Israeli Digital Health: Investors Perspective

Levi Shapiro, Founder, mHealth Israel
mHealth Israel: Join Our Community

Database of 250+ funded startups

Conferences: June and Feb

Monthly Meetups

Pavilion: HIMSS, Medica
Thesis: 3rd Wave of Digital Health Investment

Wave I
Remote Telemedicine

Wave II
Enterprise Software

Wave III
Consumerization of Big Data

Trigger
Obamacare, 2009

Example: SHL; Natali
acquired by Jinpeng-Sanpower
2014, ~$100M

250+ Israeli digital health startups
Sensors, applications, big-data, machine-learning, AI, etc

dbMotion -acquired by Allscripts 2013, $235M
AeroScout -acquired by SBD 2012, $240M
iMDSof -acquired by TPG 2012, $80M
Agenda

Investment Thesis
- Israel- Venture Capital Background
- Israel Health Sector
- Israel Digital Health Investment
Factors Enabling Israel’s Unique Healthcare Ecosystem

- Seven university-associated and five hospital-linked technology transfer organizations (TTO) provide a valuable bridge to connect researchers and early-stage projects with both investors and partnerships with multinational corporations.

- The technological incubator network houses up to 15 companies each and provides them with a full suite of services and business development, as well as funding of approximately $500,000 for the first 2-3 years of their lives.

- State Industry Academic & med institutions VCs, Accelerators Angels & Incubators

- Skilled Workforce

- Start ups
  - Total of 6,019 companies
  - 1,159 IT & enterprise SW
  - 1,018 Life Science Startups
  - Out of which 550 in Medical Devices and 210 in Digital Health

- Power Of Distance

- Dynamic Open Culture

- Direct Feedback

- Informal yet Efficient Society

- Strong connections
### Population:
- **8 M**
- **NL: 17M,**
- **MA: 7 M**

### GDP (nominal) per capita:
- **38K$**
- **NL: 52 K$**
- **IT: 35 K$**

### Unemployment rate:
- **5.9 %**
- **US: 5.8 %**
- **IT: 12.6 %**

### Human Dev. Index (Life exp., school, GDP)
- **#19 (out of 187)**
- **NL: #4,** **US #5, UK #14, IT #26**

### Country Rankings:

<table>
<thead>
<tr>
<th>Country Rank</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business expenditure on R&amp;D</td>
<td>Israel</td>
<td>Korea</td>
<td>Japan</td>
<td>Finland</td>
</tr>
<tr>
<td>Total R&amp;D Personnel in Business Per Capita</td>
<td>Israel</td>
<td>Taiwan</td>
<td>Luxemburg</td>
<td>Denmark</td>
</tr>
<tr>
<td>Total Expenditure on R&amp;D</td>
<td>Korea</td>
<td>Israel</td>
<td>Finland</td>
<td>Sweden</td>
</tr>
<tr>
<td>Nobel Prizes Per Capita</td>
<td>Switzerland</td>
<td>Norway</td>
<td>Israel</td>
<td>Sweden</td>
</tr>
<tr>
<td>Funding for technological development</td>
<td>Finland</td>
<td>USA</td>
<td>Singapore</td>
<td>Israel</td>
</tr>
<tr>
<td>Development and application of technology</td>
<td>Finland</td>
<td>Singapore</td>
<td>Switzerland</td>
<td>Israel</td>
</tr>
</tbody>
</table>
R&D Encourages Higher Quality Innovation
Proportion of Population with Bachelors Degree Among Life Sciences Hubs
Building Block III: International R&D Centers Are a Lifeline for Local Tech Industry
Role of MNC’s: Case Study- SAMSUNG
Agenda

Investment Thesis

Israel- Venture Capital Background

Israel Health Sector

Israel Digital Health Investment
Israeli VC Funds: More Money Flooding into the Market
Agenda

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- Israel Digital Health Investment
GDP Allocation: 7.5% VS 18% of GDP
Health in Israel: Relatively Good Outcomes

Life expectancy

<table>
<thead>
<tr>
<th>Country</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>80.3</td>
<td>87.6</td>
</tr>
<tr>
<td>Israel</td>
<td>79.7</td>
<td>86.1</td>
</tr>
<tr>
<td>France</td>
<td>79.5</td>
<td>86.1</td>
</tr>
<tr>
<td>Sweden</td>
<td>78.0</td>
<td>85.9</td>
</tr>
<tr>
<td>Germany</td>
<td>76.2</td>
<td>85.3</td>
</tr>
<tr>
<td>USA</td>
<td>76.9</td>
<td>85.7</td>
</tr>
</tbody>
</table>

Infant Mortality Rates

<table>
<thead>
<tr>
<th>Country</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>2.5</td>
</tr>
<tr>
<td>Norway</td>
<td>2.7</td>
</tr>
<tr>
<td>Germany</td>
<td>3.5</td>
</tr>
<tr>
<td>France</td>
<td>3.8</td>
</tr>
<tr>
<td>Switzerland</td>
<td>4.0</td>
</tr>
<tr>
<td>USA</td>
<td>4.1</td>
</tr>
<tr>
<td>Canada</td>
<td>5.1</td>
</tr>
<tr>
<td>Turkey</td>
<td>6.5</td>
</tr>
<tr>
<td>Israel</td>
<td>3.8</td>
</tr>
</tbody>
</table>

OECD, 2012
CVD Mortality in Israel

Israel Ministry of Health, 2013

OECD, 2011

Ischemic Heart Disease, Mortality Rates
Comparatively Efficient Health System Optimization

Israel, MOH; OECD
Factors That Drove Israel Toward Prioritizing Digital Healthcare Adoption

- Complexity
- Multi-Morbidity
- Resources Shortage
- Aging
HMOs bring 24 YEARS of universal, longitudinal EMR data that startups can access.

Example from Clalit, largest HMO with 54% market share.
“Israel’s community-focused information system sets an international benchmark in excellence and demonstrates commitment to quality monitoring and improvement.”
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Israel Life Sciences Industry by Sub-Sectors

- Healthcare IT & Digital Health: 285
- Biotechnology/Pharmaceutical: 317
- Medical Devices: 725
- Others: 53

Breakdown of Israeli HIT by Subsector

(Bar chart showing subsectors and their counts)

Source: IATI report

IATI, 2015
Number of Israeli Digital Health Companies Established 2005-2014

Source: mHealth Israel Database
mHealth Israel Database Breakouts

**Hardware vs. Software**
- HW & SW 5%
- HW 33%
- SW 62%

**Breakdown by Stage**
- Revenue Growth 6%
- Seed 11%
- Initial Revenues 35%
- R&D 49%

**Breakdown by Model**
- Both & B2B2C 23%
- B2B 45%
- B2C 32%
Medivizor: “Health Information – Personalized”

Improve the lives of people with serious or chronic medical conditions and of those who care for them.

Effectively apply software and the social web to the field of health for the betterment of humanity.

https://medivizor.com/
http://bit.ly/1RSv3uf
http://bit.ly/1mTipOR
http://bit.ly/1mTipOR
Medivizor: Personalized Healthcare

Henry
57 year old
Caucasian
Prostate Cancer

Untreated.
Early-stage.
Low-grade adenocarcinoma

John
57 year old
Caucasians
Prostate cancer

Not responding well to first line treatment
Prostatectomy
Cancer has metastasized

Source: Medivizor
A 3-Tier Approach to Personalizing Information

Result:
"Laser-focused" beam of health information personalized to the recipient.

Technology:
Patent-pending semantic "smart" engine collects and classifies new information to match to people profiles.

Medical Expertise/Personnel:
Experts read new scientific research and information and transform it to language that can be understood.

Wisdom of the Crowds:
Patients & caregivers actions and interactions create perpetual improvement to platform for all.

Understandable, relevant, trustworthy and proactive personal information gathering

Source: Medivizor
Cervical Cancer Worldwide

450,000
New cases every year

270,000
Deaths every year
Visual Assessment of the Cervix

MobileODT’s EVA
$1,500

Today’s Colposcope
$15,000
Online Monitoring and Evaluation

- Case review and oversight
- Aggregated data on clinicians, procedures, treatment rates
- Drilldown to focus on local, regional, national, or international levels
The Network Effect

Screener ➔ App ➔ Machine Learning ➔ Expert

Risk Factor: 76.6%
VoiciTT

Voiceitt

capturing the colors in your voice

Talkitt

created by Voiceitt
1.5% of the world’s population cannot communicate naturally using their voices.

That’s over 100 million people.
People with a **wide range of disabilities** need help to use their voice to communicate.

<table>
<thead>
<tr>
<th>People affected by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autism</td>
</tr>
<tr>
<td>Brain Injuries</td>
</tr>
<tr>
<td>Parkinson’s</td>
</tr>
<tr>
<td>Cerebral Palsy</td>
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<tr>
<td>Alzheimer’s</td>
</tr>
<tr>
<td>Multiple Sclerosis</td>
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<tr>
<td>Stroke</td>
</tr>
<tr>
<td>ALS</td>
</tr>
<tr>
<td>Hearing Disability</td>
</tr>
<tr>
<td>Throat Cancer</td>
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</table>
Talkitt improves people’s lives.

PARTICIPATE IN SCHOOL

HAVE A CUP OF COFFEE

COMMUNICATE WITH FAMILY

https://vimeo.com/98136263