

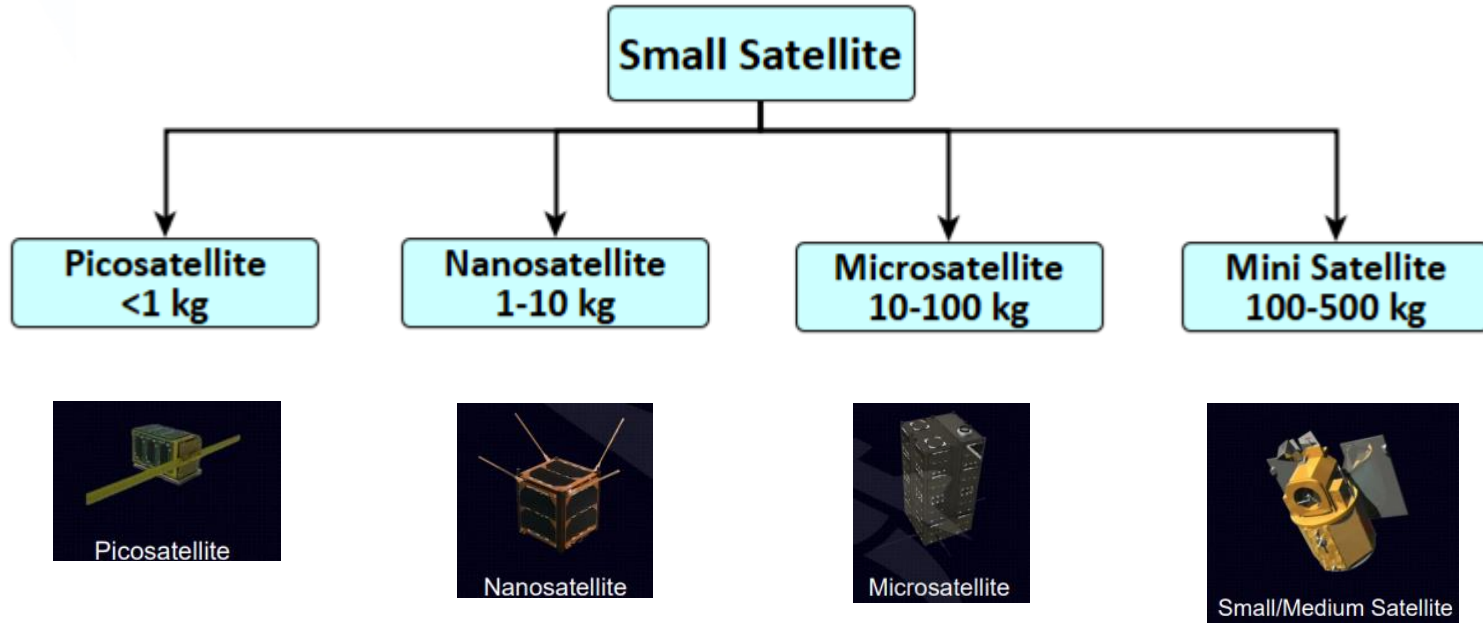


STM

**An Overview: Trends in
Small Satellite Design and
Application**

29.11.2018

Small Satellite Classifications (Mass)



Small Satellite Classifications (Missions, Payloads and Applications)



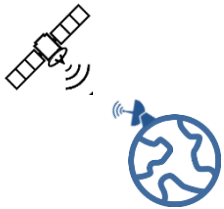
Earth Observation/
Remote Sensing



Electro-optic Imaging
SAR (Synthetic Aperture Radar)



Urban Planning
Disaster Monitoring
Land Management



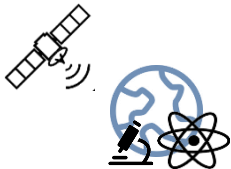
Communications



AIS (Automated Identification System)
ADS-B (Automatic Dependent Surveillance-Broadcast)
IoT (Internet of Things)



Ship/Airplane Tracking
Asset Tracking

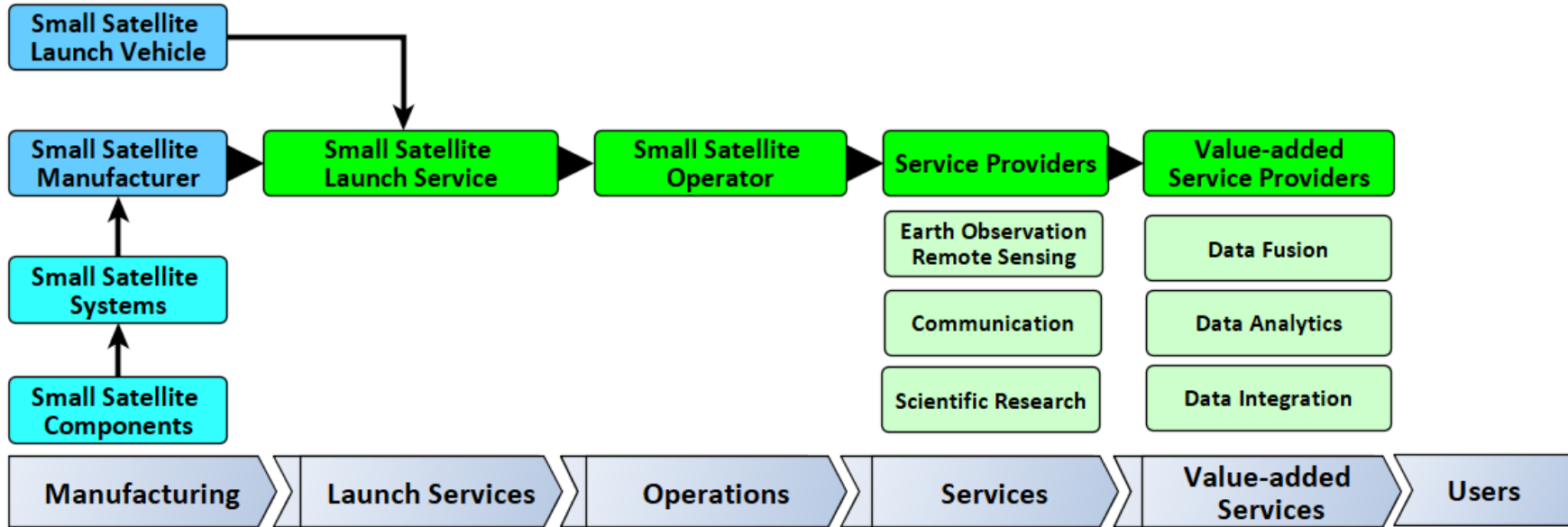


Scientific Research

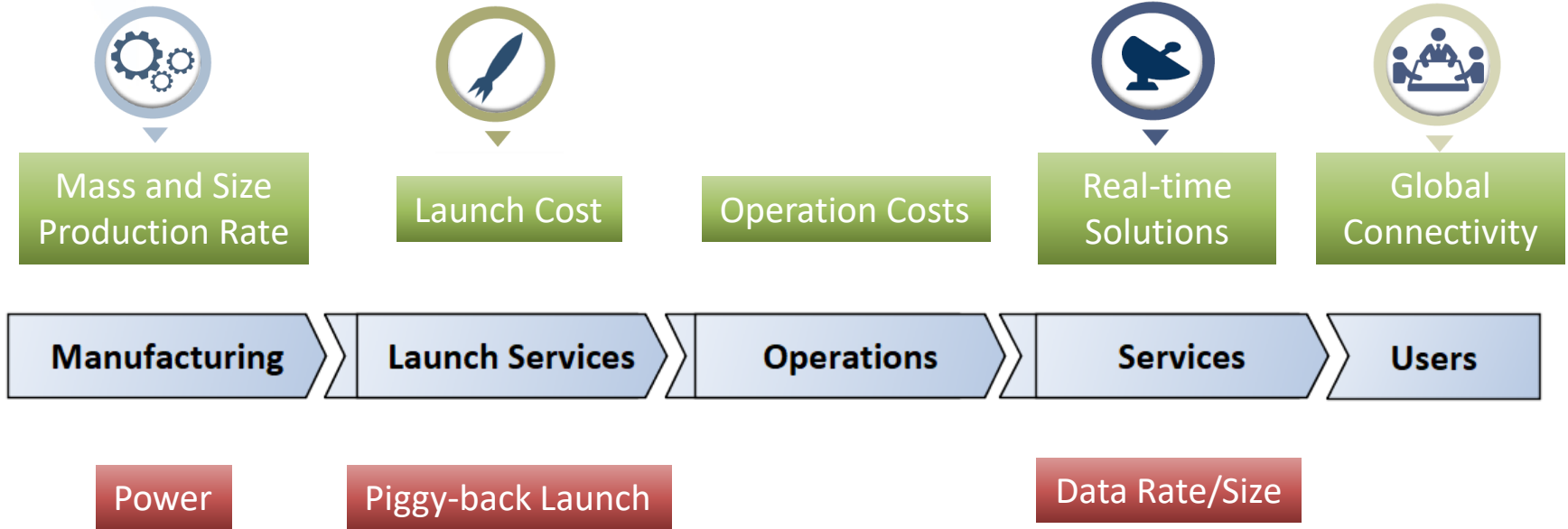


Technology Demonstration
Novel Applications

Participants in Small Satellite Value Chain



Small Satellite Market Drivers/Restraints



Small Satellite Market

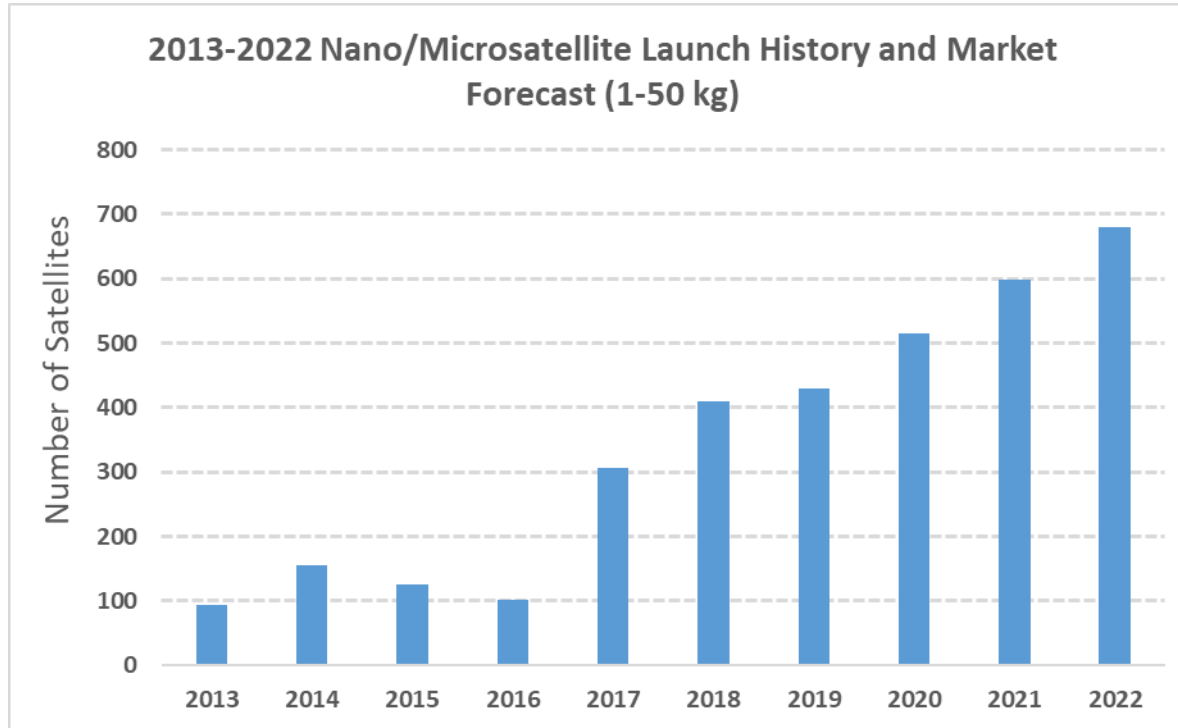
2017

- ▶ Over 300 nano/microsatellites
- ▶ 205 % increase in nano/microsatellites launched compared to 2016

2018+

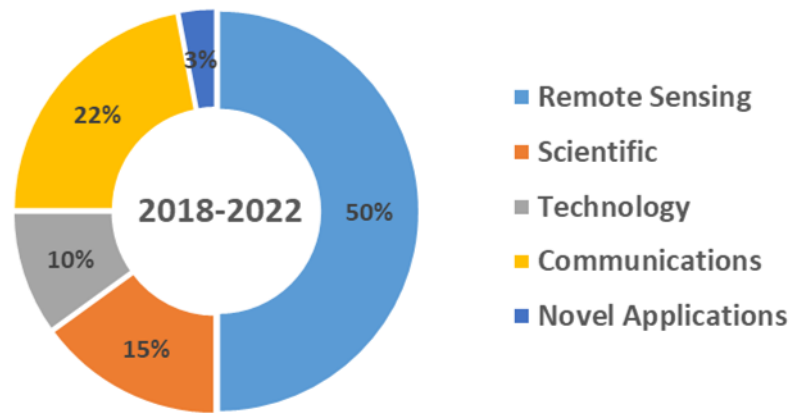
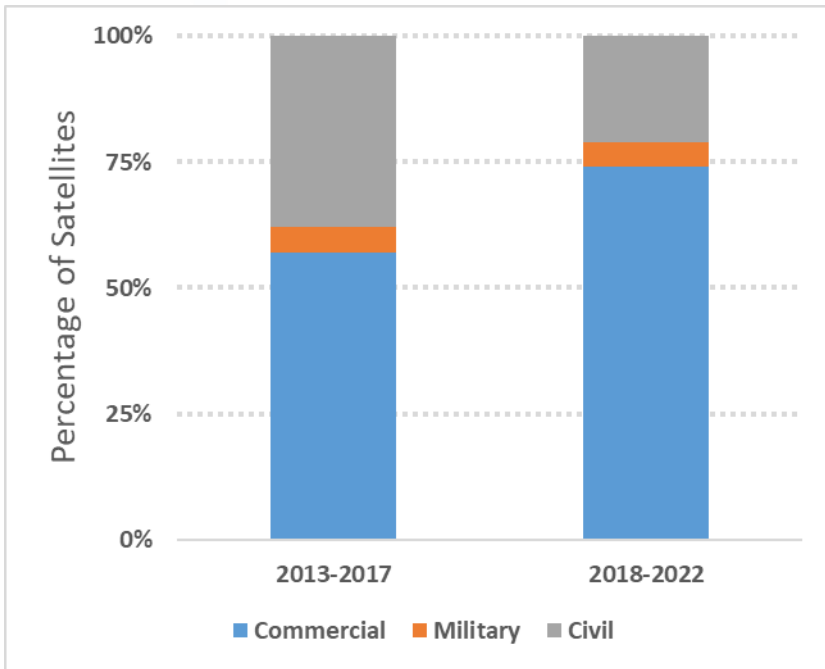
- ▶ Approximately 270 nano/microsatellites expected in 2018
- ▶ More than 2600 nano/microsatellites estimated in the next 5 years

Small Satellite Market Forecasts



Source: SpaceWorks

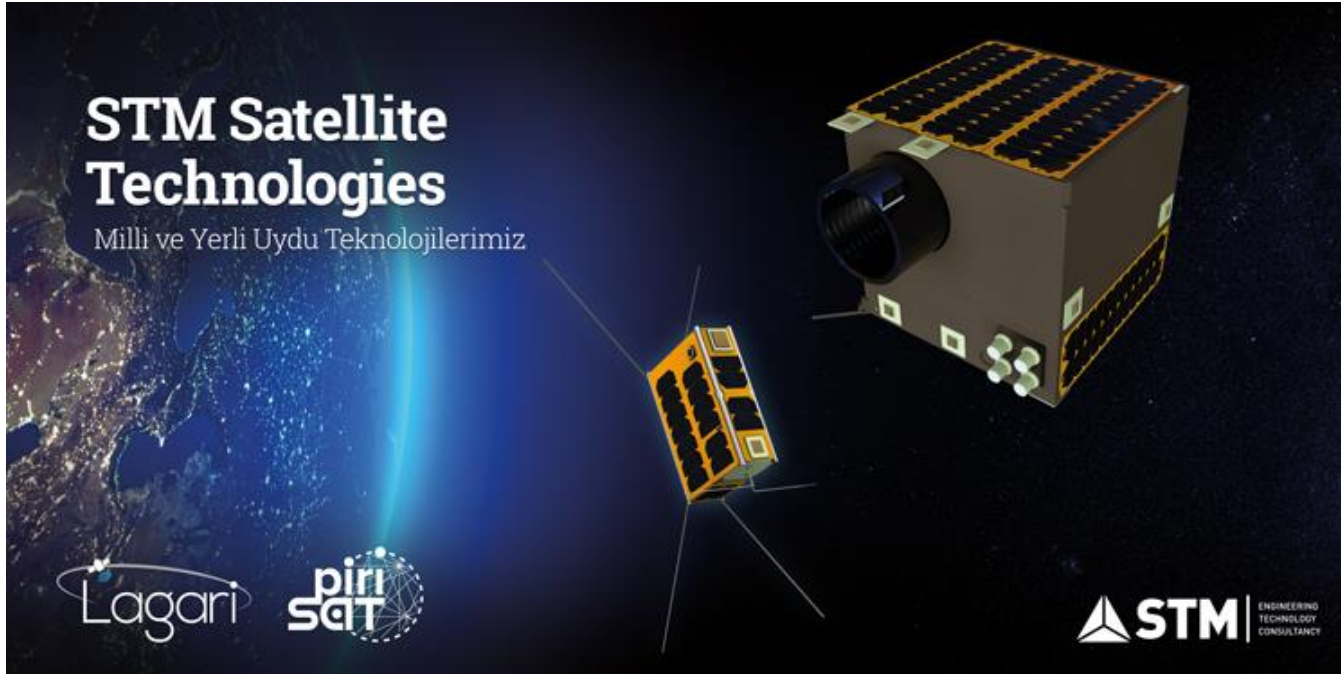
Small Satellite Trends by Application



Source: SpaceWorks



STM in Small Satellite Industry



STM Satellite Roadmap



Expected Launch:
2019 Q4/2020 Q1



Planned Start:
Q3 2019



Expected Launch:
2019 Q4/2020 Q1



Planned Start:
Q1 2020

Key Points

- ▶ Companies with standardized and integrated solutions, meeting satellite constellation requirements, will lead the small satellite manufacturing market.
- ▶ By 2025, more than 20 launch vehicles will provide faster access to space by enabling small satellite single-manifest launch services.
- ▶ Projections for market potential shows up to 2,600 nano/microsatellites will be launched over the next 5 years.
- ▶ Commercial Earth observation and remote sensing constellations are expected to make up 50% of the market over the next 5 years; rapidly growing communications constellations are expected to account for an additional 20% of the market
- ▶ The future of the nano/microsatellite market will depend largely on the ability of operators to secure capital in the near term and create sustainable customer relationships in the long term



MÜHENDİSLİK | TEKNOLOJİ | DANIŞMANLIK

STM Savunma Teknolojileri Mühendislik ve Ticaret A.Ş.
Mustafa Kemal Mahallesi 2151.Cadde No:3/A 06530
Çankaya / Ankara / TÜRKİYE

t : 0 312 266 35 50 f : 0 312 266 35 51

www.stm.com.tr

© STM 2018
All Rights Reserved

Bu doküman ve içerdiği tüm bilgiler STM'nin fikri mülkiyetidir. Bu dokümanın dağıtımını veya sunumu ile bu haklar ortadan kalkmış olmaz. STM'nin yazılı izni olmadan bu dokümanın ve içerdiği bilgilerin üçüncü kişilere aktarımı, çoğaltımı ve dağıtımı yapılamaz. Bu doküman ve içeriği hazırlanma amacının dışında kullanılamaz.

This document and all information contained herein is the sole property of STM No intellectual property rights are granted by the delivery of this document or disclosure of its content. This document shall not be reproduced or disclosed to a third party without the express written consent of STM This document and its content shall not be used for any other purpose other than for which it is supplied.