



**By Dr Paris Kokorotsikos,** CEO Euroconsultants S.A. i4G Incubation Systems IASP STP Planning Expert







**Employing IASP** (International Association of Science Parks and Areas of Innovation best practice "smart specialization practices" and 3S EU practices ) in Planning new STPs



# Linking the best since 1984

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FAN SIDAS



WHO WE ARE The worldwide membershipbased network of science and technology parks (STPs), areas of innovation (AOIs), innovation districts & hubs, knowledge-based incubation projects and the like

Members in **77 countries**, as well as contacts and associates in many more

An independent, non-profit, nongovernmental organisation





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Active since 1984 - 36 years serving the innovation community



The only **global network** for Science Parks and Areas of Innovation

- 350 members
- 77 countries
- >115,000 companies
- 7 regional divisions
- 36 world conferences

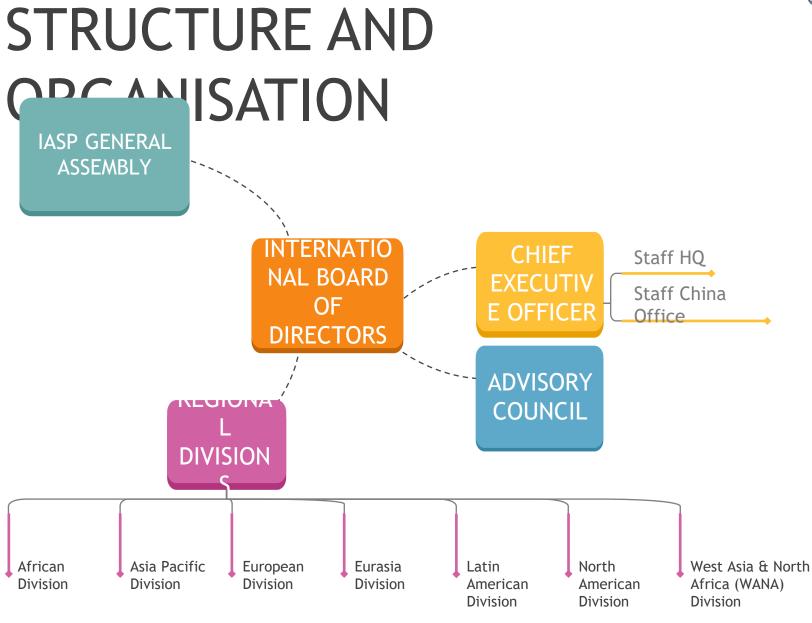


### COUNTRIES WITH IASP MEMBERS



Argentina, Austria, Azerbaijan, Barbados, Belarus, Belgium, Botswana, Brazil, Bulgaria, Canada, China, Chinese Taipei, Colombia, Croatia, Cuba, Denmark, Ecuador, Egypt, El Salvador, Estonia, Eswatini, Finland, France, Germany, Greece, Hungary, Iceland, India, Iran, Italy, Japan, Kenya, Kosovo, Latvia, Lithuania, Luxembourg, Malaysia, Mauritius, Mexico, Morocco, Namibia, the Netherlands, Nigeria, Oman, Pakistan, Palestine, Panama, Paraguay, Peru, Poland, Portugal, Qatar, Qazaqstan, Reunion, Romania, Russia, Saudi Arabia, Serbia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sudan, Sweden, Switzerland, Thailand, Turkey, Ukraine, United Arab Emirates, United Kingdom, United States of America, Uruguay, Uzbekistan, Venezuela, Vietnam







# OUR MEMB ERS

- Fully operative STPs, AOIs, innovation districts, and more
  - Projects under development
- Innovation-based incubation projects
- Universities and R&D
- institutions

Maria

Regional development agencies

Consultants technology



IASP OFFICIAL DEFINITION OF SCIENCE PARK (STP): A science park is an organisation managed by specialised professionals, whose main aim is to increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions.

To enable these goals to be met, a science park stimulates and manages the flow of knowledge and technology amongst universities, R&D institutions, companies and markets; it facilitates the creation and growth of innovation-based companies through incubation and spin-off processes; and provides other value-added services together with high qualityspace and



**IASP OFFICIAL DEFINITION OF AREA OF INNOVATION (AOI):** 'Areas of innovation' are places designed and curated to attract entrepreneurial-minded people, skilled talent, knowledgeintensive businesses and investments, by developing and combining a set of infrastructural, institutional, scientific, technological, educational and social assets, together with value added services, thus enhancing sustainable economic development and prosperity with and for the community.

There are many different models of areas of innovation - spanning from the broader city or region model with innovation activities in different locations within the area, to<sup>IASP</sup> in the specific projects like innovation districts,

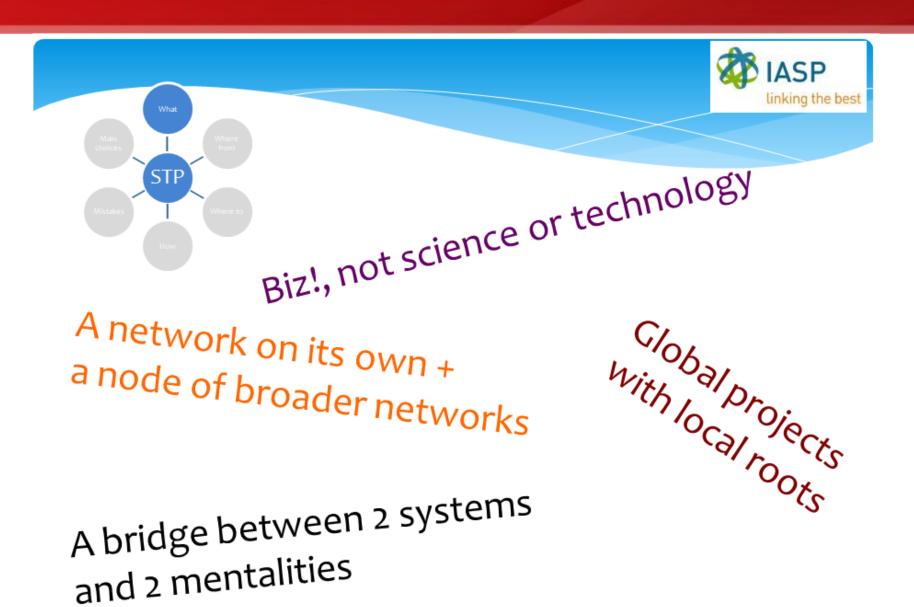


# To be the **global** network for science and technology parks and other areas of innovation, driving growth, internationalisation and effectiveness for our members

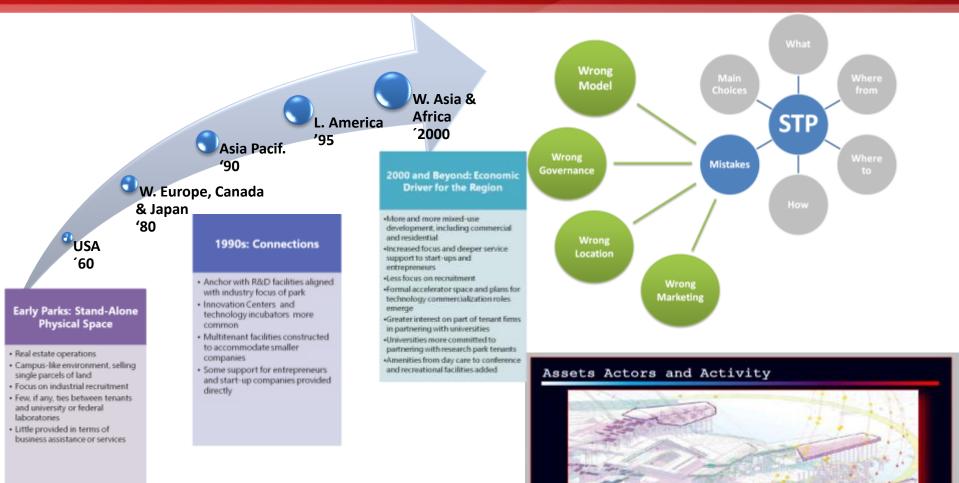
IASP in a few slides

OUR

**MISSIO** 



# Planning for the next generation of STP



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

KSPA

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

prtunity

diversity

# The Role of STPs and Areas of Innovation

Areas of innovation, of which science, technology and research parks (STPs) are a highly specialized type, play a key role in the economic development of their environment. Through a dynamic and innovative mix of policies, programmes, quality space and facilities and high value-added services, they:

 stimulate and manage the flow of knowledge and technology between universities and companies

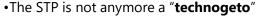


- facilitate the communication between companies, entrepreneurs and technicians
- provide environments that enhance a culture of innovation, creativity and quality
- focus on companies and research institutions as well as on people: the entrepreneurs and 'knowledge workers'
- facilitate the creation of new businesses via incubation and spin-off mechanisms, and accelerate the growth of small and medium size companies
- work in a global network that gathers many thousands of innovative companies and research institutions throughout the world, facilitating the internationalization of their resident companies

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







- •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.

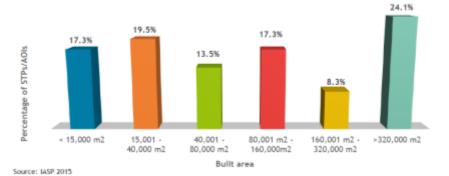


- •STPs support leveraging assets of non University R&D departments of industry.
- •STPs serve as effective tools to spur urban revitalization.
- •STPs become leaders in sustainable design. Use of renewable, minimizing green impact, promoting green/energy innovations and serving as show case of regional 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

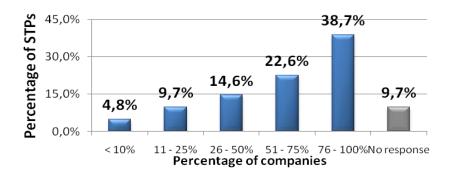


Size of STPs/AOIs based on their built area



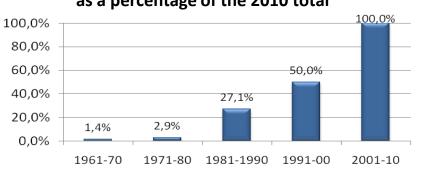
Source: IASP 2013

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





## **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?



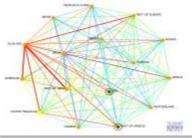
## **SE Europe** - Black Sea STPs



**Technopark Istanbul** 

### **Employment of Smart Specialization Strategy in New Thessaloniki STP planning (ThessIntec) Analysis of Regional Industry Dynamics and RTD Excellence**



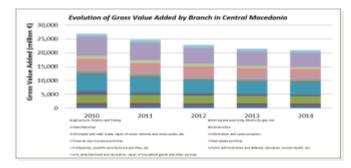






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Food Cluster





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



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



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



1992 - 1996

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



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



CEDEFOP (ECInstitution on VET)

1996 - 2002

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



Total employees': 350 (2.000)









4 Innovation Business

Incubators MG. Thermi STP. Technopolis Total : 100 tenant - 500 staft companies

2002 - 2008

Creation of 3PPPIncubators. i4G, Thermi, Technopolis

Establishment of Technopolis ICT Park, Noesis Technology Museum



Noesis - Science Museum



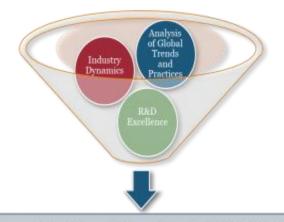




KEDEK - Multidisciplinary R&D AUTh

2008 – Today

Establishment of Thessaloniki Innovation Zone, with official Designation of the area. CERTH is the 13th 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

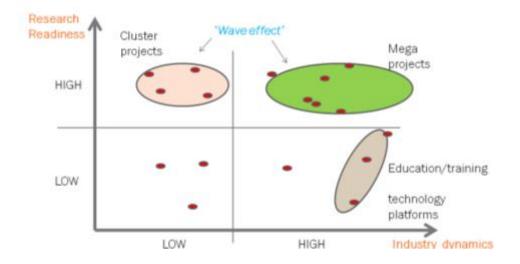


Industry Dynamics	Research Readiness	Types of innovation cooperation mechanisms
LOW	LOW	None applicable
LOW	HIGH	Cluster Project
HIGH	LOW	Technology Platforms and Education/ Training Facilities
HIGH	HIGH	Mega-Projects

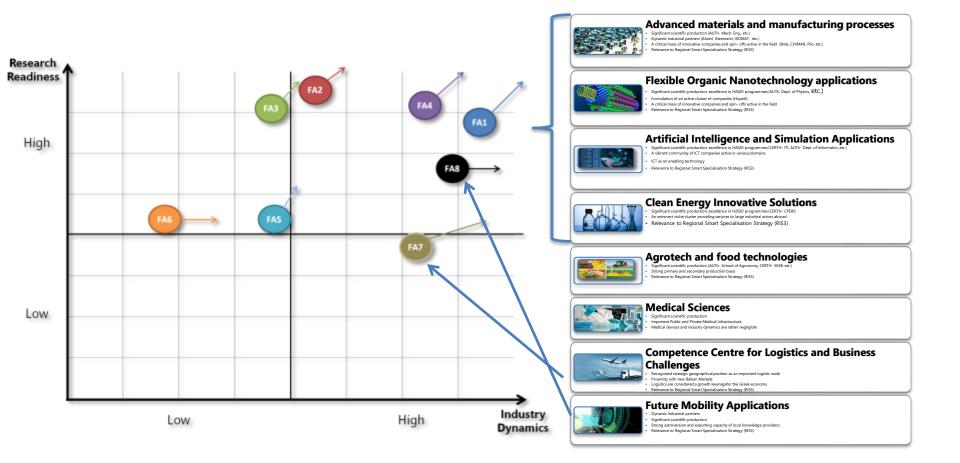
Proposals for Target Mega- Projects/ SWOT Analysis

#### **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 innovati



### **Positioning and Trends of Focus Areas**



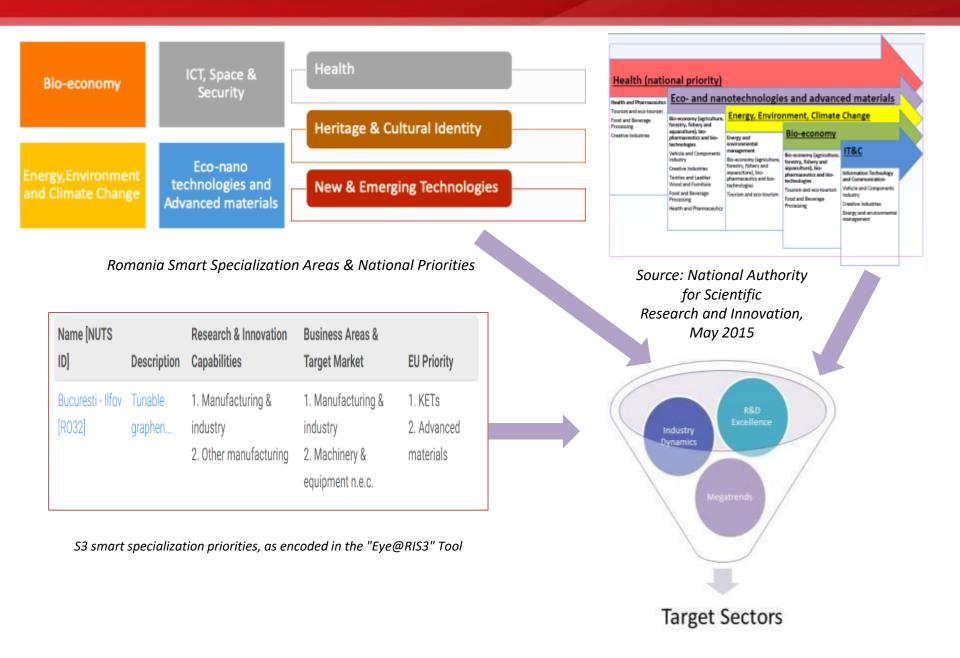
### **Employment of Smaret Specialization Strategies for Magurele** (Bucharest Ilfov) Science Park Planning



# Park Phase 1 Plan & Buildings



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



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

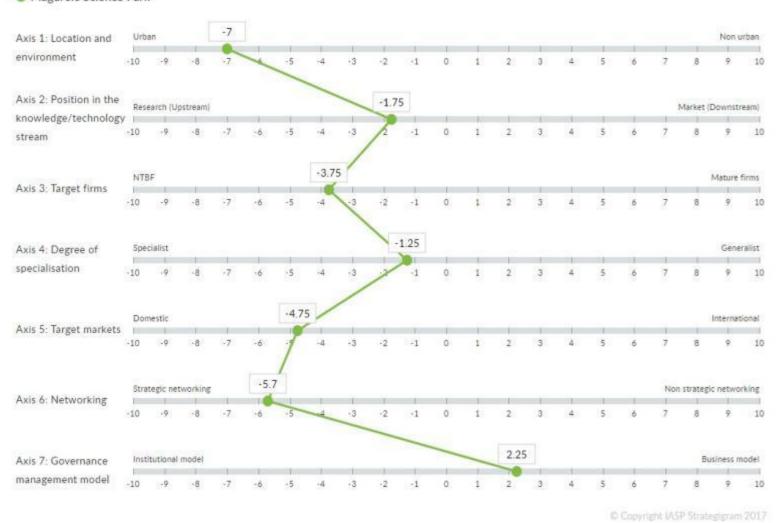


# Măgurele Parks Areas of Specialization

TS1	Advanced Physics and Nuclear Applications/ Extreme Light		
	Infrastructure		
	<ul> <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>		
TS2	Advanced meta- materials and manufacturing technologies		
	<ul> <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>		
TS3	Secure, Clean and Efficient Energy		
	<ul> <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>		
TS4	Enabling Information and Communication Technologies and Artificial		
	Intelligence		
	<ul> <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>		

# **MSP Strategigram**

Magurele Science Park



# Contacts



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