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GNSS concept in the framework of the Romanian R&D programmes “Space and Security” and “STAR”

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Romanian Space Agency



agentia spatiala romana - romanian space agency

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- **National strategy**



Romanian Space Agency

- **ROSA - National Space Agency established 1995**
- **Public organization in the system of the Ministry responsible for Research and Technology**
- **Representative and Coordinator of space activities in Romania**
- **Financing agency for research in Space, Aeronautics and Security Research**
- **Developer and integrator of its own RTD programmes by the ROSA Research Centre (RRC)**



Romanian Space Agency

ROSA – national representative for:

- **European Union: GNSS Supervisory Authority, GMES Committee, FP7 programme committees for Space, Security research, Aeronautics and Galileo**
- **NATO and EDA specific issues**
- **UN – COPUOS (chair STS and Committee)**
- **COSPAR, IAF, GEO, Eurisy, ESPI, other bilateral agreements with national agencies.**



National Space Strategy

Defined by means of the RTD policy, with effects on both academia and industry

Three constant objectives since the 90's :

- Participation to international space missions and programmes – in particular ESA**
- Development of specific national projects**
- Capacity building at national level**



National Space Strategy

Presently defined by:

- Romanian Research, Development and Innovation Strategy 2007 – 2013
- National RTD Plan 2007-2013
- Law no 262/2011 for the ratification of ESA accession and the STAR Programme



National Space Programmes

- **National RTD Programmes with space components since 1993**
- **First multiannual RTD Programme in 2001 – AEROSPACE**
- **Second National RTDI Plan 2007 – 2013 including Space and Security as thematic area with a financing of 8% of the total national public RTD budget**
- **ESA PECS programme 2007-2012**
- **National programme STAR – Space Technology and Advanced Research drafted for 2012 - 2018**
- **More than 550 fte professionals and 80 RTD and academia organizations involved presently in the programs**



National RDI Plan for 2007 - 2013

8. Space and Security

- 8.1 Space exploration
- 8.2 Space applications
- 8.3 Aerospace technologies and infrastructures
- 8.4 Security technologies
- 8.5 Security systems and infrastructures

- (RO Government Decision no. 475/ 2007)

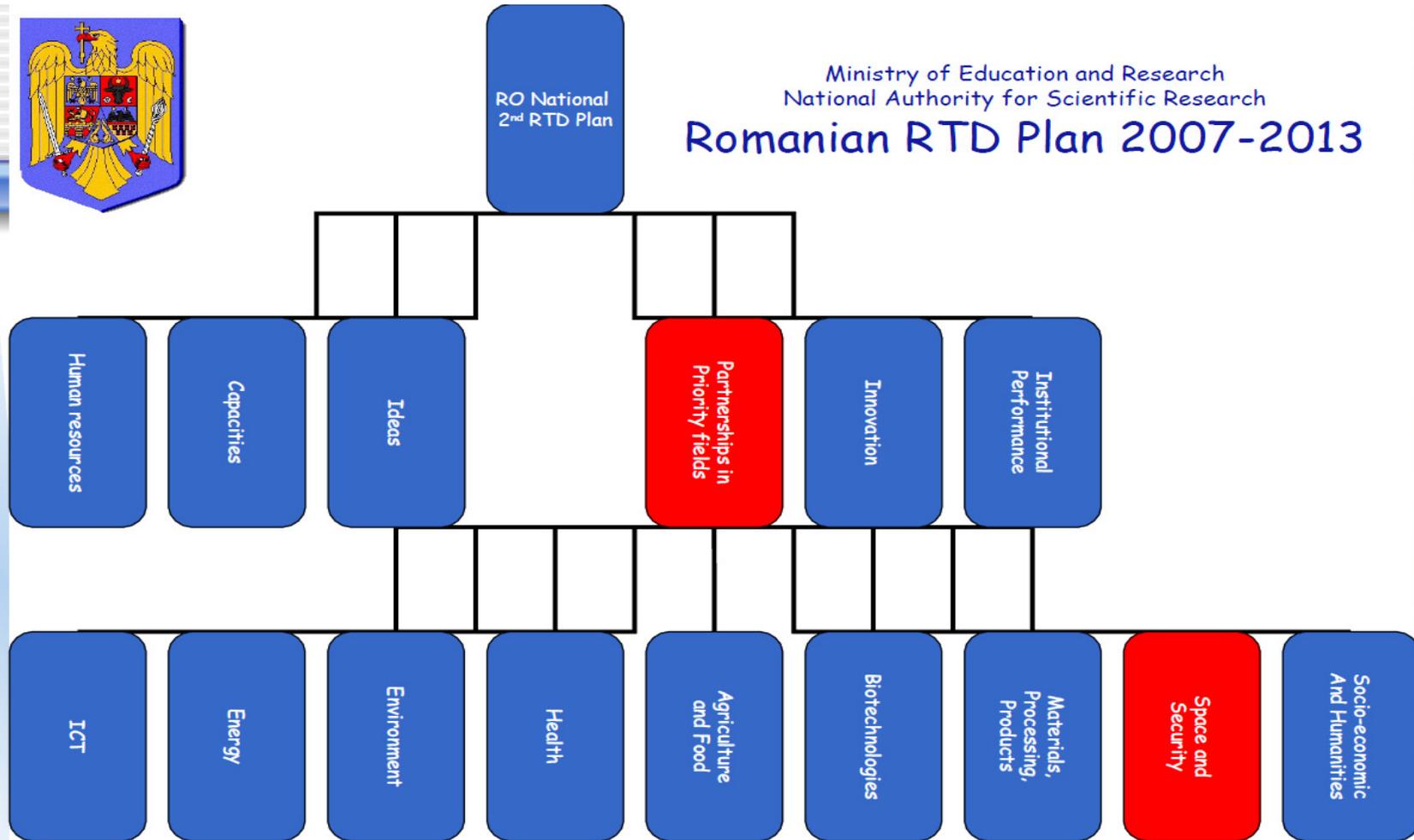


National RTD Plan 2007 - 2013



RO National
2nd RTD Plan

Ministry of Education and Research
National Authority for Scientific Research
Romanian RTD Plan 2007-2013



rosa

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National Research, Development and Innovation Programme II– Area 8. Space and Security

Area 8: Space and Security



Space Exploration

Space Applications

Aerospace technology

Security technology

Security systems and infrastructures

Romanian Space Programme

Space Applications

1. Earth observation from satellites and aerospace platforms
2. Satellite global navigation and positioning systems. GALILEO
3. Spatial communication and relevant ground-based system
4. Space applications integrated for telemedicine, precision agriculture, natural hazards monitoring, global information systems
5. Geospatial techniques
6. Automatic and semi-automatic algorithms for spatial data
7. Global monitoring systems. GMES
8. Positioning-based systems and services
9. Observation and monitoring systems and platforms



Regional cooperation FP7

- **GMES projects:**
 - **GEOLAND2 – Towards an operational GMES Land Monitoring Core Services**
 - **SAFER – Services and Applications for Emergency Response**
- **COSMOS – Cooperation Of Space National Contact Points as Means to Optimise Services**
- **SERENE – SEcurity REsearch Ncp network – phase I**
- **GALILEO: EEGS / EGGS 2– EGNOS Extension to Eastern Europe**
- **AirTN 2– Aeronautics ERA-NET as one of the key enablers of the prosperous development of Aeronautics in Europe**
- **C-SPACE - Conditions for Space Policy and related Action Plan Consolidation in Europe**
- **SERENE 2 SEcurity REsearch Ncp network – phase II – ROSA coordinator**
- **GEO: BalkanGeonet**



Ratification of ESA Accession

In accordance with the provisions of Art. 6 from Law no. 262/2011:

- “(1) With the purpose of increasing the competitiveness for research, industry and academia in order to participate in ESA’s activities, including prequalification activities and adaptation to ESA’s requirements, the Ministry of Education, Research, Youth - the National Authority for Scientific Research will initiate and finance for the period 2011-2019 a Programme for Research-Development-Innovation (RDI)
- (2) The Management of the previously mentioned (paragraph 1) Programme for RDI will be provided by ROSA on a multi-annual financing-based contract between ROSA and ANCS signed according to the Romanian Law.”



Programme STAR

- **The Programme for Research-Development-Innovation on Space Technology and Advanced Research – STAR for the 2012-2019 period, approved by Law no. 262/2011, is the main instrument of the Ministry of Education, Research, Youth (MECT) – National Authority for Scientific Research (ANCS) using Romanian Space Agency (ROSA) as managing organization to provide national support for the implement of the Agreement between Romania and European Space Agency (ESA) regarding the Romania's Accession to ESA Convention.**



Programme STAR

General Objectives

- Identification of specific niche markets for research, technology and industry at national, European and international level
- Definition and identification of projects for participation in ESA's optional Activities
- Development and promotion of the national capabilities for research, education and industry in space, aeronautics, security and related areas
- Liaisons' improvement (interact and collaborate) between research and industry
- Continuous development and provision of highly-qualified pluri-disciplinary specialized personnel
- High-level scientific outcome and quality increase in fundamental and applied research
- Development and increasing the variety of industrial, social, commercial and educational applications of the space research



Programme STAR

Specific Objectives

- Participation in ESA's optional programmes:
 - Science /Robotic Exploration
 - Earth Observation (including GMES)
 - Telecommunication and Space Applications
 - Navigation (GNSS and Galileo)
 - Human Space Flight
 - Launchers
 - Space Situational Awareness –SSA
- Development and operation of micro-satellite missions
- Development of technologies, systems, sensors and equipment for space, aeronautics, security and related domains



Thank you for your attention!

