



REPUBLIC OF TÜRKİYE
MINISTRY OF INDUSTRY
AND TECHNOLOGY

NATIONAL
TECHNOLOGY
INITIATIVE



TÜBİTAK

TÜBİTAK

The Scientific and Technological Research Council of Türkiye

Supports

- Academy Project Support
- Industrial Project Assistance
- Business Assistance
- Scientific Researcher Support

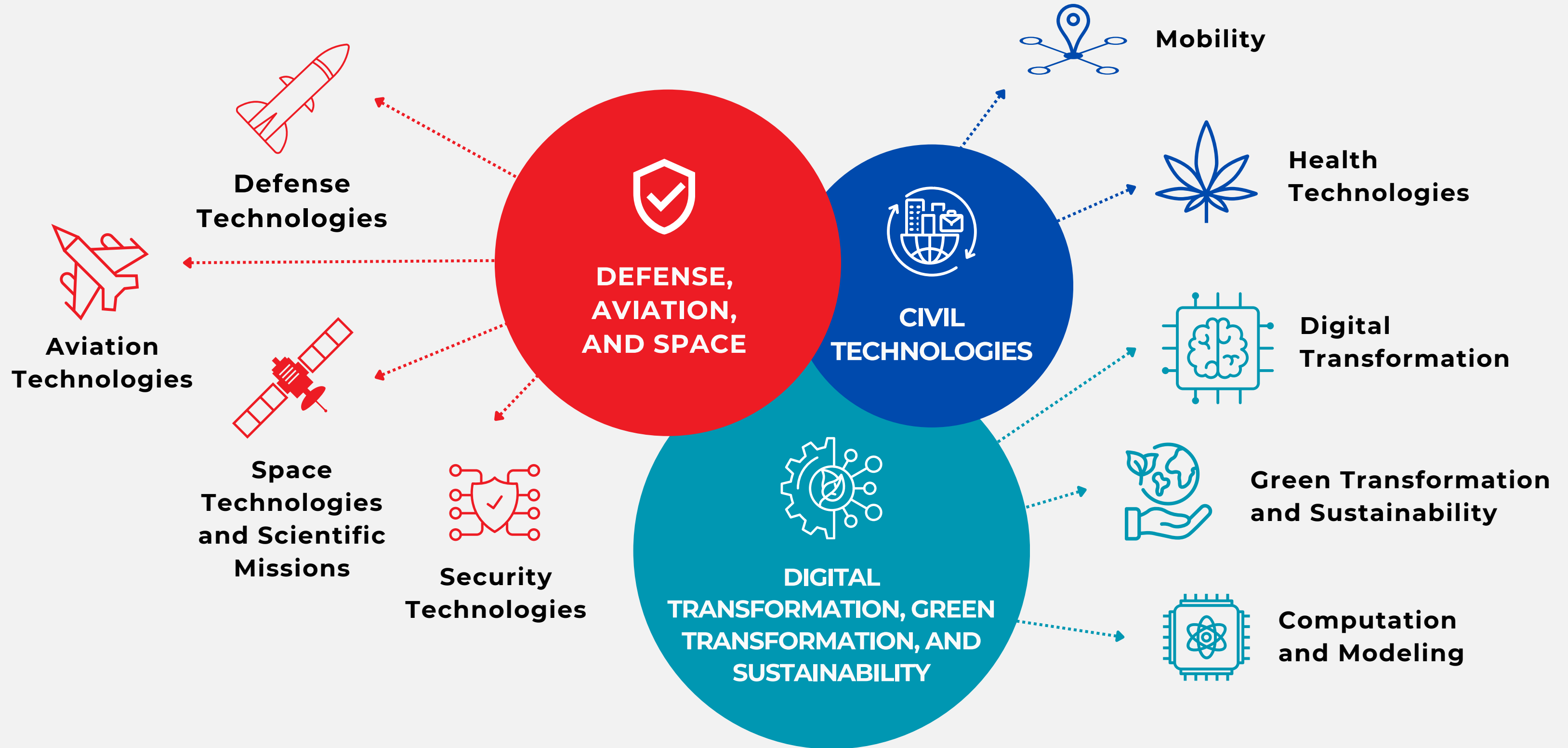
Conducts Science and Society activities

- Scientific Journals
 - Bilim Teknik, Bilim Çocuk, Meraklı Minik
- Science Fairs, Festivals, Lectures, Camps
- Science Centers
- DeneYap Technology Workshops
- TEKNOFEST

Develops

- Informatics and Information Security Research Center (**BİLGEM**)
- Marmara Research Center (**MAM**)
- Defense Industry Research and Development Institute (**SAGE**)
- National Metrology Institute (**UME**)
- Rail Transport Technologies Institute (**RUTE**)
- Space Technologies Research Institute (**UZAY**)
- Turkish Management Sciences Institute (**TÜSSİDE**)
- Institute of Basic Sciences Research (**TBAE**)
- National Academic Network and Information Center (**ULAKBİM**)
- **BUTAL** - Bursa Test and Analysis Laboratory

TÜBİTAK's Major Competencies





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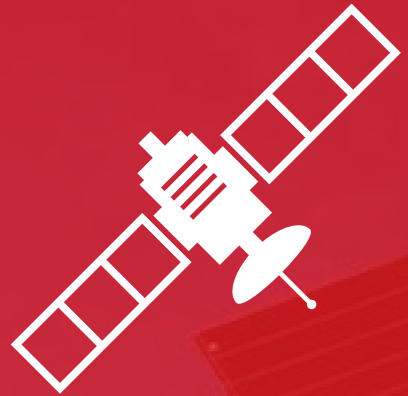
TÜBİTAK

Featured Competencies

We are exploring space, developing critical components



**DEFENSE,
AVIATION,
AND SPACE**



**Space
Technology and
Scientific
Missions**



- Türksat 6A
- Göktürk-3 Sar Satellite Project
- İMECE 2-3
- Satellite Solar Panel
- Manned Space and Science Missions
- Moon Research Project (AYAP)

KAAN Turkish Fighter



DEFENSE,
AVIATION,
AND SPACE



Aviation
Technologies

- Multi-Core Real-Time Operating System

- Flight Control and Aircraft Management Computer
- Central Management Computer
- Task Management Computer

- Life Support System
- Explosion Prevention System

- Design of Radar Absorbing Multilayer Canopy
- Design of Frequency Selective Radome

- Avionics Interface Units
- Deterministic Network

- Electromagnetic Modeling and Application of Frequency Selective Surfaces

- High Speed Network
- Middleware



EMC
Test
System



Antenna
Test System
(NFRTF)

SOM A/B1/B2
SOM M
HGK 82/83/84 NEB

GÖKHAN
KGK 82/83
GÖKDOĞAN/BOZDOĞAN

We are training artificial intelligence and using it in our applications



**DIGITAL
TRANSFORMATION,
GREEN
TRANSFORMATION,
AND SUSTAINABILITY**



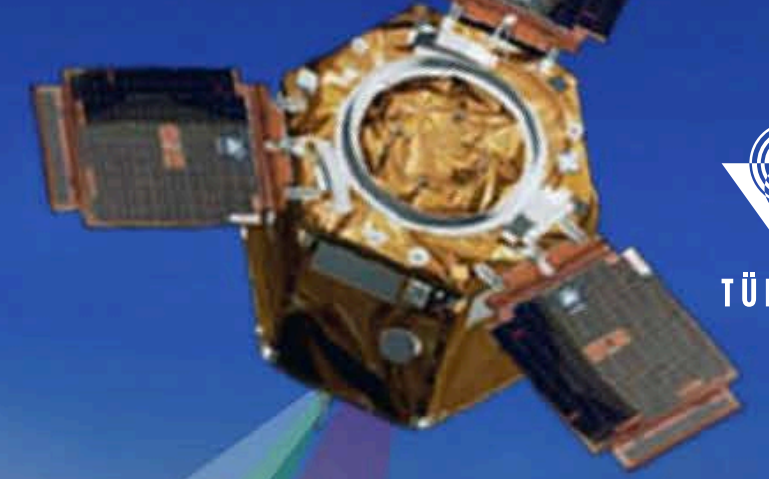
**Digital
Transformation**

Data 02

Data 03

- **Integrated Public Financial Management System**
- **Turkish Large Language Model**
- **Digital Government Middleware Project**
- **Digital Transformation Assessment Model (DDX)**
- **AI Co-Development Laboratories - AI Project Calls for Public and Private Sectors**

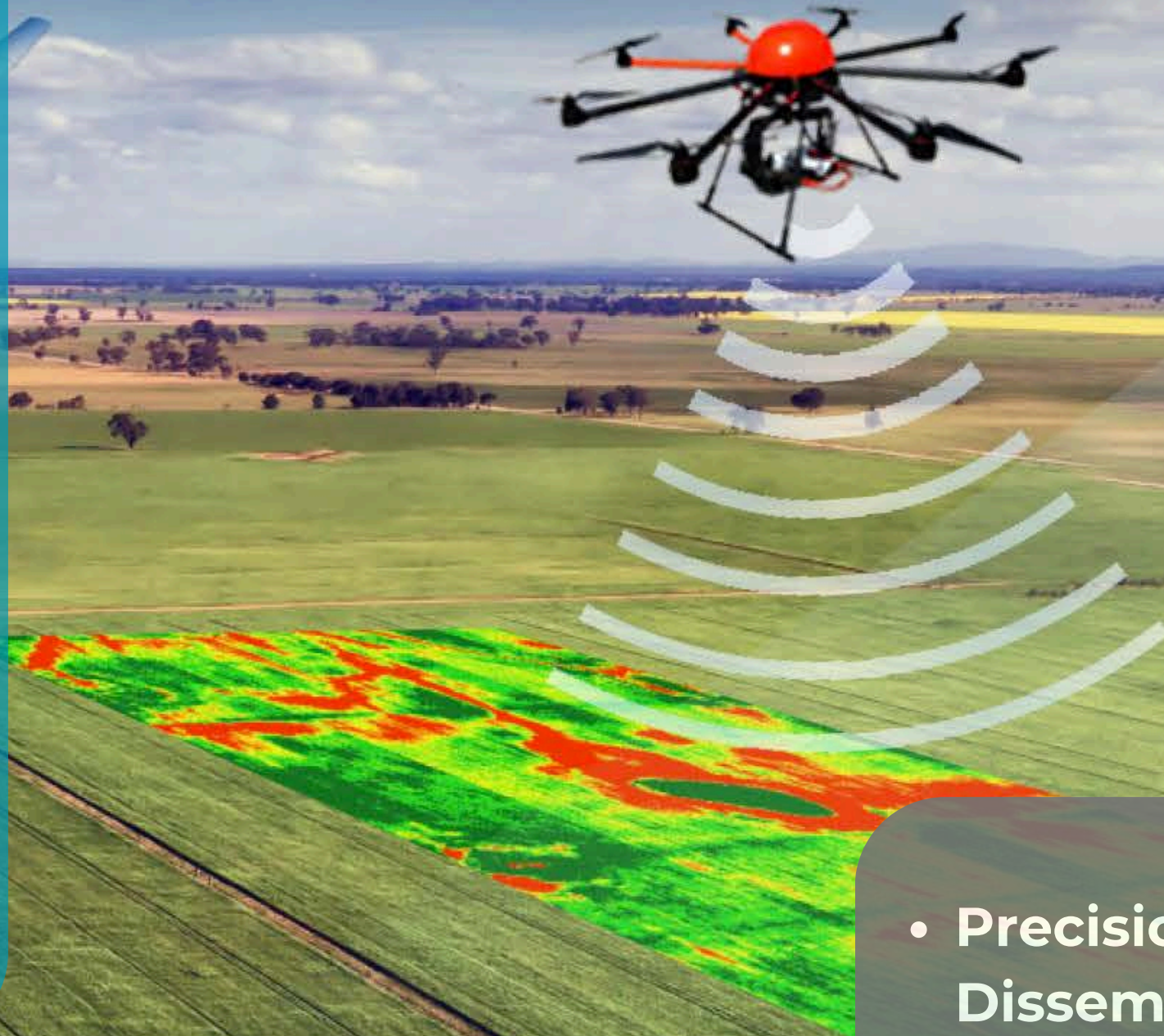
We are mobilizing technology for efficiency in agriculture



DIGITAL
TRANSFORMATION,
GREEN
TRANSFORMATION,
AND SUSTAINABILITY



Green
Transformation
and
Sustainability



- Precision Agriculture and Sustainable Practices Project Dissemination (HASSAS)
- National Land Cover Classification System (NLCSS)

We are working for a cleaner world



**DIGITAL
TRANSFORMATION,
GREEN
TRANSFORMATION,
AND SUSTAINABILITY**



**Green
Transformation
and
Sustainability**

- **Carbon Footprint Calculations**
- **Initiatives/solutions focused on the green transformation of industry**



DIGITAL
TRANSFORMATION,
GREEN
TRANSFORMATION,
AND SUSTAINABILITY



Green
Transformation
and
Sustainability

We are contributing to energy diversity with the
hydrogen valley

- Research on Hydrogen

In every vital area, TÜBİTAK works,
develops, and supports



DIGITAL
TRANSFORMATION,
GREEN
TRANSFORMATION,
AND SUSTAINABILITY



Green
Transformation
and
Sustainability

- Seismology Research Center
- Seismic risk
- Earthquake risk evaluation
- Aftershock monitoring

We provide the digital identity and security infrastructure for TOGG



CIVIL
TECHNOLOGIES



Mobility

- Intelligent Automotive Key Management System Project

We are enhancing the competitiveness of the food sector together



**CIVIL
TECHNOLOGIES**



**Health
Technology**

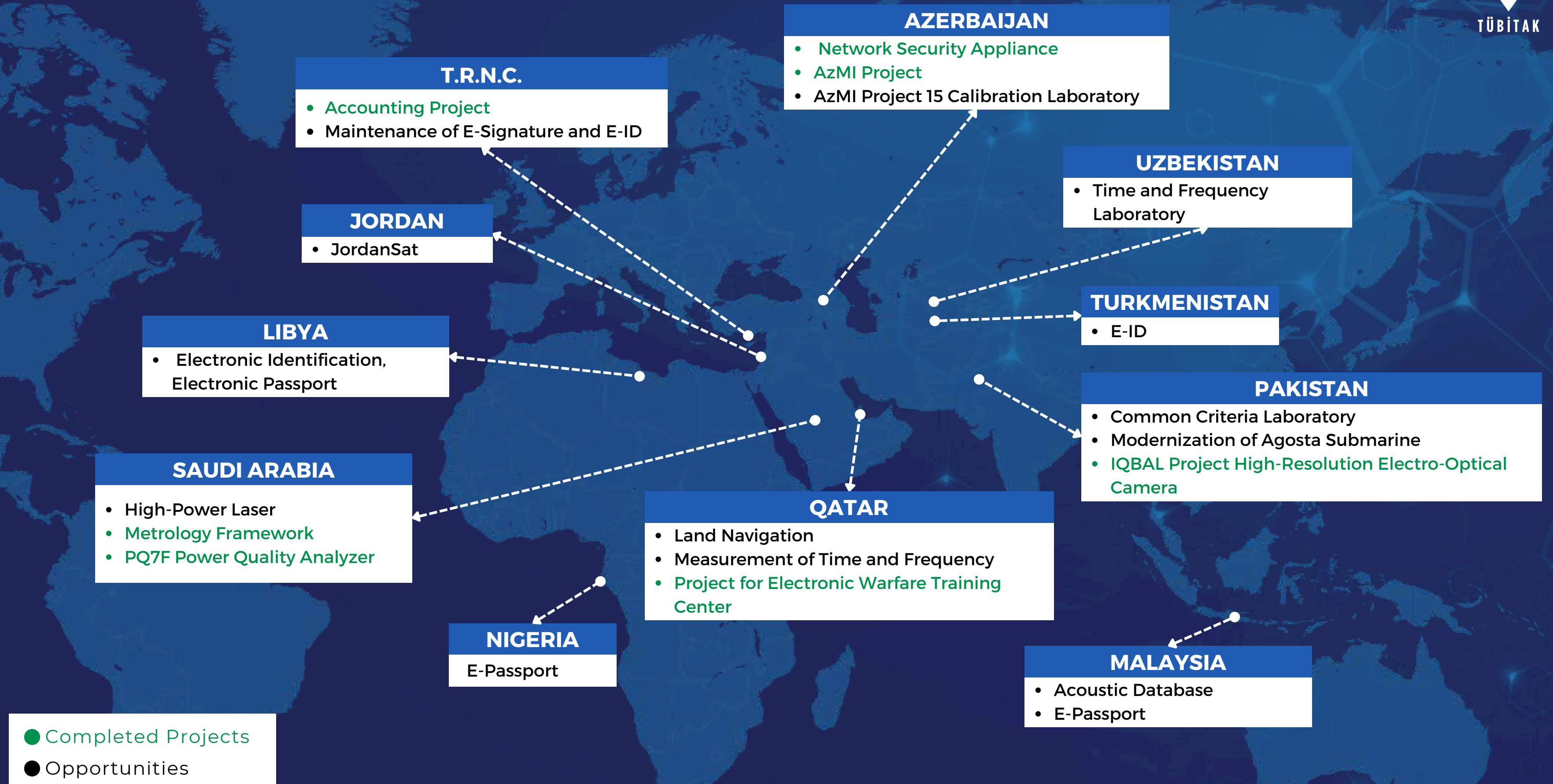


**GIDA ENSTİTÜSÜ
GIDA İNOVASYON MERKEZİ**

**TÜRKİYE GIDA İNOVASYON
PLATFORMU**

- Türkiye Food Innovation Platform (TÜGİP)
- Food safety
- Dietary supplements
- Additive-free food formulas and technology packages (yogurt, shalgam, etc.)

Global Initiatives





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INITIATIVE



LDC

Least Developed Countries

Cooperation Opportunities

LDC

Least Developed Countries

Focus Areas



Investing in LDCs to leave no one behind



Leveraging the power of Science, Technology and Innovation for the Sustainable Development of LDCs



Structural transformation as a driver of prosperity in the LDCs



Enhancing the participation of LDCs in international trade and regional integration



Addressing climate change, environmental degradation, recovery from the pandemic and building the resilience of LDCs against future shocks



Mobilizing international solidarity, reinvigorated global partnerships and innovative tools and instruments: a march towards sustainable graduation



T.C. SANAYİ VE
TEKNOLOJİ BAKANLIĞI

MİLLİ
TEKNOLOJİ
HAMLESİ



Institute Presentations

Marmara Research Center (MAM)



**ENERGY
TECHNOLOGIES**

**MATERIAL
TECHNOLOGIES**



**CLIMATE CHANGE AND
SUSTAINABILITY**

LIFE SCIENCES



Marmara Research Center (MAM)



OUR CENTERS OF EXCELLENCE

- AVIATION MATERIALS
- BIOMATERIALS, BIOMECHANICS and BIOELECTRONICS
- PHOTOVOLTAICS
- UNDERWATER ACOUSTICS
- ENERGETIC MATERIALS
- BIOTECHNOLOGICAL DRUGS
- HERBAL DRUGS
- ANALYSIS KIT DEVELOPMENT FOR FOOD ANALYSIS
- ADVANCED COAL CONVERSION TECHNOLOGIES



**BIOLOGICAL AND
CHEMICAL NATIONAL
TEST CENTER**



**MEDICAL
BIOTECHNOLOGY
EXCELLENCE CENTER**



**FOOD INNOVATION
CENTER**



**NATIONAL
CARBON-14
DATING LABORATORY**

Renewable Energy & Solar Powered Water Treatment System



- Green hydrogen and fuel cell technologies for off-grid applications
- Biomass Pyrolysis
- Blue Hydrogen from Coal/Biomass Mixture
- Advanced Polymer Composites for Energy Industry
- Metallurgical Product Development for Industry

Sustainable waste management practices

- Bio technology integrated with anaerobic digestion process
- Domestic Waste water Treatment
- Desalination & Cavitation Technology
- Effective irrigation systems
- Soil protection technologies

Solar Inverters; Central Inverter, String Inverter, Microinverter

- **Hydropower Units Parallel to Pressure Reduction Equipment**

Informatics and Information Security Research Center (BİLGEM)



**National Research
Institute of Electronics
and Cryptology**

**Information
Technologies Institute**

**Advanced
Technologies Research
Institute**

**Cyber Security
Institute**

**Software Technologies
Research Institute**

**Artificial Intelligence
Institute**

Informatics and Information Security Research Center (BİLGEM)



Avionics



Cryptographic Systems



Cyber Security



Artificial Intelligence



Semiconductor
Technologies



Naval Defense



Electronic Warfare



Blockchain & Metaverse



Digital Transformation
and Software



Digital Assets and Cloud



Quantum Technologies



Electro and Optical
Communication



Sensors & Radar



High Energy Laser
Systems



Mobility

Electronic ID, Electronic Signature Technologies

- Cloud Technologies
- Cyber Security Solutions & Trainings
- Hardware Security Module (HSM)

National Metrology Institute (UME)



**Physics Group
Laboratories**

**Mechanics Group
Laboratories**

**Chemistry Group
Laboratories**

Establishment of turnkey metrology laboratories

- **Carrying out feasibility studies for establishment of national quality infrastructure meeting requirements of international agreements**
- **Preparation of roadmap and strategy for competitive national quality infrastructure**
- **Integration of metrology laboratories to international metrology system**
- **Organization of bilateral comparisons of measurement standards**
- **Provision of calibration services, training and consultancy services**
- **Development of metrological equipment/instruments**

BUTAL - Bursa Test and Analysis Laboratory



**Material-Textile
Laboratory**

**Chemistry-
Environment
Laboratory**

**Food and Agricultural
Chemistry Laboratory**

International Training Programs



- **Technical Textiles Industry**
- **Cleaner Technologies in Leather Production**
- **Accreditation of Testing Laboratories: EN ISO/IEC 17025**
- **Eco Production and Waste Management in Leather Industry**
- **Innovative Textiles**



T.C. SANAYİ VE
TEKNOLOJİ BAKANLIĞI

MİLLİ
TEKNOLOJİ
HAMLESİ



TÜBİTAK

Thank You