



# SRI International

## *Driving Innovation In Chile*



**FONDEF**  
Fondo de Fomento al Desarrollo  
Científico y Tecnológico

Dennis J. Tsu  
SRI International  
Oct., 2013

## Agenda

- SRI Introduction, Overview
- The Innovation Opportunity
- Lessons from Silicon Valley
- SRI's 5 Disciplines of Innovation
- Innovation In Chile

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## SRI- Who We Are

A world-leading independent R&D organization



SRI headquarters, Menlo Park, CA



Sarnoff, Princeton, NJ



SRI Harrisonburg, Virginia



SRI State College, Pennsylvania



SRI Tokyo, Japan



SRI Washington, D.C.



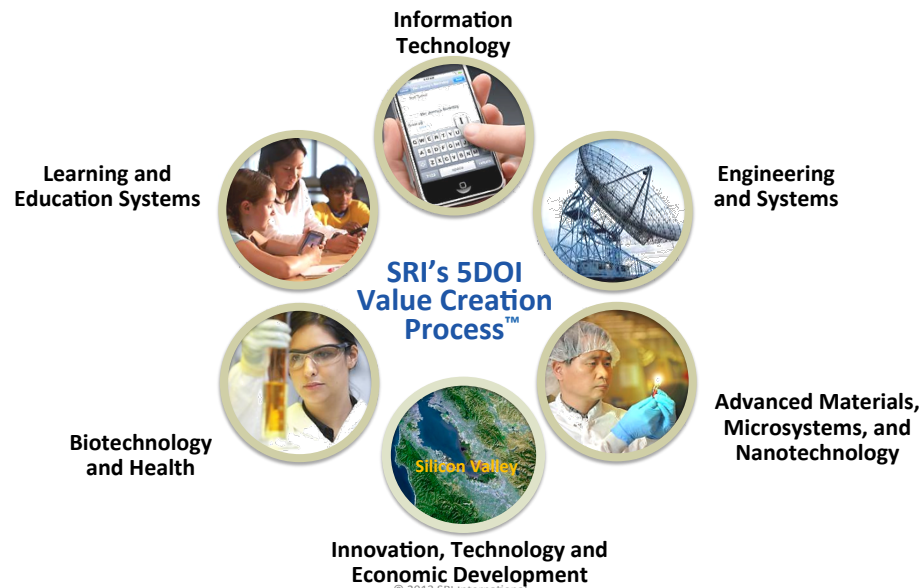
SRI St. Petersburg, Florida

- Founded by Stanford in 1946
  - Based in Silicon Valley
  - Non-profit corporation
  - Independent from Stanford in 1970
  - Sarnoff/RCA Labs integrated 2011
- 2,500 staff members
  - Nearly 50% with Masters and PhDs
  - More than 20 locations worldwide
- Consolidated 2012 revenue ~\$550M

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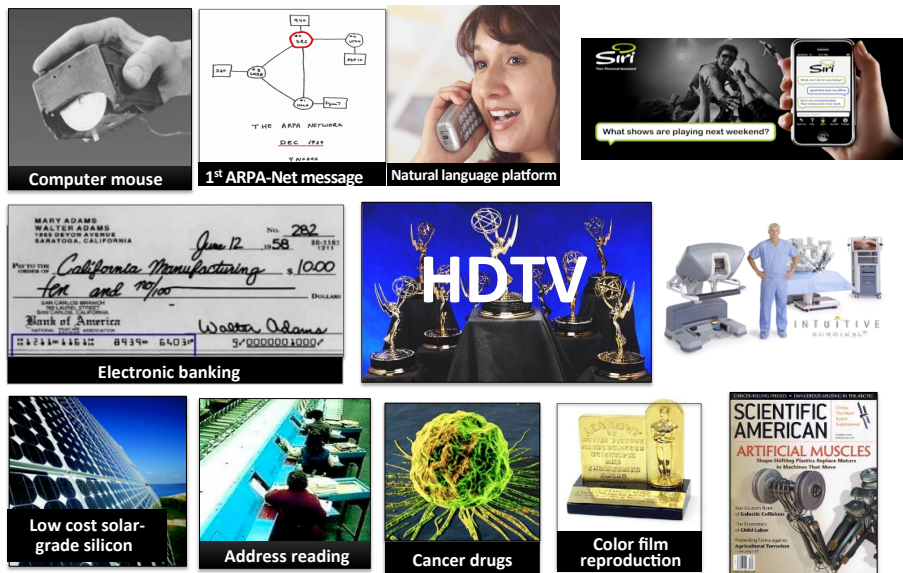
## Diverse Expertise & Interests



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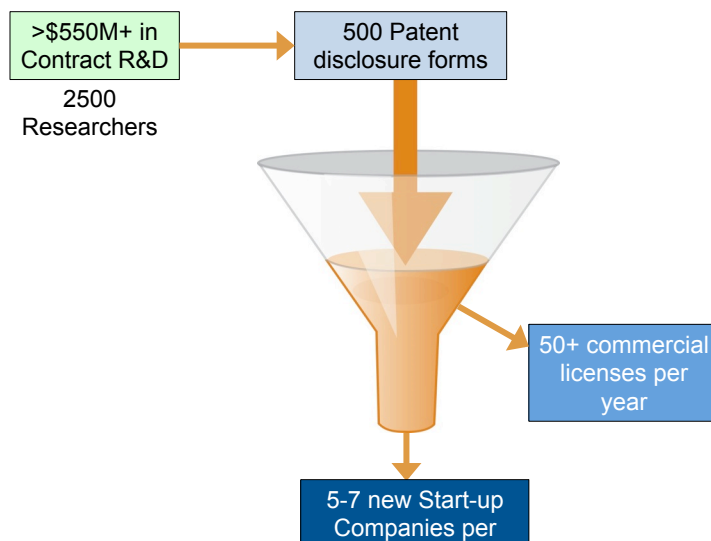
## Some of SRI's Important Innovations



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## SRI's Value Creation Process



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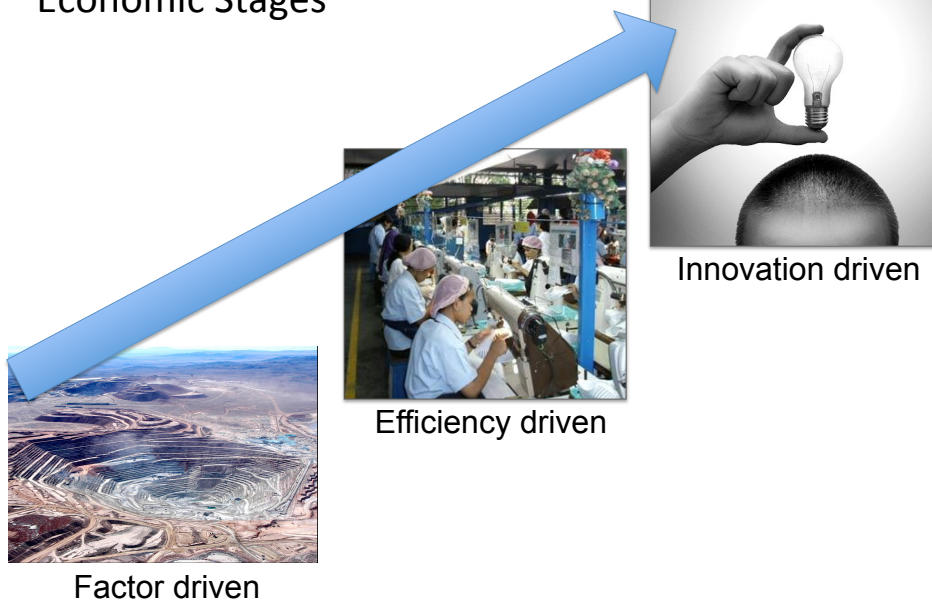
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## Economic Stages



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# Global Innovation Economy

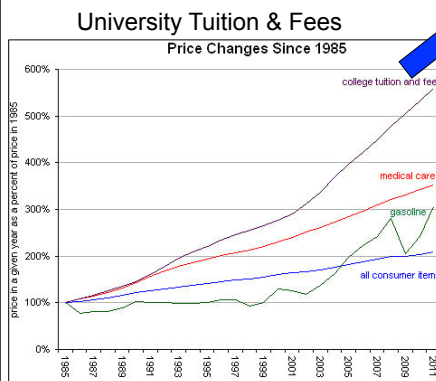
*World of abundance- unlimited opportunities*

*Rapid, exponential change*

*Intense, global competition*

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## The Landscape is Changing



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### MOOCs

**coursera**

Take the World's Best Courses, Online, For Free.

**U**  
UDACITY

Learn. Think. Do.

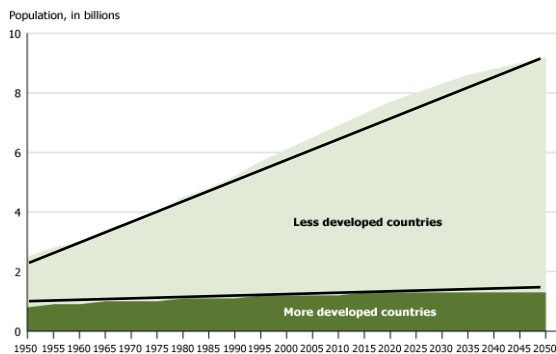
Invent your future through free interactive college classes.

**edX**

The Future of Online  
Education  
for anyone, anywhere, anytime

## Trend: Agricultural

How do we provide more water, food, energy?



Source: United Nations Population Division, *World Population Prospects, The 2008 Revision*.

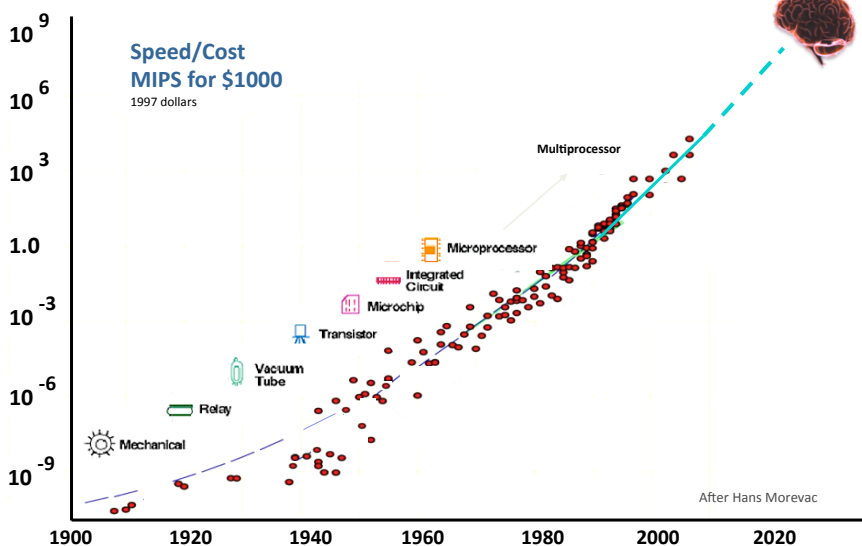
- By 2030, there will be 3 billion **new** middle-class consumers.
- The world will require 50% more food, 45% more energy, and 30% more water.
- By 2050, the world's population will surpass 9 billion, the vast majority of people living in countries with existing food scarcity problems.

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## Hard to Keep Up: Exponential Improvement Required

By 2030 a \$1,000 PC that goes faster than the human brain



After Hans Morevac

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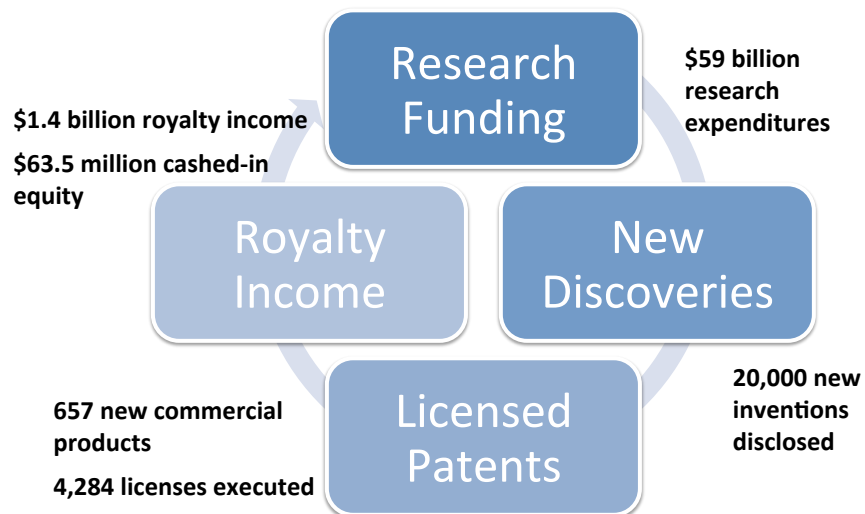
## Trend Example: Global R&D Spending (% of GDP)

Country	R&D (US\$B)	% of GDP
Israel	9.4	4.2%
South Korea	55.8	3.74%
Japan	160.3	3.67%
Sweden	11.9	3.3%
Finland	6.3	3.1%
<b>United States</b>	<b>405.3</b>	<b>2.7%&gt;</b>
Austria	8.3	2.5%
Denmark	5.1	2.4%
Germany	69.5	2.3%
Taiwan	19.0	2.3%
Switzerland	7.5	2.3%
Iceland	0.3	2.3%
Singapore	6.3	2.2%
<b>China</b>	<b>296.8</b>	<b>1.97%^</b>
France	42.2	1.9%
Canada	24.3	1.8%
United Kingdom	38.4	1.7%
Australia	15.9	1.7%

Source: World Bank  
2011 data

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## U.S. Tech Transfer in 2010

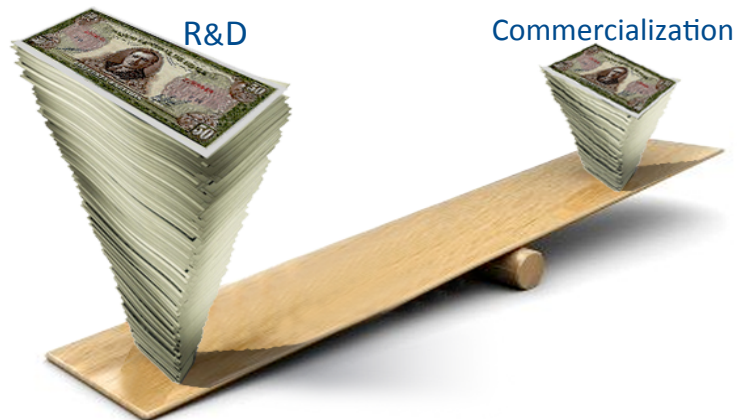


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## Knowledge Alone is Not Enough

*R&D AND Commercialization Strategies are key*

Without a focused commercialization strategy, R&D investment is inefficient



## Agenda

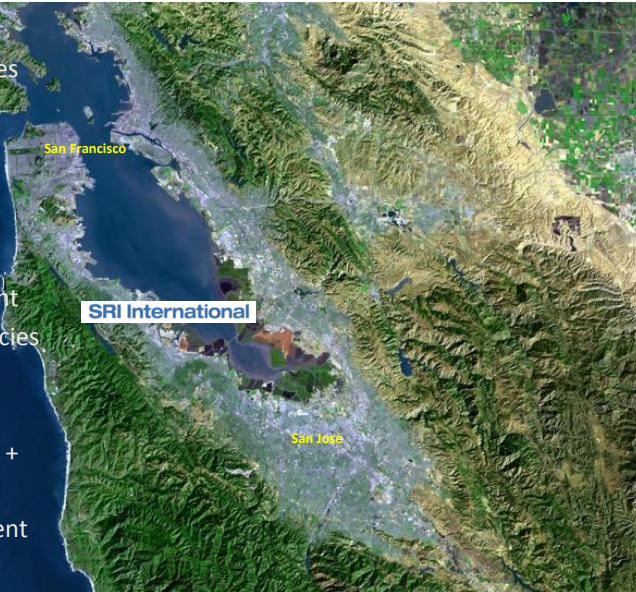
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## Silicon Valley

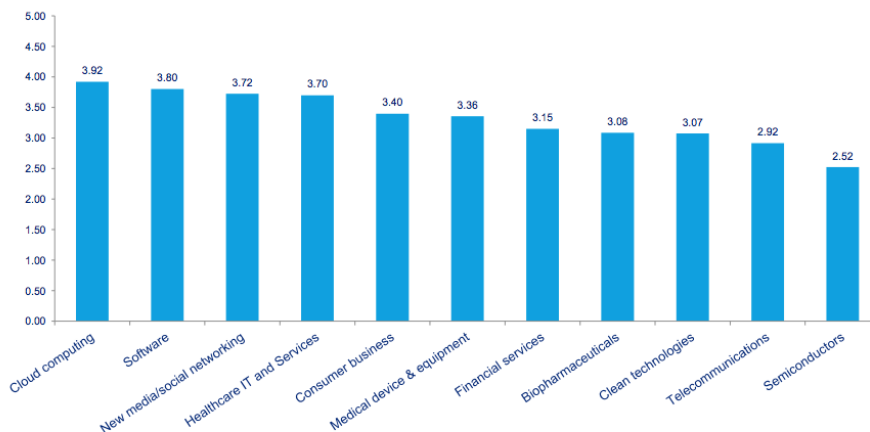
*A complete ecosystem for innovation success*

- 3 of the top 10 universities
- Global industrial clusters
- Leading VCs
- Support networks
- Rapid ideation
- Diverse population
- Collaborative environment
- Positive government policies
- Entrepreneurial culture
- Failure is allowed
- Research + Development + Commercialization
- Meritocracy = Achievement



## Industry Investing

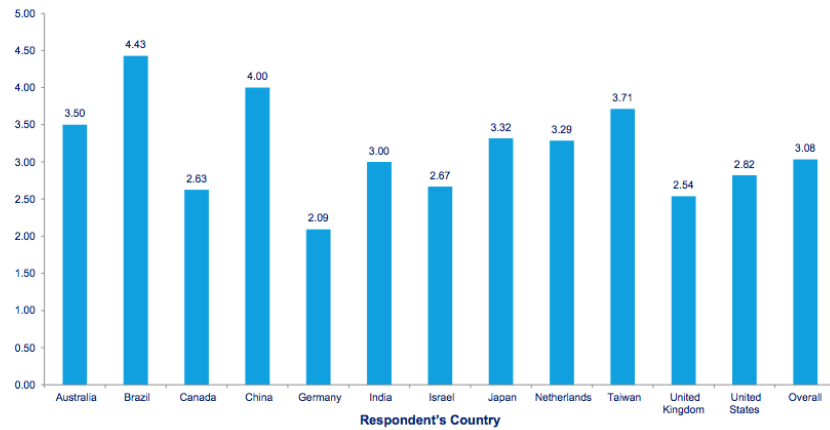
Overall confidence in VC investing by sector



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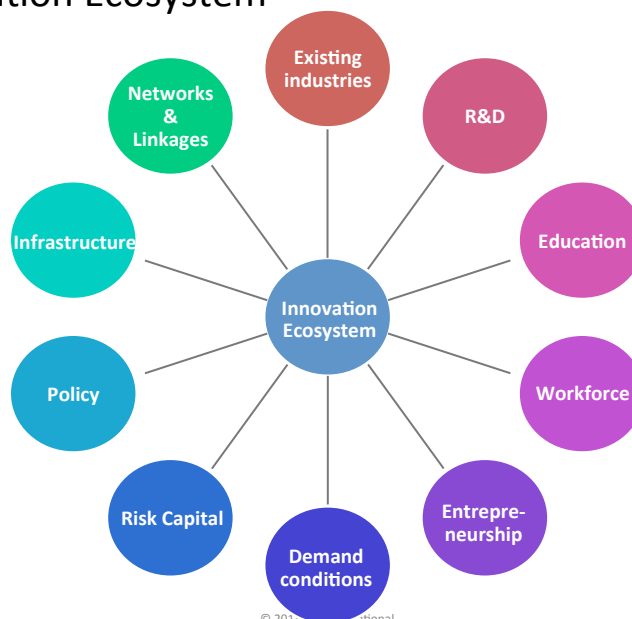
## Industry Investing

### Overall confidence in VC investing in the Biopharmaceuticals sector



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## Innovation Ecosystem



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## World Economic Forum – Entrepreneurial Ecosystems Around the Globe

Exhibit 2-1: Entrepreneurial Ecosystem Heat Map by Continent/Region: Pillars Readily Available in Your Region

Pillar	US - Silicon Valley	US - Other Cities	North America	Europe	Aus/NZ	Asia	MEA	South/Central America and Mexico
Accessible Markets	92%	83%	85%	72%	69%	68%	68%	62%
Human Capital Workforce	93%	87%	90%	81%	81%	73%	50%	71%
Funding and Finance	91%	76%	82%	57%	69%	44%	55%	45%
Mentors/Advisers/Support Systems	91%	72%	78%	52%	58%	38%	36%	35%
Regulatory Framework/Infrastructure	67%	57%	62%	54%	54%	39%	55%	42%
Education and Training	80%	62%	70%	60%	38%	34%	32%	27%
Major Universities as Catalysts	88%	67%	75%	52%	42%	30%	23%	27%
Cultural Support	90%	64%	75%	33%	35%	26%	45%	16%
Average Score	86%	71%	77%	58%	56%	44%	45%	41%

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## Silicon Valley Culture

- Many aspire to entrepreneurship
  - Children, students
  - Engineers, scientists
  - Managers, executives
- Success is rewarded
  - Financially
  - Prestige
- Failure is accepted, not punished
  - Professionally
  - Socially
- Knowledge and people move rapidly
  - Academia to business, and back
  - Business to business
  - Career change



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## What's Your Attitude Towards Innovation?



Anxious?



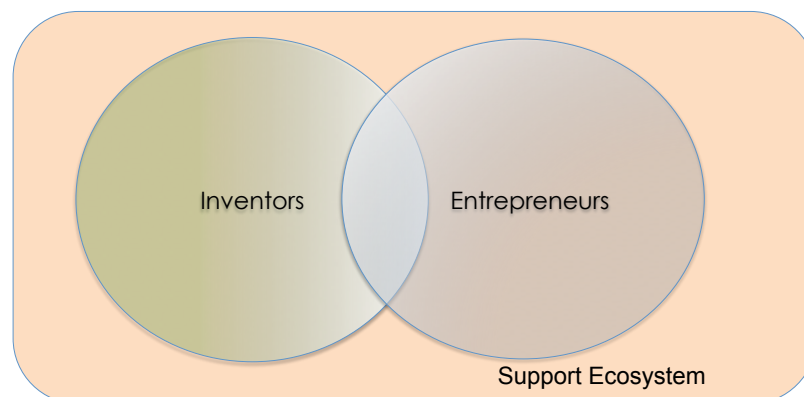
Excited!

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## Talent Pool

Innovation requires:



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## Talent Pool

What do these companies all have in common?

Google



facebook

Microsoft



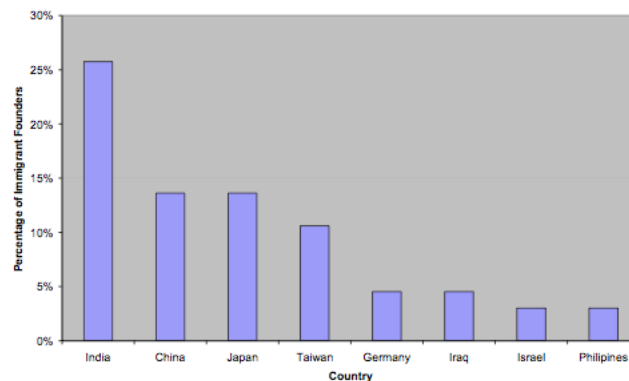
YAHOO!

**Founded by STUDENTS**

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## Talent Pool

52.4% of start-ups in Silicon Valley have immigrants as key founders



**Origins of Tech Company Founders in Silicon Valley**  
Source: Duke & UC Berkeley Study - 2007

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## Learning from Failure

- "I have not failed, I've just found ten thousand ways that won't work." – Thomas Edison
- "It's fine to celebrate success but it is more important to heed the lessons of failure." – Bill Gates
- "Failure is success if we learn from it." – Malcolm Forbes
- "Success is going from failure to failure without loss of enthusiasm." – Winston Churchill
- "Failure happens all the time. It happens every day in practice. What makes you better is how you react to it." – Mia Hamm

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## The Need for Speed

ft.com > management > **FINANCIAL TIMES**

### Entrepreneurship

Home UK World Companies Markets Global Economy Lex Comment

Business Education ▼ Entrepreneurship ▼ Business Books Business Travel Recruitment The Connect

**BUSINESS SPEAK** April 5, 2012 6:34 pm

### The need for speed

By Ian Sanders

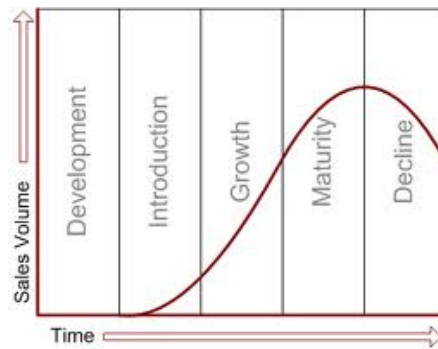
The business world is fixated upon the next "big idea" – whether it's creating a new product or innovating a fresh approach. But while an idea can be the oxygen that every business needs to grow, having the idea is not what makes you a winner. It's how fast you get it out there.

Acting fast will give you that edge over the competition.

<http://www.ft.com/cms/s/0/8a31330e-62bd-11e1-9445-00144feabdc0.html#axzz1y8GLGFwB>

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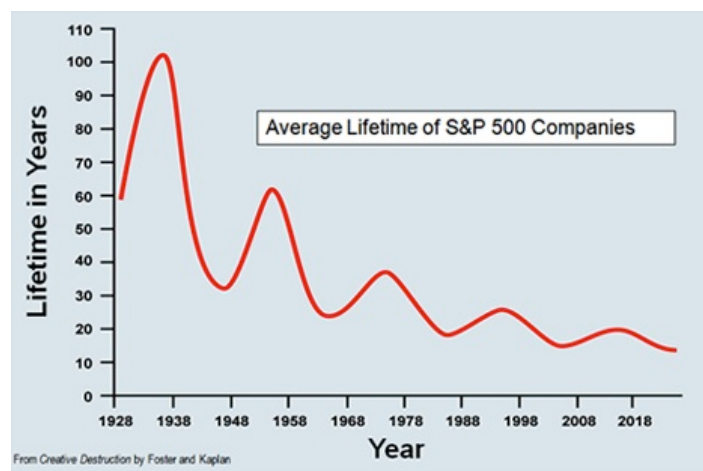
## Product Lifecycles Getting Shorter



- Multiple Reasons:
- Faster Information flow - to consumers & competitors
- Faster development cycles
- Worldwide competition
- Outsourcing - for development, design, manufacturing, etc...
- Faster logistics

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## Expected lifetime of F500 companies



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## Stanford OTL (Office of Technology Licensing)

	<u>1970</u> ↔ <u>2011</u>	<u>Cumulative</u>	<u>Active</u>
<b>Disclosures</b>	28      504 ↕	~8900 ↕	~3300 ↕
<b>Licenses</b>	3      101	~3000	~1000
<b>Royalty Income</b>	\$50,000      \$66.8m	\$1.4B	
<b>Staff</b>	2      38		



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## Types of Innovation

amazon.com<sup>®</sup>

FedEx<sup>®</sup>

Business  
Process



Consumer  
Demand

INTUITIVE  
SURGICAL<sup>®</sup>

Siri

Technology/  
Invention

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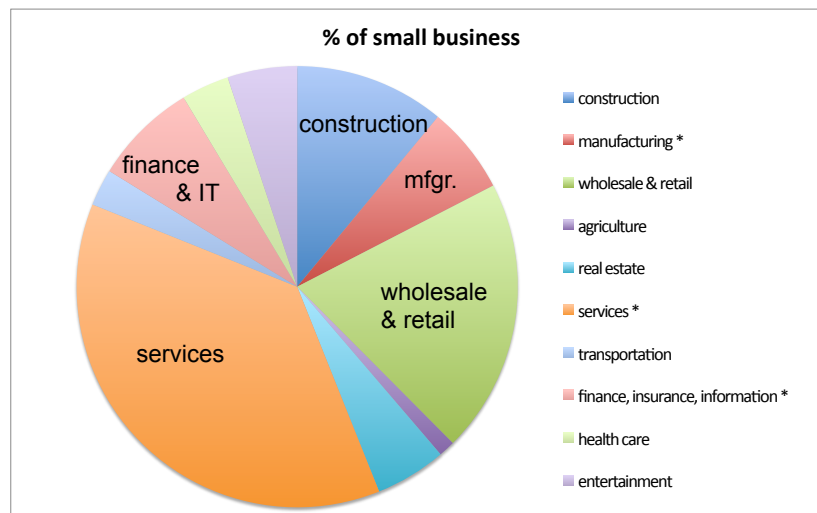


## Sources of Innovation

	Business Process	Consumer Demand	Technology/Invention
Research Lab			
University Lab			
University Student			
Independent Entrepreneur			
Existing Large Company			

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## Small Business Industry Affiliation



Source: Kauffman Foundation

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## Types of Innovation (#2)

Breakthrough  
Innovation



Incremental  
Innovation

Amazon.com

One-click shopping

Original iPhone

iPhone 5C

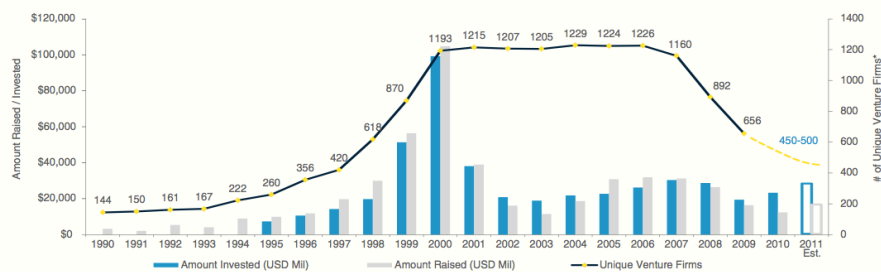
Viagra

Cialis for daily use

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## Venture Industry Disruption

Exhibit 2: Number of Venture Capital Firms\*, Industry Fundraising and Amount Invested



\* VC firms that have at least one round of investing in the year  
Sources: Dow Jones VentureSource and SVB Analytics. "Amount Invested" data unavailable prior to 1995.  
Note: 2010 and 2011 data for # of unique firms and amount raised are projections based on SVB Capital analysis

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**Entrepreneur Capital** =Angels, Super Angels, Accelerators,  
University pre-seed, seed, online, CrowdFunding ...

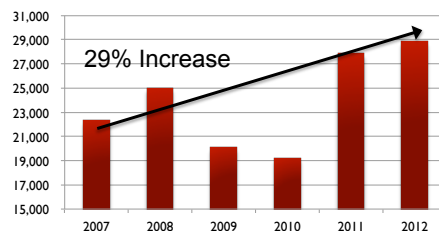
	Companies Funded	Amount
 <b>AngelList</b>	16,000+ raising capital	\$1.1 Billion+ raised
 <b>KICKSTARTER</b>	35,000 Projects Funded	\$485 Million
 <b>SV Angel</b>	350 Companies	\$89 Million Managed
 <b>FundRazr</b>	TBD	TBD
 <b>500 STARTUPS</b>	300+	\$80 Million Managed

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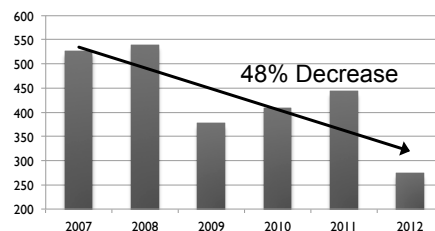
## Number of Angel Investments Grows

Disruption: Entrepreneur Capital

**Number of Angel Seed Deals**



**Number of VC Seed Deals**



MoneyTree Annual Report, PricewaterhouseCoopers, 2013; Angel Market Analysis Report, University of New Hampshire Center for Venture Research, 2013

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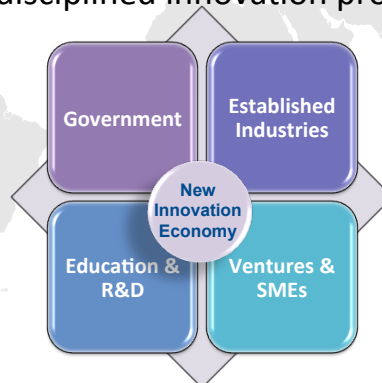
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## Innovation is a Critical Challenge

Countries, Universities, and Enterprises around the globe are trying to create a disciplined innovation process.



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## Selection of an Innovation Process is Critical

### Our Perspective

- Successful innovation is not the result of luck or lone genius
- It is the result of a disciplined, continuous improvement process with an unrelenting focus on creating the highest customer value

### Our Objective

- Share with you a systematic process for creating and delivering compelling customer value
- A process that applies to all enterprise functions
- And works for incremental as well as radical innovations

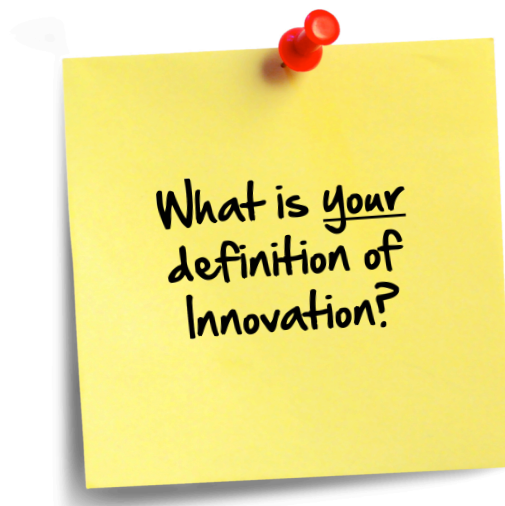
### The End Goal

- Develop high-value innovation plans
- That result in successful new business opportunities

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## DEFINING INNOVATION



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## SRI' S DEFINITION OF INNOVATION

Ensure everyone is working in the same direction

### **Innovation:**

The creation and delivery of  
new customer value in the marketplace  
with a sustainable business model  
for the enterprise producing it.

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## SRI Five Disciplines of Innovation®



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## SRI Innovation Partnership Benefits

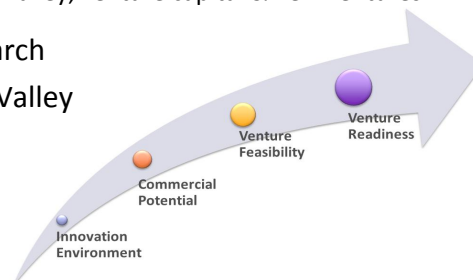
- Faster, more predictable process
  - *Methods* for identifying & nurturing innovative ideas
  - *Techniques* for selecting projects with best commercial potential
  - *Shared language* to think and talk about value
  - *Tools* to efficiently articulate & improve innovation ideas
- Building an innovation ecosystem
  - Educated, excited & innovation motivated community
  - Connecting entrepreneurs, innovators
  - Public awareness
- Connection to SRI & our network
  - Our growing global network of innovation partners
  - SRI internal research & development expertise
  - Silicon Valley experience and ecosystem



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## SRI Innovation Programs - Unique Position

- Over 65 years of R&D and commercialization experience
  - Many notable successes
- We are practitioners, not consultants
  - We practice what we preach, we use these tools every day
- Facilitators are venture knowledgeable
  - Experience in start-ups, Silicon Valley, venture capital & new ventures
- Only major non-profit research institution based in Silicon Valley



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## SRI Active in Chile



Portafolios/Lab to Business Program  
Mercado/Go-To-Market Program  
Engineering 2030 Program

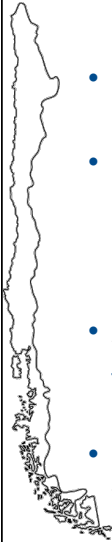
Advisory Board

MECESUP program

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## Go To Market – Program Objectives



- Identify promising potential Chilean inventions & entrepreneurial teams
- Implement a process for systematically evaluating Chilean University research and identifying projects with commercial potential
- Assist Chilean entrepreneurs to take their products to market
  - with a special emphasis on markets outside of Chile
- Encourage more invention and innovation in Chile and the formation of entrepreneurial teams

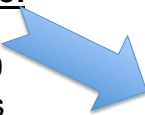
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## Go To Market – Program Context

### Start-up Chile:

Bringing 1500 entrepreneurs to Chile in 3 years

Cost of program:  
\$ xxxx



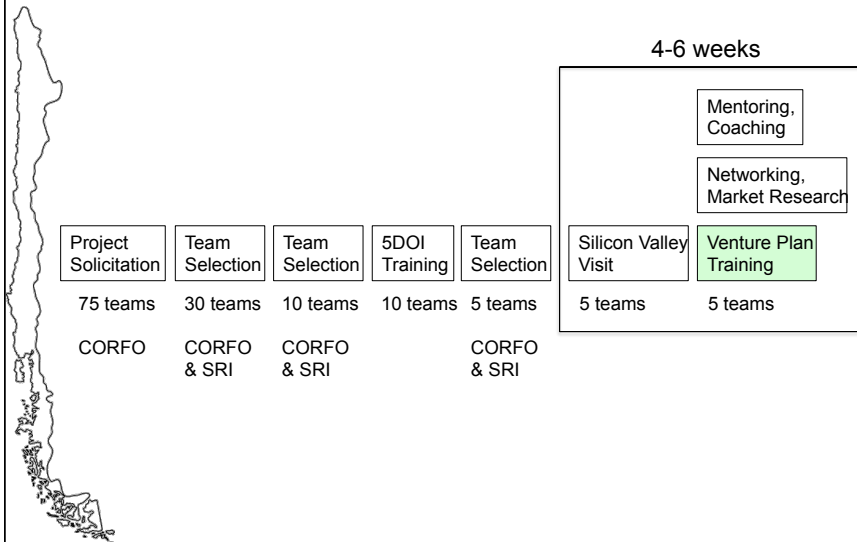
### Go To Market:

Helping 150+ (?) Chilean entrepreneurs get to market (in Chile and around the world) in 3 years

Cost of program:  
\$ xxxx

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## Go To Market #1 – Program Flow



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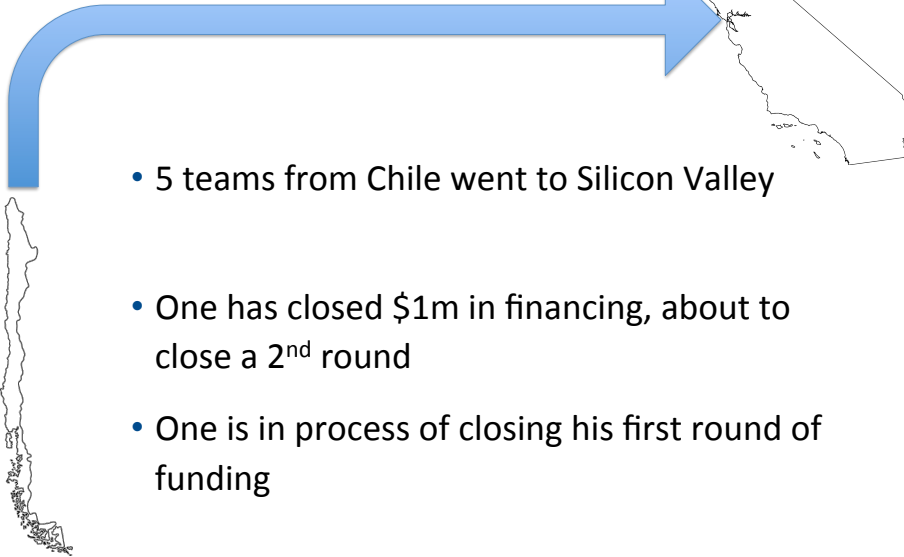
## Initial Investor Presentation = 10 slides

- Hook/Need
- Market
- Approach/Solution
- Customer Validation
- Competition
- Business Model
- Team
- Milestones/Roadmap/Vision
- Financial Projections
- Close/“The Ask”

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## Mercado Go To Market #1

Participant Experience



- 5 teams from Chile went to Silicon Valley
- One has closed \$1m in financing, about to close a 2<sup>nd</sup> round
- One is in process of closing his first round of funding

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## Mercado Go To Market #1

Participant Experience

- *"I don't know all the answers yet. But I do know what the right questions are."*
- *"I now have a prioritized set of things to work on. I have a much clearer picture of what I know and what I don't know."*
- *"I've been studying entrepreneurship and innovation for 2 years. Until you try to test the theoretical in the practical world, you don't really understand. For example, you can read about the need to understand a market ecosystem. But until you try to do it, you don't realize how much there is to do. And how much there is to learn."*
- *"It's a chance to test everything you thought you knew. We ended up realizing how much we didn't know; how often we thought we were making informed decisions. But now we realize that we were making decisions without real data - the knowledge of customers, competitors, partners, and investors."*

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## Mercado Go To Market #2

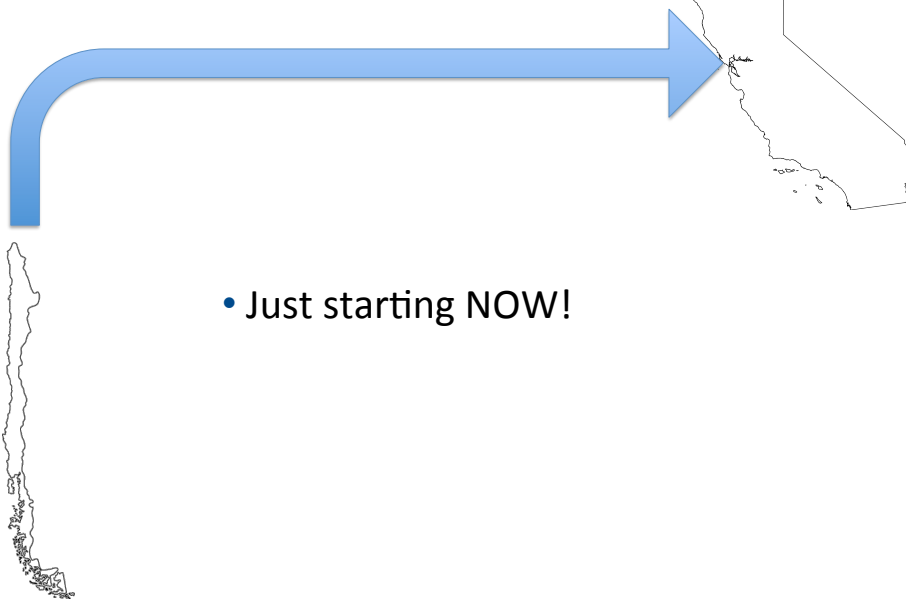
Participant Experience



- 5 teams from Chile went to Silicon Valley
- One has raised US \$4m and opened a US (California) operation
- One is in discussions with investors

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## Mercado Go To Market #3



- Just starting NOW!

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## Global Awareness

Countries where SRI delivers Innovation Programs



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The *way* we work is our *most* important innovation

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Thank you

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