

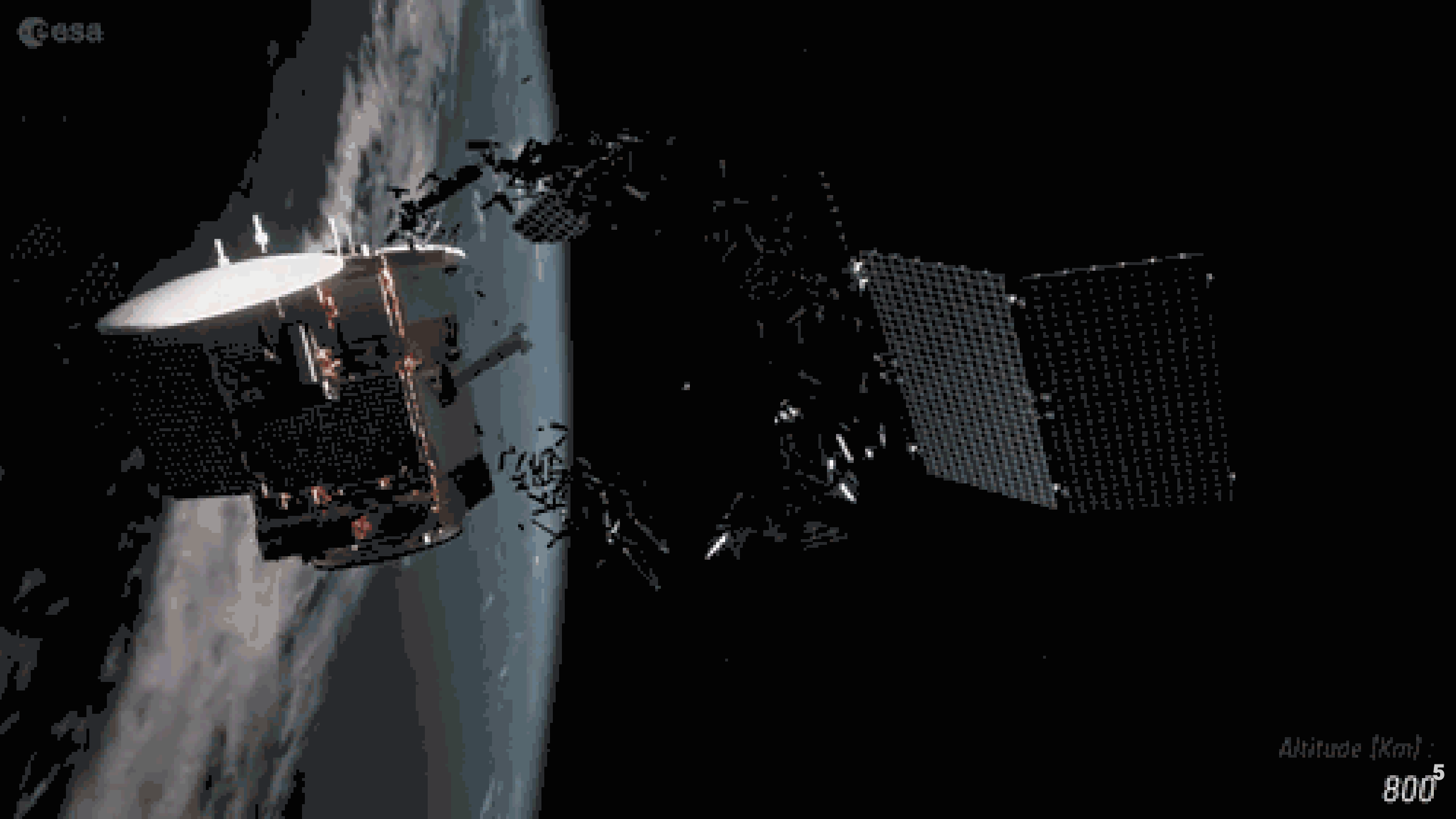
Find and avoid space junk!

**Protecting Daily Life on Earth
And the Future of Outer Space Activities**

**Space Traffic Accident Prevention
Navigation SaaS "S-CAN"**

Akihiro Iwaki

**STAR SIGNAL
SOLUTIONS**



Altitude [Km] :
800⁵

~~Financial
Transaction~~

~~GPS~~

~~Satellite
Broadcasting~~

~~Agriculture~~

~~Weather
Forecast~~

~~Fisheries~~

~~Disaster
management~~

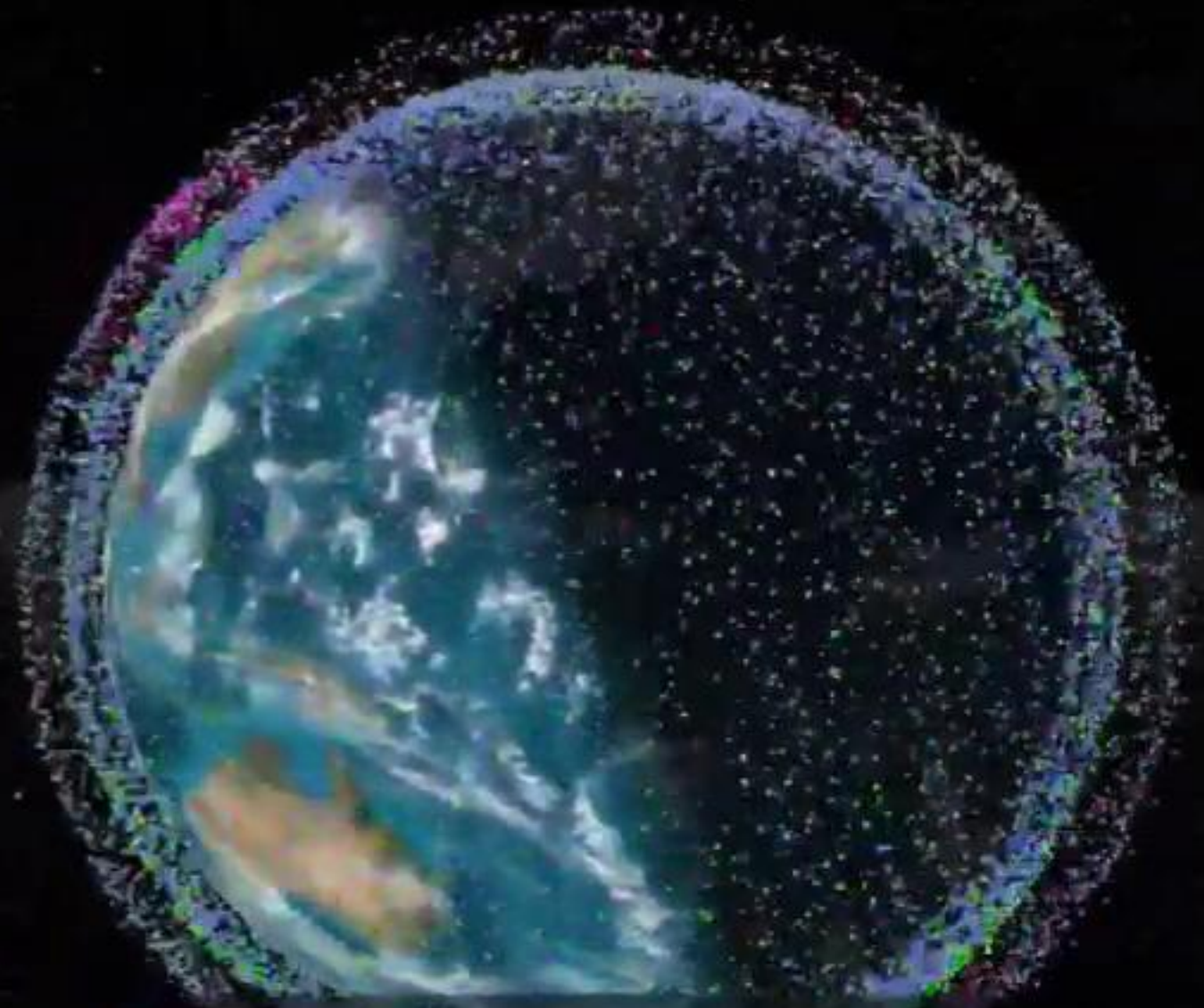
~~Satellite
Communication~~

~~Climate
Change~~

Estimated Economic Loss

US\$ 191B = 250
Natural
Disasters

- 2017 GlobalStar
- 2018 ExactView, Iridium
- 2019 HawkEye 360, Helios, PlanetiQ, SpaceX, Spire Global
- 2020 ICEYE, Karousel, OneWeb, Satellogic, SkySat, Space Norway, SpaceX, Spire Global
- 2021 GeoOptics, OneWeb, SpaceX, Spire Global, Umbra, ViaSat
- 2022 AI5Tech, Amazon, Astrocast, BlackSky, Cosata, EKS, Hongyan, Kepler, LaserFleet, NorthStar, OneWeb, SpaceX, Spire Global, UrTheCast
- 2023 Amazon, Astro Digital, Boeing, EKS, ExactView, Hera Systems, Hiber, ID3B, OneWeb, Orora Tech, Planet Labs, SpaceX, Spire Global, Swarm, Zhitca



57,000 satellites planned through 2029

<https://www.youtube.com/watch?v=oqiO2xeMkY0>

**Hazardous
approaches**

37 million/year

Problem 3: Business Interruption

Operations



Problems

Data

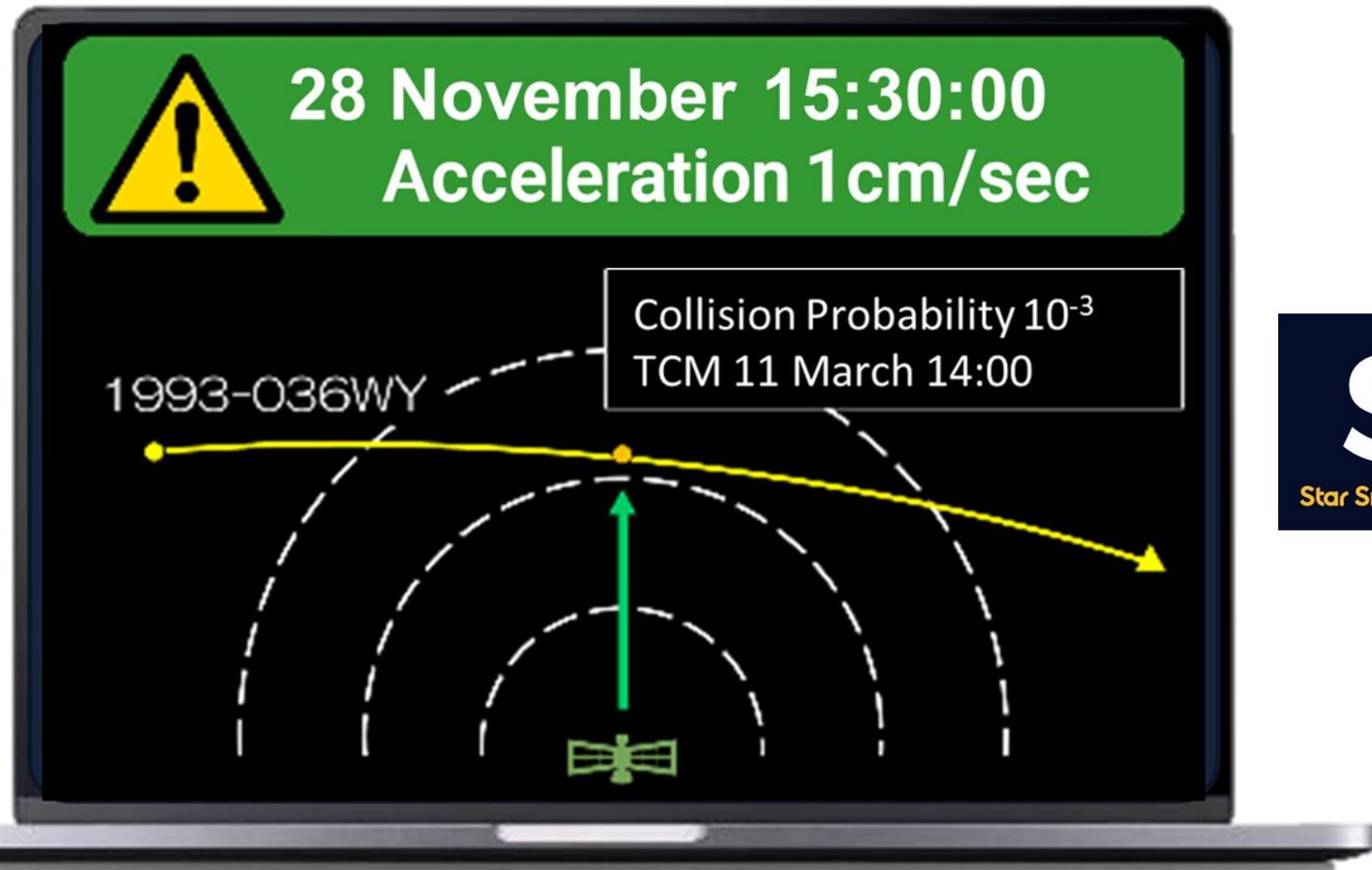
Analysis

Business

Details

- Including an error of 10 km or more
 - Requires expertise
 - 24/365 type task
- ⇒ Response Costs US\$ 100 thousand annually or more
- Lifetime is reduced
 - Business Losses

Collision Avoidance Navigation SaaS "S-CAN"



Collision Avoidance Navigation SaaS "S-CAN"

Operations

Alerts



Analysis



Detection



Planning



Maneuver

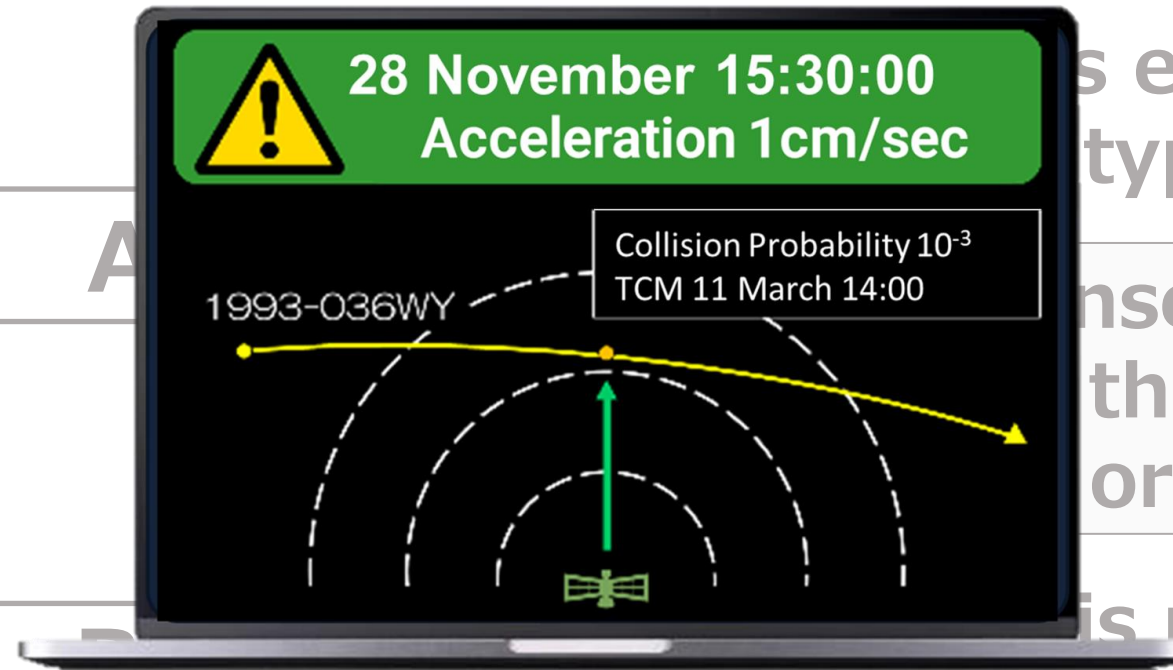
Problems

Data

A

Business

Details



- I
- C

s expertise
type task

nse Costs
thousand
or more

is reduced

- Business Losses

“Lean” and “Easy” Navigation for the safety operations.

Before



After



Customer Opinions and Benefits

"With this navigation system, I won't have to put up with Friday night drinking!"

"If we could automate the avoidance planning process, it would be a dream come true!"

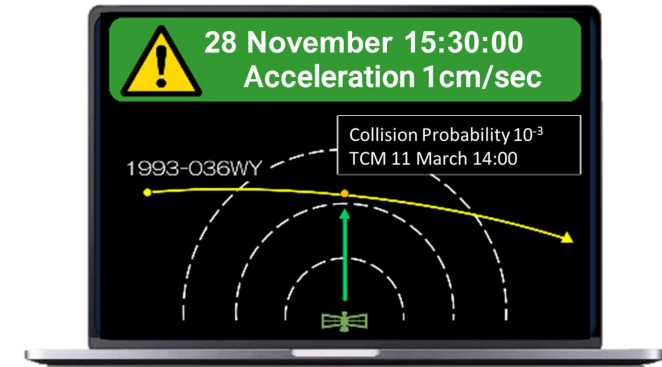
"I would be able to work on new developments without being tied to operations"

"I'll be able to take a decent amount of time off and go home to my wife's parents."

"It would save on labor costs, which would be a benefit of implementing this system."



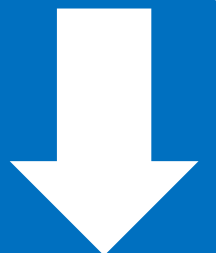
**Satellite Owners
and Operators**



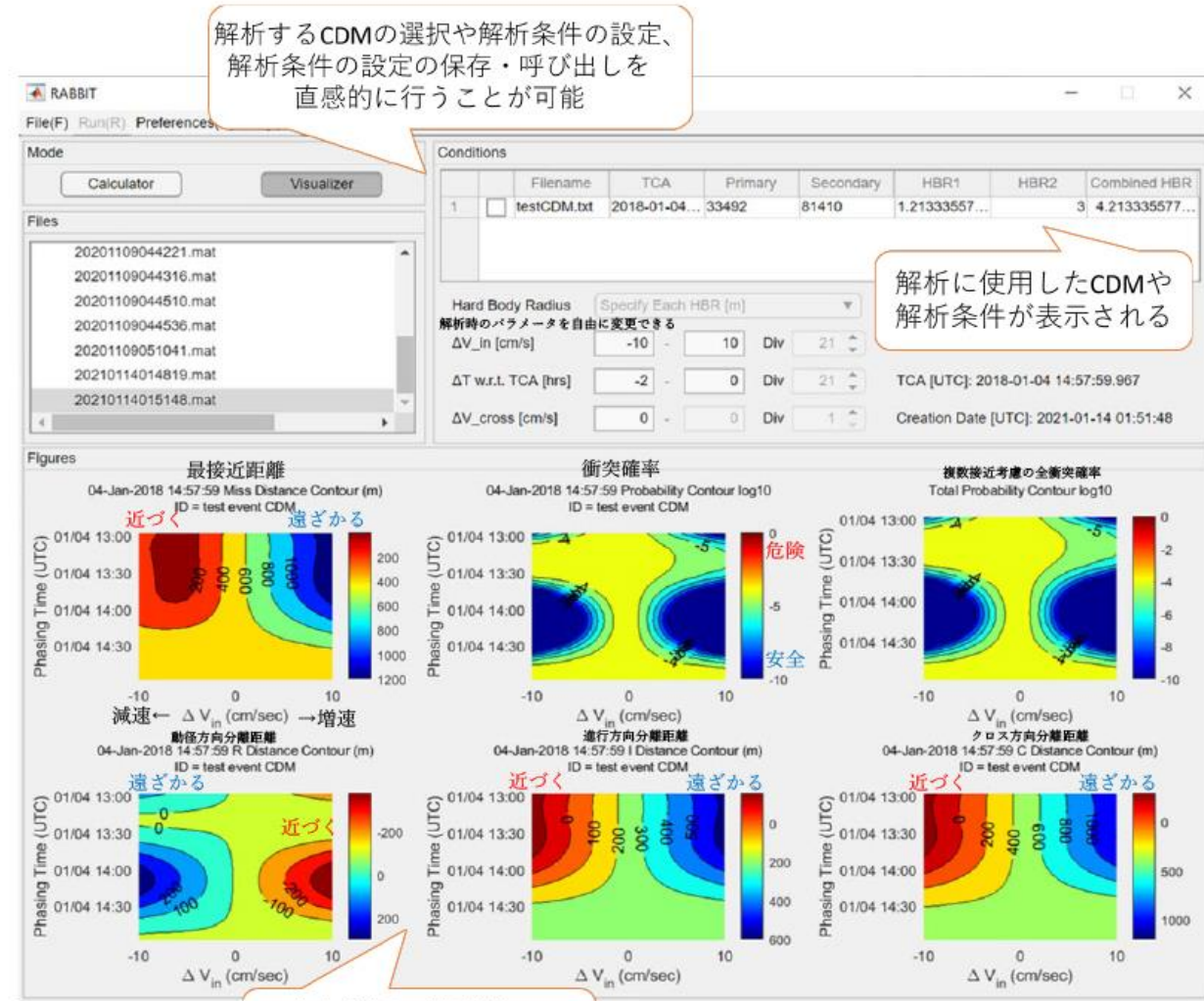
**Safety
Improvement**



**Cost
Reduction**

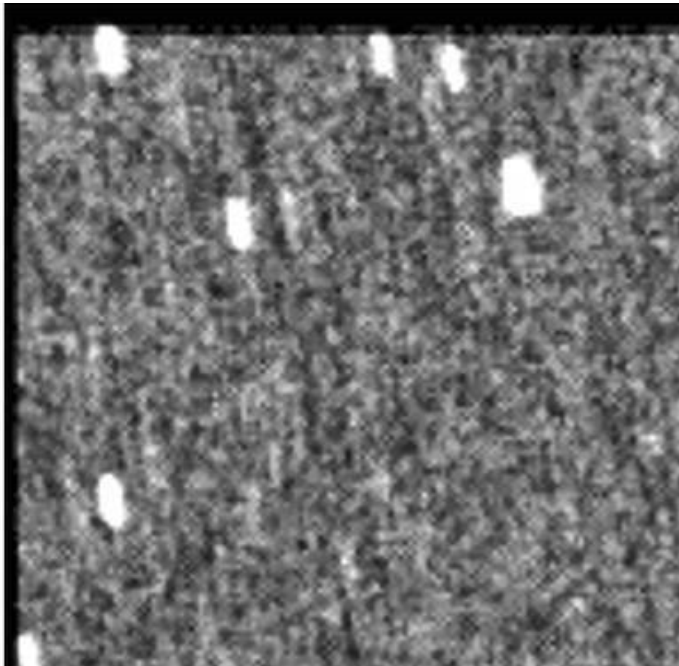
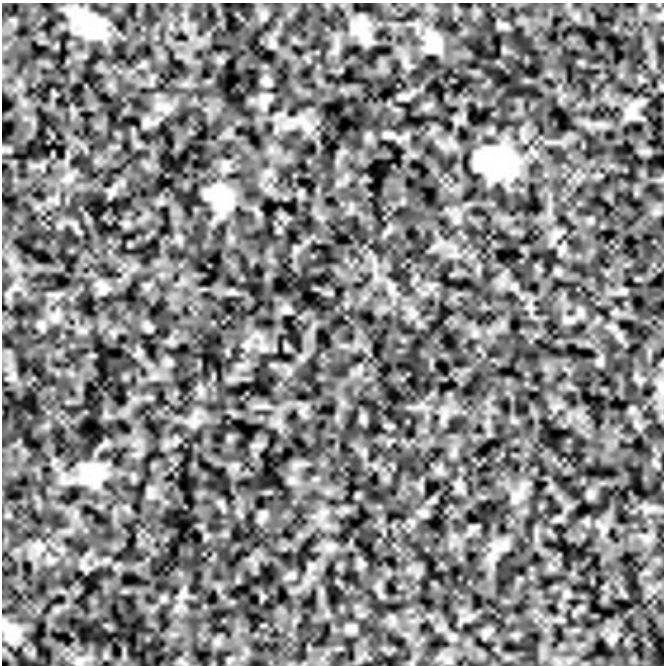


40 Organizations, 160 Satellites, High Reputation

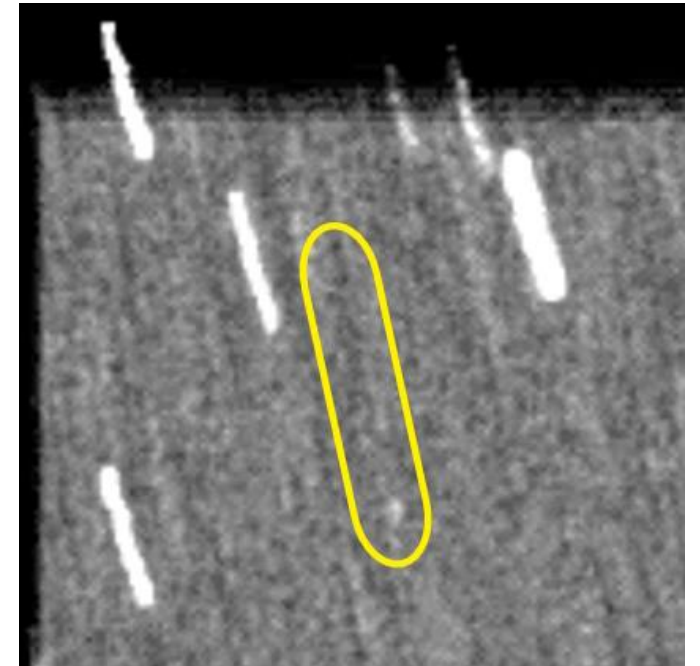


Orbital Objects Detection Technology

Original image



Processed Image



Orbital Objects Detection Technology

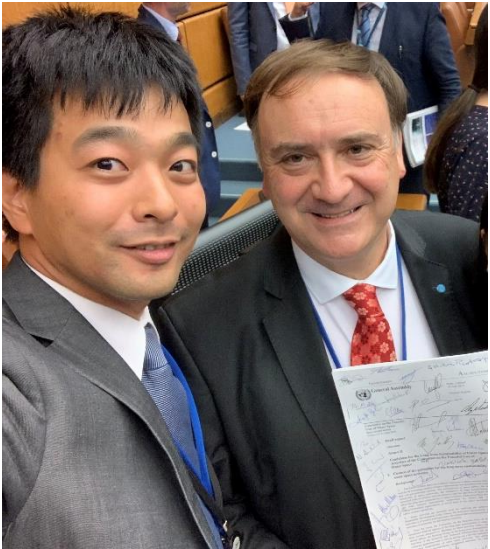
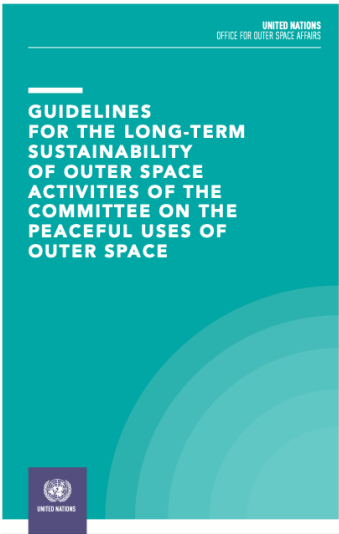


Operating Ground Facilities



Building In-Orbit Capability

Solving the Space Traffic Problem from Asia to the World



Adoption of the Long-term Sustainability (LTS) guidelines in UN COPUOS (2019)

A team of experts from JAXA

**Aki
Iwaki**



Corporate



**Toshifumi
Yanagisawa**



Observation



**Hideaki
Hinagawa**



Orbital analysis



**Yuuki
Akiyama**



Application



Achievements and awards:

STI for SDGs Award Excellence Award 2021

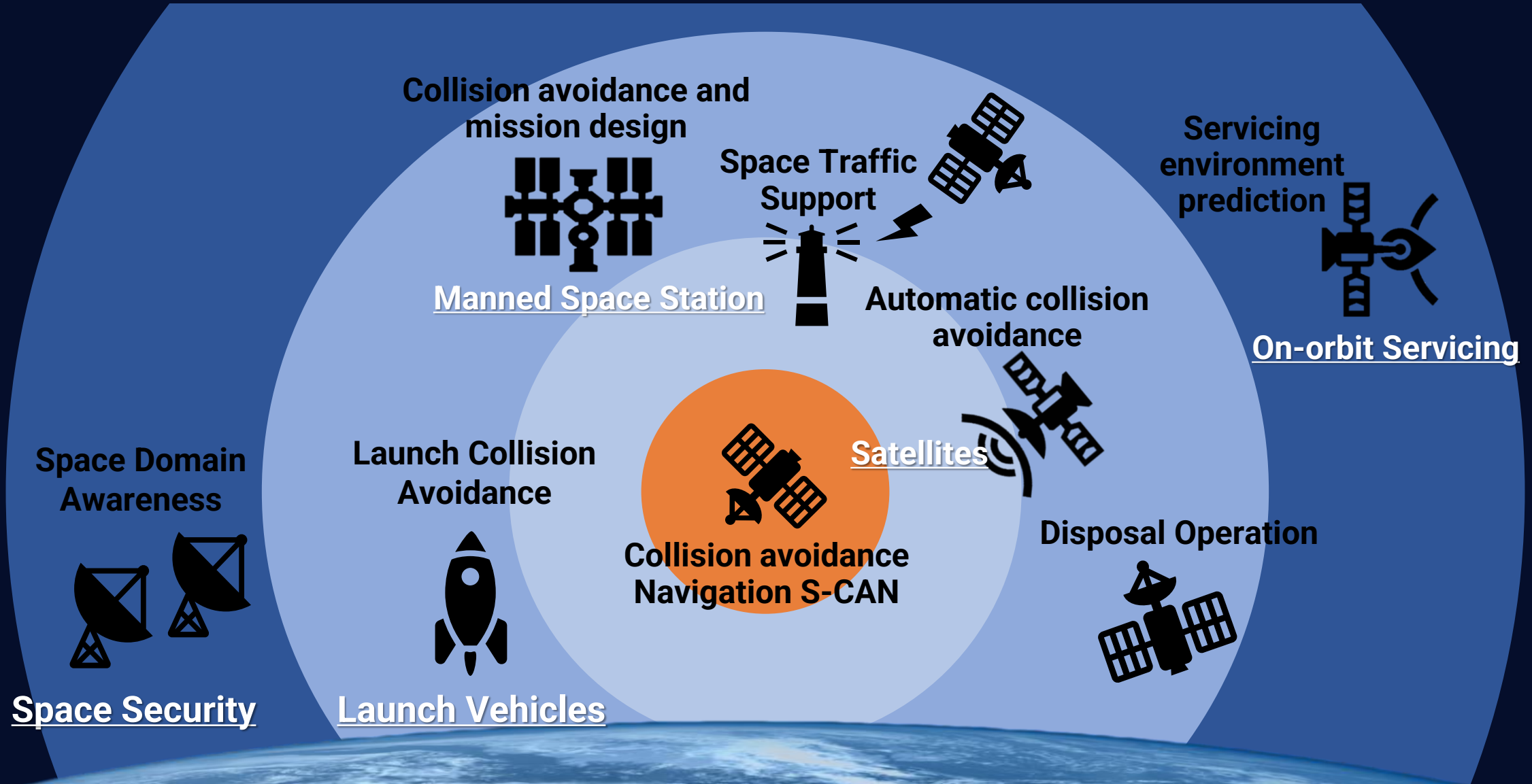
S-Booster 2021 Special Jury Prize

Sido Next Innovator 2022 Silicon Valley Selected Member

Mirai X 2024 MSI Award & Think Globally, Act Locally Award (JTB Award)

JAXA Startup Certification - October 2023

SSA data enables solutions for a full range of space activities



Our Vision

By preventing space accidents and protecting the space environment,
We build a prosperous life on Earth and a future for space activities.