



CONCEPT ARHITECTURAL



## Thess-INTEC THESSALONIKI INTERNATIONAL TECHNOLOGY CENTER



***A Methodological approach for Sector specific Business and R&D Platforms development within Science and Technology Parks in line with priorities of Smart Specialization strategies / Case studies from Thessaloniki and Bucharest***



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IASP STP Planning Expert



**Western Balkans  
Smart Specialization Conference  
15 – 16 October 2014  
BELGRADE**

# About IASP



**Breaking a record!**

**388 members**

**In 70 countries**

# About IASP



>128,000



companies



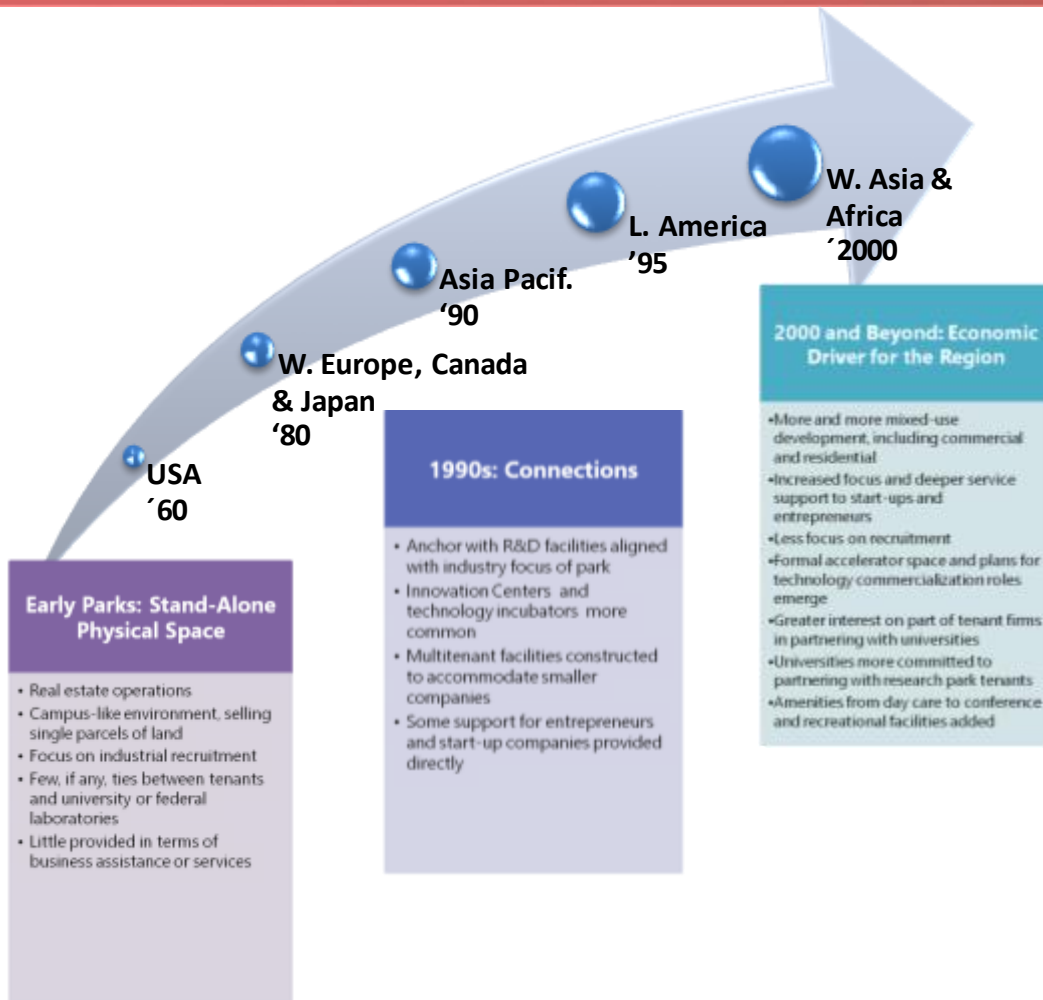
*Biz!, not science or technology*

*A network on its own +  
a node of broader networks*

*Global projects  
with local roots*

*A bridge between 2 systems  
and 2 mentalities*

# Planning for the next generation of STP



**Assets Actors and Activity**


Local physical communities and environments remain important as they drive more creativity through diversity


Urban yet borderless - invites wider inclusion which flattens innovation - speeding up social progress creating positive feed-back loop stimulating more opportunity


**UKSPA**

[www.ukspa.com](http://www.ukspa.com)

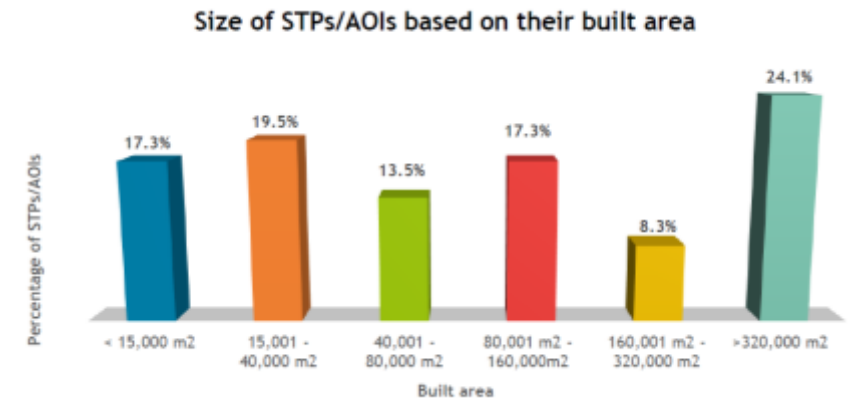
# 4<sup>th</sup> Generation STP > 2010 (AURP-IASP-UKSPA)

- 
- The STP is not anymore a “**technogeto**”
  - There are **provisions for experimental labs for proof of concept and quick market entry**, speeding the long commercialization periods needed and following today's quick / disrupting / converging technologies evolution in fast pace.
  - **Offer on site amenities** such as restaurants, sports facilities, leisure center, considered important **to attract innovation employees** as well as for **making STPs open to society** and even facilitative the promotion of open innovation principles and open lab mechanisms.

- 
- The STP encourages circular **multidisciplinary** in the research domain and support adaptation to **the pace of multisectoral converging technologies**. The 4<sup>th</sup> generation replaces the linear model of techtransfer of commercialization and **facilitates loops and links between research and business towards innovation that is evolving fast, and does not allow for lengthy evaluation**, rest processes, with stereotype R&D mechanisms approach.
  - **The new model strategically plans mixed uses that include spaces for Academia and Businesses. Multiple stakeholder ships for niche areas** are encouraged STPs place value on groups of competitive partners, supplier's, customers, and complementary, providing connectivity towards “innovation power”. The competent Management of STPs is critical for success in such a demanding and complicated task.

- 
- STPs **support leveraging assets of non – University R&D departments of industry**.
  - STPs **serve as effective tools to spur urban revitalization**.
  - STPs **become leaders in sustainable design**. Use of renewable, minimizing green impact, promoting green/energy innovations and serving as show case of regional Green innovations.
  - STPs **embrace global focus, support internationalization of start ups**, service micro multinational in transcontinental entrepreneurship STPs place and will place more emphasis in international partnerships with other STPs, serving better the soft landing need of their tenant.
  - STPS **facilitate brain exchange and circulation within tenants** / within the region.

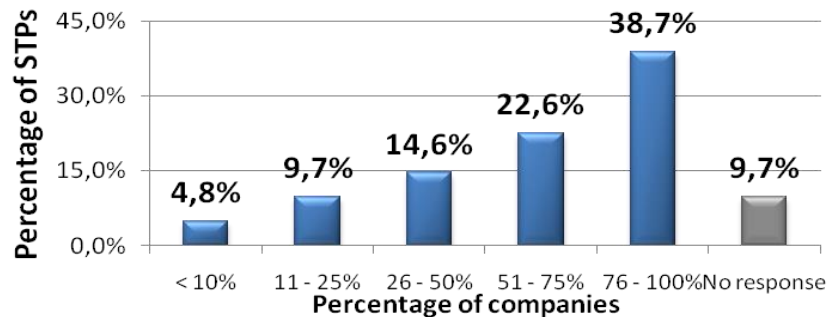
# Impact of STPs on business creation and employment



Source: IASP 2015

Source: IASP 2013

### Resident companies in STPs that sell their own technologies



**366**  
STPs

**28**  
million sqm  
(completed building  
floor space)

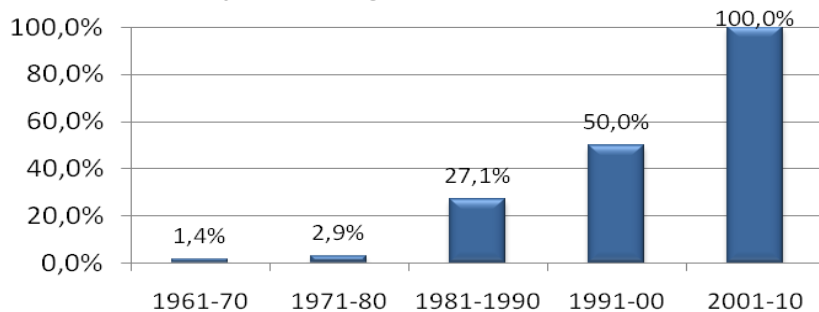
**40.000**  
Organisations

**750.000**  
Staff

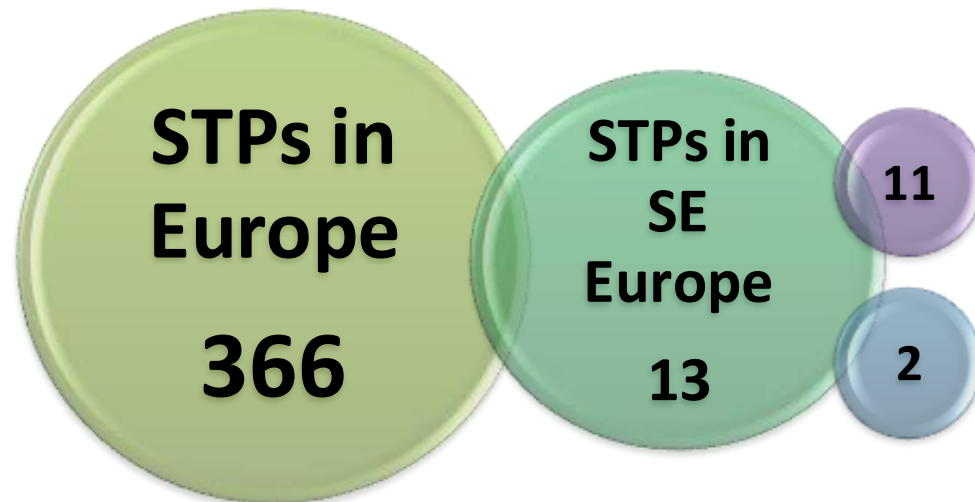
**11.7**  
billions €  
Invested

# STPs in Europe

The number of European STPs by decade as a percentage of the 2010 total



Source: IASP 2012



- EU STPs** are increasingly being portrayed as:
- ❖ Part of economic development programmes of cities and regions
  - ❖ An increasingly important part of local innovation ecosystems
  - ❖ Work extensively with knowledge-based SMEs and start-ups
  - ❖ Make valuable contributions to foreign direct investment by high tech companies

**BUT** - what is the hard evidence that STPs are key regional innovation players?

← Existing

← Under Development



# SE Europe - STPs



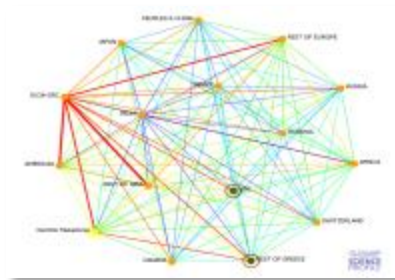
# SE Europe - Black Sea STPs

The image features a central map of Southeastern Europe and the Black Sea region, with several countries highlighted in red. Blue lines connect these red areas to various photographs of technology parks and innovation centers. The parks shown include:

- Măgurele Science Park**: An aerial view of a modern, multi-story building complex with green spaces.
- Unit City Innovation Park**: A photograph of a modern building with a large 'UNIT' logo on its facade.
- Tech Park Georgia**: A photograph of a modern building with a glass facade and a logo for 'High Tech Park AZERBAIJAN'.
- Gyumri Technology Center**: A photograph of a large, modern building with a glass facade.
- Vanadzor Technology Center**: A photograph of a modern building with a glass facade.
- Sofia Tech Park**: A photograph of a large, modern building with a glass facade.
- Thessaloniki Technology Park**: A photograph of a modern building with a glass facade.
- Technopark Istanbul**: An aerial view of a large, modern building complex with green spaces.
- Pardis Technology Park**: A photograph of a modern building with a glass facade and a logo for 'High Tech Park AZERBAIJAN'.

# Employment of Smart Specialization Strategy in New Thessaloniki STP planning (ThessIntec)

## Analysis of Regional Industry Dynamics and RTD Excellence



- Food Cluster
- Apparel and Fashion Cluster
- Cluster of chemicals and energy
- Cluster of building materials and household equipment
- Metal Cluster
- Cluster of electronic, electrical and ICT equipment

**Thessaloniki STP & Chemical Process Research Institute** with 50 Researchers and one Incubator

**Thessaloniki STPark & Center for Research & Technology Hellas - CERTH**  
Research Inst.: Solid Fuels Tech. Chem. Process Eng. / Agrobio / Transport / ICT / Biomedical  
750 researchers

**Thessaloniki Technopolis (ICT Park)**  
No of ICT firms: 10 (70)  
Total employees\*: 350 (2.000)

**Noesis - Science Museum**

**Ministry of Agriculture Research Institutes Agro / Vet / Soil Res. Inst.**  
250 researchers

**American Farm School**  
Innovative applied education of all levels on rural business

**4 Innovation Business Incubators**  
MG, Thessli, STP, Technopolis  
Total: 100 tenant - 500 staff companies

**KEDEK - Multidisciplinary R&D AUTH**

**THESTEP - Incubator**

**CEDEFOP (EC Institution on VET)**

**1992 - 1996**

Foundation of Thessaloniki STP Institute and an Incubator in the fields of the American Farm School (350km)

**1996 - 2002**

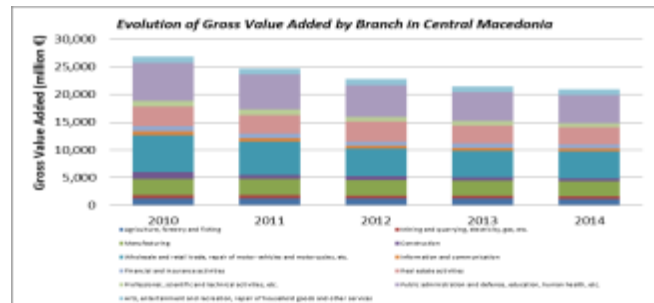
Expansion of STP including 4 new Research Institutes. Creation of CERTH. Institutionalization of TECHNOLOLIS ICT park with numerous triple helix partners

**2002 - 2008**

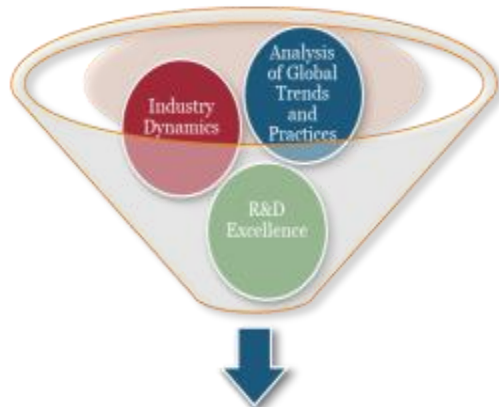
Creation of 3 PPP Incubators, i4G, Thessli, Technopolis  
Establishment of Technopolis ICT Park, Noesis Technology Museum

**2008 - Today**

Establishment of Thessaloniki Innovation Zone, with official Designation of the area. CERTH is the 13<sup>th</sup> most successful HORIZON 2020 Institution.  
Numerous networking activities clusters, start up initiatives, business plan competitions, proof of concept, birdliming with European and USA innovation areas



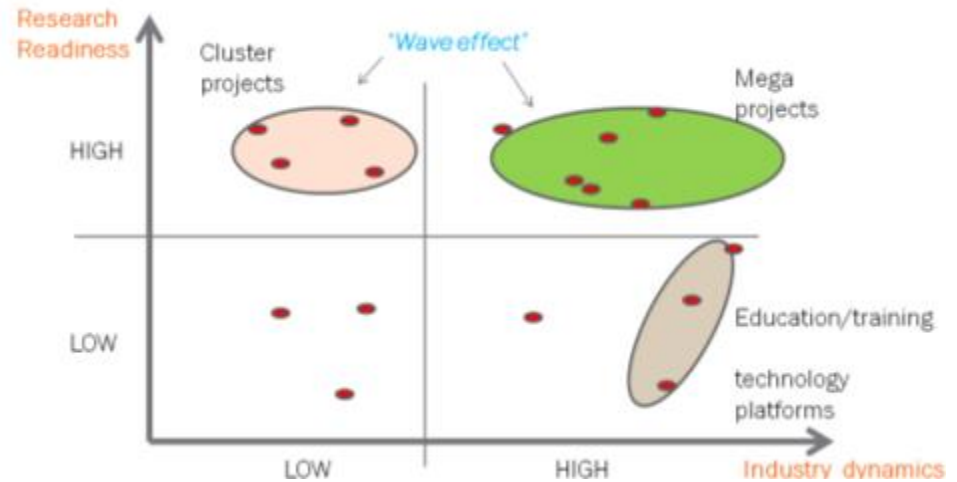
# Methodology for categorization of industrial and technology Focus Areas



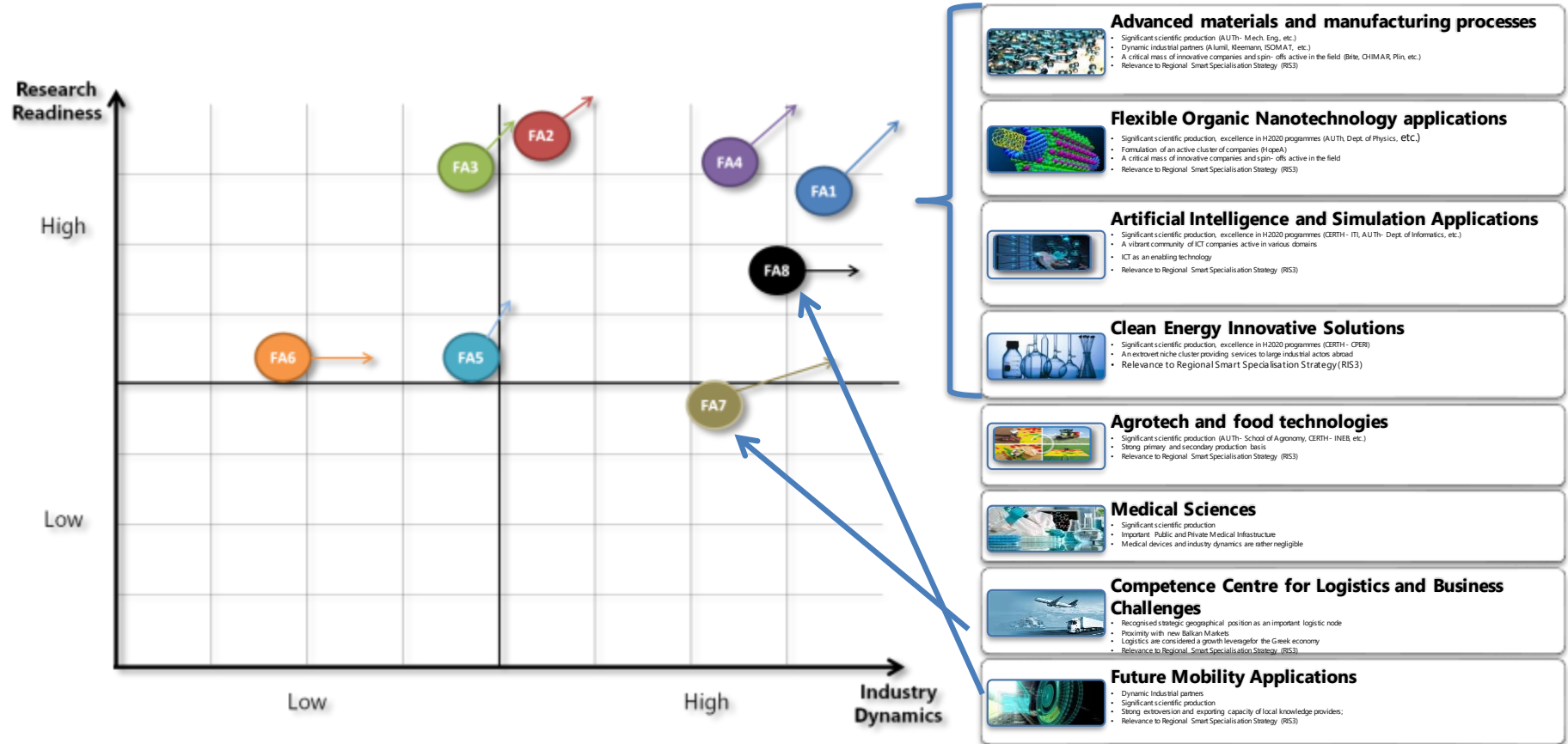
Proposals for Target Mega- Projects/ SWOT Analysis

- Selection Criteria**
- Excellent RTD performance, competitive at an international level;
  - High quality and volume scientific production;
  - Dynamic industrial activity and extroversion;
  - Significant technology transfer results (spin-offs, patents, etc.);
  - Relevance to global Mega-Trends pushing research and innovation.

Industry Dynamics	Research Readiness	Types of innovation cooperation mechanisms
LOW	LOW	None applicable
LOW	HIGH	Cluster Project
HIGH	LOW	Technology Platforms and Education/ Training Facilities
HIGH	HIGH	Mega-Projects



# Positioning and Trends of Focus Areas



# MP1- Advanced Materials and manufacturing processes


## Technologies

- 3D printing/scanning
- Laser Smelting
- Rapid prototyping
- Nanoindentation technology
- Spark plasma sintering

## Products & Services



- Special coatings
- Materials for medical applications
- Biomaterials
- Adhesive resins
- Advanced carbon fibers, metals & alloys, polymers etc.
- Continuing education & certification for advanced mechanic tools

**R&D Partners**



Dept. of Mechanical Engineering

1. Lab of Machine Elements and Machine Design
2. Lab of Physical Metallurgy



TEXAS A&M UNIVERSITY. TEXAS A&M ENGINEERING EXPERIMENT STATION

## Sectors

- Metal & Wood Industry
- Construction
- Oil & Gas
- Energy

**Tenants**



**Collaborators**



**Industrial Partners**

# MP4- Clean Energy Innovative Solutions

R&D Partners



- Dept. of Mechanical Engineering
1. Lab of Applied Thermodynamics
  2. Lab of Heat Transfer and Environmental Engineering
  3. Lab for Fluid Dynamics and Turbomachinery
- Dept. of Chemical Engineering
1. Laboratory of Petrochemical Technology



FINNISH METEOROLOGICAL INSTITUTE

## Collaborators



Industrial Partners

Thess-INTEC is an initiative of the Thessaloniki Technology Park for the development of a new 4<sup>th</sup> generation, sustainable and international center in Thessaloniki focused on innovative partnerships between research and industrial actors of the region and the world

  
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 Tel: +30 2310 490200, Fax: +30 2310 490200, E-mail: info@thestop.gr  
 www.thestop.gr

SEPT 2017

## Thess-INTEC mission

- Creating a symbiotic environment for innovative companies
- Offering an infrastructure for collocation and a place for cooperation between public and private research
- Supporting and assisting the growth of Triple Helix initiatives
- Identifying and maturing new mega projects
- Continuously creating value propositions for foreign and local investors (incentives, funding opportunities, etc.)



## Thess-INTEC identity

Easy access to European, Balkan and Middle East markets

Attractive living experience for researchers, employees and visitors

Unique approach for Triple Helix Mega Projects



### SPONSORS OF THE FEASIBILITY PHASE



### SUPPORTERS



## HOLISTIC APPROACH FOR INNOVATION

IN DOMAINS OF RESEARCH EXCELLENCE AND DYNAMIC BUSINESS IN GREECE AND THE BROADER REGION

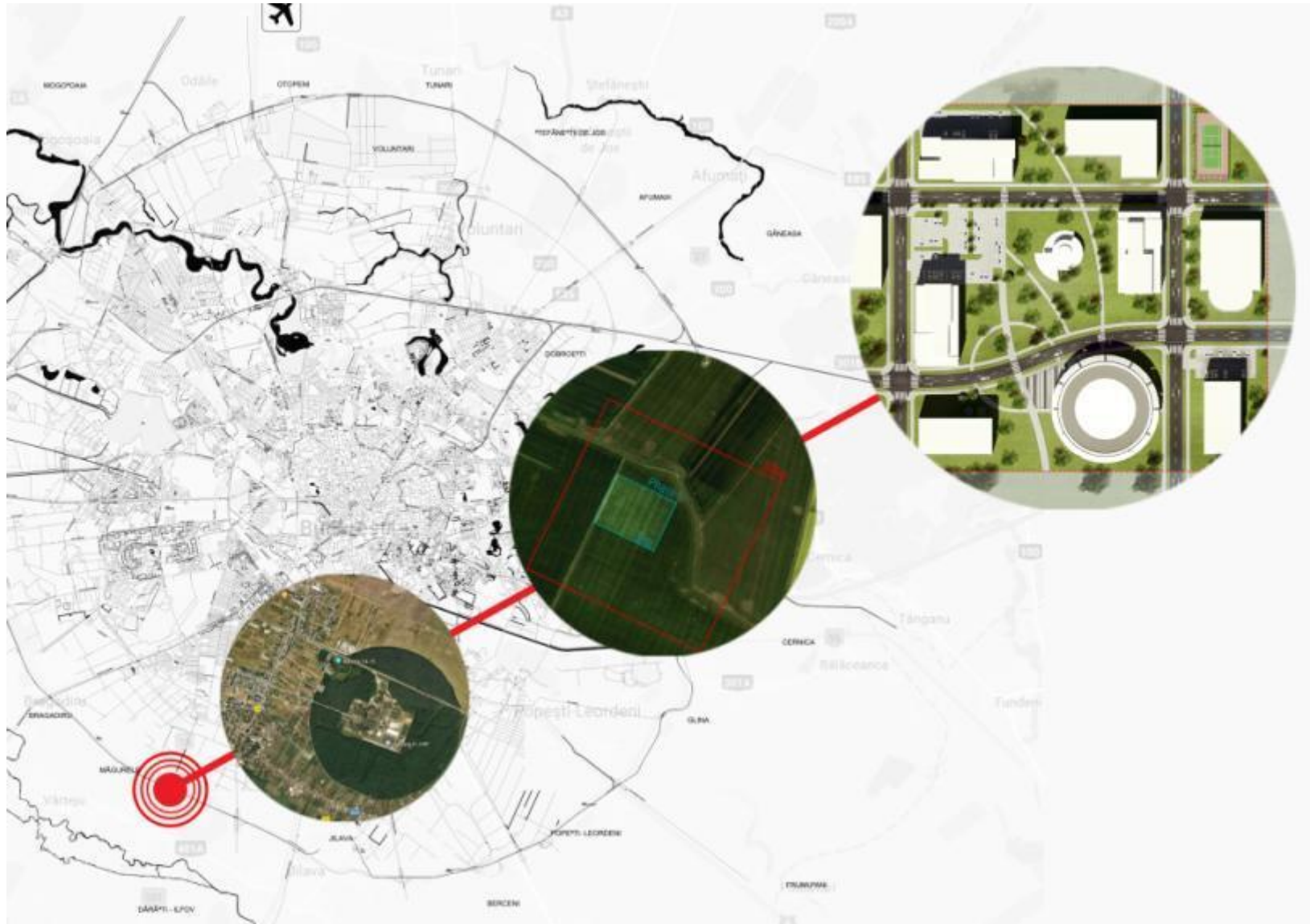
# Thess-INTEC

THESSALONIKI INTERNATIONAL TECHNOLOGY CENTER





# Employment of Smart Specialization Strategies for Magurele (Bucharest Ilfov) Science Park Planning



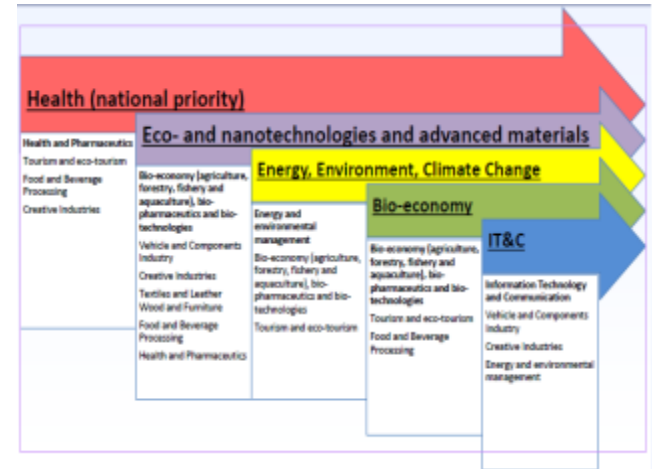
# Park Phase 1 Plan & Buildings



# Magurele Science Park in Bucharest – Pre Selection of MSP Sectors



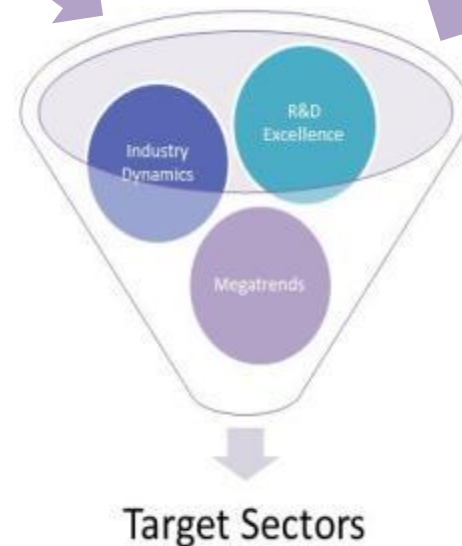
Romania Smart Specialization Areas & National Priorities



Source: National Authority for Scientific Research and Innovation, May 2015

Name [NUTS ID]	Description	Research & Innovation Capabilities	Business Areas & Target Market	EU Priority
Bucuresti - Ilfov [RO32]	Tunable graphen...	1. Manufacturing & industry 2. Other manufacturing	1. Manufacturing & industry 2. Machinery & equipment n.e.c.	1. KETs 2. Advanced materials

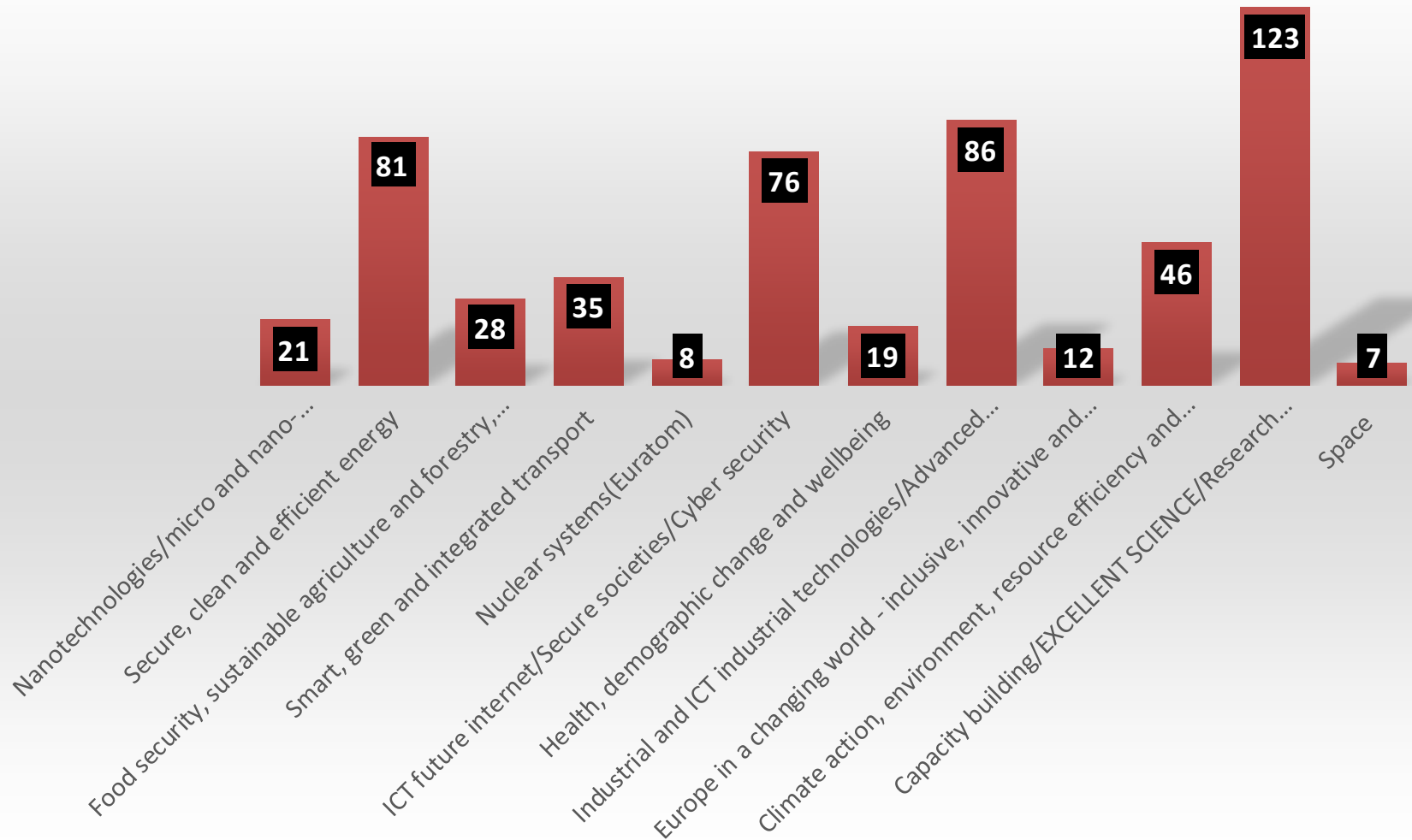
S3 smart specialization priorities, as encoded in the "Eye@RIS3" Tool



# Extreme Light Infrastructure - Nuclear Physics facility (ELI-NP)



# Sectoral Concentration of HORIZON 2020 projects in Bucharest Ilfov Region Projects in Sectors



# MSP Strategigram

● Magurele Science Park

Axis 1: Location and environment



Axis 2: Position in the knowledge/technology stream



Axis 3: Target firms



Axis 4: Degree of specialisation



Axis 5: Target markets



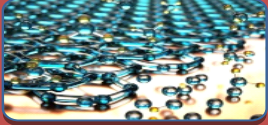
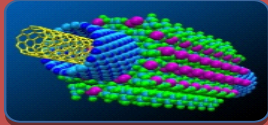
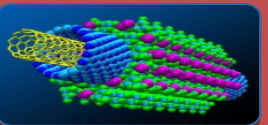
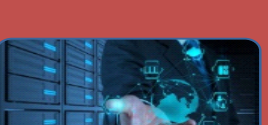
Axis 6: Networking



Axis 7: Governance management model



# Măgurele Parks Areas of Specialization

<p><b>TS1</b></p>	<p><b>Advanced Physics and Nuclear Applications/ Extreme Light Infrastructure</b></p>
	<ul style="list-style-type: none"> <li>• Excellent European level research infrastructure (ELI- NP &amp; IFIN- HH)</li> <li>• Cooperation with the most prominent European Institutions</li> <li>• Significant scientific production and international research cooperation in H2020 programmes</li> <li>• Dynamic potential industrial manufacturing partners</li> <li>• Cluster activity (CLARA, etc.)</li> <li>• Relevance to National Smart Specialization Strategy</li> </ul>
<p><b>TS2</b></p>	<p><b>Advanced meta- materials and manufacturing technologies</b></p>
	<ul style="list-style-type: none"> <li>• Significant scientific production and international research cooperation in H2020 programmes)</li> <li>• Numerous applications for the significant manufacturing industry of the Bucharest-Ilfov Region;</li> <li>• Cluster activity (CLARA- The EU Center of Excellence in Lasers and Radiations), Mechatronics, a potential strong cluster under emergence</li> <li>• Significant potential for spin-off activity under developed</li> <li>• Significant impact on regional economic activity (automotive industry, machinery, chemical, paper, furniture, rubber, electrical equipment, transport, electronic and optical)</li> <li>• Relevance to National Smart Specialization Strategy</li> </ul>
<p><b>TS3</b></p>	<p><b>Secure, Clean and Efficient Energy</b></p>
	<ul style="list-style-type: none"> <li>• Significant scientific production and international research cooperation in H2020 programmes</li> <li>• Strong link with the thriving Romanian automotive industry</li> <li>• Relevance to global technological megatrends</li> <li>• Significant Cluster activity (Biogasinno, 'Energy and Sustainable Development Management' Innovation Cluster, etc)</li> <li>• Relevance to National Smart Specialization Strategy</li> </ul>
<p><b>TS4</b></p>	<p><b>Enabling Information and Communication Technologies and Artificial Intelligence</b></p>
	<ul style="list-style-type: none"> <li>• Significant scientific production and international research cooperation in H2020 programmes</li> <li>• A vibrant community of ICT companies active in various domains and services</li> <li>• ICT as an enabling technology</li> <li>• Cluster activity (ELECTronic INnovation CLUster- ELINCLUS, Intelligent, innovative, IT cluster – 3IT)</li> <li>• Relevance to National Smart Specialization Strategy</li> </ul>

# Contacts



## Contact Details

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