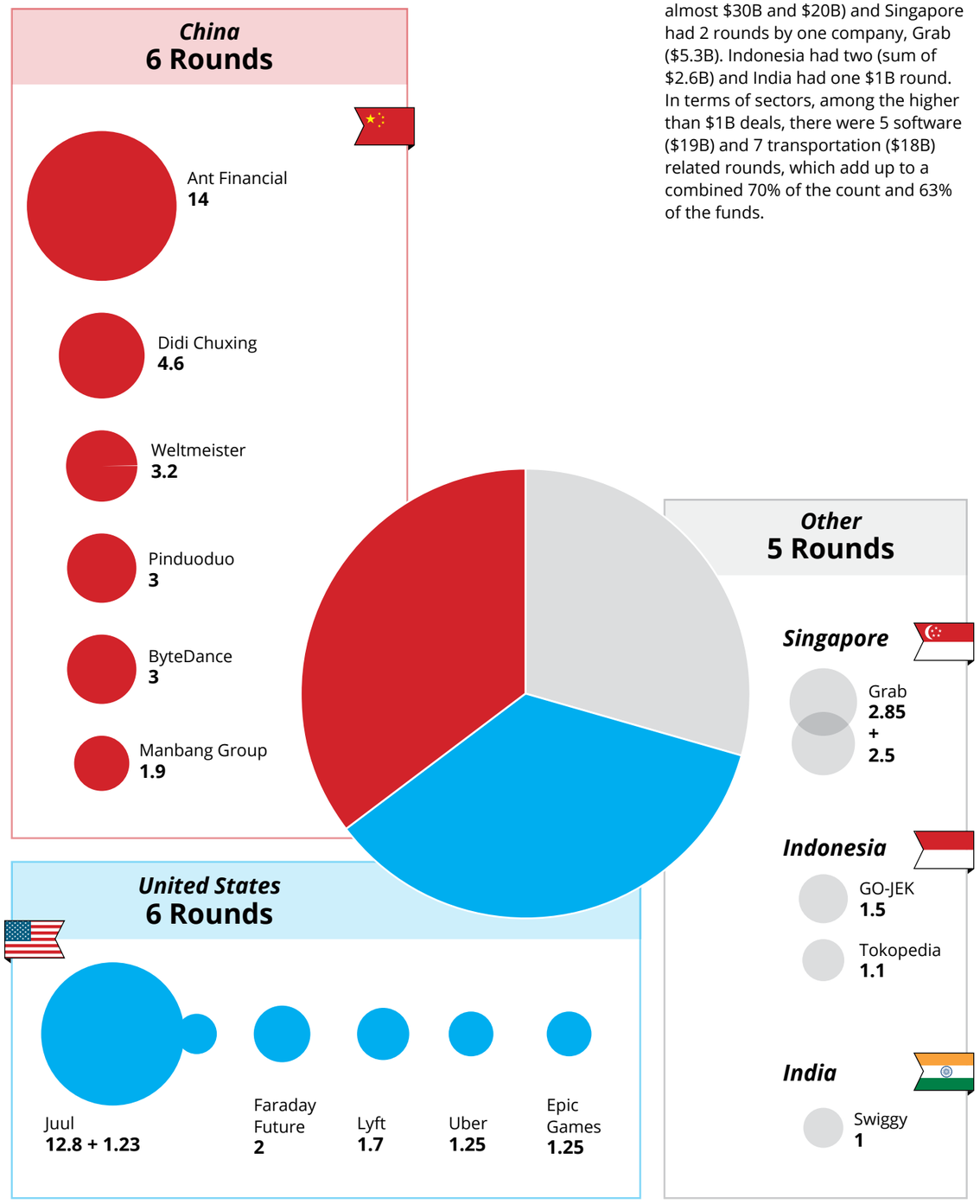
2018 was a busy year for VCs and startups alike. This year, we saw $255B worth of VC-backed funding rounds, a 46% rise in funds from the $175B invested in 2017 (based on data provided by PitchBook). Interestingly, the total number of deals fell to 15,300, a 12% decline in the number of funding rounds from the prior year. Fitting the global trend of "fewer, bigger and later", 2018 saw a 23% decrease in angel and seed deals, an 8% decline in early stage rounds and a 5% growth in later stage investments.

The US had a very impressive year with $131B raised in funding rounds, a 58% increase from 2017. The fact that this was done in 6% fewer deals than last year, continues the fewer/ bigger/ later trend. Breaking the US deal count into stages, there was a 17% decline in angel and seed rounds, a 1% increase in early stage investments and a 10% increase in later stage rounds.

The 6% US drop in the number of deals, however, was mild in comparison to the European and the Asian Pacific markets, where the total decline in rounds was 27% in Europe and 10% in the Asia Pacific region. The decline in angel and seed investments was 39% in Europe and 26% in Asia, and accordingly for early stage deals, there was a 24% drop in Europe and a 5% drop in Asia. Unlike the US numbers, later stage rounds both in Europe and Asia registered a decline compared to 2017, albeit a much milder one than the earlier stages decline, with an 8% drop in Europe and a 1% drop in Asia.

Even with European funding rounds in 2018 down across the board, the European market still registered a 9% increase in the round sum compared to 2017, with $24B total in VC investments. In Asia, the sun shined much brighter than in Europe. Despite the decline in the number of rounds, Asia saw a 44% increase in deal value from 2017, with $94B in deals.

Graph 1.2:
2018 VC Rounds Higher than $1B by Company and Country - Number and Sum [$B]



Mega Rounds

There were 17 rounds worth more than $1B in 2018, with a combined sum of almost $59B. Out of those, China and the US had 6 rounds (worth almost $30B and $20B) and Singapore had 2 rounds by one company, Grab ($5.3B). Indonesia had two (sum of $2.6B) and India had one $1B round. In terms of sectors, among the higher than $1B deals, there were 5 software ($19B) and 7 transportation ($18B) related rounds, which add up to a combined 70% of the count and 63% of the funds.

The largest single funding round of 2018 with $14B came from Alibaba's **Ant Financial** (formerly known as Alipay), from 19 investors. This round made it the highest valued Fintech company globally and the world's most valuable unicorn, with a post-round valuation of $150B.

Juul, attempting to bring vaping to the masses, had two rounds summing up to $14B. A July VC round of $1.2B was followed during the last vapors of 2018 by a massive corporate investment of $12.8B from Altria Group during the last quarter of 2018.

Didi Chuxing, a transportation $58B unicorn, raised a total of more than $5B in 2018, in two major rounds of $4.6B (8 investors, including SoftBank Capital and Toyota Motor) and $264M followed by an additional corporate round of $0.5B. In the last several years, Didi Chuxing focused on development, investment and procurement, acquiring a number of companies in the transportation sector, including one of their biggest competitors, Uber China.

Another Chinese company that received a large investment this year is **Weltmeister**, a company that specializes in the design, development and manufacturing of electric vehicles. It completed a funding round of $3.2B from 8 prominent investors, including Alibaba Group, Baidu Ventures, Tencent Industry Win-Win Fund and Sequoia China.

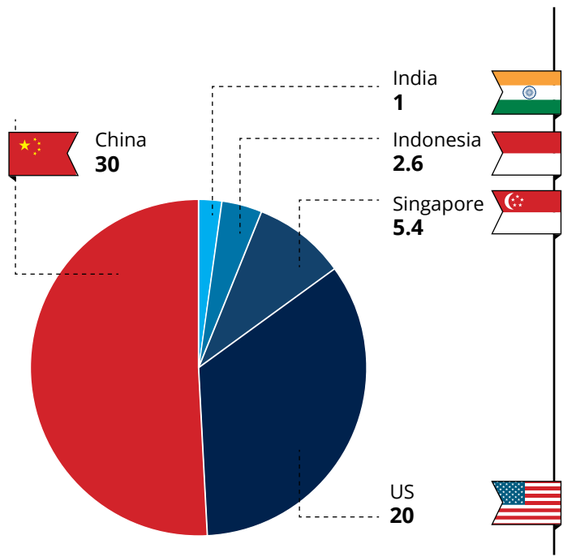
Two other transportation-related mega rounds, this time from Southeast Asia, belonged to **Grab** (Singapore), a mobile technology platform that integrates city transportation for driver partners and customers. The company completed two rounds in less than 10 months totaling almost $5.4B with an impressive list of investors such as Didi Chuxing, SoftBank Capital, Toyota Motor, Hyundai Motor, Kia Motors, Alibaba Group, Microsoft and many others. Additionally, Grab used some of the funds from the first round in order to acquire Uber Asia. Grab's main competitor, **GO-JEK**, also had a positive investment year. A startup founded in Jakarta, Indonesia, raised $1.5B in 2018, from 18 investors, led by Tencent Holdings and Astra International.

Two other transportation-related companies with major 2018 funding rounds were the US ride-sharing application developers **Lyft** and **Uber**. Lyft, which is currently funded by more than 60 investors, completed a funding round of $1.7B led by CapitalG, followed by a $0.6B round led by Fidelity Management. Uber, which has operations in 785 metropolitan areas worldwide and with an estimated 70% market share in the United States, raised $1.25B from a Series G round led by SoftBank. On December 8, 2018, Uber filed for an IPO with a valuation that could go as high as $12B.

Faraday Future, an American tech startup developing intelligent electric vehicles, planned to receive the biggest funding round in the U.S, in a sum of $2B. That did not go as planned. After court appeals, cancelation attempts and a generally convoluted 2018 journey, the company might get a chance to redeem itself and attempt to raise investments from additional sources.

ByteDance, a Chinese big data based news aggregator, got a $3B investment round from 6 investors, including SoftBank. **Pinduoduo**, an e-commerce platform allowing consumer participation in group deals, raised $1.4B (Two months later the company was listed on NASDAQ, raising an additional $1.6B, making it one of the largest IPOs of 2018). The creators of Fortnite and the famous Unreal Engine, **EpicGames**, completed a $1.25B round from seven investors. After taking on Valve's Steam and launching their own DRM plaform, the company will have its a face- off with Google promising to launch its own mobile apps store on Android to compete with Google Play. **Tokopedia**, the marketplace from Jakarta had a $1.1B round. The Indian food delivery app, **Swiggy**, had a $1B round, complemented by two additional rounds, of $100M and $210M summing up to $1.3B in 2018 counting nine investors, including Meituan-Dianping investing in two of the rounds.

Graph 1.3:
2018 VC Rounds Sum Higher than $1B by Country [$B]

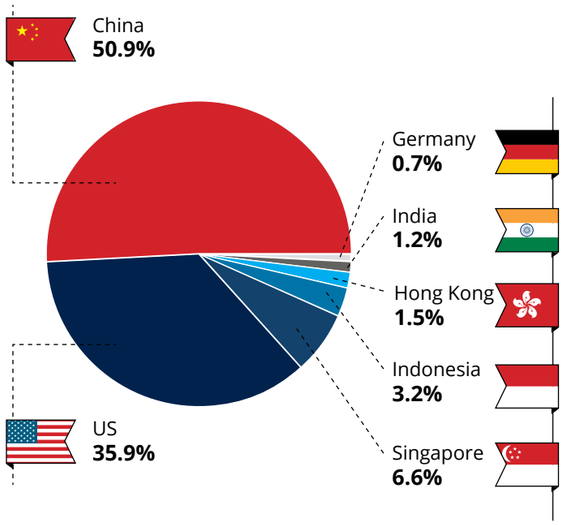


52 over 500

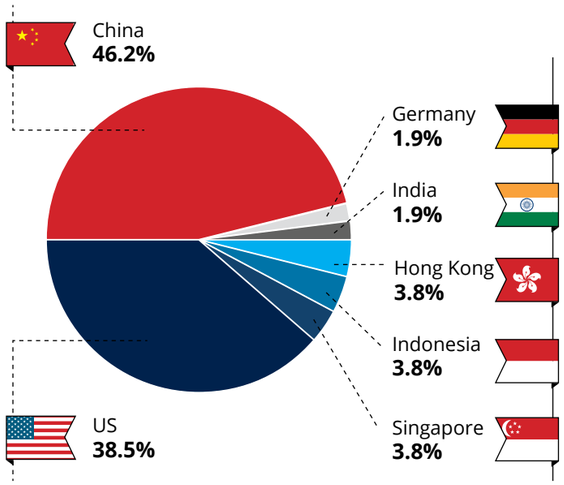
In 2018, there were 52 global VC rounds valuated at $500M or higher, raising a sum of $81B (of which the $1B and higher were $59B). Of the 52, Chinese companies completed 24 rounds (46% of all 52), with more than $41B (51% of the funding) and an average of $1.7B per deal. Together with the two Hong Kong deals, the Chinese numbers rise to 26 deals (50%) and $43B (52%). The US was a little less impressive with 20 rounds (38%), a sum of $29B (36%) and an average of $1.5B. The two leading sectors were again software and transportation with a combined 71% of the rounds and 65% of the funds. Software led with 21 deals ($29B) and transportation with 16 ($23B).

Graph 1.4:
2018 VC Rounds Higher than $0.5B by Country

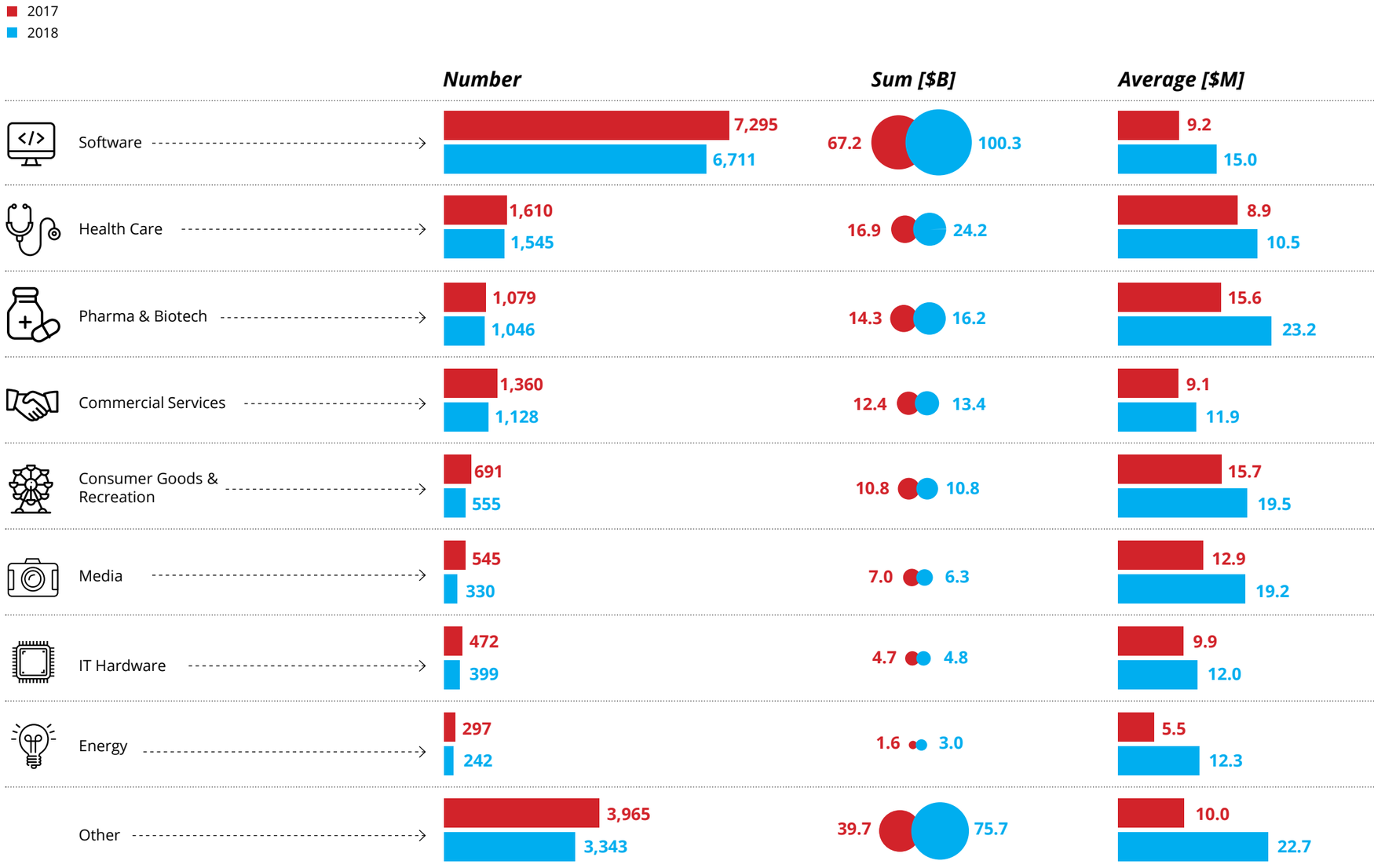
Sum of Investments



Number of Investments



Graph 1.5:
Global VC Activity
2017-2018 by Sector



By Sector

We can see the overall investment climate better when analyzing how various sectors fared (based on data and sectors provided by PitchBook). The “fewer, bigger and later” funding round trend was clear, with an average investment per deal in 2018 increasing across the board. The difference in the sums can be better seen using a sector breakdown, where all sectors had a double or triple digit percent increase in the per deal average in 2018 compared to 2017.
The most notable sector was energy, which despite having almost 20% fewer rounds, had a 83% rise in the 2018 sum, making the average round 125% higher in 2018 than 2017.

Media, the only sector that declined in the sum of rounds from 2017 to 2018, still registered an increase in the average sum per deal due to a higher decline in the number of deals compared to the decline in the sum raised.

M&As

Flipkart, India's leading marketplace, has been acquired by the giant retail corporation Walmart for $16B. Walmart announced that both brands will keep their identity and that $2B from the deal will be used to accelerate the growth of Flipkart. In addition, Walmart intends to bring Flipkart to an IPO, but hasn't set a timeline yet. The Indian e-commerce company, founded in 2007, has a customer base of over 100 million users. Its approximately $20B valuation makes it the 6th largest startup in the world. The mobile only marketplace includes over 80M products across more than 85 categories.

Alibaba Group, the conglomerate from China, acquired the Chinese meal ordering platform and gourmet food take away service, **ELE.ME**, for $9.5B. ELE.ME launched in 2008 and had raised a total of $3.3B to date. The deal will advance new retail strategy goals set by Alibaba, which aims to provide a smooth customer experience both online and offline.

The world's largest source code host, **GitHub**, was acquired for $7.5B by Microsoft for its 34 million users and 100 million repositories, which are about to get much larger, with the rumored unlimited private repositories opening soon. To not scare away the active base of the hub in its journey to break world records in number of codelines hoarding, Microsoft went to great lengths to ensure the continuation of GitHub's working methods and company structure, communicating the independence of the company from Microsoft.

After buying WarnerMedia for $85B (mentioned here for the sheer size of the deal, by far the biggest tech related deal in 2018), AT&T had two other mega acquisitions with US adtech **AppNexus**, for $2B (after the company canceled a 2017 IPO). Additionally, the comms giant bought the US cloud cybersecurity company, **AlienVault**, for $1.6B.

The Indian green energy company, a subsidiary of Equis Funds Group, **Equis Energy** was acquired for $5B. A fintech UK company, **ETF Securities**, the developer of the Canvas trading platform was bought by Legal & General Investment Management for $3.3B. **Mobike**, the bike-sharing platform in China, was acquired by the very active Meituan-Dianping for $2.7B, five months prior to its own IPO. Swedish fintech **iZettle** was acquired by PayPal for $2.2B following a canceled IPO. BI platform developer **Adaptive Insights** was acquired by Workday for $1.6B, later filing and withdrawing an IPO on NASDAQ.

Additionally, there were several major acquisitions of company units in 2018. The largest one was Thomson Reuters, which sold 55% of its financial & risk unit to Blackstone Group LP for an impressive $17B, later to be rebranded as **Refinitiv**. The software unit of **Schneider Electric** was acquired by AVEVA Group for $4.2B. Swiss fintech **SIX Group** sold its payment service unit SIX Payment Services for $2.8B to Worldline. German agritech **Bayer** Digital Farming, which spun out of Bayer for $2B was purchased by BASF. In one of the earliest deals of the year, Alphabet acquired **HTC** mobile division for $1.1B.

Graph 1.6:
Higher than $1B M&A Deals 2018 [$B]

Graph 1.7:
Higher than $1B Company Unit Deals 2018 [$B]

IPOs

Several major IPOs happened during 2018, garnering significant financing for the companies and their investors. A few of the IPOs succeeded in raising sums higher than $1B.

One of the most anticipated IPOs of 2018 came in April when the popular music streaming service **Spotify** went public, raising an impressive $9.2B: Its first day of trading gave it a market valuation of $26.6B. Additionally two fintech companies had NASDAQ seven-figure IPOs. The Brazilian fintech company **Stone Pagamentos** raised $1.5B, with an initial market cap of $6.6B. The US lending marketplace company **GreenSky** IPOed for $1B less than five months after a $200M round during the first days of the year.

Chinese companies' NASDAQ IPOs raised several billion dollars this year. The deals that crossed the $1B mark include the video streaming company **iQIYI**, which raised $2.4B, followed by the aforementioned **Pinduoduo** Inc at $1.6B. **Tencent Music,** the Chinese giant music streaming arm with an impressive 800M monthly active users, raised $1.2B, and the electric vehicle maker **Nio** IPOed for $1B.

On the other side of the world, in the Hong Kong exchange, **Xiaomi**'s IPO raised $4.7B, **Meituan-Dianping,** a provider of an online services marketplace, raised $4.2B in its initial public offering and **Ping An Healthcare and Technology Company**, which developed an internet healthtech platform, raised $1.1B. In Japan, the local online secondhand marketplace unicorn, **Mercari**, IPOed in Tokyo for $1.1B.

Graph 1.8:
2018 IPOs $1B and Higher by Country / Stock Exchange [$B]

Israeli Market Overview

When comparing Israel with 2018's global activity, we can see that the trend of fewer but bigger funding rounds has made a pilgrimage to the Holy Land. In 2018, there were 484 funding rounds in our ecosystem, only 14 rounds less (2.8%) than 2017 and 11 rounds (2%) less than 2016. Those funding rounds aggregated to $6.95B in total financing, an impressive 9% rise in contrast to 2017's sum of $6.38B and a 40% increase from 2016.

Interestingly, unlike the global market which focused its funds on later stage companies, almost an equal sum, 49% of the funding rounds in the Israeli market went to seed and early stage companies in 2018 compared to 2017. The number of seed rounds stayed the same as 2017, but the money invested into them, $485M, almost doubled 2017's amount of $244M.

The nine top deals on this list (5.6% of all 2018 seed rounds) raised almost a quarter of all funds, $116M. One of those deals, Saga's seed round, was worth $30M, which is 400% larger than the top 2017 seed round of $7.5M by Viz.

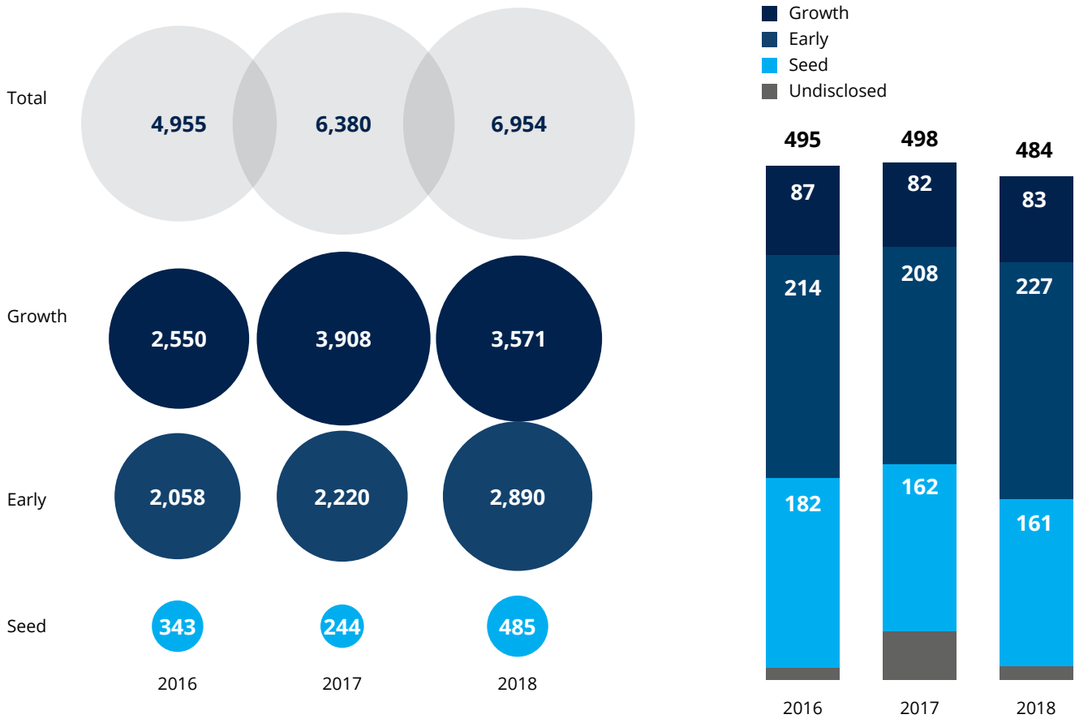
It is worth noticing that even if we leave those mega seed rounds out of the picture, the sum of rounds in 2018 is still 51% higher than last year's total.

When examining early stage rounds, there was a 9% rise in the number of such rounds in comparison to 2017 and 30% more funds were invested in startups at this stage during 2018.

In general, seed and early stage companies received 40% more funding in 2018 than in 2017. That amounted to 49% of the year's total funding. This is also 41% more than they raised in 2016, when early stages were only 39% of total funding.

The growth stage startups had the same number of funding rounds as last year, but saw 8.6% less in total funding than in 2017, which drastically differs from the global market trend, where there was a general increase in later stage investments.

Graph 2.1: Investment Sum and Number of Rounds in Israeli Startups from 2016-2018



Deals per Round Size

2018 continued the per round size count distribution from previous years. It can be seen that the number of rounds in the $1M- $30M range saw a slight increase, mostly in the $20M-30M range. Interestingly, the number of rounds in the higher spectrum stagnated and was almost identical to the 2017 count.

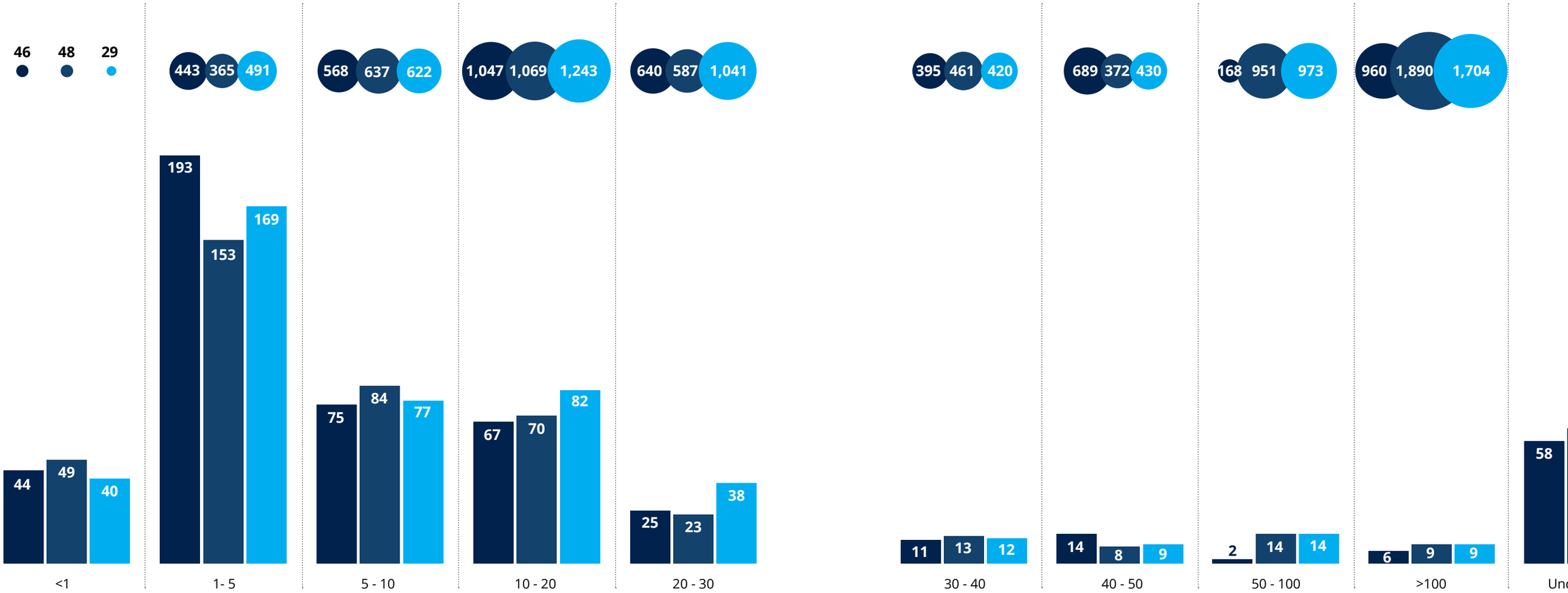
Sum-wise, the highest increase occurred in the $20M-$30M range (77%). The $1M-$5M range also had an impressive increase of 35% in the sum raised during 2018, which subsequently made the range have the highest increase in the average per round sum (22%).

Averages

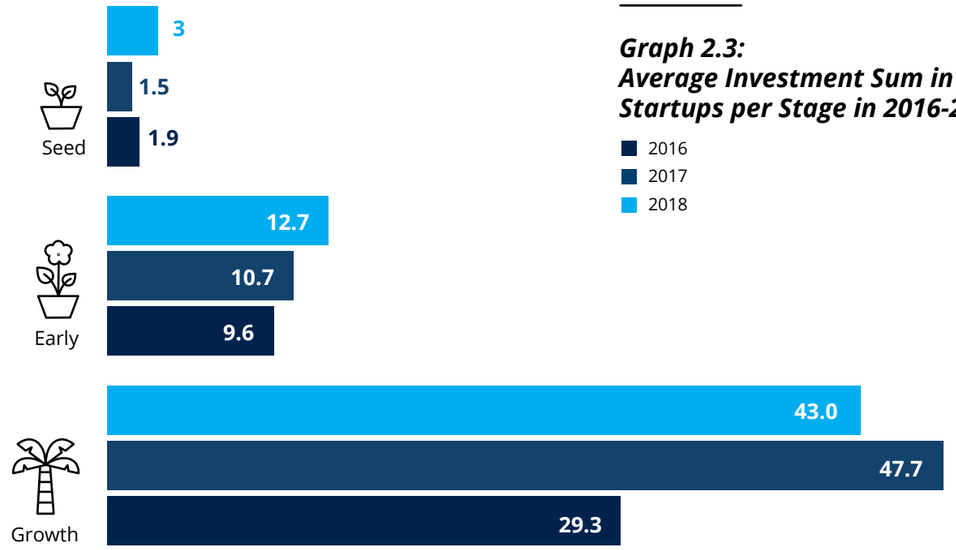
This year, we saw the amount of the average deal go up to $14.4M, a 12% increase from the 2017 deal average.

The seed round average in 2018 doubled itself from 2017, from $1.5M to $3M, reversing a 20% decline in seed investments from 2016 to 2017. Early stage investment averages increased from $10.7M to $12.7M, 19.3% higher than last year, adding to the 11% increase from 2016 to 2017. The only stage to experience a decline in 2018 was the growth stage, where an average funding round declined by almost $4.6M from 2017, which is a 10% decline in average growth round sums due to a 8.6% decline in the sum of funds invested into growth startups in 2018.

Graph 2.2:
Number of Deals by Round Size in the Israeli Ecosystem (2016-2018)



Graph 2.3:
Average Investment Sum in Israeli Startups per Stage in 2016-2018 [$M]



Mega Rounds

The real estate platform, **Compass,** co-founded by the famous Israeli investor Ori Allon, raised $400M. The company, which currently operates exclusively in the US, helps sellers, buyers and renters find properties throughout the country and provides data and analytics to agents. The F Series investment was led by SoftBank Group and Qatar Investments Authority, who were joined by IVP, Wellington Capital Management and Fidelity Investments. The company stated that the funds will be used to expand its platform internationally and to strengthen its position in the US market.

Landa DP, serial Israeli entrepreneur Benny Landa's company raised $300M. The company develops a technology called Nanography, which claims to close the critical gap between offset and digital printing. The company has developed a new ink consisting of pigment particles that are about 10,000 times thinner than human hair. The round was led by the German PE company SKion GmbH. Altana, the German chemicals giant and a previous investor in Landa, also joined the round.
(Fun equality fact: Both companies are owned by the wealthiest woman in DE, Susanne Klatten.)

The Israeli fintech company, **BlueVine,** a provider of working capital financing to small- and medium-sized businesses, raised $200M from the Swiss financial service Credit Suisse. BlueVine bridges cash flow challenges from supplier credit gaps by allowing businesses to sell their unpaid invoices. The debt financing round will allow the company to expand the service and raise the invoice factoring credit limit, after doubling it to $5M earlier this year. The round was joined by two additional rounds worth $72M.

The Netanya-based DevOps leader, **JFrog,** which intends to control the software updates market, raised a $165M Series D round. Insight Venture Partners led the funding round and was joined by an additional 11 investors. The investment will be used for JFrog's expansion and growth.

Vroom, The Online car retailer that aims to make the buying/selling process of used car fast and easy and also offers financing services to fund deals, raised a whopping amount of $146M in a Series G round. The funding round was led by AutoNation with participation from General Catalyst, Fraser McCombs Capital, T. Rowe Price Associates and L Catterton. The company will use the funds to enhance internal process and leading technologies, hire new employees and build a stronger customer base.

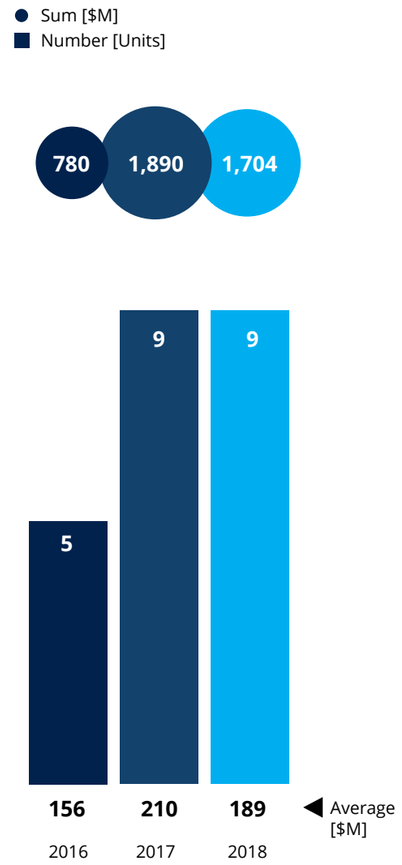
Another fintech company that made it to this exclusive club is **Behalf**, with a PE round of $150M. Behalf offers businesses working capital (up to $50K) with technology that allows decision-making and interest-determination within less than 24 hours. Soros Fund ($120M) and Viola Credit ($30M) were the investors behind this first mega round of 2018.

Trax Image Recognition, an analytic solution and computer vision for retailers provider, raised $125M to support its global expansion and penetration of additional markets with its retail solutions. The funds came from Boyu Capital Advisory, the Chinese private equity firm that led this round and will provide Trax with the knowledge and the skills to penetrate the Chinese market. Vulpes Investment Management and D.C. Thomson also took part in the round.

The youngest company in this well-respected list, **ORBS,** was founded in 2017 and managed to raise the impressive sum of $118M in a Series A round before the first half of 2018 ended. ORBS has developed a decentralized blockchain infrastructure that should make the transition into blockchain easier for any customer or consumer. Their technology is already being used by companies such as Zinc (AdTech), Kik (a chat app with more that 15M monthly users) and payment platforms like the Israeli startup, Zooz.

eToro
The fintech company and investor social network, which currently has more than 9M users, raised $100M for expanding its activity into new markets and increasing their R&D efforts in the blockchain field and the digitization of assets. The Series F round of the company was led by China Minsheng Financial, which was joined by SBI Group, Korea Investment Partners, World-Wide Invest and a few undisclosed investors.

Graph 2.4:
Number and Sum of Mega Rounds in the Israeli Ecosystem (2016-2018)



M&As

Sixty eight israeli startups were acquired during 2018. Out of this 68, we have publishable information regarding 43 deals worth $3.1B. It's lower than last year's sum which was $4.7B, representing 63% of the deals. The average deal size of $72.3M this year is 35% lower than last year's $111.3M average and a 11% less than 2016's average deal size, which was $81.9M. In terms of deals count, we can see a 9% decline (7 deals) compared to 2017 and a 6% decline compared to 2016's deals count (4 deals).

Datorama by Salesforce for $800M
Salesforce, the CRM and cloud-based software giant, acquired Datorama, a marketing intelligence and analytics platform, for $800M. The company was founded by Ran Sarig, Katrin Ribant and Efi Cohen in 2012. Its headquarters are in NYC, but they have 16 offices around the world, including Tel Aviv. The deal will help Salesforce customers receive new insights by strengthening their marketing services with expanded data integration and intelligence.

EPD Solutions by Philips Healthcare for $293M
EPD Solutions is the developer of a cardiac navigation and mapping system called KODEX-EPD, which uses electromagnetic technology to create the patient's 3D-HD image of the cardiac structures in real time. The company was founded in 2014 by Shlomo Ben-Haim and was acquired this year by the Dutch tech giant Philips for $293M and another $247M contingent on achieving targets.

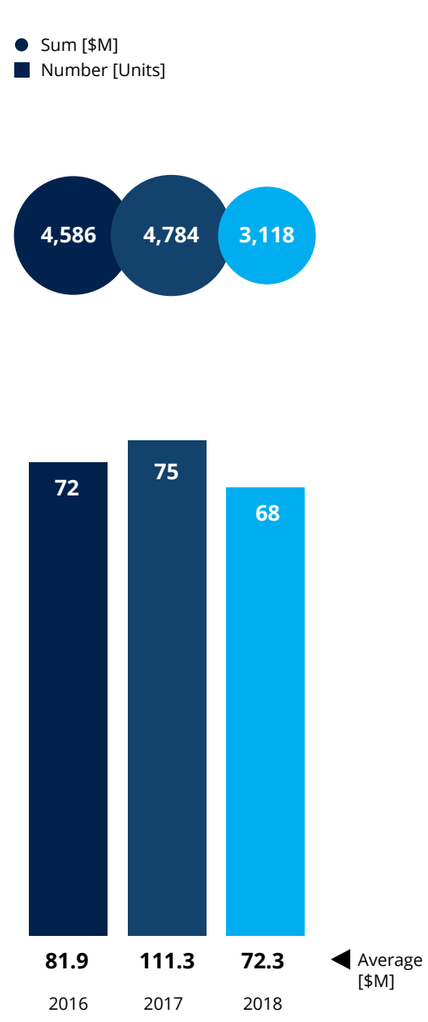
Sygnia by Temasek for $250M
The largest Israeli exit of 2018 in the cyber sector belongs to Sygnia, a consulting and incident response company founded in 2015 by Team8, the cybersecurity think-tank initiative, and Shachar Levy. It was acquired by the Singaporean holding company Temasek for $250M in October after raising only $4.3M from Team8. As of now, Sygnia should maintain its operational independence, with the chairman and CEO continuing to head the company.

Perfecto Mobile by Perforce for $200M
The DevOps cloud platform from Rosh Ha'Ayin, Perfecto Mobile, was acquired by Perforce Software for $200M. Perfecto has developed a tool called Continuous Quality Lab (CQL), which is an examination setting for mobile apps aiming to provide users with the truest test environment available.

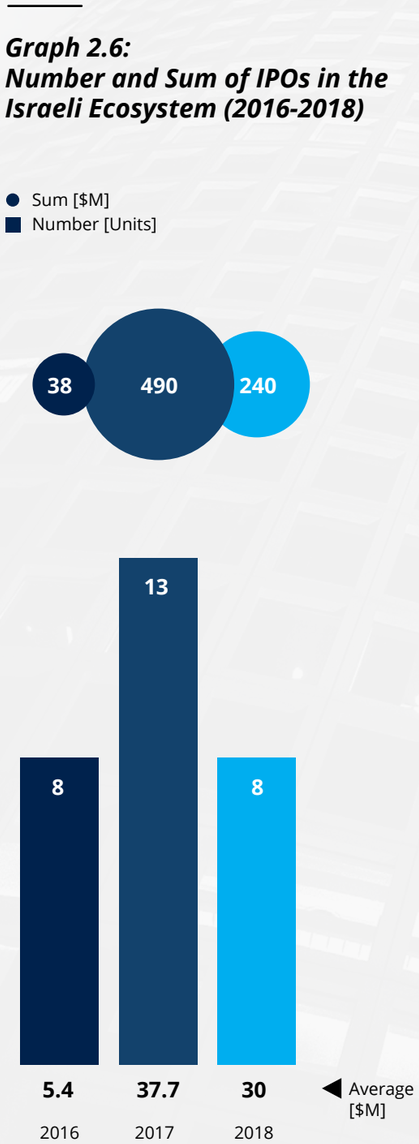
Dome9 Security by Check Point for $179M
The SaaS-based verifiable infrastructure security platform provider from Tel Aviv, Dome9, was bought for $179M by Check Point Software. According to Zohar Alon, Dome9's co-founder and CEO, "Combining forces allows us to offer the most comprehensive platform to protect customer cloud deployments as they grow and evolve."

10Bis.co.il by Takeaway.com for $153M
The most famous company on the list and the one that is being used by most of the industry, 10Bis, was acquired by Takeaway.com for $153M. Very much like the acquiree, the Dutch acquirer is an on-demand food delivery platform designed to provide food from restaurants to clients.

Graph 2.5:
Number and Sum of M&As in the Israeli Ecosystem (2016-2018)



Graph 2.6:
Number and Sum of IPOs in the Israeli Ecosystem (2016-2018)



IPOs

The three most impressive Israeli IPOs in 2018 were:

Gamida Cell - $50M
Twenty years after launching, the Israeli stem cell cancer therapy developer held an offering at a valuation of $300M and managed to raise $50M in its IPO.
The company went public on the New York Stock Exchange in October and raised $8 per share. Almost two months after the IPO, the share price is $10.

LogicBio - $70M
LogicBio went public in October and raised $70M on the New York Stock Exchange. The company, founded in 2014, develops genetic treatments for rare diseases. It sold 7M shares at the price of $10 a share. By the end of 2018, two months after the IPO, the share price rose to $15.

Sol-Gel - $75M
On Feb. 1, Sol-Gel sold 6.25M shares for $12 a share on NASDAQ under the ticker symbol of SLGL. This was the first and largest Israeli IPO of 2018. However, the stock lost 50% of its value throughout 2018. Sol-Gel focuses on identifying, developing and commercializing branded and generic topical drug products for the treatment of skin diseases.

The next IPO in terms of size, is by **Motus GI,** a MedTech company which focuses in endoscopy experiences and outcomes and raised $17.5M in the NASDAQ. Another company which went public in the NASDAQ is **Entera Bio**, also from the medtech field which enables the oral delivery of large molecule drugs and managed to raise $11.2M. 3 more IPOs came from **ParaZero** (raised $4.8M) and **Heramed** (raised $4.22M) who alongside **Shekel Brainweigh**, which raised $7.56M, decided to go down under and went public at the ASX.

New Funds

Battery Ventures
The 35-year-old technology oriented investment firm, raised an impressive sum of $1.25B for its 12th main fund and a side fund. The first and the main fund, Battery Ventures XII, closed at $800M. It will be used mainly for investments in early-stage companies. The second fund, Battery Ventures XII Side Fund, raised $450M and will fund private equity investments and growth stage companies. With these new funds, Battery will keep its strategy of investing in disruptive businesses, focusing mainly on sectors like software, IT infrastructure, chips and hardware for cloud computing and self-driving cars.

aMoon
Marius Nacht and Dr. Yair Schindel's venture capital firm, signed an agreement with Credit Suisse to raise $450M for investments in the medtech sector (Credit Suisse invested $250 million toward this goal). The VC launched in 2016 and since then, has invested in 16 early stage companies. The new funds will be used to establish the VC's second fund, aMoon II, which will focus on later stage biopharma, eHealth and medical device companies.

Playtika
The Israeli gaming giant and a global leader in social gaming, announced in January that they launched an investment arm, Playtika Growth Investments. The new fund raised $400M and intends to finance Israeli startups in digital entertainment and mobile- and internet-based consumption products that are profitable or near profitability, with steady products and structured business models.

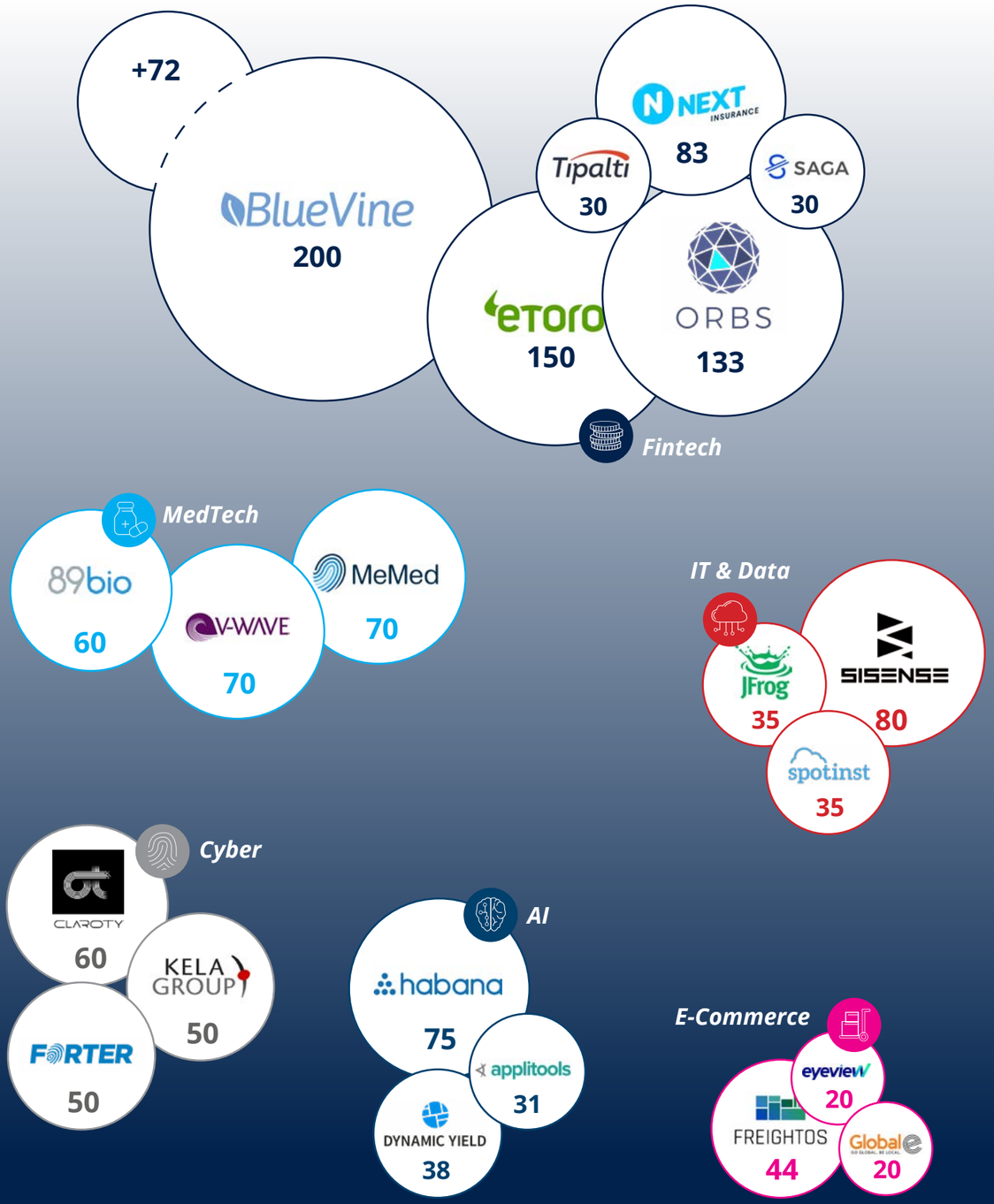
Israel Growth Partners
(IGP) founded its second fund, IGP II. Haim Shani and Moshe Lichtman's fund raised $230M from a range of private and institutional investors like Clal Insurance, Leumi and Discount investment arms, Amitim pension fund and the Teachers Association pension fund. It will use the financing to invest in growth stage startups with annual revenue over $10M and in management teams and entrepreneurs willing to build international companies.

Jerusalem Venture Partners
After investing in over 120 companies since it was founded in 1993, JVP raised $168M (which later was increased to $200M) for its eighth fund, JVP VIII. Investors like Alibaba, the Chinese commerce giant, and Bpifrance, the French government investment bank, are among more than two dozen investors in the fund. It will focus on fields like digital and mobile technologies, cyber security storage solutions and big data.

Among the list of VCs that raised over $100M this year, we can find **TLV Partners** and **Qumra Capital**, which raised $150M each. TLV Partners will use the funds to launch their second fund, TLV Partners II, which will invest in early stage companies. Qumra Capital will invest in growth-stage companies with its second fund, Qumra II. Another well-known VC on the list is **Glilot Capital Partners**, which opened it third fund, Glilot Capital III, and raised $110M for investments in early stage companies.

Additional new funds in the "Funds Mega Rounds Club" are State of Mind Ventures II by **State of Mind Ventures** (SOMV) and Cognitiv Ventures, founded by **OurCrowd**. Both funds raised $100M for investing in early stage companies in the fields of AI, IoT, cyber and hardware.

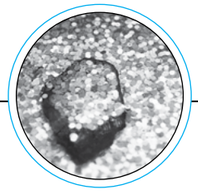
Graph 2.7:
The Biggest Funding Rounds by Sector of 2018 in the Israeli Ecosystem [$M]



Graph 2.8:
The Biggest Exits by Sector of 2018 in the Israeli Ecosystem [$M]

Leading Sectors

AI



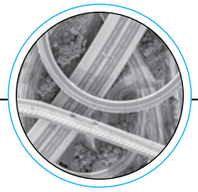
Fintech

Cyber

E-Commerce

MedTech

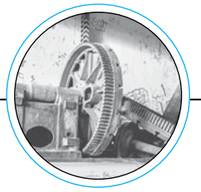
IT & Data



Transportation

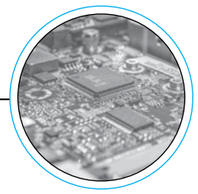
Mobile and Communications

Media

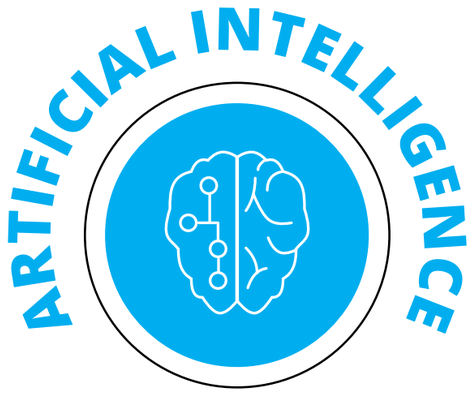


Industrial

CleanTech



Hardware



The buzzing sector kept attracting a lot of attention. The field drew more than 10% of the total round count, doubling last year's figures, and over $380M in financing. This represents 6.7% of the total money invested in the Israeli ecosystem this year, marking almost 30% more funds in the artificial intelligence field compared to 2017.

One of the most notable rounds in the sector belongs to **Habana**, the AI chip developer, which raised $75M in a Series B financing round in November. The round was led by Intel Capital. The startup claims it developed a processor three times faster than the one developed by the current market leader, Nvidia. The company had already started manufacturing and delivering their first processor, the Goya inference processor PCIE card. The processor has been tested since June and broke multiple records.

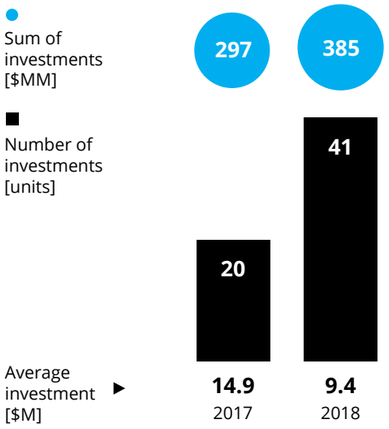
Another notable round belongs to **Dynamic Yield**. The AI-powered platform for marketers closed a $38M funding round led by Viola Growth, joined by Union Tech Ventures. The company, founded in 2011, will use the Series D funds to enhance innovation in their products and personalization of APIs, allowing their customers to personalize every touchpoint with their clients, regardless of the deal environment (digital or personalized).

Applitools raised $31M in a Series C funding round led by OpenView, with the participation of its four existing investors. The AI-powered visual validation testing company will use the funds for its market expansion plans by enhancing operations, R&D and sales. The company's product, used by more than 300 companies, crossed the 100M visual comparisons mark and the 1B mark in component validation.

Two M&A deals of AI companies occurred in 2018. The first exit belongs to **DeepUI**, a developer of a machine learning-based technology that aims to remove the need for an application programming interface (API) by understanding business software at the graphical user interface (GUI) level. The company, which launched in 2014 and managed to stay under the radar, was acquired by the Israeli startup WalkMe for an undisclosed amount.

The second M&A deal is **Sigmento** which developed AI product-listing solutions, like PIAAS (Product Information as a Service), that write product descriptions automatically. The 2015-founded company was acquired by the French company Akeneo for an undisclosed amount.

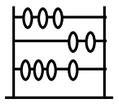
Number, Sum of Investments & Average Investment in AI Startups [2017 - 2018]



Leading Investors in the AI Sector

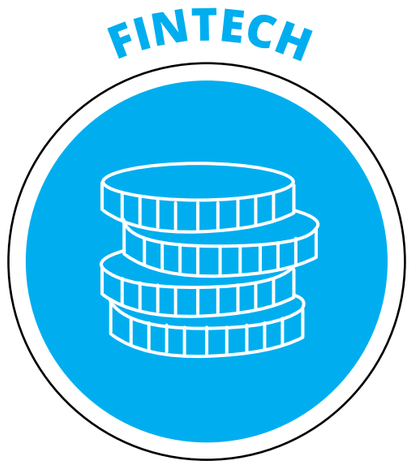
Sum of Investments

2017	2018
Goldman Sachs	Bessemer Venture Partners
Deutsche Telekom Capital Partners	Volkswagen Group
La Maison	Battery Ventures
Magma Venture Partners	Intel Capital
Samsung Ventures	OurCrowd

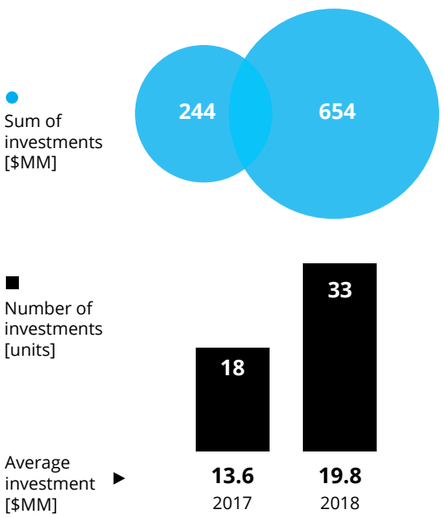


Number of Investments

2017	2018
Israel Innovation Authority	Nielsen Innovate
Vertex Ventures	Sequoia Capital
Viola Ventures	iAngels
Battery Ventures	Jerusalem Venture Partners (JVP)
Emerge	83North



Number, Sum of Investments & Average Investment in Fintech Startups [2017 - 2018]



The fintech sector had the second biggest change among all the sectors in terms of money raised compared to 2017, marking $654M in funds invested, a 168% increase from 2017. Regarding the number of deals, the round count of 2018 nearly doubled the one of 2017 with 33 deals in the fintech industry compared to 18 deals the previous year.

The most notable company in the sector for the second year in a row was **BlueVine**. In addition to the $200M mega round we wrote about earlier, the company managed to raise another $72M (total $272M raised in 2018) in a Series E round that was divided into two stages: Menlo Ventures led the first $60M stage accompanied by 83North, Lightspeed VP and Silicon Valley Bank. Microsoft's M12 and Nationwide Insurance led the second $12M stage.

Two more companies with mega rounds in the sector were **eToro**, which raised a total of $150M this year and **ORBS**, which raised $133.4M throughout 2018.

Another notable company in the field is **Saga**, which aims to invent a new kind of cryptocurrency to complement existing fiat currencies, working closely with economic institutions, raising $30M in a seed round.

Tipalti, which raised $30M in a Series C round, would like to assist its customers to reduce supplier payments, improve clients' payment experience and ensure that strong financial methods are being used. They offer a cloud-based platform that handles everything from regulations, taxes, payments for suppliers and more by a variety of methods and currencies.

In the sub-sector of InsurTech, **Next Insurance** raised an amount of $83M for its insurance solutions for small businesses. The company offers specially tailored and affordable coverage to the needs of each type of business. The Series B round was led by Redpoint from the US, which was accompanied by Israeli investors such as TLV Partners, SGVC and Zeev Ventures and US-based GFC, AEV and Ribbit Capital.

In the M&As section, the largest deal belongs to **Zooz**, which was acquired by the Dutch company **PayU** for $75M. Zooz designed a mobile platform that aims to maximize payment performance by enabling users to manage e-wallets and connect with institutions simultaneously. It also includes a built-in fraud management ingredient.

Other notable deals include **IvyMark**, which offers interior designers a cloud-based platform for business management and was acquired by **Houzz** for about $35M, and a $2M deal of the budgeting application, **Budgeta**, which was acquired by the British computing company **Sage**.

Leading Investors in the Fintech Sector

Sum of Investments

2017	2018
Sequoia Capital	Aleph
Pitango Venture Capital	Oppenheimer & Co., INC.
Goldman Sachs	Linse Capital
Magma Venture Partners	Lightspeed Venture Partners
Moshe Lichtman	Israel Cleantech Ventures (ICV)

Number of Investments

2017	2018
Magma Venture Partners	Aleph
Glilot Capital Partners	Vertex Ventures
OurCrowd	YL Ventures
Maniv Mobility	Lightspeed Venture Partners
Goldman Sachs	F2 Capital

CYBER

Last year was a good year for the leading sector both in terms of money invested and the number of rounds. 2017's 34 funding rounds in cyber almost doubled in 2018 to 62 deals, a 82.4% increase from last year. Investments in the cyber sector totaled $924M, representing 16% of all 2018 investments and 69% more than last year's sum in the sector.

The biggest funding round in the field belongs to **Claroty**. The Tel Aviv-based company developing a defense and control platform for industrial networks raised $60M in a Series B round led by Temasek, with participation from Schneider Electric, Envision Ventures, Siemens and other investors.

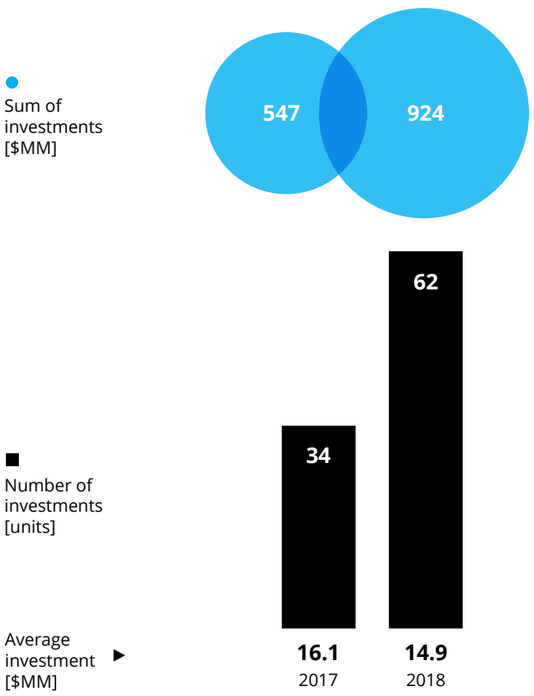
Additionally, there were two companies that raised an impressive sum of $50M each. The first one was **KELA Group**. Founded by veterans of the IDF Unit 8200 and with funds from Vector Capital, they provide cyber intelligence software and solutions to governmental agencies and enterprises from around the globe.

The second comany to raise $50M was **Forter**, a fraud prevention company that provides real-time protection to merchants throughout the customer lifecycle process. The company's Series D round was led by March Capital Partners, who were joined by Salesforce Ventures and previous investors.

The largest exit in the cyber sector, with $250M, belongs to **Sygnia**, which we detailed earlier in the report. The second largest deal is the $88M exit by **Solebit**, which was acquired by Mimecast Ltd., the UK data security company from the UK. Solebit operates in the field of threat identification and isolation in the data file environment, helping businesses find zero-day malware with links to external resources. The funding rounds of the company were led by ClearSky Security with participation from MassMutual Ventures and Glilot Capital Partners.

Another notable deal in the sector belongs to **Javelin Network**, which was acquired by **Symantec**, the American software giant, for $25M. The company, founded in 2014, helps enterprises prevent attacks on their active directory, a directory service developed by Microsoft for Windows domain networks. Due to the acquisition, Javelin will double its workforce in Israel. The investors in Javelin, which raised only $5M, are Hillsven Capital, RSL Capital, UpWest Labs and other private investors.

Number, Sum of Investments & Average Investment in Cyber Startups [2017 - 2018]



Leading Investors in the Cyber Sector

Sum of Investments

2017	2018
SoftBank	OurCrowd
Pitango Venture Capital	CRV
La Maison	BlueRun Ventures
Daimler	Samsung Catalyst Fund
CVC Capital Partners	Elron Electronic Industries

Number of Investments

2017	2018
OurCrowd	OurCrowd
Vertex Ventures	Vertex Ventures
Pitango Venture Capital	Elron Electronic Industries
SoftBank	F2 Capital
Vintage Investment Partners	TLV Partners

There were 37 e-commerce investment rounds in 2018, a 54% increase in the number of rounds. They garnered a sum of $791M, a 147% increase in the total raised compared to 2017.

The biggest round in the sector was also the biggest mega round of the year: the $400M round by **Compass**. The second biggest funding round was **Freightos**' Series C round. The shipping logistics company raised an impressive sum of more than $44M from the Singapore Exchange, which also led the round, and existing investors ICV, Aleph and GE Ventures. The company, founded in 2012 by Zvi Schreiber, developed a platform that enables importers and exporters to compare shipping costs worldwide. It is often described as the "SkyScanner" of the freight world.

Other notable rounds in the sector, which raised $20M each, belong to **Eyeview**, a video marketing technology startup that helps brands create personalized videos across any platform, and **Global-E**, which offers online retailers an end-to-end solution to localize their stores and transact with local customers.

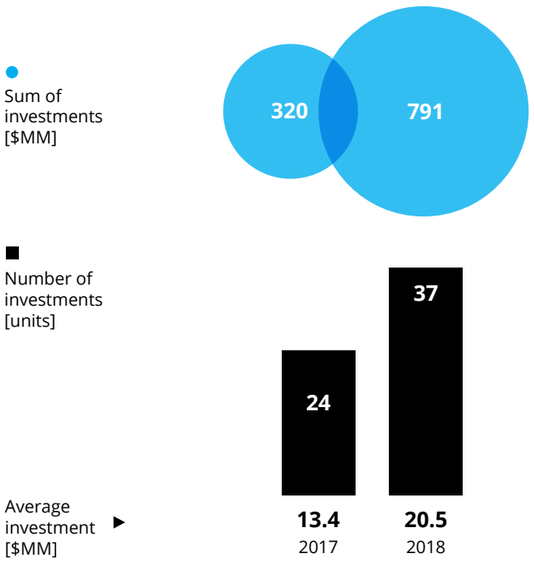
Eyeview's Series D round was led by Gemini Israel Ventures and also included existing investors Nauta Capital, Israel Secondary Fund (ISF), Innovation Endeavors and Qumra Capital. Global-E's Series D was led by Apax Partners LLP. Viola Credit, the debt arm of Viola Partners, provided an undisclosed amount of debt financing.

The biggest e-commerce M&A belongs to **10Bis.co.il**, with a $153M deal. A close second was **Tapingo**, a Tel Aviv-based startup which developed a mobile app offering food delivery and pickup services for the college market only. It was acquired by the food delivery company GrubHub for $150M.

Another impressive deal belongs to **Upstream Commerce**, which was acquired by India's largest e-commerce company, Flipkart, for approximately $50M. The company, established in 2010, has developed product analytics tools for retailers. The cloud-based services offer an automated pricing tool, product analytics and solutions for online retailers.

Two additional deals occurred this year for undisclosed amounts. **TravelTrixPro**, which offers competitive hotel prices before and after booking, was acquired by the US company Service Technologies. The Be'er Sheva-based bootstrapped company will retain its team and become the acquirer's R&D center in Israel. The second deal belongs to **Invertex**. The company developed a 3D scanning tool that allows users to customize product lines and match existing products to the customer's specific needs. It was acquired by Nike, which said it will keep the talented Tel Aviv-based team, with expectations of more groundbreaking innovations.

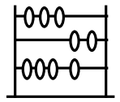
Number, Sum of Investments & Average Investment in E-Commerce Startups [2017 - 2018]



Leading Envestors in the E-Commerce Sector

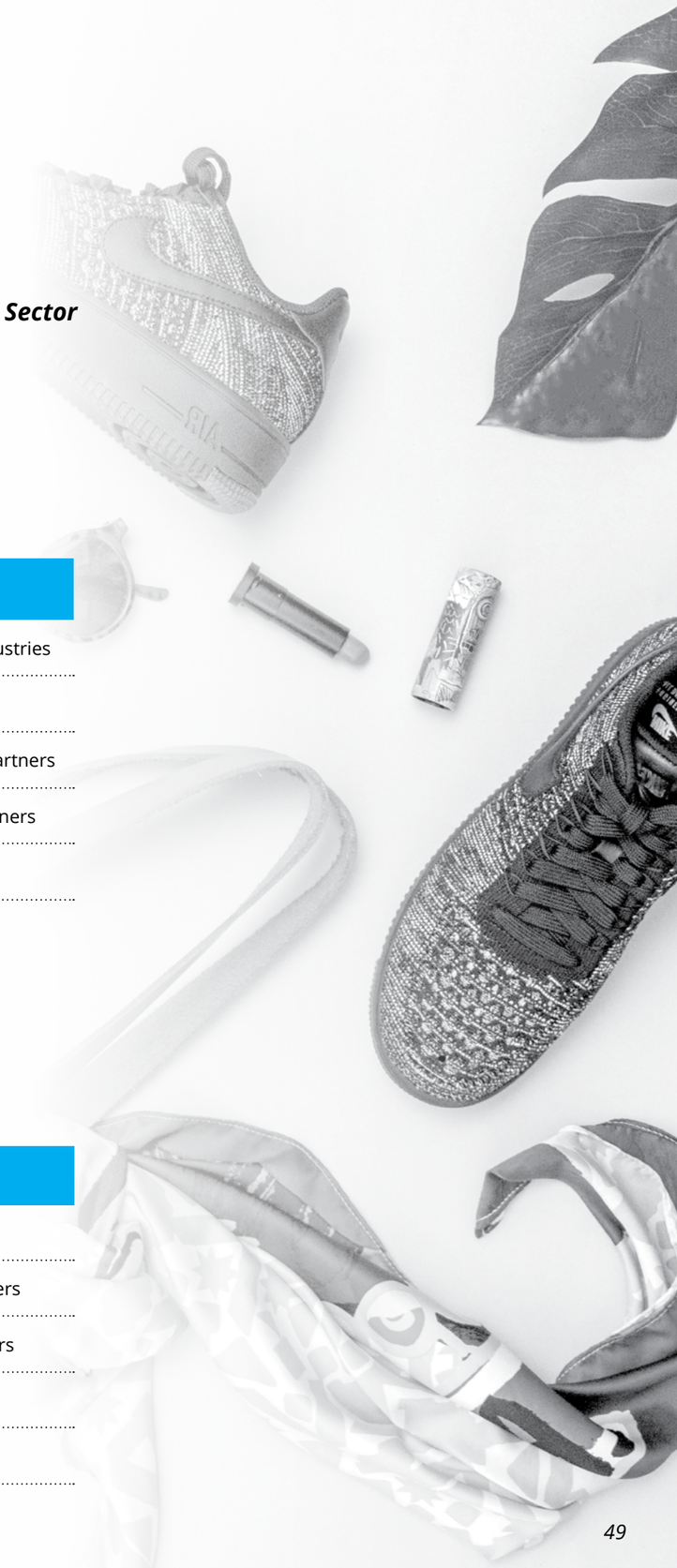
Sum of Investments

2017	2018
General Catalyst Partners	Elron Electronic Industries
L Catterton	Bridges Israel
Vertex Ventures	Mangrove Capital Partners
Insight Venture Partners	Insight Venture Partners
Zohar Zisapel	Aleph



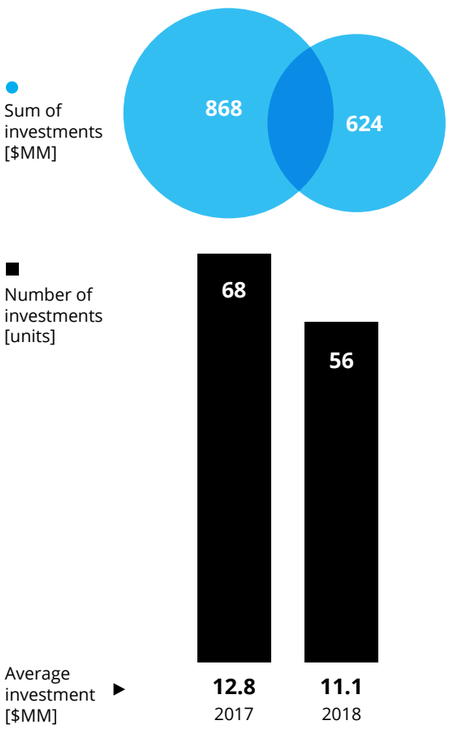
Number of Investments

2017	2018
Battery Ventures	AltaIR Capital
Vertex Ventures	PICO Venture Partners
Bessemer Venture Partners	Innovation Endeavors
Moshe Lichtman	Aleph
State of Mind Ventures	Daimler



MEDTECH

Number, Sum of Investments & Average Investment in MedTech Startups [2017 - 2018]



The only sector among the leading fields to record a decline still made it to 3rd place in the investments count, with 56 deals in 2018, 18% less than last year. A sum of $624M was invested in the sector, 28% less than the $868M in 2017.

The biggest funding rounds in the sector belong to two companies. The first one is **MeMed Diagnostics**. The company, which developed an automated tool for blood tests, raised $70M in a Series C round. The round was led by Ping An's Global Voyager Fund, with participation from Clal insurance, Caesarea Medical Holdings, Horizons Ventures, OurCrowd and others. The company will use the funds to promote its new immune system-based test for differentiating viral and bacterial infections.

V-Wave from Caesarea raised the same amount of money for a Series C round for a study of its shunt device for heart failure device trials. Deerfield Management led the round which included investors like Johnson & Johnson Innovation, Israel Secondary Fund, Quark Venture, BRM Capital, Pontifax and BioStar Ventures.

Another company in the sector that had a notable funding round this year is **89Bio**. The company, which focuses on metabolic and liver disorders and nonalcoholic steatohepatitis, raised an impressive sum of $60M for its first financing round. The round was led by OrbiMed and Longitude Capital from the US, who were joined by Pontifax and RA Capital.

While the MedTech sector may have had lower sums in funding rounds, the sector provided the 2nd biggest M&A deal of this year: the acquisition of **EPD Solutions** by **Philips Healthcare** for $293M. The sector also had the largest IPOs of the year: **Sol-Gel** ($75M), **LogicBio** ($70M) and **Gamida Cell** ($50M).

Another notable exit in the sector belongs to **Accurate Medical Therapeutics**, which specializes in the field of micro-catheters and was acquired by Guerbet from France for $23.7M and another $65M according to achieved milestones.

Leading Investors in the MedTech Sector

Sum of Investments

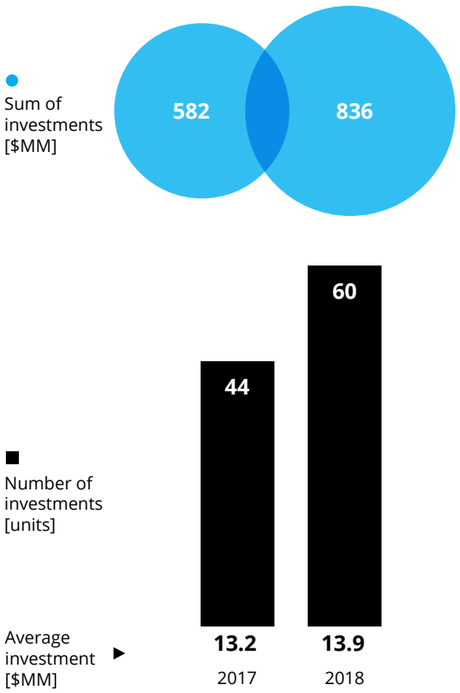
2017	2018
Sequoia Capital	Credit Suisse
ICONIQ Capital	Nationwide Insurance
GGV Capital	Korea Investment Partners
Koch Disruptive Technologies	China Minsheng Financial Holdings
GEOC	SBI Group

Number of Investments

2017	2018
Vertex Ventures	OurCrowd
FirstTime Venture Capital	Meron Capital
Peregrine Ventures	Lightspeed Venture Partners
Lightspeed Venture Partners	Mangrove Capital Partners
lool ventures	Vertex Ventures

IT & DATA

Number, Sum of Investments & Average Investment in IT & Data Startups [2017 - 2018]



IT & Data was the second largest sector in terms of investment rounds and sum of funds. It had 16 more deals than last year (a 36% increase) and raised $836M in total financing, 44% more than 2017's figures.

JFrog's $165M round was the sector's most notable round this year, mentioned earlier. Another company with an impressive round was **Sisense**, the business analytics company. The analytics software and full-stack business intelligence developer raised $80M in a Series E round led by Insight Venture Partners with participation from existing investors Battery Ventures, Bessemer Venture Partners, Genesis Partners and DFJ Growth.

Spotinst raised $35M in a Series B round. The company optimizes the transition to cloud-based platforms by analyzing, comparing and finding the best cloud-based resources, particularly for companies using servers such as Amazon Web Services. The round was led by Highland Capital with participation from existing investors Vertex Ventures, Leaders Fund and Intel Capital.

The second largest sector had 2018's biggest exit: **Datorama**'s acquisition by **Salesforce** for $800M. Another company in the field with an exit was **Corr.BI**. The company from Herzliya, founded in 2016, had only raised $160K from Techstars before its acquisition deal with Celtinel, another Israeli company. The details of the deal remain undisclosed.

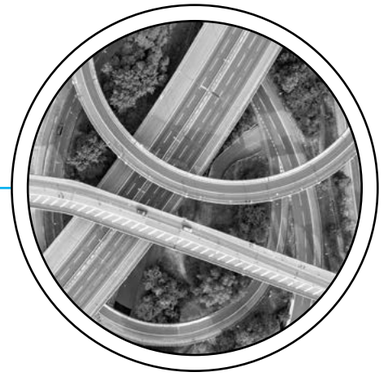
Leading Investors in the IT & Data Sector

Sum of Investments

2017	2018
Bessemer Venture Partners	Insight Venture Partners
UpWest Labs	Battery Ventures
Vertex Ventures	Scale Venture Partners
Blumberg Capital	Dell Technologies Capital
2B Angels	Vintage Investment Partners

Number of Investments

2017	2018
Bessemer Venture Partners	Vertex Ventures
Vertex Ventures	PICO Venture Partners
Emerge	Insight Venture Partners
Magma Venture Partners	Emerge
Dell Technologies Capital	Battery Ventures



Transportation

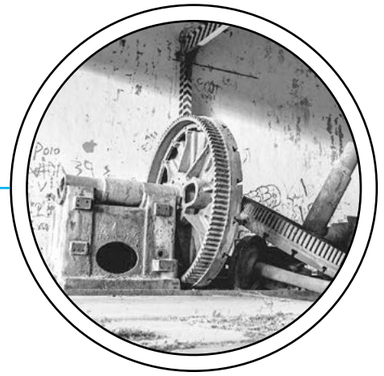
Only $287M was invested in one of global tech's buzziest sectors: This means 34% less than the sums invested in 2017 but deal-wise, 2018 had one more deal than the previous year, a 6% increase.

Mobile and Communications

Twenty-two funding rounds occurred in 2018, 12% less than the previous year. While companies raised a total of $333M, this still marks a 50% decline in comparison to 2017.

Media

With only 12 deals in 2018, this is the sector with the biggest decline in deal count: 37% in comparison to 2017. The drop also appears in the sum of investments. Only $87M was invested in the sector, 22% less than what was raised in 2017.

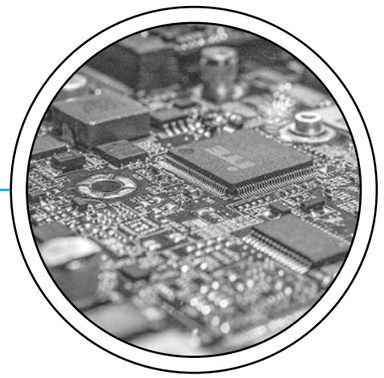


Industrial

There was only one round less in comparison to 2017. Since this sector did not raise a large number of rounds in 2017, this represents 17% fewer deals. However, the sum of investments was $47.35M in 2018, marking a 48% increase from 2017's total.

CleanTech

The CleanTech sector, where we gathered companies that handle AgroTech, FoodTech, energy solutions, etc, had 24 funding rounds. This was 41% more than last year's tally and they raised a total of $177M, 65% more than last year's sum.



Hardware

Only one funding round differed in 2018 from 2017, with 15 compared to 14 the previous year, resulting in a 7% difference in favor of 2018. However, the sum of money invested in the sector in 2018 was $496M, 221% more than the financing raised in 2017. This was thanks to Landa Digital Printing ($300M) and Valens Semiconductor ($63M).

Diversity

Diversity management in the high tech industry has become a widely discussed topic only recently, but it's an important one nonetheless. The majority of the biggest and the brightest companies already understood that it is in their best interests to include the topic at the highest ranks of decision making, and that it is way too important an issue to be left as a gimmick or as a PR-related matter.

However, the road is still long and tedious. For example, currently the global tech industry has an average of around 30% female employees, with some major companies below 20 percent. Even in companies which are close to gender parity, there is a clear divide between the core professions, where male representation is still prevalent, and the more peripheral jobs, where female employees show better numbers of representation.

Ethnically, when examining the data superficially, it seems that some minorities fare well in high tech. One such group is the Asian population in the US, which is significantly over-represented in the industry relative to their numbers in the general population (at times by hundreds of percents). This seeming overrepresentation is put at bay when examining the extremely high numbers of Asian Americans in the engineering faculties of higher education institutions. Moreover, this overrepresentation is not necessarily good news for society as a whole, as other minorities are severely underrepresented. All research shows that there is severe underrepresentation of African Americans and Latinos in US high tech.

The current dire need for skilled professionals in the ecosystem creates a unique opportunity to change the workforce composition and the strategic structure of companies. With the demand for employees being high, and with the need for innovation even higher, hiring from new pools of talent should be a no brainer for high tech HR departments. This is especially the case since the majority of research points toward a correlation between higher rates of success in high tech and increased diversity.

Obviously, studies about the added value of hiring diverse candidates get some clickbait-inducing headlines. Hiring only with diversity in mind will not get companies particularly far. There needs to be a professional benchmark that has to be placed, as in any other facet of HR.

Additionally, appointing a CDO (Chief Diversity Officer), as several companies have done lately, might not be enough. For example, Uber's hiring of Bo Young Lee as the first CDO did not significantly change the company diversity numbers, including at the highest ranks of the company. Moreover, the move could be seen partially as a PR stunt to counter the negative image of the company and increase competition with its archrival, Lyft, who hired Nilka Thomas, former director of global diversity, integrity and governance at Google as their VP of talent and inclusion. It's worth noting that both companies are preparing for highly anticipated IPOs in 2019, so image is quite important right now.

It's been more than five years since the first diversity reports in the high tech industry were released, thanks to a Freedom of Information Act request. Since this forced information handover, many global tech companies have willingly published this data, with colorful graphs and pretty annual reports. Significantly fewer companies have succeeded in implementing real change.

After studying reports and reading cutting edge research on diversity hiring practices in high tech, our team has found several common traits among successful companies. Here, we will attempt to classify the best strategic diversity models and provide various examples globally and from Israel specifically.

Successful Implementation of Diversity Programs

Awareness, Commitment and Modesty - The first common trait for successful programs is an initial awareness of the importance of diversity to the future of a company, beyond publicity gimmicks. Moreover, change takes time, and that's why commitment to change is very important. Lastly, listening and implementing change attentively might be the most important point here.

Transparency - To keep the organization on the cutting edge of diversity and enriching the ecosystem as a whole, it is important for an organization to be honest and open regarding its success and failure alike. Global leaders such as Google publish an annual diversity report about their gender and race breakdown, leadership, tech, general new hires and tech hires specifically.

Improvement - The climb is long, however it is important to see constant advancement. For many companies, the initial diversity numbers matter less than the change rates. One year of failure might be followed by several years of success, when the lessons are learned and implemented correctly.

Bias-reducing Infrastructure - All humans have biases. That's how we are wired. While biases can be helpful in reducing the computational power needed for human decision making, they can be harmful when unchecked. Creating a complementing infrastructure that can assist overcoming the harms of bias can be of great assistance when approaching such a complicated topic as diversity.

Recruitee to Employee - Companies tend to forget that while it is important to diversify while recruiting, long-term employee development and happiness create the real advantage for an organization. The long-term recruitee to employee transition, retention and promotion of individuals in the organization are the crucial parts, while the recruitment is the mere appetizer.

Leadership by example - It's important to have role models rather than figureheads. For example, Fortune 500 companies currently have an approximate 19:1 male to female CEO ratio. That's not proper leadership by example. More diversity in leadership ranks might be the most urgent change currently required, and some companies are up for the challange.

Effective Two-way Communication - It is important to have established communication lines in the organization, both top-down communication regarding diversity goals and strategy, and bottom-up communication in order to understand the reality and adjust accordingly.

Get the best practices - Everybody is learning. It's better to learn from the mistakes of others and adopt proven concepts that might work then make all the mistakes by yourself.

Finding your own path - Each company has to find a unique solution that will complement its culture and structure. For example, Slack does not have a formal "diversity" executive. Yet, it outperforms many other companies that do, with an almost equal percentage of male and female employees.

Driving D&I

There are several models for diversity incorporation in organizations. In most cases, there is a mixture composed of several pieces and tailored to the specific needs and culture of a company. These efforts are complementary and are usually divided into two main streams – efforts focused at the company level and those that benefit the ecosystem as a whole:

Company Level:

Recruitment Pools and Tools
Creating original recruitment pools from unusual environments and building technological solutions that complement the human recruitment process.

Early Detection
Creating a network of connections that allows for early detection and grooming of promising candidates.

Partnerships
Teaming up with organizations dedicated to diversity, or to one specific branch (gender, ethnicity, etc).

Formal Titleholders
A dedicated person(s) in the organization that gets their salary(ies) by improving diversity integration into the company fabric.

Benefit the Ecosystem:

Community Outreach
Building a long-term connection with local communities.

Utilizing Company Resources for Change
Using company facilities and/or manpower to assist and train others.

Educating for the Future
Teaming with schools, colleges, and universities and/or providing scholarships for students.

World

Google

The company is not only a revolutionary tech force. It is also considered one of the world leaders in the field of diversity. Google aims to extend diversity and increase transparency and overarching strategy with four focus points: equity, diversity, inclusion and integrity. Moreover, the company declares a focus on development, progression and retention, and an inclusive company culture.
To date, 84% of Google's people managers have taken unconscious bias training and the company introduced unconscious bias workshops into all new worker orientations. Since 2017, Google has made parental benefits gender-neutral. New parents, regardless of gender, receive up to 12 weeks fully paid leave (birth mothers receive an additional 10-12 weeks of pregnancy recovery time). In addition, all new parents benefit from a 2-week gradual return policy.

Google invests in teaching under-represented groups to code via projects like Made With Code. Google puts a conscious effort into implementing pay equity and focuses on early pipeline talent. This year, their internship program welcomes their largest ever cohort from underrepresented backgrounds, with 49% of Google's global interns identifying as Black, Latinx and/or women. They did this by further developing relationships with Historically Black Colleges and Universities (HBCUs) in the US and extending programs to the Latinx community.

The company also supports talent from under-represented communities. They offer computer science courses for graduating high school seniors through Google's Computer Science Summer Institute. The Google in Residence program sends company employees to college campuses across the U.S. to teach students computer science courses. In 2018, Google expanded the GiR program to include Hispanic Serving Institutions (HSIs) and 1,500 students from HBCUs participated in the Google in Residence campus programs. They also initiated Grow with Google, a program offering free skill building courses to individuals and companies.

Google encourages Employee Resource Groups (ERGs) concentrated on diversity, such as Disability Alliance, Gayglers, Greyglers (for older workers), VetNet and others. Additionally, Google has spent over $1B over the last four years on the Supplier Diversity Program, which purchases from minority-, women-, veteran-, disabled- and LGBTQ-owned businesses.

Apple

Apple's diversity strategy seems to be at full speed. Fifty percent of new hires in the previous year came from underrepresented groups. Another positive figure shows an increase of 5% over the last four years in the representation of women in the under-30 group of employees, from 31% to 36 percent. Additionally, the company showed real dedication to close the pay gap between different groups in the same positions.

Apple dedicates a great effort to empower students and educators by partnering with initiatives such as the National Center for Women & Information Tech, which helps to increase participation of women in tech fields. Another initiative the company participates in is ConnectED, which brings technology to underserved schools. The initiative is spread out over 114 schools across the US and the investment in it is estimated at $100M. The company also nurtures close ties and partnerships with Historically Black Colleges & Universities (HBCU) and the Thurgood Marshall College Fund (TMCF), which initiated The Apple and TMCF HBCU Initiative, which aims to attract talent, inspire ideas and promote inclusiveness and diversity. Apple is also putting a lot of attention into the transition of veterans from 'the force' to the workforce.

Facebook

Since starting the implementation of its diversity program in 2014, the percentage of women in Facebook's offices globally has increased by 5% to 36 percent. Five years later, Facebook employs 5 times more women. The number of women in tech positions increased seven-fold over the last five years and they hold 22% of the workforce in comparison to 15% four years ago. But the biggest leap is in the business and sales positions, where women hold 57% of the positions, 10 percent more than in 2014.

During this time, the number of underrepresented racial minorities also rose by three percentage points: from 2% to 5 percent. But the company admits it is still having a hard time finding employees from these groups for leadership and tech roles. On a more positive note, for the 2nd consecutive year, underrepresented minorities make up more than 50% of the company's workforce.

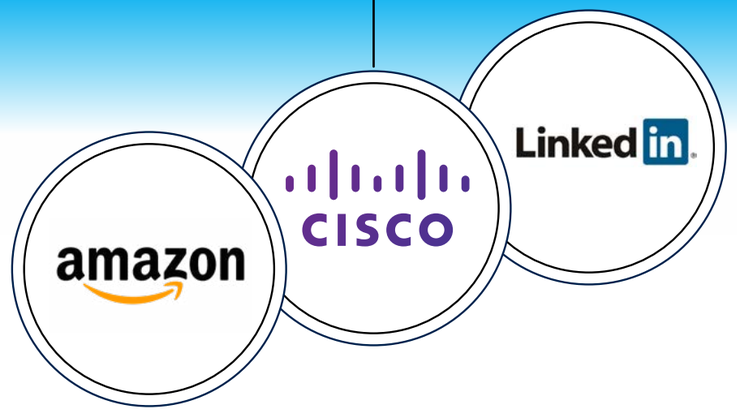
The company cooperates with diversity-oriented programs, such as Crush Your Coding Interview, which has established relationships with organizations that support people of color and women, like Anita Borg/ Grace Hopper, SHPE and NSBE. Additionally, Facebook works with diverse university students. For example, the Facebook University Training Program and Engineer in Residence at Historically Black and Hispanic colleges and universities and a partnership with CodePath.org reaches 2,000 more computer science students at over 20 universities. These include community colleges and universities that have traditionally attracted students of color.

Microsoft

Over the past year, Microsoft's workforce went from 25.5% to 26.6% female. However, this still represents a decline compared to the first time Microsoft shared its diversity data four years ago, when women made 27.5% of the workforce. On the other hand, Microsoft managed to improve the representation of Latinx and Black employees by 33% over the same period of time and now they make up 6% of the workforce, 1.9 percentage points more than four years ago.

Microsoft takes part in many programs that promote D&I like DigiGirlz and Black Girl Code, which helps to expose the future generation to the technology world, careers in it and workshops in the field.

Besides participating in programs, Microsoft leads the Tech Education and Literacy in Schools (TEALS) project, which aims to help schools build and sustain computer science programs. More than 53,000 pupils took part in it over the last ten years. Thirty percent of the participants were females and another 30% were part of a racial or ethnic minority. On top of that, the female participation rate grew over 400% in the past five years.
The company also offers military members, veterans (Microsoft Software & Systems Academy) and spouses (Military Spouse Training Academy) a variety of programs to ease the transition to the workforce.



Amazon

As of 2017, Amazon's workforce consisted of 60% male and 40% female employees, and 58% minorities. However, in regards to management-level positions, the data is a bit different: Only 26% of higher level jobs are held by women and white people fill 63% of these positions.

But a review of Amazon's compensation, consisting of stock and base salary, shows impressive amounts of equity. Women earn 101.5 cents for every 100 cents men make and minorities make 100.5 cents for every 100 cents white employees earn.

To keep on developing a better understanding of D&I in the organization, Amazon promotes its Affinity Groups. The company's employees create these internal communities for knowledge sharing, advice and discussion. The Affinity Groups and the Diversity Team hosted the Conversations on Race and Ethnicity (CORE) Conference with academics and activists to understand how they can build a more inclusive workplace. The success of the event led to Amazon's decision to make it an annual event. Another successful internal conference is the AmazeCon, which focuses on the importance and benefits of gender diversity. The conference has been held since 2015.

Amazon also takes part in initiatives like STEM (Science, Technology, Engineering and Mathematics) programs for diverse communities, including the "A to Z Experience," a summer camp aiming to inspire 9-14-year-olds to pursue careers in technology. They also have Amazon's Military Talent for veterans and their spouses and Amazon Future Engineer (AFE), which are internships at Amazon that encourage people to pursue STEM degrees.

Amazon also offers what it calls egalitarian benefits, which are tailored to various employee needs, from hourly to full-time workers. Glamazon, the LGBTQ+ Affinity Group, was influential in preparing materials for the egalitarian benefit initiative.

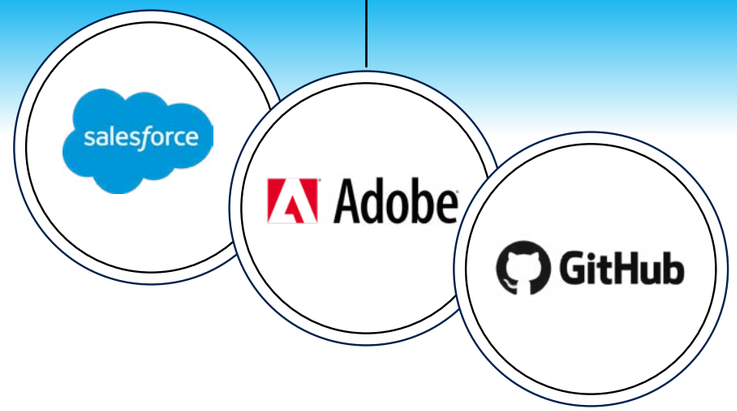
Cisco

The company used its partnership with diversity promoting organizations such as ELC, HITEC and Out and Equal, to initiate programs such as Anita Borg Grace Hopper conferences and Simmons Leadership conferences. To date, almost 2,500 employees took part in those initiatives. Those partnerships and programs allow the company to recognize talent and provide them with the capabilities, mentoring and sponsorship to progress in their careers. Cisco also promotes a supplier diversity policy to promote partnerships and inclusiveness with underrepresented groups such as women, minorities, veterans and the disabled as individuals and as business owners.

LinkedIn

Linkedin is another company that seems to succeed at diversity. Unlike companies that chose partnerships with diversity-oriented organizations as their strategy, LinkedIn decided on a different approach. They utilized a software called Talent Insights to increase the diversity in its candidate pool. The purpose of the company was to help others during the initial stage of the employee cycle, to locate diverse candidates during the primary stages of their hiring processes. Internally, Linkedin offers three programs that target HR professionals, managers and CEOs as potential agents promoting diversity ('Confronting Bias', 'Managing Diversity', and 'Inclusive Leadership'). The programs train professionals to be culturally competent, create models and generate plans to address diversity.

Additionally, LinkedIn uses resources to reach underrepresented communities, creating programs for members of these groups to temporarily work for the company. LinkedIn Accelerate U has re-innovated the hiring process by hosting events where professionals can examine resumes and host informational interviews. In addition, LinkedIn events shifted from being pitch-oriented toward skill development.



Salesforce

Salesforce is one of the best performing companies regarding diversity. Last year, the overall number of women among the company employees had increased by 28.3% and the overall number of minorities increased by 24.8 percent. The strategy of choice for the company is community building. Salesforce resource centers called Ohana groups (named after the Hawaiian concept of family) offer mentorship and professional development opportunities to employees.

In addition, Salesforce invests in the future, providing financing to secondary schools. The company announced a $12.2 million grant to the San Francisco Unified School District and the Oakland Unified School District. As a result, the enrollment of girls in computer science courses has increased by 2,000% and the enrollment of underrepresented groups in these courses has increased by 6,000 percent. Moreover, Salesforce uses its employees to empower communities by contributing tens of thousands of hours for volunteer work at schools located near its offices.

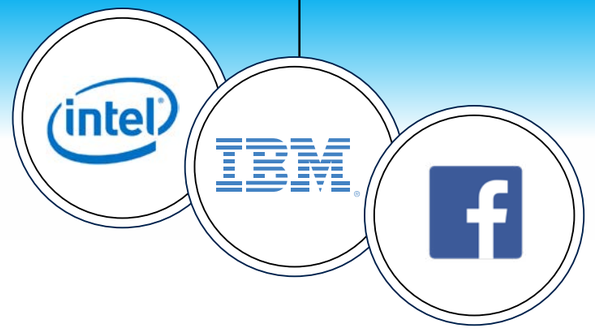
Adobe

Adobe has been one of the most successful tech companies at implementing gender diversity-oriented programs. The Adobe model, #AdobeForAll, includes a notable increase in collaborations with other, diversity-oriented organizations such as Girls Who Code and Technovation. Investment in these partnerships grew by 7,000% in the last 6 years, from $50,000 in 2012 to $3.5 million in 2018. This investment in reducing the gender parity in tech is seen from the gender distribution of hires. As of last year, 40% of Adobe hires were women. In addition, Adobe implements an out-of-the box strategy for finding talent. For example, Adobe sponsors and recruits at events such as the Grace Hopper Celebration of Women in Computing.

GitHub

GitHub works with experts who specialize in mentoring people from a variety of backgrounds to succeed in tech. On top of that, it opened its HQ and provided sponsorship to organizations that specialize in supporting underrepresented minorities in tech. Among those organizations is TechTonica, which trains low-income women of color in technical skills and introduces them to employers, and /Dev/Color, which connects black software engineers for support and mentoring. Also, GitHub's sharing promotion rates for the first time and they indicate that promotion rates among women is three percentage points higher than men's (20% women to 17% men). However, promotion rates among white people are 5 percentage points higher than POC's rates (20% white to 15% POC).

Israel



Israeli Companies

Intel Israel

For the last three years, Intel Israel has put forward a strategic diversity and inclusion plan focused on the main stages of workforce recruitment, retainment and development. The first two groups the company chose to target were women and workers with disabilities, afterwards expanding to the Israeli Arab population and the LGBT community. The company also plans to increase the representation of Ultra Orthodox and Ethiopian communities. The company program includes seminars, manager-level meetings, company participation in celebrating diversity (pride week and Ramadan), stipends and scholarships, educational programs, diversity-oriented recruitment, career development and more. In the last two years, 33% of all new workers at Intel were female, 90% of which were in tech positions.

Facebook Israel

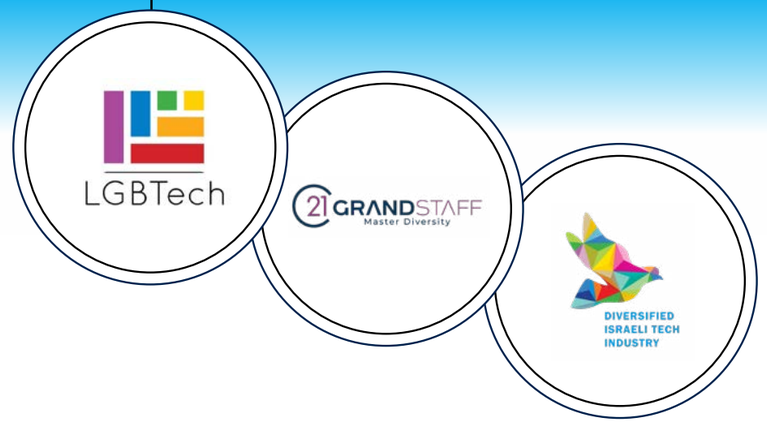
The Israeli branch of the company partners with various organizations to increase the number of women, Arabs, orthodox Jews, LGBTQ and others among its workforce. Additionally, the branch is engaged internally, creating teams that bring diversity awareness to its employees. The teams support dozens of NGOs that promote technological education for youth in the periphery and tech communities such as Aliceode, Kamatech, Ultra-Orthodox Women in Tech, Lesbians Who Code, and Unistream.

IBM Israel

Since its establishment, IBM has incorporated diversity and inclusion into its culture. IBM thinks about diversity the way high tech regards innovation — both are essential to the success of our business. When we innovate, technology becomes smarter for clients and creates new opportunities for growth. When we incorporate diversity into our business, we create better products and outcomes. IBM has embraced diversity, giving opportunities for IBMers and our clients to achieve their full potential.

At IBM Israel, they promote D&I in many ways. There are workshops designed for minorities around different topics that can help them be a major part of the workplace, including writing CVs, how to conduct an interview and digital credentials. There is a strong partnership with relevant organizations such as Kama-tech, Kav Mashveh, Tech-career and Movilot.

They also support mentorship and and long-term partnerships with youth groups. In particular, they focus on girls by partnering with programs like Breaking the Glass Ceiling and the MEHAMEMET Project to influence more young women to learn about technology in high school. IBM was the first organization to sign the LGBTech standard, which supports LGBT+ employees in the workforce. In Israel, there is a long-term partnership with Ma'avarim.



Israeli Diversity Initiatives

LGBTech

LGBTech teamed with the Israel Diversity Standard to assist willing companies to improve their LGBT+ diversity. Companies join the IDS by signing on to its statement of principles, where they commit to several of the initiative's standards. The organization works with the companies to develop annual plans based on topics of the companies' choosing. The organization cooperates with others, such as HRC and Stonewall, creating up to 40 different points (such as parenthood, language, corporate culture, etc.) that a company can choose from to promote diversity within its ranks. Additionally, the organization provides training and facilitates courses for HR, management and the general workforce.

Grand Staff

Grand Staff is an Israeli consulting company specializing in successful diversity management implementation within organizations. Diversity management is a new concept of diversity assimilation and inclusion processes for startups. The concept is based on an understanding that the real need of startups is not in diversity in itself, but rather the development of capabilities and the acquisition of tools for recruitment, integration, and maintaining of quality manpower that will bring about a variety of capabilities and perspectives that will advance the organization's innovation, performance and growth. Organizations and managers that maintain a toolbox enabling optimal management will succeed in diversifying the mix of employees according to their needs. According to this approach, diversity is a response to the business need with social benefit and therefore justifies the investment of time, money and resources.

The company has developed its "Model 21", which consists of three levels:

A. Organizational and Strategic - a conceptual and systemic infrastructure that defines diversity as an organizational core value and essential component of company strategy.

B. Work process - management of the interface between the characteristics and needs of the diverse groups and their varying identities and interests.

C. Interpersonal relations - communicating management skills to employees from various backgrounds and diversified teams while maintaining strict organizational goals, managing the needs of managers and employees.

The model is based on an organizational application of advanced psychological approaches, combined with research in the field of neuroscience, which enables the construction of individually tailored organizational programs and tools of proven efficiency at the empirical and applied levels.

The Power in Diversity initiative

The Power in Diversity initiative collaborated with the Applied Center for Psychology of Social Change to foster a diversity and inclusion culture into startup companies as a basis for organizational effectiveness. The initiative is offering integrative, tailor-made programs, training sessions, practical tools, and consultation to interested companies.

The initiative has developed a four-component model for the "Inclusive Startup".

Belonging - the feeling that one fits in, belongs to, or is a member of the team and organization.

Voice - the perception that all employees can bring their unique opinions, perceptions and ideas to work, while feeling respected and valued.

Tolerance - employees increase their desire to get to know and work with people from different identity groups, become aware of their biases and stereotypes and are motivated to address them.

Fairness - a principle achieved by fair processes and practices to get more equitable results in representation of employees from underrepresented groups across the organizational ladder. Accordingly, employees will perceive the organization as providing them a fair chance to develop and grow.

Predictions

As the modern American philosopher, Yogi Berra, once said, it's tough to make predictions, especially about the future. We are close to the end of this report and it's time for the traditional, "Let's make a futile attempt at predicting the future, so someone will be able to make fun of us a year from now." Usually, this section is structured as a disconnected list, or as a loosely-linked mosaic of various blurs. Here, we will attempt to create a multidimensional tessellation that will correspond better with the complexity of reality. This tapestry of trends woven into a possible future scenario can serve as a better representation of the reinforcement effects created by several phenomena developing in the same direction. The following chapter will include general trends that we believe will continue beyond the first decade of the 21st century, intensifying current developments, outbranching and interconnecting from one to the others.

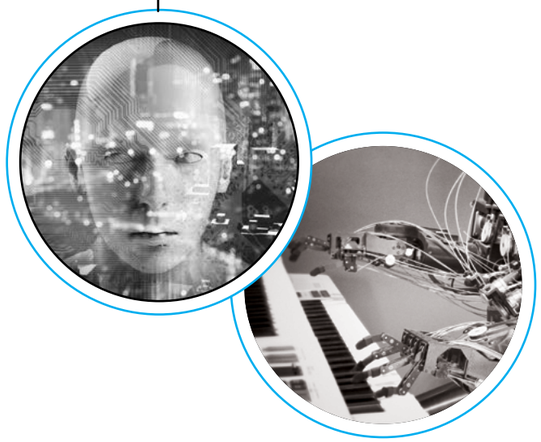
AI, Been Trying to Meet You!

AI , the technology behind the all-encompassing buzzword, will continue its invasion into every bastion of tech, out of the professionals' hands and into new levels of every company and organization, and eventually the hands of every smartphone holder. During 2018 we witnessed an inflation in the use of this term, including unnecessary applications, misguided hype and embarrassing confusion between terms related to the field. While the real use of the technology is reserved to an extremely narrow type of professionals in specific fields, the buzzword is so prominent that it has extended far beyond its current realm.

This reality is about to change dramatically. All the pieces are positioned on the board and AI is ripe to break free from the dark, windowless hallways (figuratively speaking) of professional departments and roam the mainstream streets of everyday reality. AI will become wider, deeper, better and additional superlatives, chomping away on complication, leaving complexity for future stages of development.

As it invades pioneering frontiers, makes its way higher up company hierarchies, lower to everyday users and claims unfamiliar areas, AI will face unprecedented and previously unknown challenges. One of those will be the need for accessibility. The new audiences who will start using AI-based solutions will require a novel type of platform that will be much more user friendly and front-end heavier than ever before. This simplification of the tech will be true for both narrow and wide AI applications, the uses of both potentially growing at exponential rates. AI will intrude the everyday surroundings of the general public, making friends with most of the populations in the developed world.

In this context, it is important to mention that as newfangled types of users begin adopting the technology, there will be an acute need for communicating the limitations attached to the field despite the wide new horizons opened by AI. This statement will be true for individual users and corporate applications. However, the most important understanding of AI limitations will be required for the governmental users of the novel and largely unfamiliar, but extremely seductive toys. Governments around the world, which have already pledged sums amounting to many billions of US dollars for AI-related research, expect practical tools that will revolutionize their problem-solving abilities. Such power in the hands of governmental agencies, combined with organizational diseases as false certainty or blame shifting which the technology might allow for, may prove cancerous to whole populations, vulnerable minorities in particular. The understanding of AI limitations will require the professionals to champion such rare traits as honesty and humility.



Face the Consequences

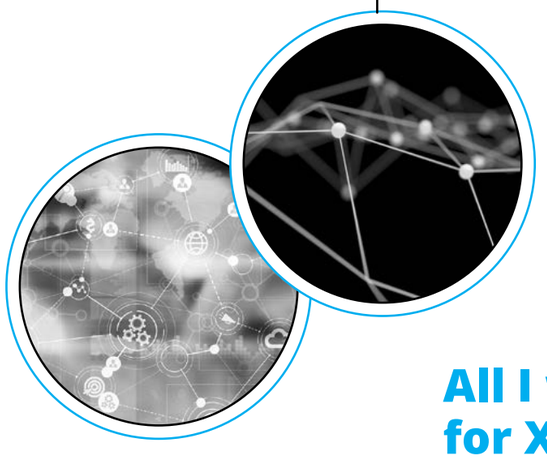
One such high-level, government-led project is the Cambrian explosion of **facial recognition** applications. This specific use of computer vision and machine learning is apparently becoming the new go-to solution for many governments around the world. The biggest and strongest countries are already deeply involved and heavily invested in such projects and are now at the beginning of the wide testing phase. Western countries and other leading forces seem to be keen on the promised solutions provided by this technology.

However, the leading country vested in the technology (as in AI in general) is undoubtedly the People's Republic of China. The central government seems to be ecstatic regarding the potential benefits of facial recognition. The governmental effort, which began approximately three years ago, currently has a reported 0.8% error rate of recognition, if one trusts the PRC press. Various local governments in the country are already running tests on technology related to the trend. The three Chinese tech giants, Baidu, Alibaba, and Tencent, are striving towards world leadership (not to say world domination) in the field with major acquisitions, top recruitments and vast research efforts in 2018 alone. Mass adoption of governmental face recognition platforms in China may likely happen in 2019.

Welcome to the Machine (Learning)

The basis for face recognition technology and many others, **machine learning algorithms,** utilize big data to self-train. They are currently much better at learning by dividing the population into 1 and 0 samples. This division, when unchecked, is merely training the algorithms to accurately copy the biases imprinted by human error into the population on which the machine trains on. This is especially true for non-democratic states, such as China, which seemingly have a much higher tolerance for type I (false positive) mistakes.

The next step for the algorithms will be an effective division into true and false, to prevent biased training and learn to identify false positives and false negatives. This step will allow for a multidimensional division of the data based on true/false and positive/negative axes. This division will enable getting beyond the biggest current obstacle of the field: machine training of human bias repetition by identifying the pattern of human biases that lead to type I and type II mistakes hiding in the population. A success in the automation of identifying both types will allow for not only a replacement of human decision making, but also a tangible improvement of the flawed human process.



IoT is in De House

The wide intrusion of connected technology is also upon us. The wide adoption of AI and ML will be paired with **IoT**vity. The IoT, or the "smart everything" of the human surrounding, is merely the infrastructure for the wide acceptance of AI. The ability of all things technological to communicate between themselves, to send and receive information, is the petri dish for AI to grow on. With the wide adoption of sensors and improved communication, 2019 should become the year of the wide adoption of the internet of things.

Additionally, the optimistic scenario of the field depends on transitivity to gain the true exponential advantages provided by network effects. To achieve that, **5G** comes to the rescue. In the very near future, true 5G networks (unlike the 4.5G currently in the works in several locations) will begin to emerge: Some of these will be in urban hubs, triggering the famous city network interdependency into a fast adoption of 5G across a global city hub network. Much like a chain, which is measured by its weakest link, a network is dependent on every node in order to gain optimal performance. Hubs that will not update their communication infrastructure in due time will lose a significant amount of traffic, eventually facing notable pressure to modernize their infrastructure. According to the Israeli ministry of communication, the Israeli 5G network should start its first steps during 2020.

All I want for XaaS is

In conjunction with the exponential growth of connectivity and bandwidth, the traditional network infrastructure will need to change its architecture and move to an **edge computing** that will reduce the distance between the data sources and the data processing nodes, allowing to save resources and time while significantly lowering the burden on the network. Edge computing will also allow for a cloud-based future. Since the distance between the source and the processing units will become shorter, it will allow for much cheaper, lighter and less demanding hardware to remain in the hands of the end users, moving much of the current end functions further away, dawning the age of **XaaS** (everything as service).

One such service might be the widespread adoption of **AIaaS**. The aforementioned developments, combined with the high cost of computing power needed for AI, could lead to a completely different AI business model and drive to a future of app-based AI, utilizing the growing capabilities into a world of cloud-based AIaaS for the majority of users who do not have access to the vast computational power required for AI, temporarily renting the power for specific uses. Moreover, this development might be the future of the currently stagnating cellular market; a solution for the innovation slump in the smartphone market. Transforming smartphones into the main drivers of the changes mentioned in this chapter does not only make theoretical sense, but also currently presents itself as the path of least resistance: It would be the cheapest, most comfortable and friendliest way to bring the evolution to the general public.

Heal the World

The advantages of AIaaS are vast and can change whole industries. One of these industries will be **eHealth** (both physical and mental). As the gap between the longevity and the quality of life continues to widen around the developed world, health systems essentially suffer from their success in saving lives. More people need healthcare for prolonged periods of time, adding unbearable burden on the resources available to the health system. The new technology will grow in several directions audience-wise. Novel tools will undoubtedly be developed for the use of professionals, however the real change will come from tools which will be developed for the use of the general population, and tools which will connect the individual points into a network, allowing for possibilities that have never been available before.

While current core health-related technology is difficult to create due to long and complicated bureaucracy, such as FDA regulation in the US, the peripheral needs of health tech constitute a more accessible field to enter. Even without including the cutting edge fields in which technology surpasses current human capability, technological advancements in subfields such as prediction, early detection, monitoring and home care could enable health systems to save tremendous resources and divert these savings to their core needs. The manpower, hospital beds, laboratory hours etc. that will be freed by technology will allow for better, more efficient systems in advanced countries and can potentially drastically improve the health care in developing states, depending on price and technology accessibility. The suppliers and customers of health and medicine will undoubtedly appreciate (and monetize) such tech. Furthermore, these improvements to health infrastructure will influence strategic planning at the highest levels, for example making some WTO measures such as hospital beds per population less relevant.

Well, well, well

Another segment these technological developments will impact is the **wellbeing** sector, especially for the aging population in developed countries. While high tech marketed toward senior citizens is currently a tiny fraction of VC-backed projects (less than 1% of total high tech VC backing in 2018 globally), this will likely change. Technology can assist in mitigating age-related regressions (both physical and mental), help with daily monitoring, provide companionship and much more. Moreover, while the majority of current tech for the elderly is designed for the use of a caregiver and/or auxiliary professionals, in the near future we will witness a shift to solutions targeting the elderly themselves, a population becoming more tech savvy by the day, with decades to live after their retirement.

We Like to Move It

Another field that will benefit from the advancements mentioned above will be transportation and mobility, specifically infrastructure, delivery and mobility. All three are ripe for the introduction of the required components, and they have significant funds available, waiting for the right solution. Between the three, we believe that infrastructure will still be the one most directed at professionals (mostly state and local governments). Delivery will meet the general public mainly at the last stages of the journey. However, coupled with the rise of e-commerce, the volumes of single packaged goods should continue rising. Mobility will undoubtedly be the most consumer friendly, with the main issue being inter-platform compatibility, or the ability of several platforms to interface seamlessly.

Data Makes the World Go Round

One larger issue to consider is that the trends we have discussed will exponentially increase the amount of generated **data**. There will not only be an enormous growth in the amount and quality of data, but there will also be entirely new pastures of raw statistics, ripe for processing. Obviously, with big data comes big responsibility. The massive breaches in 2018 prove that current security solutions are not even fitting to the present amount of online data. With the expected exponential growth in data, there will be an acute need for novel **data security** solutions.

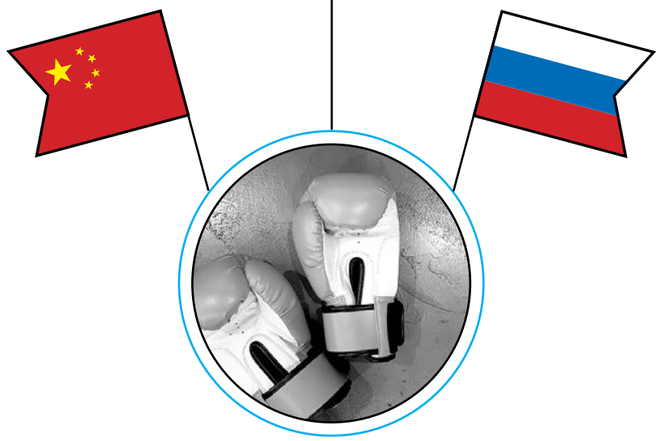
Moreover, this influx of data will change not only the storage, traffic and architecture of communication, but will also enable completely novel opportunities, including new forms of monetization. The current trend of precision-guided advertising – which essentially is an attempt to leverage a narrowed down client categorization to use any psychological trick to close the gap between a product and the needs of the potential consumer – might become obsolete. The new wave of data generated by the combination of trends we have described might bring forward an age of product **micro customization**, catering to the most nuanced market needs ever. Instead of wasting resources in an attempt to convince the customers, for the first time, the companies could create products that will be adjusted to the most specific whims of every customer. This will be especially true with the projected advantages in the field of **additive manufacturing**, both in methods and materials. This will enable the physical creation of new kinds of goods, some which are currently impossible to create with conventional mass production processes, and a considerable localization of global manufacturing chains.

Rights and Wrongs

This novel era of data overflow will reinforce the budding global conversation regarding the **rights over data**. In the near future questions regarding data ownership, such as who benefits from it and what is the correct way to handle it, will require definitive answers. The shift in the public discourse regarding data rights will undoubtedly trigger the tech giants to try and influence the reality for their own benefit. In the last year we have already seen public statements from several heads of the giants (giant heads?) attempting to portray their companies as true believers in the future of humanity, if not to dictate the emerging rules, at least to become active participants in the shaping of the new order. To promote a friendly public facade, companies will hire consultants who will exceed the current public relations and crisis management figures. This might even result in a new C-suite position, the other CEO: the Chief Ethics Officer (hooray to the currently unemployed social science majors!).

However, due to the enormous advantages to the holders of such data, the tremendous temptation for future benefits might prove too strong for the tech companies to take measured steps that contradict their nature. Governments will need to intervene to protect the rights of citizens and prevent the looming future of algorithm-driven and data-fueled monopolies and cartels by creating policies that will level the playing field. If governments linger, laws regarding data ownership, data handling, digital privacy etc. may be forced on the legislators by reality. This may also create a sizeable burden on state legal systems, putting the adjudicator as the de facto policy maker with multi-billion legal cases and binding precedents.

In 2018, several governments already started acting in that direction. The EU found itself as the world leader, with GDPR, and is currently planning to move further with its AI ethical guidelines, work on which commenced in 2018. The US already summoned some of the top executives from the biggest tech companies to congressional hearings. Additionally, while the EU failed to find a common ground on revolutionizing the tax structure for the tech companies as a whole, several of the leading member states are currently examining a novel state tax structure for the tech giants which should correct a decades' long lacuna. If successful, these laws could spread around the world, overhauling the existing financial basis of the giants. Western governments, empowered by the change in public opinion and a recent decline in the tech giants' status, will have a unique window of opportunity to take back some of the control lost in the last several years.



Fight the Power

Nevertheless, the governmental attempt to take back power might prove difficult in more than one way. In addition to tech companies' resistance, there is a clear challenge to Western countries from other state actors, most prominently **China**. Under the leadership of the current General Secretary of the Communist Party of China, Xi Jinping, for the first time in centuries, China is now on par with Western technology, driven by government-backed (and sometimes government- led) innovation. Its drive for technological independence, accompanied by vast investments, extensive R&D efforts and a whole new level of industrial espionage all lead to the Asian giant being able to compete with the most cutting- edge Western technologies in software, hardware and in many cases, even talent. These breakthroughs not only allow China to become technologically independent, but also to project its values on other entities. Now, they can sell their technology to other countries without the strings attached by Western companies regarding the use of their technology (with all due respect to the petition-signing employees of Google). Combined with the seemingly looming trade war between China and the US, this competition might dictate the emerging schism in the world for future years, continuing the 2018 trend when Chinese investments in Western companies were scrutinized and academic technology cooperation reduced, limiting the recent Chinese technological boom.

Another challenger to the West in 2019 will continue to be **Russia**. Unlike China, Russia does not have the power nor the resources to compete frontally with the West. Its strategy will continue to be opportunistic, using the perceived weaknesses of the West against itself to weaken its states and degrade them to a more acceptable level to Russia. One such technique will continue to be **digital propaganda**, disinformation and misinformation. Elections will occur in many of the states that hold a special interest to Russia in 2019, such as the Baltic states, Ukraine, several Eastern European rivals such as Poland and Croatia and some other European states like Denmark, Greece, Portugal and potentially Spain, a prominent EU member. Additional disruption might occur during the European Parliamentary elections. This long list of candidates may become too big a temptation for the spoiling strategy of the long Russian "Dysinformatiya" tradition: black, white and all the possible shades of gray in between.

Pick Your Poison

Moreover, with many major election campaigns in 2019, it seems that in addition to countries' spoiling efforts, local actors could attempt to join in at murking the waters, poisoning the minds and breaking democracy with new rounds of false information. **Elections** in states such as India, Argentina and Israel might prove to be a magnet for private companies both on the offense and the defense of the propaganda wars.

Considering the fact that all the attempts of the media companies regarding disinformation and misinformation fell well short of an expected benchmark so far, one must ponder whether the flaws in the current digital media landscape make them so vulnerable to mass manipulation that superficial changes cannot fix them. Is there a fundamental flaw in the current scheme that can only be addressed by rebuilding the model from the core. This could open a wide array of opportunities for technological solutions in the various media-related verticals around the world, and the beginning of a new "New Media".

The End is Nein

The challenges mentioned above, damaging as they may seem, may encourage a tech race that could benefit the world. Besides the obvious cyber race, the Chinese model of competition and its economic and technological parity with the West can lead to a wide innovation outburst, reinforced by governmental funds and straightforward competition. The Russian model, on the other hand, will assist at using innovation in order to close the gaps in existing frameworks. Together with the need to counter malicious use of technology by individuals (such as the Gatwick airport incident in December 2018), defense and homeland security technology, historically a major leader of innovation, have their plates full for the foreseeable future.

Economically speaking, the rift between the US and China could create opportunities for other countries around the world to take some of the manufacturing burden, benefiting their industries and dramatically changing the global trade routes. Moreover, the rift could also drastically shift the global tech investments and intensify a financing "arms race" between two competing mega polars, changing poth investment patterns and investment priorities. Additionally, the technological developments, combined with increased public awareness and the changes in the discourse might force a change in the business models of many tech corporations. Unlike the current public outrage, directed for some reason exclusively on Facebook, public opinion will pressure additional companies both directly and indirectly, through the political sphere, into allowing individuals to regain control over the long data trail left by the customers. This movement might require a transformation of the companies' monetization strategies, but that's a story for future reports.

Thanks for Reading

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