



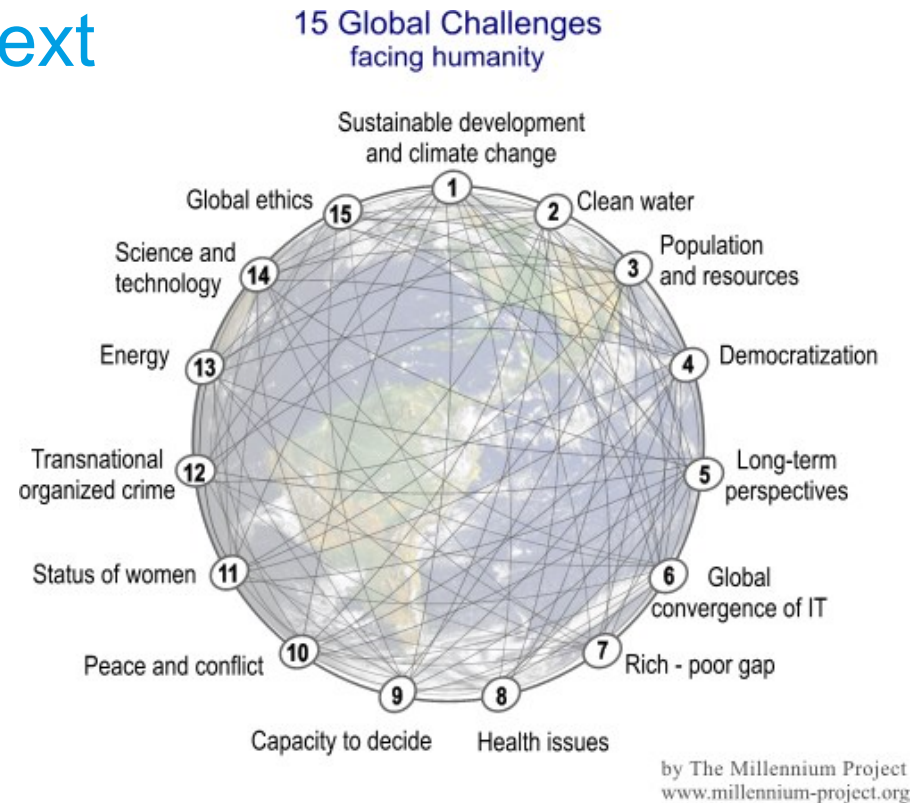
Climate-KIC

Regional aspects of climate innovation

Promoting Resource Efficiency in Central and Eastern Europe
Budapest, 13th September 2013

Miklós Gyalai-Korpos, PhD

Policy context



Europe2020 agenda and its flagship initiatives

1. Employment - 75% of the 20-64 year-olds to be employed
2. R&D - 3% of the EU's GDP to be invested in R&D
3. Climate change and energy sustainability - 3x20%
4. Education - reducing the rates of early school leaving below 10% and at least 40% of 30-34-year-olds completing third level education
5. Fighting poverty and social exclusion - at least 20 million fewer people in or at risk of poverty and social exclusion

The European framework



2008

European Institute of Innovation and Technology, EU body located in Budapest

2010

First wave of the Knowledge and Innovation Communities (KICs)

The Climate-KIC eco-system



A networked Community

- Long-term, stable, portfolio of 180 partners across education, business, research and policy
- 11 hubs of connectivity across 9 European countries
- Innovation push – demand pull
- Actively managed interactions

An innovation pipeline

- Innovation, Entrepreneurship and Education
- Educating new climate innovators
- Catalysing innovation of products, services and knowledge transfer
- Creating and incubating start ups

8 Platforms

- Defining thematic challenges and priorities, validating proposals
- Focussed cross-KIC innovation communities
- Demand-side, challenge driven
- Integration of innovation, entrepreneurship and education

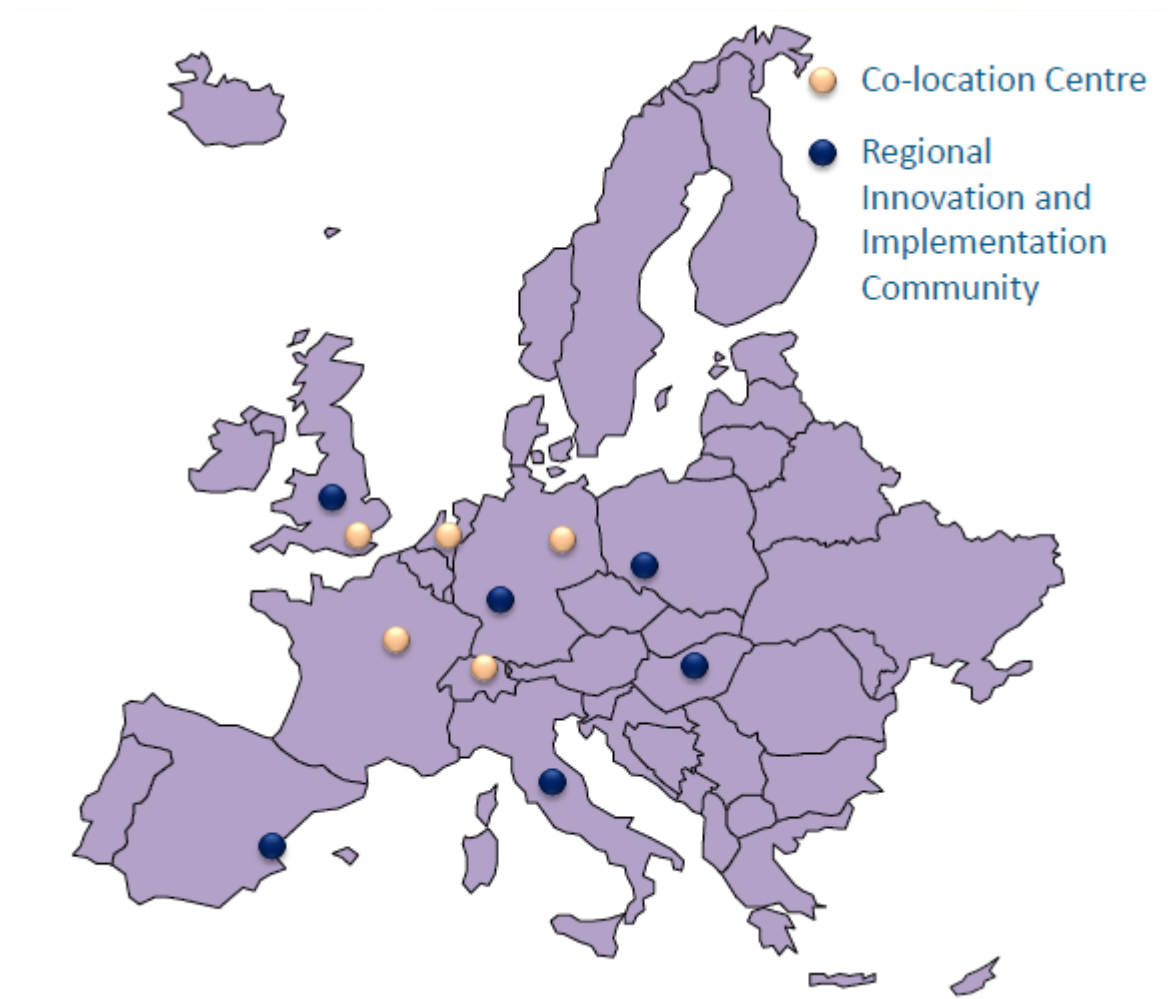
5 CLCs

- Focus for innovation
- Centre of knowledge
- Launch pads, landing pads

6 Regions

- Market demand
- Test beds and implementation

Innovation community



Benefits of the community



A case study on how Climate-KIC connects ideas, people and partners across Europe and supports innovative solutions to climate change.

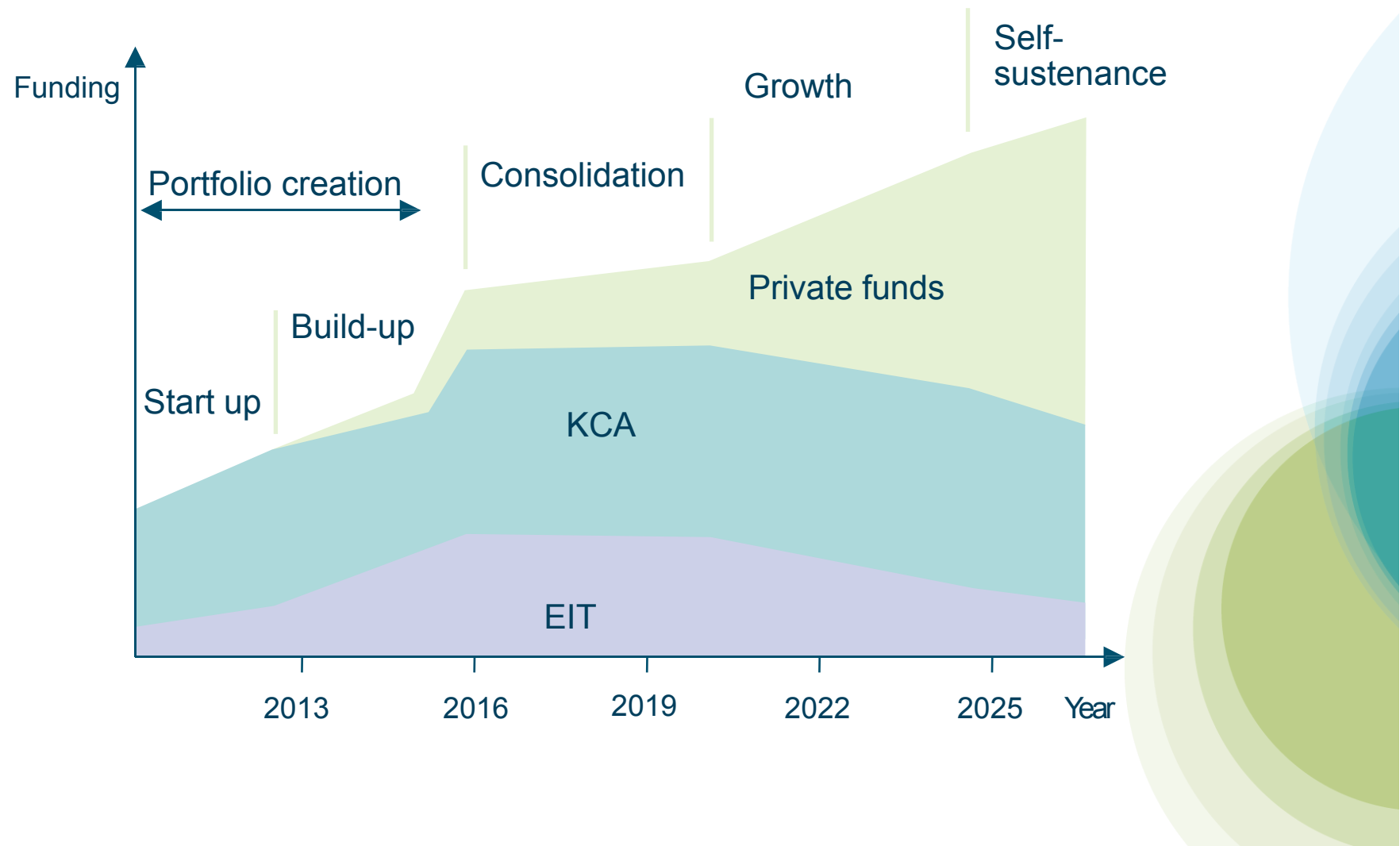
Climate-KICs role has been to identify opportunities, to match make and to open doors for us. It's like 'sheltered innovation'. Quite simply, our relationship with Climate-KIC allows us to sit at the table with the big players.

Christophe Williams
Managing Director, Naked Energy

We know the UK. But there must be brilliant ideas out there we don't know about and Climate-KIC can bring these to us. We want to get involved at the embryonic stage in order to help shape the technology in a commercially meaningful way.

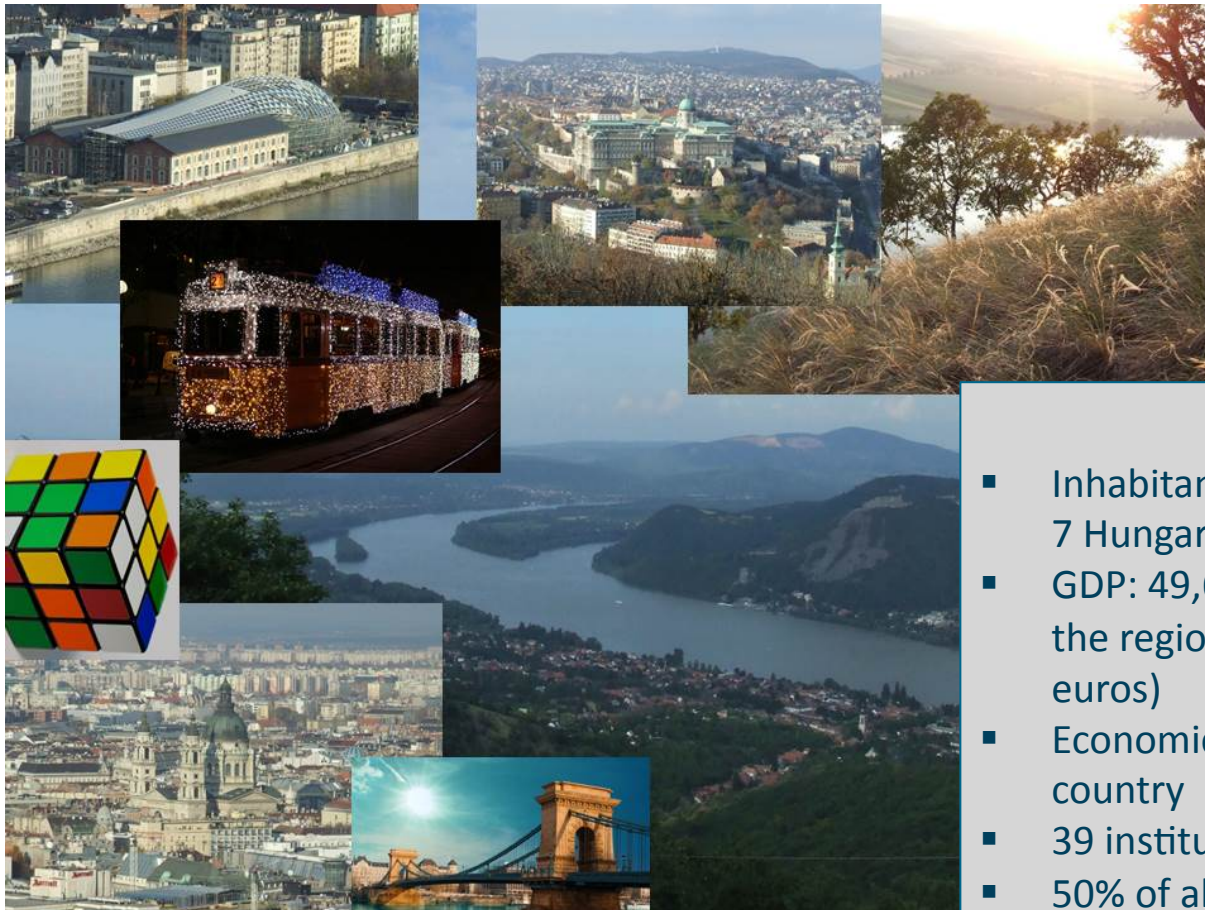
David Penfold
Sainsbury's Supermarkets Ltd

Long term vision: Self-maintenance



RIC Central Hungary

„Old traditions, new dimensions”



- Inhabitants: 3.000.000 , the smallest of the 7 Hungarian regions but the most populous
- GDP: 49,6% of national GDP is produced in the region (per inhabitant, 2012: 37,656 euros)
- Economic and governmental capital of the country
- 39 institutes of higher education
- 50% of all students and 60% of all researchers in this region
- Two-thirds of the R&D expenditures in this region

RIC Central Hungary

Climate change?

eit Knowledge & Innovation Community
Climate-KIC



Both urban areas (Budapest - floods, heat waves) and agricultural zones (drought, soil loss) are affected by climate change

Regional partnership



Government & Public bodies



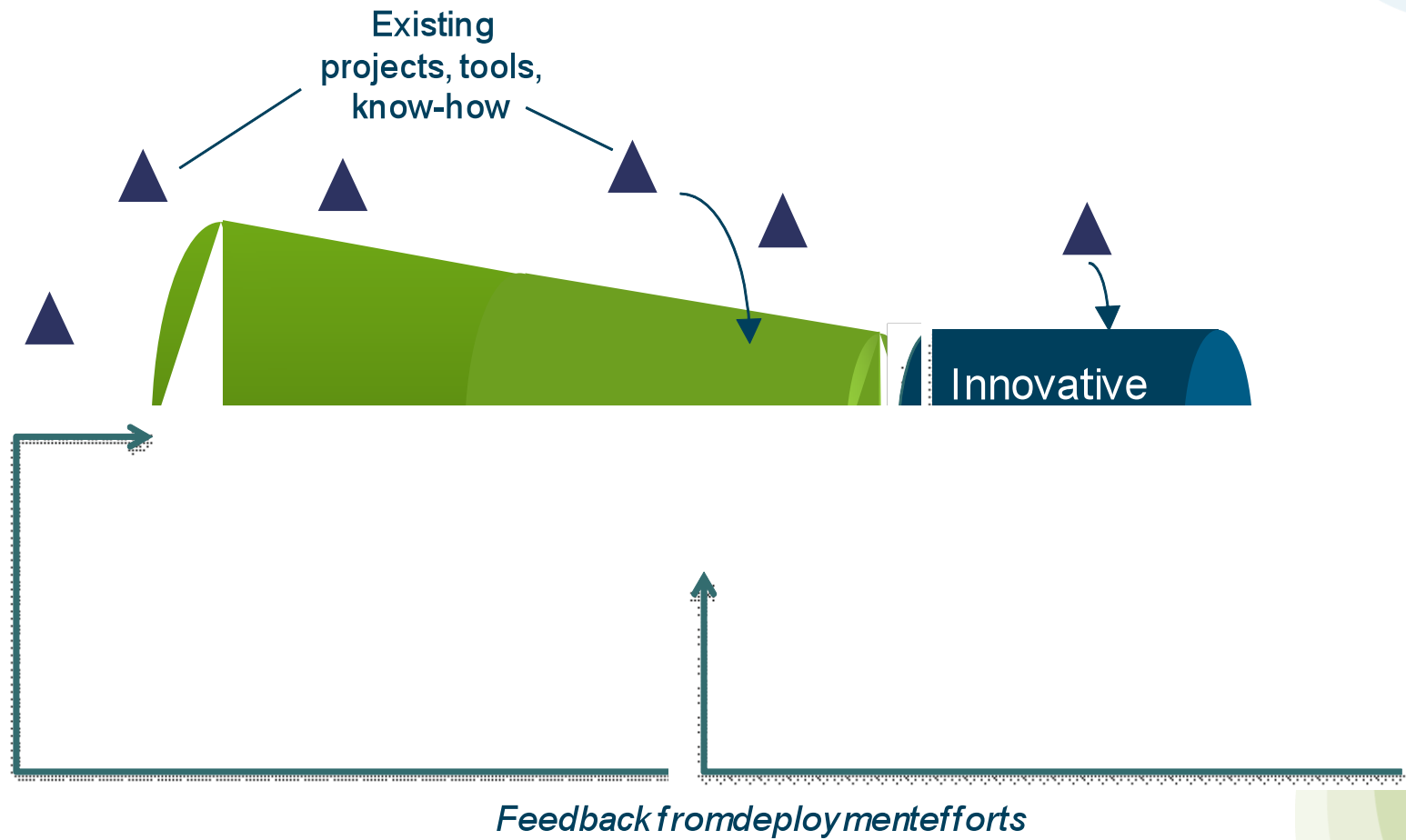


Activites....

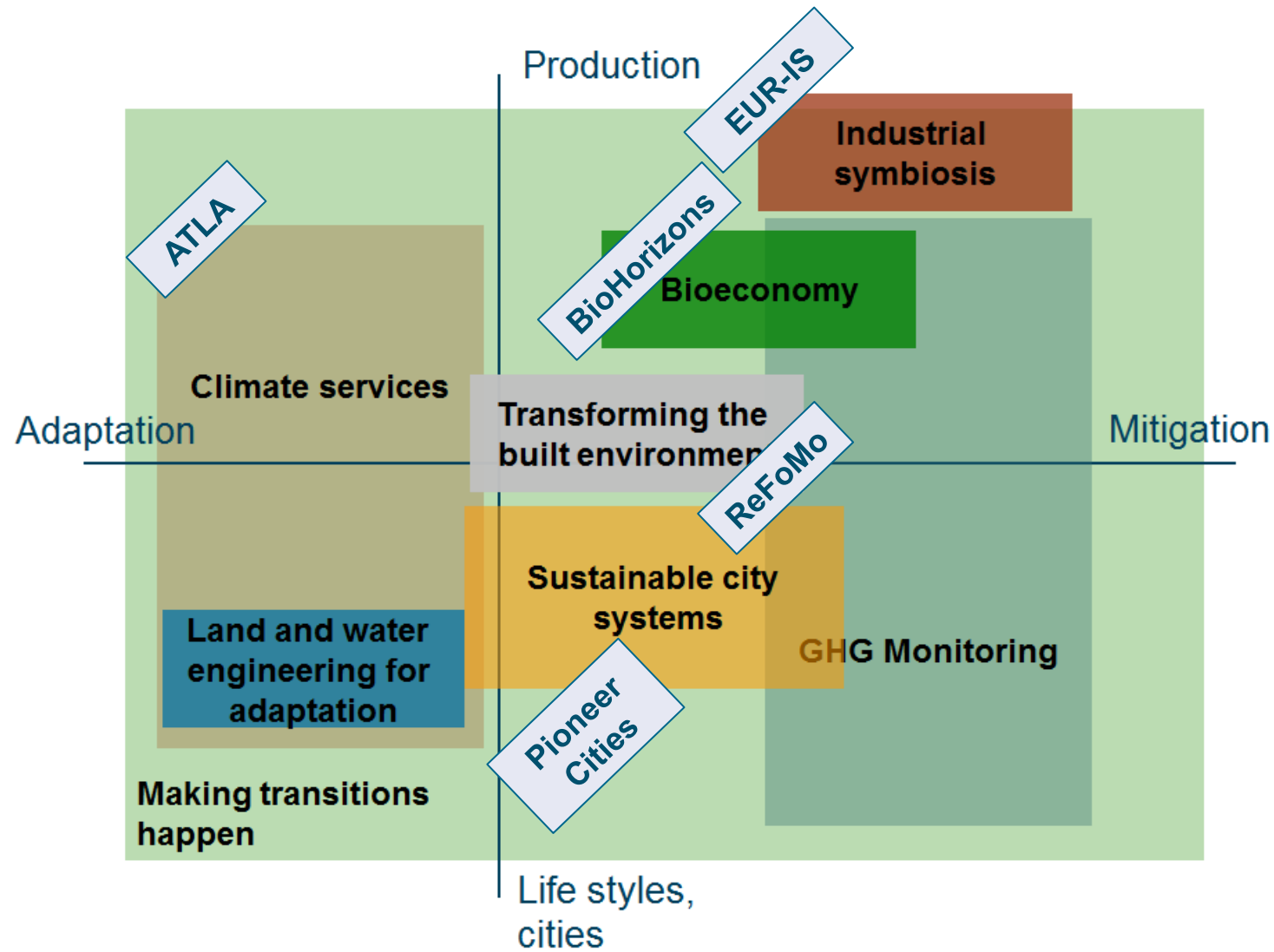
Innovation
Entrepreneurship
Education
Outreach



Innovation pipeline



Innovation



Industrial symbiosis



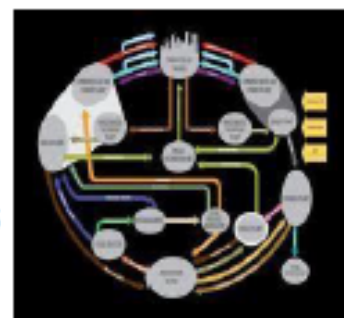
Industrial symbiosis aims to replace the traditional linear production concept by using industrial symbiosis tool. The traditionally non-cooperative industry sectors can interact and share resources when they get the opportunity of knowing each other through a system and virtual market place.

Main strategic challenge:

Increase resource efficiency and turn waste –including food waste and CO₂- into resource.

Specific challenges:

- Valorise underutilized resource flows: Build understanding of the surrounding flows of materials and energy in order to seize opportunities and utilise underutilised natural and industrial flows both within and across established firms and industries.
- Resource efficiency: Develop and valorise tools that optimize resource efficiency in product manufacturing
- CO₂ reuse: Design and bring to market new products from CO₂ reuse



Industrial symbiosis in the region



Coordinator: IFKA

(Public Benefit Non-Profit Ltd. for the Development of Industry)



EU Life funded NISP (www.nisp.hu) between 2010-2012

- Diverting industrial waste from landfill – operational success stories
- Linking industries in order to make them use each others waste streams – workshops, network of stakeholders
- Practical database in operation („have” and „want” resources)

EIT Climate KIC EUR-IS between 2012-2013

- Linking academia to industrial sector in order to tackle recycling barriers

Entrepreneurship



Recobin Eco-Friendly Recycle Bin

- 100% strengthened cardboard
- Multi-functional, adaptive & affordable
- Webshop
- School program



www.okuka.hu

BioBOTTLE Project

Re.THINK

- Degradable
- Unique design: re-squeezable, pliable, minimal art, wood-like
- Production compared to PET bottles: 70% less GHG emissions, 51% less fossil energy consumption,

Indoors urban farming

- widely available, sustainable, economical, eco-friendly technology
- healthy and high-quality fresh food (vegetables, spices)
- regardless of location and weather conditions
- no need for special expertise



Gourmet Garden

www.gourmetgarden.eu

- Generate more climate starters and let them grow faster internationally
- Mission: supporting the implementation of innovative, startup ideas, which - besides producing profit – benefit society
- Preparing the startups for the reception of venture capital investment
- 14 startups in two Incubation Groups:
 - Group One: 7 startups, each receiving 20,000 EUR – 2012 Venture Competition
 - Group Two: 7 startups, receiving free education

Education



"I gave speeches explaining that environmentalists must communicate better. Instead of talking about polar bears or ice caps, which might not register with most people, talk about the health benefits, the jobs and the security that comes from clean energy. „

Arnold Schwarzenegger
Former Governor of California

Financial Times, 6 August, 2013

Climate KIC message



Education – current activities



Path to Low Carbon Growth

London – 19-20 November
Frankfurt – 3-4 December
Budapest – 10-11 December

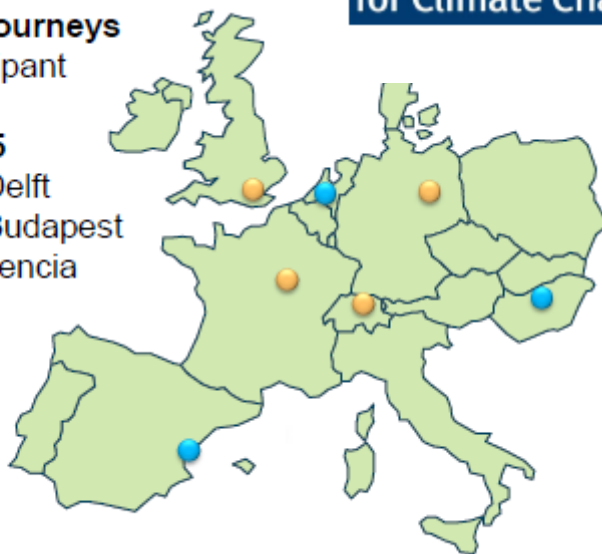


Grantham Institute for Climate Change

Summer Journeys
5x40 participant

Journey #5

Week 1-2 Delft
Week 3-4 Budapest
Week 5 Valencia



- Create and maintain a strong and collaborative innovator community – Alumni association
- Train people to operate effectively within the knowledge pyramid – out of the comfort zone
- Stimulate people's potential for innovation and entrepreneurship
- Main focus: professional education and entrepreneur skills

Next year:

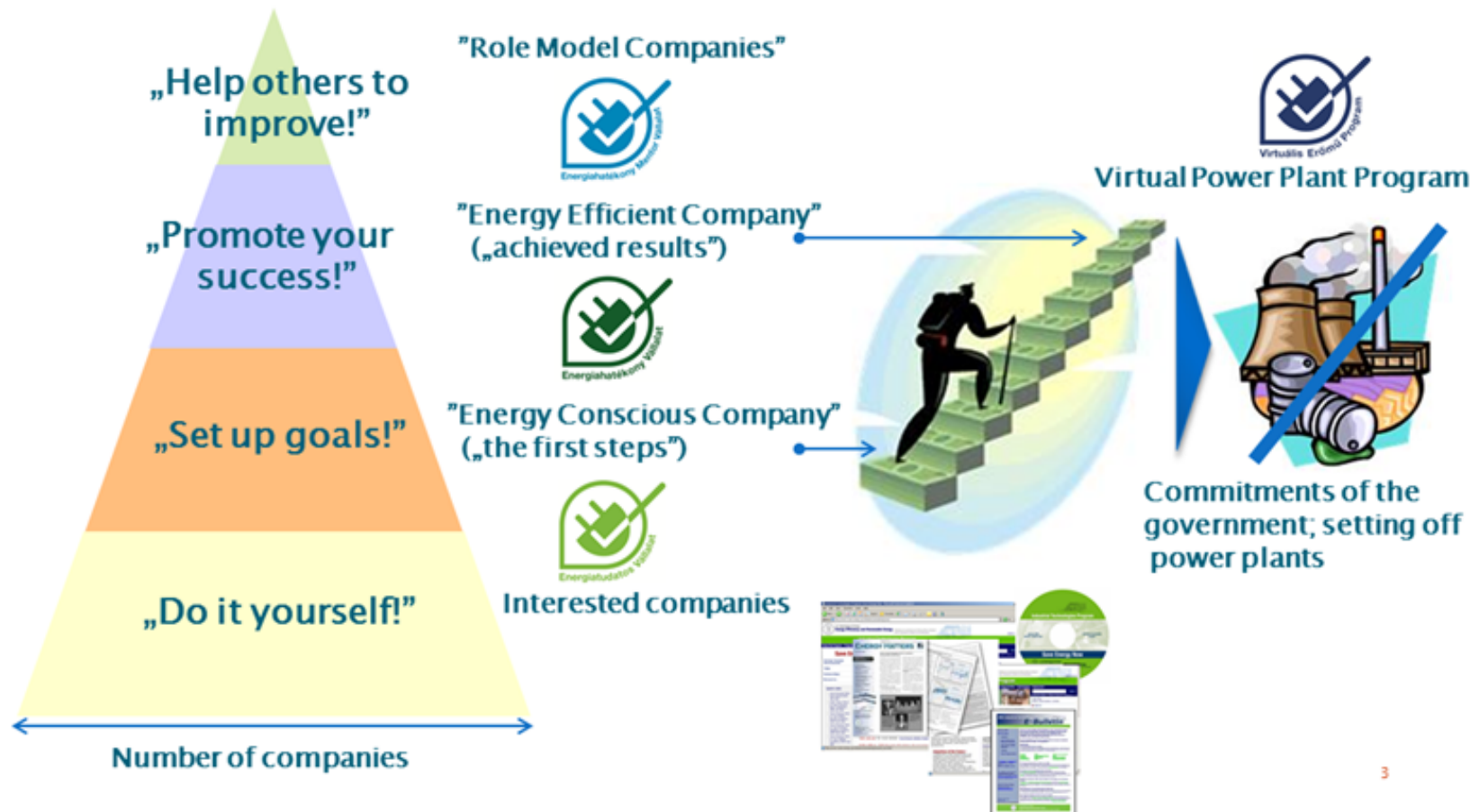
Central Hungary Regional Innovation Centre



- Focal point: coordinating Climate-KIC related activities of the region
- Creating connections: integrating existing Climate KIC educational, entrepreneurial and innovation activities.
- Event hosting: for trainings, workshops, education courses, networking events
- Co-working space and incubation centre.
- IT background: development of an e-learning platform ('Climate Science')
- Courses for professionals and mentor programs: related innovation management, social innovation, green marketing, understanding advantages of innovations, design thinking, leadership and entrepreneurship.
- Accreditation of experts in cooperation with different industry chambers.
- Challenge focused study visits to other regions and matchmaking events/meeting with local entrepreneurs for networking.
- Education: climate change awareness raising in schools (Young Agent Program). MSc and PhD programs, education material development.
- Supporting innovation activities: building the regional innovation pathway
- Hub for Outreach activities

Virtual Power Plant

Award of Excellence in Energy Efficiency – stages



Virtual Power Plant

Knowledge & Innovation Community
eit
Climate-KIC

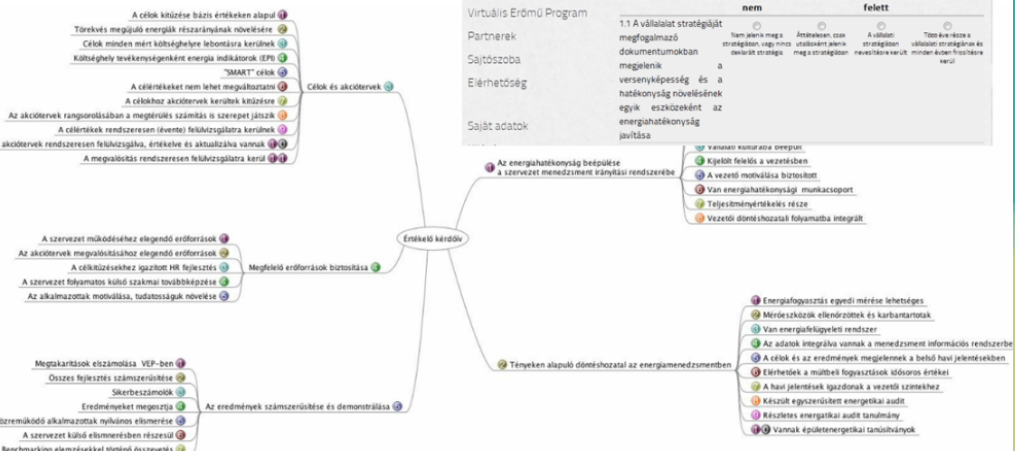
The Advisory Board

- Companies
- Foundations
- Universities
- Agencies



Self benchmark

- FREE at <http://virtualiseromu.hu> *
- 5 different parts
- 41 questions
- 4 different stages



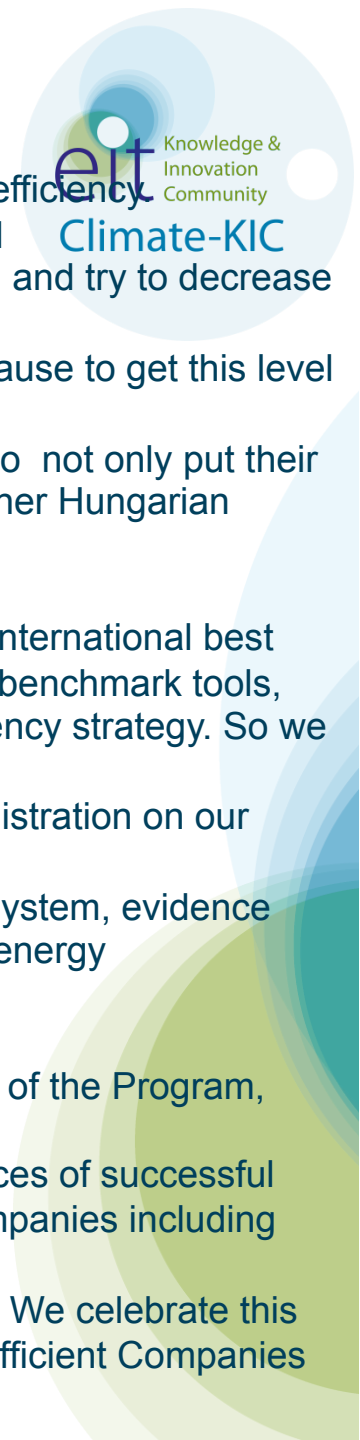
only in Hungarian: <http://virtualiseromu.hu/energiahatekonysagi-kivalosagi-palyazat/elopalyazat>



Open for cooperations!

Thank you for your attention.

Miklos.gyalai@negos.hu



Stages

- o First of all we have a free self-benchmark tool for anybody who is interested in the energy efficiency.
- o The second level of the Program is the “Energy Conscious Company” label which is a label for companies who make voluntary commitment to improve their energy management system, and try to decrease their energy consumption.
- o The third level is the “Energy Efficient Company” Award. It is an Award not only a label because to get this level you need past investments past success in energy efficiency.
- o At the fourth level – at the peak of the pyramid – there are the “Role Model Companies” who not only put their savings into the Virtual Power Plant, but are also actively promoting the program, and help other Hungarian companies to reach success in energy efficiency.
 - Self benchmark
- o When we started to develop the method of the Program, and the Award we analyze some international best practices and we found all of the successful programs has a free part. These are toolkits, self-benchmark tools, best practice databases with which the interested companies can start their own energy efficiency strategy. So we build our self-benchmark, too.
- o This questionnaire is available for anybody without any registration fee and without any registration on our website (www.virtualiseromu.hu)
- o Our questionnaire has 5 different parts: energy efficiency and the corporate management system, evidence based decision making at the energy management, goals and action plans, resources for the energy management, result metering and demonstration methods.
 - Advisory board
- o This wide range of companies, foundations, universities, agencies build the advisory board of the Program, and decide for example on the Award.
- o The General aim of the Program is to collect experiences and best energy efficiency practices of successful companies, transform them into transformable knowledge and forward them to Hungarian companies including SME-s.
- o The International Energy Saving Day on 6 of March is a very special day of the year for us. We celebrate this day with the winners of the Award. Both the Energy Conscious Companies, both the Energy Efficient Companies and the Role Model Companies are invited to the ceremonies in the House of Parliament