



Innovative practices in industry-education collaboration

Josep Bordonau, Nancy March 21st 2018



InnoEnergy
Knowledge Innovation Community



InnoEnergy Master Programmes



InnoEnergy Master Programmes

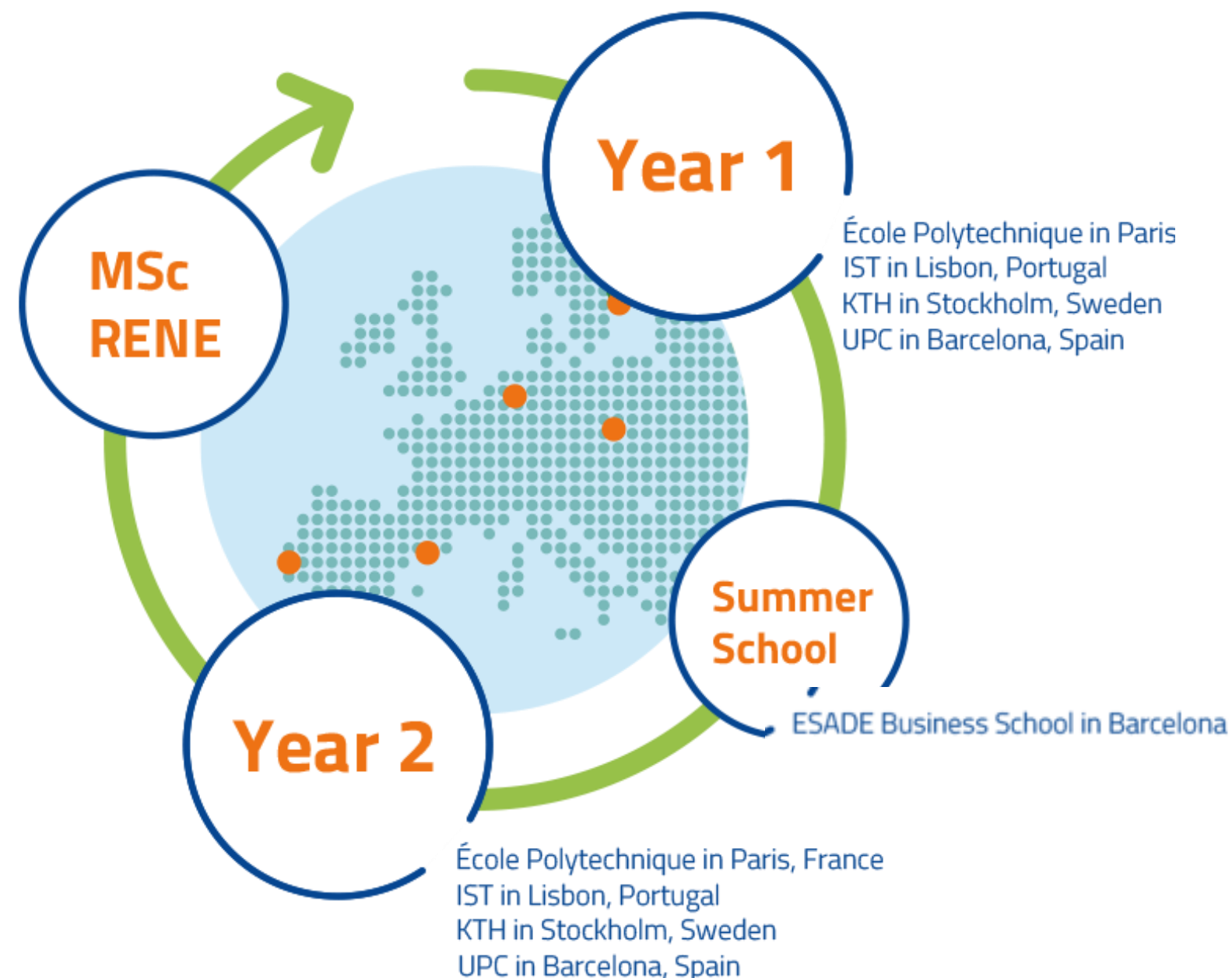
- International **Mobility** Programmes
- Get training in **innovation and entrepreneurship**
- **Internship** in InnoEnergy partners
- Strong **industry participation**
- Access the most **relevant career opportunities in the Energy Sector**



Double degree, one from each university

7 Master's programmes

Clean Fossil & Alternative Fuel Energy-CFAFE
 Energy for Smart Cities-EFSC
 Nuclear-EMINE
 Renewable Energy-RENE
 Smart grids-SENSE
 Sustainable Energy-SELECT
 Transversal-ENTECH

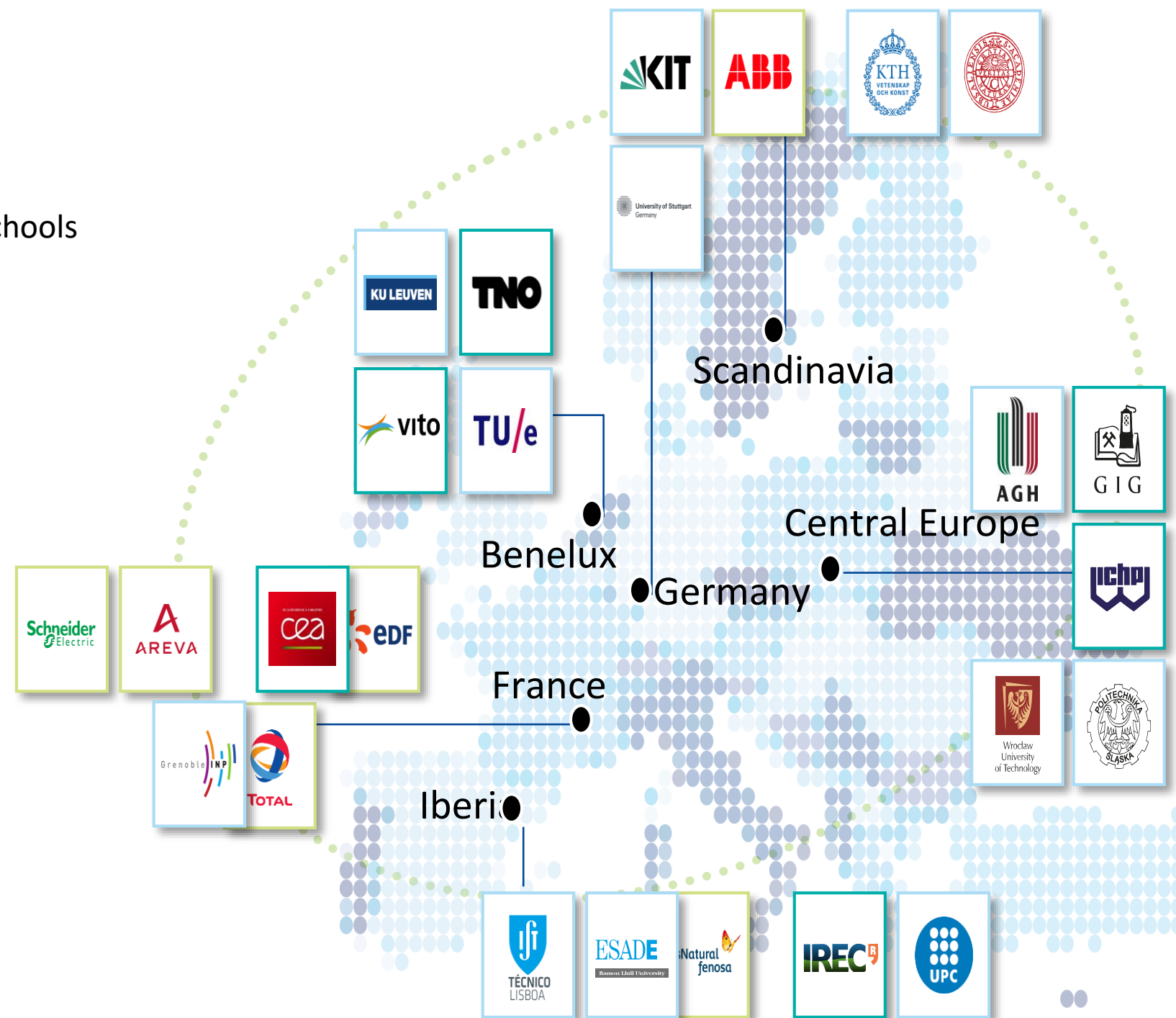


This is our network

- 6 research institutes
- 14 Technical Universities and 3 Business Schools
- 27 Major company shareholders
- 70 participating industry partners
- 1 Knowledge and Innovation Community

Our Shareholders

-  Research Institutes
-  Universities
-  Industry Partners
-  Co-location Centres





Industry participation in InnoEnergy Master Programmes



Industry Participation in the Master's School

Marketing and
Communication
Plan

Guest lectures and Business
Cases from industry experts

Study visits

Summer school activities in
collaboration with Industry



Scholarships
Talent Partner
Package



Definition of the
students profile &
Curriculum Design

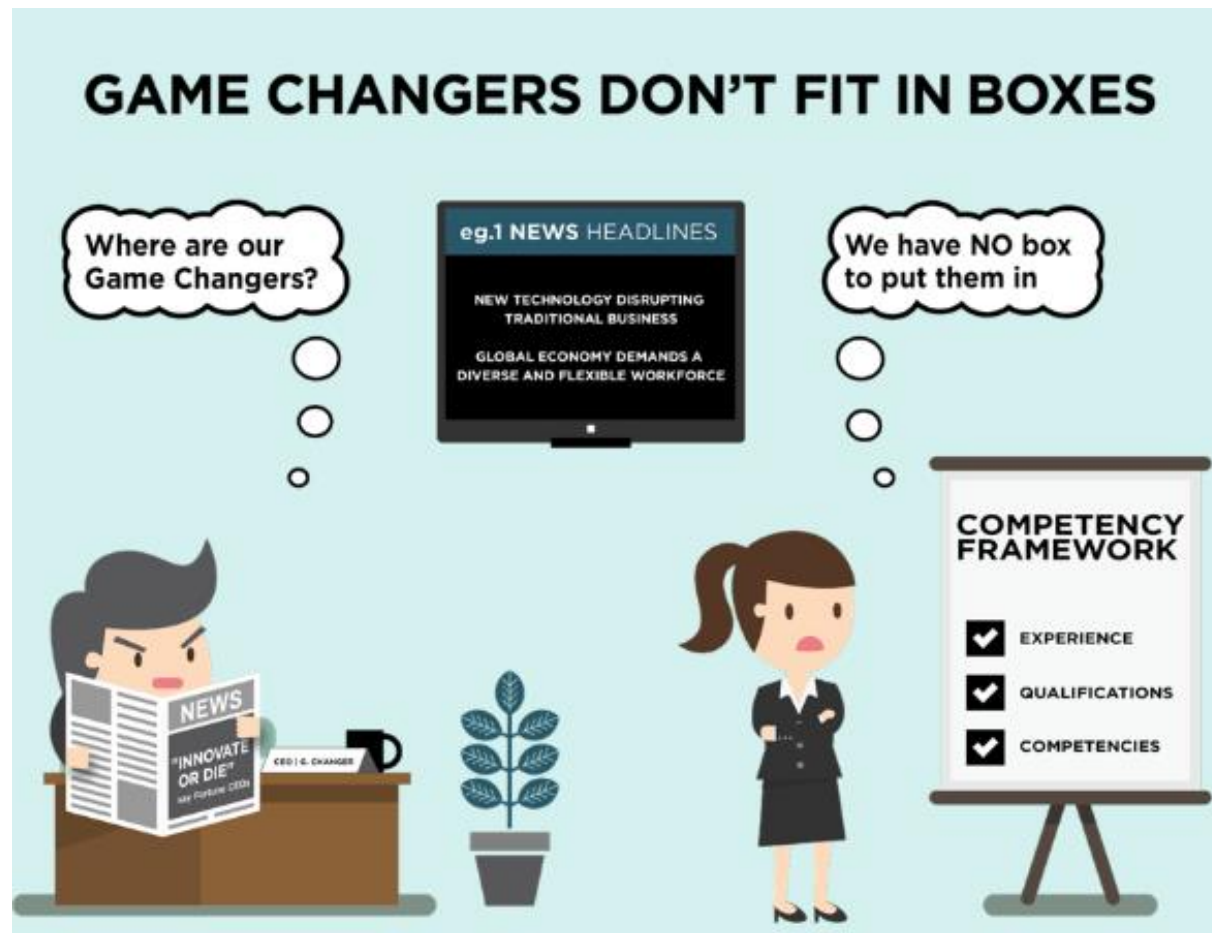


Internships & Job
Opportunities



**+200 companies have been contacted
31 companies signed
an agreement**

Students' Profile & Curriculum Design



Students' Profile

- **22 companies** have participated in the definition of student's Profile; **34 profiles were defined**
- The attributes defined as the most important by Industry were **adaptable to different technologies, creative and out of the box!!!**

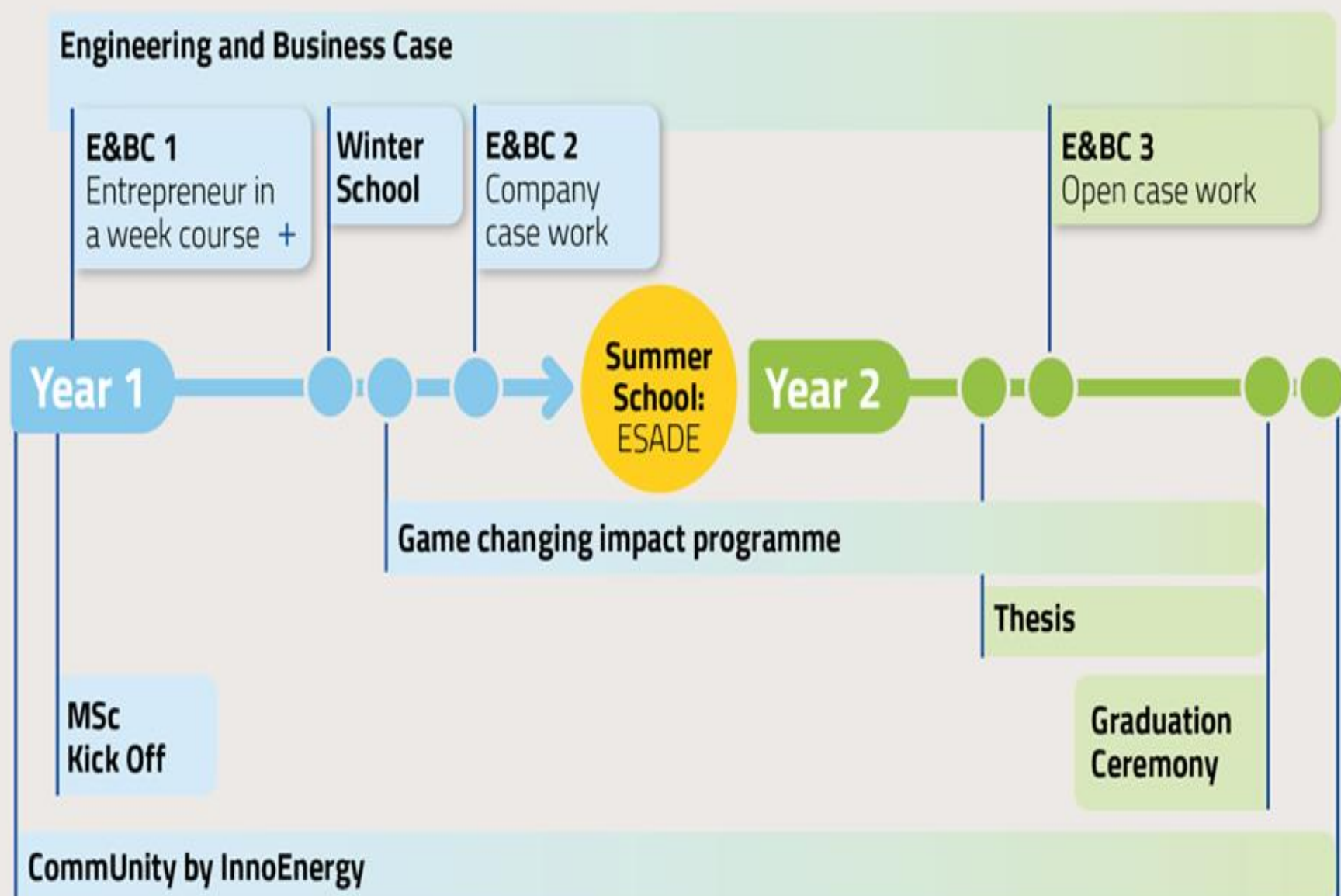


Curriculum Design

11 companies have reviewed the Curriculum Design

- Harvard “invented” legal cases in late XIX century > Business Cases in the 20s of XX century > Medical Cases in the 50s of XX century
- InnoEnergy has invented the Engineering & Business Case® in the XXI century

MSc RENE. Programme journey



Our concept is inspired in:

- Harvard: Case method
- Aalborg: Project-Based Learning
- MIT, KTH: Challenge-Driven education

Check this video for more details:
<https://www.youtube.com/watch?v=QMz0ErC8KeQ>

Business Cases



Pedagogical Innovation

Students work with industry representatives and start-ups on the development process of Engineering and Business Cases®

Methodology developed by in collaboration with:



**HARVARD
BUSINESS SCHOOL**

29 Business Cases agreed up to 2017

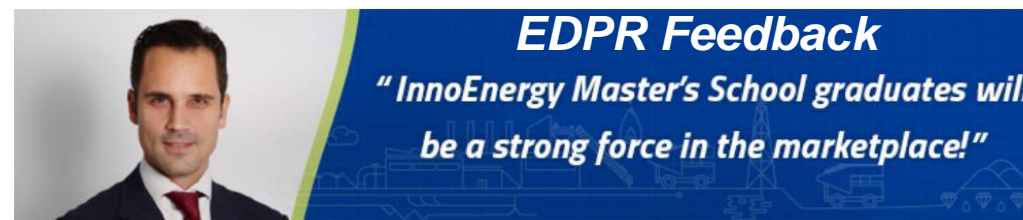
Some Developed Cases



renováveis



MEYER BURGER



Partners involved

E&BC®	IST	École Polytechnique	KTH, Aalto, AGH, Polito, TUE	KU Leuven	Poland+	UPC
The Case					X	
The Project	X					X
The Challenge	X	X	X	X		X

Lecturing, study visits and Master Thesis

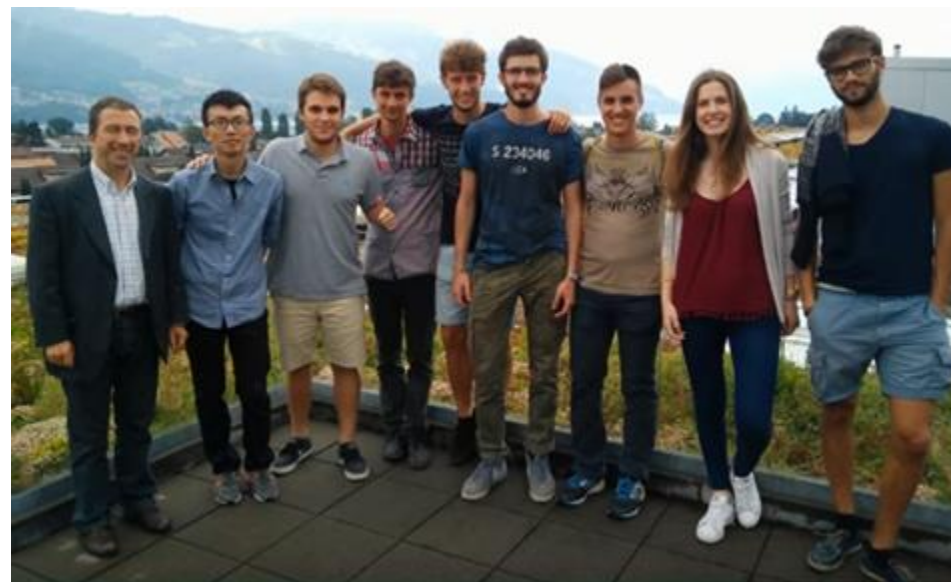
Deloitte.



*Jean-Michel Gauthier,
CEO, Energy & Resources*

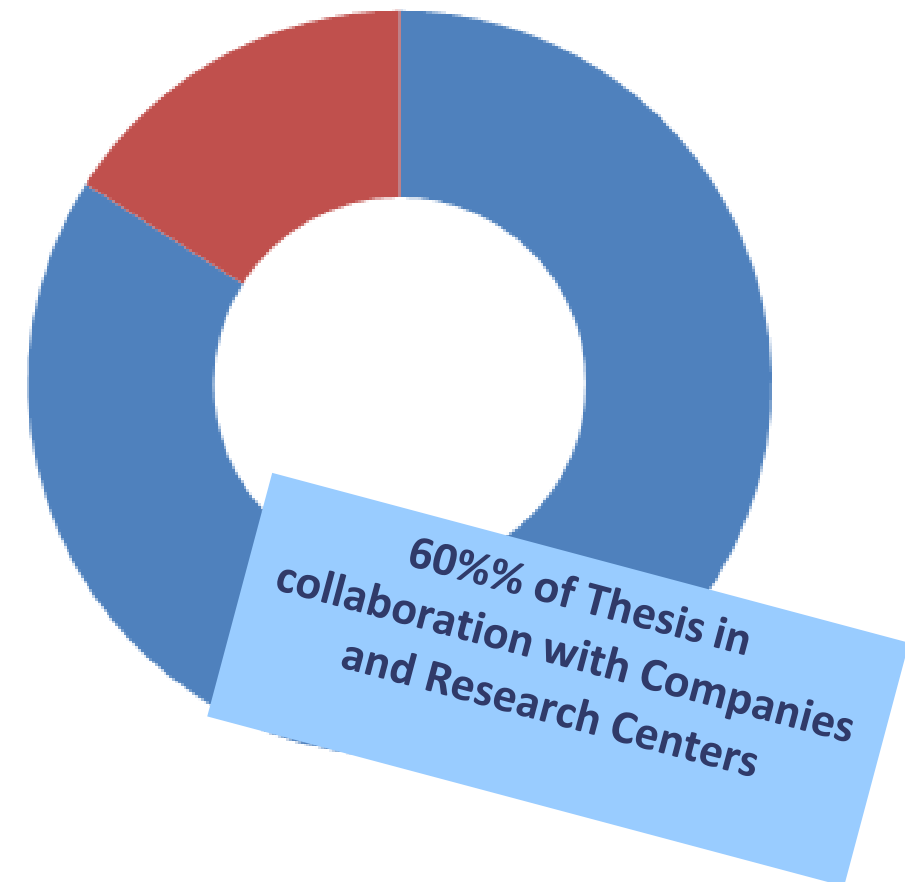
Lecturing 2017

29 Industry Experts are collaborating in Lecturing (minimum 90h)



*Visit to Meyer Burger Headquarters,
Switzerland*

Study Visits



Master Thesis 2017

More than 100 industry Master Thesis positions were proposed to the Master students

Testimonials from Industry

Along with InnoEnergy, Iberdrola launched the **InnoEnergy Challenge Driven Education Activity**. This activity aims to create new answers to address Europe's **energy challenges** with the participation of Iberdrola, which is the number one energy group in Spain and the fourth largest utility company in the world by market cap (top 1 utility in renewables).



Agustín Delgado,
Innovation Director at Iberdrola

"[...] Iberdrola launched the "Iberdrola Energy Challenge", a unique initiative addressed to students of InnoEnergy, based on three main topics related to the energy sector: Global Affordable Energy, New Digital Models in Energy and Social Economy for Affordable Energy.

After reviewing all the proposals from the different participants, we can say that **every project fulfilled our expectations** according to the Iberdrola strategy to **boost innovation [...]."**

Digital Summit Event, April 20th, 2016



Aaron Smith,
Strategic Planning Manager at Principle Power

"A very strong group – We interviewed upwards of 15 candidates for the Master Thesis (Internship) and it was very hard to make a decision"



Oier Bolibar,
Sales Director at Meyer Burger

"benefit of a close cooperation between university and industry is mutual. Both need to close the existing gap by collaborating and sharing the experiences and needs in order to make university-industry transition smoother to students. **The InnoEnergy Engineering and Business Case (R) Module** is a real example of how to build new bridges in order to close this gap"



Branding

- Being present on InnoEnergy Website and Social Media Campaigns
- Acting as guest lecturing on relevant energy subjects
- Posting challenges to be solved by students and graduates

Companies are invited to participate at the following events :

Master School KIC Off



Welcome to first year master students
25 companies attended in 2017

Alumni Unite



Industry meets talent

Graduation Ceremony



Final ceremony with the graduates

The Business Booster



Any questions?



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EIT,
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