



COBIK

Centre of Excellence for Biosensors,
Instrumentation and Process Control



From Local Innovation to Global Business Growth

Zev Gurion

Executive Director, Akron Biomedical Corridor, Ohio, USA

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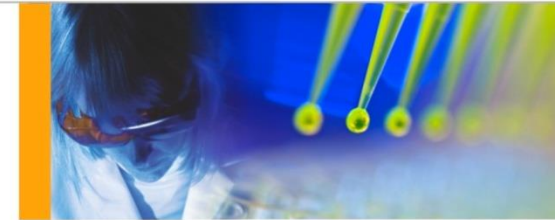
Content

- Innovation and entrepreneurship
- Key drivers
- Entrepreneurs- what makes them unique?
- The role of Government, Industry and the Investment Community
- What do the start up companies need to do ?
- Slovenia- observations and recommendation
- The Israel model- an example
- Key take aways





Innovation



- An innovation is something **original**, new, and important that breaks in to a **market** or society” (Wikipedia)
- Innovation differs from invention
 - Invention is the **creation** of something unique or novel
 - Innovation is making an invention **commercially** or **socially useful** (Dr. Frank Douglas, The Austen BioInnovation Institute in Akron)



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Why Innovate?

- Improve quality of life
- Corporations need innovation to grow top line revenues
- Real growth requires new technologies
- Attract talent, global companies
- New technologies drive global exports
 - Slovenia is a small country with small local market
- Technology start ups have low revenues and employees





Entrepreneurship-Key Drivers

- Human capital- talent
- High technology base
- Investments, funding
- Entrepreneurial culture
- Innovation infrastructure



Global interaction
facilitates innovation

Discomfort- and it maybe intellectual discomfort- is the source of all entrepreneurial activity “ (Carl Schramm, The Entrepreneurial Imperative, quote of Orna Berry, Israel past Chief Scientist)



The Evolution of an Idea



IDEA,
INNOVATION

Entrepreneur

START UP

Entrepreneur

Government

LOCAL
COMPANY

Entrepreneur

Government

Private Sector-
industry,
Investors

GLOBAL
COMPANY

Entrepreneur

Government

Private Sector-
Industry, Investors

International
Networking



Entrepreneurs

- Risk takers
- Willing to fail
- Dissatisfaction, Discomfort
- Mission determination
- Role models
- Mentors
- Serial entrepreneurs





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Government



- Support high level education
- Support basic research
- General priority areas vs. curiosity based innovation
- Academia and industry collaboration- bridge the gap
 - Technology transfer organizations
 - Centers for interaction with industry
 - Technology incubators



Government (Cont.)



- Business plan competitions
- Facilitate creation of a VC network, encourage investments
- Facilitate global network
- Attraction of international companies
- Need to encourage many participants
- Financial incentives, for all stages of company growth
 - Entrepreneurship grants
 - Globalization Technology grants
 - Marketing grants
 - Export incentives
 - Bi national funds
- Build innovation infrastructure



Private Sector



- Industry Companies
 - Play a key role in encouraging innovation
 - Define need, fit
 - Interns
 - Market feedback
 - Initial validation
 - Funding
 - Global interaction
- Investment community
 - Angels
 - VC funds
 - Funding for all stages of company growth



Start Up Companies



- Patent
- Market assessment
 - Define clear need
 - Preliminary market assessment, continuously refine
- Business plan- vision, flexible
 - Carefully test your business model
- Act fast
 - Rapid prototyping
 - Get quick market feedback, ,continue to refine
- Management
 - Recognize that different stages require different CEOs- the original entrepreneur is not necessarily the best one!
- Funding plan
 - Start planning early
 - Identify and interface with potential investors, VCs
- Determination, mission focus, stay the course but recognize when it's time to quit



Top Mistakes when Presenting to VCs



- Our projections are conservative
- (Big name research firm) says our market will be \$50 billion in 5 years
- (Big name company) is going to sign our purchase order next week
- No one is doing what we're doing
- No one can do what we're doing
- (Big name company) is too big/dumb/slow to be a threat
- We have a proven management team
- Patents make our product defensible
- All we have to do is get 1% of the market



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Slovenia- Observations



- Have many of the key components, need to connect the dots
- Strong technology and high education base and focus
- Centers of Excellence- an important bridge between academia and industry
 - Responsible for develop technologies and transferring them to the market
 - Composed of scientists with insufficient involvement of commercially experience entrepreneurs
 - Scientists are generally not entrepreneurs and lack commercial approach and drive
 - Insufficient market assessment and validation
 - Owned by private companies and public research institutions but funded 100% by public funds
- Uncertainty about financial funding



Slovenia- Recommendations



- Why not aim to Make Slovenia A Center of Global Innovation ?
- Be clear on your niche, model
- Enhance government policies and initiatives that foster entrepreneurship
 - Small countries, like small companies have advantage in remaining innovative
- Need long term commitment
- Partner with other countries
- Foster creation of many start ups
- Emphasize need to know the market, validate innovation and market value upfront
- Turn the Centers of Excellence into for profit organizations – get involvement of experienced equity investment firms
- Try to influence the culture of job security and safety as top value, encourage more risk taking



The Israel Model



- Israel has over 3500 start ups, highest VC investments relative to GDP (0.7% vs. 0.3% for the US)
- Israel has the 3rd highest number of start ups listed on the NASDAQ
- Ideas and patents are critical but not sufficient
- Unique reasons
 - Immigration, risk taking
 - Military service
 - Entrepreneurial culture
- But also
 - Smart government initiatives and policies that foster entrepreneurship and company creation
 - Strong international collaboration
 - Strong VC market
 - Government established a \$100M fund in 1992 to stimulate creation of local VCs
 - Over 50 private VC funds worth over \$10 B today!
 - Private/ public incubator system
 - Government created 23 incubators in 1991 and privatized them in 2002
 - Create constant number of start ups that enter the market every year



Key Take Aways



- Slovenia already has many of the key components
- Enhancing innovation and entrepreneurship will require
 - Greater involvement of the private sector in the Centers of Excellence – business focus and direction
 - **Owners need to risk own capital and have opportunity to profit**
 - Long term government financial commitment
 - Strong VC industry, risk capital
 - Cultural change
- Patience, it will take time



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Thank You !

info@cobik.si

www.cobik.si



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