



## *Luxembourg EcoInnovation Cluster Presentation*

April 2014



agriculture...




... industry, ...





...multi hi-tech society.

- 
- **“One World Tower” is based on Giant Steel Sections produced in Differdange, Arcelor Mittal**
  - **Guardian Luxguard S.A., “Burj Khalifa Tower”**

# Perspective - CITE DES SCIENCES



## Was ist ein Cluster?

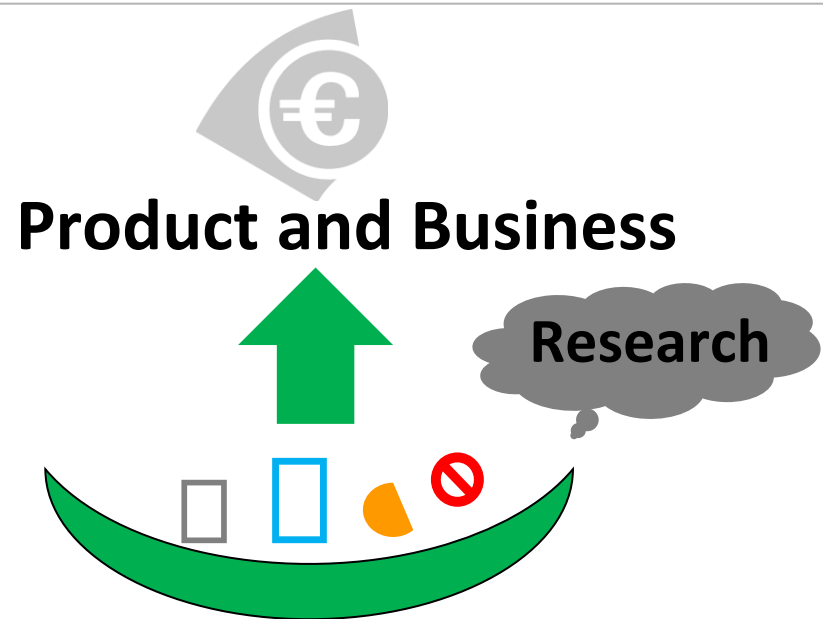


**“A business cluster is a geographic concentration of interconnected businesses, suppliers and associated institutions in a particular field.**

**Clusters are considered to increase the productivity with which companies can compete, nationally and globally. “**

*Michael Porter*

# What is a Cluster?



## Common projects:

- Common interest
- Common goals
- Common financing
- Common structure
- Common project manag.



...or





# Luxembourg Cluster Initiative



Luxembourg  
Ecolnnovation  
Cluster



Luxembourg  
Automotive  
Components



Luxembourg  
ICT  
Cluster

Luxembourg  
Cluster  
Initiative

Luxembourg  
Materials  
Cluster

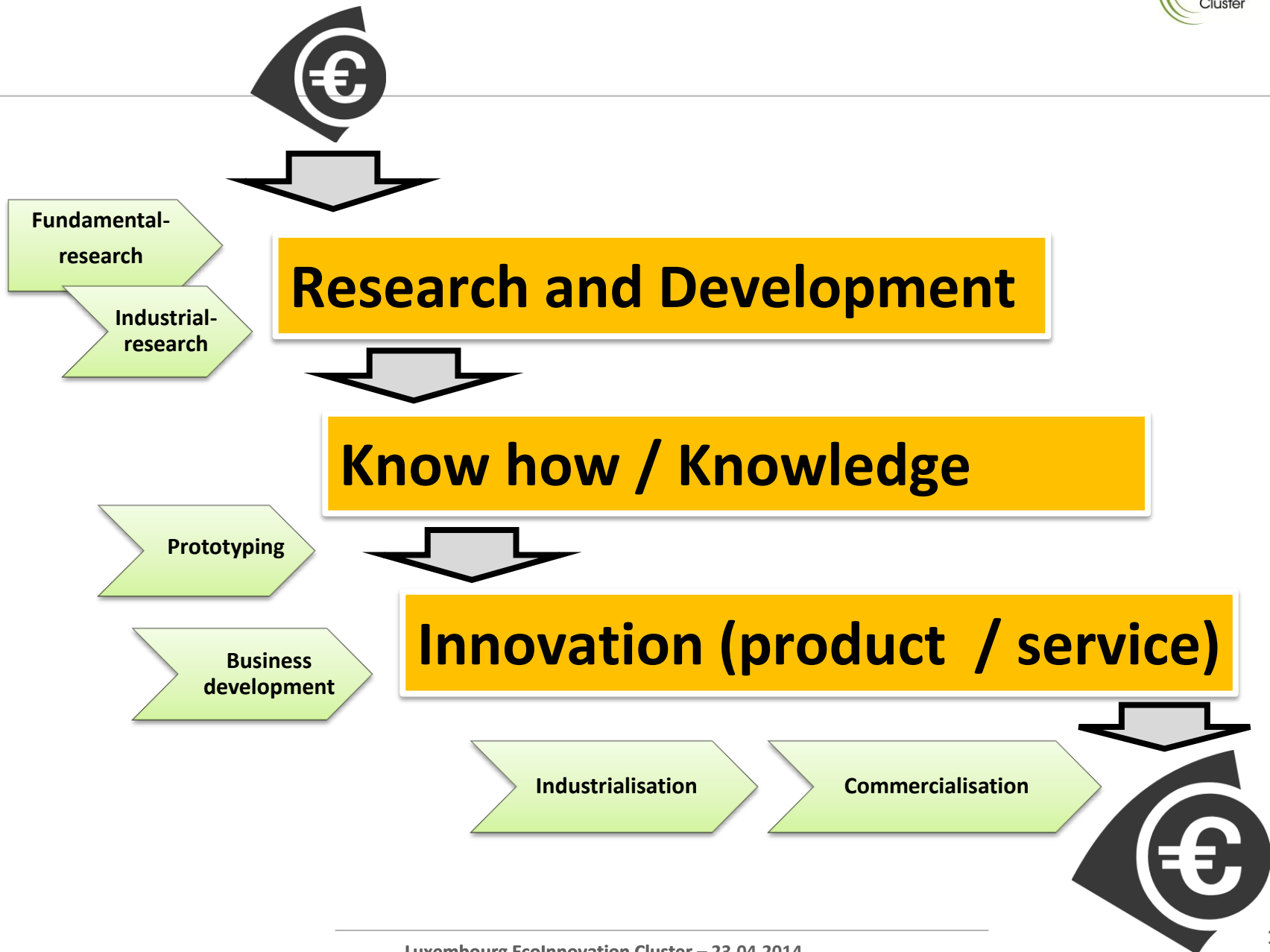


Luxembourg  
BioHealth  
Cluster

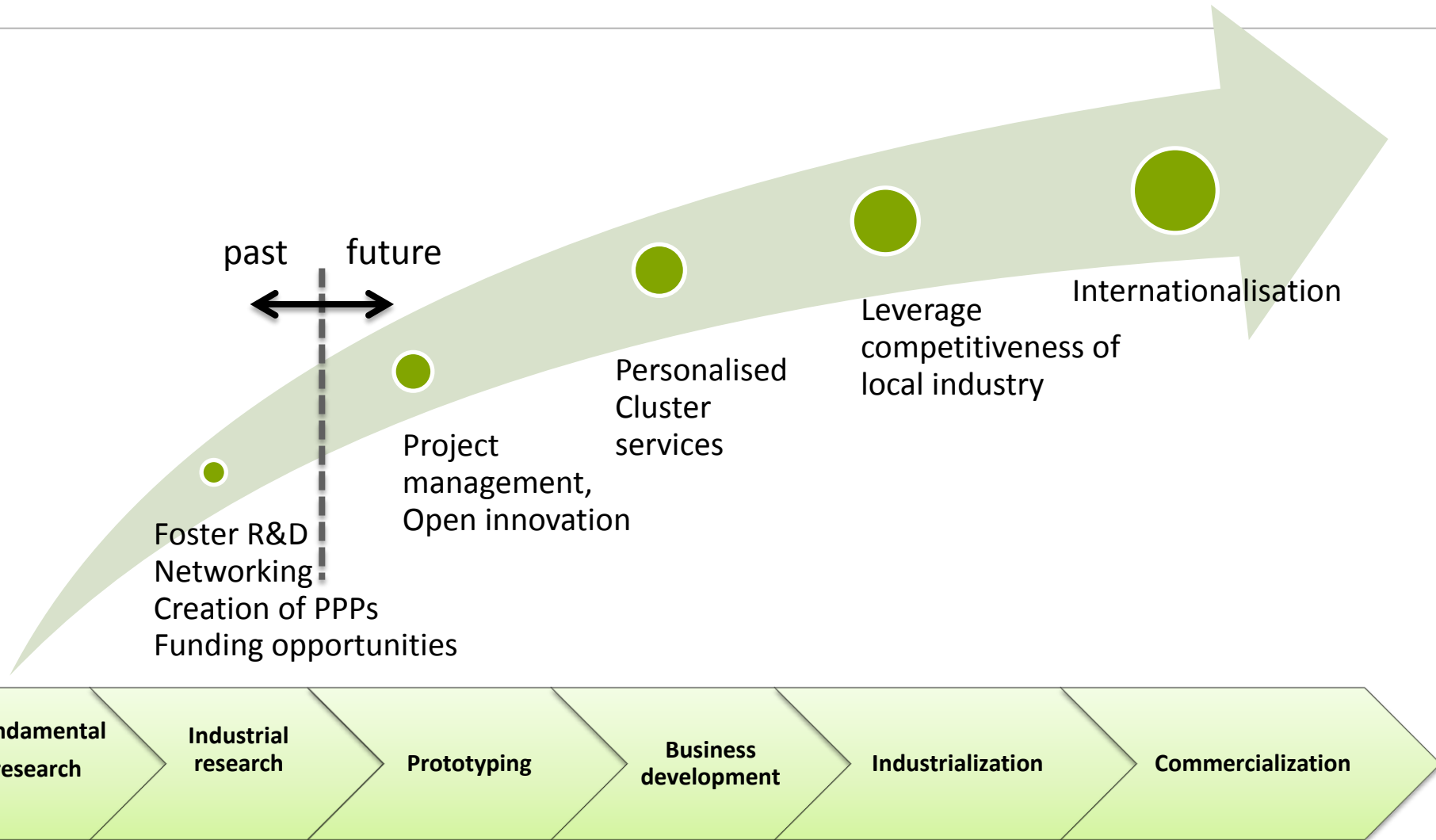


Luxembourg  
Space  
Cluster





# Adaptation of the Cluster strategy





## 5 pillars defining future Cluster activities



# Goals of the Cluster Initiative 2014-2020



## Targets of EcoInnovation Cluster

### 1. Innovative Materials

- Sustainable-construction / eco-materials
- Composite materials, conductive polymers, nano-materials
- Bio-sourced polymers, biodegradable materials, based on systems biology research



### 2. Rational use of natural resources

- Biomass, Innovative gasification and combustion technologies  
Biomass to energy, biogas, biofuel, sewage sludge treatment
- Small scale energy production units, Innovative CHP solutions (micro-CHP, fuel cells...)
- Energy storage and smart grid solutions  
Innovative chemical and/or thermal long term storage



## Targets of Ecolnnovation Cluster

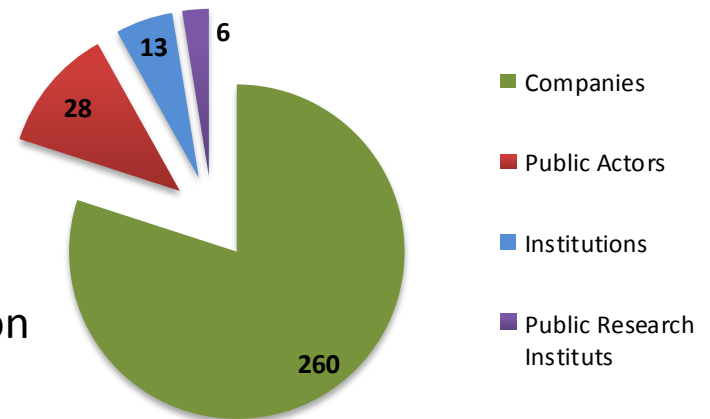
### 2. Rational use of natural resources, ...

- Sustainable construction,  
Insulating materials, steel and glass construction, timber, innovative cements
- Sustainable mobility,  
including electro-mobility, ICT for mobility, energy efficient propulsion and battery management systems
- Water and waste management
- Intelligent Design

Cradle to cradle approach,

Circular Economy,

life cycle analysis, CO<sub>2</sub> footprint reduction

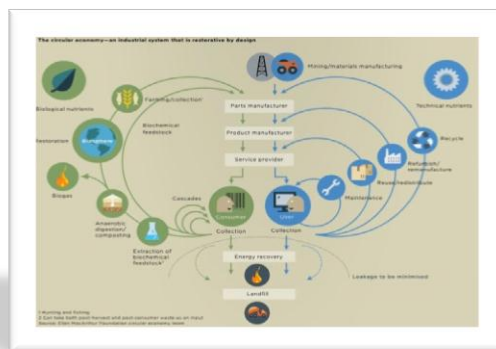


Total: +- 300 Actors

# *Strengthen the Luxembourg Eco-Tech and the Clean-Tech Sector*



**Mobility**



Circular Economy Concept ((c) Ellen McArthur Foundation)

**Circular  
Economy**



**Sustainable  
Cities and Smart  
Technologies**

## our Fokus

### Mobility

- Project management and leadership of several work packages within the “Hybrid Plug-in Buss Project”, E-Busses, → reduction of emissions and noise
- Member of the steering group «mobility» → national strategy

### Circular Economy

*“Moving away from the linear model towards creating the circular framework”*

- Analysis of economic potential in Luxembourg and greater region
- The cluster as “competence center” in the field of circular economy within the greater region and in Europe, → products and services design / business model

### Sustainable Cities and Smart Technologies

- Supporting projects in Luxembourg to enlarge the technical competences
- Foster renewable energy and energy storage, rational use of natural resources
- «Solartec, Myriado, Apatec, Grid design, LEE, BOSON, AECT, .....



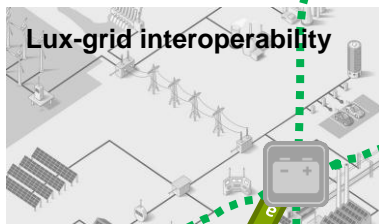
# Mobility

## Picture of Public Transport Project

→ 1. Phase: 6 Busses in Q4 2015 (Line 215)



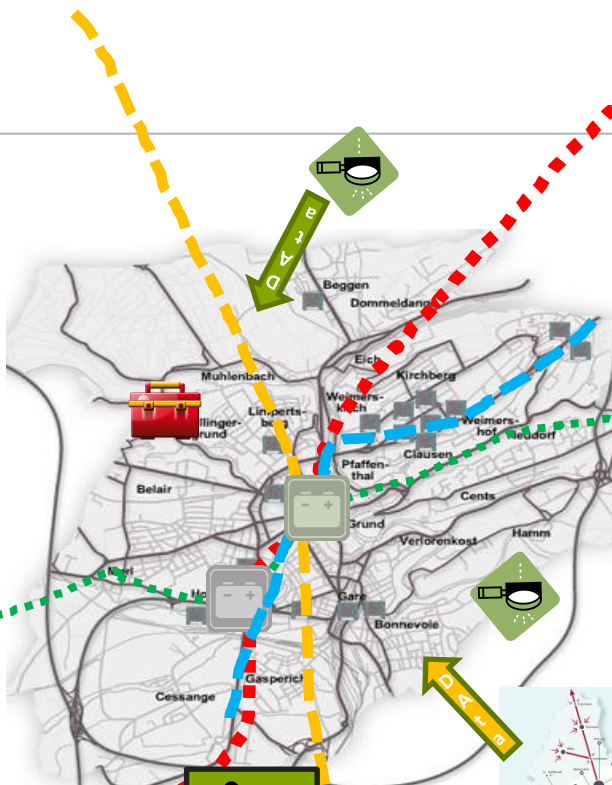
Line Volvo/Sales



Lux-grid interoperability

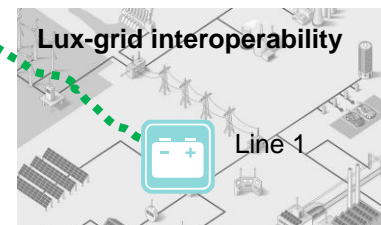


Line Volvo Sales






Line 3 «others»





Line 4 «others»



Lux-grid interoperability

Line 1

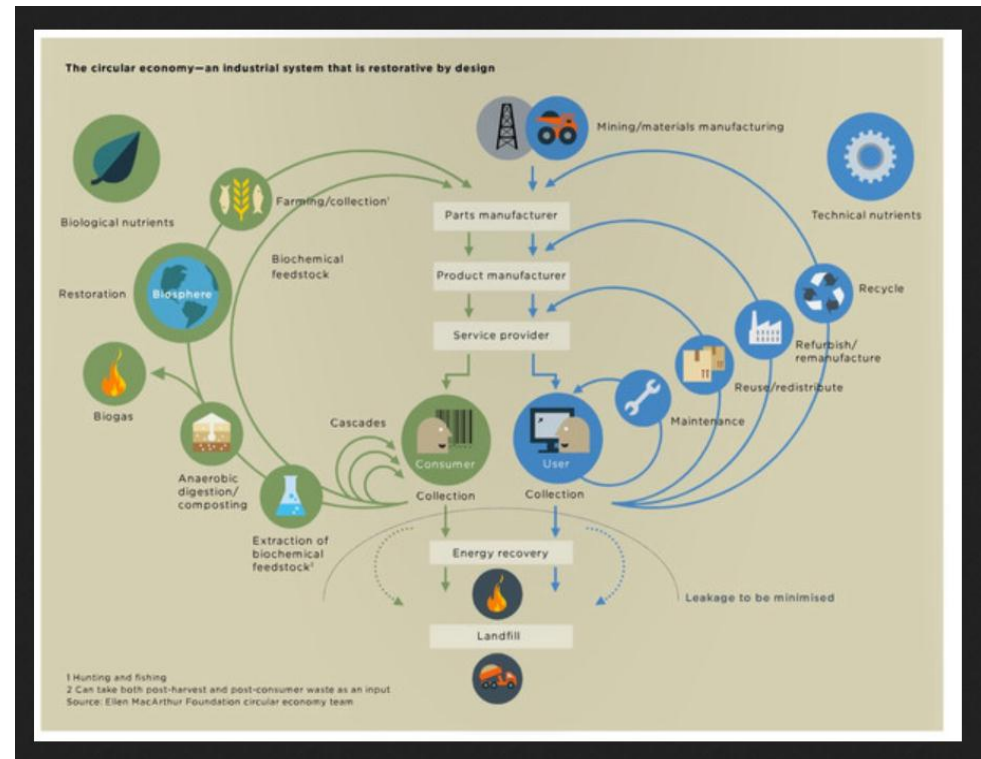
-  TUDOR - Projects
-  SNT - Projects
-  MDDI projects, IST, ..

- ITS - Projects
-  charging station
-  Maintenance and Repair
-  «Create»
-  TRAM ?

## «Circular economy»

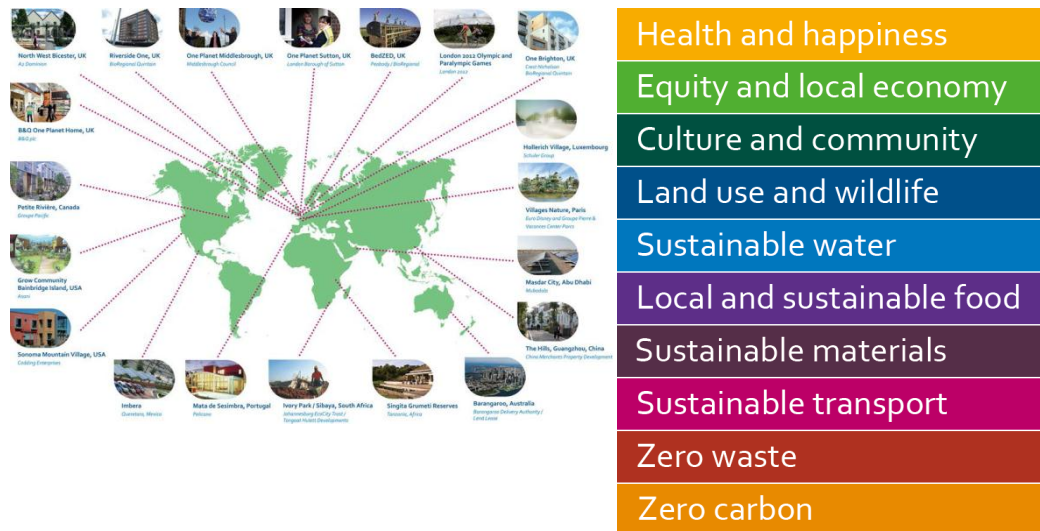
- Efficient use of raw materials, energy, water, ...
- Closed loops
- No waste but products !
- Reverse logistic
- New business models
- «Leasing» of products and services
- Sustainable production and consumption

? !!! Yes !



- «Neobuild» – Innovation Center for Sustainable Construction a partnership to foster and promote the construction sector

- Concept “Hollerich”



- Eco Cities / «Luxembourg» / Wilz / «Paul Wurth» / «Esch»



- **“Solarwind” Smart Building**  
**BREEAM (UK), HQE (F), DGNB (G)**

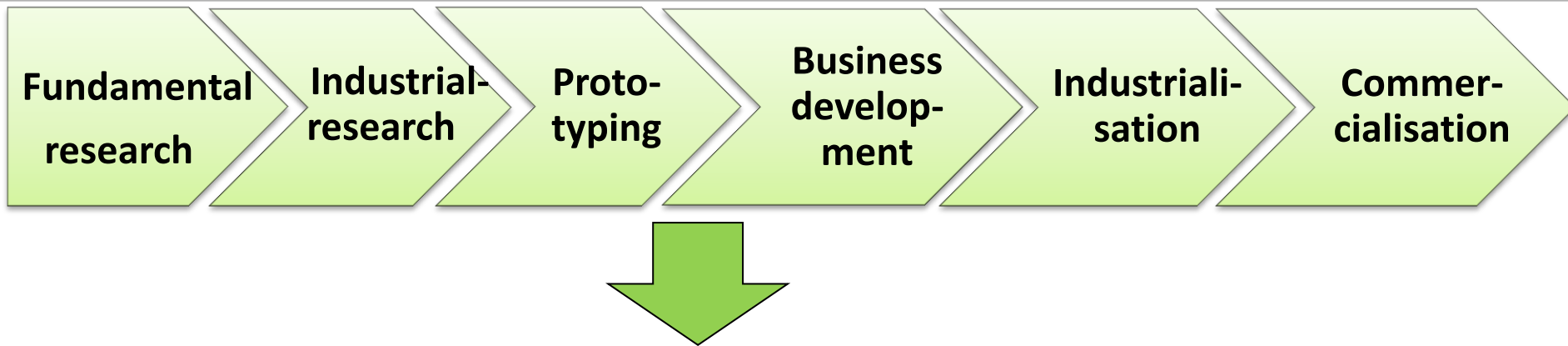


[www.solarwind.lu](http://www.solarwind.lu)

- **“Ecoparc Windhof”**

- **Enovos / Creos**
- **Paul Wurth**
- **Solartec, SWIRL, VINI, Innovattechnologies**
- **Apatec, Myriado, Aqua- Services**
- **3E Consult, Prosolut**
- **Cimalux, Betons Feidt**
- **CityMov'**
- **LEE, Boson, Soil- Concept**
- **Superdreckskescht, Ecotrel**
- **...**

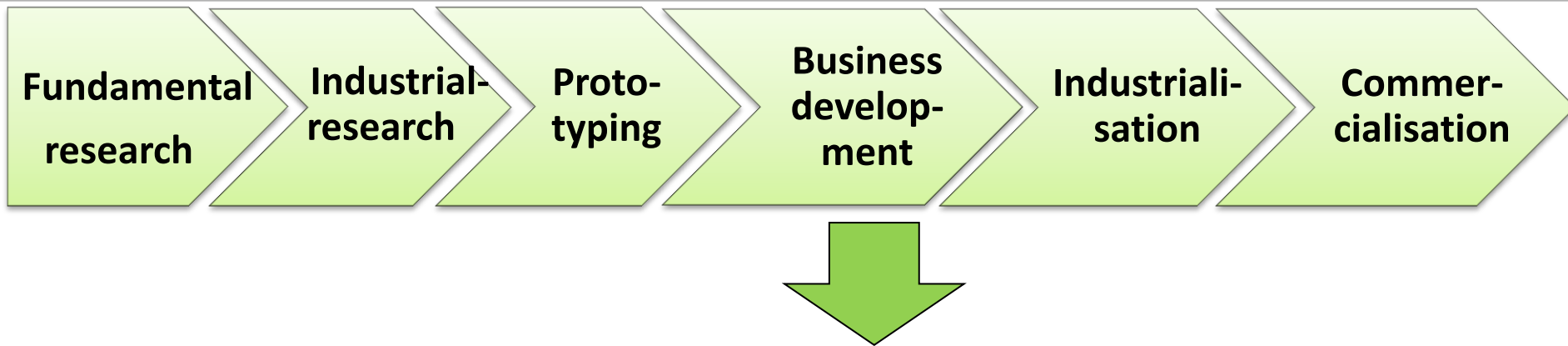
## Business Opportunity, 1



### Cooperation and Synergies

→ Myriado (water treatment) and Solartec  
(renewable Energies and energy storage)

## Business Opportunity, 2



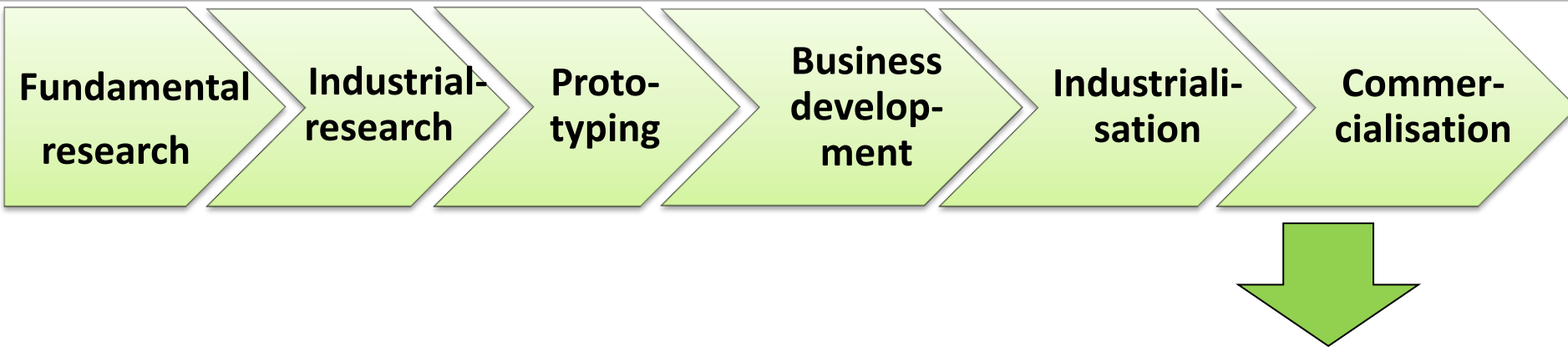
**«Business Opportunity» of three members**

**Development of new product:**

**→ Knowledge transfer to scale up a small wind turbine to a larger power.**



## Business Opportunity, 3



**„Business Opportunities“**

**Private investors looking for projects with high impact on social and environmental issues**

# 86 Members (64 companies)

**K a+p kieffer omnitec** *advance in technology*  
**DU PONT**  
**PAUL WURTH** SMS group  
**BOSON ENERGY** THE IMBY COMPANY  
**sustain** Agrégateur de compétences en RSE  
**greeneco.lu** Portail du Développement durable Grand Duché du Luxembourg  
**ArcelorMittal**  
**PRO newtech**  
**ClimEEC** ECO • EXPERT • CLUSTER  
**phoenixwatt**  
**Greenearn** **INFINITEC GROUP**  
**LIONSYSTEMS**  
**Chaux de Contern** Groupe Eurobéton  
**enovos** **HOT CITY** **ebrc** **gas** **BALLINIPITT** ARCHITECTES URBANISTES  
**DELPHI**  
**ELCO** GROUPE ELCO **act green** **ecotrel** association sans but lucratif **bêtons feidt** *Due Mondy Ecotec*  
**grid** GRID DESIGN **Lee** **PRO group** CONSULTING & ENGINEERING **Epuramat** CLEANTECH FOR WASTEWATER **Luxcontrol**  
**energieageance** gestion de l'énergie conseil en énergie formations **GF** BEILER+FRANÇOIS ARCHITECTES **Prefalux** Sarl Nouvelles Perspectives Emploi  
**cleancarb** providing tomorrow's power.... **PROPOZE** Turn Sustainability into Benefits **CITY MOV** WWW.CITYMOV.COM **Cimalux** Ciments & Matériaux

....., **Keep in mind.**

- **Business opportunities (national and international)**
- **Active Cluster, great diversity, new strategy, clear topics**
- **Circular Economy**



... only the Team!

# Villmols Merci !



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