

# ISRAEL HIGH-TECH & INVESTMENT REPORT

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## Exits are Getting Larger

One of the criticism of Israel's high companies has been their tendency to sell out early in their career. This is no longer so as in recent times we have experienced two one billion dollar exits. This is probably a good thing as companies that mature acquire a greater value than younger ones.

This will not prevent young companies to sell themselves as there is a get rich quickly tendency.

Later exits also make it more attractive for foreign investors who tend to be attracted by the prospects of attractive returns.

Israeli high-tech firms raised \$474 million in venture capital in the first quarter, after raising \$1.92 billion in 2012, The Israel Venture Capital (IVC) Research Center said.

The amount raised in the January-March period was 4 percent lower than the fourth quarter and 2 percent below the first quarter of 2012, IVC, in cooperation with the Israeli office of consultancy KPMG, said in a report.

"The majority of funding during the first quarter of 2013 was allocated to companies already generating revenue in businesses where feasibility was already proven," said Ofer Sela, a partner at KPMG's technology group. "Most funding to companies at that stage was directed to the software and Internet sectors. This reflects the

cautiousness of investors nowadays."

Israeli high-tech companies are key drivers of the Israeli economy, helping to spur growth of 3.2 percent in 2012. IVC expects a similar level of capital raising in 2013 as in 2012.

Israeli VC fund investments accounted for \$147

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### Exits are getting larger

High tech firms raise a meager \$474m

Cisco to build cyber R&D center

A Carmiel high-tech firm, a female Haredi CEO leads by example

Recent advances in stem cell biology

EMC buys startup ScaleIO for up to \$300m.

IBM acquires Israeli cloud firm

Israel ranked 6th worldwide in defense exports

Israel Information Technology Report Q2 2013

A solution for the visually impaired

Inside the secret tech ventures that are reshaping the Israeli-Arab-Palestinian world

A battery with infinite power

million in the first quarter, up 18 percent from a year earlier.

“The increase in Israeli VC fund activity in the first quarter of 2013 is a direct result of capital raising by the funds in 2012,” said Koby Simana, chief executive of the IVC Research Center.

“Several funds are currently in advanced stages of capital raising. As a result, we expect the overall amount of capital to grow, expanding Israeli VC fund investments in local high-tech companies, and even possibly increasing their share of investments in the industry.”

In the first quarter, the software sector attracted the largest share of funds for the first time in four years at 29 percent, followed by the Internet sector at 22 percent.

“The current year opened with a very strong quarter for the information technologies and software sector, with a record high level of investments both in amount invested and number of transactions made, This sector, traditionally one of the backbones of the Israeli high-tech industry, is mainly being propelled by cloud based enterprise applications and IT security” added Sela.

### Cisco to build cyber R&D center

CEO of American multinational networking corporation says company will invest \$15 million in Israeli venture capital funds, development of new security technologies

Cisco Chairman and Chief Executive Officer John Chambers, who is visiting Israel as part of the Presidential Conference, met with Prime Minister Benjamin Netanyahu on Wednesday and announced additional investments planned by the company in the country, as well as the recruitment of employees in the field of information security.

According to Chambers, the company plans to establish a development center in Israel that will sponsor research on cyber security and analyze security in the financial, health and industrial sectors in cooperation with startup companies and the academia.

### Mega Exit

Cisco buys Israel's Intucell for \$475m. multinational networking giant announces acquisition of Raanana-based developer of mobile network management technologies

Full story

He said it would facilitate the growth of a new generation of high-tech companies in Israel and the integration of ultra-Orthodox and minorities in the labor market.

A source in the Israel National Cyber Bureau estimated that Cisco would invest tens of millions of dollars in the new center and will recruit about 100 new employees in the coming year.

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The company already has 2,000 employees in Israel.

Chambers said that Cisco would also invest \$15 million in Israeli venture capital funds and in the development of new security technologies as part of a broader plan to expand its operations in Israel and outside the United States. No country has startups like Israel does and I go where the startups are,” Chambers told a news conference.

Israel “will be the first country in the world to go end-to-end digital,” he said, noting it will be boosted by an ambitious project to build a super-fast fiber optics network.

A group led by Sweden’s Viaeuropa was chosen to build the network along with state-run utility Israel Electric Corp using Cisco’s technology.

Cisco said the project, which will cost billions of shekels, is expected to be completed in 7-10 years but Chambers said that he was pushing for full deployment in 18-36 months. Cisco, he said, is financing \$140 million of the project.

**A Carmiel high-tech firm, a female Haredi CEO leads by example**

Hanita Fridman says the success of her company proves how many ultra-Orthodox Israelis want to work, if only they have the opportunity

Hanita Fridman (left), along with Economics Minister Naftali Bennett and Karmisoft CFO Shimon Korlefsky, during a recent visit by Bennett to Karmisoft’s Carmiel offices.

To paraphrase the Passover Haggadah, dayenu – it would have been enough – if Hanita Fridman ran a software development company whose vision was to help the ultra-Orthodox find their place in Israel’s workforce. As it turns out, she is all three. Along with a partner, Fridman

(whose husband studies full-time in a kollel) runs start-up computer software development company Karmisoft, where more than half of the nearly two dozen employees are Haredi men and women, in the Galilee town of Carmiel.

“Whenever I hear a debate on public policy regarding how to put the Haredim to work, I don’t know whether to laugh or cry,” she said in an interview. “Of course Haredim want to work. It’s just that nobody wants to hire them.”

Karmisoft is on top of the latest trends in app development, with employees expert in hot areas like embedded systems, user interface, web apps, and mobile app development. “It’s a little strange to fathom,” she acknowledged, “seeing the Haredi women who work in our office programming for smartphones, when they themselves use phones that don’t even have text messaging capabilities.”

Karmisoft’s staff has done dozens of creative projects, including a remote control card software project for the military, a quality testing tool for embedded system cards with LCD screens, numerous websites, and dozens of mobile and web apps. “We did, for a European company called Grunveld, a security application for trucks, which uses sensors to alert drivers to obstacles in their path when they are going in reverse,” said Fridman. “We did another sensor app for a company called Btline, which gathers data on temperature and humidity in fruit growing areas, and sends the data to a website, where farmers can access it.”

Carmiel may seem an improbable place for a Haredi-oriented company to set up shop, but the town actually has a substantial ultra-Orthodox community, attracted by the relatively reasonable house prices. Fridman and her family moved there from a kibbutz near the northern town of Ma’alot about a dozen years ago, when they became newly Orthodox (ba’alei teshuva).

Fridman has degrees in computer science, businesses administration, and marketing, and has been working in high-tech for over 20 years. “I consulted with rabbis who told me that it was great that I had a successful career, but that it would be even better if I could do something to help the community.” Thus was born the idea for Karmisoft, which Fridman and her partner established in 2010.

Some political and business leaders concerned with the issue of the ultra-Orthodox in the workplace see Fridman’s company as a model of what could be. Several weeks ago, Economics Minister Naftali Bennett visited, and this week she met (not for the first time) with industrial mogul Stef Wertheimer, who is very interested in bringing more Haredim to work in his Tefen Industrial Zone in the north.

The public is also misinformed as to the “demands” that the ultra-Orthodox are reputed to make as conditions for working. “Many of the Haredim who work for tech companies in the center of the country are sent to work in departments and even buildings separate from the rest of the employees, but that is usually a management decision. Here in the north we do not have luxuries such as separate departments for anyone, and Haredim and secular people sit, work, and produce in the same room.” The same holds true for Internet use; most Haredi authorities understand the need to use the Internet in work settings, she said, though they are concerned over the Internet’s deleterious effect on youth when used at home.

Recent advances in stem cell biology and tissue engineering have enabled researchers to consider ways of restoring and repairing damaged heart muscle with new cells. A major problem has been the lack of good sources of human heart muscle cells and the problem of rejection by the immune system. Scientists at Rambam

Medical Center and Technion – Israel Institute of Technology may have found the solution.

By taking skin cells and turning them into stem cells the scientists were able to generate beating heart cells. By transplanting reprogrammed skin cells of heart failure patients back into their body, researchers have found a solution for immune system rejection as well as a new source of heart cells.

Professor Lior Gepstein, who led the research, explained: “What is new and exciting about our research is that we have shown that it’s possible to take skin cells from an elderly patient with advanced heart failure and end up with his own beating cells in a laboratory dish that are healthy and young – the equivalent to the stage of his heart cells when he was just born.”

The process involved turning skin cells into human-induced pluripotent stem cells (hiPSCs). These are stem cells created artificially from existing human cells that have the potential to turn into any kind of body cell, or in this case – into heart muscle cells.

One of the obstacles to using hiPSCs in humans is the potential for the cells to develop out of control and become tumors. Crucially, this reprogramming “cocktail” did not include a transcription factor called c-Myc, which has been used for creating stem cells but is a known cancer-causing gene.

Much research has yet to be conducted before these results could be translated into treatment for heart failure patients in the clinic. However, the researchers warn that there are a number of obstacles to overcome before it would be possible to use hiPSCs in humans in this way, and it could take at least five to ten years before clinical trials could start.

Lior Gepstein is a Professor of Medicine (Cardi-



ology) and Physiology at the Sohnis Research Laboratory for Cardiac Electrophysiology and Regenerative Medicine, Technion-Israel Institute of Technology and Rambam Medical Center in Haifa. Ms Limor Zwi-Dantsis, who also worked on the study, is a PhD student in the Sohnis Research Laboratory.

### **EMC buys startup ScaleIO for up to \$300m.**

In another outsized transaction for Israel's high-tech industry, the U.S. data-storage company EMC Corporation said it had agreed to acquire ScaleIO, a start-up that makes server-side storage software.

Neither EMC nor ScaleIO would say how much the U.S. company is paying, except to say it would be entirely in cash. However, reports that leaked last month as the two sides were negotiating spoke about a price of between \$200 million and \$300 million.

The deal will be EMC's second acquisition in Israel in just over a year, after buying the flash storage firm XtremIO for \$430 million in May 2012. ScaleIO's Israel R&D team, based in Binyamina, will be merged into the R&D center set up after EMC bought XtremIO.

"Flash now permeates every layer of information technology - in virtualized and non-virtualized environments," EMC CEO David Goulden said in a statement. "ScaleIO is a natural extension to our best-of-breed portfolio. It strengthens our product capabilities in the area of server-side storage and brings a world-class team that will undoubtedly enable us to innovate more quickly in the future."

ScaleIO CEO Boaz Palgi didn't add any further details, but, in a letter to staff posted on the company's website, expressed "great pride in the no-nonsense manner in which we have put ScaleIO on the map, with limited resources and in a highly competitive market.

"Not only have we engineered and brought to market a robust product, but we've also gained the confidence of our customers - and drawn attention from the industry's largest players," he said.

ScaleIO, whose software helps businesses create a virtual pool of server-based storage by combining resources from solid-state drives, PCIe flash cards and traditional hard drives, will be folded into EMC's Flash Products Division.

The ScaleIO acquisition follows Google's high-profile purchase of the navigation apps startup Waze last month for more than \$1 billion, and a \$400 million fundraising from a group of blue chip investors by Mobileye, whose technology helps automobile drivers avoid collisions and other road mishaps.

ScaleIO was formed in 2011 by the same team that founded the start-up Toplo, which was sold in 2006 to the American company NetApp, formerly Network Appliances. Initially self-funded, ScaleIO raised \$12 million last December in its first fund-raising round from the U.S. venture capital funds Norwest Venture Partners, Greyllock Partners and a group of private investors.

EMC has been a serial buyer of Israeli start-ups. Besides ScaleIO and XtremIO, in 2006 it acquired the data storage companies Kashya, nLayers and ProActivity, for \$153 million, \$50 and \$30 million, respectively.

### **IBM acquires Israeli cloud firm**

IBM has reached an agreement to acquire Computing Solutions Leaders in a move meant to deepen its cloud capabilities.

Computing Solutions Leaders, an Israel-based firm, is a leading provider of virtualization management technology for IBM's zEnterprise system, and the acquisition will strengthen

IBM, allowing the company to offer simplified management of the virtualization environment, according to The Algemeiner.

The firm's CSL-WAVE software enables companies to monitor and manage their z/VM and Linux on System z environments using a powerful interface, The Algemeiner reported.

This is the second cloud-related acquisition IBM has made since the beginning of June when it announced it was buying SoftLayer Technologies for \$400 million.

### **Intel acquires Omek Interactive**

Intel is paying \$30-40 million for the Beit Shemesh-based gesture recognition company, which raised \$14 million.

Intel Corporation (Nasdaq: INTC) has acquired gesture recognition and tracking technology software developer Omek Interactive Ltd. for \$30-40 million. The Beit Shemesh-based company has raised \$14 million to date.

With this acquisition, Intel is pursuing its efforts in perceptual computing and gesture recognition and 3D cameras to improve the user's experience.

Intel Capital led Omek's \$7 million third financing round in July 2011 and other investors included Chestnut Street, ff Ventures and Equity Group. In recent weeks, the company tried to raise more funds but probably did not succeed.

The company was founded in 2006 by CEO Janine Kutliroff and her husband Dr. Gershom Kutliroff.

### **Israel ranked 6th worldwide in defense exports**

Rankings by IHS Jane's, which specializes in the defense-military field, have positioned Israel in the sixth place with regards to defense exports.

Leading the list is the US ranked in the first place; Russia, which sold weapons during 2012 at a scope of \$10 billion, is listed in the second place; France is listed third, with \$4.5 billion. The UK, with exports totaling nearly four billion dollars, is listed in the fourth place, and Germany, which sold weapons and defense equipment at a scope of \$3.5 billion, is listed in the fifth place.

According to the company's analysis, Israel sold systems at a scope of \$2.4 billion, passing Italy, China, Canada and Sweden. According to IHS Jane's, Israel is ranked second worldwide in the sales of unmanned aerial vehicles (UAVs) after the US, in contrast to reports from other companies, including Frost and Sullivan, which determined that Israel is the world's leading UAV exporter. However, the company notes that as of next year, Israel will sell twice the number of UAVs sold by the US, and will become the world's leading exporter of UAVs during 2013.

According to the report, Israel's defense export has increased by 74% compared to 2008, primarily due to deals that were signed with India.

If you've had wrist and shoulder pain from clicking a mouse, relief may be in sight. This spring, a new motion sensing device will go on sale that will make it possible for the average computer user to browse the Web and open documents with a wave of a finger.

The Leap Motion Controller is on display at the South by Southwest Interactive conference in Austin, Texas, for the first time. It's one of the most talked about startups at the conference, where some 26,000 people have gathered to see emerging tech companies.

I went to have a look at the controller, which was sitting about a foot and a half away from a big iMac computer, and was connected with a

USB cord.

There was a game of Fruit Ninja up on the screen. I put my fingers above the controller, and I could move a cursor around and blow up pieces of fruit with it. Impressive — but this motion controller can be used for more than just games.

“Out of the box, you’ll be able to control your computer very simply. You’ll be able to browse the Internet and scroll,” says Michael Zagorsek, Leap Motion’s vice president of marketing. “So a lot of the things people are used to, they can now do in the air without touching anything.”

The Leap represents another step in a goal of computer scientists: to make interactions with machines feel natural and easy, and to take away the barriers between humans and computers. Michael Buckwald, the company’s CEO and co-founder, explains that interactions with computers should mimic our normal behavior.

“Hundreds of times a day I reach out and grab things, and if you think about it, that act of reaching out and grabbing is very complicated,” Buckwald says. “But I’m able to do it hundreds of times a day without thinking and without ever failing; and we want to bring that intuition to interacting with the computer.”

You can, in fact, pull, grab and use pinching motions in the air, which the Leap will detect. But it’s not natural enough for Sarah Allen, a programmer who came along with me to try it.

“One of the things that I’ve always wanted to do is open up my computer by waving my arms in the air in a big yoga salute,” Allen says. “This is never going to do that.”

Allen notes that Microsoft’s Kinect, an accessory for the Xbox video game system, allows that kind of motion with a TV. Buckwald says his

company is aiming for something different. The feline known as Grumpy Cat.

“The Kinect is for the living room; it is for gross movements [and] doesn’t track fingers,” he says. “The Leap has a smaller interaction area but is for multiple fingers, more nuanced types of interaction.”

Allen definitely sees the potential here. Leap also showed off a program that lets you manipulate 3-D images on your computer by using your fingers. It’s like working with a chunk of virtual clay. Allen says that when more people have 3-D printers that allow you to make personalized objects from your computer, you can imagine what might be possible.

“You can imagine that you want a vase, and you’re going to go to your virtual potting app, and then you can interact with it and create something kind of fun and delightful,” she says.

But that will take a lot of programmers like her developing apps for the Leap and 3-D printers. Buckwald says they have thousands of programmers already developing for the Leap.

Analysts say the cost of the Leap Motion Controller — \$80 — and the fact that you can add it to both Mac and Windows computers makes it very appealing. When it comes out in May, they say what will really matter is not the applications to come, but the ones you have when you open the box.

Research on delivering safer drugs through skin applications

New, more efficient drug formulations designed to treat illnesses through skin applications -- thus avoiding serious side effects associated with oral drug-taking -- have been developed by a student at the Hebrew University of Jeru-

saalem. The method is based on utilizing skin-permeable proteins that are inserted into nano-structured gels

The award winner is Marganit Cohen-Avrahami, a Ph.D. candidate working under supervision of Prof. Nissim Garti and Dr. Abraham Aserin of the Casali Institute of Applied Chemistry. For her project, Cohen-Avrahami has been named one of the student winners of this year's Kaye Innovation Awards, to be awarded on June 18 during the 76th meeting of the Hebrew University Board of Governors.

Cohen-Avrahami's research has focused on the use of lyotropic liquid crystals, which are transparent, soft gels which can easily be administered transdermally, that is, rubbed on the skin. They are based on a surfactant, a molecule which can bind both water and oil and forms gels. These nano-structured gels are capable of loading high amounts of drug molecules within their extremely large surface areas.

In her research, Cohen-Avrhami focused on developing transdermal gel formulations incorporating non-steroid anti-inflammatory drugs (NSAIDs). Patients taking these types of drugs orally, as in the cases of fever, pains, inflammation, arthritis, migraine, renal colic and cancer, may suffer from severe side effects associated with their consumption, such as ulcer, gastrointestinal bleeding and renal failure.

Transdermal delivery as an alternative, therefore, might be highly advantageous to millions of patients by providing relief, while minimizing the side effects. The liquid gels can be applied on the injured area and release the drug into the tissue in a controlled manner, reducing the consumed dose through application of the drug directly on the injured area.

For controlling the drug delivery rate, cell-penetrating peptides (CPPs) were examined.

Peptides are the building blocks for proteins. They are small structures built by amino acids, which are then bonded and folded to form a three-dimensional compound.

These unique peptides, first discovered in biological systems, including HIV and herpes, were found to be able to penetrate into living cells and insert different "cargos" into them. The CPPs were proved to increase skin permeation and enhance the delivery of the NSAIDs from the soft gels.

Different CPPs were examined by Cohen-Avrahami, and their different chemical structures and specific interactions inside the gel were shown to be important in controlling the drug delivery profile.

"The finding that these safe and comfortable CPP-loaded gels comprise a controllable skin permeation of drugs shows that they may be utilized for a variety of drug systems and opens a wide window of opportunities in the transdermal delivery field," said Cohen-Avrahami."

Another student winner this year of a Kaye Award is Uri Ben-David, a doctoral student of Prof. Nissim Benvenisty of the Silberman Institute of Life Sciences, who has developed a safer method for using pluripotent stem cells, which are human-derived stem cells that can convert into any cell type of the human body, and may thus help to cure a variety of diseases.

Israel Aerospace Industries (IAI) unveiled at this year's Paris Air Show, a pioneering compact three dimensional (3D) high frequency (HF) Direction Finders for airborne, shipborne and ground platform applications.

The new communication intelligence (COMINT) system, designated ELK-7065 3D HF DF, developed and tested by ELTA Systems Ltd., an IAI subsidiary and group, tags and labels



signal identifiers such as power, frequency, modulation, geo-location and polarization in order to provide quick labelling and identification of the received signals, creating a reliable Electronic Order of Battle (EOB) picture. This unique method is enabled by innovative sensor technology.

HF communication plays an increasingly significant role in military, para-military and civilian applications. The need for Beyond Line Of Sight (BLOS) communication is achieved through HF communication without using expensive satellite communication systems. Whether using sky wave propagation or a close range network utilizing ground waves, HF communication is proving to be an increasingly practical and reliable solution especially with the advent of advanced HF related technologies such as Automatic Link Establishment (ALE). This fast growing use of HF communication has created an increasing interest in HF intelligence systems. Current systems, however, are very cumbersome and require very large antennas which typically render them unpractical for compact and mobile applications.

ELTA's unique capabilities, demonstrated by the ELK- 7065 3D HF COMINT system, allow for better classification and distinction of incoming signals.

Its advanced technology requires comparatively very small antennas for aerial purposes or small pick-up antennas for shipborne and ground platforms in order to provide an HF COMINT and geolocation capability which up to now, was provided only by antenna arrays measuring tens of meters. This compact installation enables smaller platforms to perform the COMINT mission with unparalleled mobility and flexibility.

The maritime and ground vehicle antennas are merely 35 centimetres (13.7 In) long. The new airborne antenna configuration, measuring

merely 30 by 50 centimetres (11.8 In by 19.6 In), has completed development testing and was recently installed on an IAI-made heron 1 Unmanned aerial vehicle (UAV).

The test results surpassed expectations and are paving the way for the first production unit which may be installed on any relevant UAV or manned platform. Additionally, the same concept has been applied to conformal antennas that can be installed on marine vessels and ground vehicles, enabling a low radar cross section (RCS) and body obstruction.

The Israeli Export Institute and the Israeli Ministry of Defense's SIBAT division, which are responsible for promoting Israeli civilian and defense exports, noted that this year, the Israeli pavilion will emphasize unmanned measures, systems and aircraft, which represent the future perception and stand at the forefront of global technology.

A variety of measures and defense systems will also be presented at the expo, including warning systems, active defense systems and countermeasures, electronic systems, advanced communication and electro-optic systems, and electronic systems intended for civil aviation. In addition to the developments and measures, the Paris Air Show represents a stage for promoting the export of contractor companies specializing in aviation production, which offer many advantages to local and global industries.

According to Brig. Gen. (Res.) Shmaya Avieli, the head of SIBAT: "In order to overcome the complex Middle Eastern challenges and in light of the developments of the past few years, Israel must maintain a military advantage and utilize the most advanced technologies. This is done via the IMOD's research and development, which is led by MAFAT and with the support and cooperation of the defense industry, led by SIBAT.

“Select examples of technologies developed in Israel will be seen at the Paris Air Show. These are very advanced, flexible and adaptable systems, which have been tested and proven in the field, which gives them a tremendous advantage. Israel’s defense export offers independent systems together with integration and swift solutions for existing systems. These characteristics explain the growth of Israel’s defense export in recent years, despite the economic crisis. This market is proof of the Israeli defense production and development capability, which contributes greatly to the Israeli economy.

According to Ofer Zachs, Export Institute CEO: “the size of the export intended for the civilian market grew by nearly 30% in 2012, reaching \$1.3 billion. In order to ensure the continued growth of the export, research and budgetary backing must continue for R&D in defensive fields that are close to civilian activity.”

### **Israel Information Technology Report Q2 2013**

We expect IT spending to reach ILS23.1bn in 2013, with particularly strong growth in software and services as the market matures. While hardware, particularly PC and notebook sales continue to dominate the market, we believe IT services will increasingly form an important part of the overall IT market. Increasingly the market will be driven by key sectors such as government, defence and financial services, bringing IT services to form 36% of the overall market spending by 2017. This quarter we have reasigned all forecasts to be in local currencies.

#### Headline Expenditure Projections

Computer Hardware Sales: ILS9.83bn in 2012 to ILS9.78bn in 2013, down marginally. Forecast downwardly revised due to macroeconomic factors, but Israeli businesses are investing more to facilitate expansion and development.

Software Sales: ILS5.1bn in 2012 to ILS5.2bn in 2013, growing 2% y-o-y. Device and data proliferation will drive spending on customer relationship management (CRM), databases and business intelligence.

IT Services Sales: This will remain the most dynamic sector of the industry, increasing from ILS7.9bn in 2012 to US\$8.1bn in 2013. . Stable sectors such as government and defence offer continued revenue opportunities while other sectors will grow in importance over our forecast period.

#### Key Trends & Developments

We have revised down our forecasts as the outlook for the Israeli economy is weaker than we had previously expected. Market specific factors such as the launch of Windows 8 operating system and an expected increase in tablet sales will offset some of the economic slowdown but it cannot be ignored for long. Nevertheless, the ever changing IT services segment offers strong growth opportunities that may offset slower growth elsewhere in the market.

New cloud computing offerings and increased competition in this segment should fuel further demand from users. Particular areas of opportunity for cloud computing include banking and retailing as organisations in those fields look to save money on hardware investments. Businesses will, not only seek to make cost savings, but will look to boost efficiency and increase flexibility of response to customer needs.

#### **\$493 million raised in Q2/2013, up 4% from Q1**

Q2 Israeli VC fund investments down to a 24 percent share, a two-year low

Israeli seed investments decline to \$27 million or 13 percent from Q1/2013

VC-backed investments up 20 percent H1/2013

Σ Software sector leads investments in H1/2013 with \$217 million

Tel Aviv, Israel, July 23, 2013. In H1/2013, 312 Israeli high-tech companies attracted \$967 million from local and foreign investors, slightly above the \$962 million raised by 270 companies in H1/2012, but almost eight percent down from \$1.05 billion invested in 286 companies in H1/2011.

One hundred and eighty-four VC-backed deals attracted \$763 million or 79 percent of the total raised in H1/2013. This amount is 20 percent higher than the \$638 million raised in VC-backed deals in H1/2012.

The average company financing round was \$3.1 million, while the average financing round for VC-backed deals was \$4.2 million.

In Q2/2013, 143 companies raised \$493 million, up four percent from \$474 million raised by 169 companies in Q1/2013 and three percent from \$477 million attracted by 129 companies in Q2/2012.

Sixteen companies attracted more than \$10 million each, accounting for 52 percent of the total amount raised in the quarter.

Eighty-five VC-backed deals attracted \$399 million or 81 percent of the total amount raised in Q2/2013. This compares with 77 percent in Q1/2013 and 67 percent in Q2/2012.

The average company financing round was \$3.5 million, while the average financing round on VC-backed deals was \$4.7 million.

“The second quarter of 2013 ended on a strong note for Israeli high-tech companies, which managed to raise nearly half a billion dollars in the first half of the year. It is interesting to note that more than 60 percent of financing rounds were with the participation of Israeli VC funds, despite the fact that the Israeli VC share in capital invested declined,” said Koby Simana, IVC Research Center’s CEO. “Analyzing the data beyond the direct investment perspec-

tive, shows that local funds play a major role in driving high-tech financing deals forward, even when the bulk of capital is sourced from foreign investors,” Simana concluded.

#### Israeli VC Fund Investment Activity

In H1/2013, Israeli VC fund investments accounted for \$265 million or 27 percent of the total amount invested. The share is unchanged from H1/2012, but is well below the 35 percent of H1/2011.

First investments captured \$94 million or 35 percent of total investments, compared with 29 percent and 24 percent in H1/2012 and H1/2011, respectively. Follow-on investments by Israeli VC funds in the period accounted for the remaining 65 percent.

In Q2/2013, only \$118 million (24 percent) was invested by Israeli VC funds, the lowest quarterly amount in three years. This compares with the \$147 million (31 percent) invested in Q1/2013 and \$131 million (28 percent) invested in Q2/2012.

First investments in Q2 were \$32 million (27 percent of total investments), a 48 percent decline from the \$62 million (42 percent) of Q1, but about 2 \_ times the \$13 million (10 percent) of Q2/2012. Follow-on investments by Israeli VC funds accounted for 73 percent.

#### Capital Raised by Sector and Stage

In Q2/2013, the life sciences sector attracted the largest share of quarterly investments for the fourth time in three years. Thirty-three companies raised \$121 million (25 percent of total investments), a 33 percent increase from \$91 million (19 percent) raised in Q1/2013, and a slight rise from \$120 million (25 percent) raised in the year-earlier period. The Internet sector followed with \$87 million or 18 percent. Ofer Sela, partner in KPMG Somekh Chaikin’s Technology group, commented, “The uptick in investments in the second quarter reflected in part relatively

robust activity in the medical devices segment. Yet, more than two years after the launch of the Israeli government initiative to promote investments in the life sciences, the sector as a whole is still not showing the expected results (although we believe new investors have been brought to the Israeli market and have provided some stimulation to the overall life sciences industry).

Israel is clearly falling behind the US in the relative level of biotechnology investments. Few of the most remarkable success stories of technology transfer from Israeli research institutions have been in biotech. While the risk in this industry is obvious, overall returns are still considered very rewarding. The Israeli government needs to continue to intervene in order to create the right ecosystem for Israeli biotech companies to flourish and prosper, as it did with the venture capital industry in the early '90s."

Thirty-two seed companies raised \$27 million (5 percent) in Q2/2013, a decrease of 13 percent from \$31 million raised by 53 companies in the previous quarter, but 29 percent above the \$21 million (5 percent) attracted by 31 seed companies in Q2/2012.

### **A solution for the visually impaired**

A new device called OrCam could be life-changing for the visually impaired and blind: The tiny wearable computer uses audio feedback to relay visual information that they can't see, enabling them to take on new tasks they were unable to perform alone before.

The device works with a 5-mega pixel camera that attaches to spectacles. It is capable of reading text and with the help of the user, can be taught to recognize faces and objects, says computer sciences professor Amnon Shashua, cofounder of the Israeli startup OrCam Tech-

nologies.

The OrCam invention is based on a computer-vision algorithm called 'Share Boost,' which researcher Yonatan Wexler says has improved artificial intelligence. The device can work for up to six hours before needing recharging.

One of the benefits of OrCam is that it has a memory system that stores the objects it recognizes and continually adds to the users library.

Researchers say there are still a few kinks to iron out - most importantly the device's sensitivity to light and surfaces that are not flat.

The device will go on sale in the U.S. in September and will retail at \$2,500.

Amnon Shashua is also well-known in Israeli tech circles for being a co-founder of another striking technology company, Mobileye, founded in 1999. Yet again it involves vision - in this case, developing vision-based Advanced Driver Assistance Systems. Mobileye is also famed for achieving the respectable value of more than \$1.5 billion, based on the latest investment in the firm.

Yoav Leitersdorf isn't trying to build a Silicon Valley in Israel. His goal is to bring the best of Israel to the U.S.

YL Ventures, the San Francisco-based firm where Leitersdorf is a managing partner, just closed its second fund. The firm raised \$27.5 million to invest in young Israeli tech companies after its first fund reaped generous returns for investors.

Israel is a hotbed of engineering talent, but companies can only grow so much in a small country before needing to expand elsewhere, Leitersdorf said. Leitersdorf visits Israel about



five times a year, which he said is plenty. The investment team has just one person based in Tel Aviv to scout entrepreneurs.

“There’s no point in doing business development in Israel,” Leitersdorf said. “Most of our work is actually not in finding the companies, but rather appreciating the companies after we invest. And that we can only do in Silicon Valley.”

YL Ventures likes Israel because the companies agree to take investments at lower valuations compared with their counterparts in Silicon Valley. Tel Aviv is home to as many as 700 early stage startups, according to city data. But venture capital in the region has been drying up. Efforts to build a tech scene, including free Wi-Fi in public places and a Startup Visa for skilled workers, haven’t yet paid off.

Some of Israel’s largest acquisitions recently have come from the U.S. Cisco Systems bought Intucell in February, and Google acquired Waze in June. YL Ventures’ portfolio companies, including security startup Seculert and enterprise-software maker ClickTale, have gone on to raise from Silicon Valley venture firms and other investors.

“Everybody is now interested in Israeli technology,” Leitersdorf said.

The companies YL Ventures invests in generate about three-quarters of their revenue in the U.S. on average, Leitersdorf said. They tend to keep their roots, or at least their research and development, in Israel, while Leitersdorf helps a U.S.-based team find partners, venture capitalists and potential acquirers.

**Inside the secret tech ventures that are reshaping the Israeli-Arab-Palestinian world**  
Palestinian engineers Achmed Badir (top right) and Jafar Hajear (bottom right) of Ramallah-based Exalt Technologies meet with their Israeli

teammates at Cisco near Tel Aviv, Oz Ben-Rephael (top left) and Michal Cohen (bottom left). Exalt provides R&D outsourcing to Cisco. Says Ben-Rephael: “I think it is amazing that we can overcome the distance. We just needed that common target.” Adds Badir: “There was a lot of curiosity by both sides.

Even by Middle East standards, the scene in a Dead Sea restaurant, situated within a “green zone”—a no-man’s-land claimed by neither Israelis nor Palestinians—was surreal. As a camel knelt outside, two Israeli soldiers nonchalantly sipped coffee at the counter and a score of rabbis said a prayer before their communal lunch—all oblivious to a dozen history-making Palestinians and Israelis huddled together in the back room.

“So the safety guard should be put at the whole project rather than the task,” said a Palestinian. “Exactly,” answered an Israeli Jew, who added: “Also, should the buffer be hidden or public? What do you think?” A second Palestinian spoke up: “Who’s gonna hide it?” The room broke into laughter. Yet another Palestinian, oblivious to an abstract painting of the Star of David behind him, asked: “Do you want the truth, or do you want the truth plus protection?”

Bringing Israel’s Ultra-Orthodox Into Start-Up Nation Richard Behar Richard Behar Contributor

Positively PosiTeam: A Glimpse Inside Cisco-Israel’s Training Of Palestinian Entrepreneurs Richard Behar Richard Behar Contributor

An Israeli Special Forces Commando, An Arab Investor, A Religious Zionist -- And A Hot Start-Up Called Webydo Richard Behar Richard Behar Contributor

With official relations between Palestinians and Israelis still poisonous after a century of conflict, any constructive dialogue is newsworthy. But these aren’t security forces talking about joint

military patrols, nor is this discussion connected to the sudden resumption of peace talks after a three-year stalemate. The group, brought together by Cisco Systems, is speaking their common language: tech management. Nearly 100 times over the past two years Israeli high-tech experts and Palestinian entrepreneurs have gotten together in the hope of making Israel's "Startup Nation" economic miracle a cross-border affair. And it's just one of dozens of business-driven dialogues quietly—in many cases secretly—proliferating across the Holy Land.

"The way to end this conflict is to create a very large middle class and be inclusive in how you go after it across all individuals, regardless of age, religion or gender," says John Chambers, CEO of Cisco, the most actively involved American tech executive in a coordinated effort that includes de facto diplomats from the likes of Intel, Hewlett-Packard and Microsoft. "If you can address those issues and you can get others involved, then you can have a shot at peace in the Middle East."

Of course, there's already billions of dollars' worth of trade flowing between the West Bank and Israel, given their proximity and the latter's border control over the former. Even in Gaza, whose leaders have a stated goal of destroying the Jewish state, commerce furtively passes back and forth on a massive scale. April's Dead Sea meeting, however, represents something much more far-reaching and rarely discussed. Rather than just trading goods, hundreds of Israeli and Palestinians are becoming actual business partners and colleagues in startups that are slowly transforming the Palestinian economy, at least in the West Bank. ups or to hire local Arabs.

### A battery with infinite power

Has the Israeli company Sol Chip found the way to do it? The Haifa-based company has developed the world's first solar battery that is able to recharge itself to power wireless sensors and mobile electronics devices. Operable in sunlight and low-light environments, the batteries are a result of the cross pollination of solar cell and microchip technologies.

"The company offers the missing technology that will improve batteries' life or in many cases eliminate the need in a battery as a power source in low power applications," says CEO and founder of Sol Chip, Dr. Shani Keysar.

"The idea is that chips need power, so why not give them the power directly anyway?" Keysar tells NoCamels. Prior to Sol Chip, she had extensive experience as a researcher at the Technion, and later spent 15 years in the semiconductor industry.



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