

IOPS



Korea Augmentation Satellite System : KASS



Ministry of Land,
Infrastructure and Transport

A-Hyeon Bang
Manager of Business development

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Introduction of KASS

1.KASS Overview





KASS Overview

GOAL

- GOAL 1 - Development and establishment of APV-I class Korean aeronautical satellite service
- GOAL 2 - Basic research on CAT-I level SBAS technology

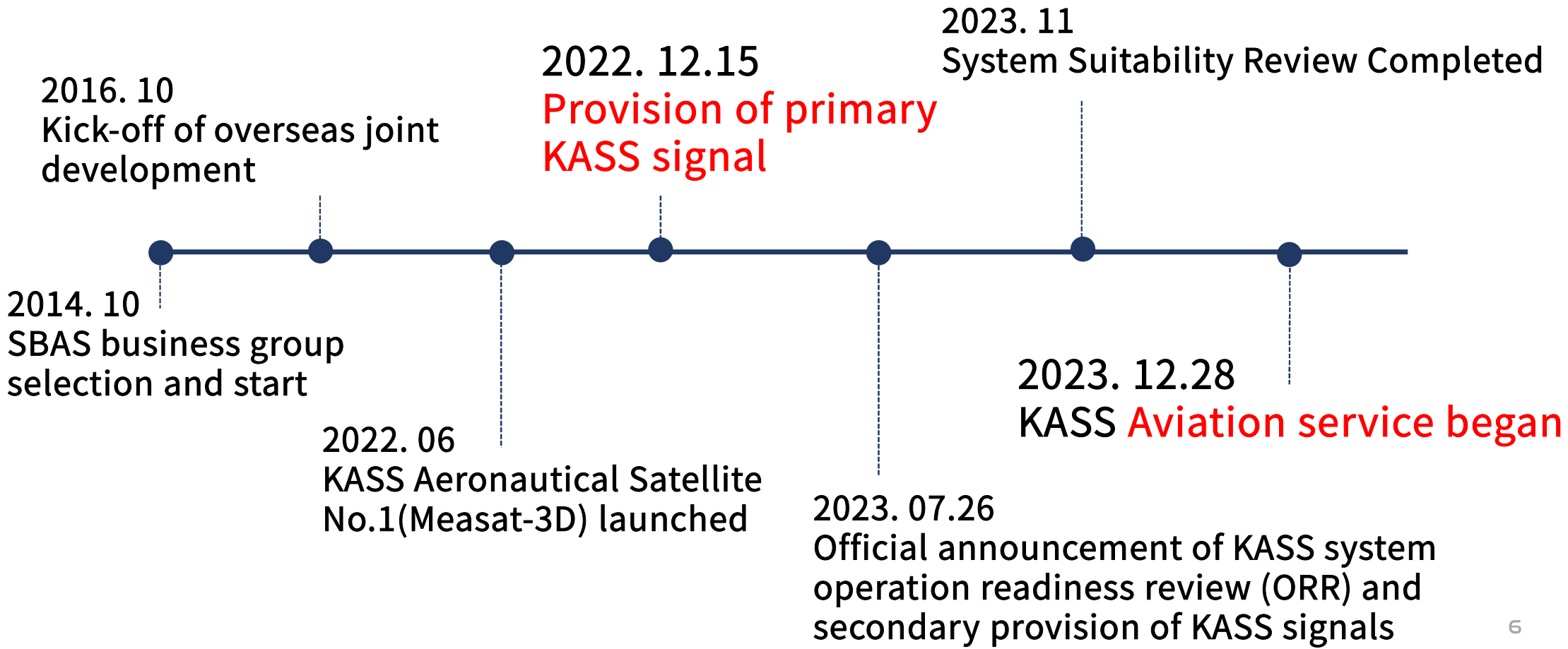
PERIOD

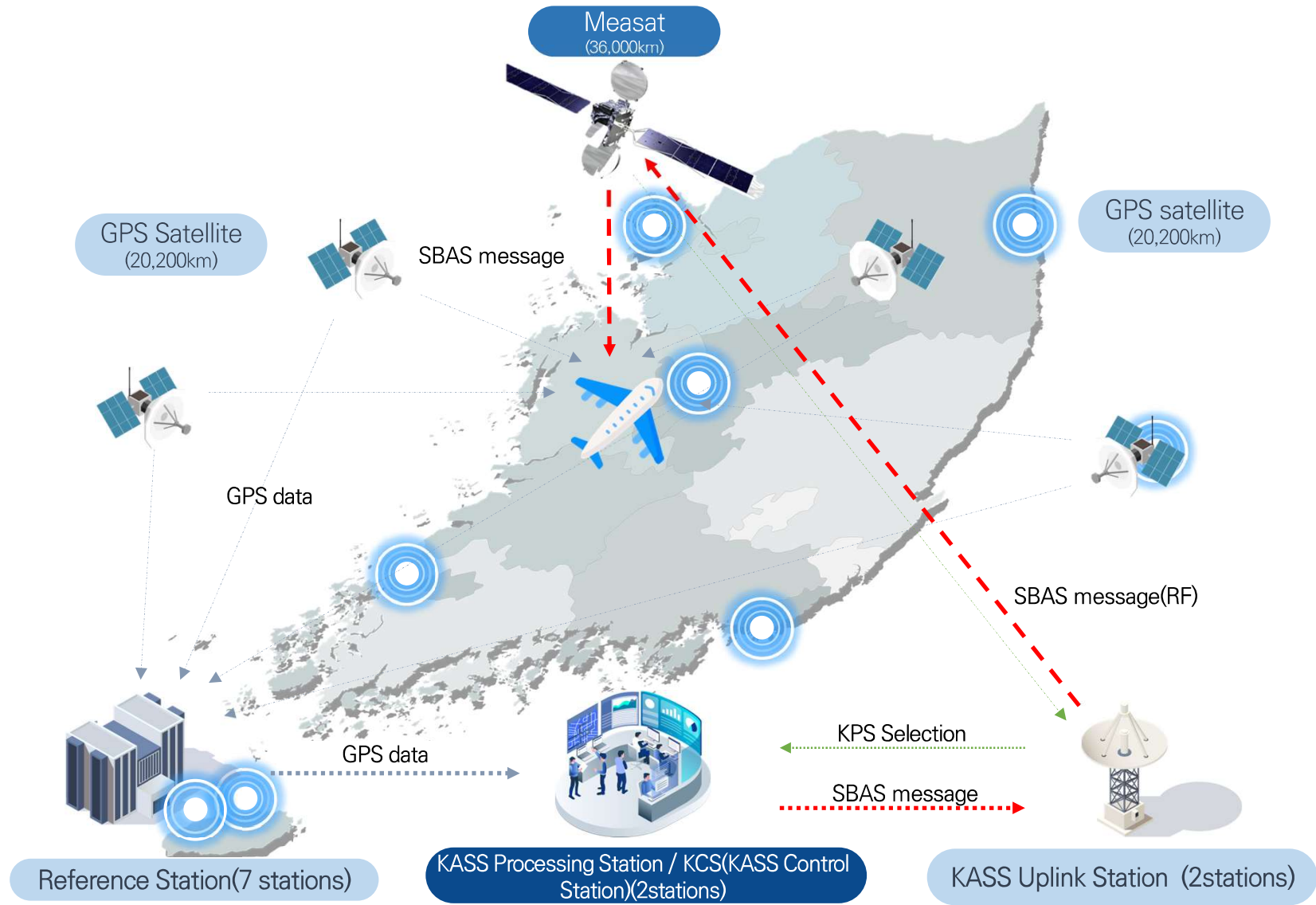
- 14.10.30 ~ 23.12.31

BUDGET





- Government expense € 88M



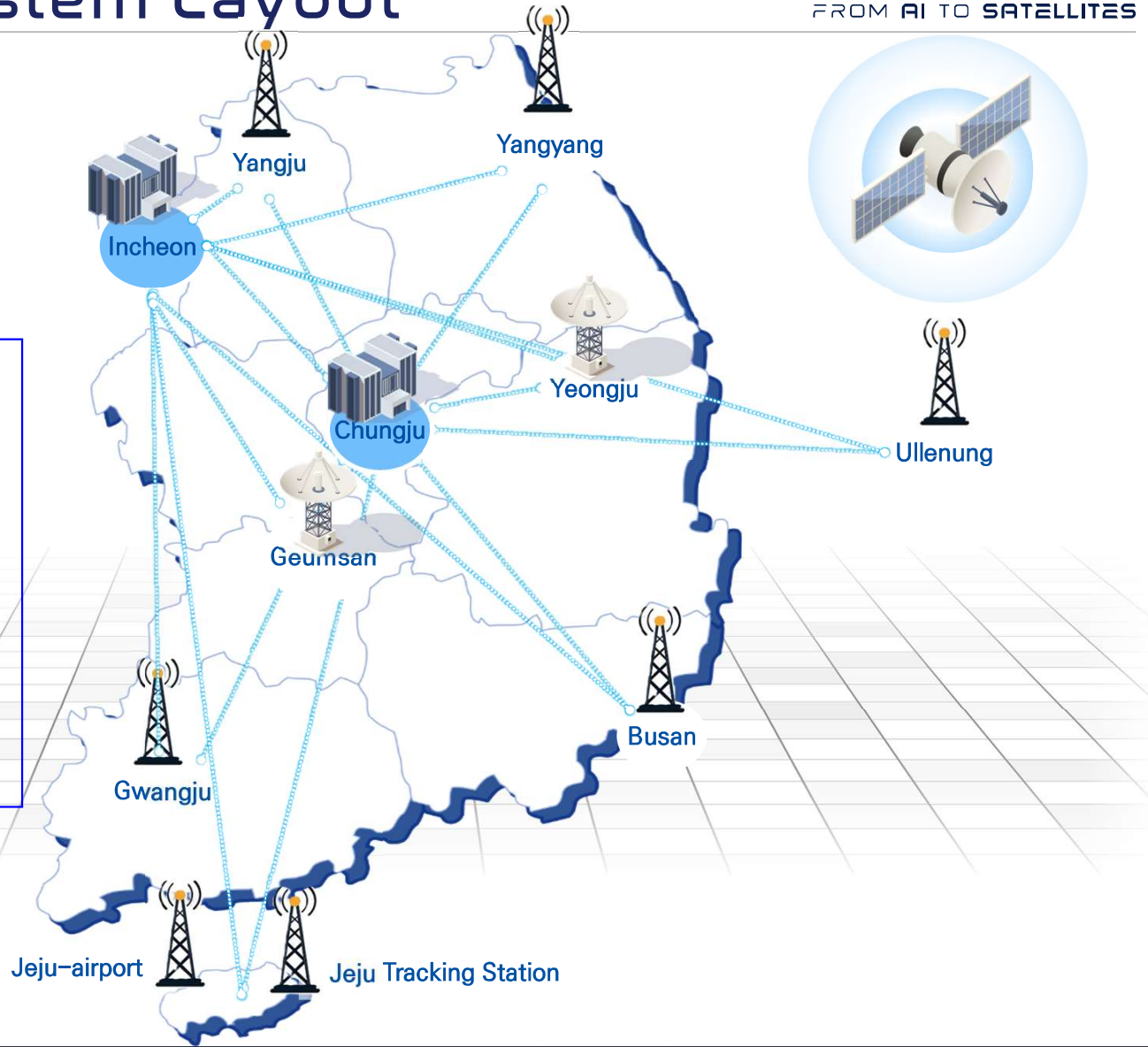




Legend

-  : GEO satellite
-  : KRS
-  : KUS
-  : KPS, KCS

KPS : KASS Processing Station
 KCS : KASS Control Station





: GEO satellite



MEASAT-3d (91.5° East)



KOREASAT 6A (116° East)



: KRS(KASS Reference Station)





: KUS (KASS Uplink Station)



MCC(Mission Control Center : KPS+KCS)



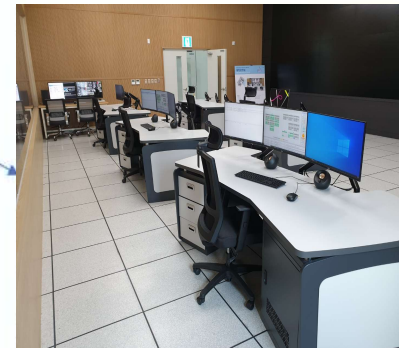
Engineering Support Room



Warehouse



Processing Room



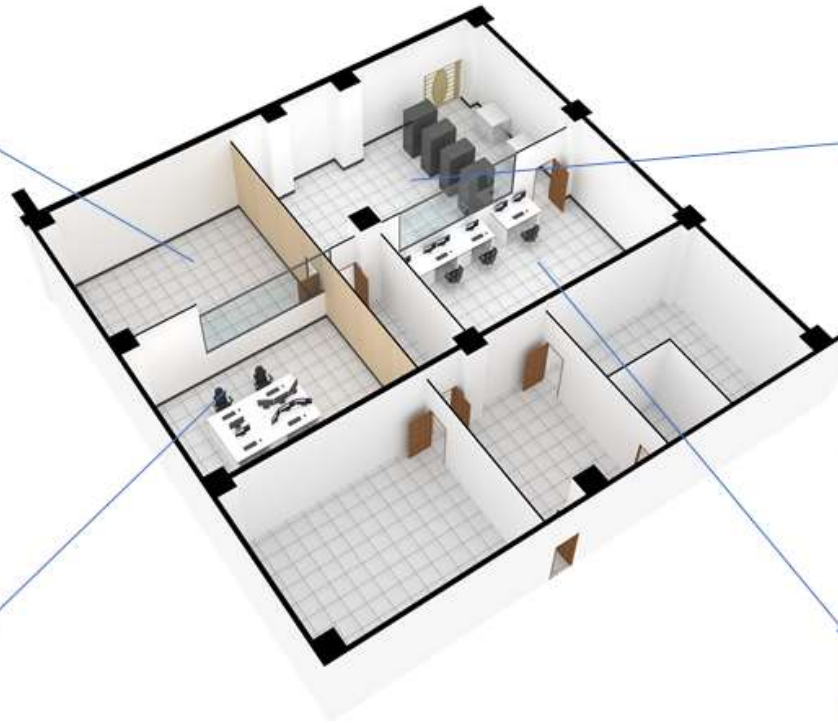
Operating Support Room

The bird's eye View of Cheongju MCC

MCC(Mission Control Center : KPS+KCS)



Warehouse



Processing Room



Operating Support Room

The bird's eye view of Incheon MCC



Engineering Support Room



KASS Performance

(January, 2024)

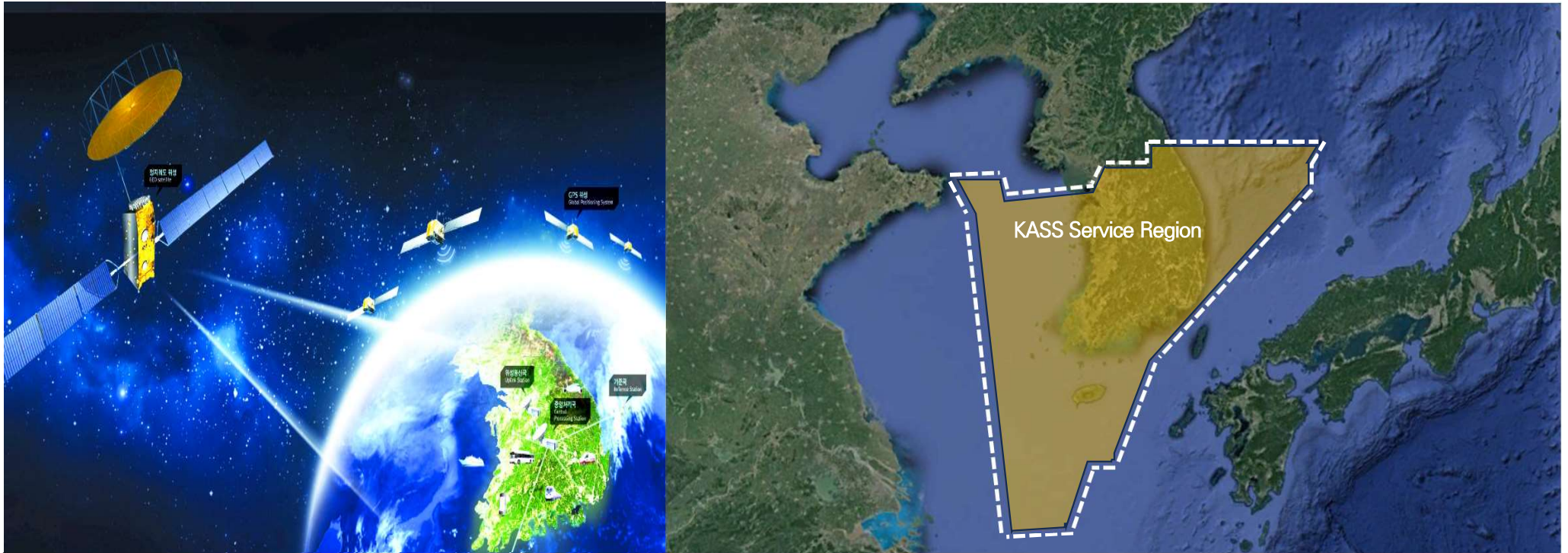
Period : 1st Jan 2024 ~ 31st Jan 2024

KRS	Accuracy		Integrity (# of MI/HMI)		Availability (99%)	Continuity (1E-06/15s)
	H (16m)	V (20m)	H (0)	V (0)		
YJV	1.0867	2.4187	0	0	98.5045	8.757E-04
YDN	1.3422	2.0568	0	0	98.2364	12.674E-04
JJA	1.3395	2.0441	0	0	97.4698	23.234E-04
JJT	1.4254	2.1238	0	0	97.3326	22.744E-04
GJL	1.1610	2.0317	0	0	98.1387	15.204E-04
DDL	1.4408	2.3581	0	0	98.2474	10.618E-04
YYA	0.8626	1.8326	0	0	98.5058	9.091E-04
Avr.	1.237m	2.124m	0	0	98.062%	1.46E-03

IOPS for KASS

1. IOPS Goal in KASS
2. What IOPS does in KASS





- **NON-STOP OPERATION**

- KASS Operation service
- 3 Patent pending on SBAS

~2023

- R&D based on the pending patent
- Optimization on KASS operation

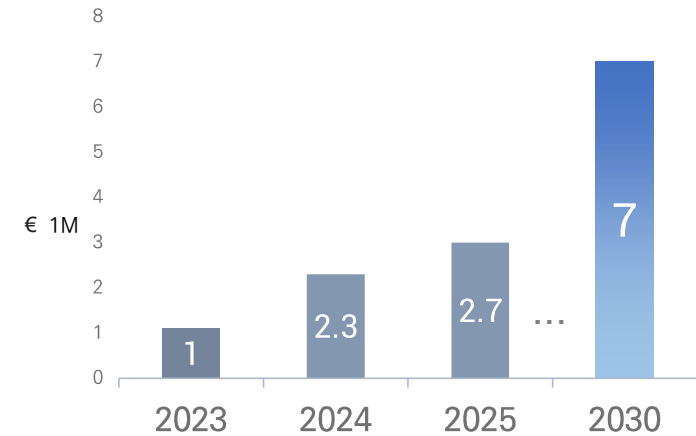
2024

- The 3 pending patents will be granted
- Development of SBAS Product

2025

2026~

- Export our SBAS product



< Expected Sales (GNSS)>

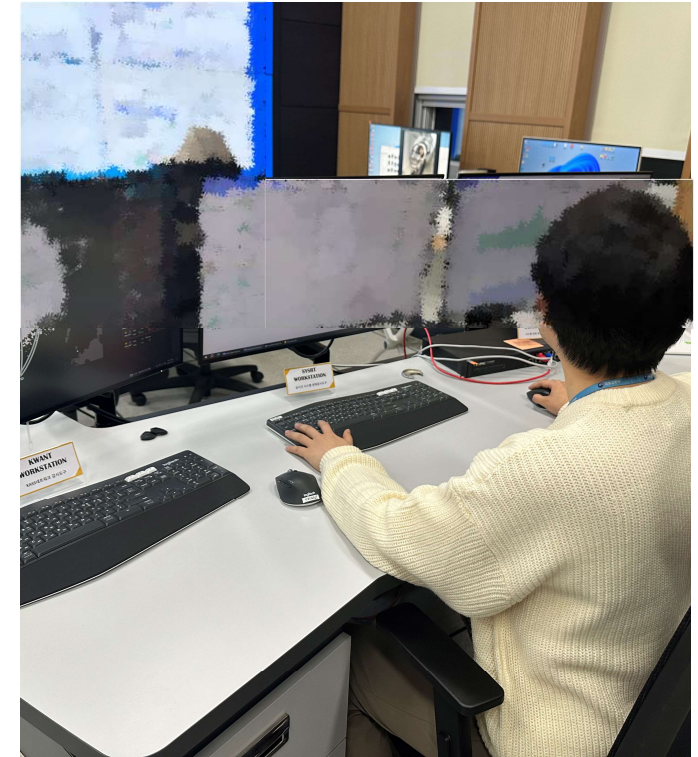
- System operation



**Subsystem
Status
Monitoring**



**Environment
Monitoring**

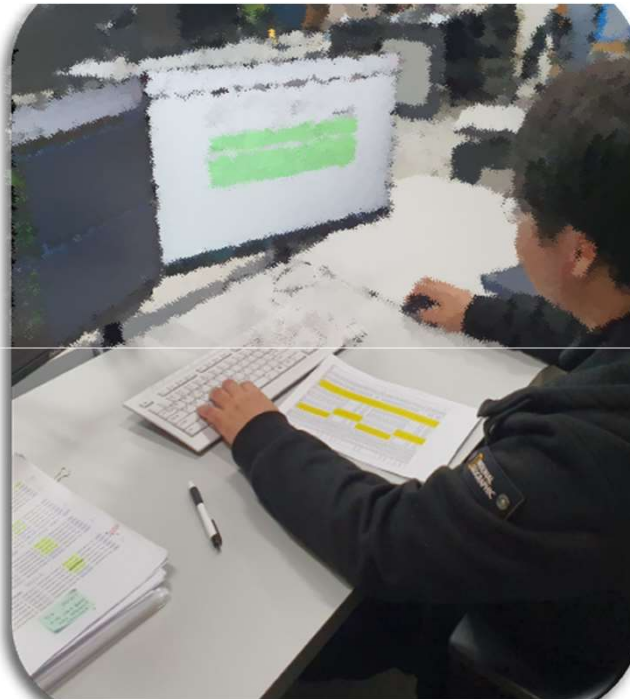


**Performance
Monitoring & remote
and on-site action**

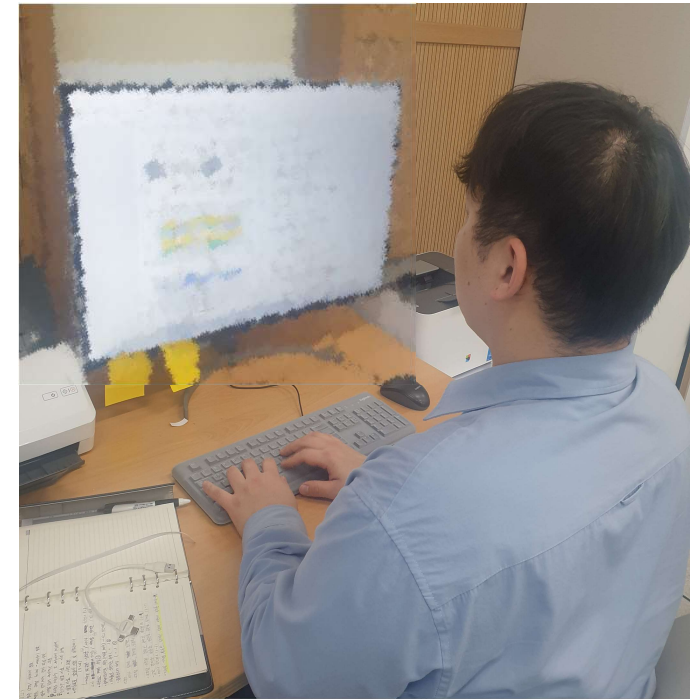
What IOPS does in KASS -System operation



**Equipment
Check**



**Network
Monitoring**

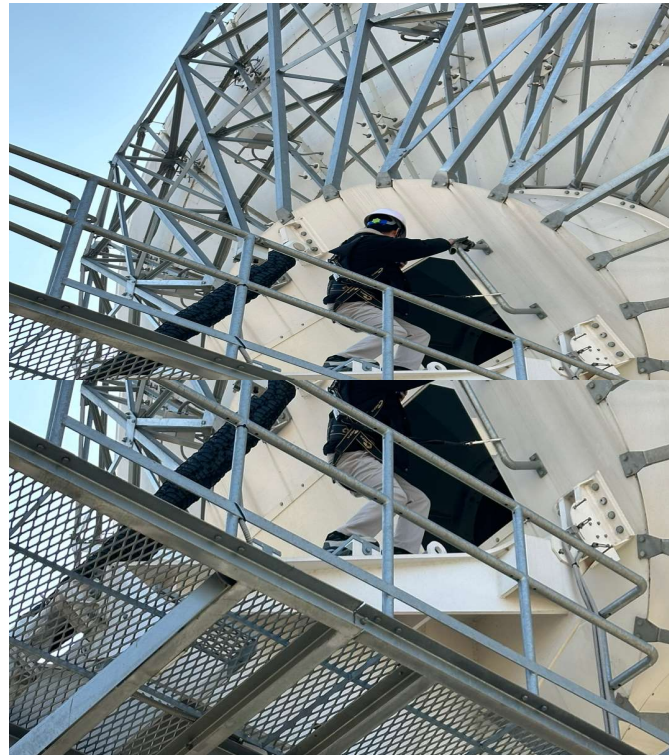


Data Report



What IOPS does in KASS

- Facility maintenance



Outdoor Equipment Check

Antenna Check

Equipment Replacement

Introduction of IOPS

1. Company Overview
2. Main business
3. Company history and Future plan



Business Area



**Ground station
Operations**



**Construction of
System/Network**



**Software
Development**



**AIT(Assembly,
Integration & Test**

2. Main Business

Sustainable
Development
Beyond
Growth



FROM AI TO SATELLITES

~~LOPS~~



Satellite Operations



KASS : Korea Augmentation Satellite System



Expand to KPS, Korean Positioning System



Started private
satellite operations
services

~2023

Expansion into
KPS field and New
business

2024

Floatation on the
stock exchange

2025

Establishment of
our own Space
Development
Center

2026~



FROM AI
TO SATELLITES

THANK YOU

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