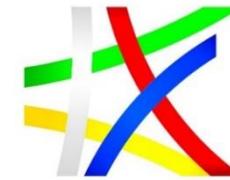




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**CENTERS OF EXCELLENCE AND CENTERS
OF COMPETENCE
STATE OF PLAY. IDENTIFIED PROBLEMS AND
CONSTRAINTS**

November 12, 2020

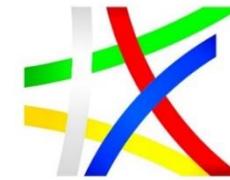
TAIEX SHARING
EU EXPERTISE
SINCE 1996





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POLICY MAKING BODIES

National Assembly

Council of Ministers

Ministry of Economy

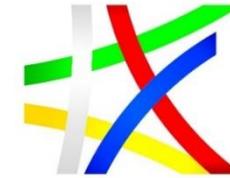
Ministry of Education and Science

National Innovation Fund

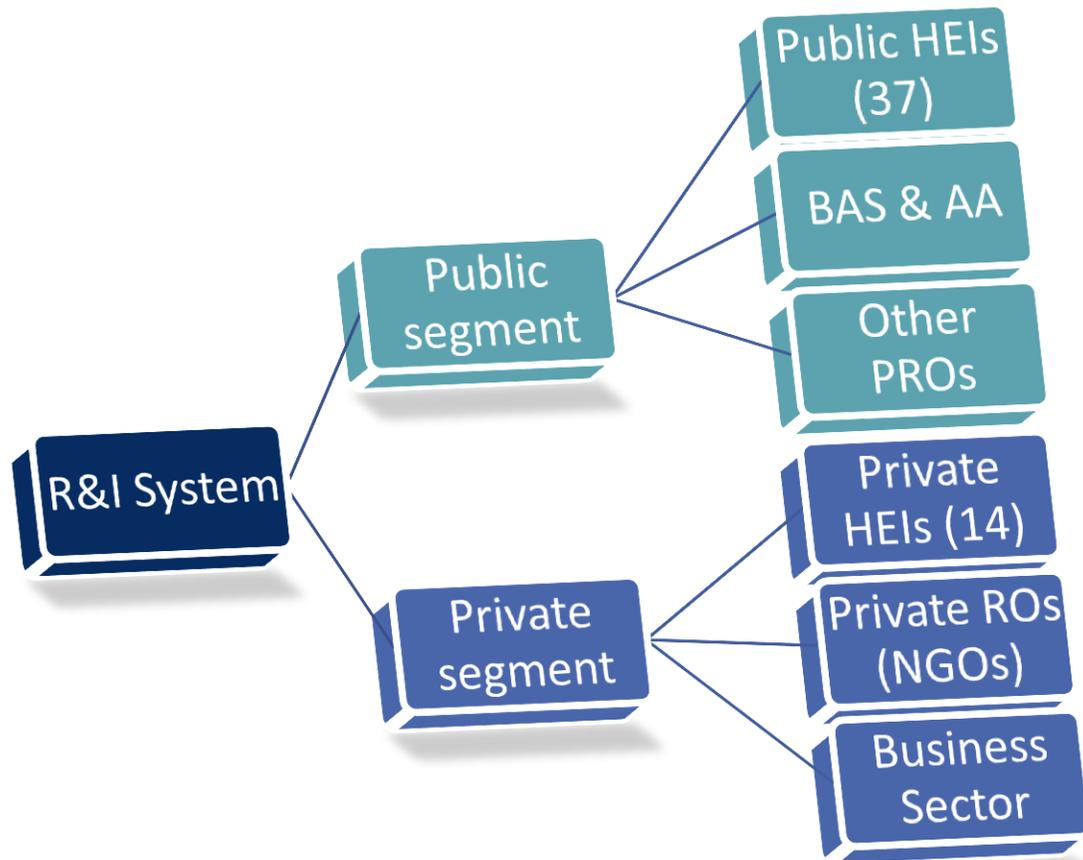
OPIC

National Science
Fund

OP SESG



R&D&I SYSTEM SEGMENTS IN BULGARIA

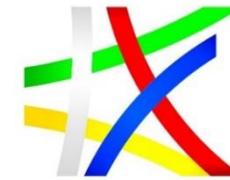


- non very well integrated public and private segments
- highly centralized system (regulation and control)
- MES – oriented toward public sector
- ME – oriented toward private sector
- policies are devised and implemented separately;
- funding and support – depend on the type of beneficiary not the R&D field or opportunities for joint projects;



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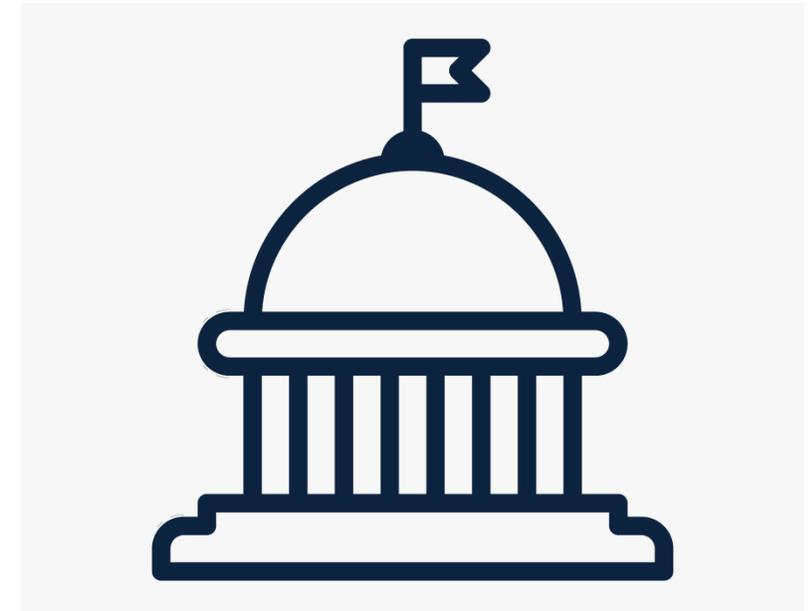
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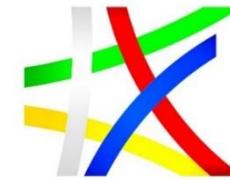


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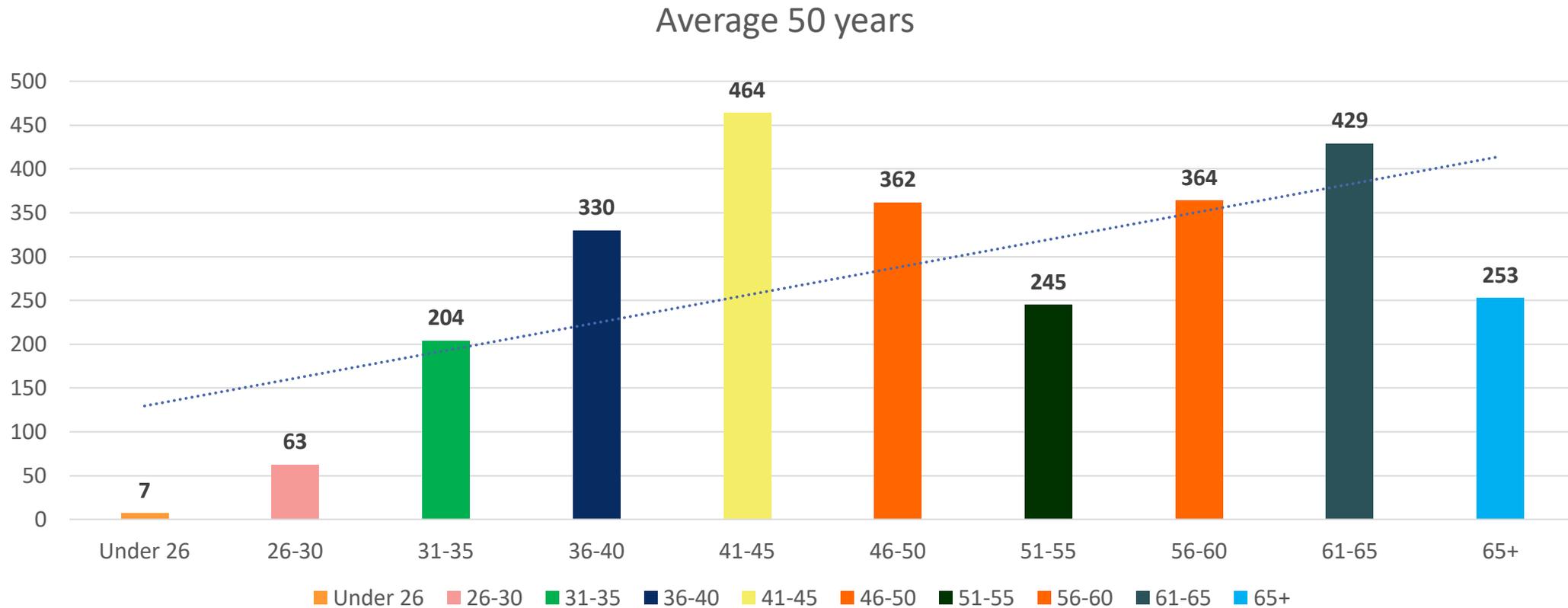
STATE AGENCY FOR RESEARCH & INNOVATION

- ❖ State policy in the field of applied research and innovation
- ❖ MA of Programme Research, Innovation and Digitalisation for Smart Transformation 2021-2027
- ❖ Combines all national, EU and international financial instruments in these fields
- ❖ Innovation Strategy for Smart Specialisation





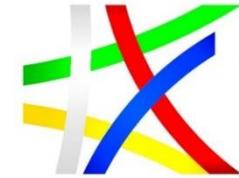
AGE STRUCTURE OF RESEARCHERS - BAS 31.12.2019 (TOTAL NUMBER 2721)





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SCIENCE AND EDUCATION FOR SMART GROWTH OPERATIONAL PROGRAMME

PRIORITY AXIS No. 1 Research
 and Technological Development



**Centres of Competence
 Centres of Excellence**

PRIORITY AXIS No. 2 Education
 and Lifelong Learning



**School education
 Higher education
 Vocational education**

PRIORITY AXIS No. 3
 Educational environment for
 active social inclusion



**Active Inclusion
 Socio-economic integration**

PRIORITY AXIS No. 4
 Technical Assistance

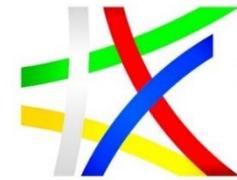


**Technical
 Assistance**



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PRIORITY AXIS 1 OF SESG OP – GOALS AND EXPECTED RESULTS

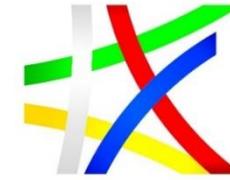
- ❖ To enhance the level and market orientation of research activities of ROs;
- ❖ To improve the potential for applied research, experimental development and innovation;
- ❖ To intensify the cooperation with the business/industry;
- ❖ To attract new researchers;
- ❖ Internationalisation.





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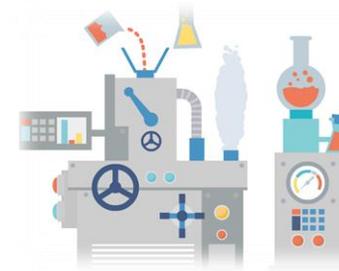
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ACTIVITIES ELIGIBLE FOR FUNDING

- ❖ Investment in research infrastructure (construction/modernisation of buildings, purchase of equipment);
- ❖ Research activities, knowledge and technology transfer.

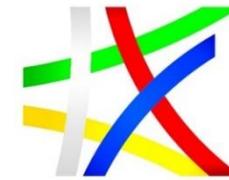


- ❖ Wide dissemination of research results (through teaching, open-access databases, open publications or open software);
- ❖ Establishment of sustainable partnerships with business, participation in joint projects



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THE BULGARIAN INNOVATION STRATEGY FOR SMART SPECIALISATION (ISSS)

4 THEMATIC AREAS



Mechatronics and Clean Technologies



**Informatics and Information and
Communication Technologies**



Industry for Healthy Living and Biotechnology

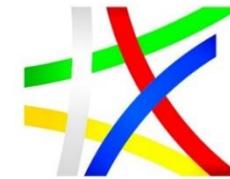


**New Technologies in Creative and Recreational
Industries**



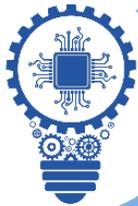
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CENTRES OF EXCELLENCE



BG05M2OP001-1.001-0008
NC of Mechatronics
69 184 529,81 BGN



BG05M2OP001-1.001-0003
CoE in ICT
29 355 861,12 BGN

BG05M2OP001-1.001-0004 UNITe
29 781 882,42 BGN

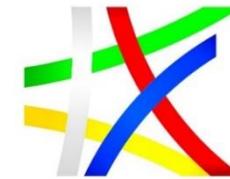


BG05M2OP001-1.001-0001 Heritage.BG
29 785 549,49 BGN



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CENTRES OF COMPETENCE



BG05M2OP001-1.002-0011
MIRACle 22 570 752,32 BGN

BG05M2OP001-1.002-0014
HITMOBIL 21 709 196,10 BGN



BG05M2OP001-1.002-0001
**Parasitology/Infections and
Immunity**
23 638 258,00 BGN

BG05M2OP001-1.002-0005
PERIMED
23 472 018,71 BGN



BG05M2OP001-1.002-0002 Big Data
13 333 868,86 BGN
BG05M2OP001-1.002-0006 Quasar
13 500 000 BGN

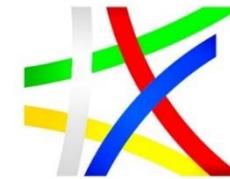
BG05M2OP001-1.002-0019 Clean&Circle
23 667 925,86 BGN

BG05M2OP001-1.002-0023 SMEEST
23 569 719,17 BGN

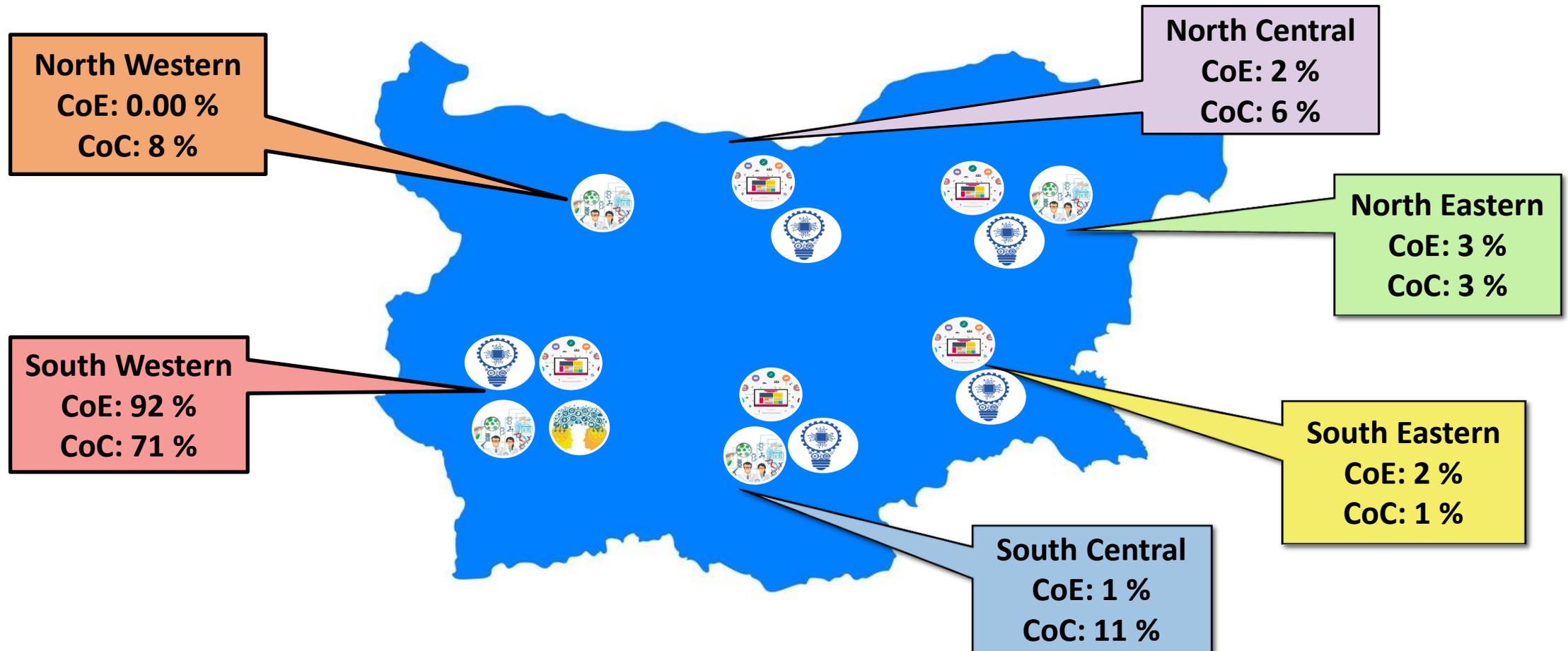


BG05M2OP001-1.002-0010
Leonardo Da Vinci
23 695 179,29 BGN

BG05M2OP001-1.002-0012
Bio Resources
23 791 055,20 BGN



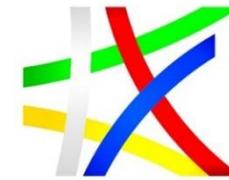
TERRITORIAL BALANCE AND SHARE OF FUNDS





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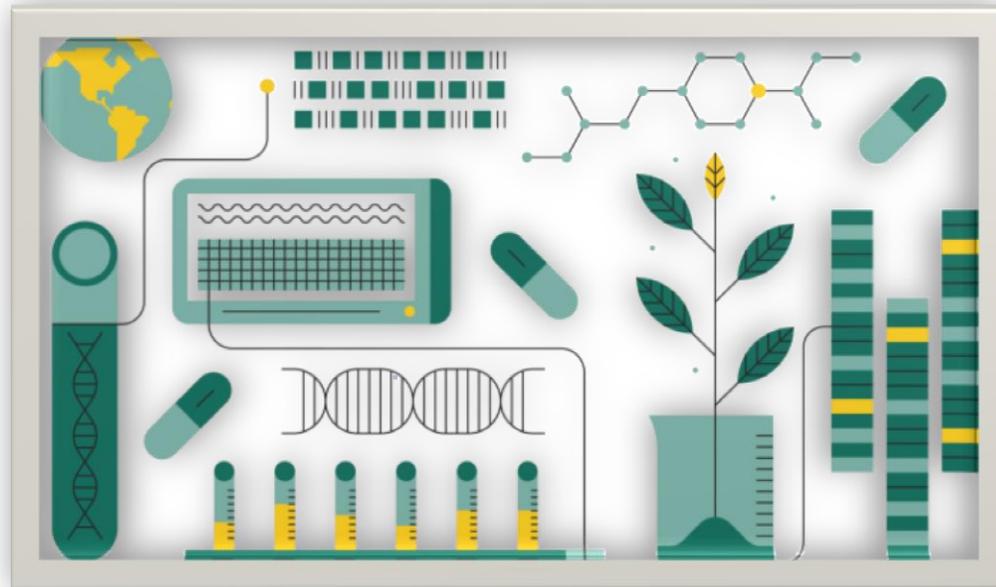


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PROJECTS UNDER HORIZON 2020 WIDESPREAD-TEAMING-PHASE 2 AND ADDITIONALLY FUNDED BY OP SESG

BG05M2OP001-1.003-0003 PlantaSYST

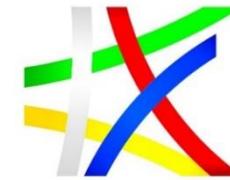
29 998 861,62 BGN



BG05M2OP001-1.003-0003 GATE

29 998 861,62 BGN





PERFORMANCE



7 Centres

- ✓ Infrastructure
- ✓ Equipped laboratories
- R&D activities



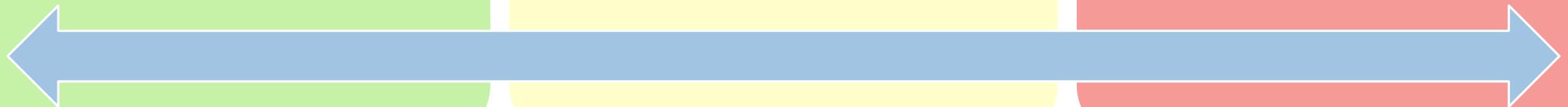
5 Centres

- Building research infrastructure (substantial constructions or new buildings)
- Laboratories – not fully equipped



2 Centres

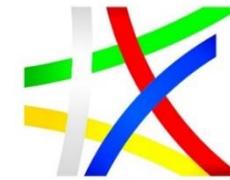
- Later signed contracts
- At public procurement stage





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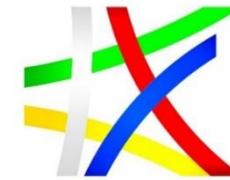


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FUTURE PROSPECTS AND CHALLENGES

- ❖ Suitable future management structure and legal framework of the centers;
- ❖ Development and commercialisation of IPR portfolio;
- ❖ Ensuring sustainable funding;
- ❖ Establishing future mechanism for knowledge transfer;
- ❖ Creation of start-ups, spin-offs and spin-outs.



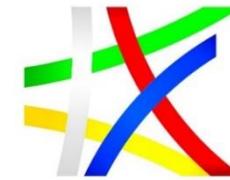


TECHNOLOGY TRANSFER (TT) AND COMMERCIALISATION

HOW TO BUILD A SUCCESSFUL TT VALUE CHAIN?

TWO MAIN ELEMENTS: (I) SCIENTIFIC RESULTS AND (II) ENTREPRENEURIAL CULTURE





COMMON PROBLEMS ACROSS THE CENTRES



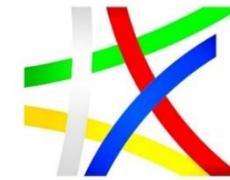
Lack of knowledge, skills and experience for effective TT through established channels, procedures and sources of translational funding (internal and external);



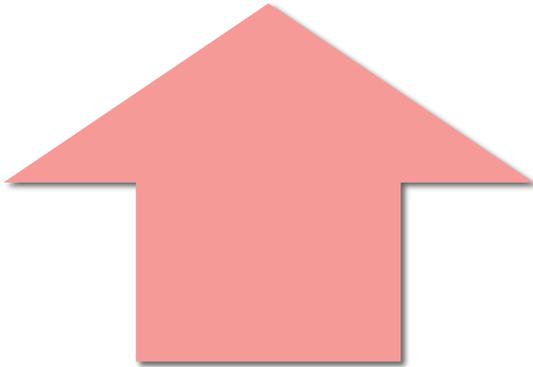
Low level of entrepreneurial mindset among researchers;



Lack of researchers' skills in IPR protection;

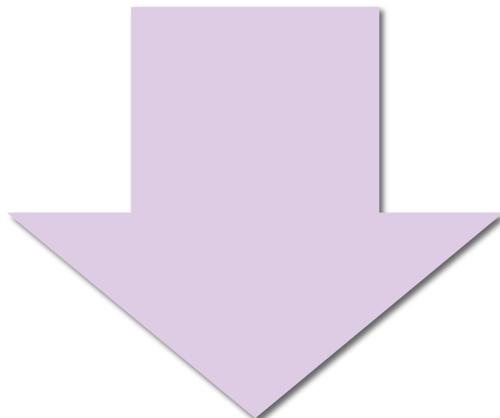


COMMON PROBLEMS ACROSS THE CENTRES (CONTINUED)

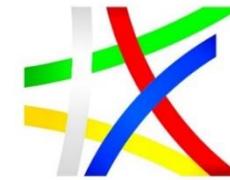


Lack of knowledge, skills and experience in:

- contemporary business/ incl. start-up/ development methodologies;
- incremental spin-off development;
- attracting early stage development funds from market sources (crowdfunding, business angels, early stage venture, etc.).



Insufficient number of skilled financial and legal experts for business planning, marketing, compliance, control and contracting functions, as well as monitoring of the use of the research infrastructure.



COMMON PROBLEMS ACROSS THE CENTRES (CONTINUED)



Lack of analytical/ full cost accounting → possible risk of incomplete cost analysis and possible under-pricing of research products and services

- **Sustainability risk:** if the centres do not set the right selling prices/ fees for services

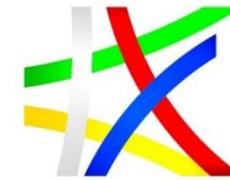
(full cost (direct costs + overheads) + profit margin = selling price/ service fee);

Selling price → market price or the equivalent of it or the price set in an arm's length negotiation

- **State aid issue:** indirect state aid granted to an undertaking (business)

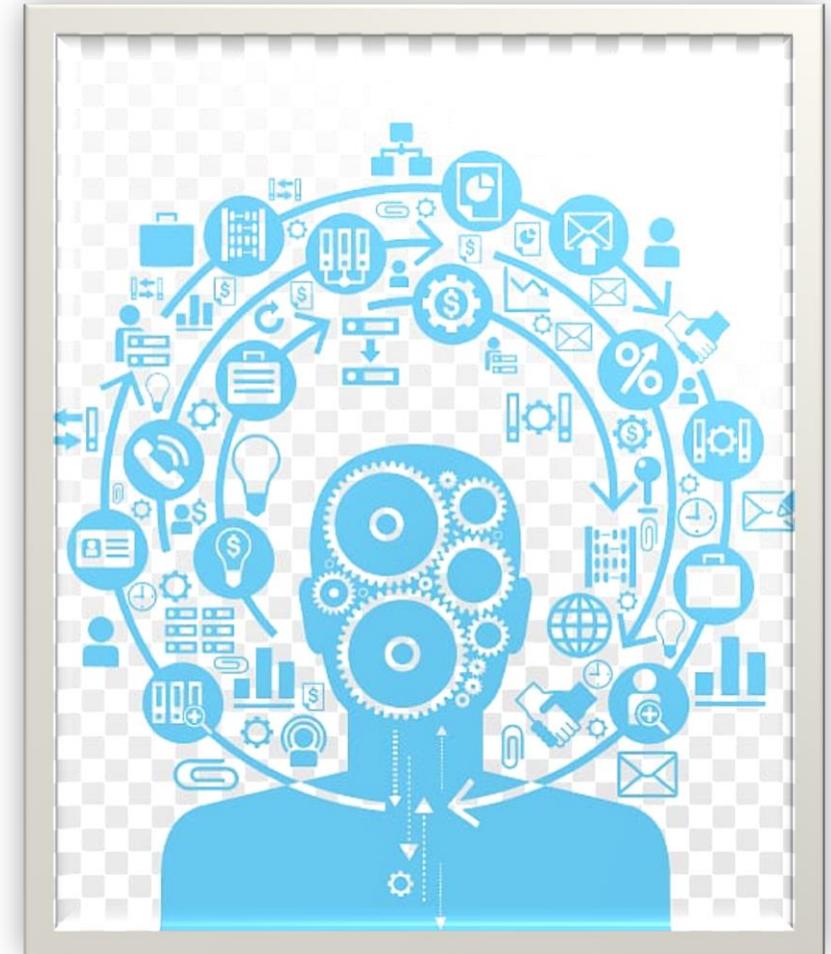


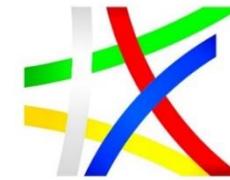
Mandatory separate accounting for economic and non-economic activities - not yet implemented.



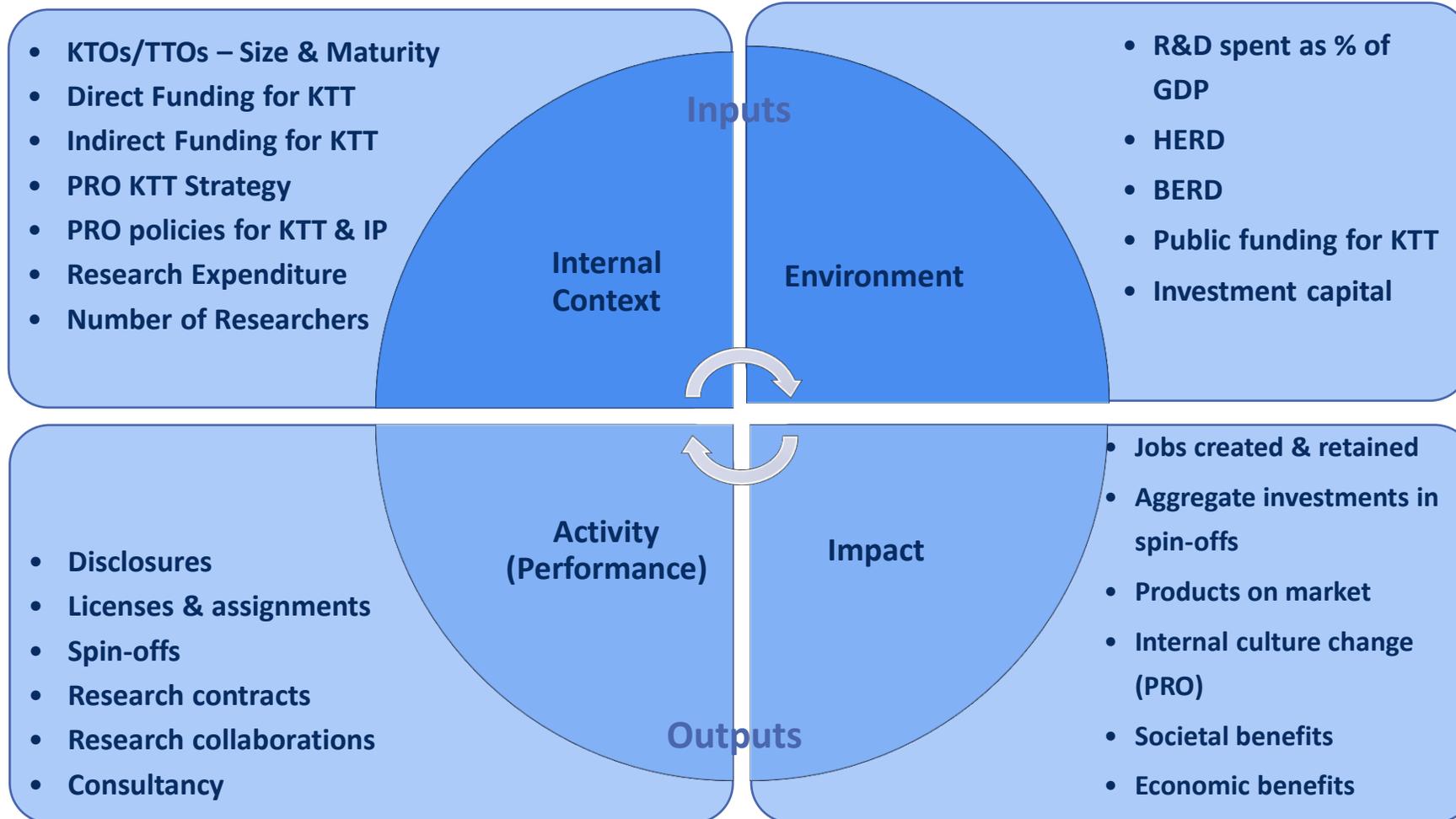
INDICATORS

- ❖ **Uniform vs. centre- specific indicators;**
- ❖ **ESFRI (European Strategy Forum on Research Infrastructures/ RI):** common approach for monitoring RI performance at European level;
- ❖ Proposal for a comprehensive set of KPI considering the common objectives of the Pan-EU RIs;
- ❖ **JRC (Report from the EC’s Expert Group):** Knowledge Transfer Metrics Towards a European-wide set of harmonised indicators





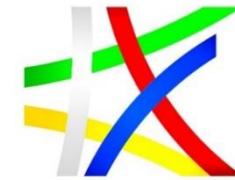
INPUT AND OUTPUT KTT INDICATORS: THE FOUR QUADRANTS



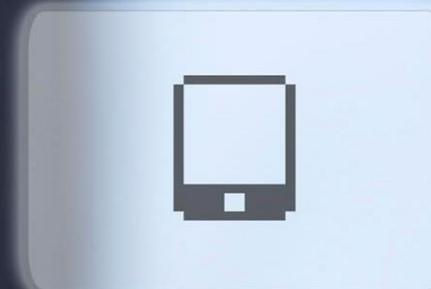


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THANK YOU FOR YOUR ATTENTION!

Contact details:

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125, Tsarigradsko Shose Blvd., Block 5, Fl.1
Phone: +359 2 46 76 101
<http://opnoir.bg/>