
ON THE RIGHT ORBIT – OHV'S PATH TO 2025 AND BEYOND

CAPITAL MARKET DAY 2022, JANUARY 18

MARCO FUCHS, CEO

INCREASING MAGNITUDE: GLOBAL SATELLITE INDUSTRY

2020 AT A GLANCE



1,275

satellites launched



114

rocket launches
(all-time record)



547 tons

payload mass launched
(+41 % from 2019)



USD 26.5 billion

generated by
manufacturing and launch

Euroconsult (2020): Satellites to be built & launched by 2029

STRONG MARKET ENVIRONMENT WITH FURTHER POTENTIAL (I)

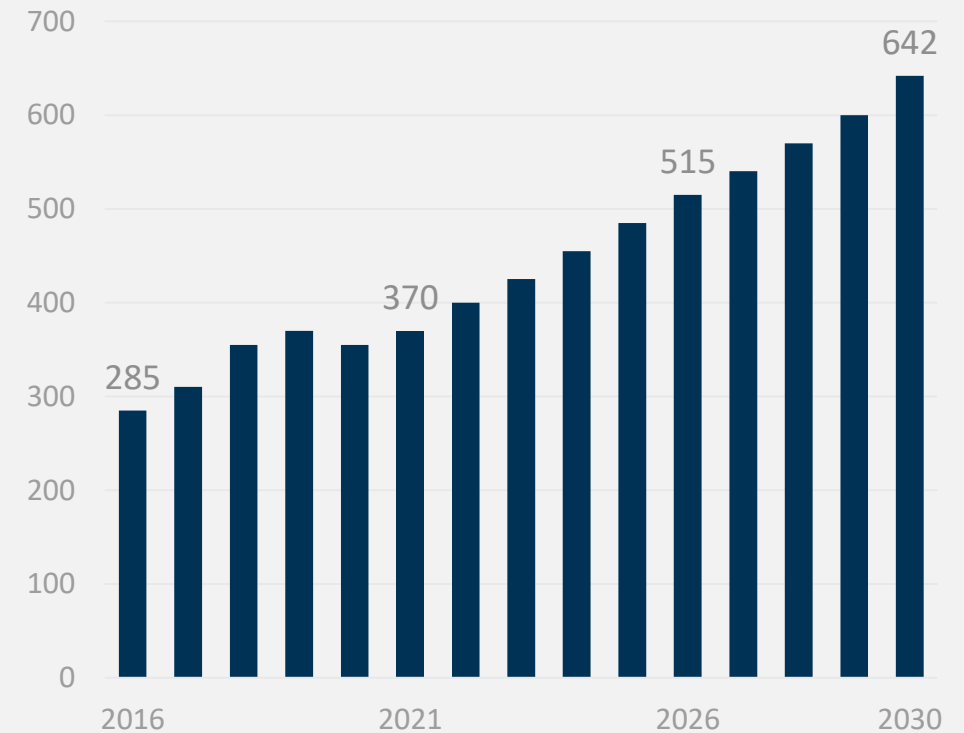
ANOTHER DECADE OF GROWTH EXPECTED FOR THE SECTOR

Rising importance of space applications is well reflected in growth projections for the global space economy

- Expected CAGR from 2016-2030: 6.3 %
→ despite Covid-19-induced impacts in 2020
- Global space economy is back on the growth track in 2021*
 - Recovered to 2019 levels after 4 % decrease caused by the Covid-19 pandemic in 2020
 - 91 % (USD 337 billion) considered as addressable space market of which ~ 25 % is located in Europe

OH B has strong capabilities and heritage to address the upstream market (all applications) and constantly works on expanding its reach into the downstream market

Global space economy:
Growth projection (in USD billion)



STRONG MARKET ENVIRONMENT WITH FURTHER POTENTIAL (II)

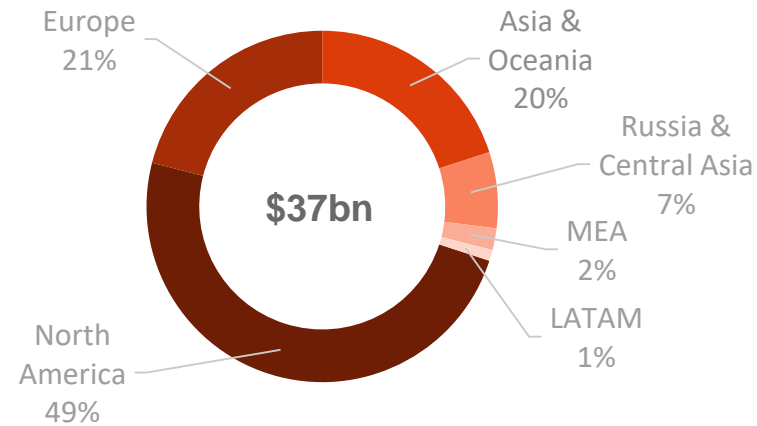


REVENUE BREAKDOWN FOR 2021

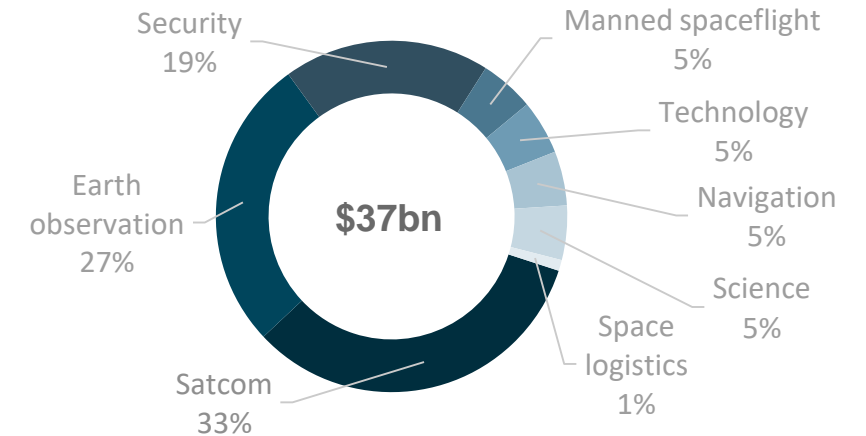


Upstream

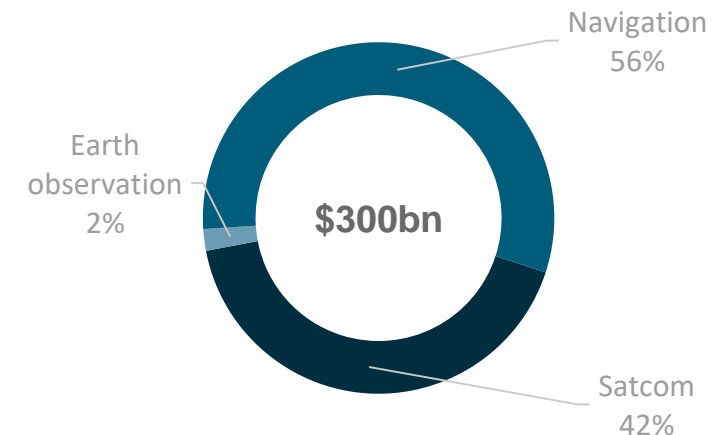
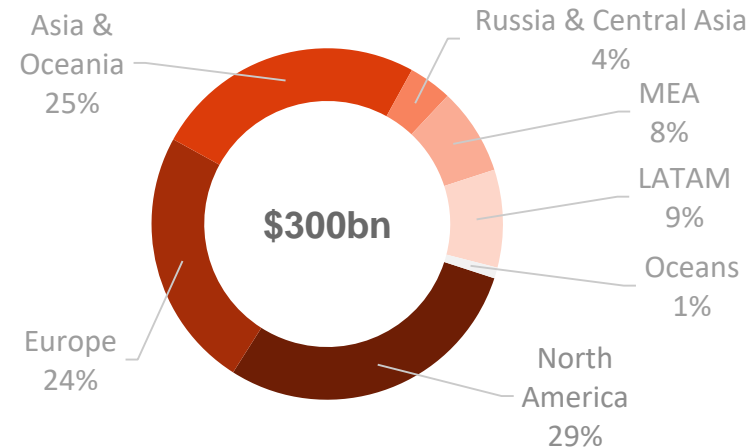
Space market by region



Space market by application



Downstream



Euroconsult (2021): Space Economy Report 2021

KEY FACTORS DRIVING A BOOM IN THE SPACE ECONOMY

SPACE IS EXISTENTIAL - FROM THE FUTURE OF THE PLANET TO THE FUTURE OF COMMERCE

Industry drivers

- Replacement of existing satellites
- Cheaper launch opportunities
- Technical innovation and new application ideas (e.g. ESA Agenda 2025)

Exogenous factors

- Economic exposure of national economies to space applications
- Increasing importance of space applications for capabilities desired by governments
- Financing: Increased capital inflow and new financing approaches
- Continuous rise in demand for earth observation
- Increasing demand for (secure) bandwidth
- Backbone for megatrends like digitalization and data driven commercial applications
- Direct and indirect user base of space applications on continuous rise

Present

Near future

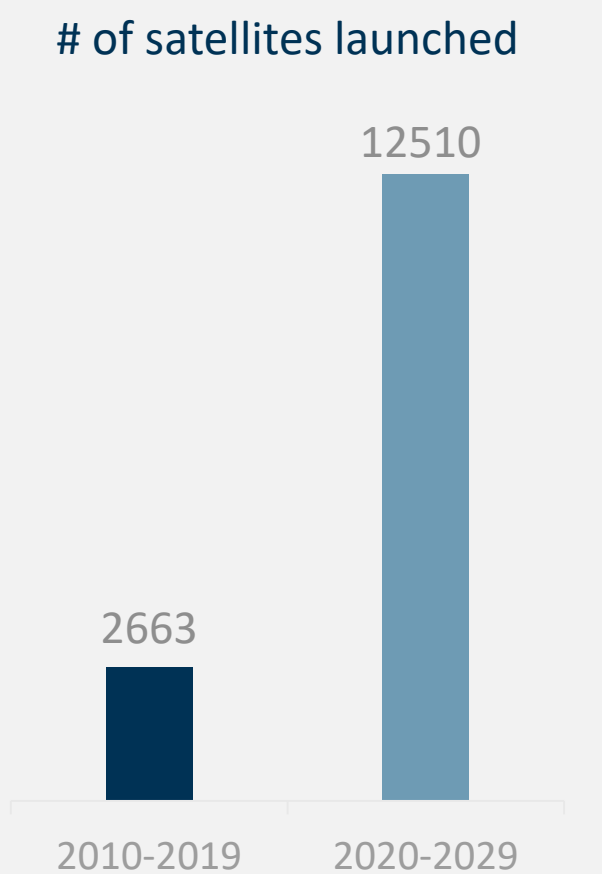
Beyond

INCREASED ROLE OF SATELLITE CONSTELLATIONS

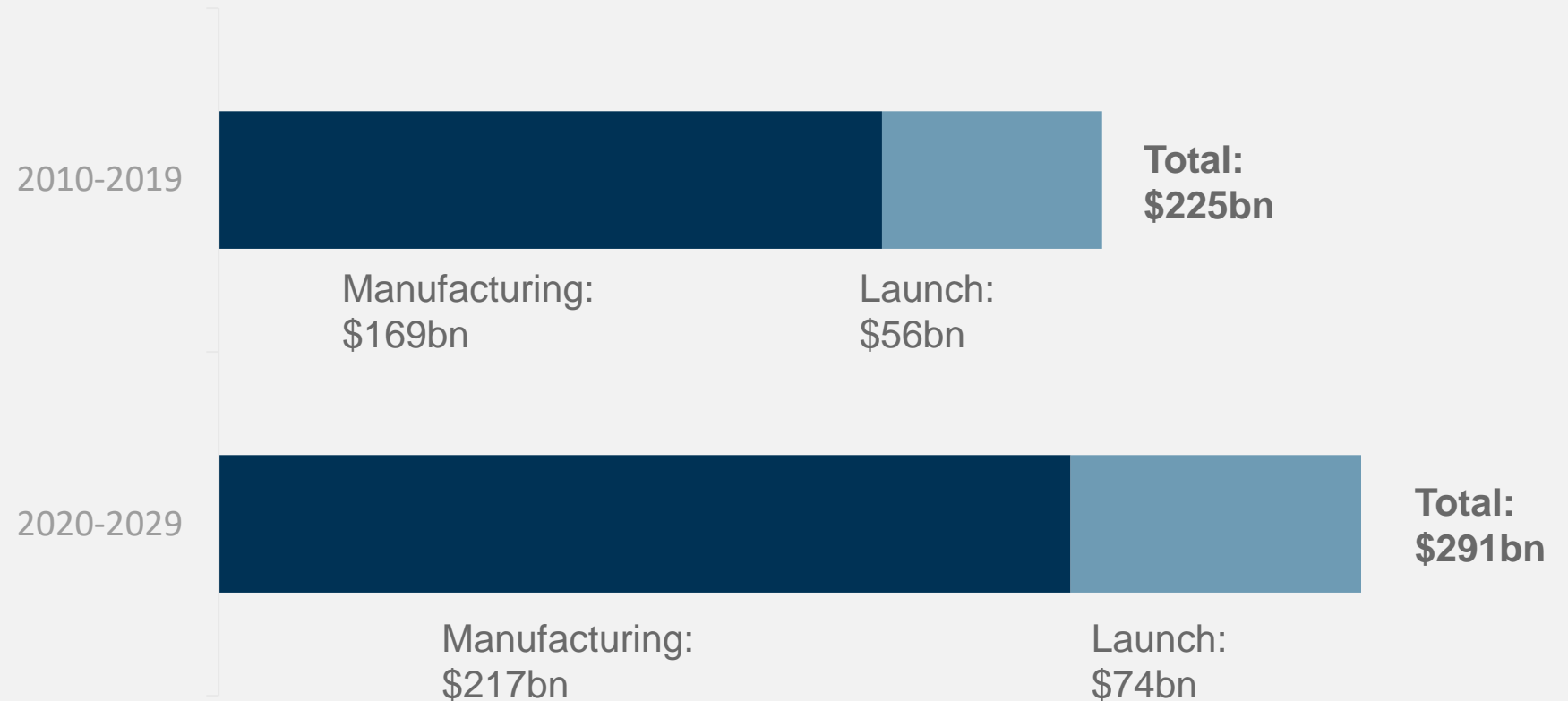
WORLD SPACE INDUSTRY OVER TWO DECADES



of satellites launched



Satellite industry: Revenue growth projection



Euroconsult (2020): Satellites to be built & launched by 2029

HOW SPACE APPLICATIONS BENEFIT THE EARTH (I)

THE IMPORTANCE OF EARTH OBSERVATION WILL INCREASE STRONGLY



Environmental monitoring

Delivering robust systematic data to address environmental challenges of tomorrow



Improved security for the population, protection of material assets, more targeted crisis management possible

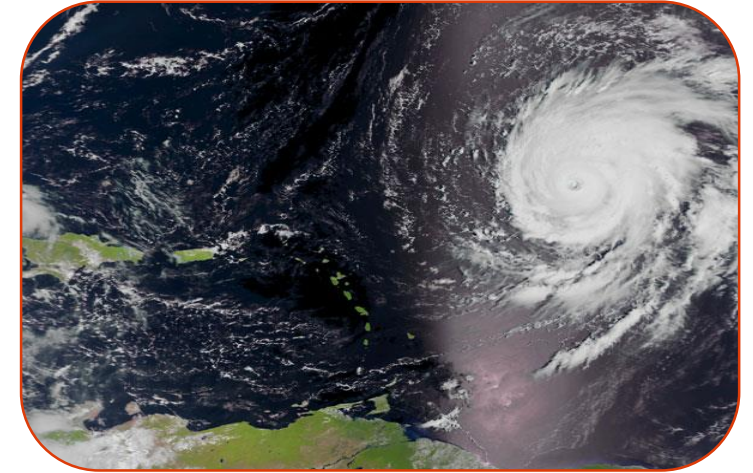


Weather monitoring

Enormous indirect added value for different industries



Makes targeted measures to meet a wide range of challenges possible - from resource shortages and environmental pollution to climate change



Security

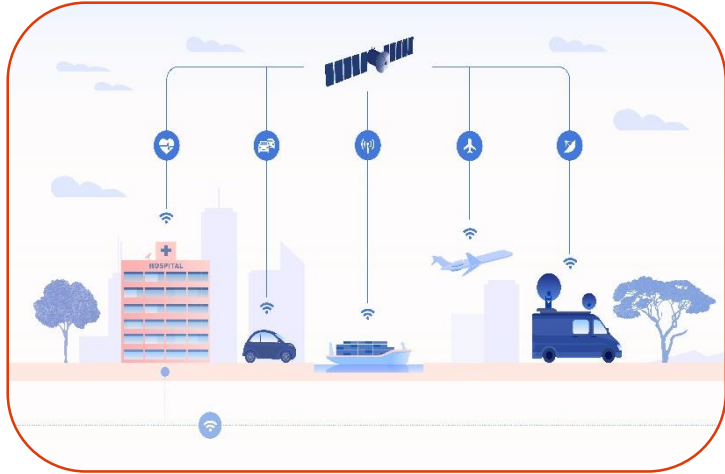
Prediction and observation of natural disasters such as floods or hurricanes



Extremely positive impact on planning and action for various industries such as agriculture, logistics, insurance, tourism

HOW SPACE APPLICATIONS BENEFIT THE EARTH (II)

WHY THE TELECOM MARKET WILL EXPERIENCE A STRONG COMEBACK

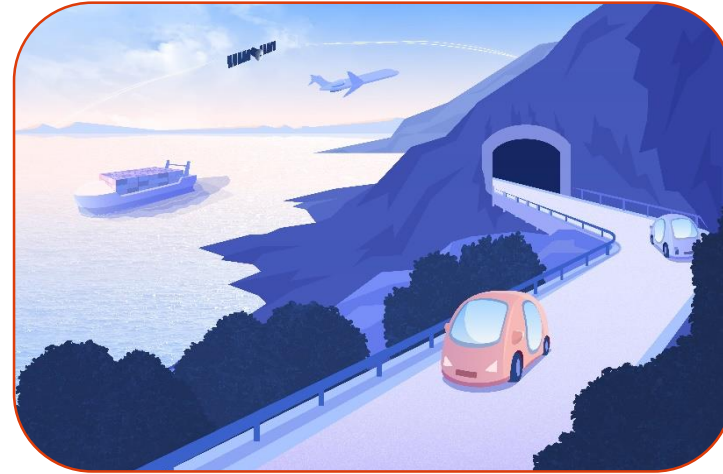


Connectivity: Internet

A growing number of internet users (~ 5 billion people) demand better service with higher bandwidth everywhere



Connectivity from space provides direct access in areas without connectivity and additional capacity in densely populated areas via backhaul



Connectivity: New applications

Telecom satellites enable new applications for mobile bandwidth and security



Transport sector will profit enormously (air, land, sea) by enhancing autonomy and accessibility everywhere, IoT sector will require low bandwidth with a very high number of users



Connectivity: Security

Higher demands on data security, stability, network resilience, control of the network, data from governmental user

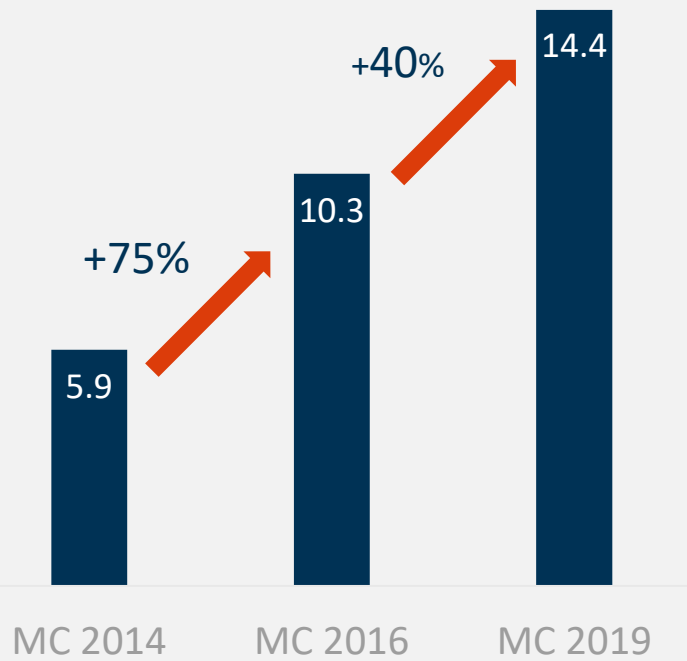


Satellites provide disaster resilient communication, data integrity, worldwide accessibility and sovereign capacity

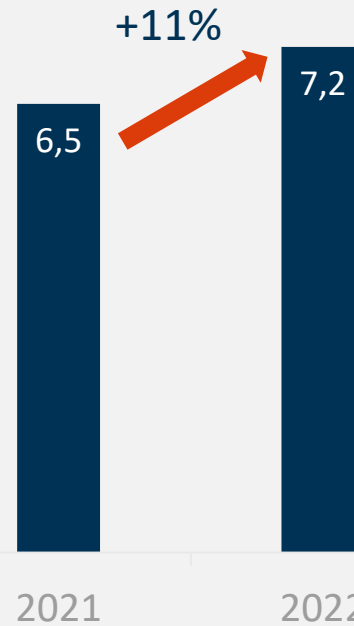
AVAILABLE INSTITUTIONAL BUDGETS ARE HIGHER THAN EVER



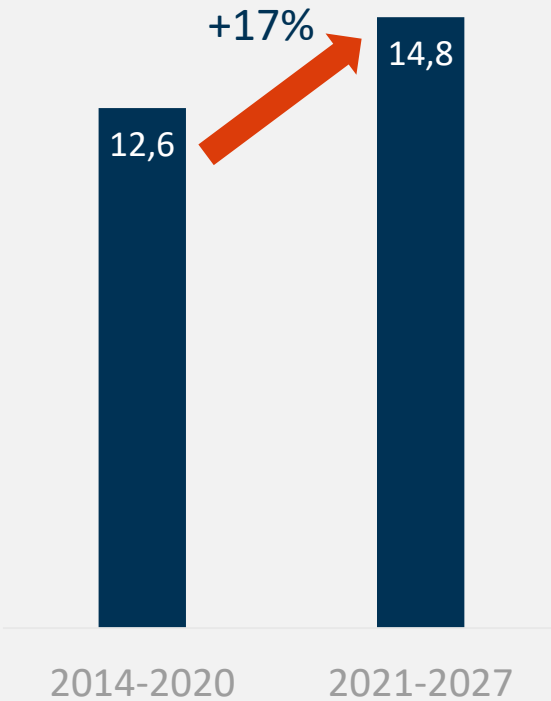
ESA Ministerial Conferences:
Decided budgets



ESA Budgets:
Annualized



European Commission:
Space Budgets



All figures in EUR billion

BRINGING EUROPE'S SPACE AMBITIONS TO THE NEXT LEVEL

ESA'S THREE ACCELERATORS SUPPLEMENTED BY MULTIPLE INSPIRATOR MISSIONS



Accelerators

- Rapid and resilient crisis response:
Intelligent interconnectivity in space empowers rapid, resilient responses to crises on Earth
- Space for a green future:
Data gleaned from Earth observation will help Europe act to mitigate climate change
- Protection of space assets:
Timely and accurate warnings of threats are needed

Inspirators:

Missions to secure Europe as a leader in space technology, innovation and deep-space scientific exploration – and to inspire the next generation of talented Europeans to enter careers in STEM



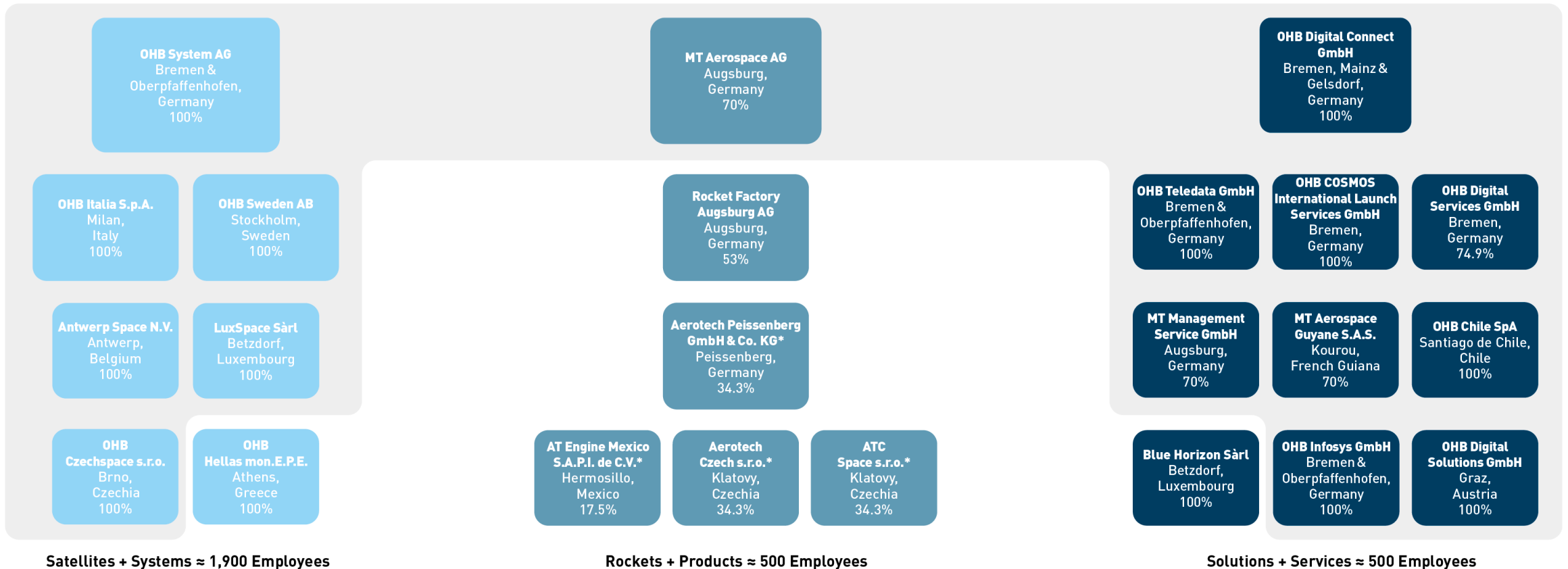
BUSINESS SEGMENT OVERVIEW



SPACE SYSTEMS

AEROSPACE

DIGITAL



Consolidated

STRATEGY: OHB 2025 REVISED

EVALUATION AND ADJUSTMENTS MADE IN SEPTEMBER 2021



ADJUSTMENT OF GROUP BODIES TO CHANGED DEMANDS

AREAS OF RESPONSIBILITY EXPANDED DUE TO THE INCREASED IMPORTANCE OF SUSTAINABILITY



- Daniela Schmidt joined the Management Board on January 1, 2022. Areas of responsibility:
 - Sustainability
 - Integrity
 - Legal affairs
 - Corporate security
- Expansion of the Management Board reflects the increased complexity in the corresponding areas
→ Sustainability in particular will assume significantly greater importance within the group
- Supervisory Board formed and delegated tasks to three committees in 2021
 - Audit committee
 - Personnel committee
 - Corporate Governance and nomination committee

STRATEGY 2025 – PROJECTED MARGIN GROWTH

ACHIEVEMENT OF THE PROFITABILITY TARGET IS BASED ON 3 PILLARS



SPACE SYSTEMS

- Optimization of the operating business according to efficiency aspects
 - Benefit from new technologies
 - Optimization of internal process streams
- Improvement of internal organization through explicit responsibilities, e.g.
 - since November explicit responsibility for the topic “productivity improvement” at the Management Board level of the most important subsidiary

AEROSPACE

- Stabilization of Ariane program activities
- Expansion of the product/solution range: Growth via transfer of existing products and capabilities to new markets and new customers
 - Broadening of customer base in the launcher business
 - Use of own technological capabilities: Addressing new growth markets
 - Additive Manufacturing
 - Hydrogen technologies (H2 mobility)

DIGITAL

- Continuous delivery of double digit margins
- Increase in sales through expansion of existing service business and addressing new markets:
 - Benefitting from increasing demand for space based applications, supported by megatrends such as digitalization
 - Multipliable or scalable business
 - Use of existing competencies, experiences and networks simplifies business creation
 - Diversified risk profile

SEGMENT SPACE SYSTEMS

MAJOR MARKET TRENDS

- Political landscape
 - Space capabilities becoming a strategic capability for most developed nations
 - COVID-19 recovery funds support development of space capabilities throughout Europe
 - Looming space race between China and the US
- Commercialization
 - Sector is growing especially for telecommunication and earth observation satellites
 - NewSpace leads a surge of commercial business opportunities across the sector
 - Private and venture backed companies are taking a larger share of the market
- Increased importance of space situational awareness
- Tackling climate change with space based solutions

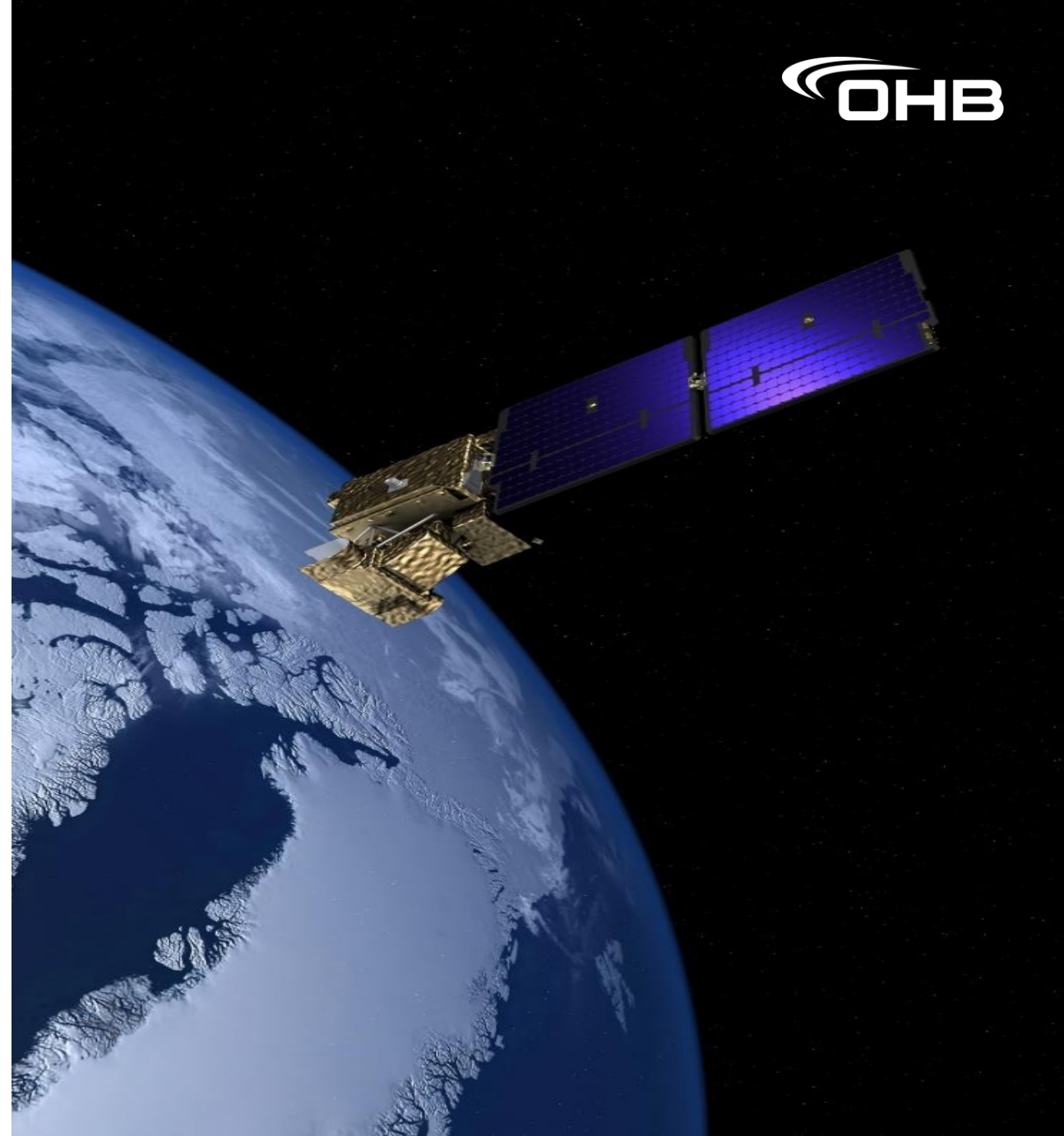


SEGMENT SPACE SYSTEMS

OHB IS ON THE RIGHT ORBIT TO BENEFIT FROM MARKET TRENDS



- **Earth observation** - Extending leadership in the fastest growing market segment through development of:
 - New missions for institutional and commercial customers
 - Technologies crucial for the next generation of satellites
- **Telecom** - Capitalizing on competencies in broader markets:
 - Leverage the capabilities built through institutional projects to design customized missions for the commercial market
 - Development of technologies that provide the best possible protection for the security of systems
- **Science & Exploration** - Contributing to scientific discovery and human exploration of the solar system:
 - Key building blocks for future (un)manned exploration systems
 - Critical capabilities for landing on the moon and supporting life



SEGMENT AEROSPACE

MAJOR MARKET TRENDS

- Lower cadence of Ariane 6 compared to Ariane 5 due to strong competition from US private backed launchers
→ Constellations might significantly change the situation
- Market opportunity for microlaunchers (taxi vs. bus ride to space)
- Needs for orbital tugs and kick-stages to augment launchers and allow in-orbit servicing / space debris removal
- Development of hydrogen economy, especially for aircraft



SEGMENT AEROSPACE

OUTLOOK FOR MT AEROSPACE (MT-A) IN 2025

- Current turnaround provides mid-term growth opportunities
- Revenue target for FY 2025: **EUR 200 million**
- Continuously increasing degree of economic independence of the company from the Ariane program (revenues from the Ariane will account for only 50 % in 2025)
- 50 % of MT-A's revenues in fiscal 2025 will be generated in the identified growth markets outside Ariane
→ Share will continue to increase in subsequent years



MT-A: EXPANDING CUSTOMER BASE IN THE LAUNCHER BUSINESS

Contract with Boeing for Space Launch System

- Supplier for core stage gore panels
- Additional development activities will be conducted
- Further proposals have been submitted (decision Q1/2022) for GS gore panels, LH2 sump cover)



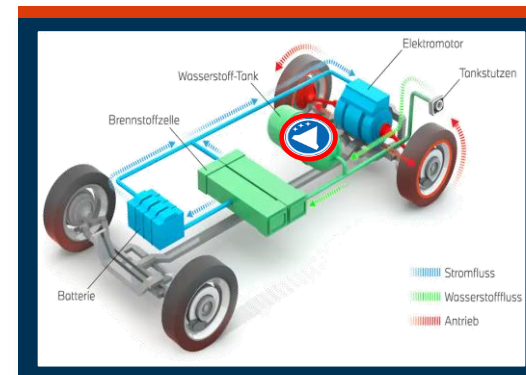
Additive Manufacturing

- ESA contract to develop Additive Manufacturing for Space Transportation applications (EUR 11 million)
 - FSW (friction stir welding)
 - DED (directed-energy deposition)
- MT-A is increasing the number of commercial customers outside the space industry
- **Objective: The company targets high-end AM products, focusing on unique technical features (special process) and on its identity as a high-quality provider**



Hydrogen

- Future target applications within the product portfolio include:
 - Electric traction system (mobility sector)
 - Hydrogen storage (decentralized energy solutions)
- MT-A targets scalable products focusing on industrialization and series production
- First projects are already under contract and implementation, e.g. a project for electric flying with German Engine Prime



SEGMENT DIGITAL

MAJOR MARKET TRENDS

- Increasing digitalization of society
- Rising importance of the downstream market
 - Downstream applications and services projected to be the fastest growing segment within the space industry
 - Institutional and commercial use of earth observation data expected to grow by an order of magnitude within the next decade
 - Offers higher potential margins compared to OHB's traditional business
 - Market has a different business cycle than the upstream market
- Supportive landscape for applications in the areas Green Deal, Safety & Security and Telecommunication, consisting of ESA Accelerators, COVID-19 recovery funds, new political majorities



SEGMENT DIGITAL

OHB IS ON THE RIGHT ORBIT TO BENEFIT FROM MARKET TRENDS

- **Expanding downstream activities**

- Development of downstream applications for earth observation
- Become an end-to-end solutions provider
- Delivery of digital solutions for cyber security
- Develop key technologies such as cyber security, big data analytics and AI
- Develop our product and service offering in the maritime, logistics, railway and critical infrastructure domain



THANK YOU!

OHV SE

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