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NTT C89

Aerospace Business Strategy

Shifting Dynamics in Space



**Technological
innovation**



**Growing interest
in the moon**

Possibilities



**Reduced
cost**



**Expansion of
space industry**

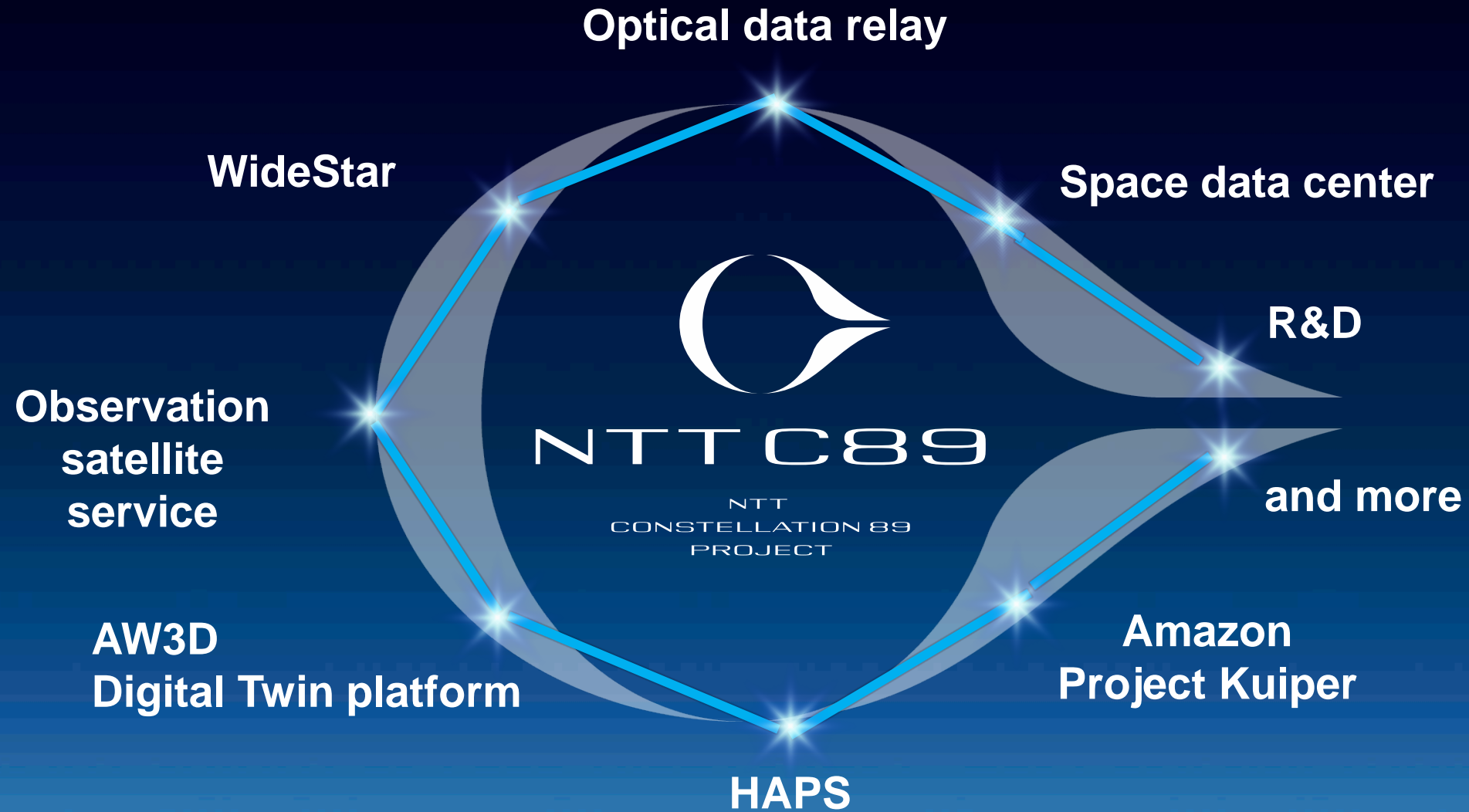


NTT C89

(C-Eighty-Nine)

NTT
CONSTELLATION 89
PROJECT

Integrate and expand each business



Space-integrated Computing Network Concept



Focus Area 1: HAPS



HAPS

Direct smartphone communication with low latency,
delivering high-resolution images and videos



Disaster
relief



Mountainous
area



Ocean



Construction
site



Remote
islands

Business Development

- Communication service
- Remote sensing service

In Preparation

Pending

Launching in Japan in 2026 with plans to
accelerate global expansion

Technological Development

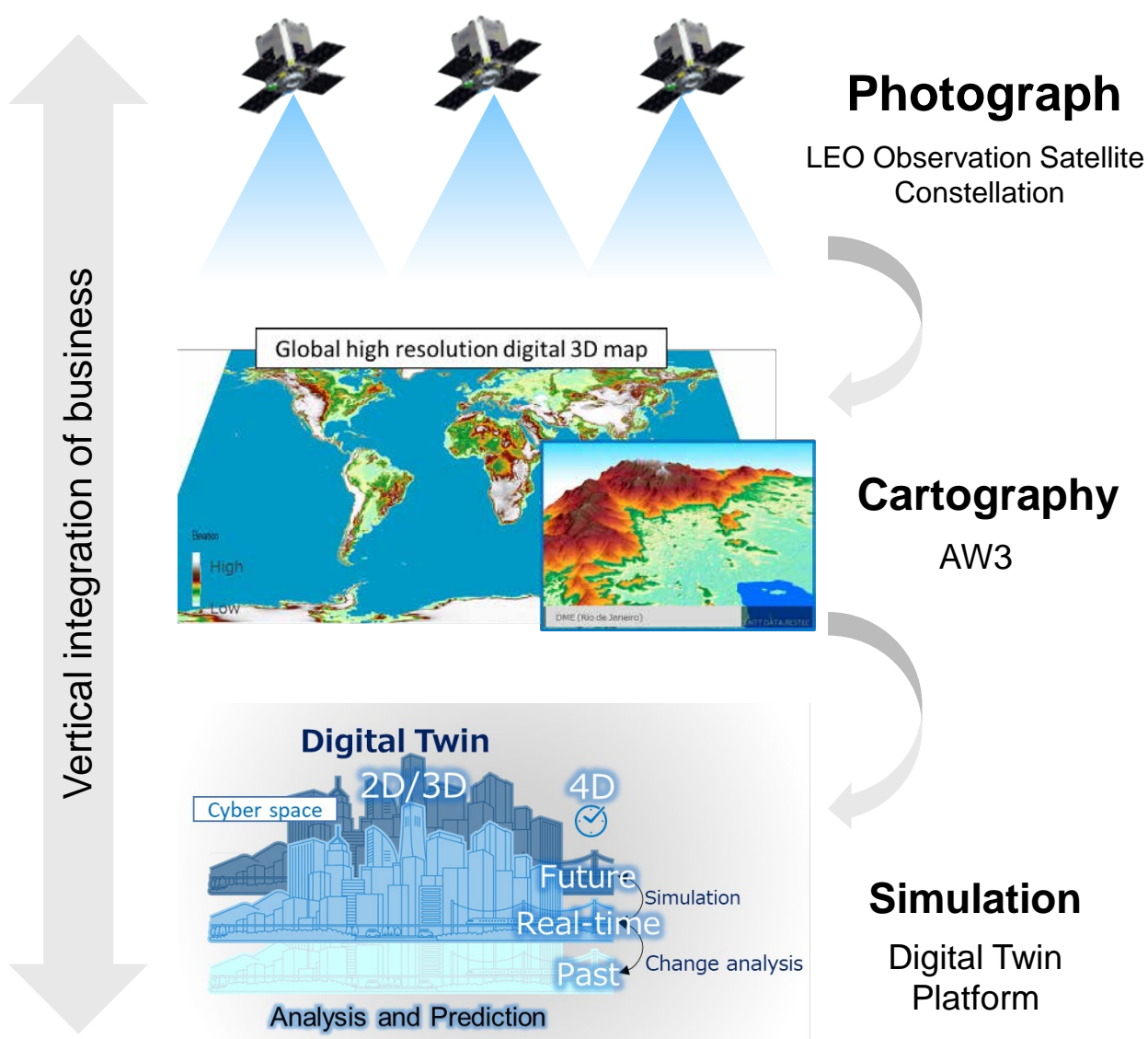
Communication Technology Advancements

- Communication Technology for Mobile Terminals
- High-speed and high-capacity

NICT Collaboration

NICT Collaboration

Focus Area 2: Observation LEO Satellite & Observation Data Platform



Business Development

Observation satellite service

- Commercialization of the observation satellite constellation

In Progress

Digital 3D map service

- AW3D

Launched

Observation Data PF

- Digital twin platform service

In Progress

Technological Development

Communication Technology Advancements

- Satellite MIMO technology
- Next-generation earth observation technology

JAXA Joint Research

JAXA Joint Research

Amazon Project Kuiper



Business Development

Communication Service

- Amazon Project Kuiper strategic collaboration
- Starlink Business

In Progress

Launched

Technological Development

Optical Communication Technology Advancements

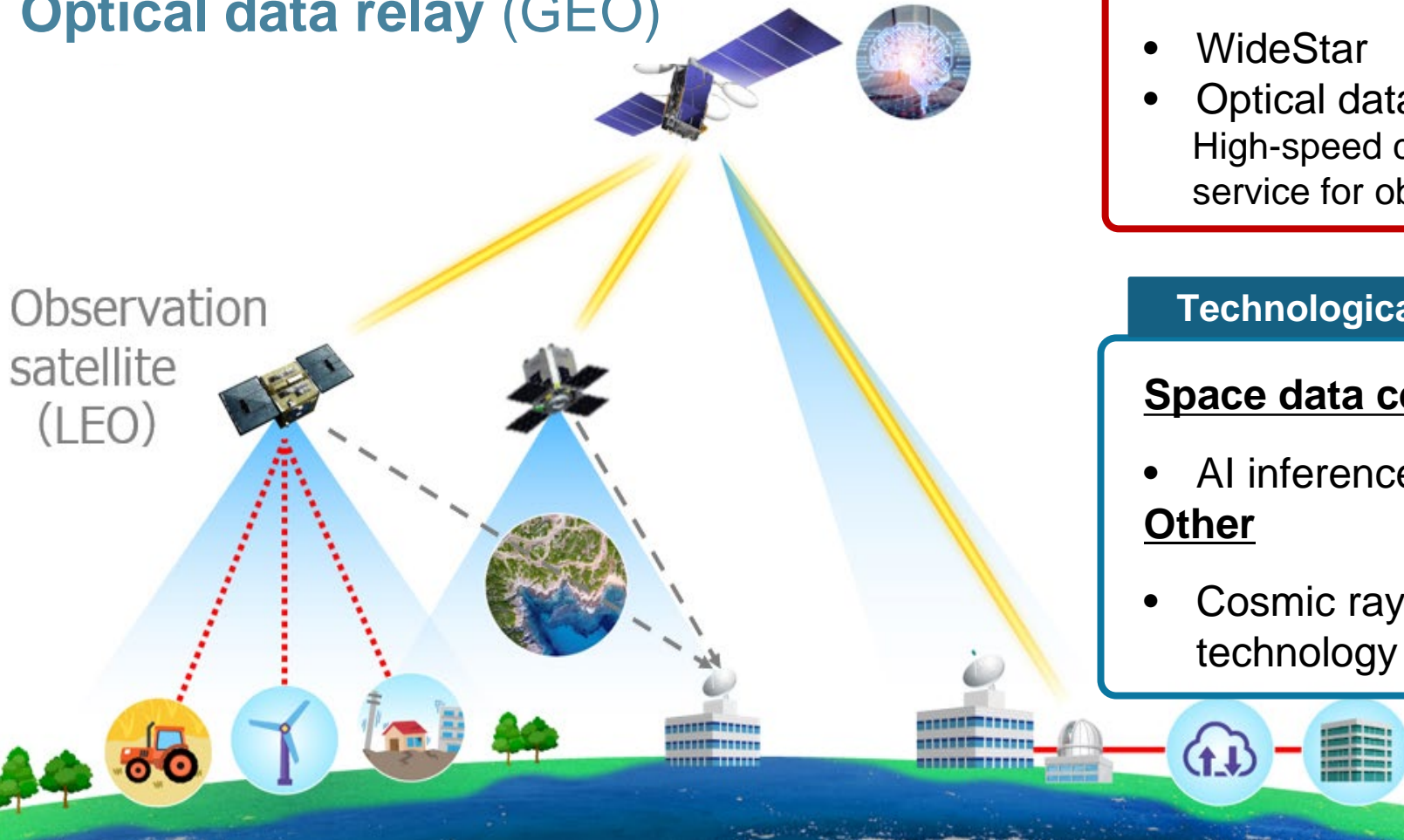
- Ultra-high-speed and high-Capacity
- Satellite constellation technology

JAXA Joint Research

JAXA Joint Research

Focus Area 4: GEO Satellites

Optical data relay (GEO)



Business Development

Communication Service

- WideStar
- Optical data relay service
High-speed communication
service for observation satellite

Launched

In Preparation

Technological Development

Space data center

- AI inference technology
- Other
 - Cosmic rays electromagnetic barrier technology

JAXA Joint Research

Future Outlook for TN-NTN

We aim to achieve global TN-NTN cooperation using Transatel's SIM roaming features for direct device satellite communication.

Now: Mobile Network

Cellular Connectivity

Global IoT connectivity is realized by roaming function using Transatel's SIM.



Note: Transatel is one of NTT group affiliates that currently offers global IoT SIM over 200 countries

Move out of service area

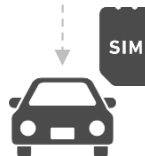
Mobile Range

Next: GEO satellite

Satellite 5G Connectivity



GEO satellite



GEO narrowband satellites enable emergency and SMS connectivity.

Out of Mobile Range

Next: LEO satellite

Satellite 5G Connectivity



LEO satellite



NTN broadband communications (Entertainment use)

**Brightening today,
guiding tomorrow**