



University of Maribor
Faculty of Mechanical Engineering

KETs in Slovenia

LAPOM

Key Enabling Technologies in Slovenia

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Ekonomski fakultet Zagreb
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Presentation structure:

1. Policy perspective on KETs in Slovenia
2. Survey among Slovenian manufacturing companies



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Policy perspective:

National Research and Development Programme for the 2006-2010 – targeted research and technology fields:

- biotechnology,
- environment,
- health,
- ICT,
- industrial production,
- nanosciences and nanotechnologies



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Policy perspective:

Research and Innovation Strategy of Slovenia 2011-2020:

It does not include specific sectors which should be targeted. Instead, it defines a way of formulating and evaluating fields of specialisation and concludes that the defined fields of specialisation should be funded with extended resources.

The *Research Infrastructure Roadmap*, which is a complement to the Research and Innovation Strategy of Slovenia 2011-2020, lists ten priority areas.

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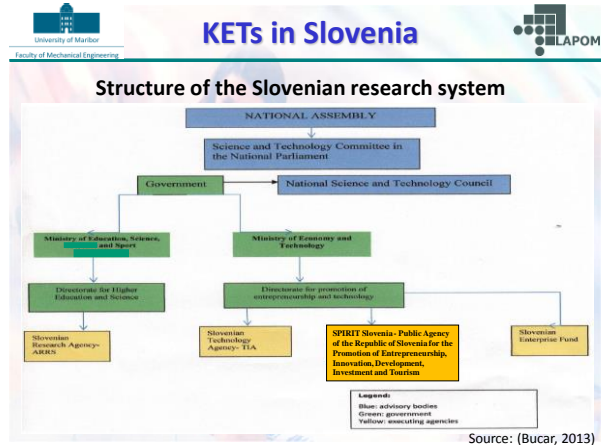
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Policy perspective:

Research Infrastructures Roadmap 2011–2020:

1. Advanced materials and nanotechnology
2. Sustainable energy resources and environmental technologies
3. Energy efficiency and sustainable construction and geo-information sources
4. Biotechnology, biomedicine and biological sources
5. High-performance computing and grids
6. Analytical capabilities
7. Digital national sources
8. Research infrastructure for social sciences and humanities
9. Research infrastructure for space applications
10. Safe and healthy food



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Slovenian policy incentives:

Policy initiatives	Targeted KETs
Centres of Excellence	Industrial Biotechnology / Nanotechnology / Advanced materials
Competence Centres	Industrial Biotechnology / Advanced manufacturing technologies / Photonics / Micro- and nanoelectronics
Applied Projects	Industrial Biotechnology / Nanotechnologies / Advanced Materials
Clusters and Technology networks (2001-2004) - Example: Automotive Cluster of Slovenia	Advanced manufacturing / Advanced Materials / Nanotechnologies

Source: KETS Observatory – Slovenia

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Slovenian policy incentives:

CENTRES OF EXCELLENCE – ROUND 1 (2005-2009) & ROUND 2 (2009 – 2013)	
Implementing body	<ul style="list-style-type: none"> Ministry of Higher Education, Science and Technology
Targeted KETs	<ul style="list-style-type: none"> Industrial Biotechnology Nanotechnology Advanced materials
Target group(s)	<ul style="list-style-type: none"> The invitation to tender was open to consortia of research organisations and companies. Co-operation and networking is mandatory.
Overall budget	<ul style="list-style-type: none"> 1st round : Ten centres were financed with a total budget of 15 million Euro for a duration of three years. 2nd round: EUR 77.5 million will be allocated for the period 2009-2013
	<ul style="list-style-type: none"> There were 61 applications submitted; 15 were rejected due to failure to meet entrance criteria and 20 were eliminated after the assessment of relevance; 17 applications were assessed as positive and 8 were selected. On average, the selected consortia will receive EUR 9 million.

Source: KETS Observatory – Slovenia

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Centres of Excellence

Relevant existing Centres of Excellence regarding multi-KETs are:

- The Centre of Excellence in Nanosciences and Nanotechnology (CE NS and NT),
- The Centre of Excellence for Biosensors, Instrumentation and Process Control (CEBIC),
- The Centre of Excellence for Integrated Approaches in Chemistry and Biology of Proteins (CIPKeBiP),
- The Centre of Excellence for Low-Carbon Technologies (CoE LCT),
- Centre of Excellence Advanced Non-Metal Materials with Technologies of the Future (CE NAMASTE),
- Centre of Excellence for Polymer Materials and Technologies (CE PoliMaT),
- Centre of Excellence Space: Science and Technology (CE Space.si), and
- NMR Centre of Excellence for Studies in Biotechnology, Pharmacy and Physics of Matter (CE EN-FIST)

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Slovenian policy incentives:

COMPETENCE CENTRES	
Implementing body	<ul style="list-style-type: none"> o Ministry of Higher Education, Science and Technology
Targeted KETs	<ul style="list-style-type: none"> o Biotechnology o Advanced manufacturing technologies o Photonics o Micro- and nanoelectronics
Target group(s)	<ul style="list-style-type: none"> o Companies o SMEs
Overall budget	<ul style="list-style-type: none"> o 45.2 Mio Euros o 7 CCs were eligible for funding and each of them was awarded €6.4 million.
Impact	<ul style="list-style-type: none"> o Competence Centres combines 46 companies, highly focused on new technologies and 16 research institutions.

Source: KETS Observatory – Slovenia

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Competence Centres

At the beginning of 2011, seven Competence Centres were approved by the government:

- Competence Centre for Advanced Control Technologies (CC ACT),
- Competence Centre – Advanced Systems for Efficient Use of Electrical Energy (CC SURE),
- Competence Centre Biomedical Engineering (CC BME),
- Competence Centre for Sustainable and Innovative Construction (CC SIC),
- Competence Centre for Biotechnological Development and Innovation (CC BDI),
- Competence Centre for Cloud-Assisted Services (CC CLASS),
- Competence Centre Open Communications Platform for Integrated Services (CC OPCOMM)

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Slovenian policy incentives:

APPLIED PROJECTS (TEMELJNI IN APLIKATIVNI PROJEKTI)	
Implementing body	<ul style="list-style-type: none"> o Ministry of Education, Science and Sport (MESS), since 2004 o Ministry of Higher Education, Science and Technology (MHEST). o Agency administering: Slovenian Research Agency.
Targeted KETs	<ul style="list-style-type: none"> o Industrial Biotechnology o Nanotechnologies o Advanced Materials
Target group(s)	<ul style="list-style-type: none"> o Scientists / researchers (as individuals) o Higher education institutions research units/centres o Other non-profit research organisations (not HEI)
Overall budget	<ul style="list-style-type: none"> o The scheme is co-financed by the private sector o The overall budget in 2011 was 22.3 million Euros

Source: KETS Observatory – Slovenia

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Slovenian policy incentives:

CLUSTERS AND TECHNOLOGY NETWORKS (2001-2004) - EXAMPLE: AUTOMOTIVE CLUSTER OF SLOVENIA

Implementing body	<ul style="list-style-type: none"> Ministry of Higher Education, Science and Technology
Targeted KETs	<ul style="list-style-type: none"> Advanced manufacturing Advanced Materials Nanotechnologies

17 clusters by 2004
4 technological platforms by 2005

Today:
Automotive cluster of Slovenia
Toolmakers cluster of Slovenia

Source: KETS Observatory – Slovenia

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Policy perspective:

Smart specialisation 2013 – 2014:

Selected industry areas:

- Chemical industry
- Pharmaceutical and medical equipment
- Manufacturing of metal products
- Electronics and electro industry
- ICT industry
- Machine building
- Automotive and nautical industry

Partly also wood industry, textile industry, civil engineering and logistics.

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Policy perspective:

Smart specialisation 2013 – 2014 – priority areas:

SI industrija 4.0: pametne tovarne

Zdravje

Čista in Zdrava

Pametne zgradb in dom

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Strma in varna

Pametna raba virov

Pametna mesta in skupnosti

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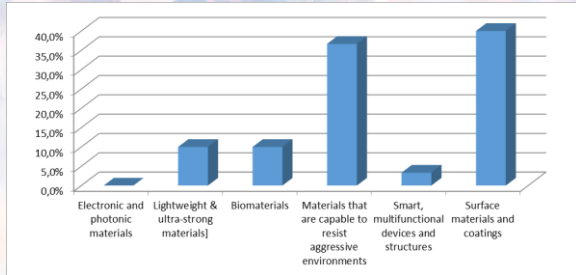
On-line survey on KETs use in Slovenian manufacturing companies

May and June 2014

NACE group
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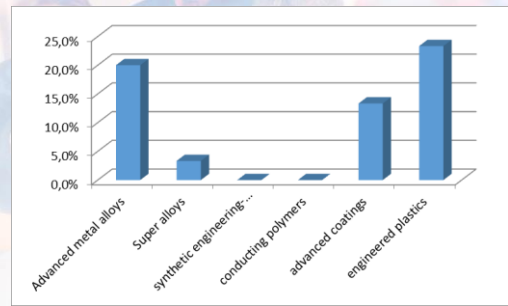
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Which of the following **ADVANCED MATERIALS** do you use in your company?



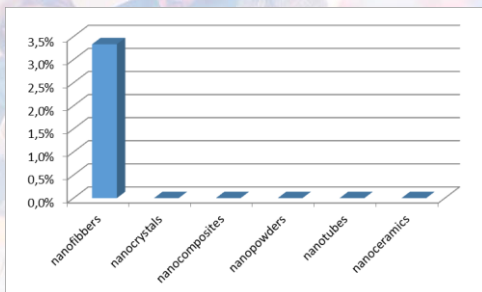
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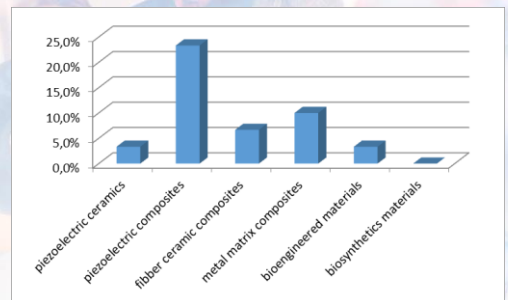
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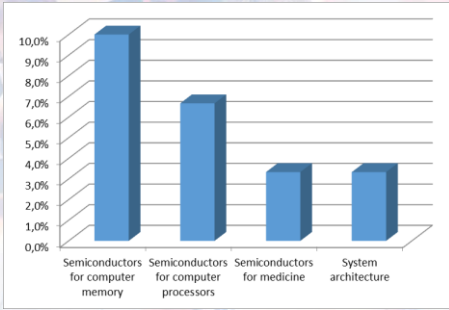
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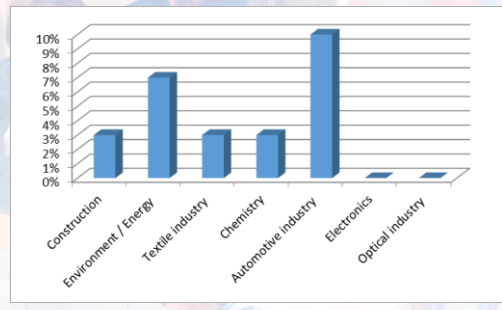
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Are you included in any part of production process of MICRO AND NANO ELECTRONICS components?



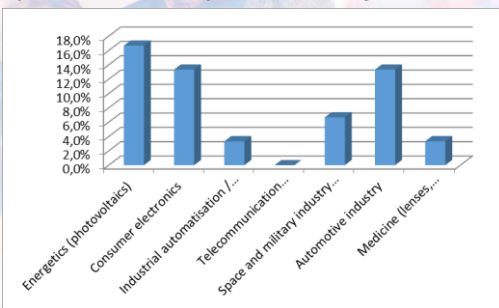
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Do you produce or use products based on NANOTECHNOLOGY?



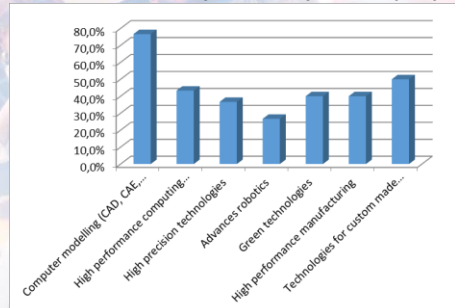
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Are you involved in production of PHOTONICS products used in any of the following industries?



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Which ADVANCED MANUFACTURING TECHNOLOGIES do you use in your company?



Are you involved in production of INDUSTRIAL BIOTECHNOLOGY products used in any of the following industries?

