START-UP NATION CENTRAL: FINDER INSIGHTS SERIES

ISRAEL'S DIGITAL HEALTH INDUSTRY IN 2018

**START-UP
NATION
CENTRAL**

EXECUTIVE SUMMARY

Despite holding a small share of a giant market, Digital Health remains the driving force for change and modernization within the global healthcare industry. To make an impact, and facilitate interaction with bigger players, Digital Health companies are consolidating in various forms, from technological partnerships to mergers, switching from niche products to platforms, and offering full scale solutions. Investment in the sector continues to grow rapidly, with a shift in focus towards patient empowerment. Patients see themselves as consumers, and consequently want more control over the treatment process. Emerging new AI (Artificial Intelligence) technologies will allow patients to monitor their health, and detect medical conditions earlier, which should eventually lead to cost savings and reduced readmission rates for healthcare providers. AI is the fastest growing technology within the sector, enabling wider access to testing, and producing more accurate medical diagnoses.

The strong AI expertise of the Israeli Digital Health sector is well renowned. With more than 25 years of digitized medical records, and healthcare providers embracing innovation, Israel is well positioned to benefit from growing global demand for deeply technological healthcare solutions. In 2018, total investments in the Israeli Digital Health Sector exceeded $0.5B for the first time, with 85% of this amount going to the companies utilizing AI solutions. 2018 also saw more later stage funding rounds than the previous year, as well as more Israeli investors participating in the sector, including healthcare-dedicated VCs. New investor models emerged, representing a combination of VC funding and healthcare provider data and platform and new dedicated healthcare VCs being set up.

Meanwhile, there is still not enough early-stage financing in the market, a necessary prerequisite for further strong sector growth. Generalist VC investors are reluctant to put their money in early stage Digital Health startups due to high risks, slow regulation, and lengthy clinical validation processes. However, recent talks regarding the creation of several early-stage healthcare VCs could be a catalyst for increased early-stage funding.

Leading the sector in terms of funding were the Decision Support and Diagnostics subsectors - areas in which AI technologies are most utilized - accounting for more than 50% of the total combined amount raised. On top of this, Decision Support was the only subsector which showed a significant increase in its number of companies in 2018. Most of the companies that received funding in 2018 were B2B companies, however about 50% of large funding rounds were for companies offering Patient Empowerment solutions, in line with the global trend. Companies within Remote Monitoring enjoyed the highest median funding rounds, due to it comprising the largest number of mature companies.

Start-Up Nation Central is proud to present its annual Digital Health report for 2018, which offers a comprehensive and up-to-date analysis of the state of the Israeli Digital Health ecosystem and its trends. It reviews the major global developments in 2018, and analyzes the performance and activity of Digital Health companies in Israel, including by subsector. We utilize the data we collect on the Israeli Digital Health industry, much of which is displayed in Start-Up Nation Finder.

GLOBAL SCOPE

Investments in Digital Health continue to grow rapidly: in 2018 funding grew at a rate of 25% year on year to reach $14.6B.[1] This is driven by increasing spending on healthcare: the medical technologies market is estimated to reach $280B by 2021, growing at a compound annual growth rate (CAGR) of 15.9% over 2016-2021, while Global Healthcare costs are expected to exceed $10TR by 2022.[2]

Perhaps the key trend in healthcare in recent years has been that of continued consolidation. Examples of this include a merger between retail pharmacy chain, CVS, and health insurer, Aetna, as well as Amazon, Berkshire Hathaway and J.P. Morgan establishing a health venture aiming to streamline health insurance expenditures for their employees and to potentially expand the service to the broader US market.

Consolidation in Digital Health continues to take place mainly within the sector. 54% of the total number of Digital Health acquisitions in the US in 2018 were made by other Digital Health companies[3], endeavoring to create technological platforms with more integrated solutions. Part of the motivation for these deals is that most Digital Health start-ups are targeting niche problems, therefore consolidation is necessary to scale up. M&A examples include chronic disease patient empowerment company Livongo acquiring weight-management and diabetes prevention company Retrofit for an undisclosed amount, and the connected respiratory devices manufacturer ResMed acquiring COPD-management company Propeller Health for $225M. Additionally, the creation of such platforms as American Well/Netsmart Technologies allows providers to offer a full-scale range of healthcare services for a patient, all on one platform.

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1   Start-Up Health Insights 2018, page 5.
    Start-Up Health is a global organization dedicated to investing in entrepreneurs, working to transform a traditional healthcare system

2   Deloitte 2019 Global Health Care Outlook

3   Rock Health 2018 Year End Funding Report: Is Digital Health in a Bubble?

Alongside industry insiders, we are also witnessing more new players from other industries, including tech giants, retailers, and pharmaceutical manufacturers become involved. The entry of tech giants in particular has been one of the most notable recent developments. Their key motivation lies in the sheer size of the global healthcare market, and the relative early-stage of disruptive innovation, as well as additional access to end-customers that translates into broader revenue stream. Google, Microsoft and Uber all began offering products in this sector in 2018. Apple has received FDA clearance for its ECG and a-fib apps at the end of 2018, which is likely to be only the first of many of its customer-facing offerings.

Large retailers are also getting involved in Digital Health. Amazon acquired online pharmacy PillPack, while electronics retailer BestBuy bought GreatCall, developer of connected safety products for the elderly. For these companies, healthcare offers additional sources of recurring revenue, namely the ability to sell subscriptions along with their regular products.

Global pharmaceutical manufacturers are also gaining a greater foothold in Digital Health, by investing in the Digital Therapeutics space. Novartis participated in Pear Therapeutics' latest $46M round, and Amgen participated in Akili's $68M round. Other examples of large pharma companies entering the Digital Health space include Roche's acquisition of oncology EHR company Flatiron Health, and GSK's 4-year contract with 23andMe together with a $300M investment.

Perhaps the most important development in Digital Health from the perspective of patients, has been the continued shift towards solutions offering patient empowerment. Companies in this space received a total of $3B in 2018, the largest share of funding for any function within Digital Health[4].

The new technologies in this area provide patients with more control over their data and diagnostic capabilities, as well as solutions for managing chronic conditions, while reducing visits to clinics and hospitals.

The healthcare industry has recognised that patients want to be consumers, just as in any other service industry, with more control over the treatment process. Part of this shift is a move towards more preventive/early detection solutions, which puts the patient in charge, by monitoring their lifestyle and/or vital signs more closely; this also aims to save costs for healthcare providers by reducing amounts charged for treatment, as well as decreasing the need and cost of readmission.

The emergence of patient-focused solutions has also been influenced by the growth of the Wellness market, worth $4.2T in 2017[5]. As demand rises, Wellness technologies have experienced rapid growth, and suppliers have recognized an opportunity to offer products with a faster time to market and less need for regulatory approvals. The largest funding round of the year was a $550M series F round raised by the connected indoor fitness bike company Peloton. In 2018, Wellness remained among the top three most funded value propositions[6]. Demand for medical grade solutions has also increased, meaning that many new products now straddle both fields, beginning as Wellness apps, and then gradually applying for regulatory approvals.

Among the new technologies in the sector, AI has seen the most rapid growth, allowing wider access and more accurate medical diagnoses. AI medical use cases include but are not limited to decision support tools for physicians, medical imaging analysis using computer vision, and big data analytics for population health management. In the US, investment in Machine Learning (ML) and AI in Digital Health was up 161% in 2018, making it the most rapidly growing technology. AI now accounts for 25% of all investment within the sector[7], a trend expected to continue, since AI/ML Learning is fast becoming a core technological solution for the industry.

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4   Start-Up Health Insights 2018, page 19
5   According to the Global Wellness Institute. There is an overlap between the Wellness and Healthcare industries.
    Note: the 2018 numbers for the Wellness market are not yet available.
6   Rock Health 2018 Funding Part 2: Seven more takeaways from digital health's $8.1B year
7   Rock Health 2018 Funding Part 2: Seven more takeaways from digital health's $8.1B year

ISRAELI DIGITAL HEALTH ECOSYSTEM IN 2018

537
innovative Digital Health companies

Over 25
years of digitalized accumulated EMR

Market players:
4 HMOs,
servicing the entire ~9M population

~100
active investors in the sector with an Israeli presence

Multinationals:
32
with exposure to Digital Health

Hubs, including hospitals & HMOs innovation platforms:
23 Digital Health hubs, including 11 accelerators

Incubators:
4
industry focused

Government:
~$300M National Digital Health Plan supports industry development

INNOVATIVE DIGITAL HEALTH COMPANIES

There were 537 active Digital Health companies in Israel in 2018, a minor increase on 2017[8]. The growth rate slowed down in 2018, which could indicate market saturation in terms of the number of players in certain areas. Most of the newly established companies appear within the Decision Support subsector, where the use of AI/ML technologies is prevalent.

Figure 1: Number of Active Digital Health Companies
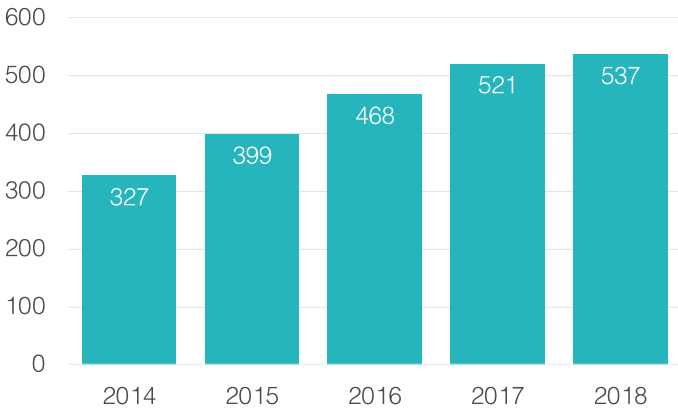
The market is dominated by B2B players: 67% of companies mostly focus on a B2B model, 48% on a B2C model, and 30% on B2B2C[9]. Israeli Digital Health B2B companies obtained the most financing between 2014-2018: 68% per year on average. In 2018 the pattern did not change: 51 funding rounds in B2B companies, compared to 19 funding rounds for both pure B2C and B2B2C companies combined.

The B2B prevalence is explained by the small size of the local Israeli market, as well as a lack of resources to develop the extensive go-to-market strategies required for consumer markets. Most start-ups are very focused on the most efficient scalability, and target large clients from day one, mainly in the US. Another reason is technology. Israel's strength in AI solutions lends itself more naturally to a B2B model. 77% of Digital Health AI companies are B2B, with only 37% offering B2C and 29% B2B2C. Nonetheless, it is worth mentioning that approximately 50% of large sector rounds (>$10M) in 2018 were in patient-centric B2C companies, reflecting the global trend towards patient empowerment.

The important global trend not as yet reflected in Israel, is Digital Health industry consolidation and the creation of integrated platforms. The Israeli Digital Health sector is still at an early-stage and most companies in the sector prefer to focus solely on their niche solutions, rather than initiating horizontal collaboration. We believe that this may change once the sector matures, and local innovators begin to encourage the creation of wider platforms for scale up, and to better penetrate and navigate healthcare systems globally.

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8   The numbers for 2018 are likely to change as additional data is gathered

9   These shares are not mutually exclusive: a company can have several business models; B2B2C in Digital Health refers to solutions sold to healthcare providers and payors, to eventually reach consumer end users

GEOGRAPHICAL MARKETS

The US remains the key target market for the majority of Israeli Digital Health start-ups. While more companies are gaining exposure to Europe and Asia (for example, India), this does not appear to be a major trend. A recent example of a company entering the Indian market is the glucose monitoring company GlucoMe, which signed a contract with the Apollo Sugar chain of diabetes clinics. We are also seeing an interesting trend of Digital Health start-ups re-entering the Israeli market after successful pilots in the US, such as Tyto Care and Zebra Medical. We expect to see this trend intensifying, due to government incentives, a familiar local environment, and HMOs and hospitals increasingly becoming more open to innovation.

GOVERNMENT SUPPORT

Recently the Israeli Government has begun providing incentives for Digital Health start-ups to consider Israel as a target market. This includes a pilot project allocating $8M (part of the ~$300M National Digital Health Plan) over the next three years to finance 20-50% of R&D activities of the start-ups, which are potentially able to disrupt the local healthcare system. The pilots will be run in conjunction with healthcare organizations, and utilize their capabilities and data. Key areas include individualized medicine, preventative healthcare, tele-care, decision-support systems, digital medical devices and solutions for patient empowerment. It is hoped that this program will compensate for the small size of the Israeli healthcare system, and, among other things, provide a much needed infusion of Decision Support solutions.

NEW INVESTOR MODELS

Another interesting development is the emergence of new investor models, combining VC investments with the data and expertise of healthcare providers. An example of such a model is Triventures ARC, a $45M early-stage fund being launched by Triventures, an Israeli leading health technology VC together with Sheba Hospital, which will focus on data-driven digital health solutions produced by Sheba ARC innovation center. Sheba ARC is currently incubating 20 projects developed by Sheba doctors, plus a further 11 external Digital Health start-ups, providing POC opportunities and mentorships by Sheba's principals. Another example is ALIVE, an Israeli medtech fund with a target of $150M under management by the end of 2019. This is a partnership between seasoned Life Sciences executives and investors, with Maccabi, Israel's second-largest HMO, and Assuta, its chain of private hospitals. The fund will invest in mid- to late-stage companies in medical devices and Digital Health, with Maccabi and Assuta providing access to data, clinical trials and pilots.

NEW HUBS

Another recent example of growing healthcare organization exposure to Digital Health innovation is a new accelerator by Hadassa Hospital and IBM for post-seed start-ups, which opened in November 2018 in Biohouse Hadassa. The program provides access to resources of both the hospital and IBM.

MULTINATIONALS

Israel is a hub for multinational companies' (MNCs) R&D and healthcare is no exception. There are 32 MNCs involved in Digital Health in Israel, some with multiple operations. Thirty run R&D centers in Israel, eight have established investment arms, and six have innovation centers[10]. A recent example of a healthcare product developed in Israel by a foreign company is Microsoft's recently launched AI-empowered Healthcare Bot service. Other notable MNCs developing healthcare technologies in Israel include Philips Healthcare, which has a significant part of its R&D coming from Israel, especially in information processing, as well as IBM Research in health informatics. Medtronic, GE Healthcare and Change Healthcare, which already have R&D in Israel, are expected to receive a six-year grant of $33M from the Israeli government to expand their activity, with Digital Health as one of the focus areas.

Hospitals and universities are increasingly coming to Israel to look for Digital Health technologies and invest in local companies. For example, Intermountain Healthcare's investment in Zebra Medical, Mt. Sinai Ventures' JV contract with digital speech therapy company Novotalk, and Thomas Jefferson University's pilot validation program in conjunction with the Israeli Innovation Authority for clinical care and hospital operations solutions.

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10 Not necessarily specifically in Healthcare

INVESTMENTS

INVESTMENT VOLUME

Total investment in the Israeli Digital Health sector for 2018 amounted to $511M, up 32% year on year, somewhat outpacing the growth in the global industry (+25%). The total number of rounds grew from 60 to 70, but remains in the range of the last 4 years (see Figure 2).

MEDIAN DEAL SIZE

The median size of rounds in Digital Health declined by 24% to $3.1M in 2018 from $4.1M in 2017, despite the fact that the general median round size for Israeli start-ups rose in 2018[11]. One of the reasons for this decline was an increase in the number of smaller early-stage rounds in the Digital Therapeutics subsector[12]. In general, while the median round size for later rounds comes close to the global levels (~$8M for A rounds, ~18M for B rounds and ~30M for C+ rounds), Seed rounds in Israel are significantly smaller: ~$0.8M compared to ~$2M globally[13].

FUNDING STAGES

The number of A rounds declined from 16 to 13, while the combined number of Pre-Seed and Seed rounds increased slightly from 33 to 35. An important development is the increase in the number of later stage rounds, which rose from seven disclosed B and C+ rounds in 2017 to 12 in 2018. The combined capital raised in disclosed B and C rounds amounted to 50% of the total financing for the year compared with 30% in 2017. 17 investment rounds raised more than $10M each (80% of sector funding) in 2018 compared to 12 rounds in 2017 (68% of total funding). The companies that raised the largest amounts in 2018 were:

MeMed, which develops diagnostic tools for distinguishing between bacterial and viral infections, raised $70M from Ping An Global Voyager Fund, Foxconn, Caesarea Medical Holdings, Clal Insurance, Phoenix Insurance, OurCrowd, Social Capital, WTI, Horizons Ventures, and high-net-worth individuals.

AI-assisted medical imaging insight and analysis company Zebra Medical Vision raised $30M in a C round from a group of investors, led by aMoon and Aurum Ventures, and including Khosla Ventures, Johnson & Johnson Innovation JJDC, Intermountain Healthcare and others.

Medial Earlysign, a company providing solutions for early detection of life-threatening conditions raised $30M from a group of investors led by aMoon, with the participation of Hong Kong-based Horizons Ventures and Nir Kalkstein, the company's co-founder and angel investor.

Nuvo, a remote prenatal monitoring company, received $30M from Value Management AG.

OrCam Technologies, a wearable assistive technology device for visually impaired people, started by the founders of Mobileye, received $30M in an undisclosed round from ClalTech and Meitav Dash.

In terms of early-stage financing, Pre-Seed and Seed funding accounted for just 8% of the total. There is still very little early-stage financing in the market, as investors view this stage as too risky: unlike most other sectors, Digital Health start-ups face lengthy clinical validation and regulatory approval processes. We believe that with more dedicated early-stage healthcare VC funds coming to the market (see Investors section), the funding landscape will evolve and greatly contribute to the growth of the sector.

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11 Start-Up Nation Central: Finder Insights Series: The State of the Israeli Ecosystem in 2018, page 3
12 See the Subsectors section for details
13 Start-Up Health Insights 2018, page 13

Figure 2: Israeli Digital Health Investments

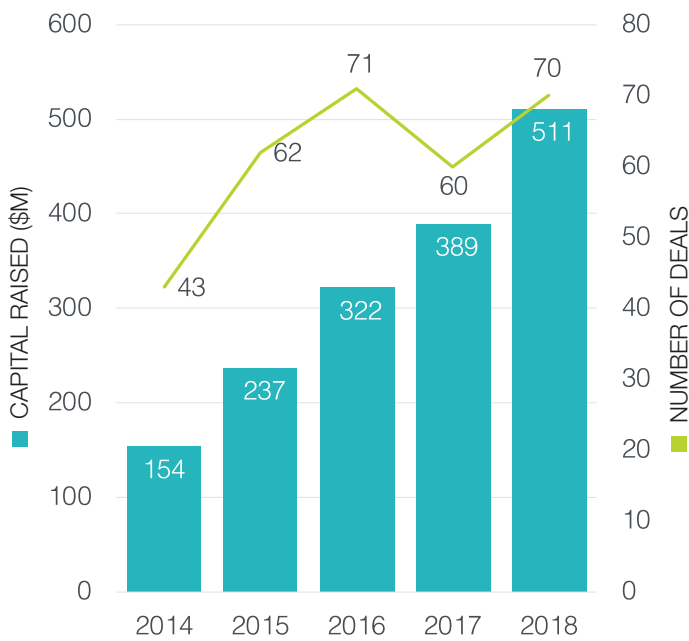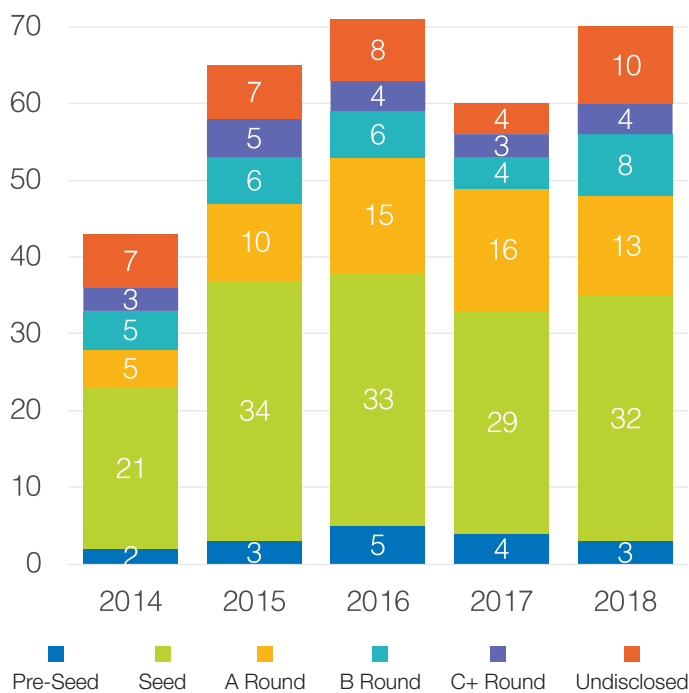## Figure 3: Number of Deals by Stage

Pre-Seed Seed A Round B Round C+ Round Undisclosed

EXITS

Following the trend of the past few years, there were not many exits in the sector. The industry is still young and there are few companies which are mature enough to be acquisition targets for larger players. The only exit in 2018 was Nutrino's acquisition by Medtronic for a reported $100M, the first exit of an Israeli Digital Therapeutics company. Nutrino is an AI-driven personalized nutrition company that collaborated with Medtronic's diabetes group for 2 years prior to the acquisition. The company had pre-announced that it was looking to invest in an Israeli diabetes start-up. This was the third acquisition by Medtronic in Israel in 2018, but the first in the Digital Health space (previous investments were in the medical device space).

INVESTORS

There are about 100 active investors in the Digital Health sector that have a permanent presence in Israel. This includes 27 foreign players, three of which established an Israeli presence in 2018.

Overall, we identified 124 unique investors, who invested in the sector in 2018 compared to 100 in 2017, with the growth coming mostly from the increased involvement of Israeli investors. While the number of unique foreign investors grew slightly from 67 to 69 , the number of Israeli investors increased by 67%, from 33 in 2017, to 55 in 2018. Foreign investors participated in 47% of rounds in 2018, down from 58% in 2017, while Israeli investors participated in 84% of rounds in 2018, up from 71% in 2017.
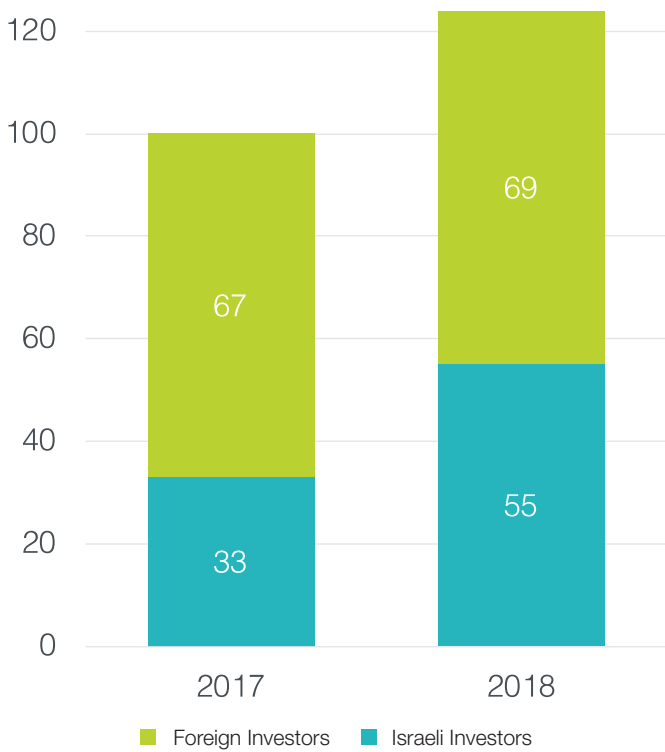
The increased activity of local investors was driven significantly by healthcare dedicated funds such as aMoon and OurCrowd Qure. We expect this trend to continue, as there are several newly raised healthcare dedicated VCs: aMoon just closed a $660M life sciences fund, and Triventures is raising a new early-stage fund together with Sheba ARC, the Sheba hospital innovation arm. Among other new local investors, who entered the local Digital Health scene in 2018 were 17 generalist VCs, which had not invested in the sector prior to 2018, local investment houses and insurance companies, as well as angels and angel groups.

In 2018, 47 (67% of total) of foreign investors in Digital Health in Israel were from the US. They were joined by four investors from the UK, a further four from China and Hong Kong, two from Canada, two from Japan and one per country from 10 other countries.

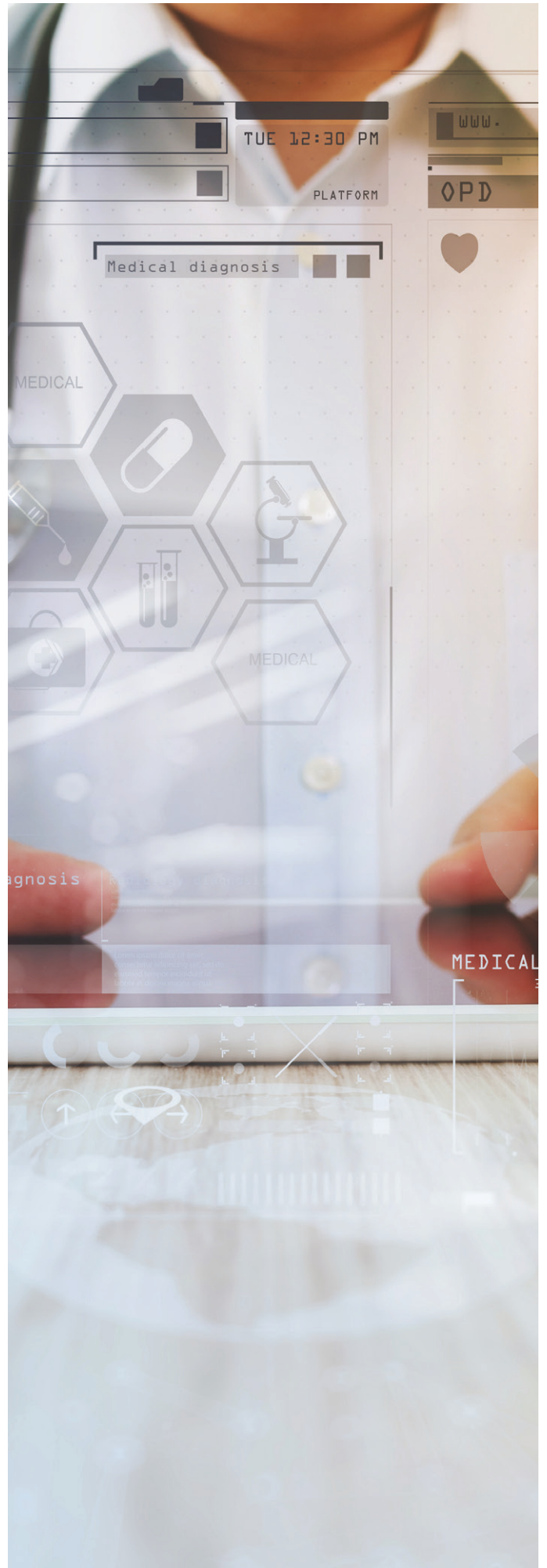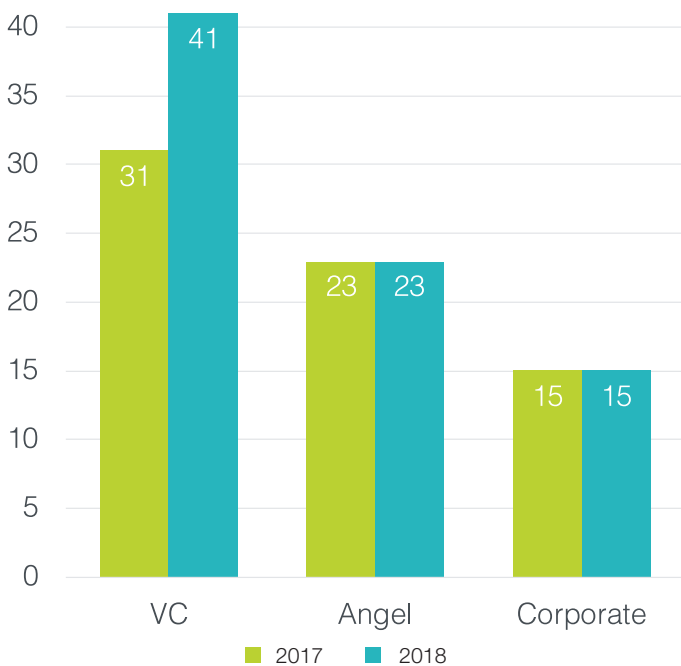14 Based on publicly available data, not including undisclosed angel investors

15 This number includes foreign investors with and without permanent presence in Israel, which invested in Israel Digital Health companies in 2018

Figure 4: Number of Unique Investors

Figure 4: Number of Unique Investors (stacked bar chart)
- 2017: Israeli Investors 33, Foreign Investors 67
- 2018: Israeli Investors 55, Foreign Investors 69

Legend: Foreign Investors, Israeli Investors

The share of investment rounds with VC participation increased to 60% in 2018 from 52% in 2017, while CVC and corporates participated in 21% of total number of rounds in 2018 vs. 25% in 2017. Angel investors participated in 33% of total rounds in 2018 vs. 38% in 2017. In absolute terms, number of rounds with VC participation increased to 41 in 2018 from 31 in 2017, while number of rounds with CVCs and corporates and Angel investors remained unchanged at 15 and 23, respectively. CVC and corporate investors participated mostly in larger rounds in AI-focused companies.

Figure 5: Investor Type, Participation by Number of Deals

Figure 5: Investor Type, Participation by Number of Deals (bar chart)
- VC: 2017 = 31, 2018 = 41
- Angel: 2017 = 23, 2018 = 23
- Corporate: 2017 = 15, 2018 = 15

Legend: 2017, 2018

SUBSECTORS

As in our previous Report, we divide the Digital Health sector into seven subsectors, according to main use cases, and classify Digital Health companies as follows:

Clinical Workflow

Solutions that improve the current healthcare workflow by using Electronic Medical Records (EMR), healthcare-related payment platforms, on-the-job training software, RF-tracking of medical equipment, cyber security for medical networks and devices and so on.

Decision Support

Data analysis software that enables more accurate, personalized, and data driven decisions, which improve diagnostics and treatment outcomes. These solutions are mostly designed for physicians and utilize AI algorithms.

Digital Therapeutics

Digital tools and platforms that allow consumers to proactively track, treat and manage their own medical conditions. Biological, environmental, and behavioral data of the consumer is collected and analyzed, then translated into actionable insights, and recommendations for health improvement.

Remote Monitoring

Technological tools that continually monitor and collect patient data from remote, which helps prevent medical events, as well as alerting to their occurrence.

Assistive Devices

Devices which aid and assist consumers with permanent physical disabilities, such as vision, hearing, age-related conditions and so on.

Diagnostics

Data analytics tools that provide automatic, fast, and affordable medical diagnostics, which are especially valuable for early disease detection. Many of these tools draw on Big Data, AI, and computer vision to provide accurate diagnoses.

Patient Engagement

Technologies that increase patient cooperation and compliance with healthcare guidelines and medication regimens, including population health management.

ISRAELI INNOVATION: DIGITAL HEALTHCARE

THERE ARE MORE THAN **500** INNOVATIVE DIGITAL HEALTHCARE COMPANIES IN ISRAEL
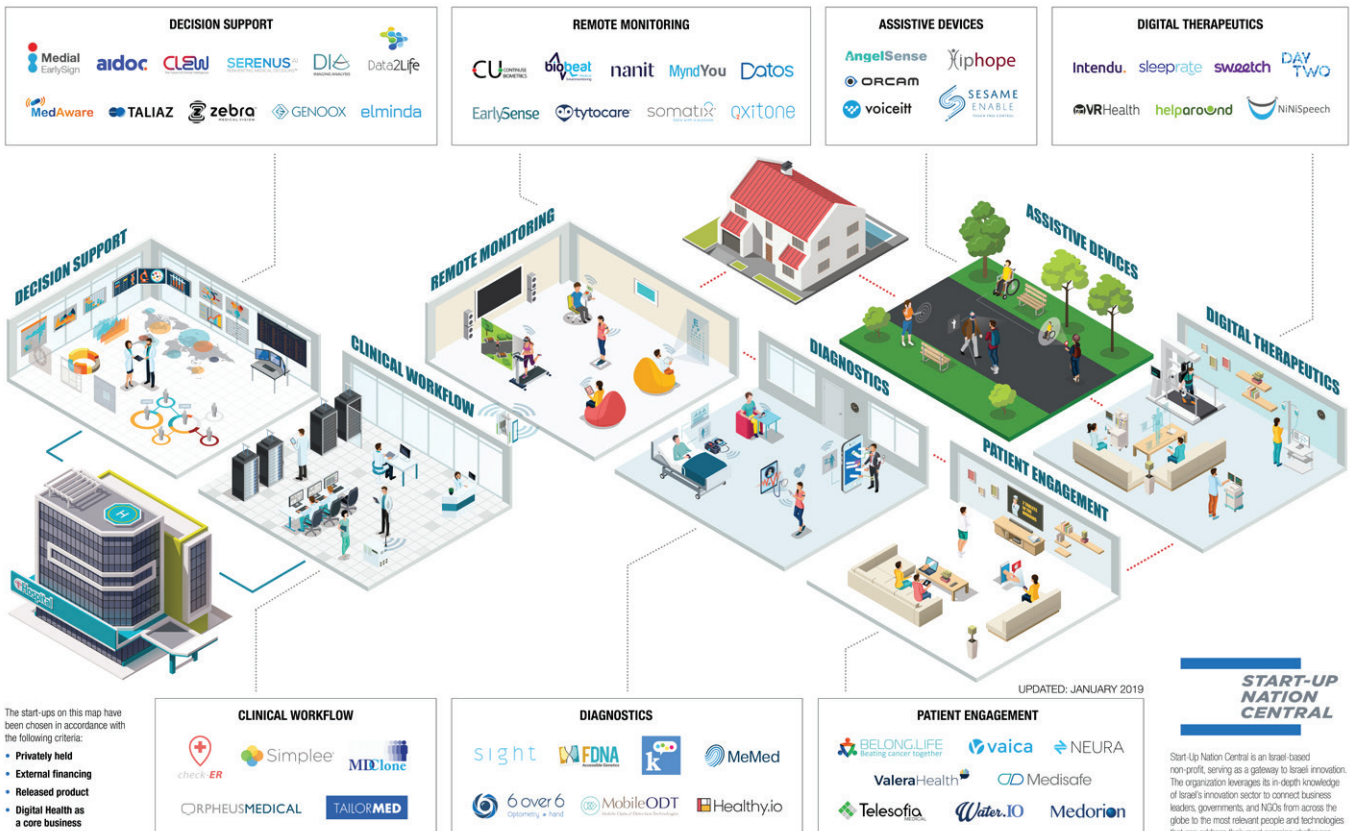
To download the full landscape please click here

SUBSECTOR TREND ANALYSIS
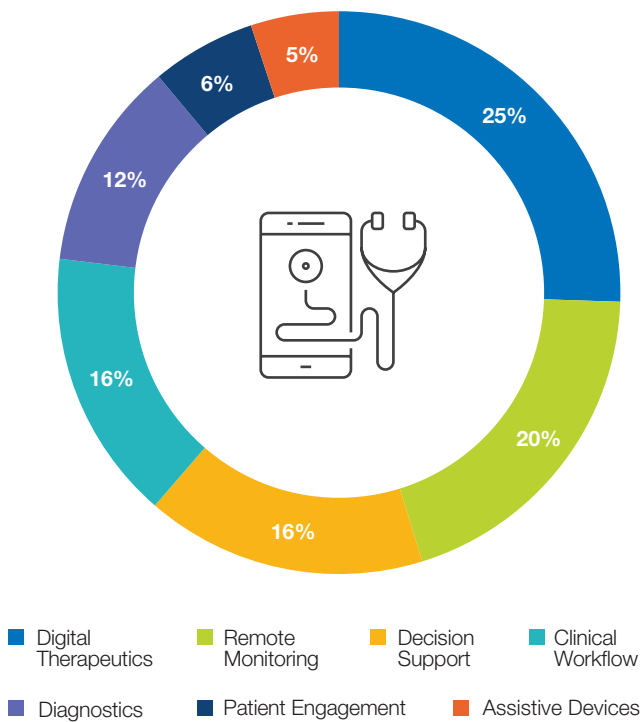
Figure 6: Digital Health Companies by Subsector

Legend:
- Digital Therapeutics
- Remote Monitoring
- Decision Support
- Clinical Workflow
- Diagnostics
- Patient Engagement
- Assistive Devices

Figure 7: Number of Companies by Subsector

Legend:
- Digital Therapeutics
- Remote Monitoring
- Decision Support
- Clinical Workflow
- Diagnostics
- Patient Engagement
- Assistive Devices

Figure 8: Funding by Subsector, $M

Legend:
- Decision Support
- Diagnostics
- Remote Monitoring
- Digital Therapeutics
- Assistive Devices
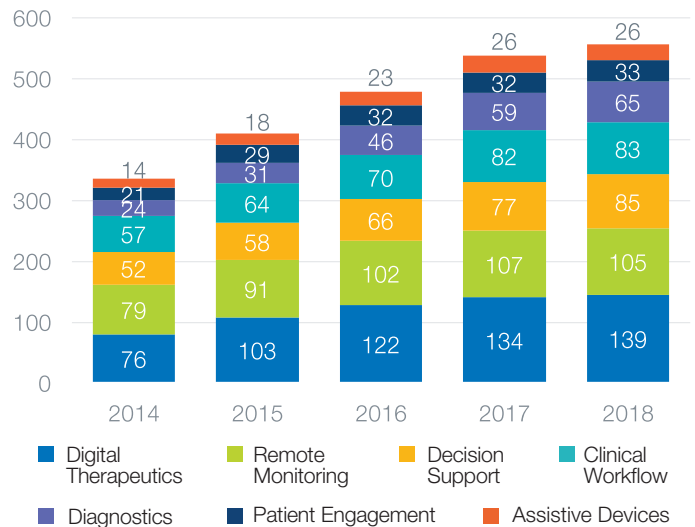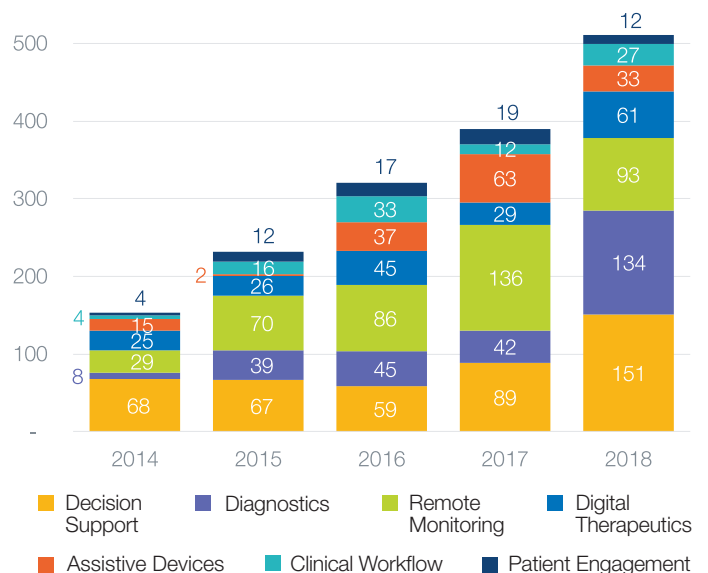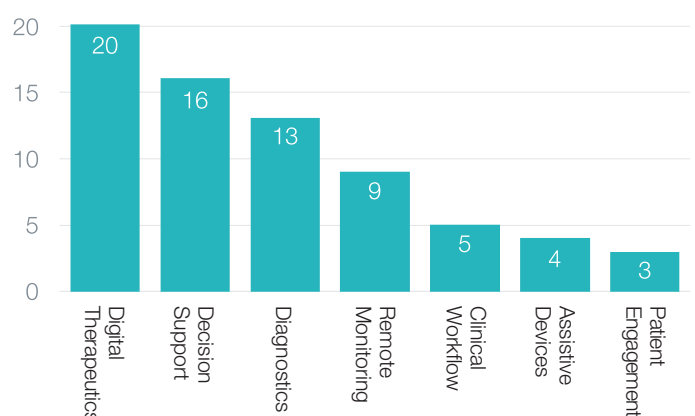- Clinical Workflow
- Patient Engagement

Figure 9: Number of Deals by Subsector, 2018

We have identified the following notable subsector trends in 2018:

- Decision Support saw substantial growth in the number of active companies, followed by Diagnostics. The number of companies in other subsectors barely changed year on year.

- Total funding increased dramatically in the Decision Support and Diagnostics subsectors, both heavy users of AI/ML. This reflects global trends - Diagnostics/Screening was the most funded subsector with $2.3B invested in the segment worldwide[16]. This mostly includes solutions that aim to assist with decision support for physicians, and reduce the burden of clinical flow. These are solutions where Israel is traditionally strong, and is where most of the funding went in 2018 - 56% of the total. In Remote Monitoring and Assistive Devices, funding levels decreased.

- We saw the largest number of funding rounds in Digital Therapeutics, the largest subsector according to number of companies, which is represented mostly by small companies and subsequent smaller median funding rounds. Remote Monitoring companies had the largest median funding rounds, as the sector is characterized by a relatively large number of later stage companies with released products.

16 Start-Up Health Insights 2018, page 20

AI/ML IS THE FASTEST GROWING TECHNOLOGY WITHIN DIGITAL HEALTH

AI/ML has become the fastest growing technology used by Digital Health start-ups, with approximately 38% of Israeli Digital Health start-ups using AI/ML in their solutions (See Figure 10).

While globally AI/ML is the fastest growing technology, this trend is even more pronounced in Israel: 85% of sector funding in Israel went to to AI-based Digital Health companies, a 120% year on year increase (See Figure 11). This is significantly higher than in the US, for example, with 25% of all capital in the sector (although the US saw a 161% year on year growth in 2018). This is not surprising, as Israel has a competitive advantage in this area.

Local start-ups are utilizing more than 25 years of digitalized Electronic Medical Records that are held by the four national HMOs. This is sufficient data to train and test many AI solutions, and companies are therefore able to partner with these HMOs to validate their technology from early stages of development. With the combination of strong technological expertise and access to data, Israeli Decision Support companies, most of which utilize AI/ML technologies, have been able to flourish, and have attracted increased levels of funding. 43% of AI Digital Health companies have at least one released solution. Additionally, some players with existing products which are not AI/ML based, are also expanding into the AI/ML space.

Figure 10:
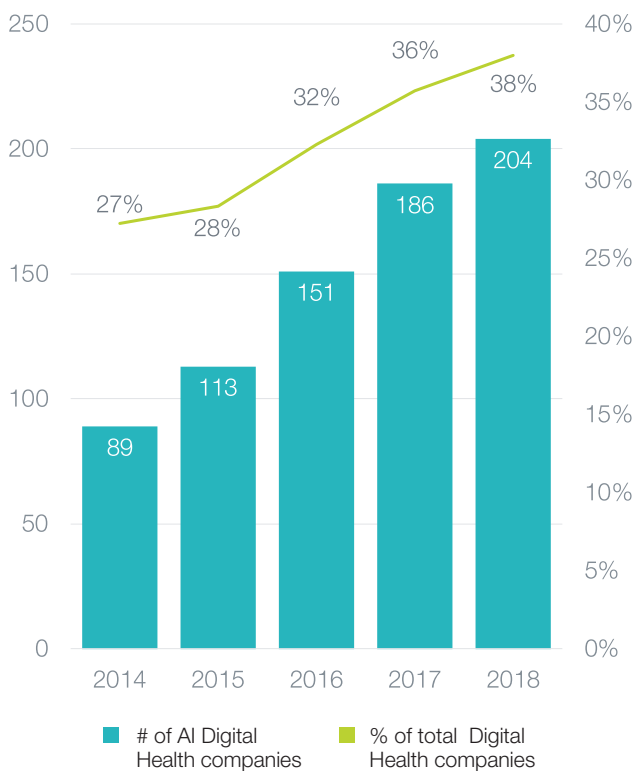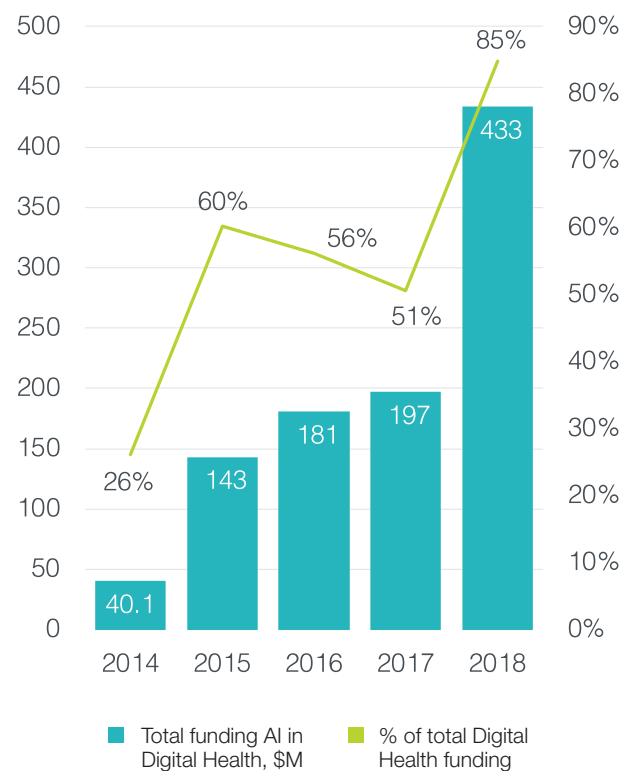### AI Companies as % of Digital Health Total

Legend: ■ # of AI Digital Health companies   ■ % of total Digital Health companies

Figure 11
AI Funding as % of Digital Health Total

Legend: ■ Total funding AI in Digital Health, $M   ■ % of total Digital Health funding

MORE SUBSECTOR DETAILS

DECISION SUPPORT
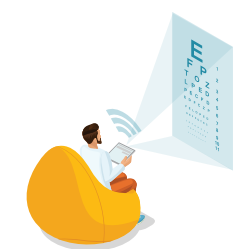**16% of companies,
30% of 2018 sector funding**

The Decision Support subsector was represented by 85 companies in 2018 compared to 77 companies in 2017 (a growth of 10% year on year). This was the only Digital Health subsector which showed significant growth in terms of the number of companies, and also attracted the most funding in 2018. Both factors confirm that Israel is very well positioned for the "Third Wave"[17] of Digital Health industry development, which is categorized by data driven actionable insights - 68% of Decision Support companies utilize Artificial Intelligence in their solutions. The subsector may also further benefit from the governmental pilot program for Digital Health start-ups, allowing program participants to test their technologies in large healthcare organizations.

Decision Support companies raised $151M in 2018, which is 30% of total Israeli Digital Health sector investments in 2018, up 88% year on year and 158% more than 2016. About 18% of companies in the subsector received funding in 2018. Medial EarlySign and Zebra Medical Vision were the most funded companies in the sector in 2018, receiving $30M each in B and C rounds, respectively. Both companies received financing from a combination of local VCs and global strategic investors.

DIAGNOSTICS
**12% of the companies,
26% of 2018 sector funding**

The Diagnostics subsector was represented by 65 companies in 2018 compared to 59 in 2017 (a growth of 10% year on year) or 12% of the sector. It was the second most funded subsector, and as with Decision Support, was mostly due to investments in AI companies. The subsector received $134M in funding in 2018, 3.4 times more than in 2017. MeMed, which has developed a platform to distinguish between bacterial and viral infections, received the largest funding - $70M in a C round, from a group of local VCs and international investors. Another notable example is K Health, an AI-driven personal symptoms checker, which received funding from a group of Israeli and US VCs, including Comcast Ventures.

REMOTE MONITORING
**20% of the companies,
18% of 2018 sector funding**

The subsector is represented by 105 companies, compared to 107 in 2017. Investment was down by 25% year on year to $93M in 2018. Most of the companies in Remote Monitoring represent the "Second Wave" of Digital Health development – typically companies offering wearable devices or related software solutions. Since this is one of the "older" subsectors in the Digital Health space, there are a significant number of companies looking to address similar challenges, related to continuous monitoring of vital signs for out-patients. As a result, this segment is becoming commoditized both in Israel and globally. Many of the players have already received FDA clearance for some of the applications and are waiting for clearance for more parameters. Cardiac Sense is one of the examples of an Israeli wearable device developer raising funding in 2018.

The largest amounts in the subsector were raised by different types of companies. Examples include Nuvo, a remote prenatal monitoring company that raised $30M from German financial investor Value AG, and Tyto Care, a company that offers remote examination and consultation with a physician, and raised $25M in a C round from a group of Israeli and foreign VCs. Tyto Care now offers its diagnostics kit to the clients of Clalit, Israel's largest HMO.

DIGITAL THERAPEUTICS
**25% of the companies,
12% of 2018 sector funding**

The number of Digital Therapeutics companies increased by 4% year over year to 139 in 2018, while funding was up 113% year on year to $61M, largely due to a $20M round in VI Technologies, developers of wearable devices, (mostly for wellness), and an $11M investment in Wisdo, which is not a pure Digital Therapeutics company, but rather a mental wellness app helping people to cope with difficult life situations through experience and support of other people in similar situations.

The subsector had the largest number of rounds, but they were mostly small, representing 40% of Digital Health Seed and Pre-seed rounds. The core of the subsector is a large number of small early-stage companies, developing niche apps. However, it is worth mentioning that there are more players in the sector gaining scale following increasing global demand for patient empowerment solutions. Among the companies funded in 2018 were Hello Heart, a company developing a solution for high blood pressure prevention and heart risk reduction; Lumen, a virtual nutritionist and metabolism measurement device; and VR Health, a virtual reality health management company. On top of this, the only M&A deal in Digital Health in 2018 occurred in this subsector with the aforementioned Nutrino acquisition by Medtronic.

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ASSISTIVE DEVICES
**5% of the companies,
7% of 2018 sector funding**

There were 26 companies in the subsector in 2018 unchanged year over year. Funding was up 57% year on year to $33M, but this was mostly as a result of one large round of $30M for OrCam, the only Israeli Digital Health unicorn. Assistive Devices is a promising sector with unique solutions, some of which have been globally recognized, including OrCam, ReWalk, and Voiceitt. There is a huge market for assistive technologies. People with disabilities account for 10-20% of global population, and on top of this, many assistive tech solutions can be expanded to the broader population, yet a trigger is clearly needed for this market to take off. The subsector is still small in terms of the number of companies and size of funding, due to the lack of a clear reimbursement pathway, marketing strategy and centralized support system.

CLINICAL WORKFLOW
**16% of the companies,
5% of 2018 sector funding**

The sector consisted of 83 companies in 2018, virtually unchanged year on year. There were a total of five rounds that raised $27M, 30% more than in 2018. Most of the companies that received funding were in the Cybersecurity segment. The largest rounds were $10M for MDClone, a healthcare data analysis data platform, and $10M for Cybersecurity company CyberMDX, both of which were Round A.

PATIENT ENGAGEMENT
**6% of the companies,
2% of 2018 sector funding**

There were 33 companies in 2018 compared to 32 in 2017. The subsector raised $12M in 3 rounds, 36% less than in 2017. The largest round was $7.75M for air quality data analysis company Breezometer, where patient engagement is one of several use cases. Patient engagement is one of the segments getting most traction globally, as patient adherence remains one of the key challenges for global healthcare systems. However it is not the key theme for Israeli Digital Health start-ups yet, despite their superior access to clinical data.

ABOUT START-UP NATION CENTRAL

Start-Up Nation Central is an independent non-profit that builds bridges to Israeli innovation. We connect business, government, and NGO leaders from around the world to Israeli innovation, through highly customized business engagements, and through Start-Up Nation Finder – an easy to use, up-to-date, free online platform for discovering and connecting with thousands of relevant innovators.

We identify technological sectors with high-growth potential, and help them develop to maturity. We currently focus on the Digital Health, AgriFoodtech and Industry 4.0 sectors, exposing them to global audiences, helping them develop practical tools, attracting investors, and establishing and nurturing tech communities to increase collaboration, knowledge-sharing, and skill expansion.

We accumulate knowledge and generate in-depth insights about Israel's innovation sector, and share these findings with our clients and partners.

START-UP NATION CENTRAL YOUR PARTNER FOR ISRAELI INNOVATION

START-UP NATION CENTRAL AND THE DIGITAL HEALTH SECTOR

TOP CLIENT NEEDS

We have identified the following key needs from the delegations we hosted in 2018, according to client type:

CLIENTS FOCUSED ON EMERGING MARKETS
Cost efficient solutions, including primary care, telemedicine, remote care, cheap diagnostics, population health management, simple solutions which do not require deep expertise to use
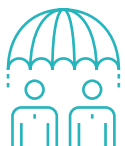
HOSPITALS
AI solutions, validated and initial revenue generating, remote inpatient and outpatient monitoring – support for nurses and doctors

MEDICAL DEVICES MANUFACTURERS
Continuous vital signs monitoring – preferably multiple parameters, prenatal monitoring

INSURANCE COMPANIES
Solutions for seniors, including monitoring, prediction/detection and safety

CONSUMER GOODS MANUFACTURERS
Brain health solutions, personalized nutrition, fertility solutions, healthy aging

START-UP NATION CENTRAL
STRATEGIC PROJECTS IN DIGITAL HEALTH

HOUSTON-ISRAEL PROJECT

As part of Start-Up Nation Central's efforts to promote the Digital Health field we are establishing a bridge to enhance collaboration between Israeli tech companies and the Houston-based Texas Medical Center, the largest medical complex in the world, through co-development, pilots, and implementation of innovative Israeli technologies. To this end, Start-Up Nation Central has partnered with a Houston-based entity to establish deep strategic partnerships with medical institutes in the Texas Medical Center, map their needs and internal processes, and serve as a landing pad for Israeli companies to navigate the Texas Medical Center. This project was born from the understanding that healthcare systems on the American East and West coasts are crowded with medical technologies trying to enter them, while other geographical hubs demonstrating medical excellence in the US are eager to implement innovation, and can serve as a fertile ground for Israeli innovation to tap into the American healthcare system.

DIGITALHEALTH.IL CONFERENCE

For the fifth consecutive year, Start-Up Nation Central organized the DigitalHealth.il conference, in collaboration with EY Israel and IATI. The conference took place in January 2019, and comprised almost 700 participants. The theme of the conference was "Tech Giants are Entering Healthcare". The "Tech Giants" believe they are uniquely positioned to enter a complex healthcare market and leverage their experience and tech stack, in terms of consumer approach, big data and AI to solve some of the biggest and most challenging problems plaguing the healthcare system. By doing this, they also expect to capture a piece of the growing $7T healthcare market.


INDIA PROJECT

In the Digital Health space, there is tremendous unrealized potential in the Indian market. In 2018, Start-Up Nation Central signed an MoU with the Association of Healthcare Providers India (AHPI), which counts over 3,000 private hospitals as its members across the country. AHPI has established a steering committee which includes Start-Up Nation Central's Country Relations Director for India, and meets regularly to identify needs that can be addressed by Israeli innovative companies. Start-Up Nation Central identifies relevant companies that run proofs-of-concept (POCs) in AHPI hospitals and clinics. After identifying these companies, AHPI provides support by "marketing" the success of the POCs across its network of members. Start-Up Nation Central has already received requests for nearly 20 pilots.

START-UP NATION FINDER

Start-Up Nation Central also creates many opportunities through Start-Up Nation Finder, our innovation discovery platform, in which anyone can search for information about Digital Health companies, technologies and investors in Israel, and can also contact them. During 2018, the term "Digital Healthcare" was the second-most popular search within the platform, after Fintech. Digital Health company profiles received 222 unique visits on average across the whole of 2018. Figure 12 presents the average number of visits per profile by subsector.

Figure 12: Average of Unique Visits per Profile, 2018
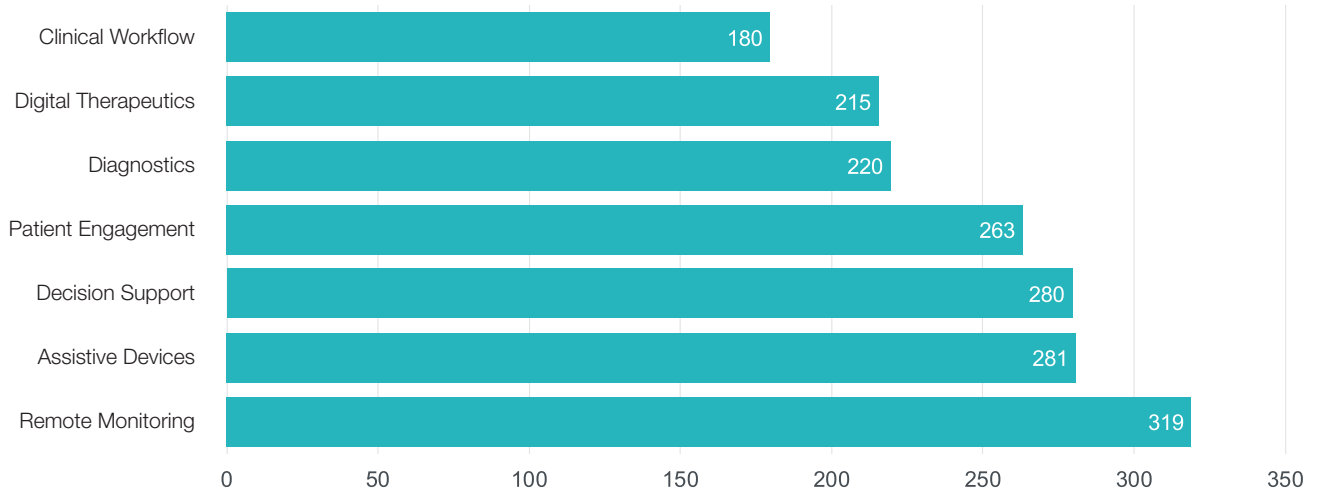
METHODOLOGY

DATA SET

Amounts and definitions relating to Israeli innovation and entities accord with those of Start-Up Nation Finder. Companies considered for this report were founded by Israelis and pursue R&D activities in Israel, and are not service providers. This report organizes Israel's Digital Health sector into subsectors. Since our 2016 report, we have presented the Digital Health landscape as organized into seven subsectors. Subsector division organizes the relevant companies into an inherently simplistic regimentation. Some companies offer multifaceted technologies and therefore could be assigned to multiple subsectors. But for the sake of deriving investment and tech trends, we associate each company with only one subsector, which reflects the company's major focus. Figures representing numbers of companies and investments in Israeli Digital Health and its subsectors are likewise exclusive: we do not associate one company with multiple subsectors.

FINANCING

Refers to any equity transaction (e.g. VC, corporate, or angel investments; private equity in growth stage), but excludes full or major liquidity events (those are considered as Exits). In the cases where companies receive investments from incubators conjointly with grants from the Israel Innovation Authority, the latter are included in the funding amounts and are not specified. Fundraising amounts entail only the value invested in a given time period; even if a deal includes terms for future obligations, we do not include the pending conditions in the amounts listed in this report. Some investment figures may include funding that does not appear to the public on Start-Up Nation Finder. These amounts reflect data that Israeli companies disclosed to Start-Up Nation Central in confidence, which they prefer to remain hidden to the publicwhile still factored into aggregates.

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For more information on the Israeli Digital Health sector and the companies cited in this report, please visit:
https://finder.startupnationcentral.org

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