

## Israel's technology, media, and telecom industry

### An overview for businesses considering innovation investments

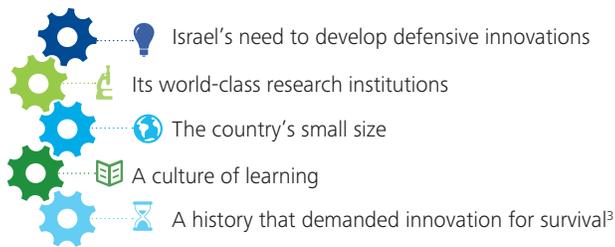


Business sustainability within the technology industry in Israel has depended on innovation since the industry's birth in the 1950s. Only by continually coming up with new offerings do technology companies withstand competition and retain loyal customers.

For decades, the U.S. was recognized as a global leader in technology development, with innovation after innovation coming out of places like Silicon Valley, Boston, and Austin. Yet increasingly over the past decade, other innovation hotspots have emerged around the world in places like Stockholm, Bangalore, London, Tel Aviv, Vancouver, and Moscow.<sup>1</sup>

Among these, Israel in general and Tel Aviv in particular appear to be among the faster growing hotspots. In recent years, the Israeli technology industry has turned into an economic success story by both local and international standards.<sup>2</sup> To accomplish this, Israel has had to overcome obstacles such as lack of natural resources, the country's small population (8.2 million citizens in a territory smaller than New Jersey), geographic isolation, and the fact that Israeli entrepreneurs must both compete and collaborate with each other.

At the World Economic Forum in January 2014, Prime Minister Benjamin Netanyahu attributed the country's technology success to five things:



For businesses around the world that might want to tap Israel's technology innovation environment, this report offers a snapshot of the current technology industry in that country, focusing specifically on the Israeli technology, media, and telecom (TMT) sectors. The report reviews the volume — and high valuations — of Israeli TMT companies being acquired by multinationals, as well as a number of major companies that are establishing innovation and research and development (R&D) centers in Israel. We also look at some of the reasons behind Israel's success as an innovation hub, and we offer thoughts on what companies can expect if investing in the Israeli TMT industry sectors.

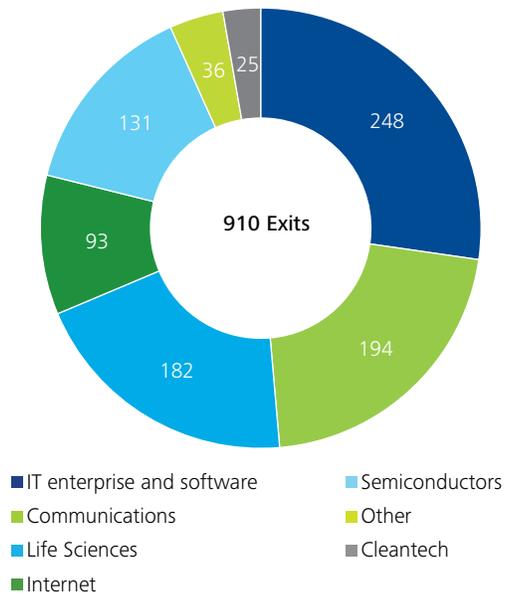
### Israel's technology industry: A snapshot

As a testament to its innovative spirit, Israel has the highest concentration of technology companies outside of Silicon Valley, and the most NASDAQ-listed technology companies of any country except China and the U.S.<sup>4</sup> For that, Israel has earned the nickname "Silicon Wadi," wadi being the Hebrew word for small valley.

The strength of Israel's technology industry can be illustrated by the number of companies sold and other economic measures:

- Since 2004, more than 900 exits<sup>5</sup> of Israeli technology companies were announced (see Figure 1), totaling more than US\$50 billion<sup>6</sup> in value.
- The majority of deals had multiples that were last seen during the days of the 2000 tech bubble (see Figure 2).
- Israel's technology industry accounts for 15.7 percent of the business sector's<sup>7</sup> gross domestic product (GDP).
- Israel's technology industry provides jobs for 6.8 percent of the employment market.<sup>8</sup>
- The country's technology industry accounts for 27 percent of Israel's total exports, of which 38 percent are to the U.S., 17 percent are to the European Union, and 30 percent are to Asia.<sup>9</sup>

Figure 1: All Israel technology exits 2004–2013<sup>10</sup>



Israel's technology focus also has encouraged more than 250 multinational businesses to establish innovation and R&D centers in the country. Of these companies, 66 percent are U.S. based. More than 80 Fortune 500 companies have established technology accelerators, incubators, corporate venture capital offices, and R&D centers there as well.<sup>11</sup> Among those companies are Cisco, Broadcom, EMC<sup>2</sup>, Google, Oracle, Microsoft, eBay, Facebook, IBM, Apple, Amazon<sup>12</sup>, and Intel.<sup>13</sup>

### Israel's TMT sectors: Going strong and growing stronger

A focus on the TMT segments of Israel's technology industry reveals where much of the country's innovative strengths are derived. Israel was ranked No. 2 after the U.S. in investor confidence for those sectors in a 2013 global Venture Capital confidence survey.<sup>14</sup> In the last decade, more than 690 TMT Israeli exits — accounting for 75 percent of all technology exits — had a total value of almost US\$35 billion<sup>15</sup> (see Figure 2).

Figure 2: Number of Israeli exits and valuations, 2004–2013

Year	No. of exits	USD value of exits
2004	44	US\$1.4 billion
2005	75	US\$2.4 billion
2006	106	US\$9.9 billion
2007	95	US\$3.5 billion
2008	53	US\$1.6 billion
2009	50	US\$1.2 billion
2010	67	US\$1.9 billion
2011	81	US\$4.1 billion
2012	69	US\$8.1 billion
2013	52	US\$4.3 billion

Within the Israeli TMT sector, the most attractive segments appear to be information technology (IT) and enterprise software, with 248 exits valued at \$14.76 billion; communications, with 185 exits valued at \$12.9 billion; and Internet, with 94 exits valued at \$4.49 billion.<sup>16</sup>

The majority of these startups were acquired by Fortune 500 corporations, primarily U.S. companies. Since the startups had minimal revenues at the time they were acquired, the buyers appear to have been motivated by the potential of the innovative technologies and the staff they possessed (see Figure 3).



Figure 3: Select Israeli startup acquisition stories

Transaction	Target description	The story	Rationale
May 2012 EMC <sup>2</sup> » XtremIO for \$430 Million	Three years from inception, \$25 million in venture capital (VC) funding, Beta stage product with no revenue, 50 employees	<b>The problem:</b> Enterprise storage increasingly demands virtualization for high-quality performance, rapid response time, scalability, flexibility, and administrator agility.  <b>The solution:</b> Leverage flash and enable the data centers of the future.  <b>The result:</b> Disruption to the enterprise storage space with flash memory capabilities.	'The XtremIO team and technology will help customers take advantage of all-Flash storage across many applications.' <sup>17</sup>
January 2013 Cisco » Intucell \$475 Million	Three years from inception, \$6 million in VC funding, ~\$10 million in revenue, 80 employees	<b>The problem:</b> Mobile usage is changing radically with more data and elements at a lower cost per bit.  <b>The solution:</b> Automatic algorithmic adjustments to tweak the network without involving engineers — self-organization, self-optimization, and self-healing for all the network elements.  <b>The result:</b> Accessibility during Hurricane "Sandy" (Philadelphia).	'This acquisition will help to optimize the mobile experience and is aligned with Cisco's goals to create innovative technologies.' <sup>18</sup>
June 2013 Google » Waze \$966 Million	Seven years from inception, \$67 million VC funding, 100 employees, a few million dollars in revenue, 50 million users	<b>The problem:</b> Real-time traffic data is challenging to retrieve.  <b>The solution:</b> Use of the crowd for map creation and traffic data.  <b>The result:</b> Zero cost to build maps and collect real-time data, allowing a no-subscription model. A social data aspect was added to Google's mapping business.	'Through real-time traffic updates, the acquisition of Wave should improve user experience.' <sup>19</sup>

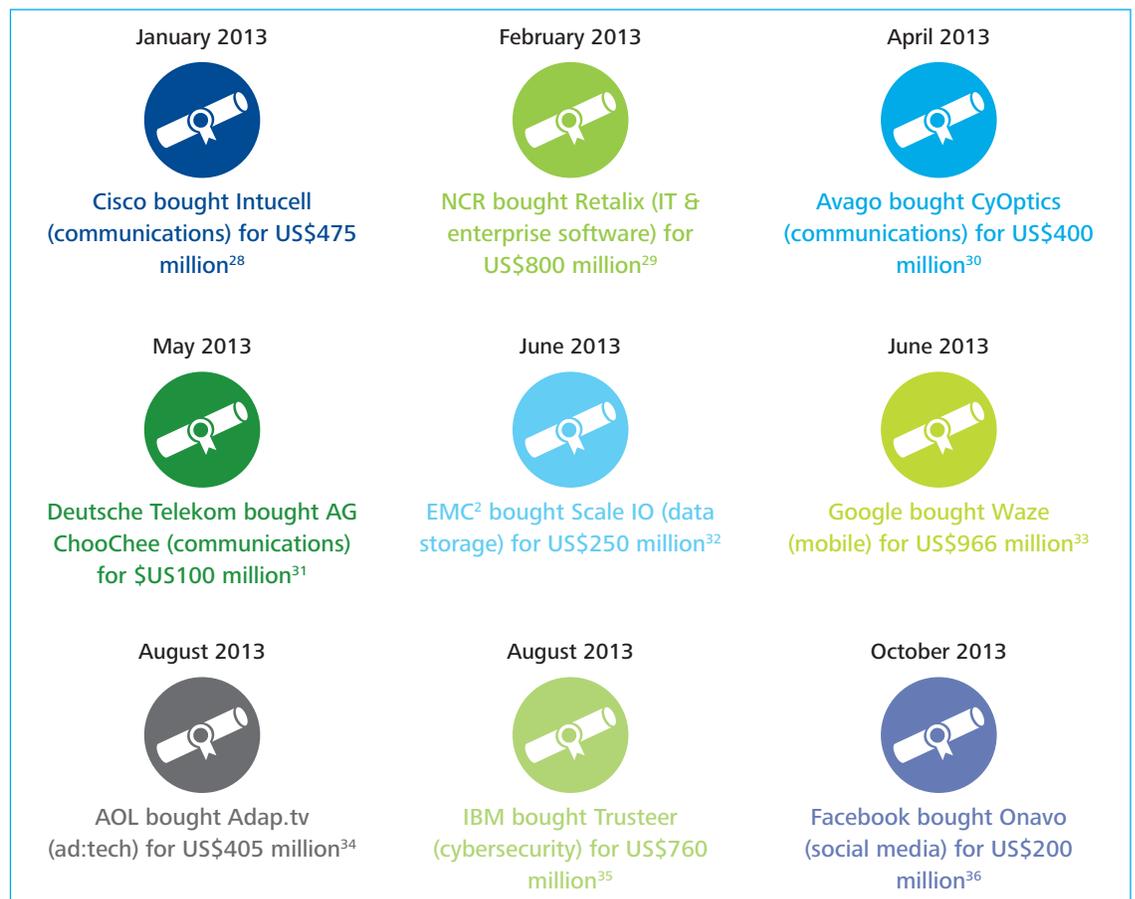
For the Israeli TMT industry, 2013 was a particularly successful year:

- **Somoto** (software monetization) raised New Israel Shekel (NIS) US\$20 million in its initial public offering (IPO) on the Tel Aviv Stock Exchange at a company value of NIS 115 million. The offering was oversubscribed by NIS 55 million orders.<sup>20</sup>
- **Galtronics** (through its parent company, Baylin Technologies Inc., an antenna manufacturer) raised US\$50 million in its IPO on the Toronto Stock Exchange at a company value of US\$100 million.<sup>21</sup>
- **Wix** (cloud-based development platform to create professional HTML5 Websites and mobile sites) raised more than US\$122 million in its IPO on the NASDAQ exchange. The 7.7 million shares sold were priced at US\$16.50 each, which was at the top end of the range the organization provided before the IPO. The shares were up nearly 100 percent to US\$29 in February 2014.<sup>22</sup>

Additionally, in 2013 total capital raised by Israeli TMT startups was US\$2.3 billion, second only to the year 2000 record when US\$3.1 billion was raised. Software companies alone raised 21 percent of this amount, second only to the life science companies.<sup>23</sup>

Between 2003 and 2012, average Israeli TMT company merger and acquisition deal size was US\$54 million,<sup>24</sup> and in 2012, the average was US\$68 million. In 2013, the average deal size increased to US\$83 million.<sup>25</sup> The rise demonstrates that the Israeli TMT market continues to mature: It appears that entrepreneurs are no longer interested in early exit opportunities; instead, they are choosing to focus on creating sustainable technologies and companies and maximizing their returns over the long term.<sup>26</sup>

In 2013 there were 52 Israeli TMT exits totaling US\$4.29 billion.<sup>27</sup> Select 2013 transactions include:



### Israel's history: A major factor in innovative culture

Some consider the success of the Israeli technology industry to be intimately interwoven with Israel's history. Since its founding 65 years ago, the country has depended on innovation and entrepreneurship for its very survival. That, along with the country's emphasis on learning, has resulted in a high-quality education system that is heavily subsidized by the government. As a result, Israel is second only to Canada in terms of the most educated population in the world.<sup>37</sup>

Moreover, the country's mandatory military service (three years for males and two years for females) may be conducive to developing common values and vernacular for success. In the military, soldiers receive high-quality technical training and are given an unusual amount of responsibility for their age relative to other countries. This military training appears to make Israeli entrepreneurs less tolerant of failure and may help them persevere in the face of difficulties.

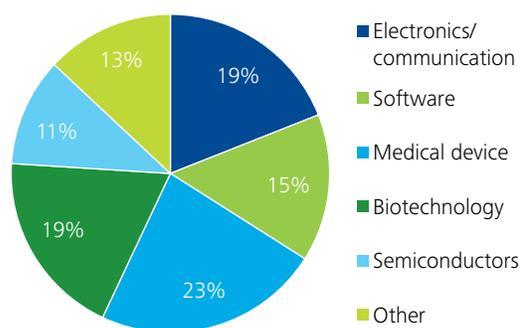
Additionally, limited options for growth due to Israel's size and location may force Israeli entrepreneurs to adhere to a global vision from the very inception of their ventures. Many Israeli entrepreneurs adopt international standards that enable them to collaborate with larger multinationals, which can make them attractive acquisition targets.

Despite all this, the TMT sector in Israel would likely not have experienced the success it has had without government support through subsidies and large investments in R&D — both for civilian and military purposes — which could then be commercialized in international markets. At 4.4 percent of GDP, Israel's R&D expenditure is the largest worldwide, ahead of South Korea, Japan, Sweden, Finland, and the U.S.<sup>38</sup> The Office of the Chief Scientist (OCS) of the Ministry of Industry, Trade, and Labor is responsible for implementing the government's policy of encouraging R&D in Israel and overseeing all government-sponsored support taking place in the country. The OCS operates through an R&D fund, as well as a number of domestic and international programs and partnerships. The OCS' annual budget of NIS \$400 million (~US\$115 million)<sup>39</sup> enables the government to support and sponsor hundreds of projects each year, ranging from early-stage ideas and incubators to start-up companies and autonomous industrial enterprises.

The Israeli government also encourages foreign investments, provides attractive packages of subsidies, tax exemptions, and other benefits for international companies interested in investing in the country's technology

industry.<sup>39</sup> In addition, the government has created 24 technology incubators that are scattered throughout technology sectors (see Figure 4)<sup>41</sup> with a goal to transform innovative technological ideas that are too risky for private investments into viable startup companies that could raise money from the private sector and operate on their own at the end of the incubator term.<sup>42</sup>

**Figure 4: Sector breakdown of technology incubators in Israel.**



### Considerations for investing in Israel

With more Israeli companies receiving high valuations, it is possible that Israel is experiencing a technology bubble similar to the dotcom bubble of 2000. Still, many solid reasons exist why multinational businesses continue to purchase and invest in Israeli companies, as well as establishing innovation centers of excellence in the country.

Companies considering an investment in Israel are likely to encounter:

<b>A collaborative culture with an emphasis on innovation</b>	In addition to its emphasis on education, Israel has one of the most entrepreneurial <i>multicultural</i> workforces, naturally extending from the fact that its population consists of individuals with origins in more than 100 different countries spanning five continents. <sup>43</sup> This striking combination of innovative and highly educated people, a culture that promotes innovation, experimentation, and daring, and a government eager to create nurturing economic conditions has assisted in making Israel a leading technology hub.
<b>Track record of investor confidence</b>	Its top ranking on global indexes of economic competitiveness and years of multinational companies successfully operating in the country have resulted in Israel's TMT sector being ranked No. 2 (after the United States) in investor confidence. <sup>44</sup>
<b>Supportive environment for multinational companies</b>	The Israeli government encourages foreign corporations to explore business opportunities in Israel through attractive packages of subsidies, tax exemptions, and other benefits in the Israeli technology industry in general and the Israeli TMT sector in particular.
<b>Local presence of multinational corporations</b>	Microsoft, Motorola, Google, Apple, Facebook, Berkshire-Hathaway, Intel, HP, Siemens, GE, Philips, Alcatel-Lucent, AOL, Cisco, Applied Materials, IBM, EMC <sup>2</sup> , and Toshiba are just some of the more than 250 multinational companies that already have established beachheads in the country. Although many multinational companies acquired Israeli companies, there are other ways to have a presence. For example, Intel, Cisco, and Google operate large R&D centers; Facebook and eBay acquired Israeli startups that now operate as their IT innovation centers; and Microsoft, EMC <sup>2</sup> , and IBM established accelerator programs in the country.

### Israel: Right place, right time?

In a February 2013 interview, Warren Buffet indicated that Israel is a promising country for investors.<sup>45</sup> Furthermore, Cisco CEO John Chambers suggested that Israel is an innovative and start-up nation.<sup>46</sup> Business leaders like Buffet and Chambers clearly understand the vital role of innovation in the technology industry. Innovation is food for technology businesses, and to have sufficient innovation to power through the next decade, companies should continually evaluate opportunities to make well-timed, fruitful investments. Whether a company seeks to acquire innovation through existing startups or by establishing a different kind of R&D presence, Israel could be an attractive option.

During a visit to Israel in June 2013, Cisco's CEO John Chambers announced his "digital nation" experiment, in which a Fiber to the Home (FTTH) infrastructure and network — based upon Cisco technology — would be installed in Israel by a consortium led by Sweden's Viaeuropa to compete with existing Israeli phone and cable companies. Additionally, Chambers announced that Cisco was investing US\$15 million to "support integration of Israelis and Arabs and the development of innovative security technologies." Most of the funds will be funneled to cyber-security startups through venture capital funds.<sup>48</sup>

Cisco already has approximately 2,000 employees in Israel, and over the past 15 years the company has invested more than US\$1.5 billion in acquiring several Israeli companies.<sup>49</sup> Intel also has invested significantly in Israel over the years — US\$10.5 billion over the past decade, including US\$1.1 billion in 2012 — and has received US\$1.3 billion in government grants. In mid-2013 the company was reported to be in discussions with the Israeli government regarding a US\$10 billion investment, including US\$3 billion to upgrade its existing manufacturing facility there and another US\$7 billion for a new factory.<sup>50</sup>

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On October 15, 2013, Facebook announced its acquisition of Onavo, an Israeli start-up. Onavo will remain in Israel and become Facebook's first R&D center in Israel.<sup>47</sup>



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- <sup>19</sup> Google 10-Q filing. Security and Exchange Commission, 25 Jul. 2013. Web. 4 Apr. 2014.
- <sup>20</sup> Compiled using S&P Capital IQ search, a subscription service from McGraw Hill Financial, at: <https://www.capitaliq.com/ciqdotnet/Transactions/transactionDetail.aspx?transactionId=242780524&companyId=223047403>.
- <sup>21</sup> Ibid
- <sup>22</sup> Ibid
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- <sup>24</sup> Not including US\$5 billion acquisition of NDS by Cisco, "Cisco Completes Acquisition of NDS," the network, Cisco's Technology News Site, 31 Jul. 2012. Web. 1 Apr. 2014.
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