ULAŞTIRMA DENİZCİLİK VE HABERLEŞME BAKANLIĞI

TÜRKSAT

TÜRKSAT 6A

FIRST NATIONAL COMMUNICATION SATELLITE OF TURKEY

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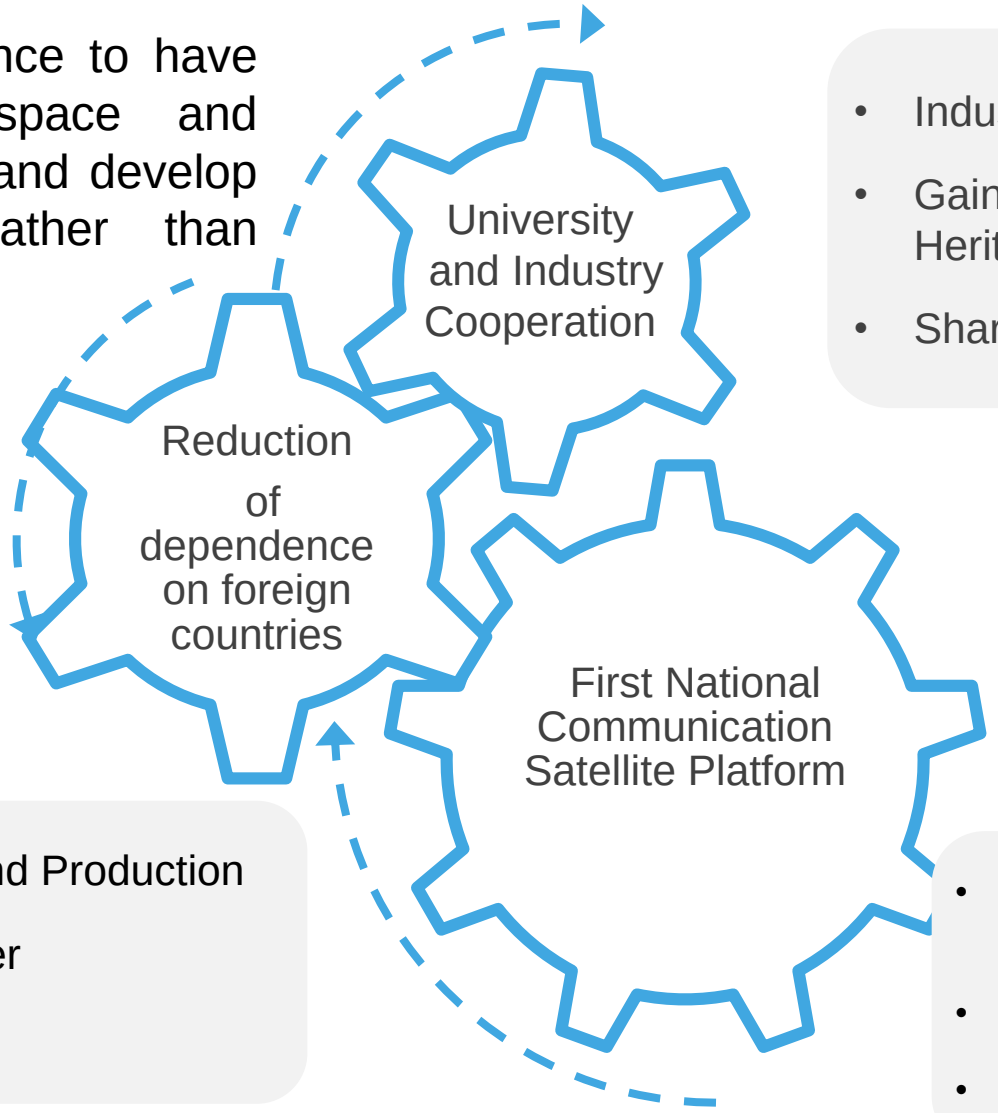
Objectives of TÜRKSAT 6A Project

TÜRKSAT

It is of great importance to have the capability of space and satellite technologies and develop them in Turkey, rather than acquiring from abroad.



- Industrial Participation
- Gain Experience and Heritage
- Sharing of Know- how

- Domestic Design and Production
- Educated Manpower
- Infrastructure

- National Commercial Equipment
- National Platform
- High Competitiveness

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Objectives of TÜRKSAT 6A Project

TÜRKSAT

To be one of the country which have GEO satellite production capability.

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TÜRKSAT 6A National Communication Satellite

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"TÜRKSAT 6A National Communication Satellite» Project Contract and its "Additional Protocol" were signed between the Ministry of Transport and Infrastructure of the Republic of Turkey, TÜBITAK (Scientific and Technological Research Council of Turkey) and TÜRKSAT.

The contract was signed on 15 December 2014 with the attendance of Republic of Turkey's President Recep Tayyip ERDOĞAN and the Project was officially started.

TÜRKSAT

TÜBİTAK UZAY

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TURKSAT 6A National Communication Satellite

Ministry of Transport and Infrastructure of the Republic of Turkey, and TÜRKSAT involves in TURKSAT 6A Project as customer.

TUBİTAK UZAY is Prime Contractor and TUSAŞ, ASELSAN and CTECH are located as Sub- Contractor in Project.

TÜRKSAT is the end-user of the TURKSAT 6A Satellite.

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Project Organization and Work Pack Distribution

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TÜBİTAK UZAY

- Project management
- Systems Engineering
- Platform Sub Systems
- Integration
- Ground System

TUSAŞ

- Structral Sub System
- Thermal Control Sub System
- Harness
- Chemical Propulsion Sub System
- USET operation

ASELSAN

- Payload Ku – X Band

CTech

- Telemetry Telecommand Ranging SW

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Technology Transfer Programs (TTP)

TÜRKSAT

- Technology Transfer Program in Satellite Communication Technologies was first implemented in the scope of TÜRKSAT 3A Satellite Project in Turkey.

- Within the scope of TÜRKSAT 3A program, 16 Turkish engineers participated in Satellite Design, Production and Testing activities in France.

- Within the scope of TÜRKSAT 4A and TÜRKSAT 4B Satellite Programs, 15 TÜRKSAT A.Ş. staff have participated in the assembly, integration and testing process of our satellites and have received training on them.

- TÜRKSAT engineers, who have gained knowledge and experience within these technological transfer programs, participate and actively work in the TURKSAT 6A Project according to their specializations.

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Model Philosophy

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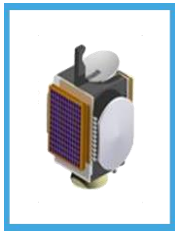
4.FM
Flight Model

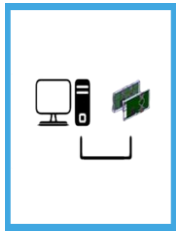
3.EM
Engineering Model



National Satellite Platform

Scalable Architecture
High Reliability
Domestic Equipment

1.STM
Structural and Thermal Model



2.EEM
Electrical Model

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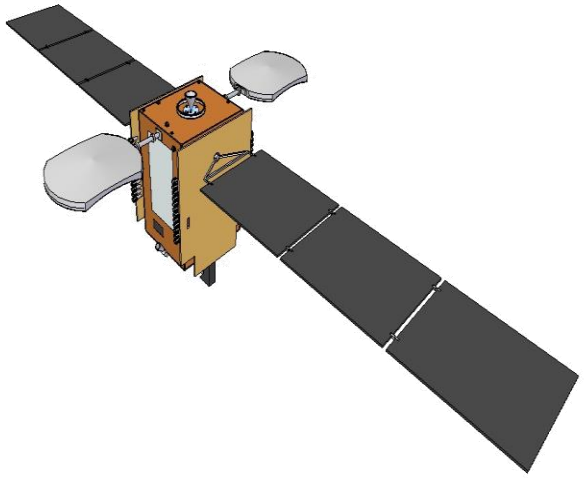
TÜRKSAT 6A General Features

TÜRKSAT

Features	
Orbit	42° East Geostationary Orbit
Payload	20 Ku-Band Transponders X-Band Transponders
Mission Life	> 15+1 years
Reliability	> %80 (EOL)
Targeted Launcher Compliance	Ariane 5 Proton Falcon, etc.



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Space Systems Integration and Test Center (USET)

TÜRKSAT

- Integration and test of our National Communication Satellite TÜRKSAT 6A is produced in the Space Systems Integration and Test (USET) Center, which was opened on 21 May 2015,

- USET center was built by SSB (Presidency of Defense Industries), and TÜRKSAT.

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Space Systems Integration and Test Center (USET)

TÜRKSAT

- Multiple satellites can be assembled, integrated and tested in the USET Center.
- USET Center has 3800 m2 clean room conditions.
- In this facility,
  - Physical Properties Measurement Tests
  - Thermal vacuum test
  - Vibration test,
  - EMI/EMC tests, acoustic tests
  - Antenna tests

  can be carried out for all satellites with 3.5 t dry mass and 3m x 3m x 6m size.

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TÜRKSAT-6A National Communications Satellite Project Actual Status

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Design, production, development and testing activities of the satellite are still ongoing.

TÜRKSAT-6A National Communications Satellite is planned to be completed in 2020 and to be launched in 2021.

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