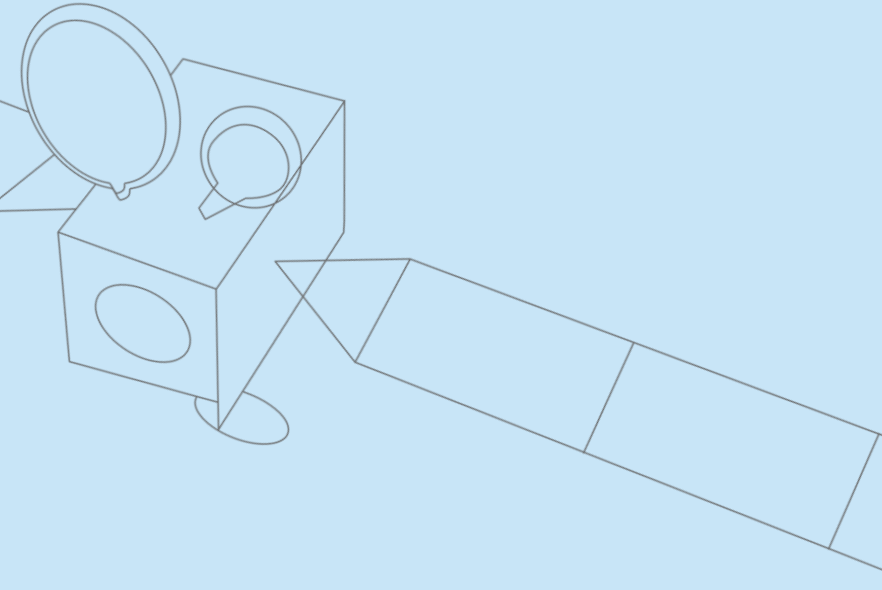
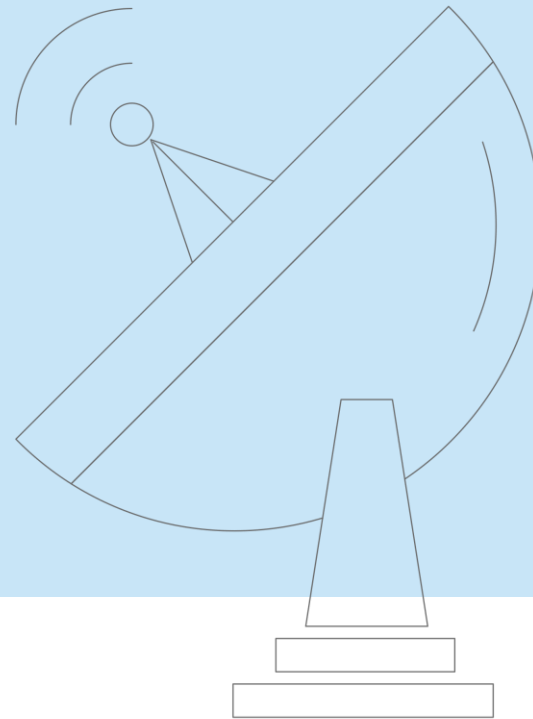
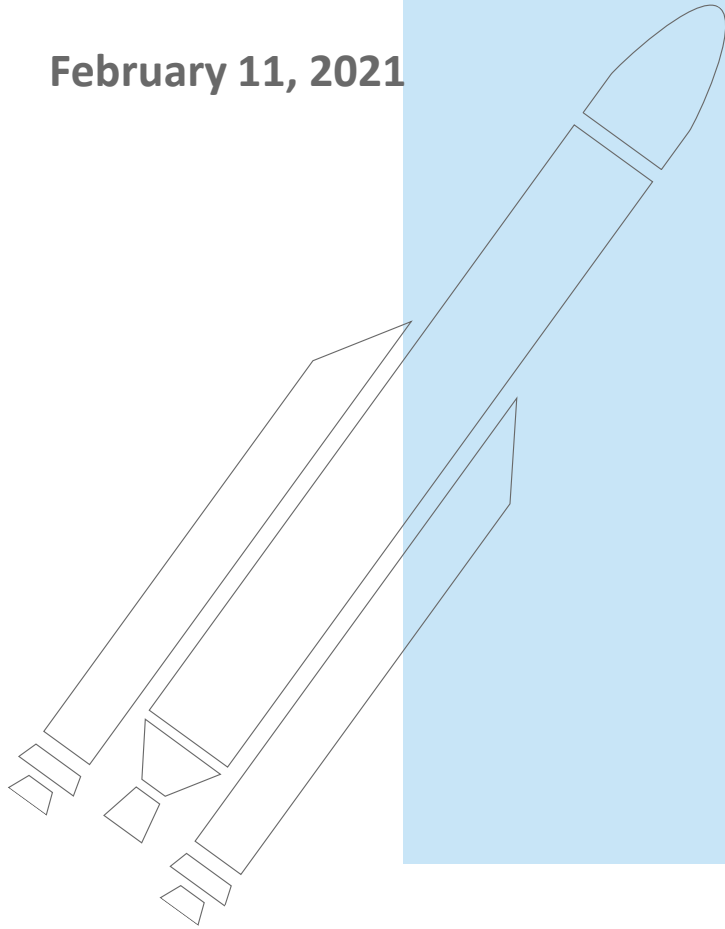




Delivering on strategy „OHB 2025“:

New satellite missions to come & OHB DIGITAL takes off

February 11, 2021

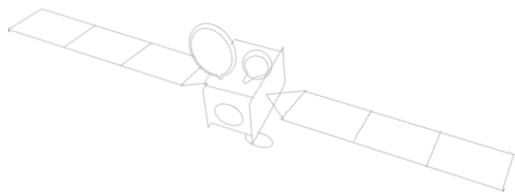


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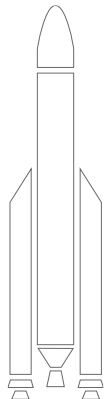
2 OHB covers all stages of the value chain within the space industry

Business activities of OHB

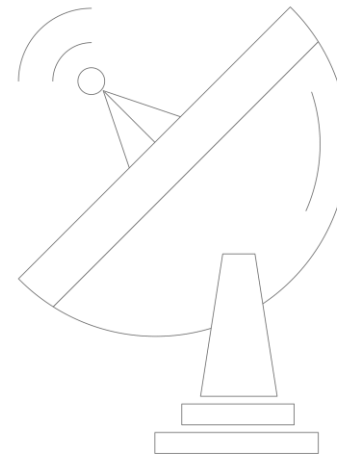
*development,
integration and
testing of
satellites*



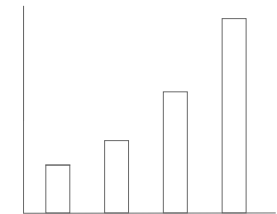
*launchers,
access to space*



*in-orbit
operations &
terrestrial
services*




*exploitation of
data generated
by space-based
systems*



3 General space-based solutions to major global challenges

How do space applications benefit the lives of the general public?

CHALLENGES




Overpopulation



Emissions & Climate change



Deforestation



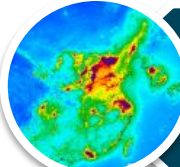
Natural disasters and security related complex threat scenarios




Digitalization




Precision farming and fishing




Tracking of emissions and their consequences



Detection of illegal activities and monitoring of ecosystem vitality

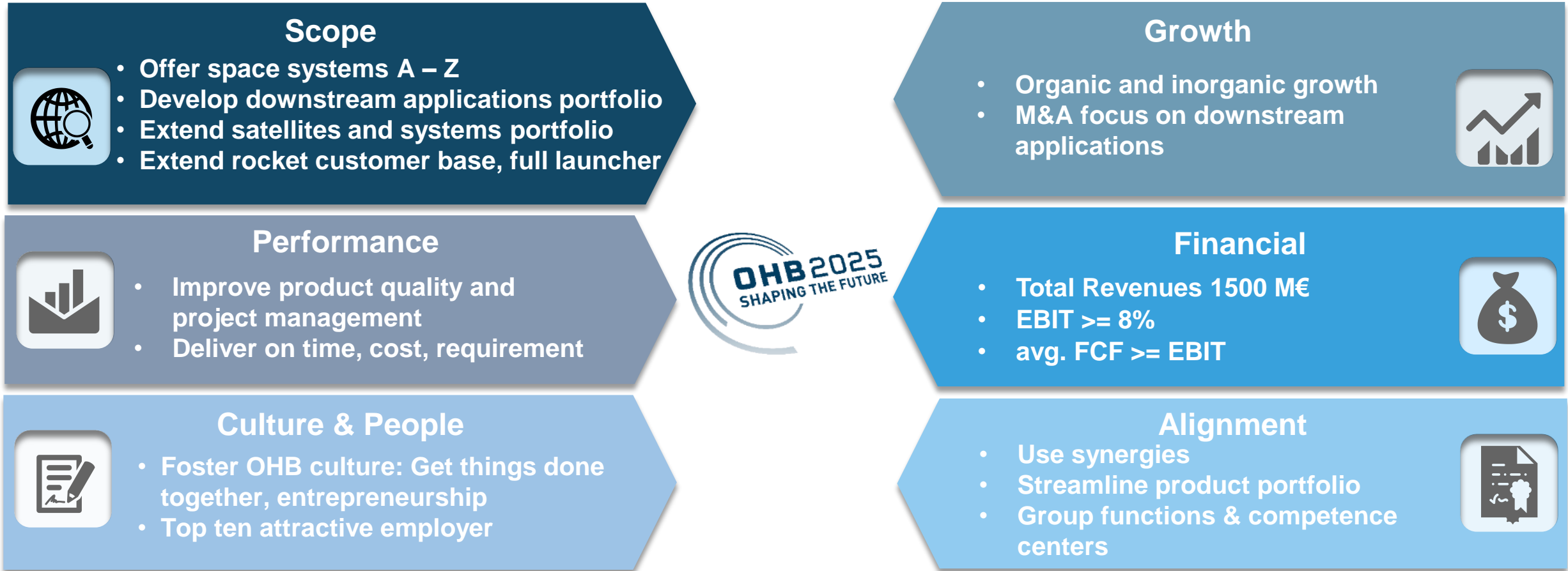


Monitoring of affected areas, coordination of crisis response



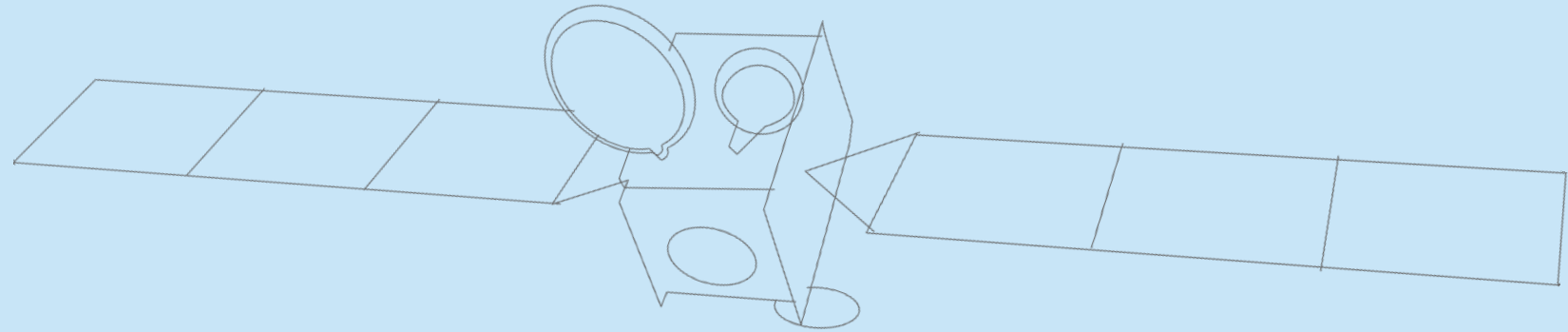
IoT, autonomous systems, data security and global coverage

SOLUTIONS



Confirmed after COVID-19 wave 1,
adjustments in relation to COVID-19 wave 2 impact will be evaluated mid 2021

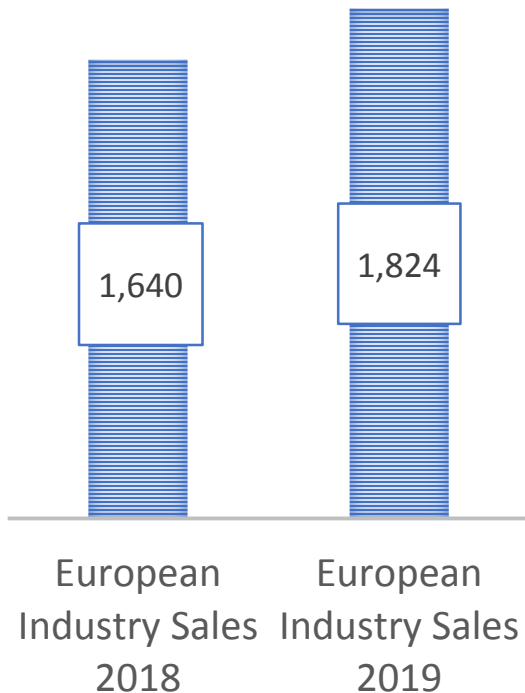
Business Development Space Systems 2020 / 2021ff



Dr. Lutz Bertling, CSDO / CDO

6 Earth Observation: high economic and environmental benefits

Earth Observation:
sales in EUR million



Example: Copernicus Program of the European Commission - the biggest environmental monitoring programme in the world!

- **Satellite system** that observes the earth and atmosphere and **provides data for climate protection**, sustainable development, food security and the condition of the oceans
- The program is becoming increasingly important due to global environmental problems (**provides the data basis for climate policy decisions**)
- Probably **the most ambitious program** of global environmental and security monitoring
- The data obtained is available to all people **free of charge** - Innovation driver for downstream industries

Quelle: ASD Eurospace

Heritage



SAR-Lupe
Reconnaissance System

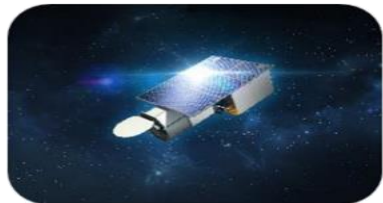


Prisma
Environmental satellite

OHB's current EO portfolio



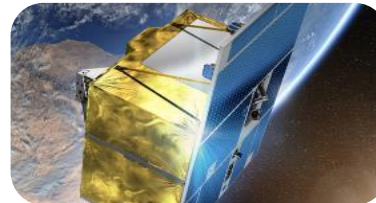
- CO2M Satellite
- CIMR Payload
- CHIME Payload
Environmental



Optosat & NAOS
Reconnaissance satellites



MTG
Weather satellites



EnMAP
Environmental satellite



SARah
Reconnaissance satellites

Upcoming programmes



- Sentinel-1 NG
- Sentinel-2 NG
- Sentinel-3 OPT NG
- Sentinel-3 TOP NG
Environmental



- Earth Explorer 10
- Earth Explorer 11
Environmental



Arctic Weather
Environmental







FORUM
Environmental



LYNX
Environmental

8 OHB contributes to stop climate change

Earth Observation

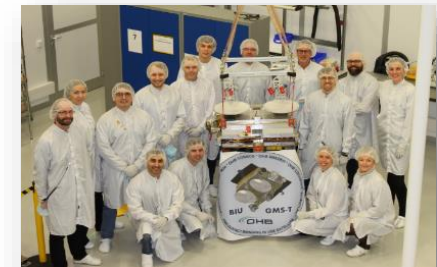
Copernicus: CO2M	Copernicus: CHIME	Copernicus: CIMR	Arctic Weather Satellite (ESA-EO)
			
Mission Prime: OHB System	Payload Prime: OHB System	Payload Prime: OHB Italia	Mission Prime: OHB Sweden
Contract signed on July 31 (EUR 445* million)	Contract signed on November 19 (EUR 259 million)	Contract signed on December 29 (EUR 178 million)	OHB Sweden wins one more ESA Earth Observation Mission
Order intake 07/20 – 03/21 > 900 M€			

* plus an option for additional EUR 130 million

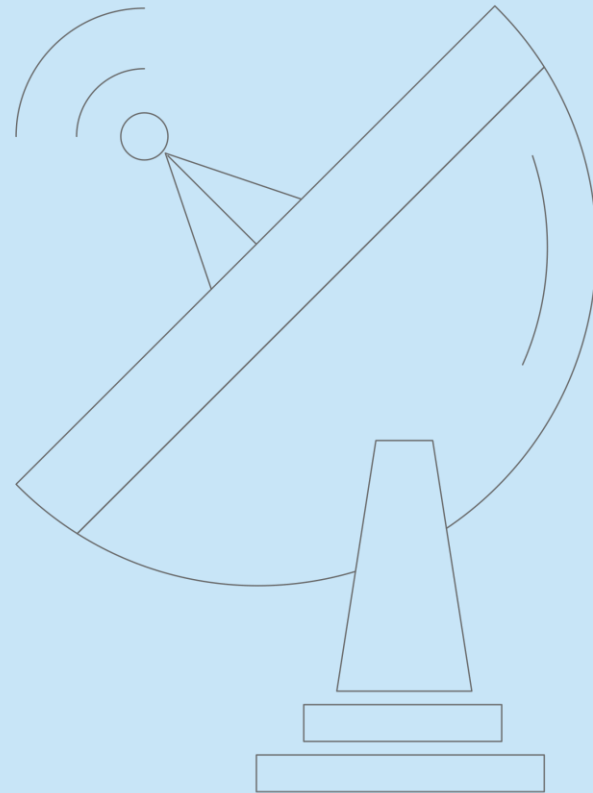




- Small communication satellite designed, built and tested by SPACE SYSTEMS as “New Space” Prototype for a planned **constellation**
- Contract signature to launch in **7 Months (+ 3 Days)**
- **Launched** with Electron (Rocket Lab) from New Zealand on January 20th, 2021
- Successfully being **operated** by OHB DIGITAL
- OHB sets foot in the **mega-constellation business**
 - OHB secures European spectrum in space for Non-US constellations
 - In this decade 3 to 4 additional constellations, especially from **Canada, Europe and China** are very probable, opening a 10B\$ market for European manufacturers
 - One of them will be a secure communication constellation, the so called 3rd flagship of the European Commission
- GMS-T is the first **in orbit servicing** contract of **OHB DIGITAL**, being the prime contractor (OHB Cosmos International Launch Services GmbH)

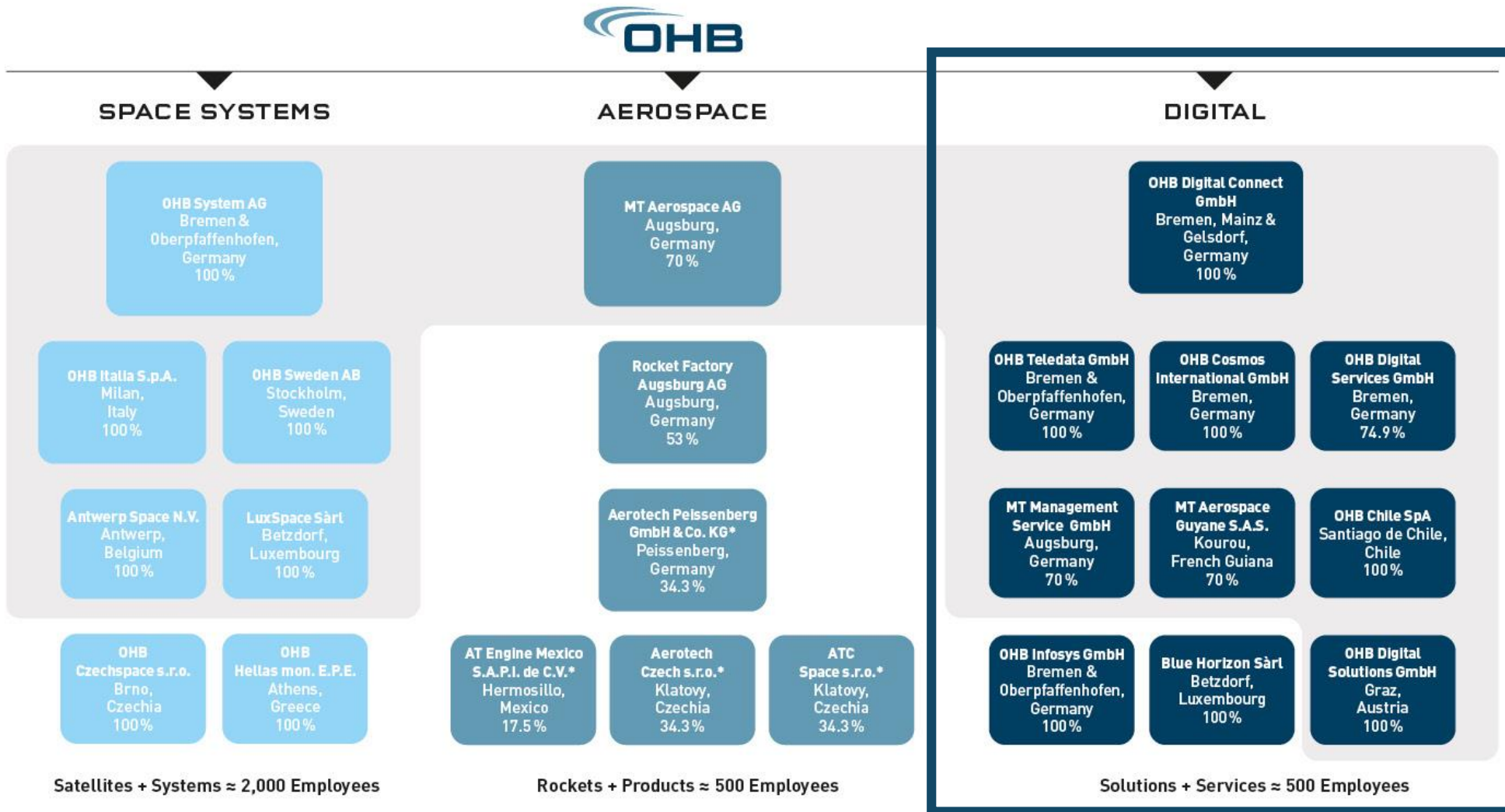


OH B DIGITAL takes off



Dr. Lutz Bertling, CSDO / CDO

Our new business segment



This chart shows an overview of the business segments, not the detailed shareholding relationships.

*The approx. 650 employees of the ATP Group are not included here. Aerotech Peissenberg GmbH & Co. KG is included at equity in the consolidated financial statements of OHB SE.

Consolidated



12 Key objectives

OHB DIGITAL

OHB as an end-to-end space solution provider

- Investment in OHB DIGITAL and RFA

OHB needs to become more crisis resilient

- Diversify into new, adjacent markets with different business cycles to balance risk

New growth opportunities and change company valuation

- Downstream applications and services are the fastest growing space related business areas with better margins than OHBs current business

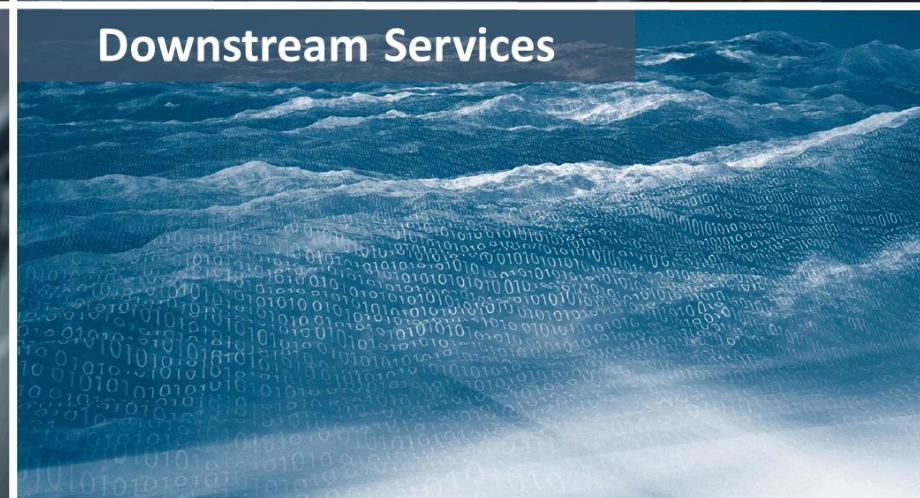
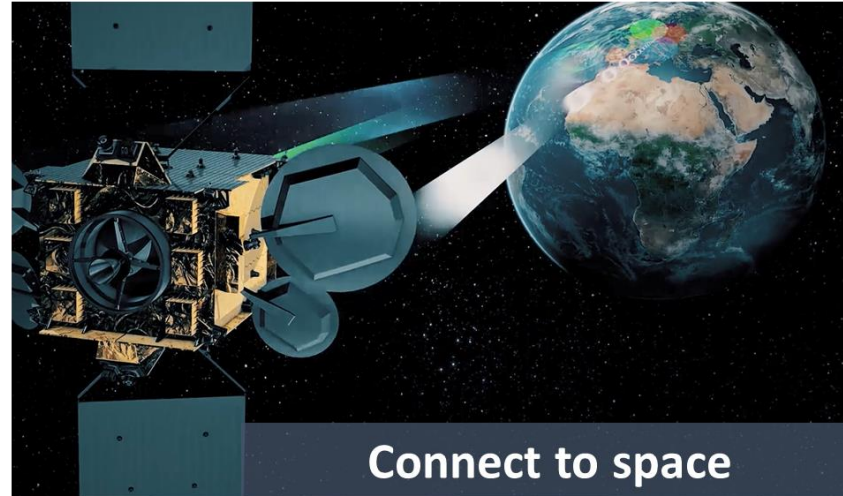
Build on what we already have

- Develop digital, services & ground activities into core businesses
- Achieve sustainable profitable growth

OHB DIGITAL is expected to deliver >200M€ revenues with >10% EBIT by 2025



- OHB DIGITAL combines OHB Groups today and future business in the areas of solutions and services
- OHB DIGITAL will be structured along market verticals
- Cross-segment Competence Centers will be build-up:
 - Security: Cyber, electronics, and cryptography
 - Software development (incl. cloud based)
 - Data analytic (incl. Big Data and AI)



14 Connect to space

- **Antennas and telescopes**

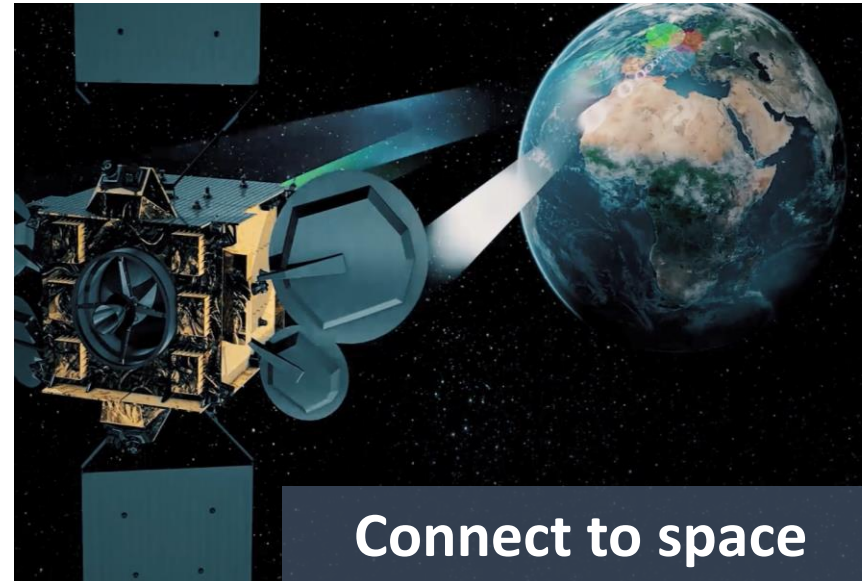
- Large astronomical antennas
- Optical telescopes, incl. new optical communication ground stations
- Launch facilities incl. New Space launch sites

- **Operations**

- Operations for OHB and customers owned satellites
- High level of autonomous operation

- **Ground Segments**

- End-to-end system capability



15 Critical infrastructure

- Maritime

- AIS applications
- Vessel monitoring system

- Logistics

- Asset tracking
- Digital twin

- Rail

- Power distribution and control
- Cyber security for digital rail infrastructure
- Positioning services for trains



Maritime



Critical Infrastructure



Logistics

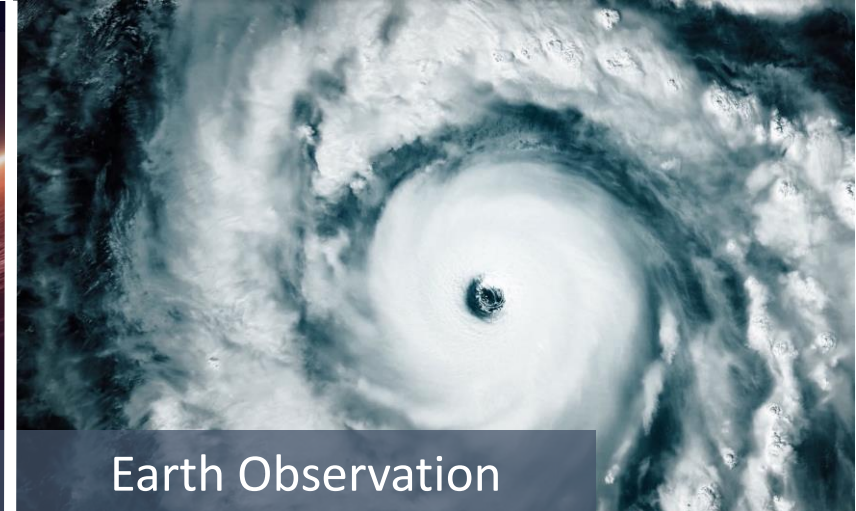


Rail

- **Telecom**
 - Secure communication (e.g. Quantum Key Distribution)
 - Broadband and IoT services
- **Earth Observation**
 - Remote sensing applications
 - Climate monitoring
 - Pollution monitoring
 - Agriculture & Fishery
 - Remote infrastructures
 - ...
- **Airborne and ground**
 - Security applications



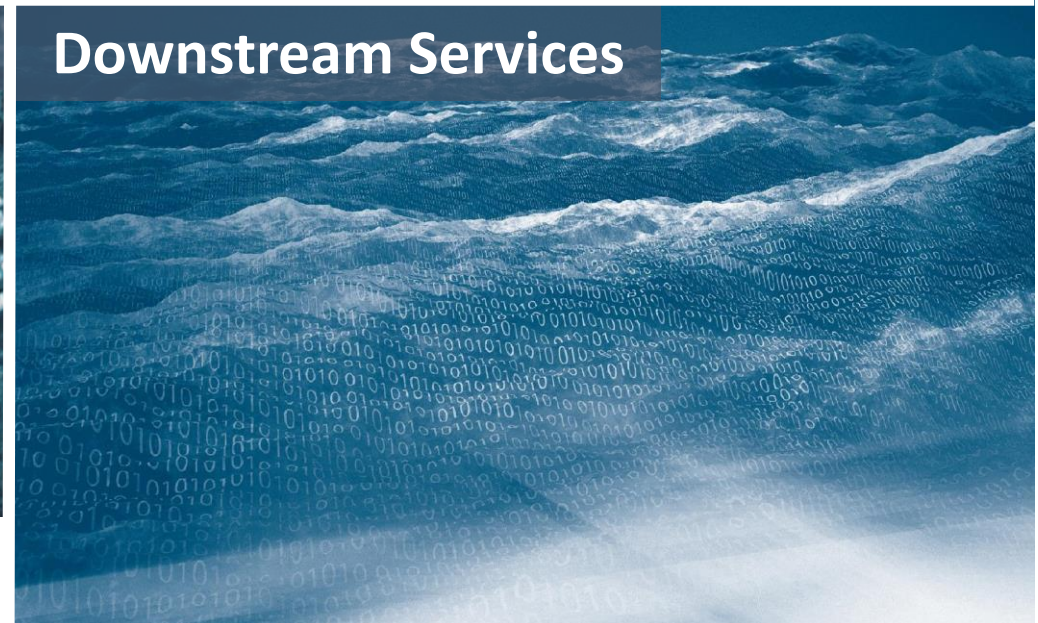
Telecom



Earth Observation



Airborne and Ground



Downstream Services

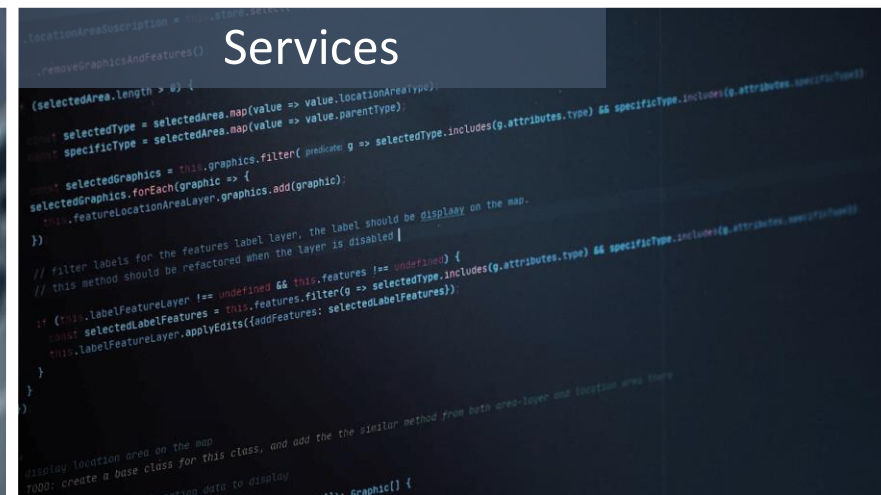
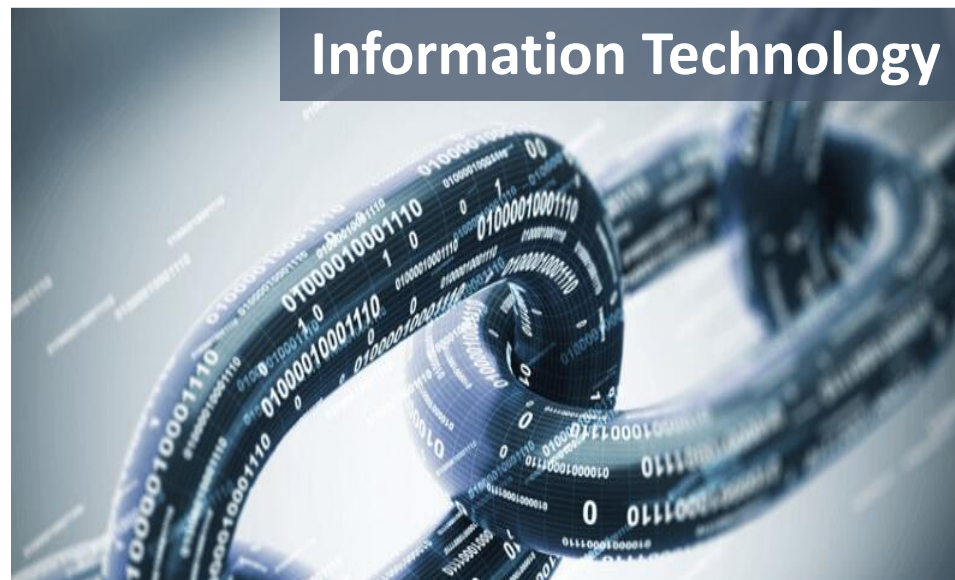
• Services

- Agile software and application development
- Digitalization of business processes
- Cloud services and consulting



• Security

- Cyber security as a service



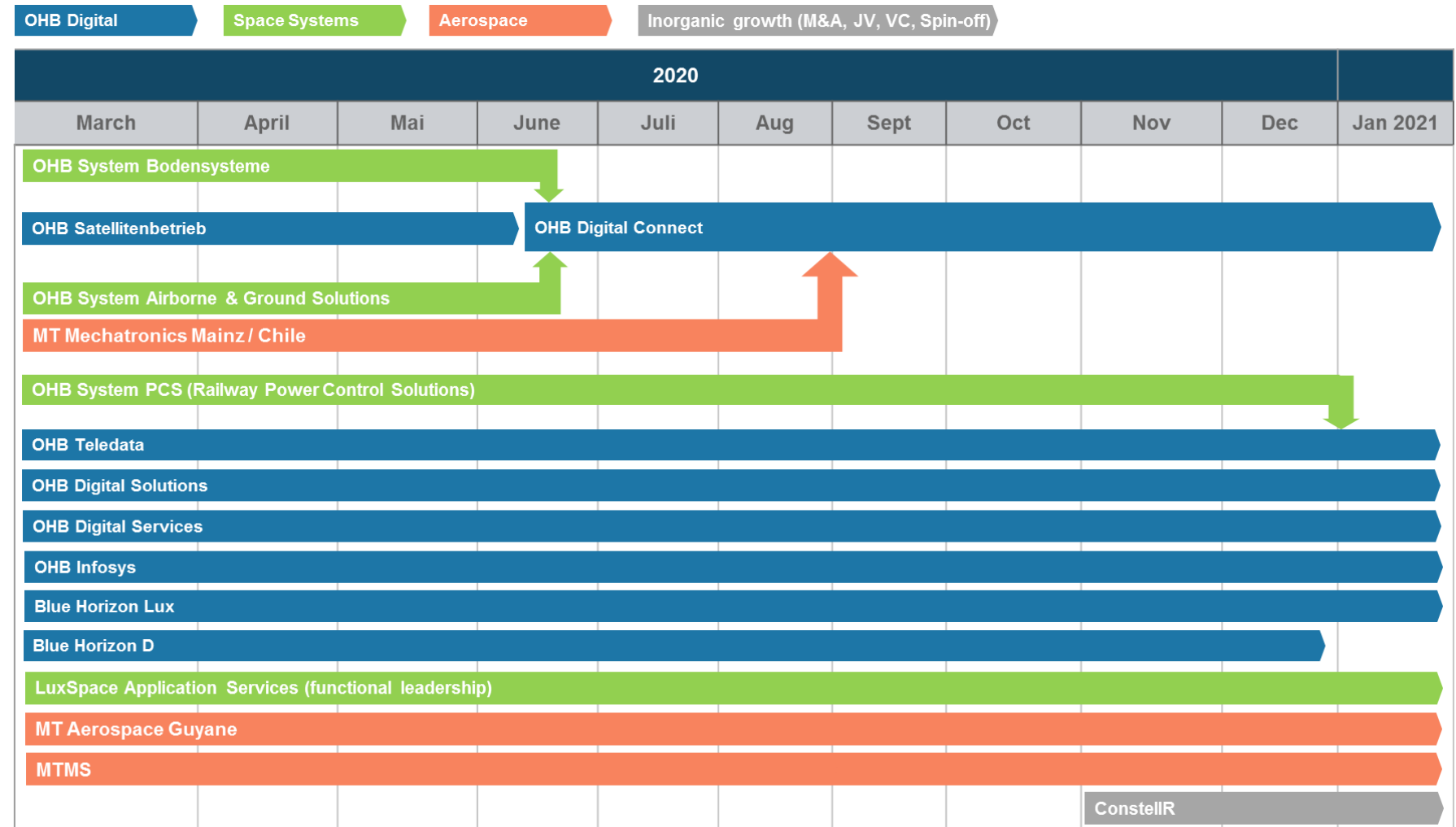
• Infrastructure

- Digital backbone
- IT services

• Digitalization of OHB Group

18 2020: The Formation Year

- In 2020 we created OHB DIGITAL mainly by reallocation of existing OHB Group activities
- First structuring and initial cooperation opportunities were already implemented to realign and strengthen the OHB DIGITAL activities
- High support by OHB SE Management Board to invest in OHB DIGITAL
- In 2021 focus will be on leveraging of this new structure plus organic & inorganic growth



19 Inorganic growth, example ConstellR

- Inorganic growth of OHB DIGITAL through Acquisitions, joint ventures, venture capital and spin-offs
- Focus on synergies with OHB's existing products and customers
- Focus on downstream applications and services
- First investment in ConstellR already took place, several others being negotiated
- SPACE SYSTEMS will be payload responsible, DIGITAL will develop and market downstream services complementary to ConstellR



Food security through temperature data. [From space.](#)

