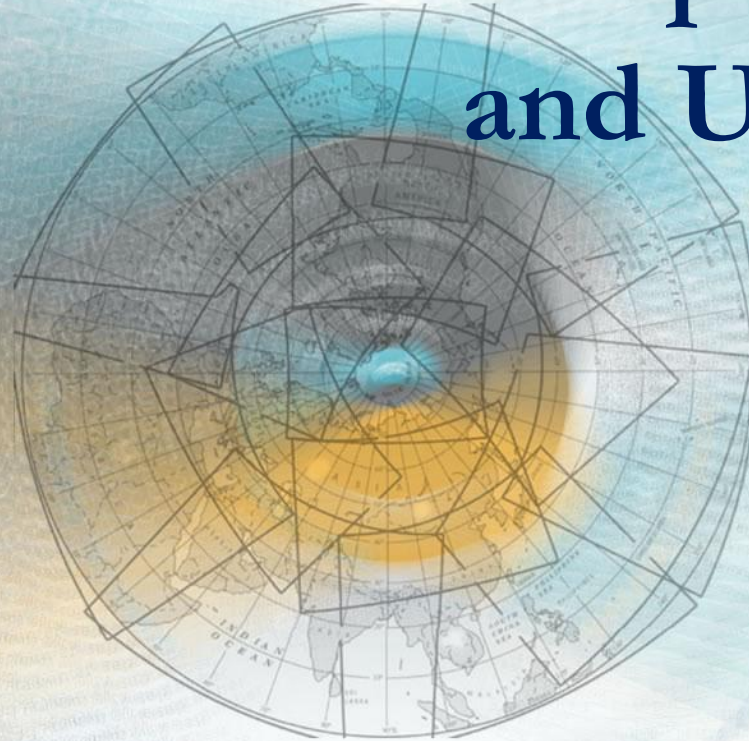


Entrepreneurship and Universities



Thomas Andersson
KOZANI, January 26, 2012

Context

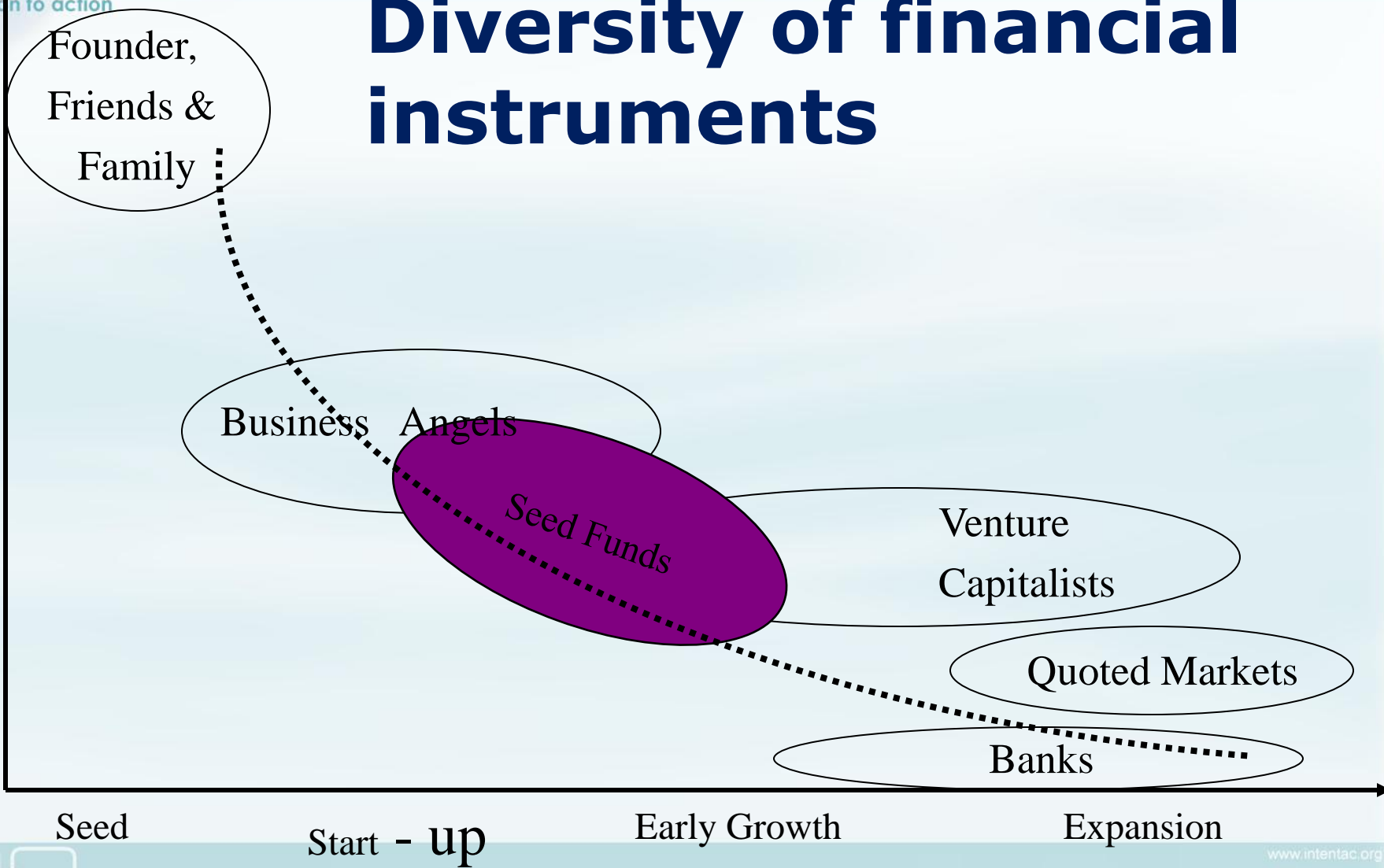
- Transformation of the global economic landscape based on accelerating technical progress and the diffusion of ICT.
- Dramatic growth of higher education needs coupled with growing demands for increased quality – need of addressing both volume, global reach and quality issues in more effective ways, including through governance reform and upgraded management.
- New kinds of higher education on the rise, contributing to business creation, job creation and economic growth in real time.
- Overriding need for Entrepreneurial Mindset, in support of new ideas, innovations, and solutions to social and environmental problems.
- Moving from “push” to “pull”, to anticipating and pre-empting real needs, to being capable of evolving and grow with continuous change.

Evolution of Innovation Metrics

First Generation Input Indicators (1950s–60s)	Second Generation Output Indicators (1970s–80s)	Third Generation Innovation Indicators (1990s)	Fourth Generation Process Indicators (2000s plus emerging focus)
<ul style="list-style-type: none"> • R&D expenditures • S&T personnel • Capital • Tech intensity 	<ul style="list-style-type: none"> • Patents • Publications • Products • Quality change 	<ul style="list-style-type: none"> • Innovation surveys • Indexing • Benchmarking innovation capacity 	<ul style="list-style-type: none"> • Knowledge • Intangibles • Networks • Demand • Clusters • Management techniques • Risk/return • System dynamics

Diversity of financial instruments

Level of risk



Seed

Start - up

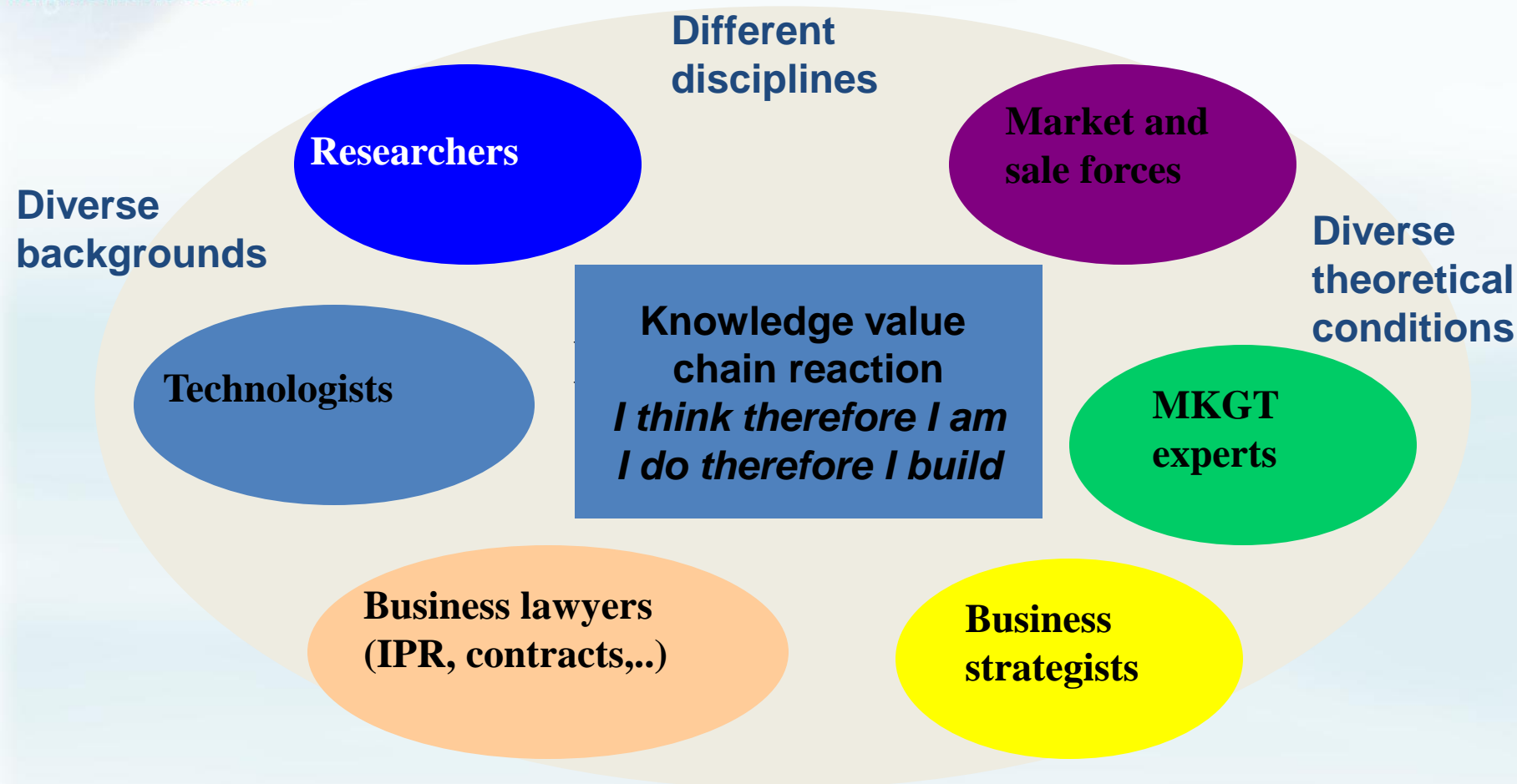
Early Growth

Expansion

Stages of development

Today's Context Enablers: A Knowledge Pool – A Super Collider (Particle Accelerator) for Entrepreneurial Reactionbringing them together, the reaction starts

from intention to action



“The symbiosis is the building upon one another's strength... one another's competencies...adding value and passing it on”.

Table 3.1 Extent of autonomy experienced by universities¹

	Institutions are free to:							
	1	2	3	4	5	6	7	8
	Own their buildings and equipment	Borrow funds	Spend budgets to achieve their objectives	Set academic structure/course content	Employ and dismiss academic staff ²	Set salaries ²	Decide size of student enrolment ³	Decide level of tuition fees
Mexico	●	▶	●	●	●	▶	●	●
Netherlands	●	●	●	▶	●	●	●	▶
Poland	●	●	●	●	●	▶	●	▶
Australia	●	▶	●	●	●	●	▶	▶
Ireland	●	▶	●	●	●	▶	●	▶
United Kingdom	●	▶	●	●	●	●	▶	▶
Denmark	▶	●	●	▶	●	▶	●	▶
Sweden	▶	▶	●	●	●	●	▶	
Norway	▶		●	●	●	▶	●	
Finland	▶		●	▶	●	●	▶	
Austria	▶		●	●	●	●		
Korea (national – public)			▶	▶		▶	●	
Turkey				▶	▶		▶	
Japan (national – public)				▶	▶			

Legend: Aspects in which institutions:

- have autonomy
- ▶ have autonomy in some respects (see the Appendix for details).

1. Data in Table 3.1 are based on responses to a 2003 survey of university governance by members of the OECD's Institutional Management in Higher Education (IMHE) programme. Participation in the survey was voluntary, responses were not received from institutions in all OECD countries, and the IMHE members do not necessarily represent the full range of higher education institutions in the countries concerned. Institutional responses were cross-checked for consistency against each other, and published sources and national experts were consulted in preparing the table. However, the table shows a simplified picture, and countries vary in many detailed respects, as described in the Appendix. Non-university institutions are not included except where specifically mentioned in the Appendix. Countries are ranked in order of the number of areas in which universities reported autonomy, and alphabetically where the number is the same.

2. "Employ and dismiss academic staff" (column 5) and "Set salaries" (column 6) include cases where any legal requirements for minimum qualifications and minimum salaries have to be met.

3. "Decide size of student enrolment" (column 7) includes cases where some departments or study fields have limits on the number of students able to enrol.



Education for maturity and mindset change...

- Quality education and learning for life
- Entrepreneurial training, experimentation
- Mobility, brain circulation
- Inspiration and engagement:
 - ▶ *Transpassing borders: building alliances between disciplines, age groups, nation states*
 - ▶ *From push to pull, from turf to inclusion*
 - ▶ *Role models: authority and mentoring, not authoritarian rule...*
 - ▶ *Learning in action*



Entrepreneurship and innovation, engagement, learning **in** action

Soft Skills

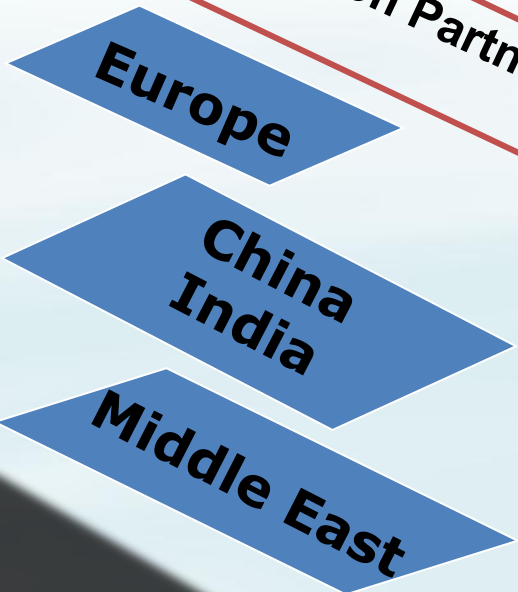
- *Awareness*: Recognising your own strengths and weakness.
- *Imagination*: Identifying new patterns in complexity and opportunities in uncertainty.
- *Curiosity*: Challenging and thinking out of the box.
- *Regulation*: Keeping emotions under control.
- *Motivation*: Developing optimism and personal drive.
- *Empathy*: Reading emotions and motivation in other people.
- *Ability* to build and manage relationships.

Overview : INTENTAC INTERNATIONAL ENTREPRENEURSHIP ACADEMY

Environment

- | | |
|---------------------------------|---|
| House of Ideas | <ul style="list-style-type: none"> • Open-source network • Federated, distributed and authentic conversations • Access to and refining of entrepreneurship policy • Knowledge for problem solving and opportunity chasing • Students' style of learning • Professional professors (theory-oriented practitioners) • Academic professors (practice-oriented scholars) |
| Entrepreneurship Policy Network | |
| Courses | |
| Workshops | |
| Seminars | |
| Conferences | |
| Forum | |

Higher Education Partners Network



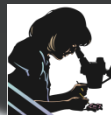
Competence-oriented diploma
Non-credit programmes
Career counselling



Lecturing
Researching
Mentoring and tutoring
Academic counselling

Education

Business process implementation



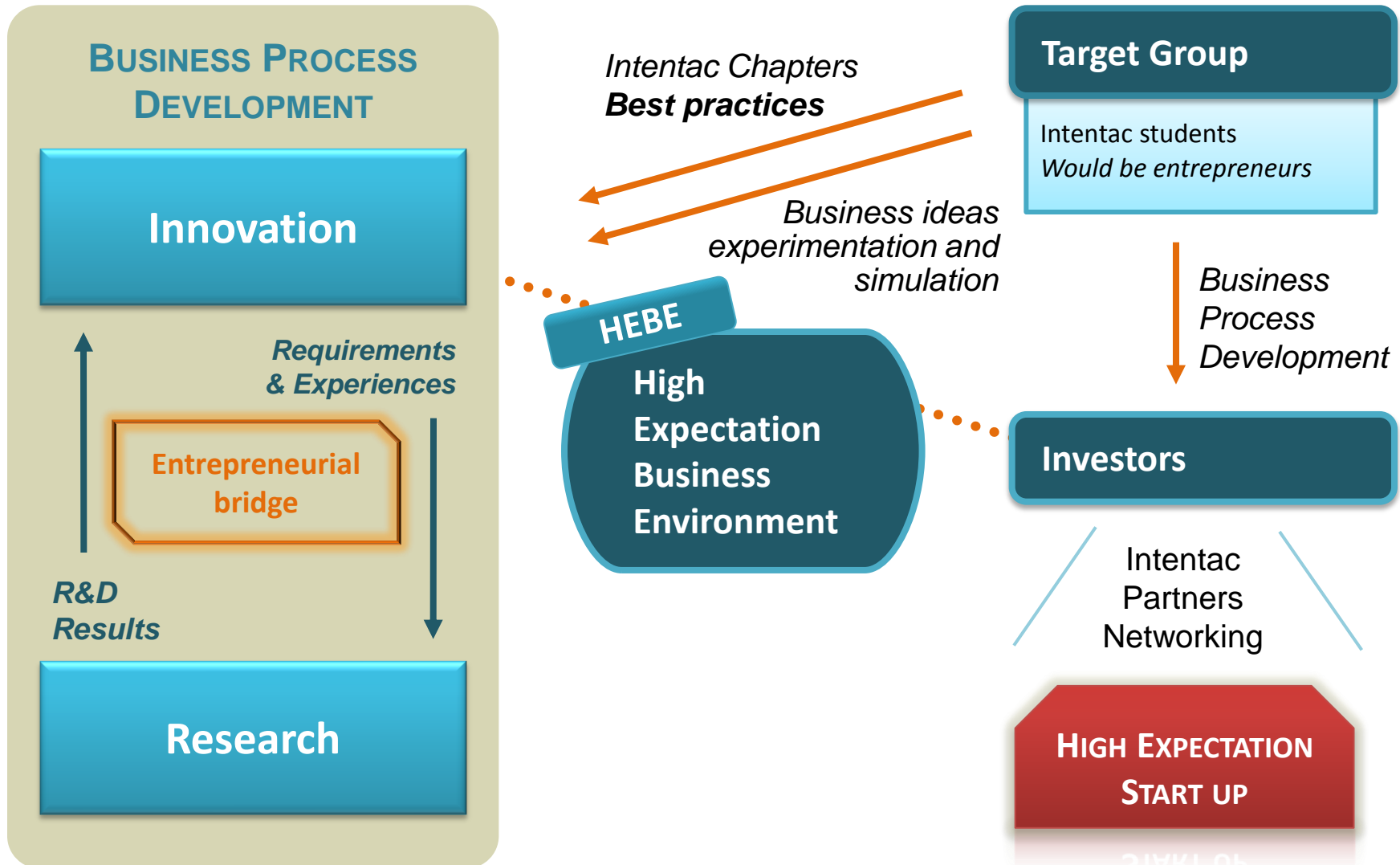
Business and Tech Labs without borders



Brain mobility & brain waves

Labs for experimentation & simulation of high-expectation start-ups

INTENTAC EXPERIMENTAL LAB DEMO DESIGN



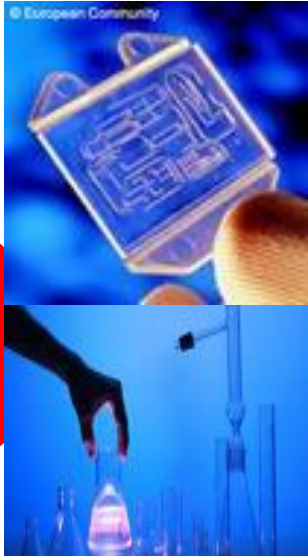
...A Bridge at the Convergent Spaces

CONVERGENT SPACES

IT & Innovation

Nano & Bio

IT & Mechatronics



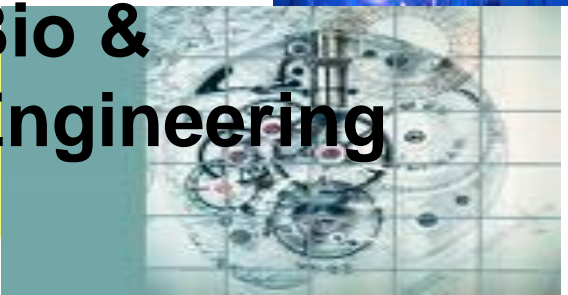
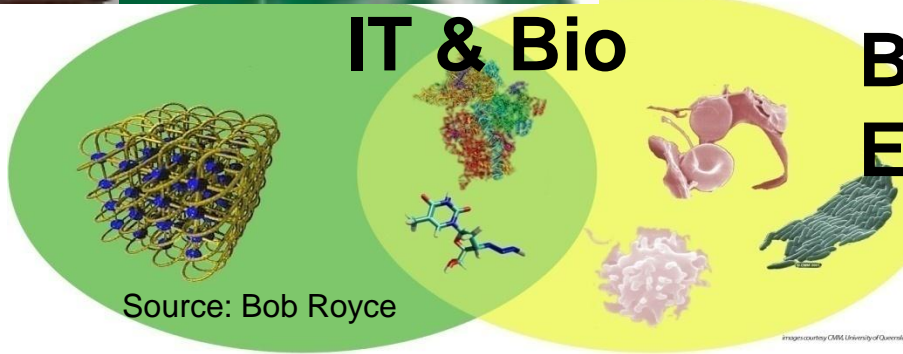
Desirable to users

Possible with technology

Viable in the marketplace

IT & Bio

Bio & Engineering



Source: Bob Royce

engineering OMS University of Queensland

High Expectation Start-Ups

Western Sweden context

from intention to action

8 million out of Scandinavia's 19 million people live in the corridor between Oslo and Copenhagen

29 universities and university colleges

260 000 university students

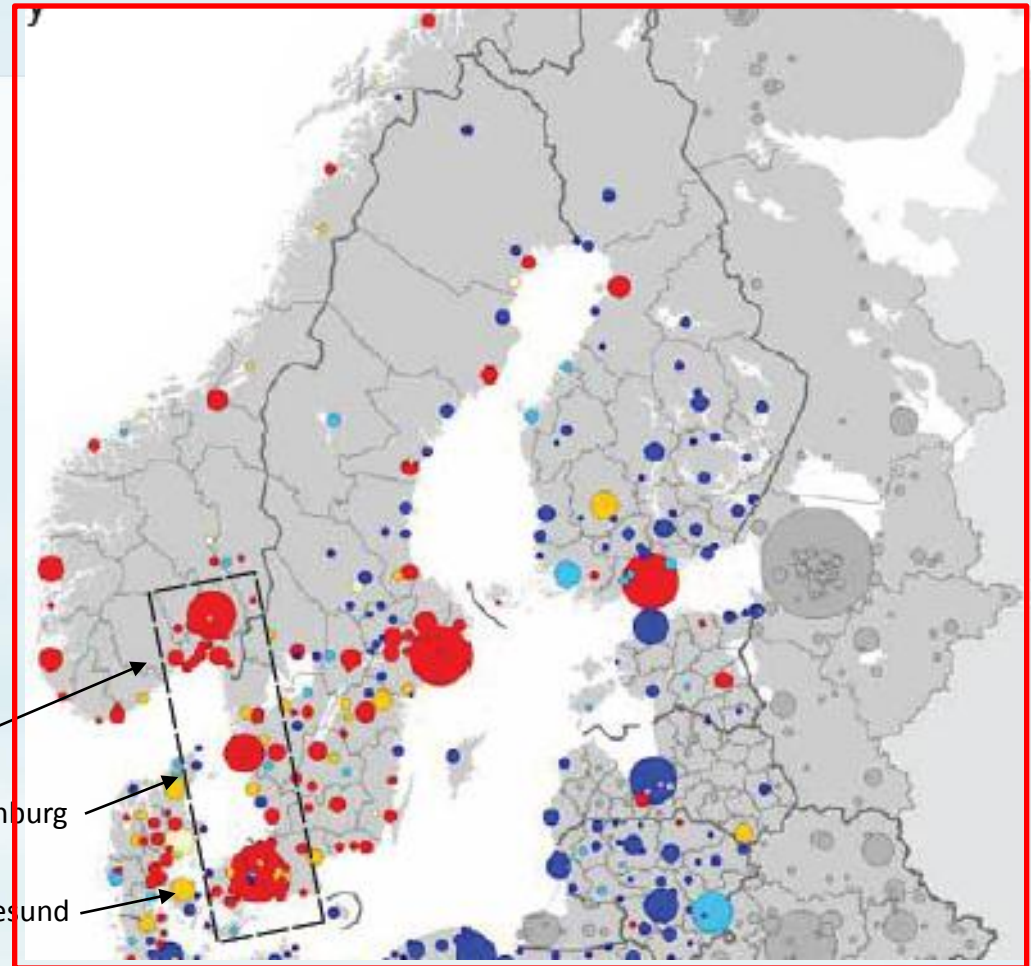
14 000 researchers

22 science parks/incubators

44 000 new businesses annually

Very high research expenditures

One of the world's most innovative regions

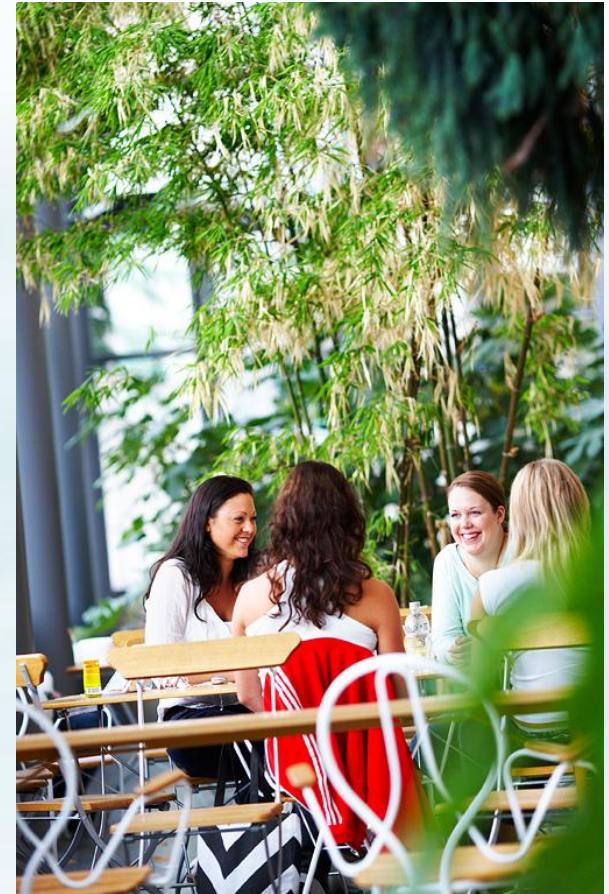


“Mega-regions are large-scale economic units of multiple large cities and their surrounding suburbs”

Richard Florida, “The Rise of the Creative Class”

Jönköping - key to success

- Foundation university - high autonomy, indep. board
- Organisational and governance structure with high accountability
- Dedication to specialisation: entrepreneurship, innovative learning, human side to health, technology and SMEs
- Partnerships, broad basis student exchange, few selected locally and globally for strategic development
- Strong integration with Science Park and Business Development, triple helix model, business labs for students, mentorship arrangements for industry



The Gothenburg model

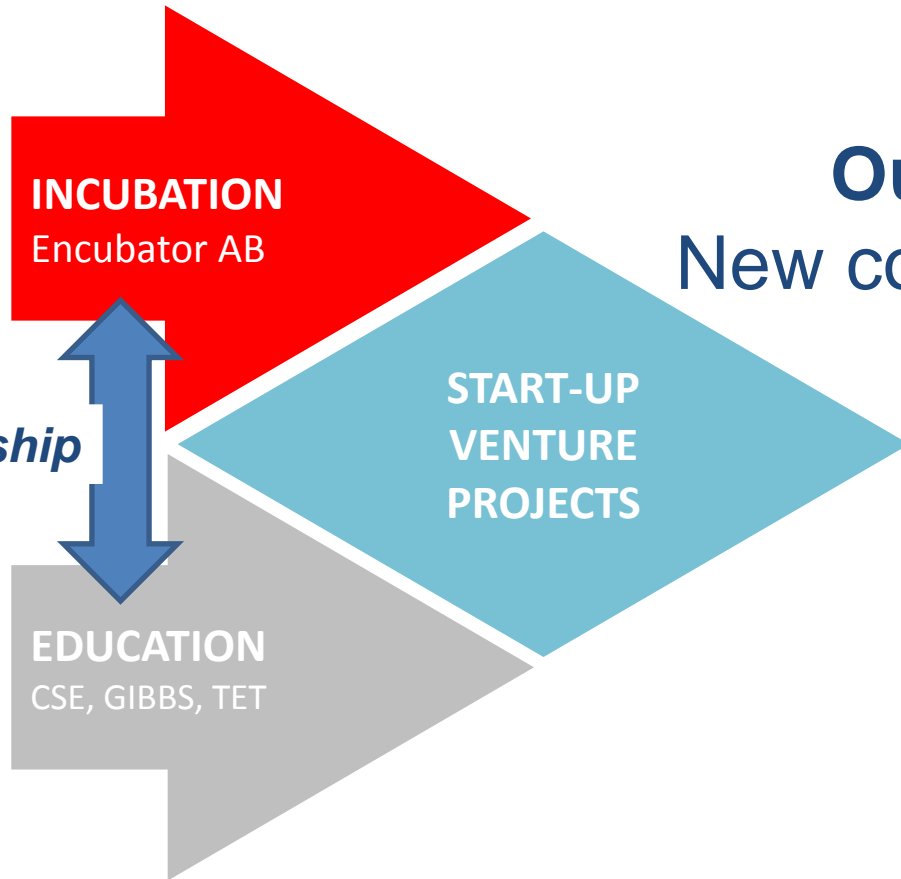
- Connect education tightly with commercialization activities
 - Transform talented students into entrepreneurs through "Learning by Doing Business"
 - Not only build a supportive innovation system, but populate it with entrepreneurial capacity



Encubator's venture creation model

Innovations

Science, Technology,
Services



Output:
New companies

Entrepreneurs (grad students)

CSE, GU, GIBBS

Encubator model

Innovation partner

Innovation / Idea

CHALMERS



GÖTEBORGS UNIVERSITET



COMPETENCE CENTRE FOR CANCER RESEARCH

SAAB

VOLVO

ABB

smith&nephew



TecNet Nordic AB

Joint venture

business development
(~10 months)

Company formation

Business developers
(M.Sc. Students)

Business development

Incubator

encubator
IDEAS REALISED

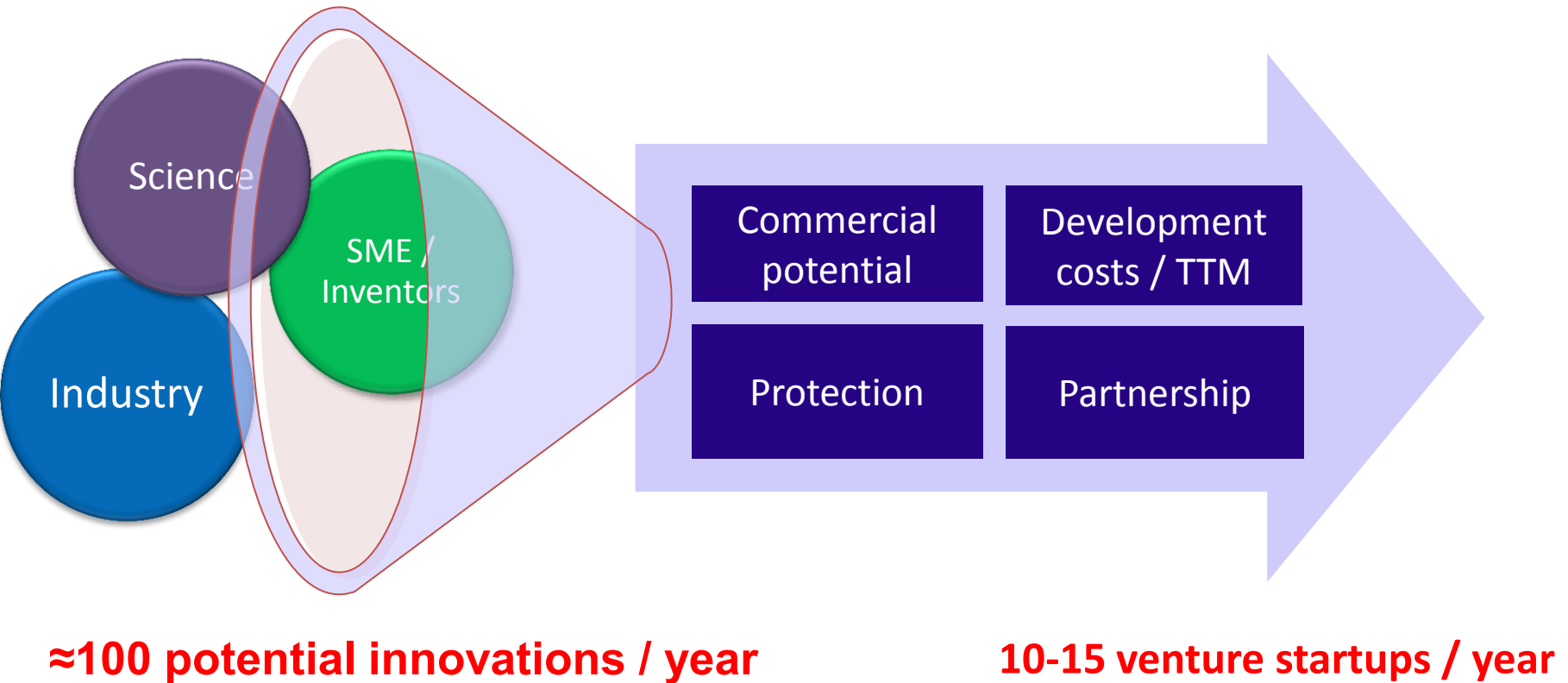
Legal expertise
Business coaching

Seed financing
Facilities / infrastructure

Sourcing

**Analysis &
Valuation**

**Establishing
partnership**







from intention to action

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