



HELLENIC REPUBLIC
Ministry of Development

GSRI
GENERAL SECRETARIAT FOR
RESEARCH AND INNOVATION

National Strategy on Research, Technological Development and Innovation 2021-2027

**Research and Innovation Priorities for the support of
Circular Economy and Sustainability**

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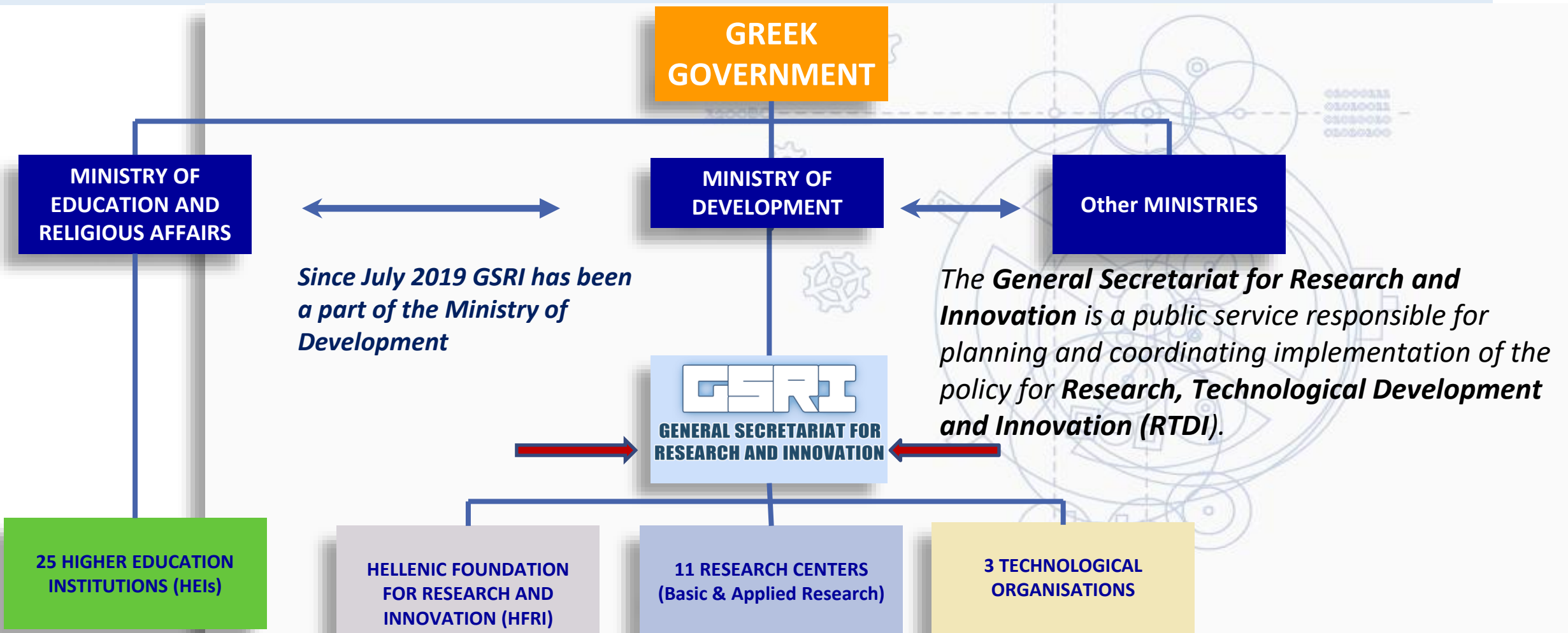
SUSTAINABILITY MASTERCLASS CONFERENCE / Day 2
Session 7: Partnerships for Sustainability – Universities, Business, & Community

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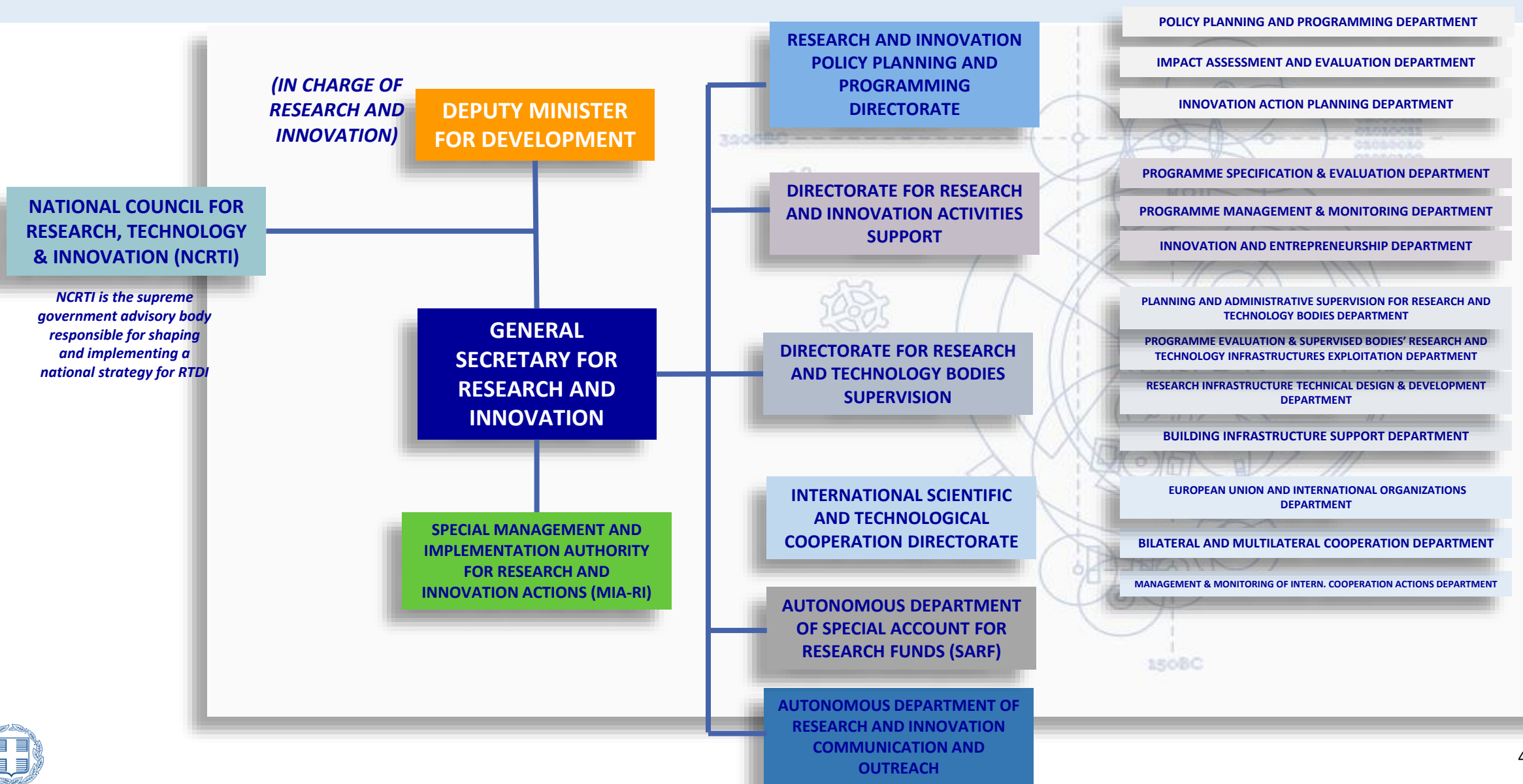
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Ministry of Development / General Secretariat for Research & Innovation



Organization Chart of the General Secretariat for Research & Innovation



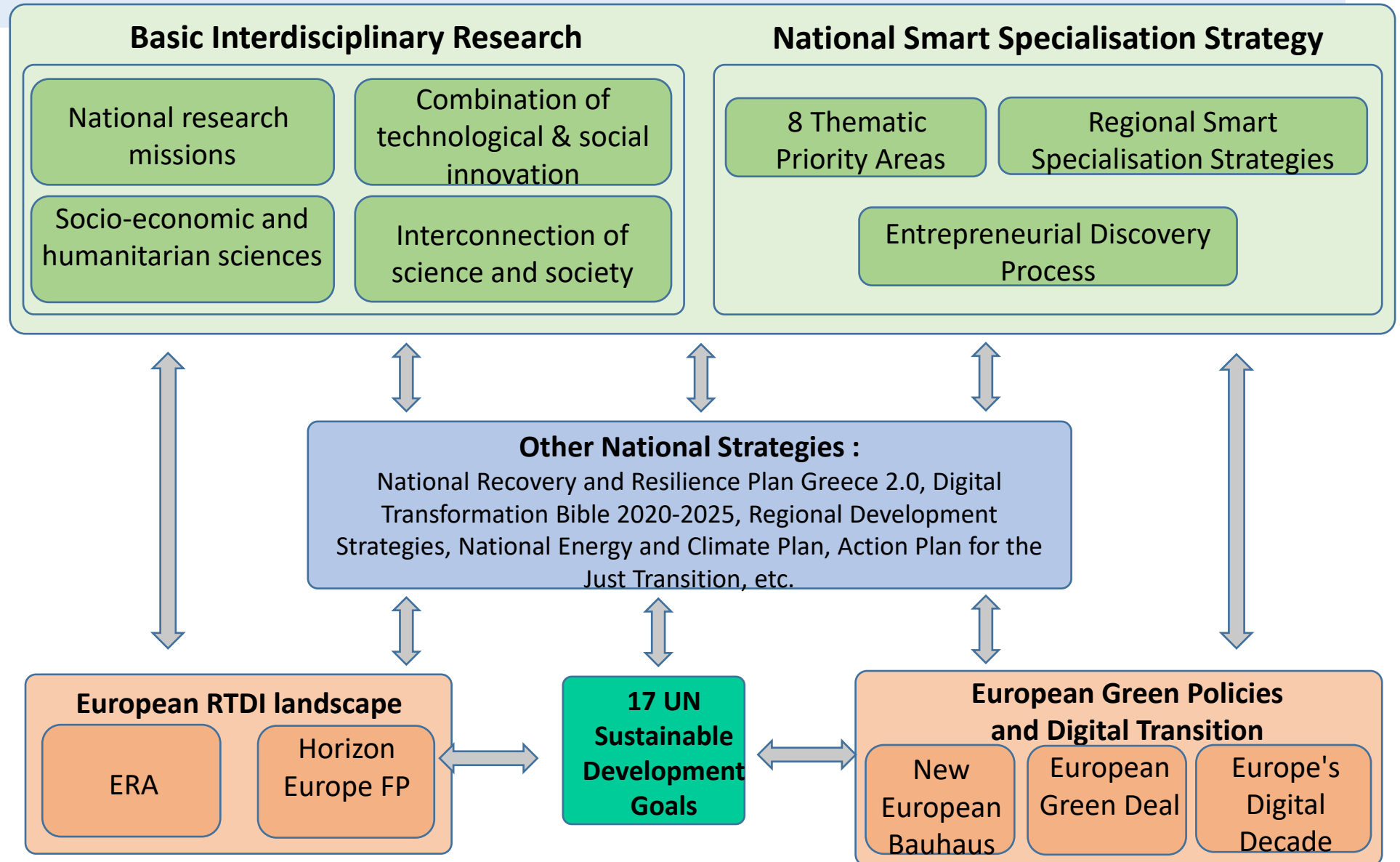
The Mission of the General Secretariat for Research and Innovation

- ✓ Design, implementation, monitoring and evaluation of the **National Strategy for Research and Innovation**
- ✓ Launching and funding of **research and innovation competitive programmes** giving emphasis on both economic growth and social justice
- ✓ **Supervision** and funding of **11 Research Centers** and **3 Technological Organizations**
- ✓ **Representation to the European Union, OECD** and International Research Organizations (CERN, EMBL etc.)
- ✓ **Promotion of public awareness** on Science, Research and Technology



National Strategy for Research, Technological Development and Innovation

- ✓ It is defined in article 4 of Law 4310/2014
- ✓ Refers to a seven-year period (2021-27)
- ✓ Expediting Body: GSRI
- ✓ For the formation of NSRTDI, GSRI undertakes a broad consultation and collaboration with representatives of the scientific community, the business sector and social and economic partners
- ✓ It is voted by law by the Greek Parliament



Vision for the Greece of 2030



In **2030**, Greece will be a country where Research, Technological Development and Innovation (ETAK) is a key catalyst in a green, digital and sustainable knowledge economy



The **research system** is strongly internationalized and produces important technological and interdisciplinary knowledge to address social and economic challenges.



Human potential have the necessary resources to produce and utilize knowledge, and to find innovative solutions in their workplace but also more broadly for the benefit of society.



Enterprises produce innovative products/services, are extroverted and use research results, digital and green technologies and high-level human resources.



There is **strong interconnection, interaction** and a **culture of collaboration and open innovation** between the research and production web, the public sector and social actors



The **public sector** provides high-quality services by creating opportunities for innovation and innovative entrepreneurship through demand.



There is a **system of public policies** that supports the strengthening and exploitation of the ETAK System through the coordination of all interested subjects-carriers (**whole-of-government approach**).

European and global challenges

- **Profound economic, ecological and social challenges:**
 - ✓ accelerating the green and digital transition
 - ✓ new EU economic development model based on social welfare, sustainability and circularity
- The **European Commission** has developed a number of policies (e.g. European Green Deal), which underline the need for Europe to continue to innovate and remain at the cutting edge of global science, **in line with the 17 UN Sustainable Development Goals**
- The **European RTDI landscape**, despite the progress of recent years with the creation of the European Research Area (ERA), shows a **slowdown** in terms of **investment in research and innovation**
- To achieve an ERA fit for the future **it is necessary to strengthen coordination and coherence between European, national and regional policies**
- **Horizon Europe: major new interventions** to boost the EU's competitiveness and improve its capacity to innovate



National challenges but also opportunities

• Opportunities

- **Plenty of financial tools** (from NSRF 2021-2027, Recovery and Resilience Fund, Just Development Transition Fund, etc.) that can be used to improve the RTDI System and address the above challenges
- **Utilization of knowledge of the Greek diaspora scientists** either through their return to the country or through their partial reconnection and employment in knowledge-intensive activities
- **Opportunity to attract Foreign Direct Investment (FDI)** due to the valuable and qualified scientific staff - at a competitive salary cost compared to other developed countries - as well as the good climatic conditions of the country



Strategic Objectives of NSRTDI

- 1) New knowledge production
- 2) Utilization and dissemination of new knowledge
- 3) Strengthening the Innovative, Technological and Digital Capabilities of enterprises and organizations
- 4) Internationalization of Research, Education and Production System & Business Penetration in International Value Chains



4 main policy pillars for the transformation of the RTDI System

1	Pillar 1 Investment in Innovation	<ul style="list-style-type: none">▪ Networking and Interactions▪ Innovative Entrepreneurship▪ Public Demand for Innovation
2	Pillar 2 Excellence, Research Potential & Education	<ul style="list-style-type: none">▪ Strengthening human resources / skills▪ Strengthening of research infrastructures
3	Pillar 3 Addressing societal challenges, connecting science & society	<ul style="list-style-type: none">▪ Societal/Economic Challenges▪ Interconnection of science and society
4	Pillar 4 Regulatory framework (Legislation, Administration, Taxation)	



NSRTDI governance

- Adopting a **whole-of-government approach** with the aim of the **maximum possible coordination between policy actors** both vertically, i.e. between the different levels of government, and horizontally, i.e. between the different policy sectors and functions of the state
- **Strategic planning** and **decentralized** but **coordinated implementation**
- **Cooperation** between the public and private sectors, the world of research and science, and civil society
- **Coordinating policies** for more rational and efficient management of human, financial and administrative resources, clarifying roles and achieving complementarities and synergies, and minimizing piecemeal, unilateral, disjointed and often conflicting and contradictory interventions, often leading to unintended negative consequences
- **Substantial evaluation of strategy implementation** through collective learning processes with the active involvement of all stakeholders
- **Interaction** of ESETAK's governance system **with the European and international RTDI environment**



Funding Sources of the 2021-27 Programming Period

Indicative Budget PP 2021-27: > 1,8 b €

OP “Competitiveness”
Research, Innovation,
Advanced Technologies:
633.228.490 €

OP “Competitiveness”
Skills :
139.622.108 €

OP “Competitiveness”
Financial Instruments for
innovative entrepreneurship:
110.000.001 €

Recovery and Resilience
Programme:
485.000.000 €

Just Transition Fund:
270.000.000 €

Regional Operational
Programmes, Other Sectoral
O.P.s, National Investments
Programme, Tax Incentives



Financing Plan

Policy Pillar	Policy Sub-Pillar	Funding Sources
Investment in Innovation	Networking and Interactions	NSRF 2021-2027, Recovery and Resilience Fund, PPP
	Innovative Entrepreneurship	NSRF 2021-2027, Recovery and Resilience Fund
	Public Demand for Innovation	State Budget, NSRF 2021-2027, Recovery and Resilience Fund
Excellence, Research Potential and Education	Strengthening human resources / skills	HFRI, State Budget, Recovery and Resilience Fund, NSRF 2021-2027, Horizon Europe Program, Private resources (donations, sponsorships, etc.)
	Strengthening of research infrastructures	State Budget, NSRF 2021-2027, Recovery and Resilience Fund, Horizon Europe Framework Programme
Addressing societal challenges, connecting science & society	Societal/Economic Challenges	State Budget, Recovery and Resilience Fund, NSRF 2021-2027, Horizon Europe Framework Programme, Private resources (donations, sponsorships, etc.)
	Interconnection of science and society	Recovery and Resilience Fund, State Budget, NSRF 2021-2027, Private resources (donations, sponsorships, etc.)
Regulatory framework (Legislation, Administration, Taxation)		NSRF 2021-2027, Recovery and Resilience Fund, State Budget



"Competitiveness" 2021-27. Anticipated RTDI Actions

PRIORITY	SPECIFIC OBJECTIVE	ACTIONS	INDICATIVE PUBLIC EXPENDITURE
1	1.i	1.1.1 Development of Industrial Research and Technology	65.138.071
		1.1.1.1 Production of new/improved products and processes in accordance with RIS	34.846.799
		1.1.1.2 Strengthening new business initiatives for the exploitation of knowledge from research activity	30.291.272
1	1.i	1.1.2 Interconnection of companies with research centers / cooperative mechanisms	376.210.007
		1.1.2.1 Short-term business collaborations with HEI laboratories and research organizations / "Research-Innovate" (integrated)	303.736.483
		1.1.2.2 Development of structures connecting businesses with academic/research centers	25.473.524
		1.1.2.3 Development of Competence Centers and other structures of co-creation and medium-long-term strategic cooperation, such as joint laboratories, ecosystems and infrastructure co-financed by the public and private sectors	20.000.000
		1.1.2.4 Strengthening the creation and development of innovation clusters	25.000.000
		1.1.2.5 Creation of National Technology Initiatives (PPPs) for immediate exploitation of research results & development of products of high added value	2.000.000
1	1.i	1.1.3 Research Infrastructures	106.578.701
		1.1.3.1 Modernization / upgrading / promotion of research infrastructures in areas of strategic interest	
1	1.i	1.1.4 Στήριξη / προώθηση διεθνών συνεργασιών	80.999.814
		1.1.4.1 Support for the development of Greek initiatives in the Horizon Europe / Widening Participation and Strengthening the European Research Area program and other international and transnational collaborations	
1	1.i	1.1.5 National Strategy for Smart Specialisation support	4.301.897
		1.1.5.1 Governance/support mechanisms of the Smart Specialization Strategy (coordination, management, evaluation, monitoring, entrepreneurial discovery)"	
		Total Ε.Σ 1.1 (PRIORITY 1)	633.228.490
1	1.iv	1.4.1 Targeted training programs for business executives	111.250.590
1	1.iv	1.4.2 Utilization/development of specialized personnel by the companies	28.371.518
		Total Ε.Σ 1.4 (PRIORITY 1)	139.622.108
3	1.i	3.1.1.1 Strengthening with seed capital of business initiatives from research centers, universities, and companies and supporting start-up and initial business development projects, with the cooperation of financial institutions, such as banks, venture capital and business angels	110.000.001
		Total Ε.Σ 1.1 (PRIORITY 3)	110.000.001
Total Sum for RESEARCH & INNOVATION ACTIONS			882.850.599



Thematic Priorities 2021- 2027 Programming Period

Digital Technologies

Bio-Sciences, Health and Pharmaceuticals

Environment and Circular Economy

Sustainable Energy

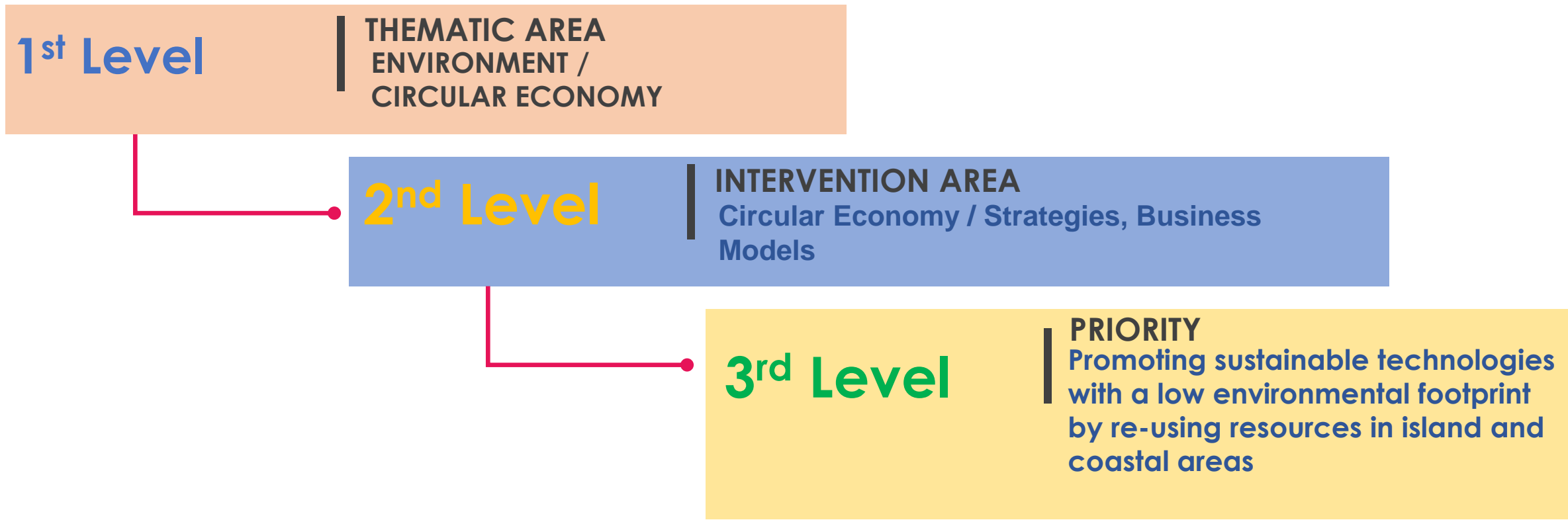
Transport and Logistics

Agro-food Value Chain

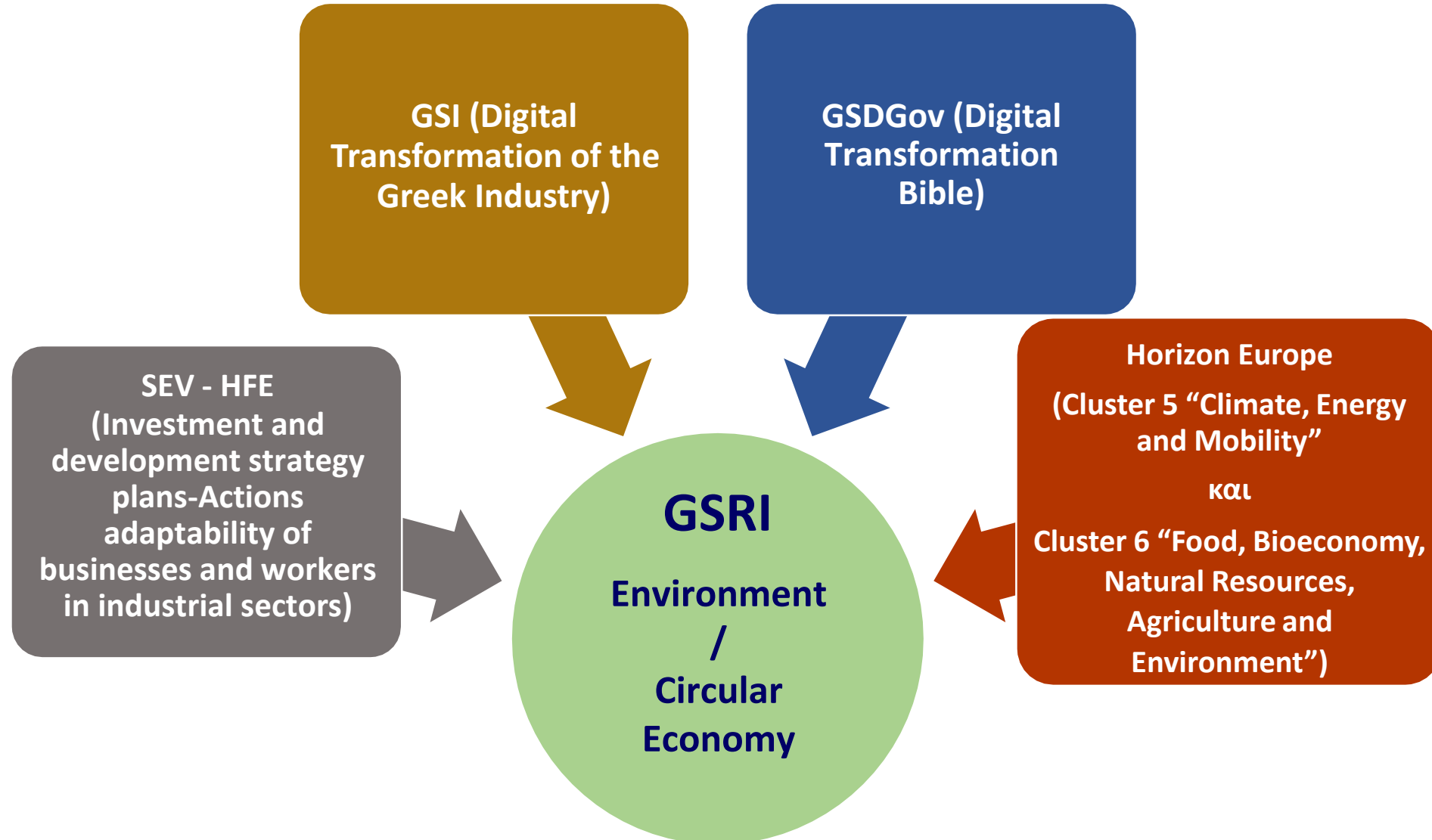
Tourism, Culture and Creative Industries



3 Consecutive Levels of Specialization



Sector Synergies with other Strategies



Promotion of research and innovation activities related to the Environment and the Circular Economy

Priority 1

Intervention Area

Waste management and prevention

Soil and Water Health

Air pollution

Protection, promotion and sustainable management of biodiversity

Climate change mitigation and adaptation and response to natural and man-made disasters

Environmental Observatories - Ecosystem approach to sustainable Development

Circular Economy / Strategies, Business Models

Industrial Symbiosis / Secondary Raw Materials

Ecological Product Design for safety and sustainability

Intersectoral Interventions (nexus)

Priority N



Circular Economy / Strategies, Business Models (indicative priorities) 1/2



Analysis (characteristics, comparison) and **application of circular economic concepts**, such as Circular Economy, Reverse Logistics, C2C, Regenerative Design, etc.

Circular Smart and Healthy Cities with a low environmental footprint based on the principles of the circular economy development of infrastructures enabling circularity using innovative digitization technologies and implementation of advanced collection systems for reuse of material/waste streams

Development of methods of intelligent use of products (intensification of product use - design of sharing / multi-functionality)

Development of methods to extend the life of products (reuse, repair, rebuild, new functionality, etc.)

Development of methods of useful applications of materials through recycling and recovery of raw materials

Development of circular economy and bioeconomy business models

Development and optimization of value chains throughout their cycle (food, plastics, construction, materials, etc.) with the participation of citizens, environmental and other civil society bodies



Circular Economy / Strategies, Business Models (indicative priorities) 2/2

Creation of Platforms for sharing products and providing services, as well as for Circular Economy advisory support

Development of platforms and systems for the seamless participation of citizens and businesses in the circularity of material flows, production/consumption of products. Study of new forms of social solidarity economy and infrastructure sharing (collaborative economy), entrepreneurship and social life/organization

Improving the management of natural resources in urban areas (water, soil, space, transport, urban agriculture, urban green) **and circularity in urban planning**

Design and renovation of new or existing buildings in the context of the "Renovation Wave" (using RES, recycled and bio-materials) with the simultaneous application of tools to optimize these processes

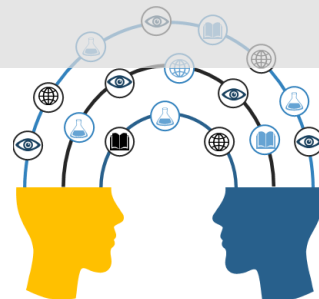
Promoting sustainable technologies with a low environmental footprint by reusing resources in island and coastal areas



Conclusions / New Perspectives of the 2021 – 2027 Programming Period

2. Ερωτήματα για την διαμόρφωση των θεματικών προτεραιοτήτων

- ✓ Interdisciplinary approaches (Nexus “Environment – Health – Climate Change”, Nexus “Energy – Environment – Agro-food” etc.)
- ✓ Technologies of the 4.0 Industrial Revolution (Artificial Intelligence, Advanced ICT, Advanced Robotics, Advanced Materials & Sensors, Nanotechnology, Biotechnology, Bioinformatics, κλπ)
- ✓ De-carbonisation
- ✓ Skills
- ✓ Major Societal Challenges (Health, Climate Change, Food Resilience κλπ)
- ✓ Support of wider national, European and/or international Strategies (Green Deal, **Circular Economy**, Sustainable Development Goals (SDGs), Blue Growth, Clean Energy, Hydrogen, Intelligent Transport, Biodiversity, Bio-economy, Security, etc.)





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Thank you for your attention!



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