KIC InnoEnergy

Achievements since incorporation in dec 2010

Brussels, 14th March 2012

1. Reminder on KIC InnoEnergy
2. Achievements since incorporation December 2010 [15 months]. Tangible results
3. FAQ:
   1. Absorption capacity
   2. Business participation
   3. Sustainability model
   4. Synergies with other instruments
KIC InnoEnergy – Reminder (1/1)

The leading engine for innovation and entrepreneurship in Sustainable Energy

Smart Cities

Smart Grids

Renewables

Clean Coal

Convergence - Nuclear - Renew

700M€ 2011-2015
Achievements 2011
Tangible results since incorporation in December 2010 [15 months]

146 students in our 120 ECTS Masters*
28 engineers in our PhD School
21 professionals in our Exec. programs
Achievements 2011
Tangible results since incorporation in December 2010 [15 months]

146 students in our 120 ECTS Masters*
28 engineers in our PhD School
21 professionals in our Exec. programs

11 patents filled (1/1M€; 1/67M€)
23 new technology products & services

Education
Technology
Business Creation

mobility
Entrepreneurship
Business case
hands on (intern)
market orientation
Achievements 2011
Tangible results since incorporation in December 2010 [15 months]

146 students in our 120 ECTS Masters*
28 engineers in our PhD School
21 professionals in our Exec. programs

11 patents filled (1/1M€; 1/67M€ in FP7)
23 new technology products & services
52 ventures nurtured in our Highway*

Four dimensions:
1. Human
2. Technology
3. Market
4. Finance
Achievements 2011
Tangible results since incorporation in December 2010 [15 months]

52 ventures nurtured in our Highway

28 engineers in our PhD School

21 professionals in our Exec. programs

11 patents filled (1/1M€; 1/67M€ in FP7)

23 new technology products & services

146 students in our 120 ECTS Masters

23 new technology products & services

52 ventures nurtured in our Highway

Four dimensions:
1. Human
2. Technology
3. Market
4. Finance

Entrepreneurship
Business case
Hands-on (intern)
Market orientation
Achievements 2011 => impact in short term future
Tangible results since incorporation in December 2010 [15 months]

146 students in our 120 ECTS Masters*
28 engineers in our PhD School
21 professionals in our Exec. programs

11 patents filled (1/1M€; 1/67M€ in FP7)
23 new technology products & services
52 ventures nurtured in our Highway*

Educational mobility
Entrepreneurship
Business case
Market orientation

Four dimensions:
1. Human
2. Technology
3. Market
4. Finance
Some of the **game changers** of the future

- **RENE (UPC)**
- **SELECT (KTH)**
- **Smart Cities (KUL)**
- **(TUE Eindhoven)**

---

**EIT Knowledge & Innovation**

**KIC InnoEnergy**
FAQ: **Industry buying in (1/3)**

Only industry heavy involvement and leadership legitimizes us

Presence in partnership (from **14** in 2010 to **55** in 2011 to **95** in 2012)

<table>
<thead>
<tr>
<th>CC Germany</th>
<th>CC France</th>
<th>CC Benelux</th>
<th>CC Iberia</th>
<th>CC Poland</th>
<th>CC Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVA-CO2</td>
<td>Acerde</td>
<td>Arez RTB</td>
<td>Ciclete</td>
<td>EPTE</td>
<td>ABB</td>
</tr>
<tr>
<td>Bauer Holzenergie</td>
<td>Amcor</td>
<td>BIC Industries</td>
<td>EDP</td>
<td>Edf Polska</td>
<td>Cortus</td>
</tr>
<tr>
<td>Boson</td>
<td>Aeram</td>
<td>BTG Wors B.V.</td>
<td>ESADE</td>
<td>Eco GAW</td>
<td>Eiforsk</td>
</tr>
<tr>
<td>Drexel &amp; Weiss GmbH</td>
<td>Areva</td>
<td>CG Holdings</td>
<td>Gas Natural Fenosa</td>
<td>Kwent</td>
<td>Energyxerts</td>
</tr>
<tr>
<td>DVGW-EBI</td>
<td>Batscap</td>
<td>Cofely Refrigeration</td>
<td>Ibardrola</td>
<td>MALEX</td>
<td>Ericsson</td>
</tr>
<tr>
<td>E-Flox</td>
<td>Disatech</td>
<td>Delif Patents BV</td>
<td>RobCork</td>
<td>Metal ERG</td>
<td>Fortum</td>
</tr>
<tr>
<td>EIFER</td>
<td>EDF</td>
<td>DSM</td>
<td>SgurrEnergy Ltd.</td>
<td>Multichem ECO</td>
<td>Green Exergy AB</td>
</tr>
<tr>
<td>EnBW Energie</td>
<td>ERAS-Lebo</td>
<td>Enedia</td>
<td>SIMO</td>
<td>PSNIG SA</td>
<td>Seabased</td>
</tr>
<tr>
<td>Evohaus GmbH</td>
<td>GDF Suez</td>
<td>MTT</td>
<td>Tecnologia</td>
<td>Fromont</td>
<td>SP</td>
</tr>
<tr>
<td>IDS</td>
<td>Grain2</td>
<td>NXP</td>
<td>Termo Fluids</td>
<td>Rafeko</td>
<td>Stri</td>
</tr>
<tr>
<td>LigndGen</td>
<td>Gravit</td>
<td>Peer+</td>
<td>Wavec</td>
<td>SIF-FAS</td>
<td>Technion</td>
</tr>
<tr>
<td>Modinger</td>
<td>Inxsolar</td>
<td>Progression</td>
<td></td>
<td>Syngas</td>
<td></td>
</tr>
<tr>
<td>Cuto tec GmbH</td>
<td>Luxol</td>
<td>Saint Trofee</td>
<td></td>
<td>Vattenfall</td>
<td></td>
</tr>
<tr>
<td>Batfisch Analysen Systeme Gmbh</td>
<td>McPhy</td>
<td>Solvay</td>
<td></td>
<td>Tauber</td>
<td></td>
</tr>
<tr>
<td>Steinbeis</td>
<td>Plosticpolis</td>
<td>Terra Energy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TTI GmbH</td>
<td>Rei gi</td>
<td>Triphase</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viessmann</td>
<td>Schneider</td>
<td>Van Looy Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SCT</td>
<td>Waifer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SITA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>S’tile</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top Industrie</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>Private owned partners in 2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vinci</td>
<td></td>
<td></td>
<td>Private owned partners in 2012</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Coverage of all value chain
Coverage in all nodes
Covering all activities
FAQ: Industry buying in (2/3)

Governance

- **Shareholding structure**
  - 10 out of the 29 shareholders are industries
  - 1 shareholder is a private Business School

- **Supervisory Board Structure**
  - 9 of the 14 Supervisory Board members come from private companies
  - All subcommittees (Industry, Audit and Nomination) are chaired by private companies
  - The Vice Chairman is from Industry

Financial commitments

- For 2011 and 2012 the share of the budget from the industrial partners reaches **31%** (out of an aggregated total of 290M€ for the 2 years).

Operations: Industry lead working groups

- **Industry 2020 Working Group** (Energy landscape in 2020)
- **Business Working Group**: Yearly industry requirements for Innovation projects
- **Innovation projects KIC selection Committee** (the big share of the budget): 7 out of 14 coming from industry, Chair person from Industry.
- **Education Industry sub Working Group**: Continuous industry needs in Education
What does industry get from education?

- The talent adapted to their needs:
  - Fresh outs recruits
  - Long life learning

What does industry get from Innovation projects?

- New product and services for their own Business Processes (growth, early adopters)
- A bit of financial complementarity (always help if no red tape)
- A trusted network, with the best
- Roadmap complementary to their needs

What does industry get from Business Creation?

- Early adopters of new technology
- Spin-outs as HHRR management
- Investment possibilities

What does industry get from such a governance?

- Long term commitment
- Stability in the network
- Governance rules close to theirs
- Shorter Time to market
FAQ: Complementarity to other EU instruments

Education

- i.e. In 12 of 17 groups of SET plan Education initiatives, leading 2 of them
- i.e. COFUND awarded in 2012 for 9M€

Technology Innovation

- Full alignment with SET plan
- Complementing projects supported by other instruments (ETP, JRC, DG R&D, DG ENER)
- Member of JRC WG Board
7 revenue streams towards financial sustainability (independence from a single source)

1. **Partners cash** contribution
   - Yearly contributions committed upfront (100K€/FFPP; 30K€/AAPP)

2. **Partners in-kind** contribution

3. **EIT Grant**

4. **IP royalties**
   - 10% of royalties of all IP generated goes back to KIC
   - All current Technology Innovation projects have signed the IP agreement

5. **Monetization of equity**
   - At least 10% of equity in the new start ups is owned by KIC
   - 19 of the 52 entrepreneurs have signed the 10% equity contract

6. **Services to external** customers
   - **Portfolio** of services created
   - First proposal delivered to Indian TREC-STEP on LM for CCT/CCS

7. **Donations**
   - Alumni network under way.
Towards our ambitions: a 400MW per year industrial plan

Our prospective sourcing plan

2 decades to consolidate

Standford & MIT took
FAQ: Absorption capacity (1/2)

Financial & scope

¿Can we mobilise the “75%” (when run rate will be 100M€ EIT funding/year), that represents (at least) 300M€ on annual basis on complementary funding?

On industry contribution (90+ partners):

1. Their combined R&D annual budget is 4B€
2. Their combined annual technology CAPEX and OPEX is 52 B€

On research and universities contribution (30+)

1. Coming from National, regional and European instruments

On KIC own revenue stream

1. Financial sustainability case
FAQ: Absorption capacity (2/2)

Operational scalability

<table>
<thead>
<tr>
<th>Manager</th>
<th>Bus. Creation</th>
<th>Thematic leader</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC Sweden</td>
<td>Kenneth</td>
<td>Ingvar</td>
<td>Lars</td>
</tr>
<tr>
<td>CC Poland</td>
<td>Rafal</td>
<td>Thomasz</td>
<td>Thomas</td>
</tr>
<tr>
<td>CC Germany</td>
<td>Frank</td>
<td>Rolf</td>
<td>Thomas</td>
</tr>
<tr>
<td>CC Alpes Valley</td>
<td>Serge</td>
<td>Frédérique</td>
<td>Laurent</td>
</tr>
<tr>
<td>CC Benelux</td>
<td>Jan/Klaas</td>
<td>Sven/Aart</td>
<td>Lucienne</td>
</tr>
<tr>
<td>CC Iberia</td>
<td>Mikel</td>
<td>Josep Mikel</td>
<td>Antoni</td>
</tr>
<tr>
<td>KIC</td>
<td>Arne/Bart/Diego</td>
<td>Elena</td>
<td>Torsten</td>
</tr>
</tbody>
</table>

Run as a company
Business Process in place
Scalability assured

Executives used to run 500M€ companies
Conclusion

KIC InnoEnergy

A new **Innovation engine, output oriented**

**Fully aligned** with the **SET plan**

**Complementing** other instruments

**Integrating** Education, Research and Business (**KT**)

**A company run as a company**
KIC InnoEnergy

Achievements since incorporation in dec 2010

FAQ

Brussels, 14th March 2012

1. Reminder on KIC InnoEnergy
2. Achievements since incorporation December 2010 [15 months]. Tangible results
   1. Education
   2. Technology Innovation
   3. Business Creation
3. FAQ:
   1. Absorption capacity
   2. Outreach
   3. Business participation
   4. Synergies

Diego Pavía - CEO
Achievements 2011  
Tangible results in Education (2/3)

2011 intake. Up and running!

<table>
<thead>
<tr>
<th>ECTS</th>
<th>Education program</th>
<th>Alps Valleys</th>
<th>Benelux</th>
<th>Germany</th>
<th>Iberia</th>
<th>Poland+</th>
<th>Sweden</th>
<th>Total 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MSc Nuclear Energy (EMINE) - M1</td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>MSc Nuclear Energy (EMINE) - M2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MSc Smart Cities - M1</td>
<td></td>
<td></td>
<td></td>
<td>17</td>
<td></td>
<td></td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>MSc Renewable Energy (RENE) - M1</td>
<td></td>
<td></td>
<td></td>
<td>30</td>
<td>5</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>MSc SELECT - M1</td>
<td></td>
<td></td>
<td></td>
<td>28</td>
<td>32</td>
<td></td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>MSc SELECT - M2</td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td>12</td>
<td></td>
<td>21</td>
</tr>
<tr>
<td>120</td>
<td>PD Eng</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>60</td>
<td>Msc Innovation and Entrepreneurship *</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>90</td>
<td>Exe prog Energy Engineering and Management</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>PhD school - Smart Grids Track</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>4</strong></td>
<td><strong>60</strong></td>
<td><strong>6</strong></td>
<td><strong>63</strong></td>
<td><strong>0</strong></td>
<td><strong>54</strong></td>
<td><strong>187</strong></td>
</tr>
</tbody>
</table>

Executed by
Achievements 2011
Tangible results in Education (3/3)

2011 intake: some data for the Masters
• Promotion in May 2011
• 1170 applicants for 220 sits

• Selection:
  • 155 applicants selected => excellence, not quantity
  • 79 mark threshold in GPA

• 120 scholarship granted (partners money)

Reasons for joining KIC InnoEnergy Masters (survey on 95 students)
• Quality, depth and breath of the programs
• No pre-engagements after 2 years
• Scholarship amount
• Reputation of institutions
• Mobility
• Double degree

Link with other EU initiatives:
• i.e. In 12 of 17 groups of SET plan Education initiatives, leading 2 of them

• More to know: http://www.kic-innoenergy.com/education/msc-programmes.html
Achievements 2011
Tangible results in Innovation projects (1/4)

What we do:

1. Roadmaps per thematic field defined by KIC InnoEnergy
2. Build and run innovation projects

The product we produce:

1. Patents/Know-how to be transferred
2. New services/products to be implemented by players of the energy value chain (from the project or from outside)
3. Start-ups based upon those patents/know-how

Achievements (total portfolio) in 2011:

• 11 patents filled in 2011 (1 patent / 1M€ investment, in FP7 it is 1 patent per 67M€ investment)
• 23 new products/services

Link with other EU initiatives:

• Full alignment with SET plan
• Complementing projects supported by other instruments

• More to know: http://www.kic-innoenergy.com/innovation-projects.html
Achievements 2011
Tangible results in Innovation projects (2/4)

34 resulting projects dynamically managed:

- 4 projects stopped, 3 conditional to market analysis outcome, 5 restructured
- No industry – no project
- Product/services identified vs TAM
## Achievements 2011

Tangible results in Innovation projects (3/4)

<table>
<thead>
<tr>
<th>Innovative Product/Service (to be) created as output of project</th>
<th>Incremental</th>
<th>Disruptive</th>
<th>Decrease Energy Cost</th>
<th>Operational Security</th>
<th>Lower Gas Emissions</th>
<th>Phone</th>
<th>Transport</th>
<th>Distribution</th>
<th>Retail</th>
<th>Storage</th>
<th>Equipment for offshore grid connection</th>
<th>Other</th>
<th>Potential market (M€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultra-fast electromechanic actuator (technology demonstrator)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Commutation hybrid switch (technology demonstrator)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Improved transformer design to meet DC magn.</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cascade HVDC rectifier with energy storage</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Cooperative power flow controller</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Equipment for achieving power quality</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Capacitor bank with power electronic switch</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Submerged Sub-Station including Power Devices</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>150</td>
</tr>
<tr>
<td>Simple devices for non-contact high voltage and high current measurements</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Diagnostic system based on natural transients</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Microwave antennas for diagnostics of power transformers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Interpretation service for PD diagnostics of power transformers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Off-line PD diagnostics of medium voltage power components</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Reconfigurable high-speed hardware controllers for energy conversion</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>
# Achievements 2011
## Tangible results in Innovation projects: patents (4/4)

<table>
<thead>
<tr>
<th>Status</th>
<th>Patent Identifier</th>
<th>Patent already filed</th>
<th>Product</th>
<th>Service</th>
<th>Decrease Energy cost</th>
<th>Operational toxicity</th>
<th>Lower Gas Emissions</th>
<th>Impact of the patent in the energy value chain</th>
<th>Utility</th>
<th>Impact</th>
<th>EqManufacturer</th>
<th>EqManufacturer</th>
<th>Manufacturer (if any)</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>KIC-ASS: New technology to enable automatic, in-the-field calibration of a wide variety of voltage and current sensors in power grid-like applications. Expected filling: Q4 2011</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>SECool: T2.3. Method for utilization of low-concentration gas mixtures of combustible gas and air with stable heat energy recovery and flow reversal device for implementation of the method.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>SECool: T5. Novel design of membrane module for OEA generation</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>SECool: T2.2.1. Development of the oxide binary/ternary catalyst.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>CoalGas: D5.3. The multi-cyclone dryer of plant biomass: chopped straw, oil cake, seaweed grown for energy purposes, and other fibrous waste of agricultural production.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>UPGRADE: Pyrolysis Reactor and Process for production of high-particle-free pyrolysis and synthesis gas</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>UPGRADE: Improved process for depletion of pollutants</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>FUEL FLEX: A method for converting C1-C4 alcohols to higher-value hydrocarbon compounds.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>FUEL FLEX: Use of perfume composition composition as fuel for internal combustion engines and burners that guarantees safety, stability and durability.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>INSTITUTE: Substation Automation via LTE, potential for services under evaluation.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>Smart Grid Materials: Method for depositing of nanomaterial coating on electrical circuit breakers</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>HITTEG: Method to produce devices consisting of at least one independently movable element and one fixed part; EP 06791.647.8-2122</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>HITTEG: Design of TEG (Status in progress)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Achievements until march 2012
Tangible results in Business Creation (1/2)

Launch of KIC InnoEnergy Highway™

• 184 NEW entrepreneurs proposing their business ideas

• 52 being nurtured => excellence

Reasons for choosing KIC InnoEnergy as their advanced incubator (all 27)
• Specialization in Energy
• Network of top notch players
• KIC commitment to find the first customer
• Brokerage to financial investors
• The Highway process in itself
Achievements 2011
Tangible results in Business Creation (2/2) – Segmentation analysis

---

### Business creation monitoring dashboard

<table>
<thead>
<tr>
<th>Type of idea</th>
<th>Impact</th>
<th>Value Chain</th>
</tr>
</thead>
</table>
| Product                   | Service
| Decrease Energy cost      | Operational Security
| Low Emission              | Fuel
| 13%                       | 77%                                 |

---

<table>
<thead>
<tr>
<th>Characterization of Entrepreneur</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Age segment</td>
</tr>
<tr>
<td>Above 40</td>
</tr>
<tr>
<td>Between 30 and 40</td>
</tr>
<tr>
<td>Less than 30</td>
</tr>
</tbody>
</table>

---

**Business idea from Entrepreneur (1 sentence)**

<table>
<thead>
<tr>
<th>Venture or Entrepreneur Name</th>
<th>Business idea from Entrepreneur</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polly Generation AB</td>
<td>Poly generated small scale energy production</td>
</tr>
<tr>
<td>Wireless Infrared Temperature Sensor</td>
<td>Measurement of various parameters such as temperature in high voltage environments</td>
</tr>
<tr>
<td>ALTEREOLE</td>
<td>New microalternators, allowing to produce energy by capturing very low winds</td>
</tr>
<tr>
<td>ALPES BIOTECH</td>
<td>Innovative process of mechanisation (removal of exploitation and maintenance costs)</td>
</tr>
<tr>
<td>NORTHSTAR TELEMETRICS</td>
<td>Optical automatic universal meter reading w. artificial intelligence algorithm</td>
</tr>
<tr>
<td>OPEN DOMO ENERGY</td>
<td>Low cost Open Source Energy metering and control system</td>
</tr>
<tr>
<td>Andrzej Strugala</td>
<td>Manufacturing and sales of innovative, high-efficiency SO2 chemical sorbents</td>
</tr>
<tr>
<td>Handzelka</td>
<td>Energy use efficiency, smart grids</td>
</tr>
<tr>
<td>Neutral Test Lab</td>
<td>The Neutral Test Lab provides prospective suppliers of smart energy building and city products a fast and easy way to test their product in a complete ecosystem without the hassle and investment related with building up and maintaining own test infrastructure</td>
</tr>
<tr>
<td>Rubber Heat Engine</td>
<td>With the construction of a &quot;Rubber Heat Engine&quot;, it is possible to use industrial waste heat and produce mechanical or electrical energy from it.</td>
</tr>
<tr>
<td>Production of methane out of biomass</td>
<td>Through gasification in a fluidized bed, solid and liquid fuels are converted into a raw gas and after that transformed by cleaning and conditioning into a synthesis gas. The SNG can be used in gas engines and gas turbines, which can not be operate with solid fuels</td>
</tr>
</tbody>
</table>

---

**Impact**

- Decrease Energy cost
- Operational security
- Low Emission

---

---
Business Plan 2012
IP ambitions vs other EU instruments achievements

194 patents for 13B€ spent in FP7 projects (August report from EU) (so 67 M€ per patent. KIC as of today is running at 1M€ per patent)

Table 17: Reports encoded in SESAM by funding scheme and year (by 30/06/2011)

<table>
<thead>
<tr>
<th>Funding Scheme</th>
<th>Year</th>
<th>Periodic reports</th>
<th>Final reports</th>
<th>Review reports</th>
<th>Assessments by Project Officers</th>
<th>Publications</th>
<th>Patents</th>
<th>Exploitable foregrounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCA</td>
<td>2009</td>
<td>137</td>
<td>12</td>
<td>1</td>
<td>0</td>
<td>19</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>1657</td>
<td>446</td>
<td>0</td>
<td>82</td>
<td>1272</td>
<td>20</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>1637</td>
<td>509</td>
<td>41</td>
<td>448</td>
<td>1478</td>
<td>20</td>
<td>52</td>
</tr>
<tr>
<td>MCA Totals</td>
<td></td>
<td>3431</td>
<td>967</td>
<td>42</td>
<td>530</td>
<td>2769</td>
<td>41</td>
<td>138</td>
</tr>
<tr>
<td>CP/CSA/NoE</td>
<td>2009</td>
<td>79</td>
<td>22</td>
<td>6</td>
<td>30</td>
<td>103</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>1322</td>
<td>228</td>
<td>353</td>
<td>758</td>
<td>937</td>
<td>11</td>
<td>163</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>1458</td>
<td>372</td>
<td>353</td>
<td>715</td>
<td>4077</td>
<td>86</td>
<td>433</td>
</tr>
<tr>
<td>CP/CSA/NoE Totals</td>
<td></td>
<td>2859</td>
<td>622</td>
<td>712</td>
<td>1503</td>
<td>5117</td>
<td>97</td>
<td>596</td>
</tr>
<tr>
<td>BSG</td>
<td>2009</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>173</td>
<td>24</td>
<td>180</td>
<td>151</td>
<td>39</td>
<td>7</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>335</td>
<td>85</td>
<td>170</td>
<td>220</td>
<td>224</td>
<td>49</td>
<td>243</td>
</tr>
<tr>
<td>BSG Totals</td>
<td></td>
<td>508</td>
<td>109</td>
<td>350</td>
<td>371</td>
<td>263</td>
<td>56</td>
<td>357</td>
</tr>
<tr>
<td>Overall Totals</td>
<td></td>
<td>6798</td>
<td>1698</td>
<td>1104</td>
<td>2404</td>
<td>8149</td>
<td>194</td>
<td>1091</td>
</tr>
</tbody>
</table>

1091 exploitable foregrounds (how many exploitED?)