

# KPS & KASS Status Updates

21<sup>st</sup> March 2023



# Overview of KPS (Korean Positioning System)

## Objectives

Providing high-precision PNT information required in the era of the 4th industrial revolution

## Goals

**Development and construction of KPS system** that stably provides PNT services to meet various satellite navigation needs



Program

KPS R&D Program  
(including Space, Ground and User Segment)

Period

2022~2035 (14 years)

Governing



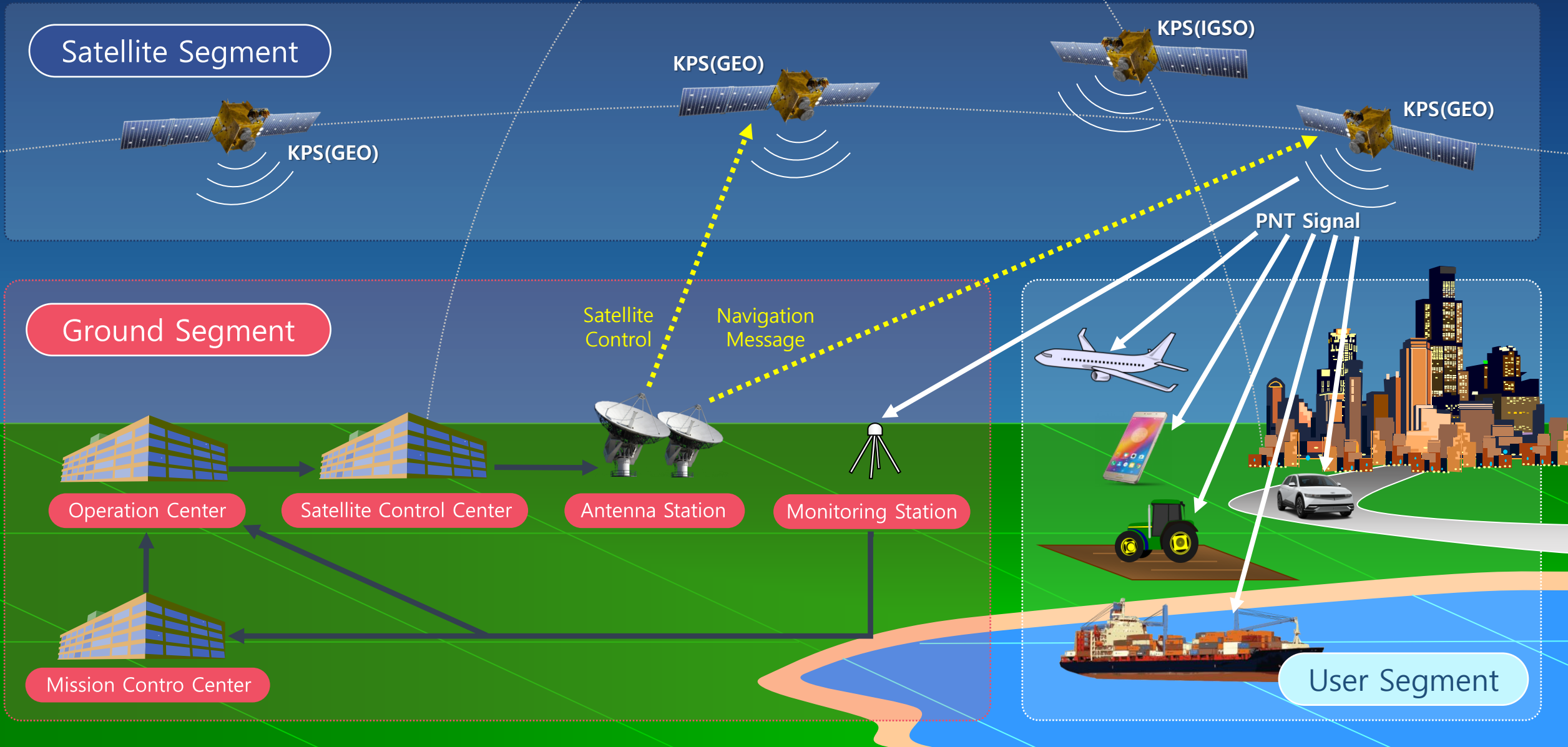
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R&D



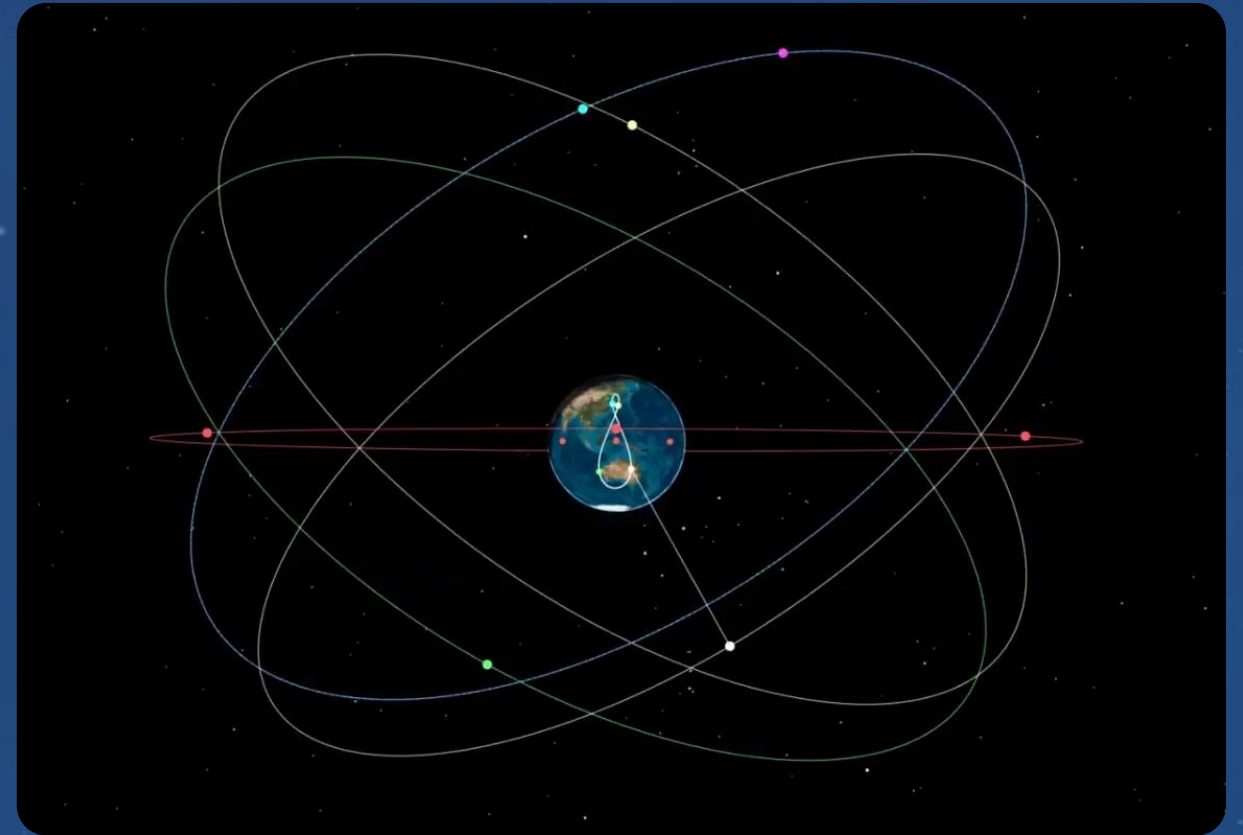
한국항공우주연구원  
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# KPS System Configuration



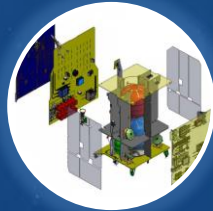
# KPS Satellite Constellation

It consists of 3 GEO satellites and 5 IGSO satellites.



# KPS Development Plan

Launching 1<sup>st</sup> KPS-IGSO in 2027, Finishing Deployment until 2035



## System Design ('22~'24)

- KPS R&D start and application for international satellite network registration
- Navigation signal and Constellation design



## System Development ('25~'28)

- Development of satellite bus, payloads, and ground segments
- Launch of the 1st IGSO satellite in 2027



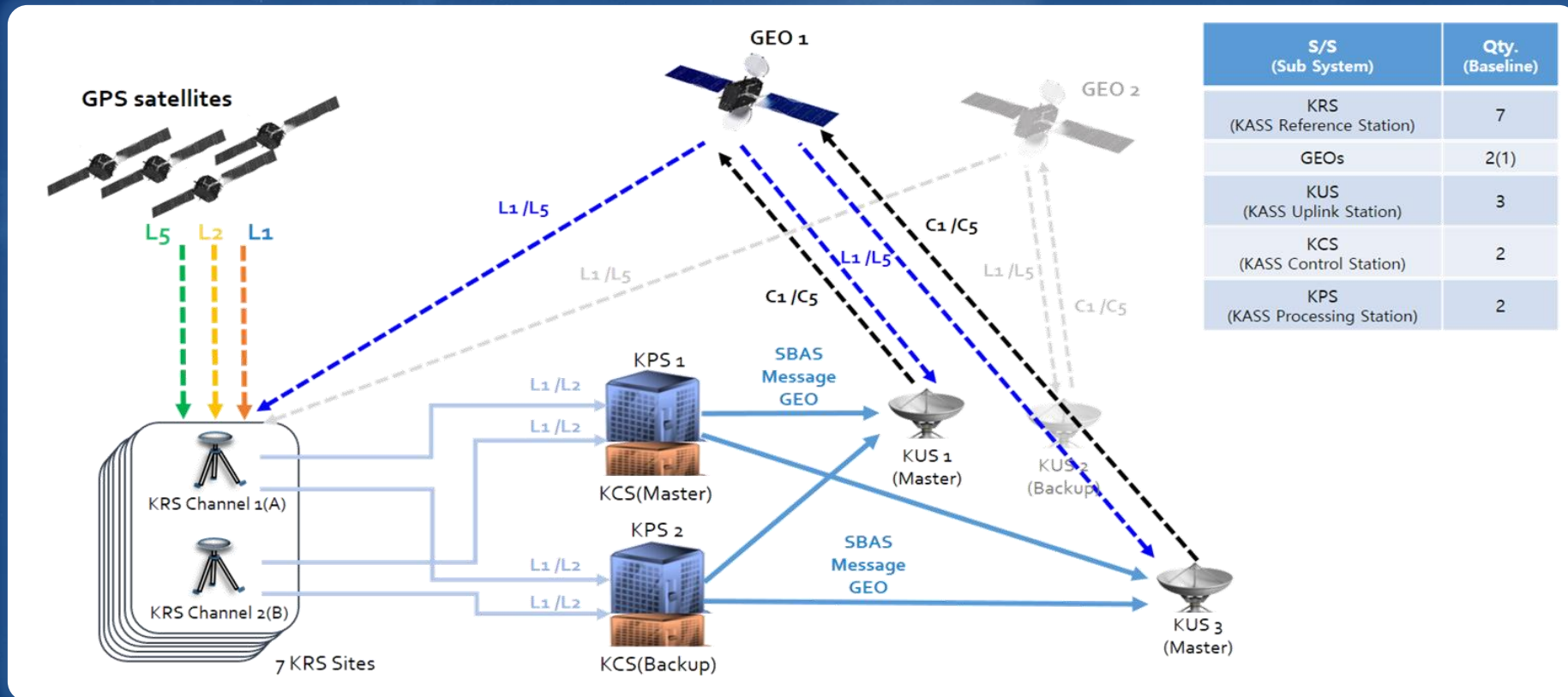
## Deployment and Validation ('29~'35)

- Development and launch of the 4 IGSO and 3 GEO satellites
- Development of all of the ground segments, Test during IOC and FOC

# KASS (Korea Augmentation Satellite System) Status (1)

## Main Goals

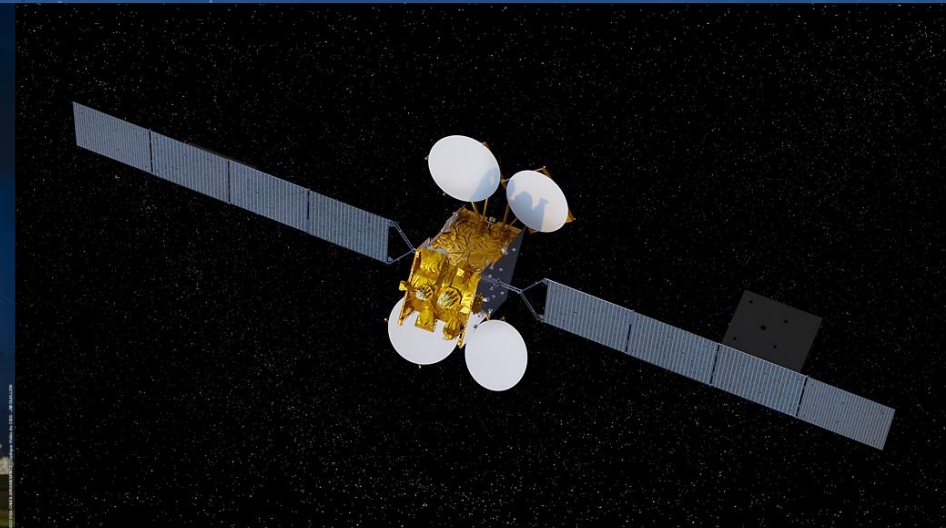
- Provide APV-I SoL Service to Airports located in South Korea
- Start APV-I SoL Service after 2023



# KASS Status (2)

## | KASS 1st Satellite Launch

- (Satellite) Malaysian Measat-3D launch with **KASS payload**
- (Date) 23rd June in 2022
- (Vehicle) Ariane 5 ECA+
- (Launch Location) Ariane Launch Area 3, Kourou, French Guiana
- (GEO Location / Lifespan) 91.5 ° E / 18 years



# KASS Status (3)

Launching 1<sup>st</sup> KPS-IGSO in 2027, Finishing Deployment until 2035



## Status

- ('21.6) KUS Infrastructure Facilities Construction Completion
- ('22.6.23.) **KASS 1st GEO satellite launch** (Measat-3D with KASS payload)
- ('22.7.4.~6.) KASS Navigation Payload IOT (In Orbit Test) Completion
- ('22.7.19.) KASS FAT (Factory Acceptance Test) Completion
- ('22.10.~11.) KUS ↔ GEO#1 (Measat-3D) integration test
- ('22.12.) **KASS 1st signal broadcasting** (MT0/0)



## Future Plan

- ('23.6.) KASS 2nd signal broadcasting (MT0/0 or MT0/2)
- ('23.11.) SQR (System Qualification Review)



# Thank you



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