



TÜBİTAK

TURKISH INITIATIVES ON R&D INFRASTRUCTURE

Ebru BAŞAK AKÖZ

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Euro-RIsNet+ Tripling Visit

Key Actors in Turkey


Tübitak

- R&D Funding
- R&D Policy formulation
- Coordination of R&D
- Research
- International Coop. R&D

Ministry of
Development

- National R&D
Infrastructure funding
- e-Transformation Turkey
Project

The Scientific and Technological Research Council of Turkey

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- Established in 1963, TUBITAK is an autonomous public institution, governed by a Science Board.
 - TUBITAK is responsible for promoting, developing, organizing, conducting and coordinating STI.
 - TUBITAK acts as an advisory agency to the Turkish Government on science and research issues.
 - TUBITAK is the secretariat of the Supreme Council for Science and Technology, i.e. the highest S&T policy making body in Turkey.

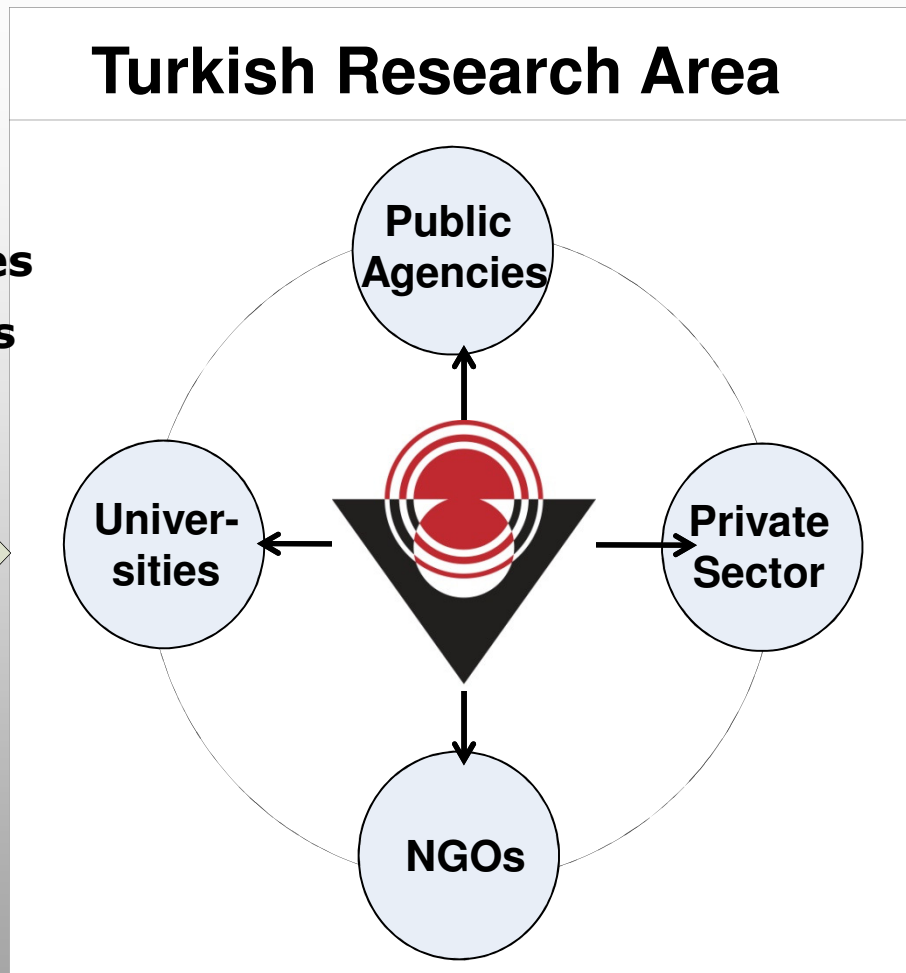
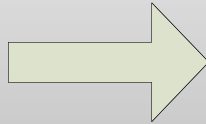
TÜBİTAK

- Enhancing capacity by funding research and researchers
- Encouraging and funding R&D and innovation activities of the business enterprise
- Improving R&D absorption capacity by public procurement
- Supporting national and international scientific and technological collaboration networks
- Enhancing science communication and scientific literacy in society
- Conducting R&D
- R&D infrastructure

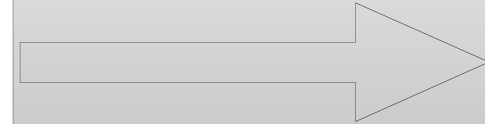


We define Turkish Research Area (TRA) as...

- Aims
- Objectives
- Principles
- Priorities



- Solving problems
- Increasing quality of life
- Enhancing welfare
- Improving competitiveness



TRA 2013 Targets:

GERD: %2 of GDP and FTE R&D Personnel:
150.000

Milestones of Recent STI Policy-1

- National Science and Technology **Strategy Document** - **Vision 2023**
 - Turkish foresight exercise for priority setting
 - Carried out between 2002 and 2004 by consensus of various expert focus groups (more than 1000 experts)
 - Approved by the SCST in March 2005

Milestones of Recent STI Policy-2

- 2005-2010 National Science, Technology and Innovation **Implementation Plan** complemented by:
 - International STI Strategy and Action Plan (2007-2010)
 - National Innovation Strategy (2008-2010)
 - *National HRST Strategy and Action Plan (2012)*
 - *National STI Infrastructure Strategy (forthcoming)*

Milestones of Recent STI Policy-3

The National Science, Technology and Innovation Strategy (UBTYS) 2011-2016

Preparation Process: A Consultative Approach

Workshops, Roundtable Meetings and other mediums for Stakeholder Consultations



UBTYS 2011-2016 Strategic Framework

Mission-oriented approaches in areas with **strong R&D** and innovation capacity

Automotive

Machine Manf.

ICT

Need-oriented approaches in areas with a demand for gaining acceleration

Defense

Space

Energy

Water

Food

Bottom-up approaches including basic, applied and frontier research

Development of Human Resources for STI

(The mobilization of human capital towards the strategic approach)

Stimulate the Transformation of Research Results into Products and Services

(For research results to create added value to the economy based on new products, process and services)

Diffusion of a Multi-Actor and Multi-Discipline R&D Cooperation Culture

(To steer the system towards intersectoral and interdisciplinary interactions)

Invigoration of the Role of SMEs within the National Innovation System

(To integrate more SMEs into being R&D and innovation actors in the system)

Boost the Contribution of R&D Infrastructures to TARAL's Knowledge Production

(For existing and new research infrastructure to provide a foundation to the strategic approach)

Activation of International STI Cooperation in the Mutual Interests of the Country

(For international STI cooperation to be formed in ways that support the strategic approach)

Ministry of Development

Ministry of Development

SPO is one of the main responsible institutions regarding the science & research policy development process.

Ministry of Development is responsible for;

- Providing consultation for the government about economic, social and cultural policies and targets,
- Coordinating & guiding the implementations of the ministries and remaining public institutions' activities,
- Providing perspective for the private sector,
- Forming the public investment budget and monitoring and evaluating.

MD Funds R&D Infrastructure via:

Development Plans

E-Transformation Turkey
Project

10th Development Plan (2013-2020)

Main objective:

- “to increase the capability of the private sector to create innovation.”

Main Policy Priorities:

- Support will be given to improving the university-industry collaboration and the use of R&D human resources and infrastructure at universities by the private sector.
- Establishment of research institutes and/or centers by private sector in selected priority fields will be encouraged.
- The researcher work force will be improved in terms of quality and quantity and employment of researchers will be encouraged in the private sector.

Knowledge Society Strategy(2011-2015)

- Renewal of Knowledge Society Strategy for 2011-2015 is on progress
- It will replace 2006-2010 Knowledge Society Strategy Document
- More participation from all stake holders
- E-infrastructures will be an important complement
- In the responsibility of Prime Ministry Information Society General Directorate

Policies

- Legal and institutional regulations to establish an efficient national innovation system.
- Research infrastructure of universities, research institutions and other institutions will be improved based on priority areas.
- Science and technology awareness in the society and the number of qualified researchers will be increased.
- Innovation infrastructure, instruments and initiatives such as TDZs, technology transfer centers, and enterprise incubators will be supported.

Basic Characteristic of Research Centers

Relation with country and region priorities

Focused on public and private sector needs

Multidisciplinary

Open to all researchers

Selection Criteria

Strategic Importance of the RI

- R&D Policy
- Strategic Plans
- Regional Needs

Competence of the team

- RI Management Capacity
- Reputable scientific team

Sustainability of the RI

- Required Legal Base
- Cooperation with Private and other actors
- Open Access

Academic research

- **Target area:** Researchers from universities
- **Cost of running:** 6-10% of initial investment, (1/3 energy and maintenance; 2/3 personnel)
- **Who pays:** Initial investment by Ministry of Development, running costs by university
- **Who plans the future development:** Owner of the e-infrastructure plans and negotiate with Ministry of Development

Research for Public Affairs

- **Target area:** Better policies for public affairs
- **Cost of running:**
 - Generally: 6-10% of initial investment, (1/3 energy and maintenance; 2/3 personnel)
 - For health: overall effective lifetime running cost amount up to 3-4 times initial investment
- **Who pays:** Initial investment by Ministry of Development, running costs by Ministry
- **Who plans the future development:** Owner of the e-infrastructure plans and negotiate with Ministry of Development

E-infrastructures

- Academic research
 - TR-GRID (10 M Euro)
 - HPCC (25 M Euro)
 - 15 Smaller scale HPCs (each 0,5 to 2 M Euro)
- Research for Public Affairs (esp. Defence, Health, Agriculture & Rural Affairs)
 - HPCs
- Networking (20 M Euro per year)
- Digital Learning Resources (2 M Euros per per year)

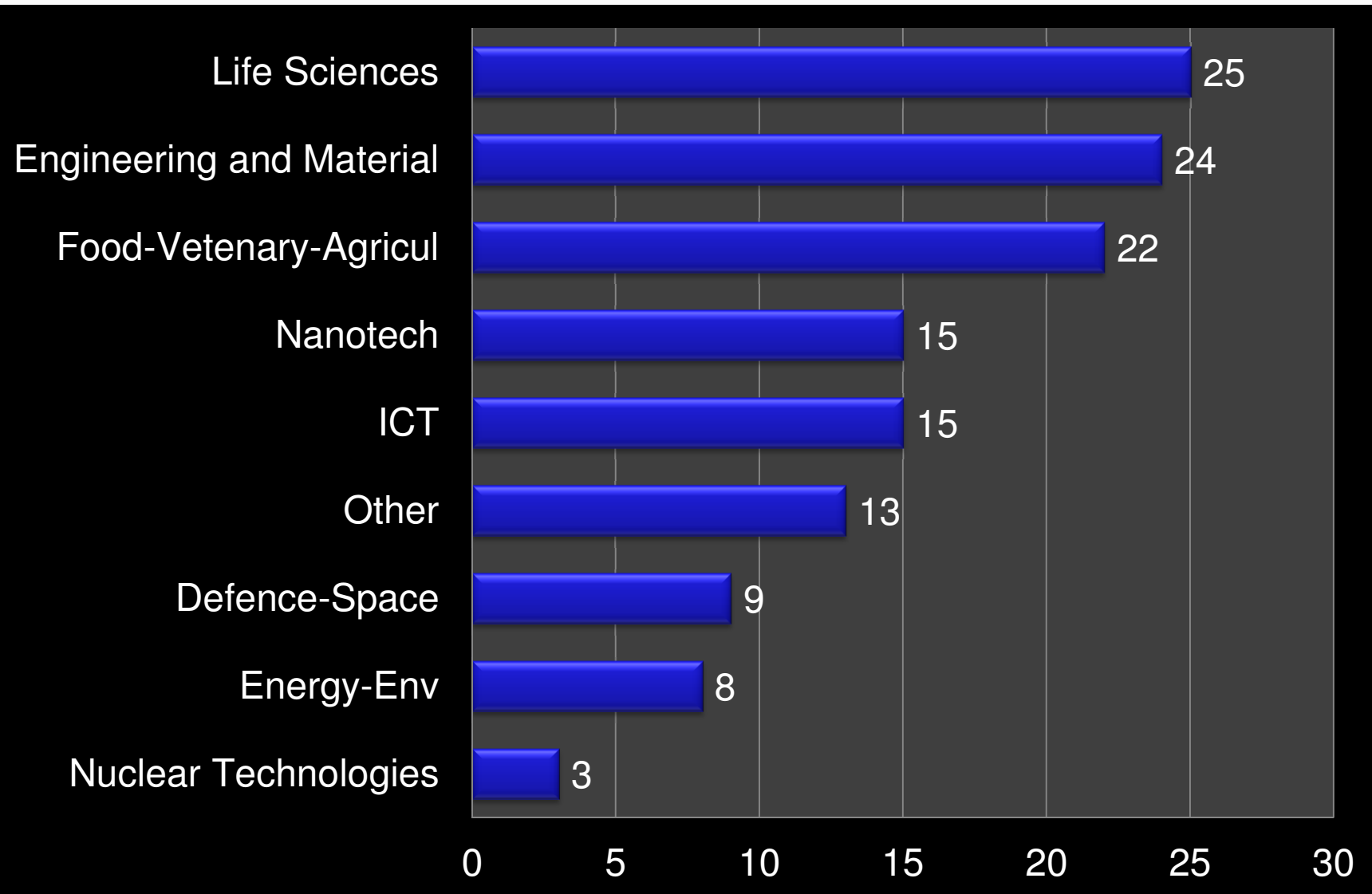
Some Important Projects

- Biotechnology Institute - Ankara University (20 million €)
- Institute of Materials Science and Nanotechnology - Bilkent University (16 million €),
- Advanced Technologies In Engineering Istanbul Technical University (30 million €),
- Industrial Micro-Electro-Mechanical Systems (MEMS) – Middle East Technical University (10 million €),
- Turkish Accelerator Center, TAC – Ankara University with 9 universities (10 million €),

Research Centers

- Hybrid Automotive Technologies
- Agricultural Biotechnologies
- Biomedical Material Technologies
- Solar Energy Technologies
- Advanced Textile Technologies
- Nanomedicine

2003-2010: 134 Thematic Advanced Research Centers



Turkish Science e-Infrastructure Advisory Board

The Advisory Board was launched on October 2010 with the approvement of TUBITAK Science board.

- The main responsibility of the advisory board is to :
 - recommend on national science e-infrastructure policy for Turkey
 - review the developments at the international area
 - recommend on international cooperation possibilities
- The secretariat of TRUBA is under the responsibility of TUBITAK ULAKBIM.
- The advisory board Representatives are from Ministry of Development, TUBITAK, main universities, related public and private organizations.

Room for Improvement ?

- more coordination & cooperation among national and international actors
- better reach to industry
- No RI Roadmap yet!

how can European policy alignment help?

- acts as a catalyst for coordination and creates awareness among funding and policy formulating organizations

Sabancı University Nanotechnology Research Center(SUNUM)



LifeSci: Bogazici University



individually ventilated cages

