Background

Israel,

- worldwide leader in innovation
- 1st worldwide (per capita) in IP and start-up companies (N~4,000)
- Backbone of the economy
  - 15% of GDP ($200-billion)
  - 40% of exports ($35 billion)
  - Invests ~4.7% of its GDP in R&D
Center of the Universe...

When it comes to innovation...
Israel’s main strengths remain its world-class capacity for innovation (3rd), which rests on highly innovative businesses that benefit from the presence of the world’s best research institutions geared toward the needs of the business sector.

Israel’s excellent innovation capacity is reflected in the country’s high number of patents (4th).

Its favorable financial environment has contributed to making Israel an innovation powerhouse.

Israel Assets

• Innovative thinking
• Highly skilled workforce
• Problem solving orientation
• Entrepreneurial spirit
Military Background

- Israeli security and military technology has been a principle driver behind developing the high-tech scene
And the World’s Most Educated Country Is...

By SAMANTHA GROSSMAN | @sam_grossman | September 27, 2012 | 13

With spiking tuition costs, insurmountable loan balances, and the unemployment rate for recent college graduates hovering around 53%, it’s clear that a college education hasn’t gotten the best rap lately. Despite the ongoing financial woes across the globe, though, many think that college is still worth the investment. A new study shows that we’ve continued to flock to institutions of higher learning, enrolling at record rates over the past few years. Not surprisingly, the percentage of adults with degrees soared highest in developed nations, reaching 30% in 2010. But which of these nations can boast the status of most educated?

1. Canada
2. Israel
3. Japan
4. United States
5. New Zealand
6. South Korea
7. United Kingdom
8. Finland
9. Australia
10. Ireland
The Israeli Chutzpah
Israel Office of the Chief Scientist

- Principal government tool to support R&D
- Unique Israeli laws to encourage R&D
- Grants programs and tax benefits
- Technological entrepreneurship
- International cooperation in R&D
- Academic-industrial cooperation.
- Life-science is defined as a preferred sector
- Fast growing sector.
- Over 1,000 life science companies.
- >500 medical device companies.
- ~50 new LS companies formed /year
- ~1/3 of companies generating revenue.

Source: www.investinisrael.gov.il
Cardiology is the leading sector within the Israeli LS industry
There are 100 active Israeli medical companies in CV medicine

Source: ILSI (2012)
Israel and Biotech in Cardiology
Edwards-LifeSciences
Catheter Valve R&D

Sapien XT
Sapien 3
Centera
The Medtronic-Engager™ TA Heart Valve

2011 moved away
C-THV Navigation and assessment tool for TAVR

C-THV for Sapien

C-THV for CoreValve
On line vessel and stent enhancement technology
Electro-magnetic Guided lab for EP and Coronary angio
Patient Specific Simulation

Simulators allow to practice complex cardiac procedures

PLAN

REHEARSE

APPLY in
PRACTICE

PROcedure Rehearsal Studio™

Simbionix™
Detection of Arterial Function

Endo-PAT2000
Special stent for Heart Attacks and SVGs
Novel Endovascular graft technology

A SOLUTION FOR ANEURYSMS INVOLVING THE AORTIC ARCH

ENDOSPAN LEVERAGES ITS INNOVATIVE PLATFORM TO CREATE A SIMPLE, ENDOVASCULAR PROCEDURE
Adjunct to TAVR

[Image of medical device and tissue samples]
Distal Embolic Protection

- Deliver, Lock, and Deploy Innovations

- GARDIA MEDICAL
Proximal Embolic Protection

EmboPRO
Embolic Protection
Cord Traps Emboli from all Source
Intra-Atrial Valve for Unloading CHF

V-Wave
Percutaneous Trans-Apical Access and Closure Devices
Optimal TAVI positioning

1. Placement in LV
2. VPS initial deployment
3. VPS pulled back to aortic valve
4. Markers aligned on implantation plane
Trans-Apical Mitral Bioprosthesis
Percutaneous mitral annuloplasty
Closure devices
CTO enabling device
Made in Israel
Warning signs for the industry

- Diminished Funding resources!
  - Diminished early financing & late stage funding
  - Shrinking VC investments
- ‘Brain drainage’
- Failure to mature
  - 35% will not survive >5 yrs

Source: PwC & IVC (2012)
Conclusion

• Israel innovation is a universally admired national asset.
• Israel exports high-tech and bio-tech to the world.
• Life Science is a major sector of innovation and R&D.
• Cardiology is an important sector in Israeli Life Science.
• The Israeli innovation scene continues to hold promises but shows some vulnerable business signs at the same time!
Thank you!