



GEDC
GLOBAL ENGINEERING
DEANS COUNCIL

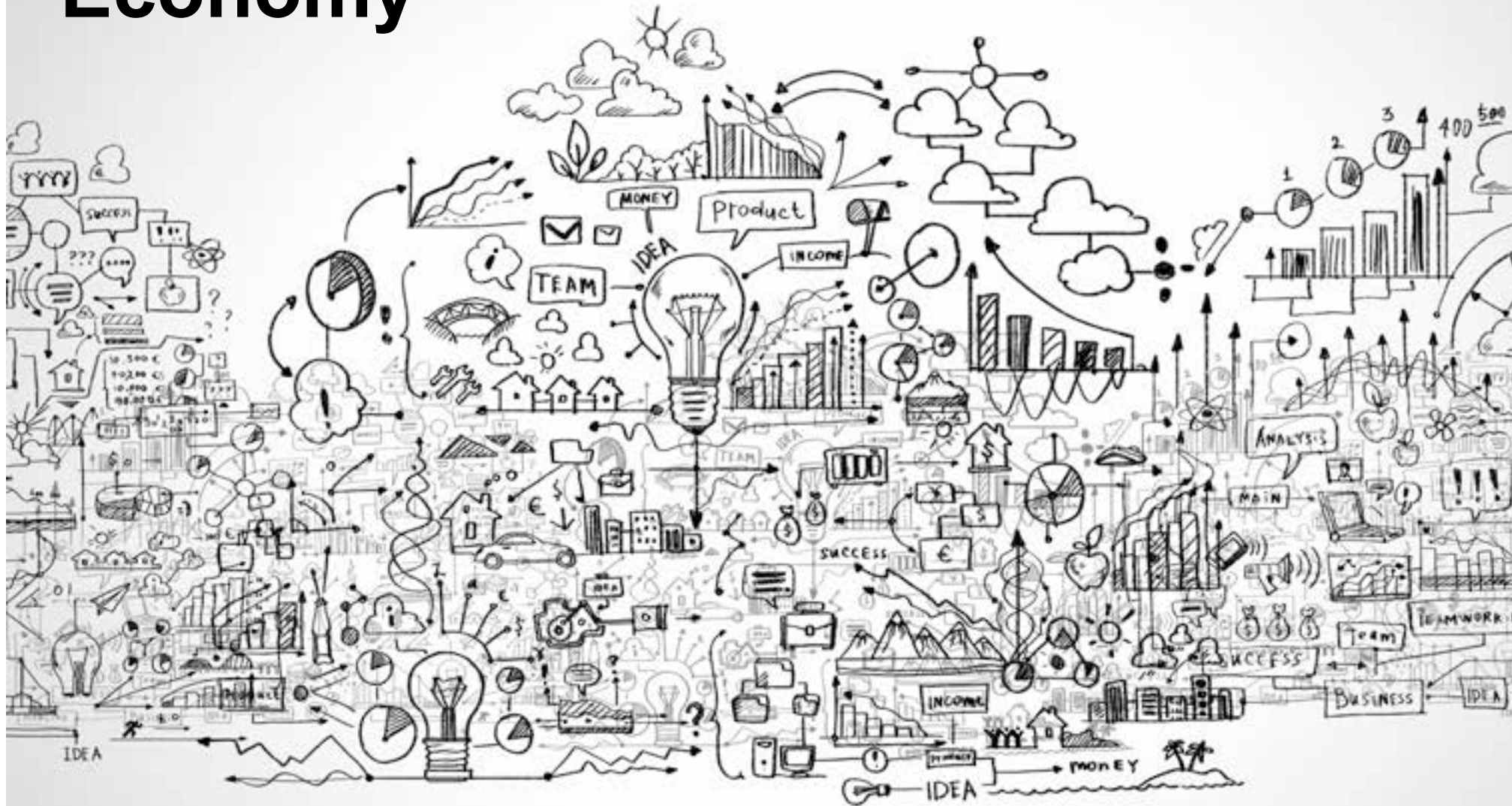
Global aspects of research

Juan C. de la Llera
October, 2013



ESCUELA DE INGENIERÍA
FACULTAD DE INGENIERÍA

Knowledge Economy



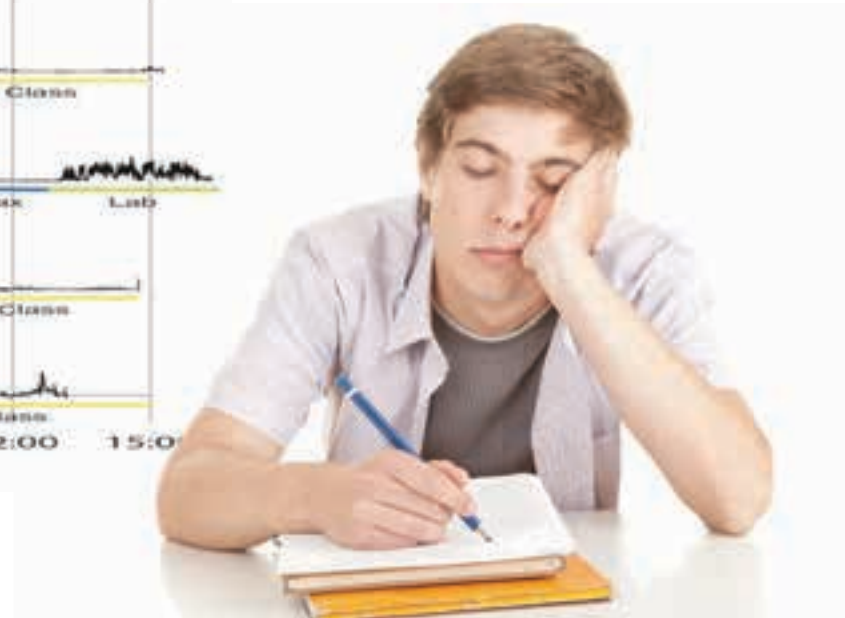
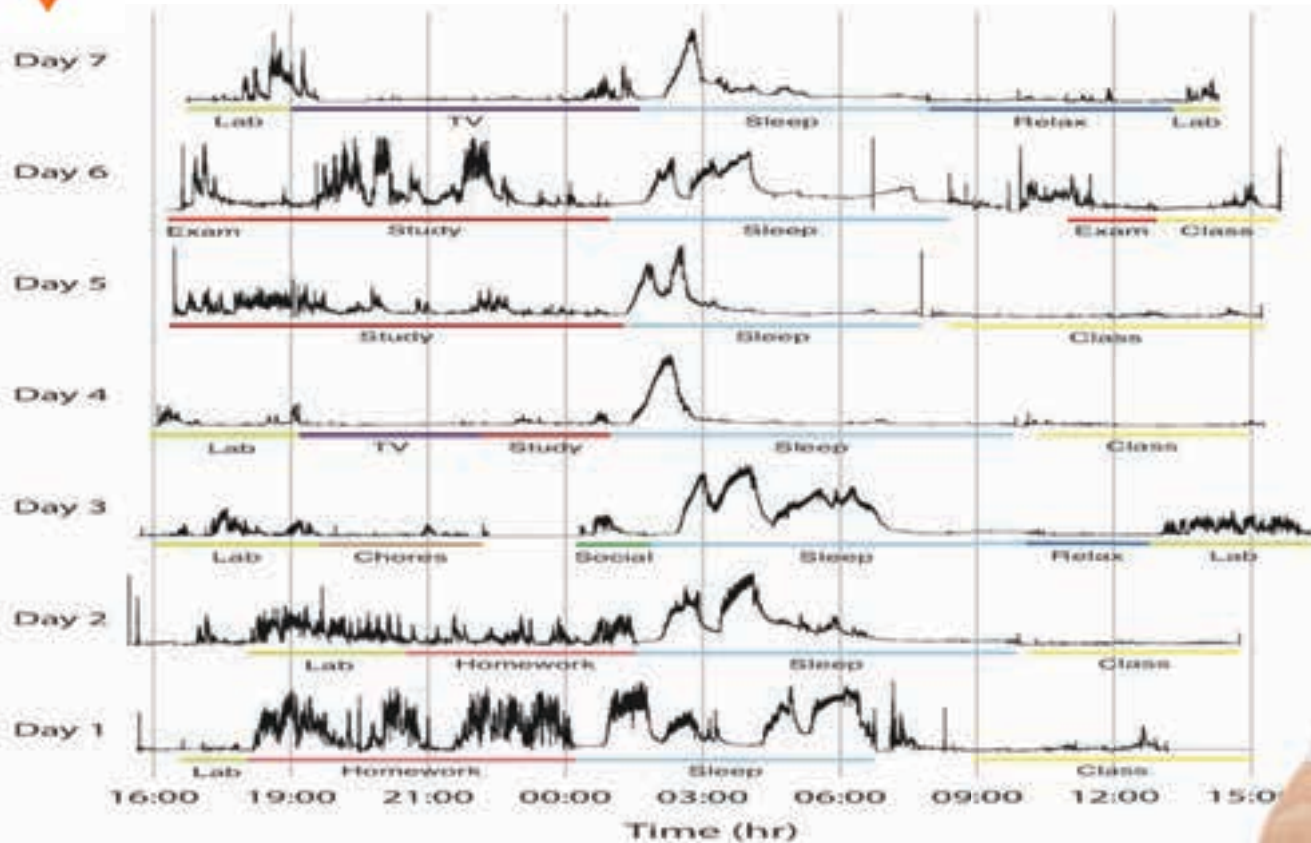
Looks familiar?

How will all these new trends in engineering education will also change the way we do research?





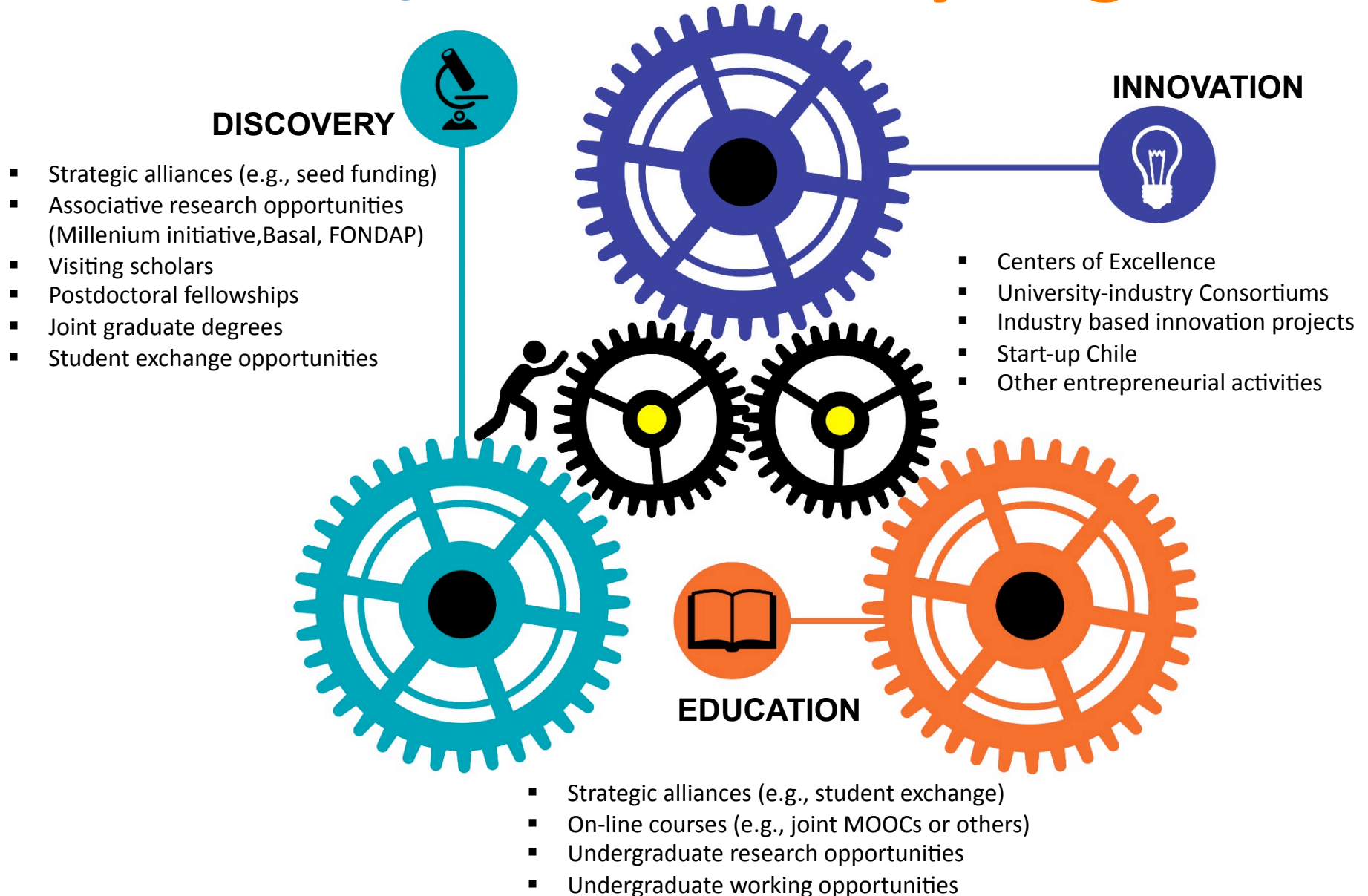
Changing an education



Creating a different mood



The complex University Engine



01
Network model

02
Process model

03
Solution shop model

Model integration



Clues for...

01
A shared concern
and challenge

02
Access to talent

03
Resources



The solution shop

It is all about networks

Globally shared concerns





Environment



**Sustainable
development**



Natural Disasters





Education

Local resources

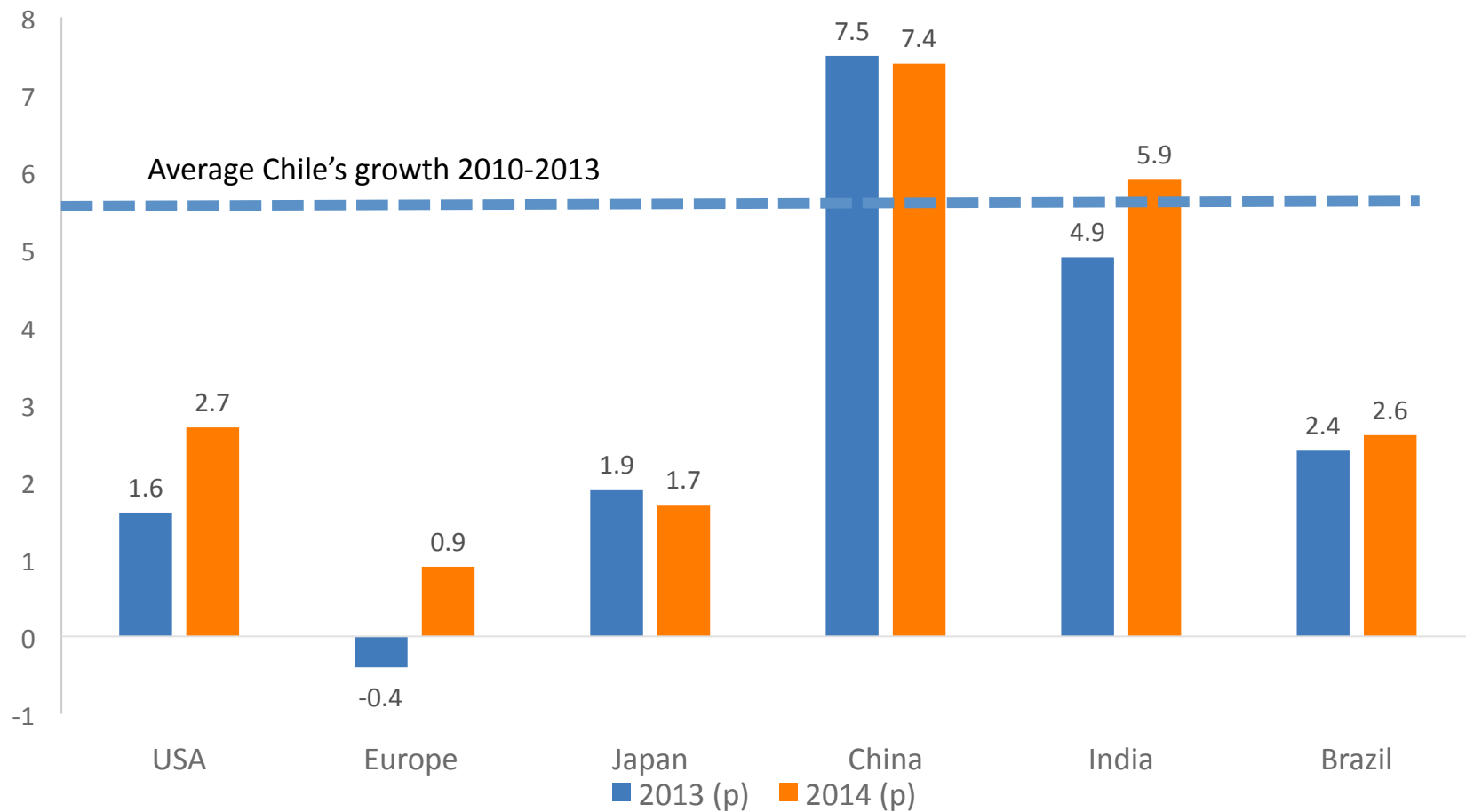


Local opportunities

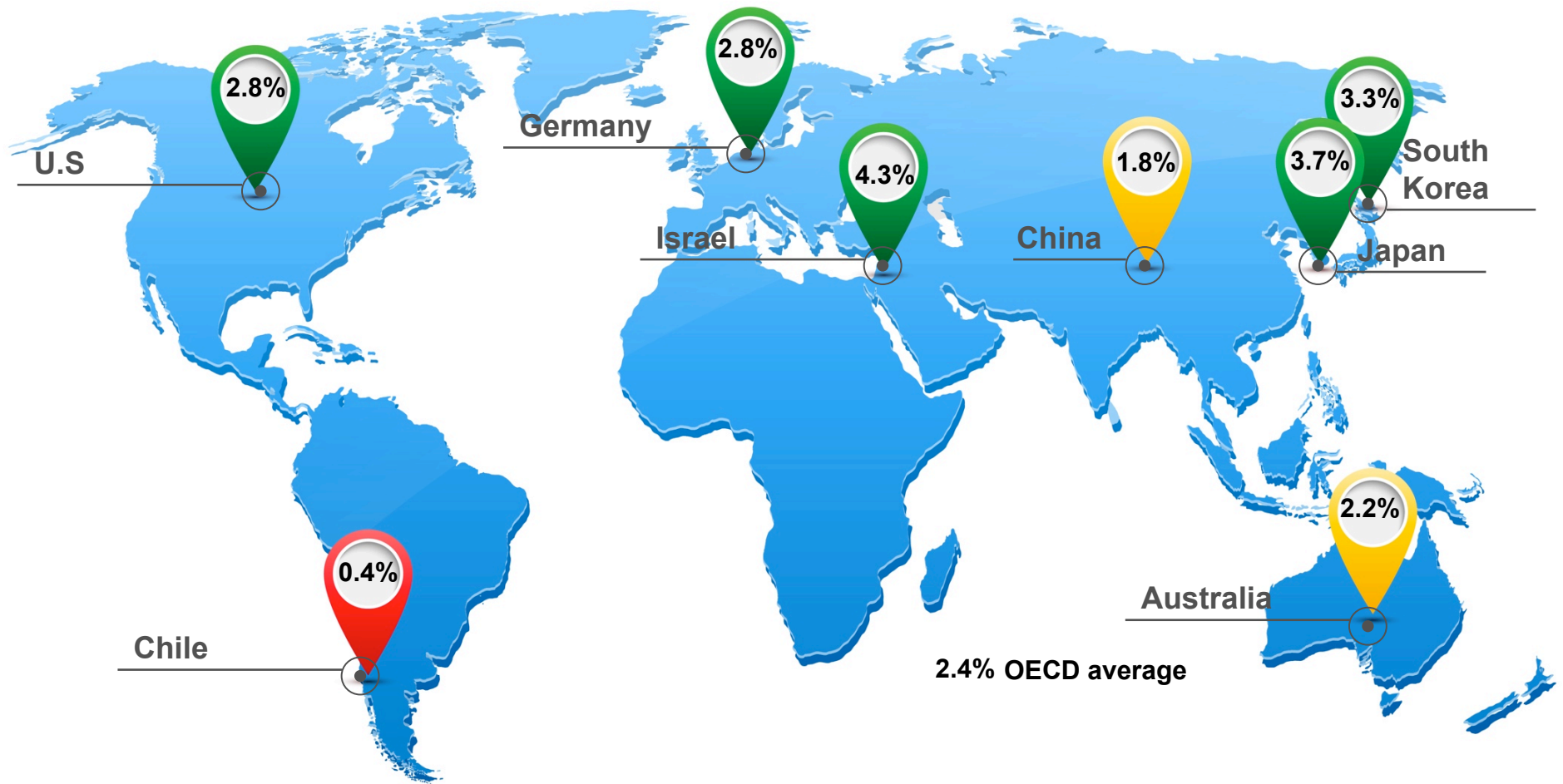


Growth

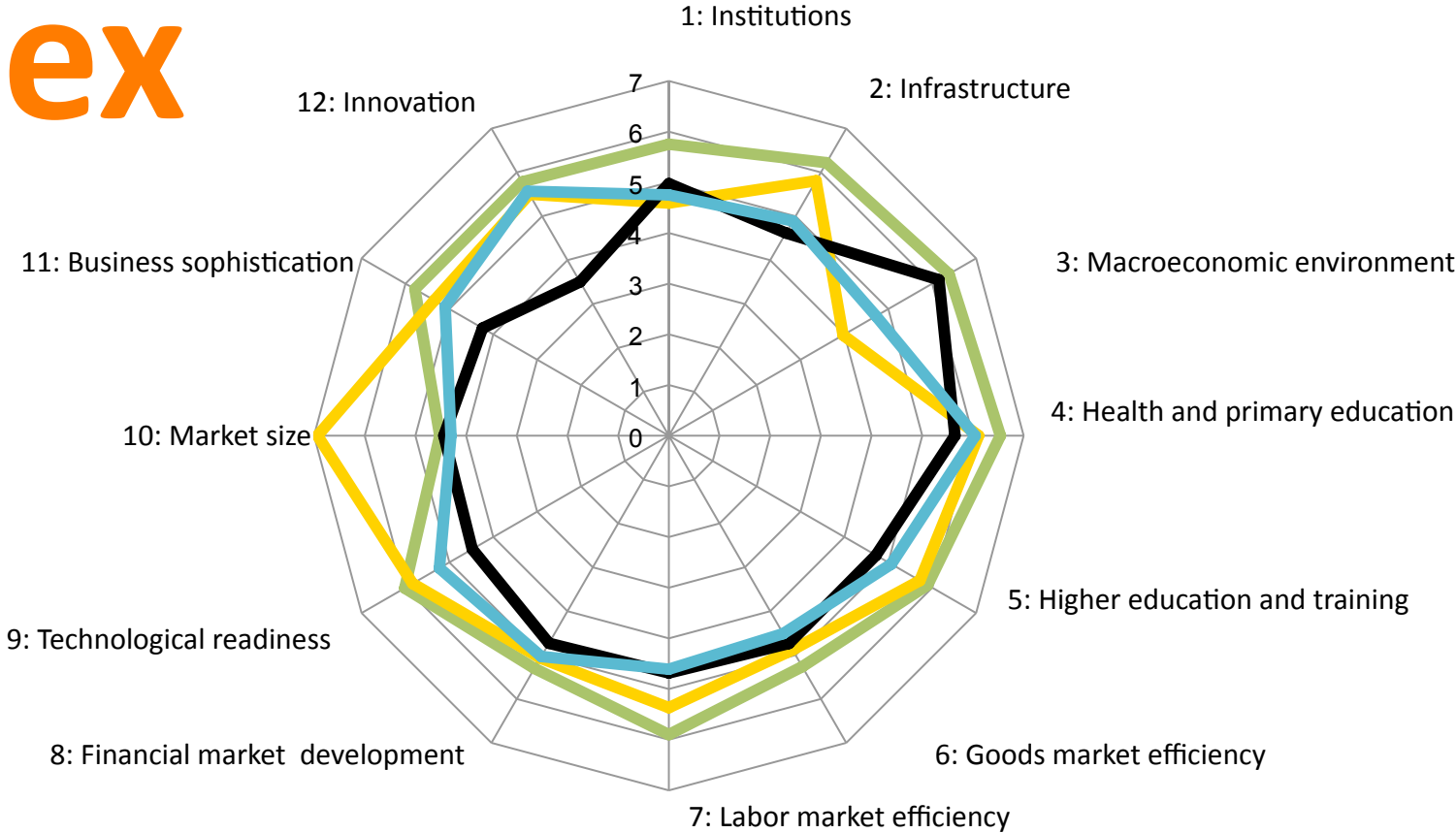
(GDP, annual % variation)



R+D/GDP Investment



Global Competitiveness Index



- Suiza (1°)
- EEUU (7°)
- Chile (33°)
- Israel (26°)

Fuente: Global Competitiveness Report 2012-2013, World Economic Forum

Practices that have worked



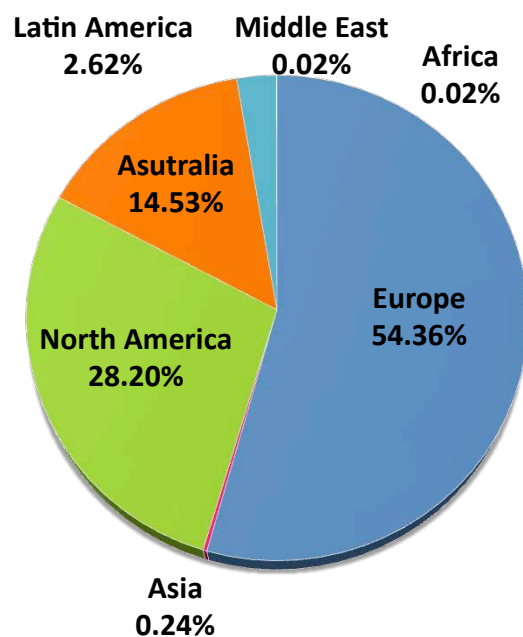
Undergraduate student Exchange



Advance Human Capital

2006-2012

Distribution by World Area
(in % of total number of Master and PhD
scholarship holders)



4652

Chilean scholarships awarded

Country	# Scholarship holders
United States	1150
United Kingdom	934
Spain	802
Australia	605
France	354
Germany	208
Canada	162
Netherlands	72
New Zealand	71
Belgium	47
Argentina	43
Brazil	39
Mexico	38
Italy	37
Other countries	90

* Scholarship holder: Person who signed the grant agreement and began graduate studies

* Includes Becas Conicyt Internacional and Becas Chile for PhD and Master.

* Data updated in December 2012

Bringing Excellence

Shared Government Funding

14 Regional Centers

13 Basal Centers

8 Fondap Centers

2 Education Centers



CSIRO



 **Fraunhofer**
CHILE



WAGENINGENUR CHILE
KNOWLEDGE IN ACTION



Inria
Chile
INVENTORS FOR THE DIGITAL WORLD

Associative Projects Research



FONDAP CEDEUS
Sustainable Urban Development Research Center
Dir. Johnathan Barton



FONDAP CIGIDEN
Research Center for Integrated Management of Natural Disasters
Dir. Luis Cifuentes.



FONDAP CEGA
Los Andes Center of Excellence for Geothermal Research
Dir. Diego Morata.



CONSORTIUM Conminuc
Consortium for Continuation in Mining



VREF BRT-ALC
Bus Rapid Transit Center of Excellence
Volvo Research And Educational Founda



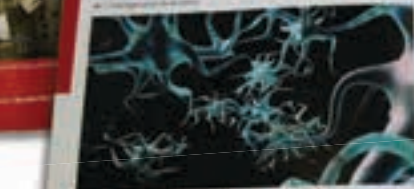
CONSORTIUM
Algafuels
Consortium for production of biofuels



Undergraduate Research I³



I³ 2011



Influencia de redes cerebrales funcionales implicadas en la atención

E

El presente artículo describe los resultados de un estudio que analiza la influencia de las redes cerebrales funcionales implicadas en la atención. Se utilizó un modelo de predicción de la demanda para componentes de sistemas complejos usando datos de mantenimiento.



I³ 2012

I³ 2013

The MISTI Opportunity

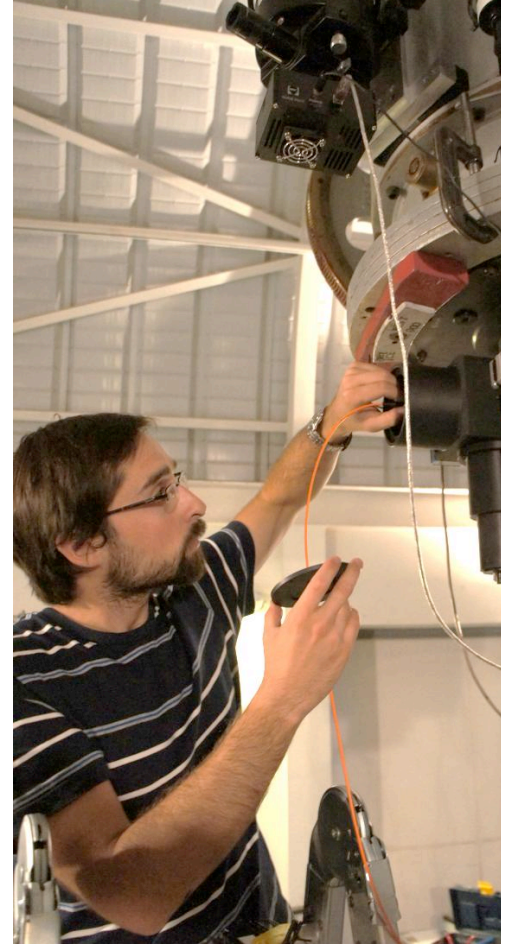
Shared Concerns



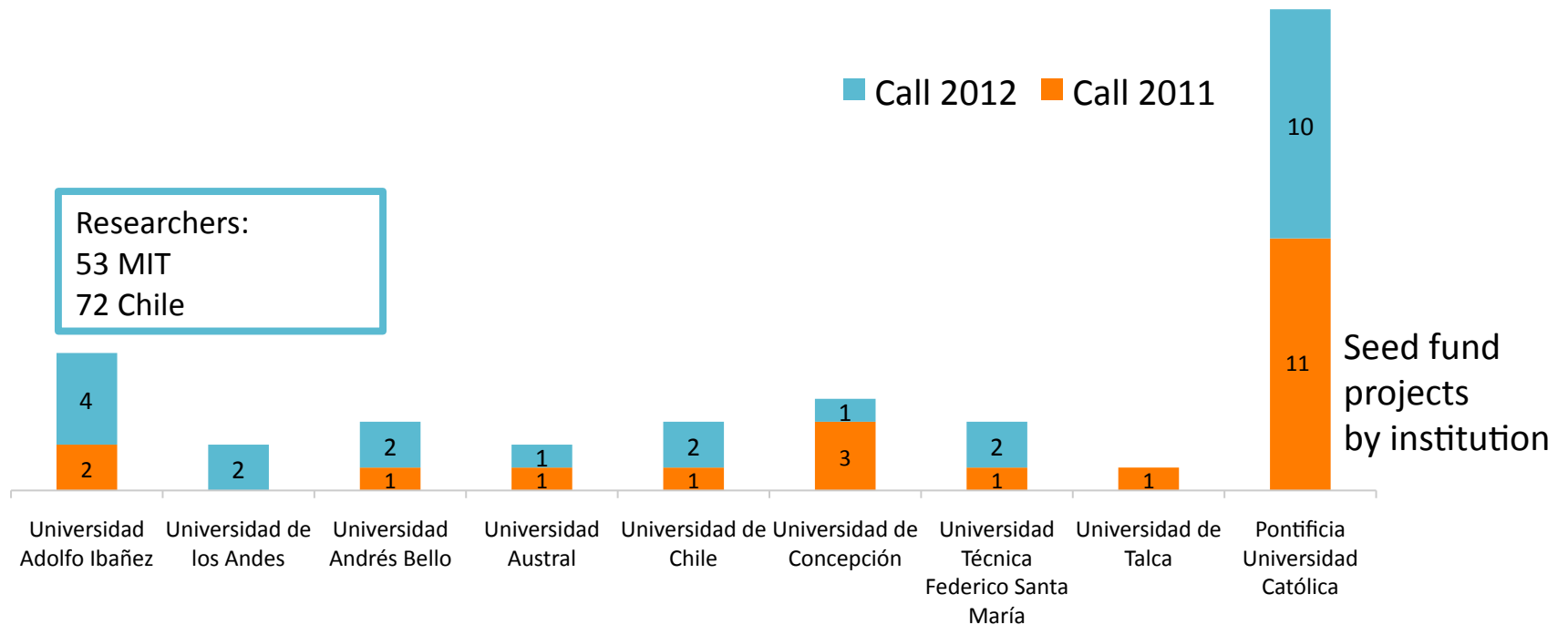
Talent



Resources



MISTI



Seed Funds

	Chile	UC	UC-Engineering
Call 2011	21	11	7
Call 2012	24	10	6

MIT Exchange Students

	Chile	UC	UC-Engineering
2012	28	12	7
2013	33	14	6

158 Researchers 8% UC Engineering
Funding MISTI: 1MM USD / year

Start-Up Chile

ST>RT-UPCHILE

+ 1,000 Projects with
+1,500 entrepreneurs
in Chile by **2014**

Attract world-class
young entrepreneurs,
USD \$40K, plus one
year visa

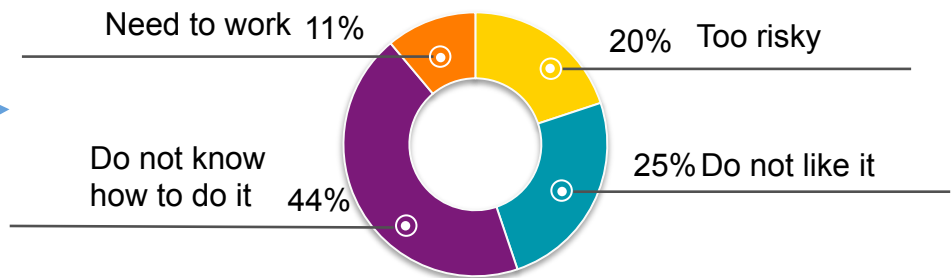


Changing an i+e ecosystem

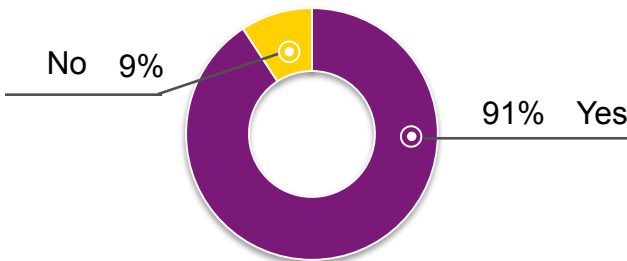
Is entrepreneurship a real possibility?



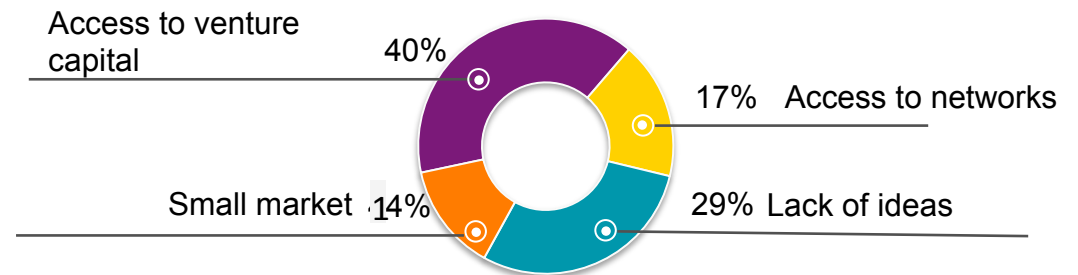
No, why not?



Could you do it using S&T?



What is the biggest difficulty?



Fuente: Survey Engineering UC (2013)

Mood of 1540 students



Center of Innovation

Hax Building (interdiscipline)



Are we in the right mood to change?





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