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# BRIDGES - Mapping of bioeconomy businesses in the Helsinki-Uusimaa region

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Burgos | Project meeting

# The Finnish Bioeconomy Strategy (2014)



- **VISION FOR 2025: Sustainable bioeconomy solutions are the foundation of well-being and competitiveness in Finland**
- **The objective of the Bioeconomy Strategy is to push the bioeconomy output up to:**
  - **100 billion eur** (now 60 billion)
  - **100 000 new jobs** (now about 300 000 jobs)
- **Currently about 60 % of Finnish bioeconomy is based on so called forest based bioeconomy.**

# Bioeconomy strategic goals

## Bioeconomy Strategy in Finland

Strategic goals

### 1. COMPETITIVE OPERATING ENVIRONMENT FOR BIOECONOMY

A competitive operating environment will be created for bioeconomy growth

### 2. NEW BUSINESS FROM BIOECONOMY

New business will be generated in bioeconomy by means of risk financing, bold experiments and crossing of sectoral boundaries

### 3. A STRONG BIOECONOMY COMPETENCE BASE

The bioeconomy competence base will be upgraded by developing education, training and research

### 4. ACCESSIBILITY AND SUSTAINABILITY OF BIOMASSES

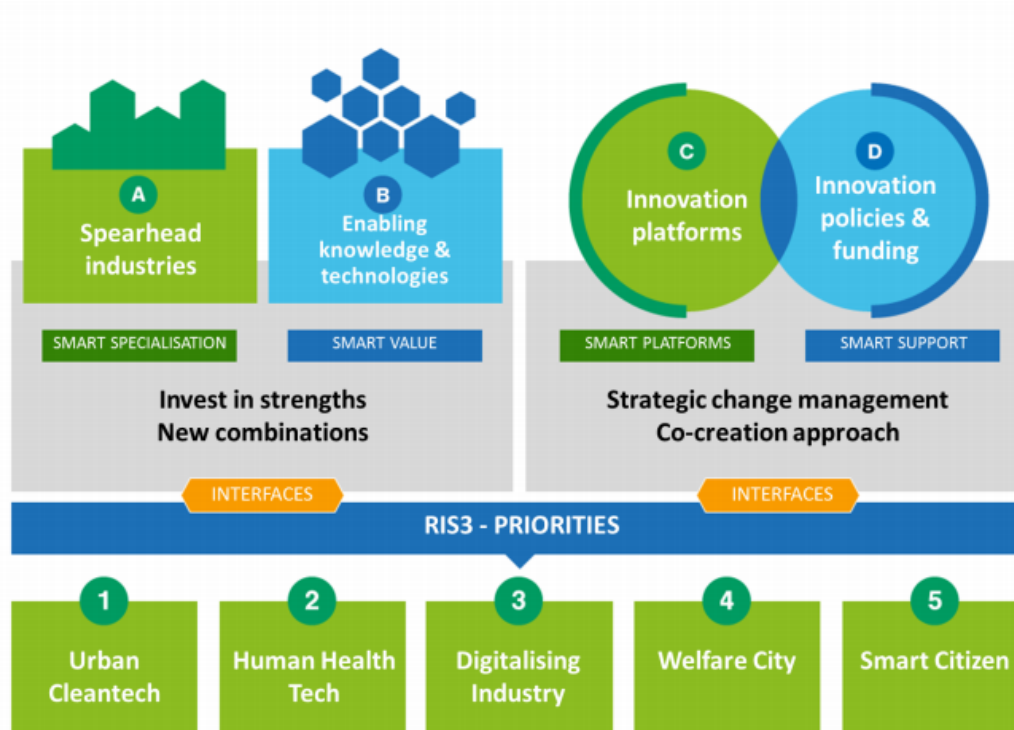
Availability of biomasses, well-functioning raw material markets and sustainability of the use of biomass will be secured

Implementation and monitoring

Sustainable bioeconomy solutions are the foundation of well-being and competitiveness in Finland

Each of the four goals have their own action plans which can be found in Finnish bioeconomy strategy document in [http://biotalous.fi/wp-content/uploads/2014/08/The\\_Finnish\\_Bioeconomy\\_Strategy\\_110620141.pdf](http://biotalous.fi/wp-content/uploads/2014/08/The_Finnish_Bioeconomy_Strategy_110620141.pdf)

# Bioeconomy and Uusimaa RIS3 priorities



# Finnish bioeconomy strategy, Action 1.6 Smart green urban regions as development environments for bioeconomy solutions in the future

The bioeconomy provides sustainable solutions for energy and water supply, transport and waste management in cities.

The bioeconomy will be developed through city innovations, linkages between them and by disseminating them.

## Measures:

- **Supporting long-term development environments structured upon the large investments of urban regions**, in which we can experiment with, test and develop resource-effective solutions of the new generation of **renewable energy and water supply and waste management as well as models for ecologically sustainable transport**.
- Together with urban regions, **creating open marketplaces based on public sector innovation and procurement needs** where new applications can be developed together with companies and organisations and their dissemination and commercial introduction can be speeded up.

# Mapping methodology in Uusimaa, the criteria

- 1. Received public support** (as appliers or part of a partnership) for innovative products development AND have **invested for the product development during** the last 3 years
- 2. Utilised advanced research services** (e.g. material research measurements) during the last 3 years; single, short term cooperation
- 3. Been developing products** through Research2Business innovation partnerships during the last 3 years (long term, comprehensive cooperation)
- 4. Applied for patents** (biotechnology) and /or IPR during the last 3 years
- 5. Applied for Phase 1 SME or Phase 2 SME Instrument** (TRL 6 and higher)

# Mapping criteria in practice

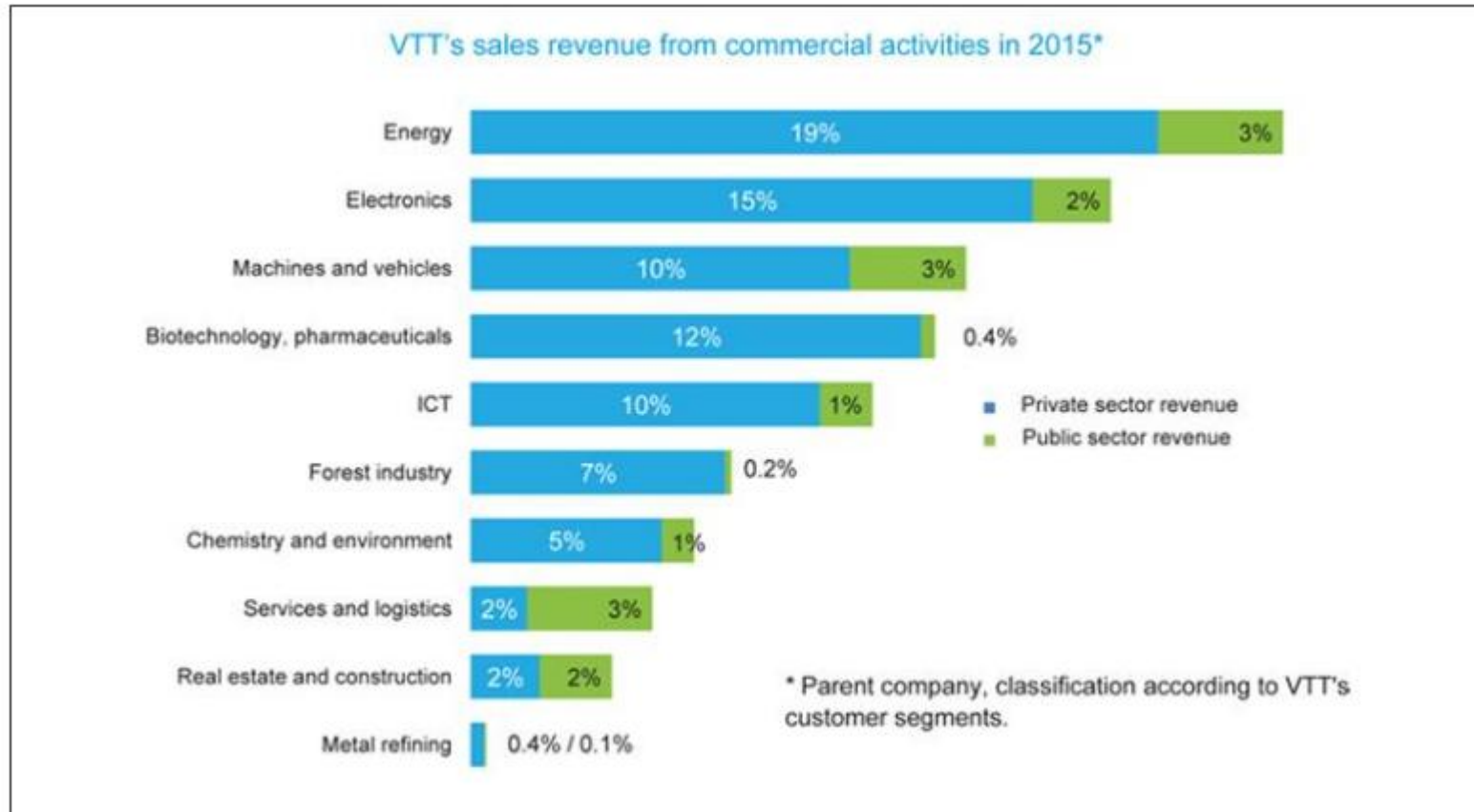
## Open access to information about criteria no 1 and 5:

1. Information on companies who have received Tekes (the Finnish Funding Agency for Innovation) funding is available
2. Information on who has **received** European funding is available

BUT:

1. Information on research organisations' business customers is not public (criteria 2-3)
2. Finnish Patent and Registration Office has online database "PatInfo", where **received** patents can be observed, but the patents are not linked with companies, just the name of the inventor
3. Information on who has **applied** for European funding is classified.

# In example VTT's public information on their customers





# Main information sources utilized in the mapping

- **List of companies who have received Tekes funding**
- **List of companies who have received European funding**
- **Social media channels (Twitter, LinkedIn)**
- **Contacting bioeconomy network leaders:**
  - Green Net Finland
  - Finnish Water Forum
  - Finnish Green Building Council
  - Climate Leadership Council (CLC)
  - CLIC Innovation
- **Tekes EU-office**

# Two categories

- 1. Manufacture-based businesses** showing growth dynamics, but lacking access to a specific type of research information, that could be provided by international cooperation and networking with research-based project partner organizations and/or their networks.
  - 2. Knowledge-based businesses** looking for international cooperation and business opportunities, to be matched with businesses in other regions with restricted capacity of access to information needed to boost product development and/or innovation.
- + Research institutions with technology transfer - office**

# RESULTS OF THE MAPPING IN UUSIMAA

# Mapping results, quantitative

## **30 companies identified:**

- 25 manufacture based companies
- 5 knowledge based companies

## **6 research institutions identified**

## **5 networks / clusters related to bioeconomy identified**

# Type of companies

- **Majority of the companies have services in the following sectors:**
  - (Energy efficient) building solutions
  - Energy production
  - Food
  - ICT

NACE	Number of companies
HITECH or HMTECH (medium/hitech manufactures)	9
ENERGY (energy producing activities)	5
ICTMAN (ICT manufactures)	7
C15 (food products and beverages)	5
C36T37 (manufacturing and recycling)	1
C35 (other transport equipment)	1
C45 (construction)	1
C104T1 (mining and quarrying)	1
<b>TOTAL</b>	<b>30</b>

# Company profiles

## 1. Solutions for buildings and construction

1. Air purification solution provider
2. Automation and energy efficiency
3. IT solutions for building management
4. Solution that recovers heat from process and shower water
5. Indoor air quality solution
6. recycled composite products for construction
7. energy efficiency solution for district heating houses
8. energy efficient lighting solutions
9. Smart lighting solutions for street lighting
10. electric car charging in real estate environment
11. systems for environmental remediation
12. energy management services
13. Data solution providing information how buildings should be maintained, managed and renovated.

## 2. Solutions for energy production

1. nanotechnology surfaces i.e. for thin and flexible solar cells and OLED lighting.
2. Wave energy converters
3. SOFC fuel cells
4. Natural energy gases
5. Fuel cell systems
6. fermentation technology preventing ammonia inhibition in biogas production.
7. Solar energy as a service

## 3. Solutions for food

1. drinkable supermeal
2. plant protein food called pulled oats
3. vegetarian foods, which are produced from Finnish raw materials.
4. completely closed vertical farm for herbs and lettuce in Finland (collaboration with Fujitsu)
5. Ecological and organic Soya products

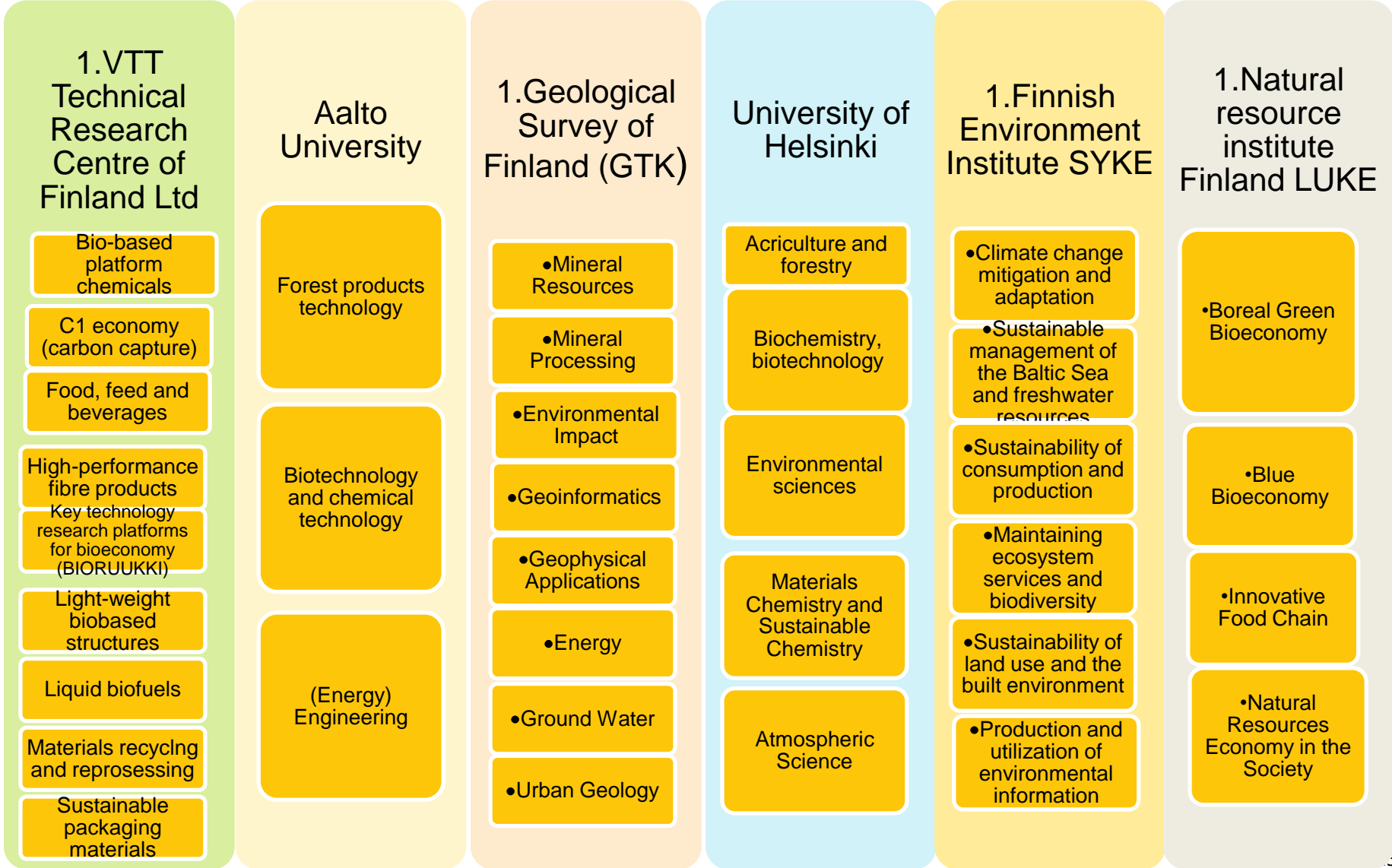
## 4. Solutions for waste and materials

1. Robotic waste separation solution
2. Packaging materials, world's leader of sustainable cartons

## 5. Others

1. measurement service for cost-effective point-of-source aerial analyzing services for emission monitoring
2. Ride-sharing for goods
3. App for car sharing

# Research know-how in Uusimaa



# Finnish research institutions winning H2020 funding in 2015

Research institution	Funding M€	Number of projects
VTT	34,04	70
Luke	3,65	11
THL	2,76	11
Syke	1,01	6
GTK	0,94	4
TTL	0,66	1
ETLA	0,53	1
EFI	0,2	2



# Finnish Universities winning H2020 funding in 2015

<b>University</b>	<b>Funding M€</b>	<b>Number of projects</b>
<b>Helsinki University</b>	<b>17,85</b>	<b>40</b>
<b>Aalto University</b>	<b>17,23</b>	<b>28</b>
Tampere University	7,57	14
Oulu University	5,84	17
University of Eastern Finland	5,02	10
Jyväskylä University	4,57	10
Turku University	3,21	10
Lappeenranta University of Technology	1,71	5



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European Union  
European Regional  
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Thank you!



*Project smedia*