**This report is under EMBARGO until Monday, January 14th**

**Israel Innovation Authority 2018-19 Report**

**Israel's most significant challenge in 2019:
Investment in future technologies**

**Minister of Economy and Industry, Eli Cohen:** "In the financial world, characterized by technological innovation, the State of Israel is a key player. This is evident in the number of startup companies in Israel and the number of leading multinational corporations operating in Israel. In order for the Israeli high-tech to really live up to its potential the main challenge is to work towards increasing the number of people employed in technological sectors among the general population and in the periphery in particular. Moreover, following the sharp increase in the number of multinational corporations operating in Israel and contributing to the ecosystem, we must incentivize startups to continue growing locally, by providing resources, incentives and personnel that allow them to develop valuable technologies and maintain entrepreneurship in Israel."

**Israel Innovation Authority CEO, Aharon Aharon**: “We must acknowledge the fact that the race for leadership in artificial-intelligence-based technology has begun. The State of Israel must close the gap with other countries who already make enormous investments in artificial intelligence infrastructures. Artificial intelligence and the changes it brings will be the key to economic growth worldwide. In order for Israel to continue to lead in the global technological race, it is necessary to allocate resources and a national artificial intelligence strategy shared by the government, academia, and the industry.

**Dr. Ami Appelbaum, Chairman of the Israel Innovation Authority and Chief Scientist at the Ministry of Economy and Industry**: "In order to guarantee the impressive achievements of the high-tech industry and the future prosperity of the Israeli economy, the State of Israel must change from a Startup Nation to a Smart-Up Nation – an astute technological market. A leader in the development of future technologies as well as their assimilation in all walks of life."

**The 2018-19 Innovation Report reviews trends, changes and innovation characteristics in Israel; it presents the challenges of the economy in the field of innovation and provides solutions for coping with them.**

**The report highlights a number of significant issues of crucial importance:**

1. **The years 2017-2018 were excellent years for the Israeli high-tech industry** manifested in several aspects:
	* Rapid increase in raising capital - especially at the stages of growth.
	* Development of new fields (artificial intelligence, digital health, FinTech and smart transportation marked the fastest growth), and the growth in financial parameters, most prominently, high tech export.
	* A trend of diverting funding from the *early stage* to *growth* *stage* - a global trend that reflects a change in investors' preferences.
2. **Global changes** - including the Trump tax reform, the China-US trade war and the tightening of regulations on tech companies in Europe. These changes cast a shadow of uncertainty on the Israeli high-tech industry.
3. **Importance of Artificial Intelligence to the Israeli industry - the global** competition for leading the technologies of the future, and artificial intelligence in particular - is increasing. Leadership in artificial intelligence will also be a lever for the expansion of Israel's innovation ecosystem into other areas – such as personalized medicine.
4. **Personalized medicine -** The approach of personalized medicine is becoming more and more established in the global biopharma industry, where the combination between innovation in biology and genetics and between developments in artificial intelligence and Big Data is changing the whole process of drug development. This trend blurs the boundaries between the "classical" biopharma industry and the information technology industry, generating an opportunity for the long-awaited breakthrough of the local biopharma industry. The Israeli industry is in an excellent position to be leading this field as it enjoys the great advantages of unique clinical and genomic data and advanced basic science. Artificial intelligence leadership is essential for realizing the opportunity to develop this field.
5. **Innovation in all sectors of the economy (from Startup Nation to Smart-Up Nation)** in order to insure that the high tech success will be translated into an all-encompassing financial growthit is not sufficient to develop innovative technologies – they should be implemented in all sectors of the economy and in all areas of life. For this purpose, Israel has to turn into a technological and intelligent economy that leads both in the development of technologies and in their implementation. It is necessary to close the gap between the high-tech industry in Israel and the day-to-day life in Israel, so that all the citizens of the country benefit from the investment in innovation.
For this purpose, it is necessary to promoteregulation that encourages innovation, and to increase the interfaces between the high-tech industry and the other sectors in the economy. Cooperation between The Innovation Authority and the other arms of the government is critical for achieving these objectives – and it is indeed at the heart of the Authority's activity in the past year and its future plans.
6. **Technological innovation in the periphery -** the high-tech industry in Israel is mostly concentrated in the center of the country, while the peripheral regions specialize in industrial production and agriculture.
Approximately 75% of all jobs in Israel's high-tech industries are in the center of the country. There is a productivity gap between the peripheral regions and the center of the country: periphery wages are 30% lower than the average wages in the center of the country.
The strategy of The Innovation Authority in dealing with these challenges includes four main objectives: Promoting technological innovation in the manufacturing, agricultural and food industries of the periphery; encouraging local technological entrepreneurship in the periphery with relevance to regional anchors; connecting between the human capital supply in the periphery and leading high-tech companies; and strengthening the high-tech ecosystem in Haifa, Jerusalem and Be’er Sheva.

**Expansion:**

1. **The performance of the Israeli high-tech industry in 2017-2018 was excellent:**
* The consistent growth in capital raising continued in 2018. Total annual capital raising expected to exceed $6 billion, compared to $ 5.2 billion in 2017. Most of the increase in capital raising in recent years is attributed to startup companies in the growth stages.
* Artificial intelligence, transport and digital health are the leading sectors in growth rates, number of companies and the amount of capital invested in them between the years 2015 and 2018[[1]](#footnote-1), along with the preceding FinTech and cyber ​​security sectors, which continue to show rapid growth. On the other hand, there is a significant decline in the communications industry.
* High-tech export grew by 8 percent and is expected to reach $100 billion, with the software industry being the main growth engine.

**At the same time, it appears that there is weakening in the *early stages*:**

* After several years in which more than 1,000 new startup companies were established each year, only 770 start-up companies were established in 2017, and preliminary data indicate that the downward trend continued in 2018. In addition, there is a decline in the number of exits and their total financial volumes, compared to 2015's peak.
	+ The decline in the pace of new startup launch in Israel reflects global changes in investors' preferences. It seems that the global venture capital funds prefer to put their stakes on fewer promising start-up companies and to "fuel" them more generously over a longer period of time, in the hopes of eventually win a huge, albeit late, exit. In other words, investors in Israel and around the world are trying to "pick their winners" at a very early stage.
1. **Dramatic developments in the global economy throughout 2018 shuffle the cards:**Major developments include: the Trump tax reform, China-US trade war and the tightening of regulations on the activities of tech companies in developed countries. The Trump tax reform includes far-reaching changes in the US tax system, which aim, among others, to attract financial activities of American multinational companies, including tech companies, back to the US. The impact of these changes on the Israeli high-tech companies is likely to be significant because the latter tend to be global with an emphasis on the US market. The Israeli government acknowledges the need to update its tax environment in order to remain attractive for startup companies and large companies alike. The government is looking into ways to ease the tax burden expected as a result of the reform. As of the end of 2018, it appears that the relevant players in the Israeli innovation system are still weighing and calculating their steps in light of the global changes
2. **Leading the technologies of the future – Israel needs an artificial intelligence strategy:**Artificial intelligence is expected to be the heart of the technology of the 21st century. Artificial-intelligence-based technology is expected to be a key economic growth engine for countries, sectors and companies that will be at the forefront of this technology. In recent years, we see more and more countries that develop national artificial intelligence strategies. As of the end of 2018, 17 countries have already declared such strategy, some with an investment of billions of dollars. This is another sign that the race for taking a technological lead in this sector is already underway.
In Previous technological waves of the digital revolution, Israel was among the leading countries. Technologies and capabilities in the fields of communications developed by the defense system, combined with academic excellence in the fields of software, have led Israel to take a good position to benefit from the development of the internet. At the same time, the correct policy of the government contributed to the Israeli technological leadership.

The Report calls all sectors – government, academia and industry – to gather around the vision and strategy of artificial intelligence for the Israeli economy. Such strategy should address a number of key challenges.

* Strengthen the academic research infrastructures in the areas of artificial intelligence and transform research universities in Israel into centers of excellence in this field.
* Promote the entire human capital pyramid required for this field.
* Develop research and development infrastructures that will serve both academia and industry, especially computer and data infrastructures.
* Implementation of artificial intelligence technologies in all industries of the economy. The enormous economic value that lies in artificial intelligence may enable an increase in efficiency and well-being of all aspects of life. Accompany the move towards implementing this technology with appropriate regulation (especially in matters of autonomous decision-making and privacy) and with a thorough preparation of the human capital to cope with the labor market challenges in an era of intelligent machines.
1. **Personalized medicine - an opportunity to develop a biopharmaceutical ecosystem:**The approach of personalized medicine is becoming more and more established in the global biopharma industry, where the combination between innovation in biology and genetics and between developments in artificial intelligence and Big Data is changing the whole process of drug development. This trend blurs the boundaries between the "classical" biopharma industry and the information technology industry, generating an opportunity for the long-awaited breakthrough of the local biopharma industry, which has not realized its scientific potential over the years.
The changes in local biopharma industry in recent years indicate positive momentum, where thevolume of investments in this sector has significantly risen in recent years, and the average round of funding has tripled.
A number of assets form a competitive advantage for the Israeli biopharma industry in the era of personalized medicine.
	* Long-standing scientific excellence in the field of biopharma.
	* A unique medical and genomic sources of information.
	* Israel's leadership in information technology and computing and artificial intelligence.
	* An advanced healthcare system provides the platform for fruitful cooperation.

These assets are of high relevance for the drug discovery phase and for clinical trials. Israeli biopharma companies that will be wise enough to assimilate the technological trends will be able to reach the market faster and at a lower cost.

The government is taking several measures to make the medical and genomic information accessible to the industry and to encourage synergy between information technologies and biopharma. A significant step in this respect is the establishment of the “MOSAIC” project. Within the framework of the project, which is established in the collaboration between the Ministry of Science, the Administration for the Development of Weapons and Technological Infrastructure at the Ministry of Defense, the Ministry of Health, the Innovation Authority, the Planning and Budgeting Committee of the Higher Education Council and the Ministry for Social Equality, a new genomic and clinical data infrastructure will be established for the benefit of academic research and the development of new products and services for the industry. In addition, the Innovation Authority, with joint financing of the Headquarters for the National Digital Israel Initiative of the Ministry of Social Equality, is currently establishing a User’s Association for digital health – which will serve as industry-shared array of medical information infrastructures.

A national investment in the field of artificial intelligence will also leverage the benefits of the State of Israel in personalized medicine, and accelerate the development of advanced ecosystem in this field.

At the same time, The Innovation Authority is working to improve its incentives in the fields of biopharma. As part of wide range of consultations conducted by The Innovation Authority over the past year, in cooperation with the industry and academia, for the purpose of mapping growth barriers in the biopharma industry, it became evident that the phase of translational research, namely, the process of bringing a scientific discovery to a phase where it can be developed to a commercial drug is deficient. The Innovation Authority is currently formulating, together with all the relevant entities, an outline for improving the translational research process in Israel. It was further revealed during the extensive consultations, that the government support at the early clinical stages is more effective than in the later stages. Therefore, The Innovation Authority will increase its support rates in the early clinical stages to ensure efficient and effective trials that correspond with the global trend.

1. **From high-tech industry to smart technological economy – the technology must penetrate the fabric of life:**In the past few decades, the State of Israel has established itself as a world-class innovation hub that excels in the development of breakthrough technologies and pioneering companies. On the other hand, significant sectors in Israel such as transportation, commerce, construction, education and public services are still lagging-behind when compared to other Western countries, in terms of innovation. This is a result of a variety of factors, mainly - the nature of the competition in the business sector and the regulatory environment in Israel. Due to structural characteristics of the Israeli economy - many sectors in Israel do are not subject to competition, which reduces the incentive to invest in technological innovation therein. At the same time, regulation plays a key role in encouraging or delaying the implementation of technological innovation in the local economy.

However, the global digitation and automation trends may change "players" in the Israeli market. The first sign of these processes is notable in the retail industries that are recently threatened by international online trade. At the same time, the entrance of innovative technologies to heavily regulated and “local” areas, such as transportation and finance, changes the rules of the game in these sectors. It seems that for the long run it will not be possible to prevent the entering of agile innovative competitors to said markets. The citizens of Israel, who are now more exposed than before to the standards in developed countries – demand trains that arrive in time, timely supply of mail packages, relief in traffic congestion and other basic essential services.

These trends will expose companies of all the business sectors in Israel to global competition and increase pressure on the regulators to adjust the rules to the new era. In our opinion, a counter response, that is basically increasing the economic “walls of defense” will not be effective over a long period of time and will not serve the interest of the Israeli citizens. The response should be the opposite – it is necessary to assist Israeli companies in dealing with the innovation-based global competition, and to adjust the regulation to the new technologies.

The first necessary step in this direction is increasing the synergy between high-tech companies and other sectors of the Israeli economy - a step that will benefit all parties involved. The Innovation Authority is at the forefront of this mission and has already begun to implement it. The Authority's new incentive program supporting pilots encourages Israeli high-tech companies to conduct experiments or demonstrations of their products on various sites across Israel. The program is jointly operated with a variety of government ministries that are interested in encouraging innovation in their respective field, and they take part in the financial support and in providing the regulatory approvals for the pilots of the innovative technologies, as necessary.

At the same time, The Innovation Authority is looking into collaborations to promote regulation that encourages innovation. Within the framework of the cooperation that is currently being formed, with the World Economic Forum, Israel is expected to join a network called C4IR, which aims to consolidate and share best practices in the field of regulation of innovation. Within the framework of the network, the Innovation Authority will operate an Israeli center, which will work with local regulators to set regulatory guidelines for future technologies similar to global standards.
2. **Technological innovation in the periphery:**The high-tech industry in Israel is mostly concentrated in the center of the country, while the peripheral regions specialize in industrial production and agriculture. Approximately 75% of all jobs in Israel's high-tech industries are located in the center of the country, while approximately half of the jobs in the manufacturing industry and approximately 80% of the total cultivated agricultural land are in the periphery. Furthermore, the centralization trend continues: between the years 2015 and 2017, 70% of the increase in the number of employee jobs in the high-tech sector are attributed to the Tel Aviv District alone.
This is a widespread global phenomenon: innovative companies tend to concentrate in geographical areas with developed ecosystems – mainly around metropolitan cities. As these areas grow, they become a powerful magnet that attracts most of the "talents", investors and entrepreneurs. In Israel, however, the centralization phenomenon forms two challenges:
	1. A production gap between the peripheral regions and the center of the country: periphery wages are 30% lower than the average wages in the center of the country.
	2. The Israeli high-tech industry does not exhaust the human capital potential in the peripheral regions – a critical issue in light of the shortage of human capital in the high-tech industry.

The Innovation Authority's strategy in dealing with these challenges includes four main objectives:

1. **Promoting technological innovation in the manufacturing industry and the agricultural and food industries of the periphery.** The Authority will act to increase the participation of companies from said industries operating in the periphery, in the various incentive programs by means of intense regional activities (field marketing, deployment of the research and development preparatory in numerous center in the periphery, cooperation with clusters of local authorities in the Negev and the Galilee to provide better accessibility). At the same time, the Authority will encourage technological cooperation between industrial, agricultural and food companies and high-tech companies, technological entrepreneurs and applied research institutions.
2. **Encouraging local technological entrepreneurship in the periphery in propensity to regional anchors.** The Innovation Authority will encourage local entrepreneurship in the periphery, in propensity to regional anchors such as academic institutes and industrial, agricultural and food centers, by means of the new incentive program – “Entrepreneurship Incubators.”

***Expansion on Entrepreneurship Incubators***: A new incentive program to promote local entrepreneurship and employment in the periphery via designated incubators that will assist in the establishment of companies conducting research and development and commercialization. The activities on the incubator will include consolidation and promotion of enterprises in the periphery developed by entrepreneurs or students in academic institutions, joint projects to industry or entrepreneurs or startup companies and academic institutions.
As part of this program franchisees will be selected to run and operate entrepreneurship incubators in the periphery, which will invest in developing local entrepreneurship by providing various tools such as: entrepreneurial grants, grants to local academia and enterprises that meet the needs of local industry's anchors. In addition the incubators will provide numerous services to the incubated companies, including technological and business guidance and connections to local anchors in the vicinity of the incubator, such as: industry, academia, local government, investors, partners and potential customers.
Incubator's franchise will be granted for a period of five years with a possibility to extend it for additional three years, via competitive proceedings that will take place in development A regions in Israel.
This program enables entrepreneurs and startup companies to receive initial investment assistance from the Innovation Authority up to a maximum budget of NIS 1,000,000 as well as additional grants given by the Innovation Authority other programs such as the: Ideation (Tnufa) or Early Stage Companies incentive programs.
3. **Connecting the human capital supply in the periphery with leading high-tech companies.** The Authority will incentivize innovative high-tech companies interested in expanding their search for potential employees to open branches in the periphery, while supporting them in the necessary training and adjustments, by means of a designated incentive program. This program will focus on establishing local anchors of technological excellence that based on local “talents”.
4. **Strengthening the high-tech ecosystem in the large cities.** Haifa, Jerusalem and Be’er Sheva have the pre-conditions for developing high-tech ecosystem such as research universities with strong science and engineering faculties, technological entrepreneurship and research and development centers of large and multi-national companies. The Innovation Authority will act to develop a high-tech ecosystem in all three cities in order to realize their potential as high-tech employment centers. In 2018, Israel Innovation Authority Council approved a new incentive program to encourage technological entrepreneurship in Haifa. In addition, during 2019 a FinSec innovation lab in Be’er Sheva will open, in collaboration with The National Cyber Security Authority and The Ministry of Economy.

**A taste of The Innovation Authority operations throughout 2018:**

2018 was a fruitful year for The Innovation Authority, and the first year in which all the divisions of the Authority have become fully staffed and operational. A central feature of the Authority's activities in the past year is increased cooperation with all the entities of the Israeli government. The synergy between the knowledge, experience and regulatory authorities of the various government agencies and the Authority's expertise in advancing technological innovation is at the base of a variety of incentive programs launched throughout the year, and it strengthens the government's ability to move the Israeli economy forward.

Throughout 2018, the Authority supported 943 companies and financed approximately 1,500 innovative projects, at a total sum of NIS 1.7 billion, of which:

* NIS 450 million, granted to companies who submitted a request for support for the first time this year.
* Approximately NIS 550 million in the fields of life sciences.
* Approximately NIS 400 million for advanced manufacturing.
* Approximately NIS 520 million in the peripheral areas.

Additional key data:

* 213 startup companies were granted support in a total amount of approximately NIS 400 million, under the technological incubators program, and under the Early Stage Companies programs of the startup division.
* 177 growth and mature companies received grants from the research and development fund, at a total sum of approximately NIS 430 million. The average grant amounted to NIS 2.1 million.
* Approximately 200 research group received grants for applicable research in collaborations with the industry.
* 60 companies were granted NIS 70 million for pilot programs of innovative technologies in numerous sites across Israel, with the participation of a variety of government ministries.
* 7 training frameworks started operation under the “coding boot camps” program, designed to train 250 graduates, and received over NIS 10 million during their first operational year.
* 17 start-up companies of ultra-Orthodox and Arab entrepreneurs were granted support within the framework of a designated sub-program, at a total amount of approximately NIS 30 million.
* 57 innovative projects were supported under digital innovation for the public sector challenges program, shared by The Innovation Authority and Headquarters for the National Digital Israel Initiative, at a total amount of approximately NIS 35 million.
* 90 Israeli companies received grants to perform research and development projects, in collaboration with companies from other countries.
* In 2018, the number of applications for research and development support submitted to the Authority increase by 6%, compared to 2017.

Major activities in the past year:

**Promoting innovative growth companies**

During 2018, a new incentive program started operating under the Growth division at The Innovation Authority, **intended to support technological pilots** carried out in Israel. Its goal is to encourage innovative companies to move from the research and development stage to scale up and commercialization, thus embark on a growth path. This program operates in collaboration with a variety of governmental entities – a collaboration that enables to increase the scope of support and ensure that the pilots act in accordance with the regulatory requirements, or under a designated regulatory layout as necessary. During the first year of its operation, dozens of applications were submitted for pilots in numerous pilot sites in the fields of digital health, environmental protection, energy, smart transportation, cyber security, agriculture and with the governmental companies. In the coming years, this program is expected to expand into additional sectors and feature collaboration with additional governmental entities. This program is of strategic importance to The Innovation Authority since it encourages companies to grow into complete companies in Israel, and bridges between the Israeli high-tech industry and other parts of the Israeli economy altogether.

In addition, at the end of 2018 the Advanced Manufacturing division at the Innovation Authority launched, in collaboration with The Investment Authority at The Ministry of Economy, an incentive program to **support initial manufacturing technological feasibility.** The objective of the track is to bridge over the valley of death between the research and development stages and small-scale manufacturing while forming a sequence of governmental support of the technological development – from the research stage all the way to the establishment of an industrial plant in Israel.

**Promoting advanced manufacturing**

The Innovation Authority intensively acted in support of research and development and technological innovation in manufacturing plants, as well as in development of technological infrastructures for the manufacturing sector. **The research and development in the Manufacturing Industry (MOFET) incentive program**  operated by the Advanced Manufacturing division, aims to encourage industrial manufacturing plants to promote and implement advanced technology procedures. The program was promoted throughout the year among industrial companies by means of intensified field work, specifically in the peripheral areas. As a result, approximately half of the industrial companies that applied for support under the MOFET incentive program during the past year, were first time applicants. The research and development incentive program is supplemented by the **research and development preparatory course**, which aims to assist industrial companies that have never engaged in research and development, or such in need of guidance in this field, to embark on the path of innovation. Throughout the year, 23 companies that have successfully completed the preparatory course have moved to the research and development MOFET incentive program - a figure that reflects the leapfrogging of these companies, made possible through the support of The Innovation Authority.

In the field of technological infrastructures for advanced manufacturing, the Technological Infrastructure division, is currently putting together a strategic plan to increase the effectiveness of applied research institutes that work with the manufacturing industry. At the same time, the Authority acts together with The Ministry of Economy, to establish new applied research institutes in the food industry and in the advanced manufacturing industry, both will operate in the northern region of the country.

**Future technologies**

Throughout 2018 a number of new **Generic Technology Research and Development Consortiums (MAGNET)** were approved: An IoT consortium for the food industry, a space communication consortium, generic processor for electronic components consortium and a quantum sensing consortium. The Generic Technology Research and Development Consortium program, operated by the Technology Infrastructure division, aims to encourage the development of generic technologies by a group of companies from the industry and researches from academia.

In addition, throughout the year, the Technology Infrastructure division established a collaboration with the CERN particle accelerator in order to transfer knowledge to companies in Israel, and has begun to support the commercialization of academic knowledge in the field of quantum technologies within the framework program of the European Commission - Quantera. Participating in the financing of Israeli technologies in the field of nanotechnology, together with companies and research institutes in Germany.

The Growth division worked throughout 2018 to expand the **Generic R&D incentive program**. This program designed for mature and large companies, supports long-term research and development of breakthrough technologies that could be leveraged by the companies in the future to a variety of products. In order to expand the number of the large companies investing in breakthrough technological developments in Israel, the division has encouraged in the past year, companies in advanced growth stages to join this program, and the overall investment therein increased from NIS 60 million in 2017 to NIS 85 million in 2018.

In 2019, The Innovation Authority will act to promote a national strategy for artificial intelligence, in collaboration with a wide spectrum of governmental agencies.

**Increasing the supply of human capital in high-tech**

During 2018 the Societal Challenges division at the Authority initiated the **“Coding Bootcamps”** program to support of extra-academic computer coding training. The reward model according to which the program operates is subject to the success to integrate the graduates of the program in a highly paid key positions in the industry. The program also provide incentives for placement of women and under-represented population in the high-tech industry. There is already a surge in extra-academic, high-level programming training - with 20% increase to the supply of high-tech graduates in 2018, and an increase from 8 active extra-academic entities in 2016 to 20 in 2018.
In addition, the Authority participated in the launch of a new category of **foreign experts work visa**, intended for high-tech experts only. Furthermore, the **"Back to Tech"** pilot program was launched to re-integrate Israelis men and women living abroad. People with knowledge and experience reintegrated back to the high-tech industry in Israel, by connecting them to employers and relevant employment opportunities. At the same time, there was an increase in the application and grants to **ultra-orthodox and Arab** entrepreneurs and start-ups.

Other channels in which the division operated throughout 2018 for the purpose of increasing the human capital in high-tech include removal of barriers to integrate foreign experts in the industry, connecting returning citizens with technological qualifications to high-tech companies and encouraging technological entrepreneurship among groups in the population that are under representation in the industry. In order to allow Israeli high-tech companies to employ foreign experts with unique knowhow and experience, the Population and Immigration Authority, Foreign Trade Administration at the Ministry of Economy and Industry, Ministry of Labor and Social Affairs, Ministry of Foreign Affairs and The National Economic Council in the Prime Minister's Office, together with The Innovation, formed a new category of **foreign experts work visa** intended for high-tech experts only. This channel has many advantages, among which is electronic submission, a fast approval track for a work permit and a working visa for the partner. In addition, the pilot program **“Back to Tech”** was launched, designed to re-integrate into the Israeli high-tech Israelis living abroad who have the required knowledge and expertise, by connecting them to local employers and employment opportunities. And finally, **the Diverse Startups Incentive Program for Minorities and Ultra-Orthodox population**, jointly operates together with the Startup division, was updated in order to increase the number and the quality of the supported projects. This was carried out following an in-depth analysis of the program's results, conducted by the strategic division at the Authority. Under the updated framework of this program, the Authority expanded its marketing efforts, in order to reach the relevant target audiences. As a result, the number of projects supported under this program throughout 2018 increased by 20% in comparison to 2017.

**Innovation in the periphery**

In the field of advanced manufacturing – where half of its operation is in the periphery, intensive field work was carried out to make the Authority's incentive programs available to industrial companies, especially in the periphery. In this framework, the Advanced Manufacturing division's team conducted dozens of visits to companies and participated in professional conferences in the periphery. As a result, more than half of the companies supported by the division are operating in the north and south of the country.

In addition, this year the division held a "speed dating" event, the first of its kind at the Kinneret College. The event served as a meeting platform to connect startup companies that develop solutions in the field of advanced manufacturing and industrial companies. Given the success of the event, which was attended by 160 participants and during which many connections were made, a second such conference is planned for early 2019, in the south region of the country.

At the same time, in 2018, a competitive process was announced for the establishment of an incubator in the field of Food-tech in Safed - northern Israel, the results of which will be published in 2019. Further, the establishment of a new innovation lab in Be'er Sheva was approved. This lab designed for cyber security and FinSec, was launched together with The National Cyber Security Authority and The Ministry of Economy, which will lever national assets (mainly CERT), to promote start-up companies in these fields.

These initiatives will begin operating in 2019, together with two new tracks that reflect the realization of the strategy for promoting innovation in the periphery that was presented in the Innovation Report:

* **A program to encouraging local entrepreneurship in the periphery** by connection them to regional anchorssuch as academic institutions and industrial, agricultural and food centers – the entrepreneurship incubators in the periphery program operated by the start-up division. During 2019, franchisees will be chosen through a competitive process, to establish and operate these incubators. The franchisee will be locating and selecting suitable local enterprises, providing them with technological and business support, and connecting them to regional anchors, investors, partners and potential clients. In addition, it will provide entrepreneurs and start-ups with the necessary workspace and will invest supplementary funds in them and in the operation of the incubator. The Innovation Authority will take part in the financing of the ongoing operation of the incubator, and will grant incentives to encourage entrepreneurship, commercialization of applied research and R&D through a variety of of the Authority's benefit programs, including the Ideation (Tnufa) program, the Early Stage Companies incentive program, and the Kamin and Nofar programs for applied research.
* **An incentive program to encourage the establishment and expansion of high-tech companies' activities in the periphery**, which will be operated by the Growth division. This program provides incentives for high-tech companies, encouraging them to base technological excellence centers in the periphery. This program has dual objectives: to leverage the human capital in the periphery for the purpose of integration to the high-tech industry, and forming highly paid local employment. The terms of the track include generous benefits for companies willing to develop research and development operations in the periphery, alongside with the requirement to perform the majority of the supported research and development work by local employees and ensuring high level of innovation. In order to moderate the risk involved in establishing research and development operations in a remote region and in a "lean" employment market, the companies supported by this program will receive a three-year support package, at a grant rate starting at 70 percent of the approved budget, which will gradually decline to 50 percent during the third year, up to a maximum of NIS 10 million per year. In addition, the companies will receive up to NIS 3 million for their required operational needs, such as purchasing research and development equipment and training manpower. On the other hand, the support will be granted provided that 60 percent of the employees working on the research and development project will be residents of the periphery and subject to the high quality of the project. After the said support period of three years, the companies will be able to apply for additional support within the framework of the employment programs at The Ministry of Economy and Industry (The Investment Authority).

Promoting international collaborations and making international financing accessible to the Israeli industry

Seven new **bilateral agreements** were signed between Israel and countries around the world throughout 2018, including the UK, Thailand, Argentina and four US States. In addition, the Israel-India Industrial R&D and Technological Innovation Fund started its operation. Moreover, extensive activity was carried out to increase the participation of Israeli companies in the various tracks suggested by the European research and development framework program, Horizon 2020. From its inception, total participation of the Israeli industry in Horizon 2020 framework program is currently summed at over € 200 million, with an upward trend in Israeli participation in the years 2017 and 2018.

**Encouraging research and development in response to societal and public challenges**

In the past year, the Societal Challenges division concentrated all the incentive programs that provide responses to these areas under one strategic umbrella and began to focus all the programs in the strategic direction of impact investments. Accordingly, the programs were updated and extensive marketing activities have been carried out with various partners from across the ecosystem in order to expand the target audience, to increase the scope and quality of projects that seek support, and to direct the entrepreneurs in the field to focus on the significant challenges defined in the calls for proposals. In this framework, the **Digital innovation for track for public sector** **challenges** program, in cooperation with the National Digital Israel Initiative, Ministry of Social Equality, and the program for **Assistive technologies for the disabled** **(“Ezra Track”)**, in cooperation with the National Insurance Institute, were launched in 2018 with calls for proposals directed at preferred focus areas. In addition, the evaluation of projects' method submitted within their framework has been improved. At the same time, The **Grand Challenges Israel** **(GCI) incentive program** - **Innovation for Global Health Challenges** in cooperation with the Ministry of Foreign Affairs, that was not inactive since 2015, was updated and re-launched in 2018.

**Improving interfaces with the industry**

1. The Authority acted to establish and implement a new service concept in 2018 - to decrease its response times throughout the support cycle of both the entrepreneurs and companies. The results are already evident: 90% of the entrepreneurs and start-up companies who applied for support from the Startup Division accepted the committee's decision within 9 weeks, and 83% of the companies who applied to other divisions received a response within 12 weeks.
2. The Authority's support for projects that include open source provided for general use was approved. This is so long as the providing of the source code for the general use is expected to generate economic and business benefit for the supported company.
1. The data provided in respect of 2018 refers to the first three quarters [↑](#footnote-ref-1)