



San Diego and Beyond Lessons learned in the Rainforest

Saudi International Technology Incubation Conference

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A Brief History

- Founded in 1985 at UCSD as a 'partnership of equals' between
 - Entrepreneurs
 - Academia / Researchers
 - Industry
 - Government
 - Capital Providers
 - Business Services
- With the purpose of:
 - Commercialization of Research
 - Entrepreneurism education
 - Advocacy on behalf of innovation



~ 1,500 companies > \$10 billion in funding

San Diego's *'Incubator Without Walls'*



- Facilitating the convergence of scientific invention, entrepreneurship, and smart capital
- Access to technology developments in all fields
- Access to diverse forms of financing -- seed, angel, venture, corporate, SBIR, grant/foundation
- Business planning and market intelligence
- Domain, business, and market expertise “know-how” connecting to “know-who”
- Lifelong education and training for professionals

Numbers at a Glance



- 230+ Members
- 16 Staff
- 30 Programs
- 150 EIRs; 200 Domain Experts
- >1800 Volunteers
- 330 Events
- 15,000 Attendees
- \$3M budget



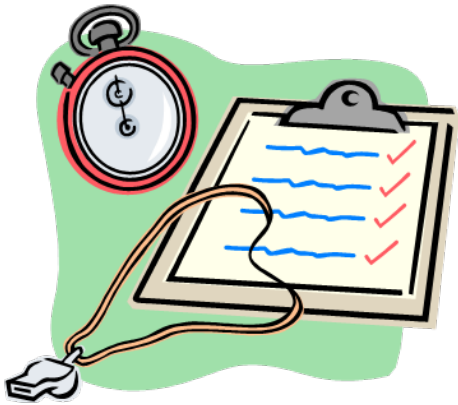
A Mentoring Program

What is Springboard?

Springboard is a year-round, CONNECT flagship program started in 1993 that assists technology and life science companies and entrepreneurs refine their business, market and financial strategies through a group mentoring process.

Springboard – The Process

- A 3 to 5 month process tailored to achieve the client's goal -



Business coaching
by CONNECT EIRs

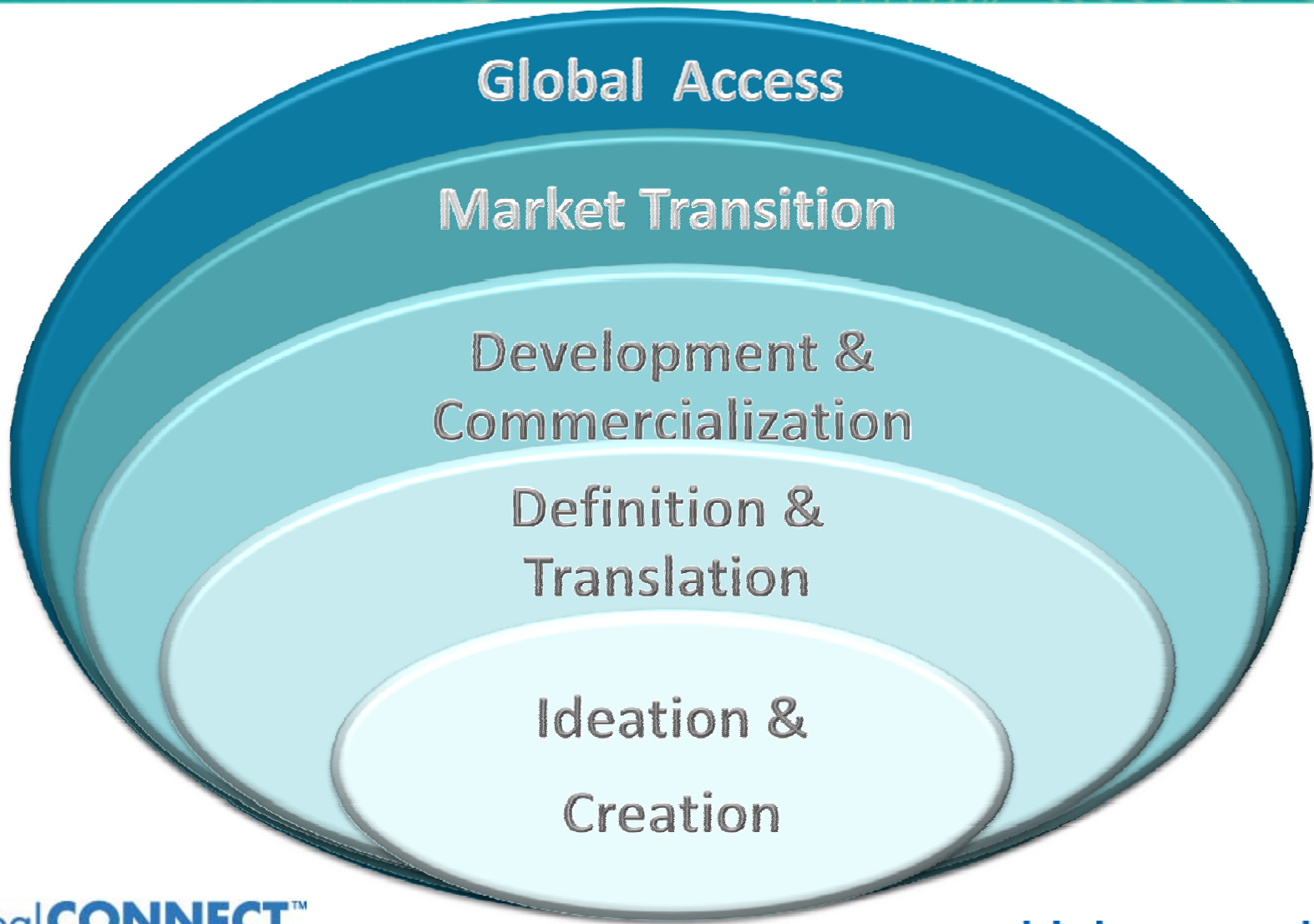


Discipline to define
business opportunity



Springboard Panel
presentation

Springboard Assists Companies at all Stages



Success Stories

- Over 500 technology companies have completed the process since 1993
- 130 companies have completed the Springboard program since January 2005
- More Than 70% were still doing business as of June 2009



CardioCreate



Egea Biosciences



SOAPBOX™
MOBILE



Results After Mentoring



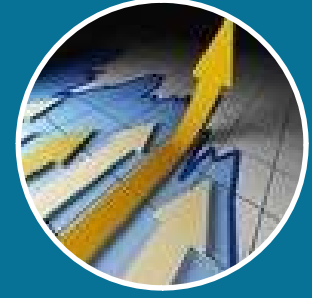
70%
received
funding



\$700M
capital
raised



100% more
talent hired



\$80M / year
of economic
impact



The Global CONNECT Network

- **USA**

- *Boston*
- *Washington*
- *New York*
- *New Mexico*
- *Midwest (Illinois, Indiana, Wisconsin, Michigan)*
- *Orange County, California*
- *Los Angeles*

- **Canada**

- *Toronto*
- *Quebec*
- *British Columbia*

- **Asia**

- *Japan*
- *Singapore*
- *Korea*
- *Taiwan*
- *Malaysia*
- *India*

- **Europe**

- *United Kingdom*
- *Sweden*
- *Scotland*
- *Denmark*
- *Estonia*
- *Finland*
- *Latvia*
- *Germany*

- **Russia**

- **Middle East**

- *Jordan*
- *Saudi Arabia*

- **Oceania**

- *Australia*
- *New Zealand*

- **Latin America**

- *Mexico*
- *Colombia*



**So, why should you
listen to me?**



Today, we have more choices than ever.....

Innovation is geographically agnostic

What is driving this change?

- Information on demand
- Talent is mobile
- Resources for innovation may not be proximate
- Social networks and the media
- Science has become more highly

interdisciplinary and cross-disciplinary

(convergent)

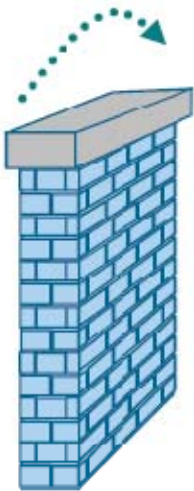


Definitions matter

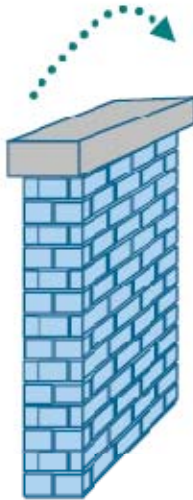
- Innovation \neq Creation ...(but requires it).
- Innovation occurs when there is realized and measureable economic and / or social impact.
 - For this to occur, science needs to be transformed & translated into value added products and services, and then applied to advance market and societal disadvantages
- Innovation is a process of examination, experimentation and iteration. Therefore, failures are a necessary and valuable outcome
- Knowledge is a critical input for innovation

And the Barriers to Growth of SMEs are high

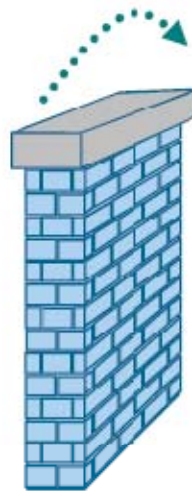
Lack of
role models



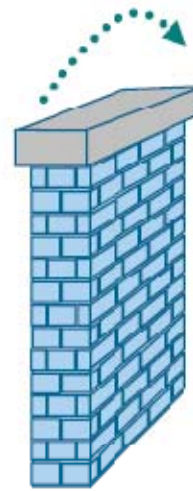
Lack of
trust



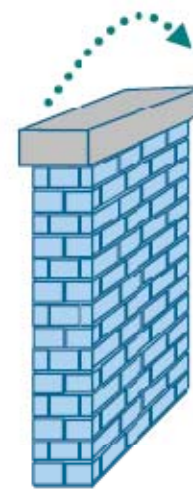
Limited
management
expertise



Limited access
to smart
capital



Lack of contacts
and mentors



Why is this important to understand?

- Knowledge driven enterprises are now less dependent on physical infrastructure to drive growth and impact
 - The rise of the Protean Corporation* (micro-multinationals)
- Individual ideas most likely will need to be bundled and / or converged to deliver their sustaining value
- Industry is relying more than ever on ‘open innovation’
- Fierce competition for resources, particularly knowledge workers and ‘smart’ risk capital
- Partnerships and alliances will drive significant value creation
- Innovation is now a game of days and months....not years and decades. Agility and speed are prized attributes

Innovation: A Non-Linear Configuration

- Major enterprise activities are categorized into 4 main groups:
 1. Technology: How to Make
 2. Customer/Market: How to Sell
 3. Human Resources: How to Recruit and Retain Employees
 4. Organization: Models of integration
- Innovation happens in all aspects of enterprise activities.
 1. Technology Development / Innovation
 2. Customer & Market Development
 3. Human Resources Development (learning and creativity)
 4. Organizational Development (change and leadership)

Innovation is not limited to technology

A different approach to economic growth

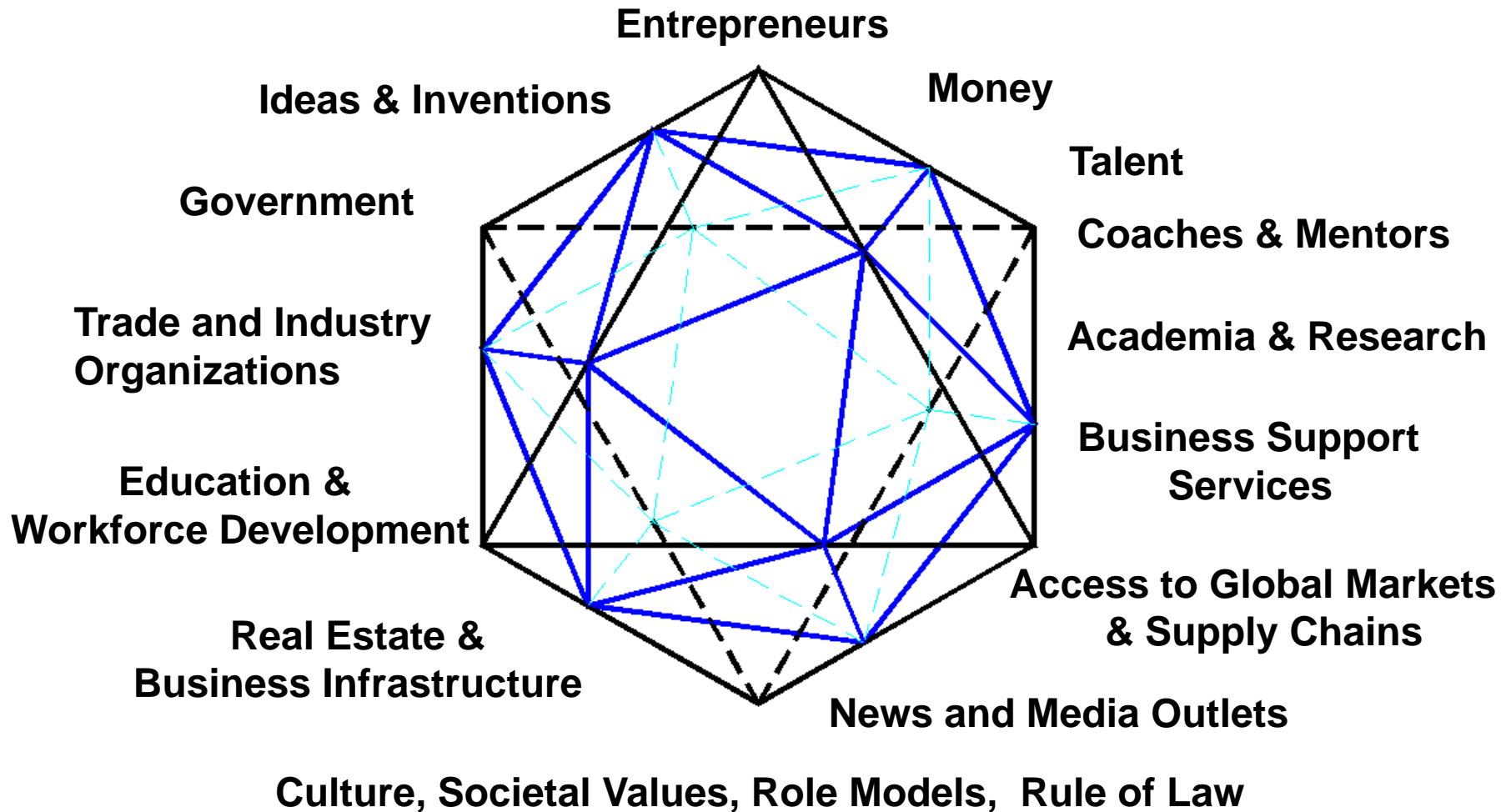
Plantation



Rain Forest



It takes a village (or rather, an ecosystem)



Collaboration must be a core competence



Dream Big





The Law of Creative Destruction

**It's not about thinking outside the box. It is realizing
that the box doesn't even exist.**

Competition is global and hypercompetitive





What we've learned

- Innovation is complex and idiosyncratic
- Innovation systems are organic and in a state of constant change
- **Trust** is the new currency
- Failing is not failure
- Create lots of opportunities, because you can't always pick the winners
- Commercialization is a 'body contact' sport
- Networks drive the rapid diffusion of knowledge

Culture of Innovation

- Being comfortable with uncertainty and ‘randomness’
- Having high tolerance for ‘bad news’
- Identifying and celebrating role models
- Strive for fairness, not advantage
- Telling your stories
- Workforce development
- Failure being seen as a positive metric
- Serial engagement (time, money, connections)
- Don’t build for perfection. Build for evolution
- Understand the motivations of all stakeholders and align incentives appropriately

Impact of Innovation

Innovative small business have generated 80 percent of net new jobs annually over the last decade

- Employ 30 percent of high-tech workers, such as scientists, engineers, and computer workers
- SME's produce 13 times more patents per employee than large patenting firms
- Small Companies are a key source of innovation by themselves and for large companies

Source: Small Business Administration


*“It is not the strongest of the species
that survives,
nor the most intelligent ...
... but the one most responsive to
change.”*

Charles Darwin



The Importance of Networks

- It is important to leverage *networks* that transcend professional and social boundaries, while allowing for non-hierarchical exchanges
 - Accelerating ***knowledge absorption, diffusion, and application***
 - Understanding, articulating, and ***aligning mutual values and definitions*** of the stakeholders
 - Harnessing the ***collective intelligence*** (none of us are as smart as all of us)
 - Incubating ***leadership***
 - Reinforcing and ***rewarding behavior***
 - Providing opportunities for ***convergence***
 - ***Shared risk and rewards***
 - Increasing readiness and sustainable outcomes, while lowering ‘transaction costs’ through ***trust-based relationships***
- Innovation Intermediaries facilitate and accelerate these outcomes***



“Spontaneous sociability is critical to economic life because virtually all economic activity is carried out by groups rather than individuals.”

*Economic historians Douglass North and Robert Thomas
(P47 of “Trust”)*

The Importance of 'Boundary Spanners'

They facilitate access and flow of intellectual, financial, and human capital in order to:

- Address economic transition
- Capture the benefit of investments in R&D and higher education
- Build entrepreneurial cultures
- Create Jobs
- Help existing industries modernize
- Diversify economies and create sustainable and renewable wealth
- Develop regional and global innovation networks
- They break down hierarchies and allow knowledge to flow



Now what?

Get ready for action

- Don't build for perfection....build for iteration
- Be inclusive
- There are no boundaries, only obstacles
- Become a mentor and incubate leadership
- Remember: None of us are as smart as all of us
- People are the most important 'intellectual property'

How to make it work

- Talent / Knowledge Exchanges
 - Fellowship programs
 - Internships
- Calibrate Opportunity
 - Rapid Opportunity Assessments
 - Global Bridge
- Create boundary spanning organizations
- Engage mentors

How to make it work


- Involve Saudi diaspora
- Create multiple 'feedback loops'
- Identify near-sourcing capabilities
- Provide entrepreneur and workforce development programs
- Involve the business community
- Identify policies which inhibit and promote entrepreneurship...and act

How to make it work


- Find ways to create access to risk capital
- Reward positive behaviors, and publicly recognize success
- Measure, report, measure, report...and benchmark
- In addition to entrepreneurs, educate policy makers, journalists, business providers, capital providers, and academics



What will you choose to do?



“If you want to build a ship, don’t drum up people to collect wood and don’t assign them tasks and work, but rather teach them to long for the endless immensity of the sea.” *~Antoine De Saint Exupery*



“While we associate economic growth with technological development, organizational innovation has played an equal, if not more important role since the beginning of the industrial revolution.”

Economic historians Douglass North and Robert Thomas

(P47 of “Trust”)

Thank you



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San Diego's Economic Transformation

- Replaced 100,000 jobs lost in defense with 136,000 in new companies – 2/3 high wage
- 26,000+ employment in biotech; 25,000+ in IT
- 500+ life sciences companies
- 525 wireless communications companies
- 600+ cleantech companies
- \$1.5 billion research base
- \$900 million venture capital investments, 2009