

ENG  
2019.1.22

# COMPASS

vol.0



SPACETIDE

# COMPASS

## Introduction

The international space industry is undergoing a paradigm shift. Whereas previously the space industry has been led by mainly the government, leadership by the private sector has been a gaining momentum in recent years.

Over the past decade, more than 30 countries and regions have invested in space-related businesses, and over 1000 startups have been launched. Various companies from terrestrial industries have also entered and invested in space-related businesses. Thus, today organizations and people from a wide range of fields have joined or are discussing various business possibilities in the new space industry. In Japan, too, interest in the space industry is growing in both the public and private sectors, and signs of a new industrial eco-system have begun to appear.

In this situation, SPACETIDE was established in 2015 and aims to accelerate the whole space related businesses through the cross-industrial activities. Our objective is also contribution to development of Japanese and international space industries by exploring the new ways.

It is in this milieu that SPACETIDE was established in 2015, with the aim of accelerating space-related businesses overall through cross-industrial activities. Our objective is also to contribute to the development of Japanese and international space industries by exploring new paths.

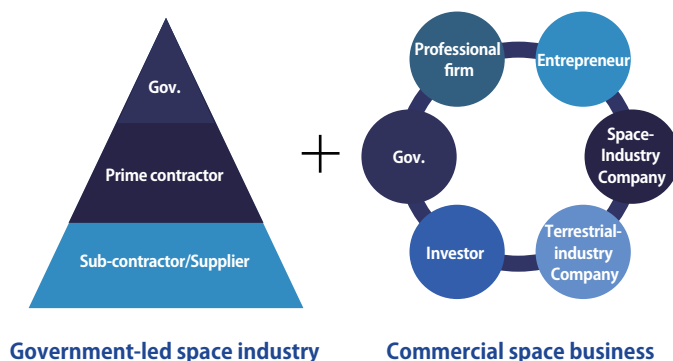
SPACETIDE plans and manages the largest annual space business conference in Japan, as well as a variety of small networking events. As a new activities, we have also started to publish our own industry report: "SPACETIDE COMPASS".

SPACETIDE COMPASS analyzes the domestic and international market trends of the space industry. By publishing the analysis, we aim to enlarge and develop the industry by delivering information that deepens readers' understanding of and interest in space-related businesses. The report's first issue, "vol. 0", includes the followings with the objective of providing the "big picture" view of space business and maturity level of the industry.

- 1 Definition of space-related business market segments (business domain)
- 2 "Player Map" identifying the type of players in each segment
- 3 Research of recent capital raised by startups showing the cash inflow into space industry

We plan to update the player map and key indicators along with the latest hot topics / analysis, on a quarterly or biannual basis.

## NEW ECOSYSTEM



Current space-related businesses can be categorized into 6 segments

### Satellite data space tech application

Business utilizing satellite data and various space tech (mainly ground-based) and its related businesses

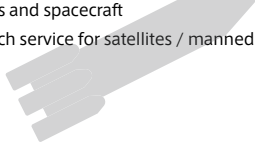
- Satellite data distribution
- Satellite data solution services, using analyzed / processed satellite data
- Satellite communication service



### Launch service

Commercial / manned space flight business and its related businesses

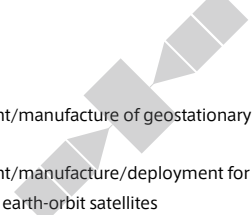
- Development and manufacture of large/small rockets and spacecraft
- Launch service for satellites / manned space flight



### Satellite infrastructure deployment and operation

Business deploying and operating satellite infrastructure and its related businesses

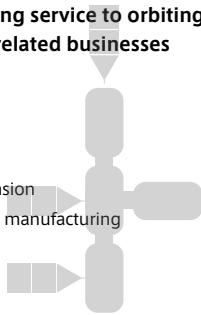
- Development/manufacture of geostationary satellites
- Development/manufacture/deployment for low/medium earth-orbit satellites
- Ground facilities and terminal



### On-orbit service

Business providing service to orbiting artifacts and its related businesses

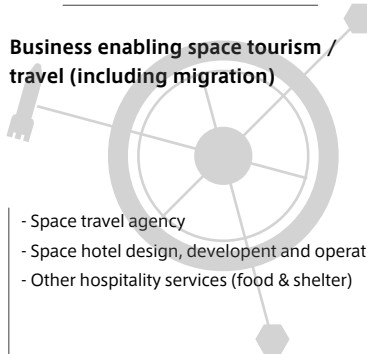
- Satellite life extension
- In space R&D and manufacturing
- Debris removal



### Space tourism migration

Business enabling space tourism / travel (including migration)

- Space travel agency
- Space hotel design, development and operation
- Other hospitality services (food & shelter)



### Space exploration space mining

Business for deep space and its related businesses

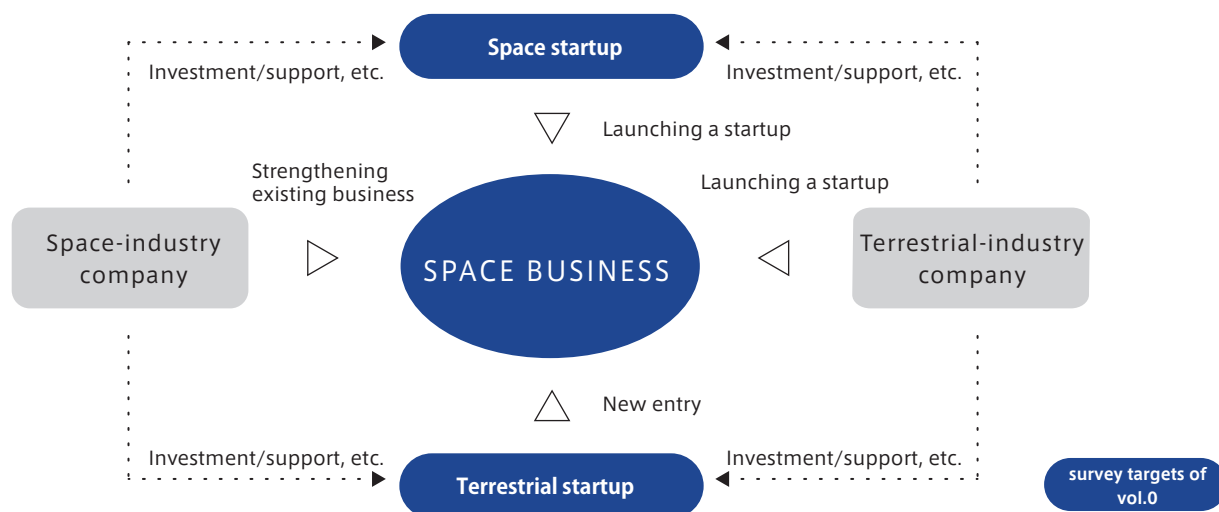
- Space probe / rover development and manufacture
- Lunar / Mars base / infrastructure planning, design and operation



### Space business entry approach and vol. 0 research scope

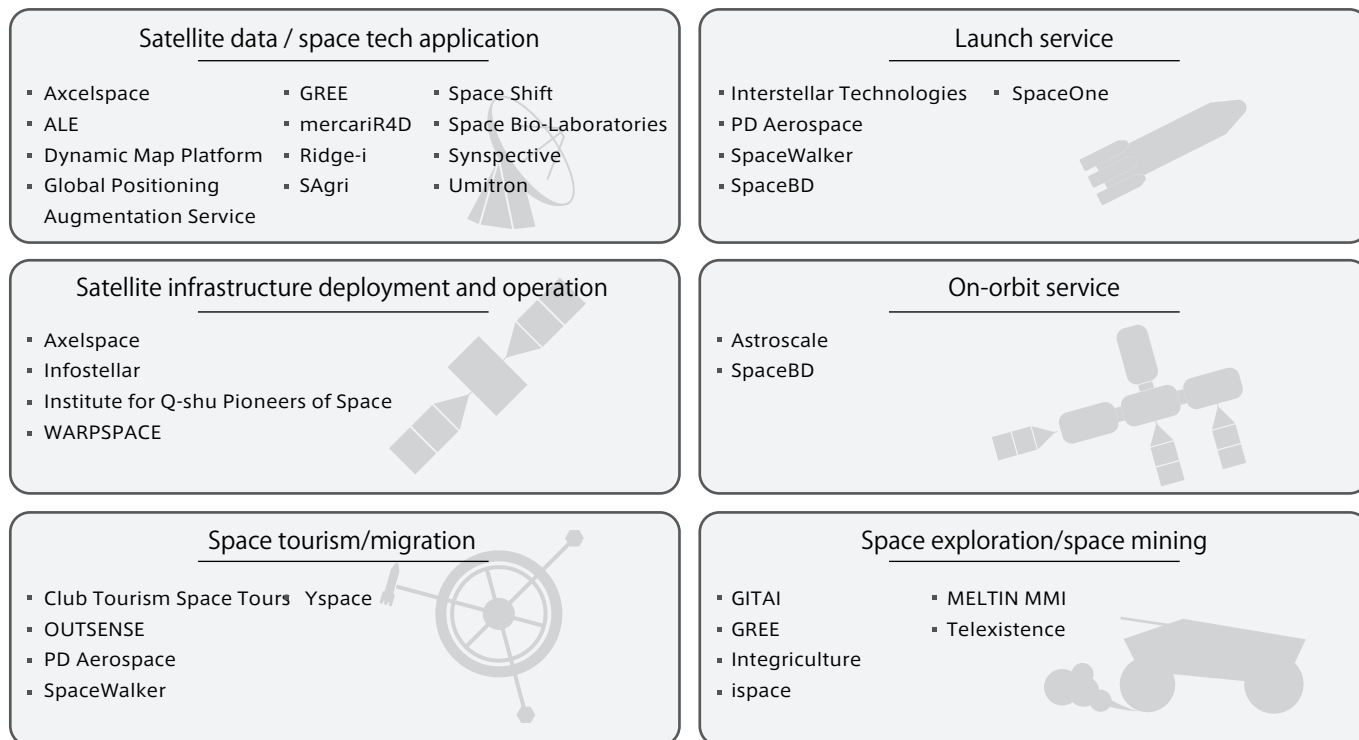
Launching a startup, developing a new business and investing/advising ...

There are many approaches to enter the space business. Vol. 0 research scope is Japanese startups established after 2000.



### Player map by business segment

Various startups are emerging in each segment



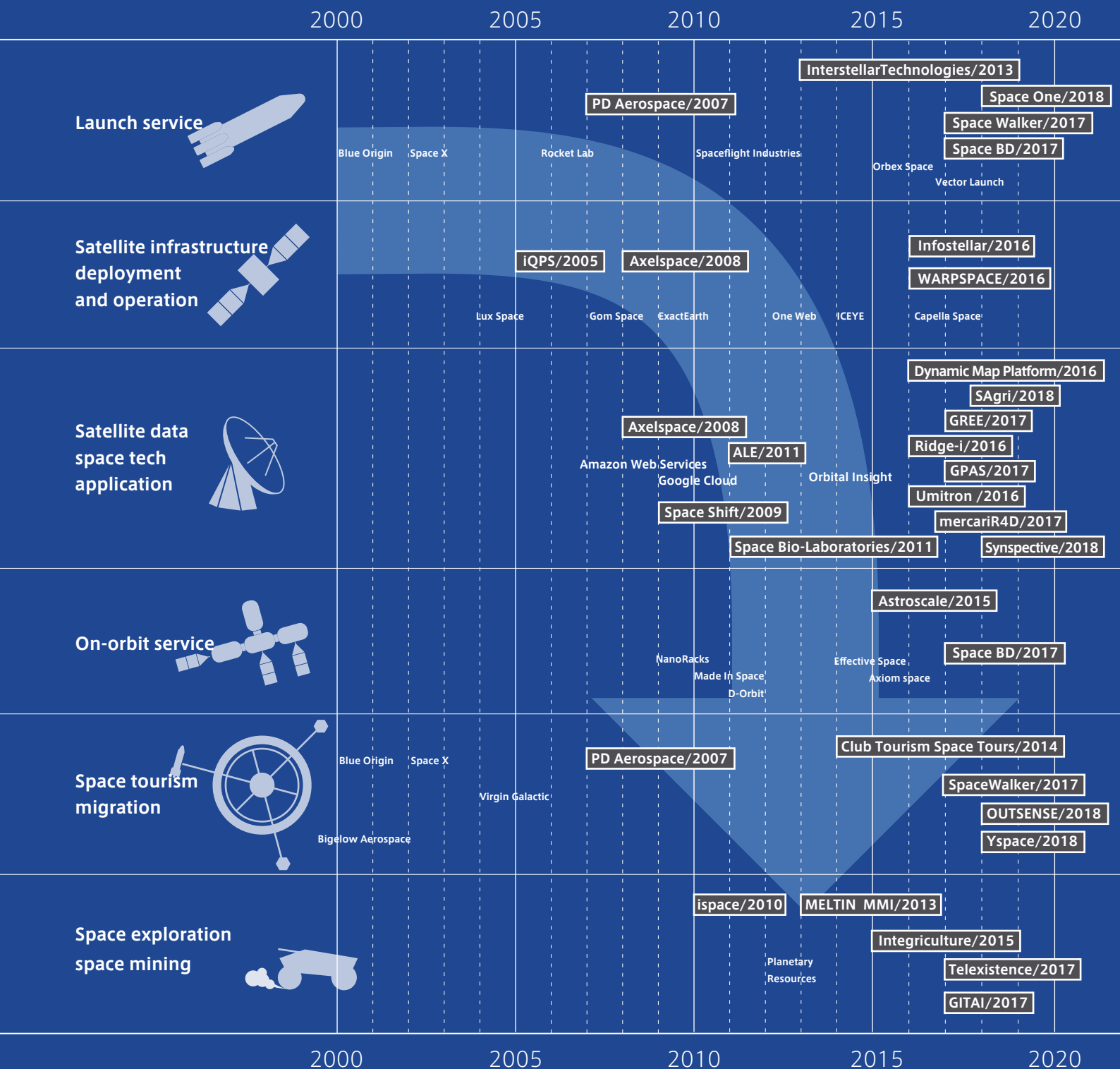
\*1 : Definition of startup: companies established after 2000. (incorporated associations are excluded)

\*2 : Only end product manufacturer (OEM) is listed

\*3 : Alphabetical order

## Player map by year founded

The development of launch service drove the growth of satellites data applications and related businesses.  
New type of businesses such as space tourism and space mining has emerged



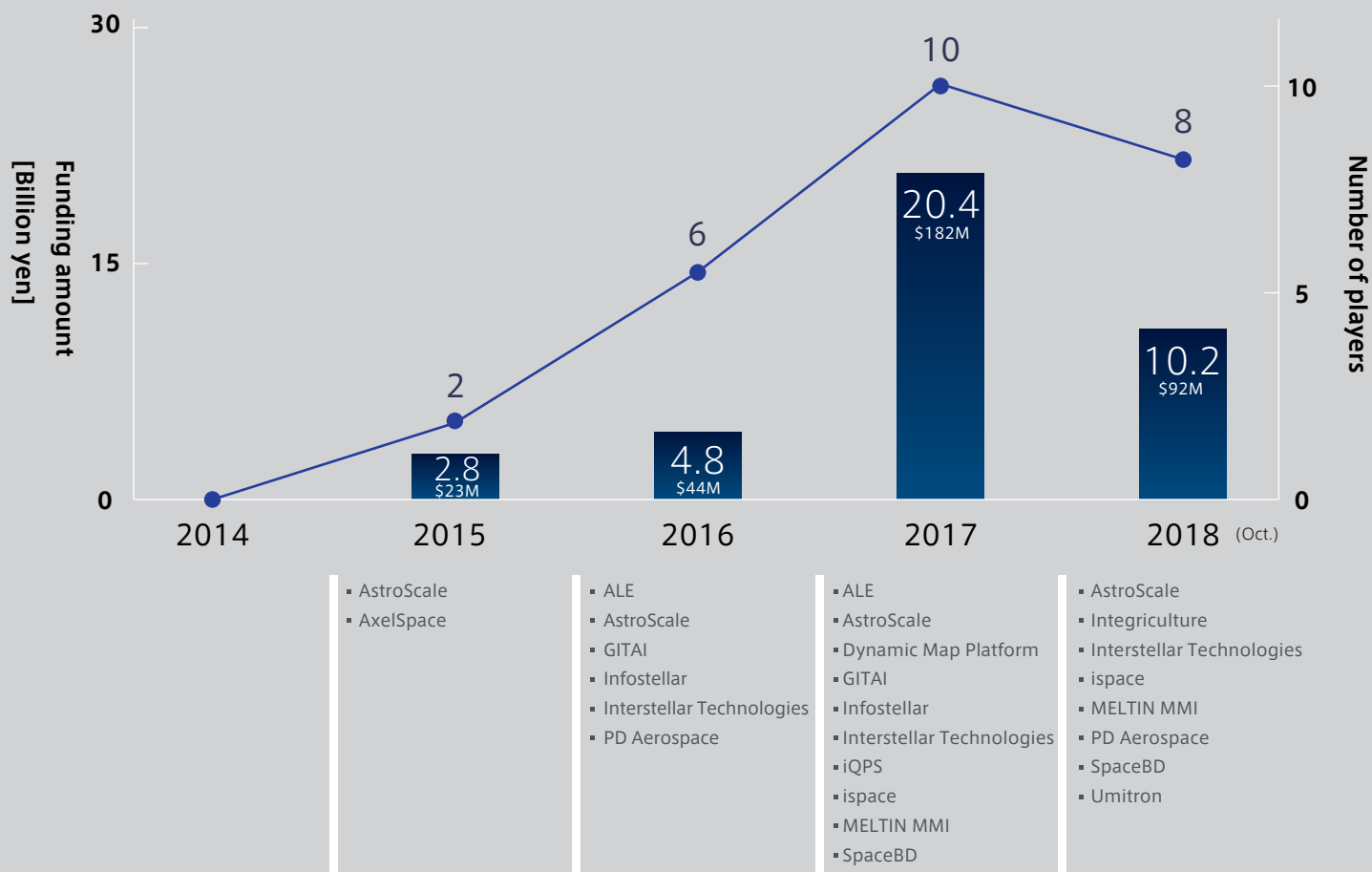
\*1. Lowercase letters indicate foreign companies (only main players)

\*2. Some abbreviation are used due to limited space

\*3. Terrestrial startups are also listed in order of years since their establishment. However, GREE is listed by the year when it announced entry into the space business.

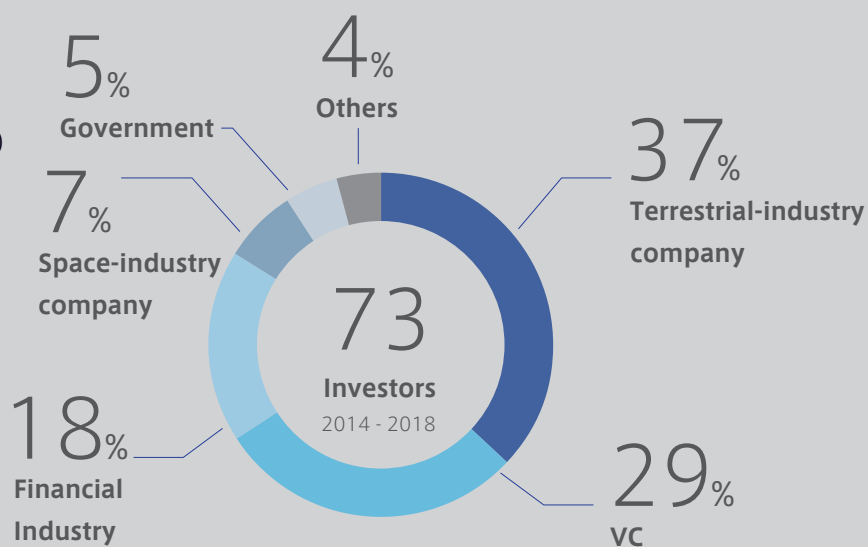
### Raised capital by year (Startups in Japan)

Funding is steadily increasing, however still have room to accelerate fundraising compared to the scale of its global peers



### Investor profile

The main investors in Japan are typically VCs and terrestrial corporations (incl. CVC)



\*1 : Based on public information released (only the number of startups are counted if the raised amount is not disclosed)

\*2 : Raised capital is the total of domestic investment, alliance, sponsorship and crowdfunding

\*3 : investor profile is based on total of invested players between 2014-2018 without overlap (categorized by SPACETIDE)

# AFTER WORD

Domestic and international space industry is undergoing a dynamic change. By analyzing the change from different angles and sharing the findings, we hope to contribute to development of the space industry and to bringing space closer to people.

We started to publish "SPACETIDE COMPASS" because we feel that SPACETIDE has an important mission. The main content of Vol. 0 is a basic fact pack, such as player map, but we plan to share more diverse range of information / analysis in the future reports.

It is our hope that SPACETIDE COMPASS will contribute to development of space industry, and that - as the name suggests - it will serve as a "compass" for people who shows interest in space-related businesses.

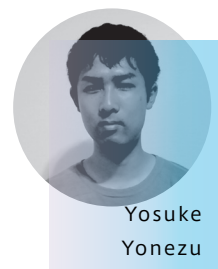
Since its establishment in 2015, SPACETIDE's main activity has been organizing annual conferences and networking events. At these events, we often received feedback from participants that they would like to learn more about the "big picture" and recent progress of space industry. SPACETIDE COMPASS is our first attempt to cater for these feedbacks.

This is a new challenge for SPACETIDE, however we are please to be able to contribute to the development of space industry. Thank you very much

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## COMPASS Vol.0

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by SPACETIDE