



中 国 国 家 航 天 局  
CHINA NATIONAL SPACE ADMINISTRATION

# CHINA'S SPACE ACTIVITIES TOWARDS 2030



UN/UAE High Level Forum

“Space as a driver for socio-economic sustainable development”

SPACE ACCESSIBILITY SESSION

UAE-Dubai

Ms. Hui JIANG  
Director of International  
Cooperation

22nd November, 2016

◆ MULTI-POLARIZATION

◆ GLOBALIZATION

◆ INFORMATIZATION



**SPACE TECHNOLOGY**

**SPACE APPLICATION**

**SPACE SCIENCE**

# 2016

- 60 Anniversary
- Space Day of China

4.24





2016

# 2016

- New Generation Launch Vehicle
- New Launch Sites



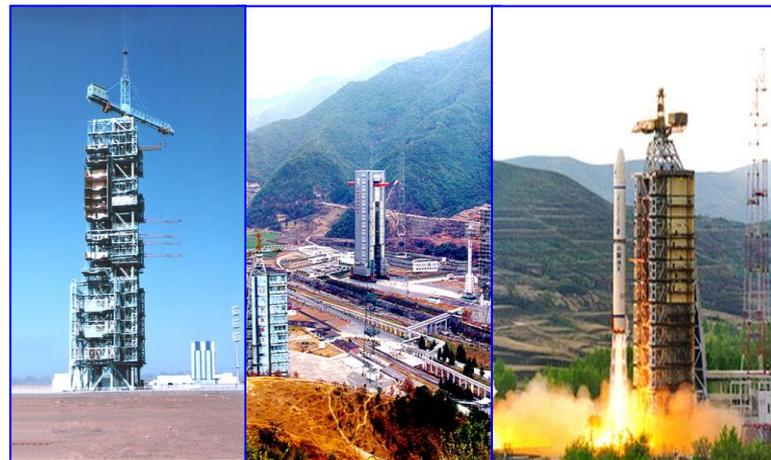
# Space Transportation System

Capability from technology research to system production



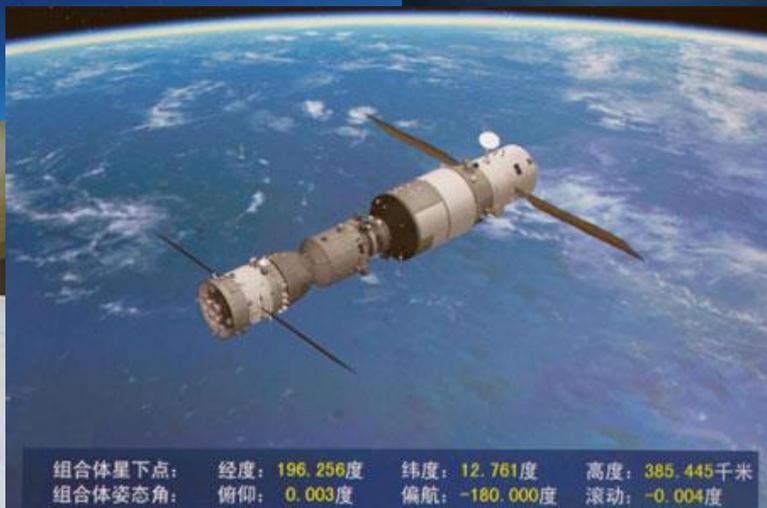
**A Heavy Lift Launch Vehicle with capacity of 100 tons to LEO is under development. The design and technical CDR of its high-thrust liquid oxygen-kerosene engine and LOX/LH engine have been initiated.**

# Launch Site and TT&C



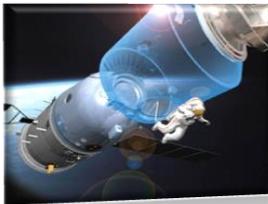
# 2016

## ➤ Manned Space program



# Manned Space Program

Three-Step strategy



Chinese Space Station  
(by 2022)

Spacelab  
(accomplished)

Humanmission  
(accomplished)



# 2016

## ➤ Beidou satellite system



# Beidou (Compass) Satellite Navigation Program

- **Beidou Global Satellite Navigation System is under development.**
- **14 Satellites Operational in Orbit**
  - **The first experimental satellite I1-S launched on March 30, 2016,**
  - **The experimental satellites M1 and M2 launched by a single launch vehicle on July 25, 2016.**
- **More than 30 satellites will be completed which can services for global users by 2020**



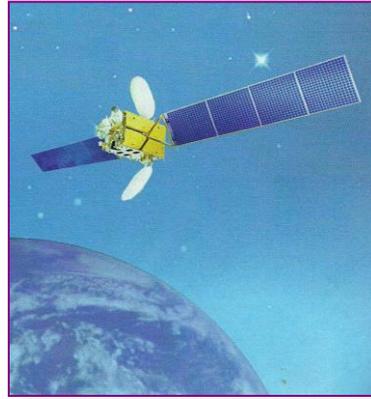
# 2016

## ➤ Satellite Mobile Communications System

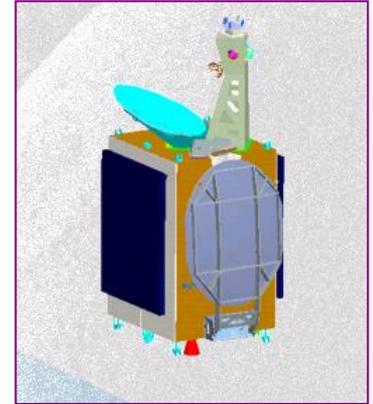


# Telecommunication Satellite

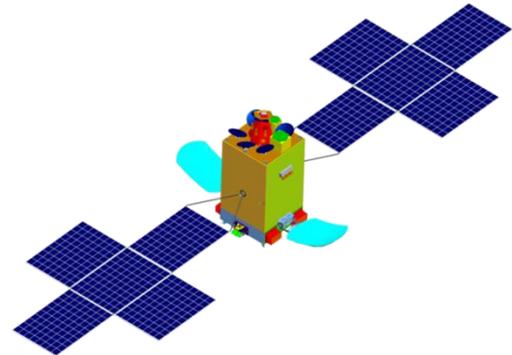
- New-generation DFH-5 platform satellite to be launched in 2019.
- New LEO orbit telecommunication satellite constellation will be developed
- L-band mobile multimedia communication satellite will be development



**ChinaSat-11**



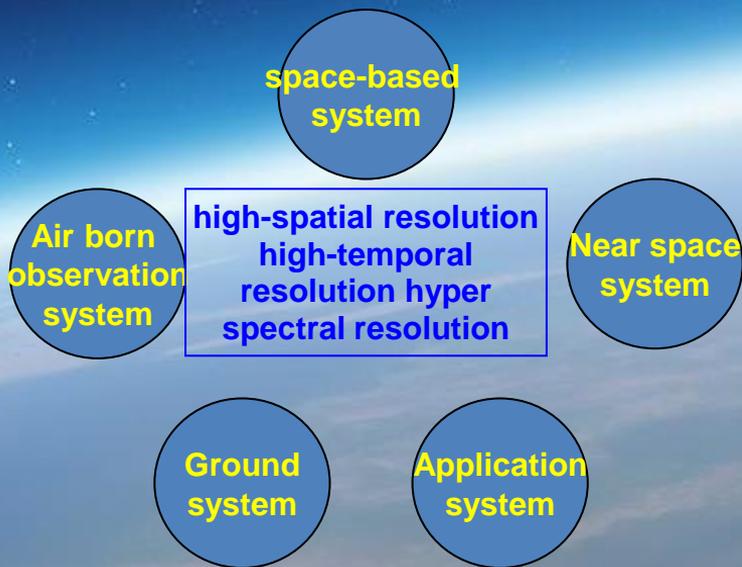
**DFH-3B**

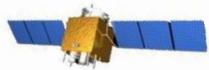


**DFH-5**

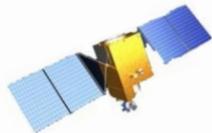
# 2016

## ➤ China High-Resolution Earth Observation System (CHEOS)

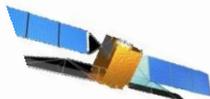




**GF-1**



**GF-2**



**GF-3**



**GF-4**



**GF-8**



**GF-9**



## Application Area



**Disaster**



**Land**



**Agriculture**



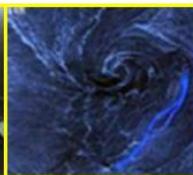
**Forest**



**Water**



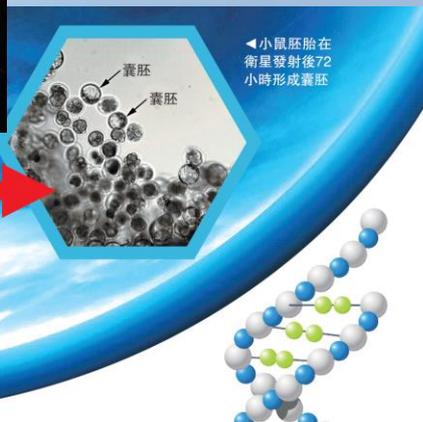
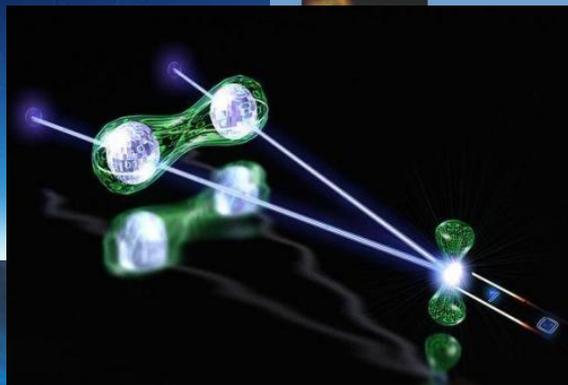
**Ocean**



**Survey**

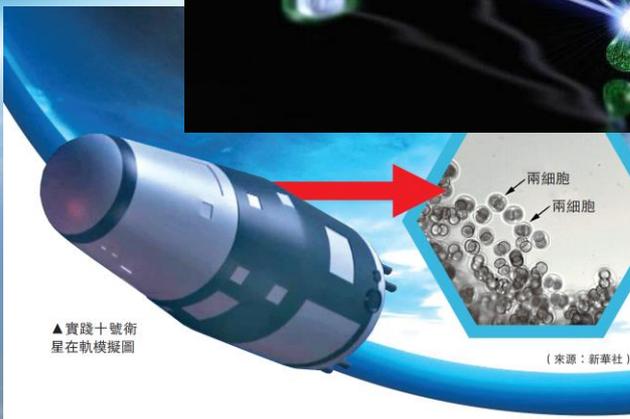
# 2016

## ➤ Space Science Satellite



◀小鼠胚胎在  
衛星發射後72  
小時形成囊胚

◀衛星發射前  
4小時的2細胞  
小鼠胚胎



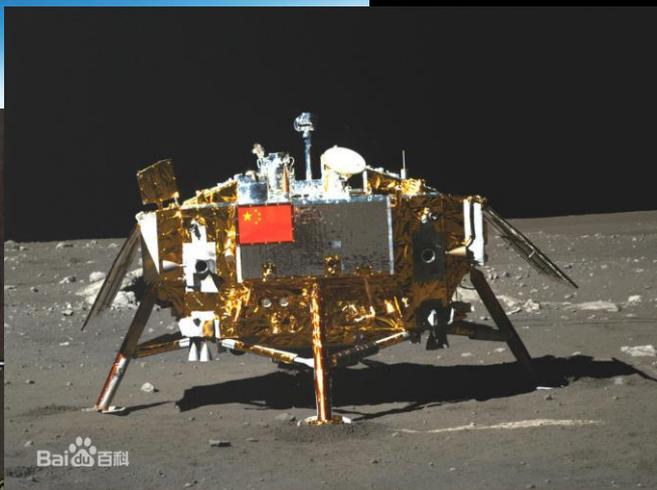
▲實踐十號衛  
星在軌模擬圖

(來源：新華社)

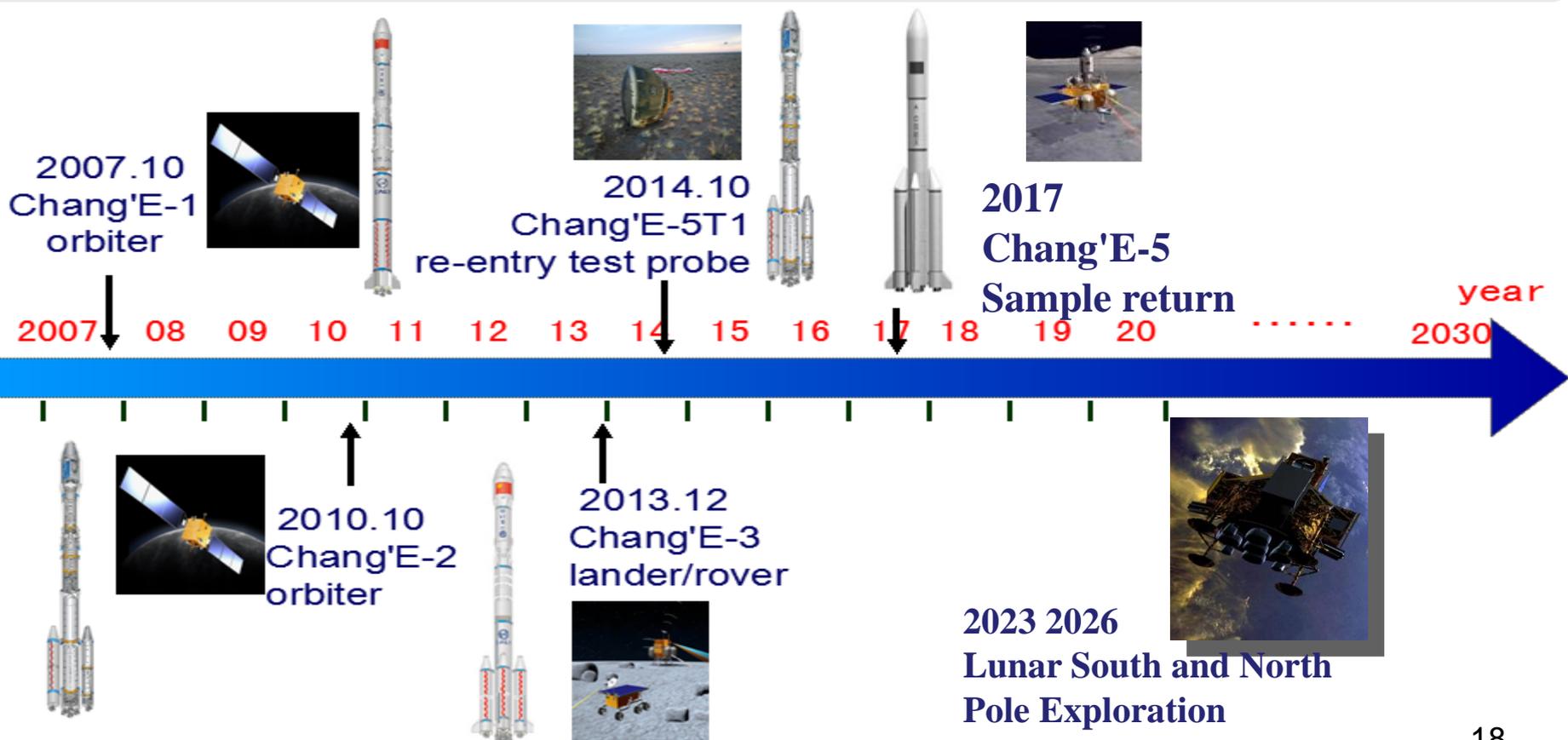


# 2016

- Lunar Exploration Program
- Mars exploration program
- Asteroid exploration



# Lunar Exploration



- **PRINCIPLES**

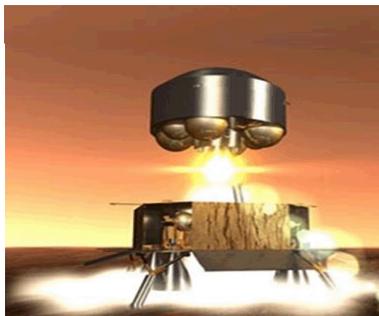
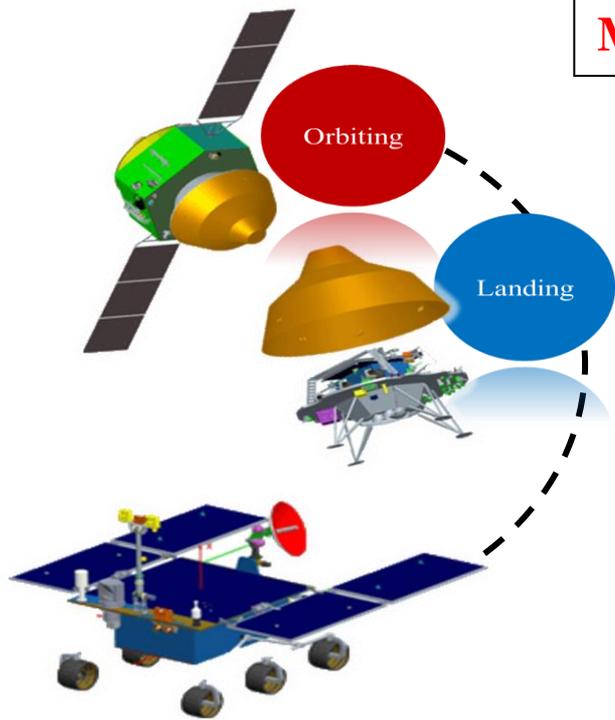
- to explore the unknown in the universe and serve the human civilization
- to implement project tasks on the basis of scientific research

**Openness, equality, sharing and win-win cooperation**

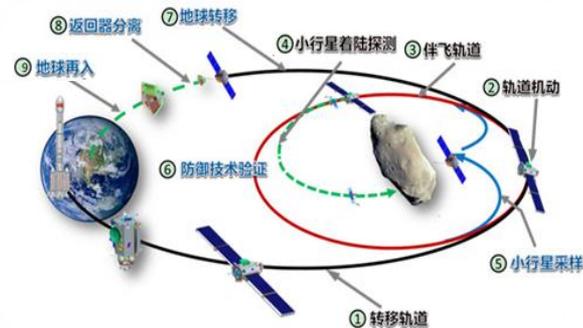
# Mars and Deep Space Exploration

**Orbiting, landing and cruising all in one step  
to be launched in 2020, Approved by Government in 2016**

## Mars Sample Return Mission



## Asteroid Exploration Mission

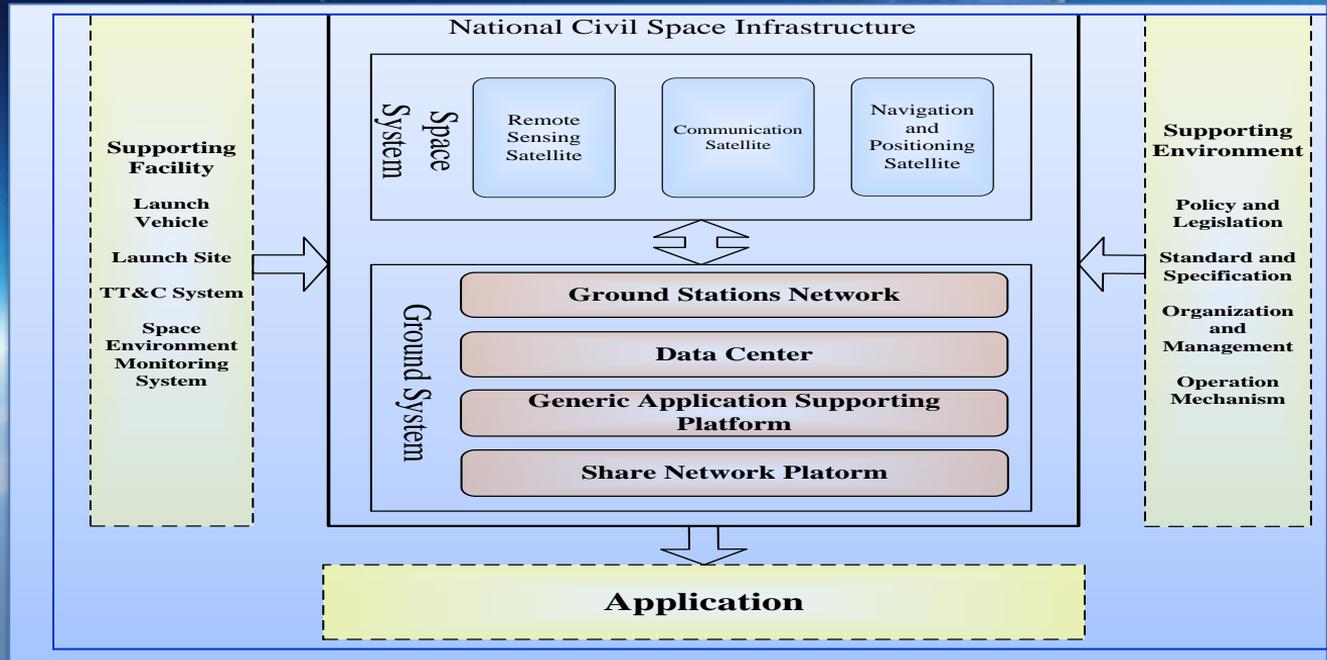


By end of November of 2016, more than 160 satellites operated in orbit, including communications & broadcasting, navigation, meteorological, ocean, land resources, environment and disaster reduction, and space scientific satellites.

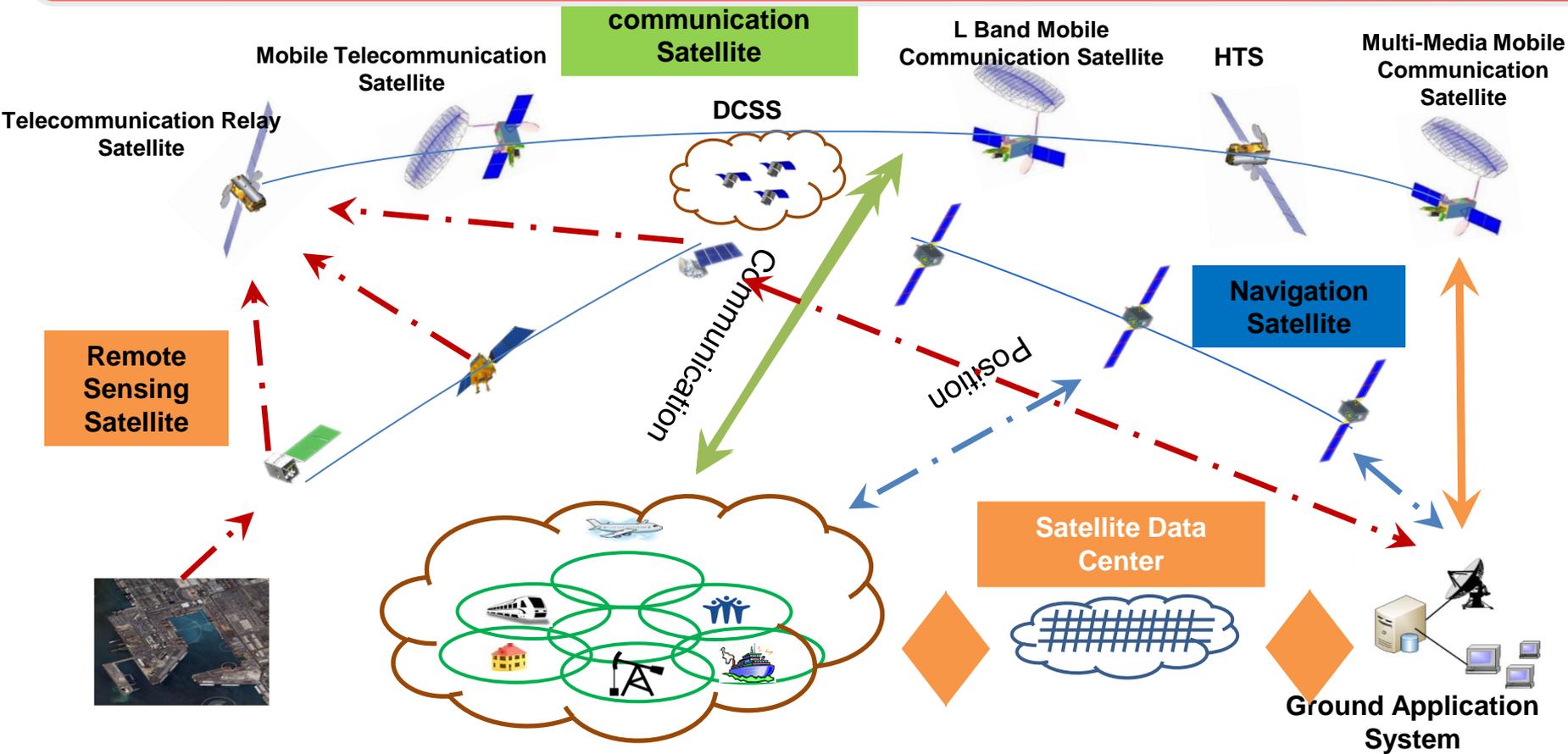


# ON THE WAY

## ➤ Medium and Long Term Development Plan for Civilian Space Infrastructure (2015-2025)



# Integrated Spatial and Territorial Information System



# ON THE WAY

## ➤ Commercial Space

### 航天商业遥感卫星系统 即将霸屏

0.5m 分辨率光学卫星 16 颗

高端光学卫星 4 颗

微波卫星 4 颗

视频、高光谱等微小卫星 多颗

# Commercial Space

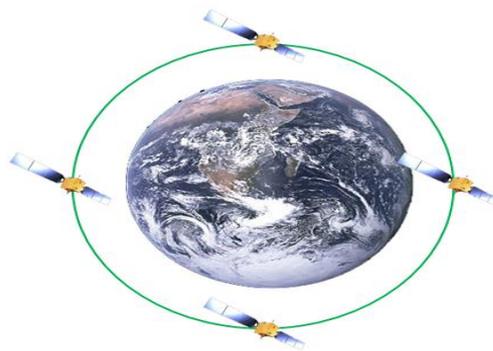
Commercial space plays an increasingly important role globally, civil agencies, enterprises, research institutions and the public keep intensive attention and involvement in commercial space activities.



Land Space and One Space



LM-6



Superview Constellation



JiLin1

# ON THE WAY

## International Exchanges and Cooperation



# International Exchange & Cooperation

United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) Beijing Office, Established in 2010.



CNSA and UN-OOSA signed the MOU of Earth Observation Data and Technical Support in Sep, 2015.



# International Exchange & Cooperation

**Regional Centre for Space Science and Technology Education  
in Asia and the Pacific (China)  
(affiliated to the United Nations)**



**The first Governing Board Meeting**



**Inauguration Ceremony**

*Established at Beihang University on Nov. 17, 2014  
10 Member States included Argentina, Algeria, Bangladesh, Bolivia, Brazil,  
China, Indonesia, Pakistan, Peru and Venezuela*

A background image of space showing the Earth's horizon and the Moon in the sky.

# Thank you for your attention!

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