How Microlaunchers could change Europe's Space business landscape

EISC Digital Meeting

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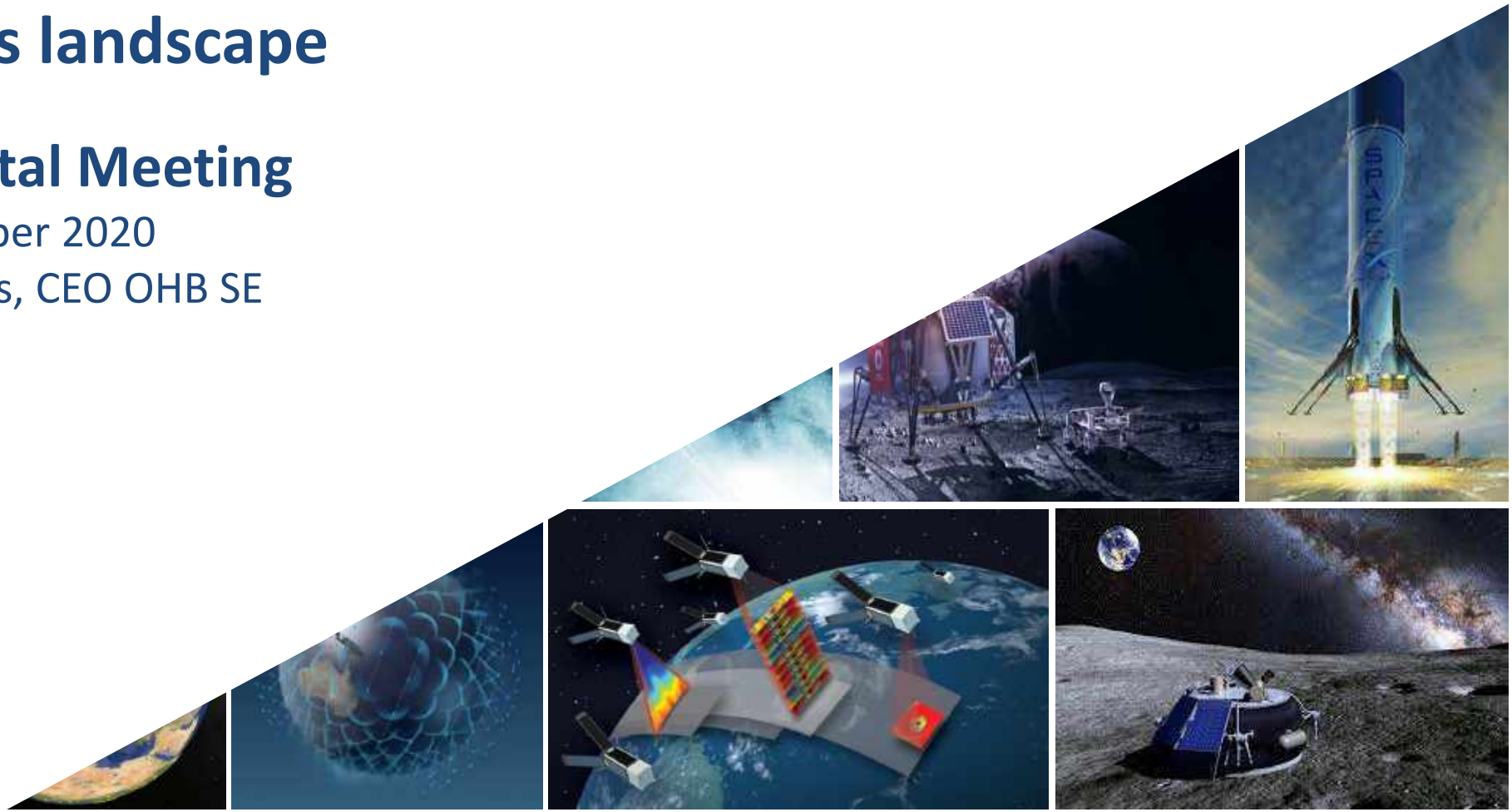
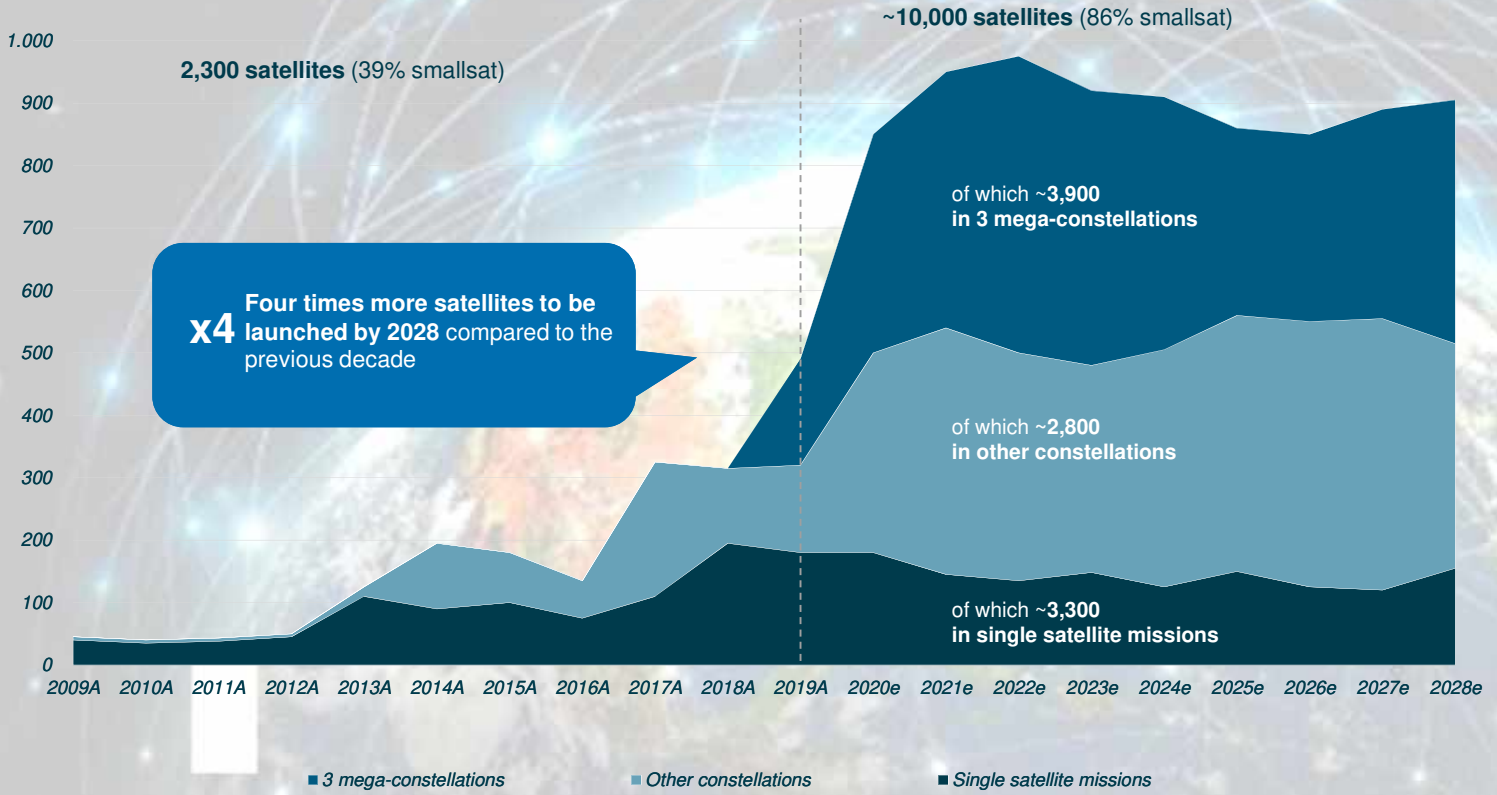
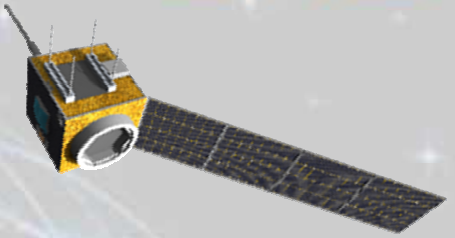
Marco Fuchs, CEO OHB SE

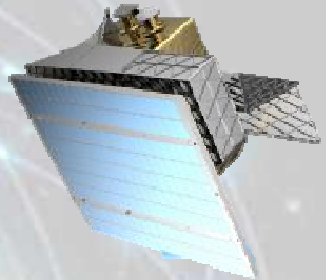


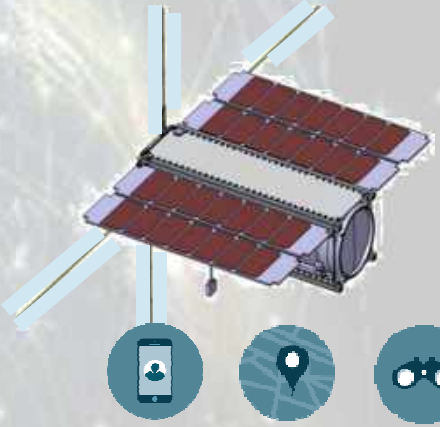
TIMES OF CHANGE IN SPACE

The market for small and medium sized satellites is growing rapidly due to the enormous increase in the number of (private) constellations for telecommunications services, Internet and Earth observation services

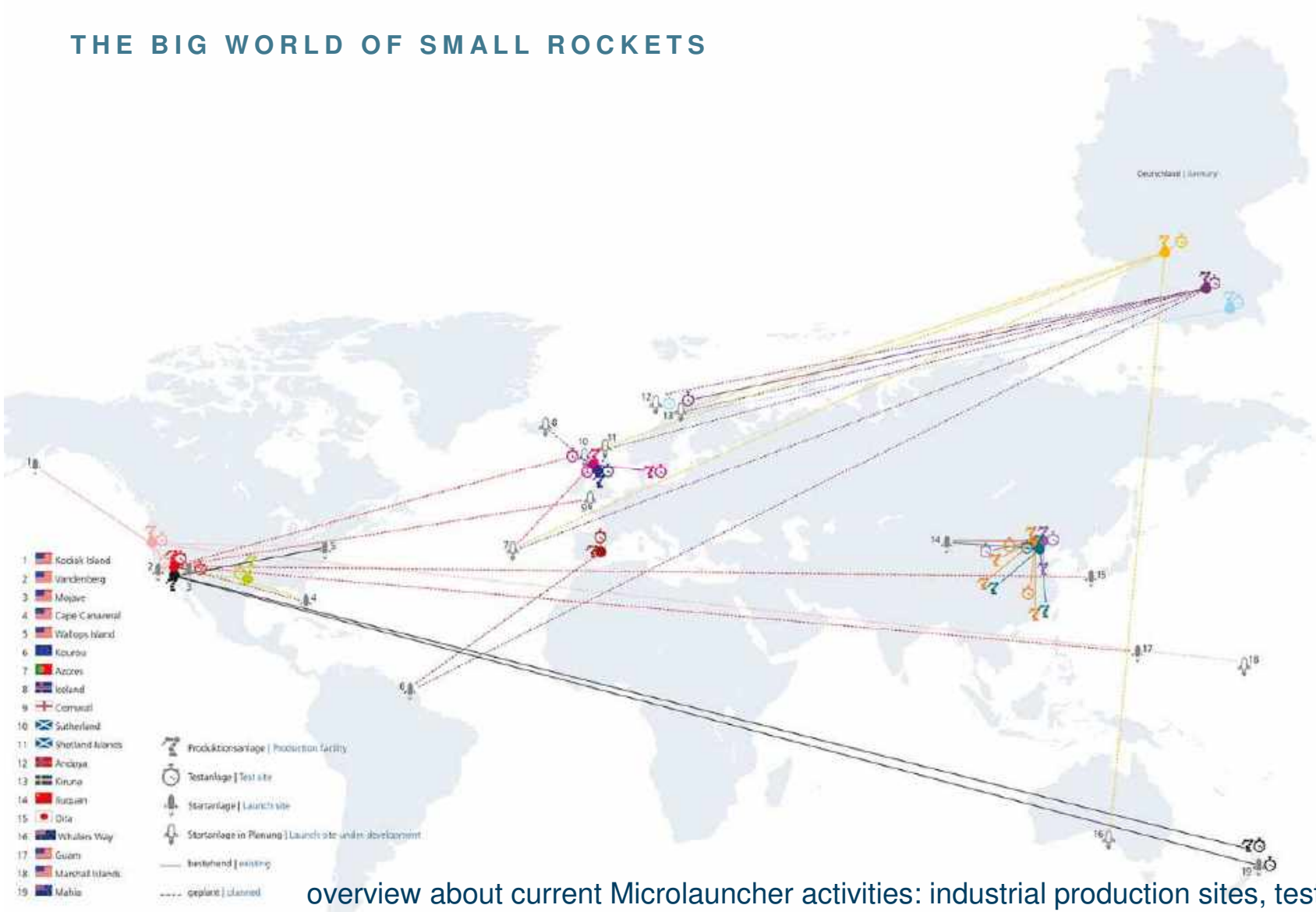








THE BIG WORLD OF SMALL ROCKETS



overview about current Microlauncher activities: industrial production sites, test sites, launch sites (operational and in development)

Source: DLR

GERMAN MICROLAUNCHER COMPETITION

Picture: BMWi

"We are breaking new ground with this competition. Our aim is to build up new players from the start-up environment alongside the established launchers. In doing so, we are focusing on the commercialisation of space travel, as NASA is already doing successfully. Companies such as SpaceX have emerged from there. (…)".
(Thomas Jarzombek, Federal Government Coordinator of German Aerospace Policy)

- Initiated by Federal Ministry of Economics and Energy (BMWi) and German Aerospace Center (DLR)
- Supports the Development of the German Microlauncher branch
- Three companies have qualified for the mai competition
- Winners will receive funding for the final qualification phase of their carrier system, including the performance of two demonstration flights each, to be carried out between 2022 and 2023.

ESA COMMERCIAL SPACE TRANSPORTATION PROGRAMME CSTS

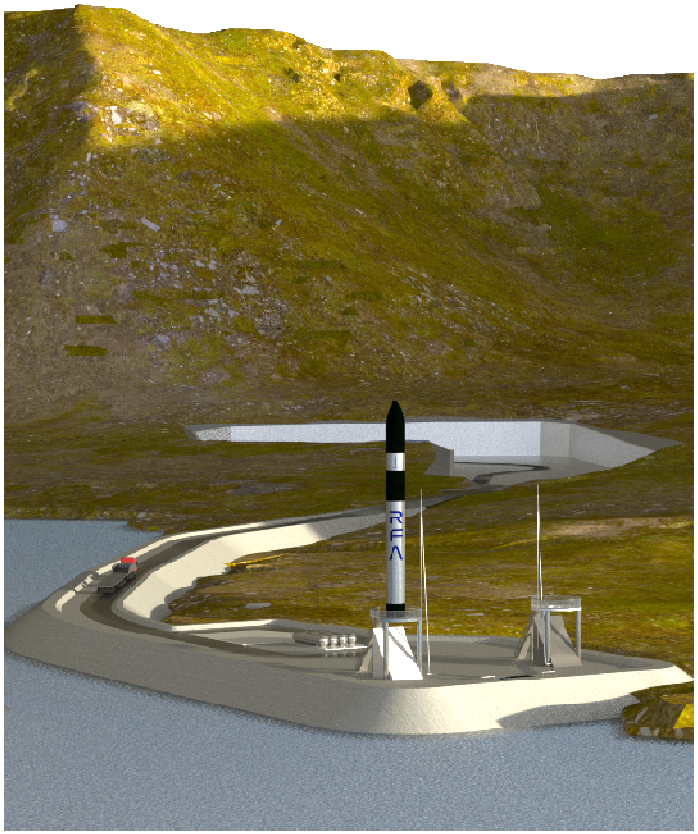
At Space19+, Germany has initiated the new ESA CSTS-Programme (Commercial Space Transportation Programme) that should push ESA's transformation from focusing on developing space programmes to becoming an agency that also keeps the empowerment of the European Space industry sector by procuring services and products from industry.

The programme consists of two elements, each with its own objective:

- **Commercial Space Transportation Services** (Element 1) – to provide support that is flexible and tailored to the needs of European economic operators pursuing privately-led developments for commercially viable new space transportation services.

- **Support to Participating States** (Element 2) in meeting the demand of ESA Member States to provide them with assistance in the implementation of national space transportation objectives in the field of spaceports infrastructure and related services.

ROCKET FACTORY AUGSBURG



- Rocket Factory Augsburg was founded in August 2018
- To provide fair and affordable access to space, serving the growing demand for small satellites
- Design and production of a Mini-Launcher
- Cost-optimized Launch Operations
- Dedicated Launch Service with a two-week launch target

KEY SUCCESS FACTORS

RFA Rocket Factory

Scalable Product

Scalable launch **vehicle** with a payload mass up to 1500kg (700-km-polar orbit)

Most Competitive Engine

Staged combustion: most powerful & efficient, first in Europe, flight proven tech

Industrialization Network

MT Aerospace; sole source in Europe for launchers, tanks and structures

Market Acceptance

OHB signed five launches as anchor customer

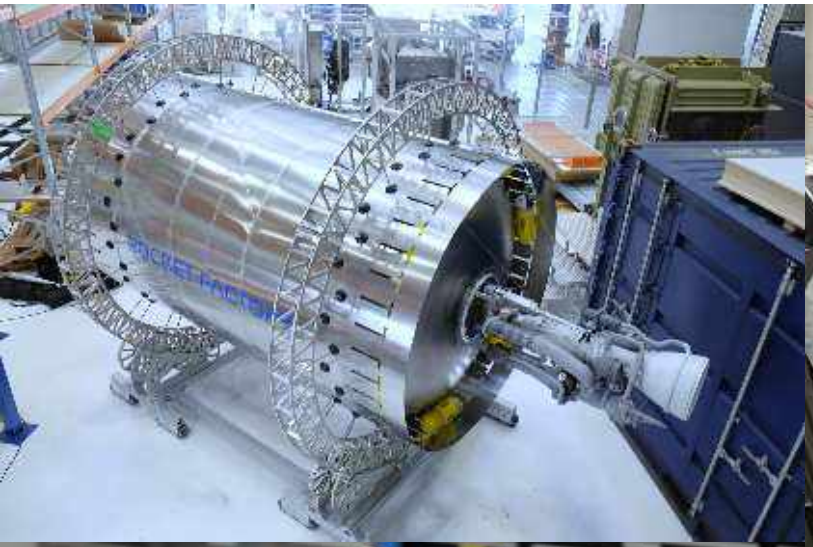
Second Mover Advantage

Lower risk & lower investment required because of second-mover advantage, RFA core team has done this before

Experienced Team

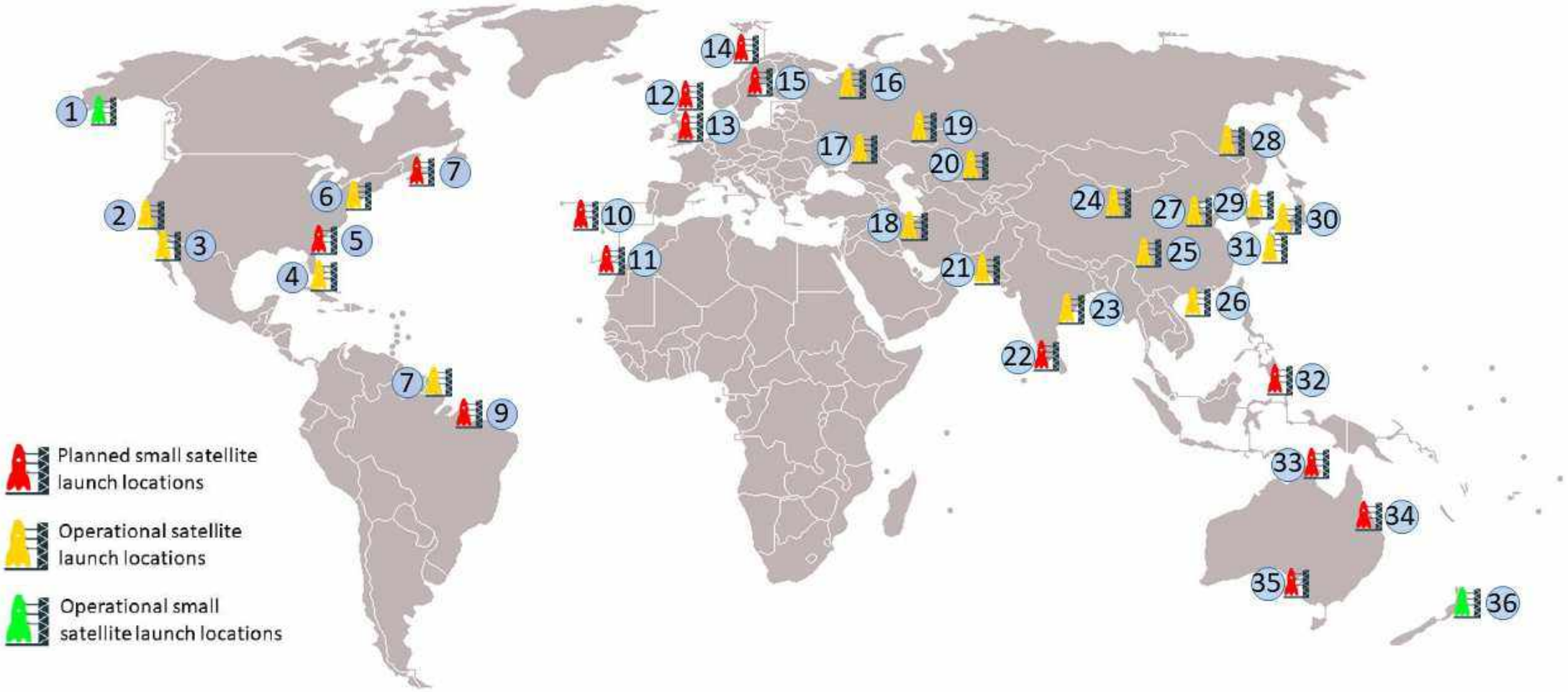
Experienced engineers from Rocket Lab supported by J.J. Dordain (former ESA Director General), M. Fuchs (CEO OHB) and H. Steininger (CEO MT Aerospace), access to 3.000 engineers at OHB and MT Aerospace

ROCKET FACTORY AUGSBURG – STATUS OF DEVELOPMENT



LAUNCH SITE COMPETITION

ANDØYA SPACEPORT




MANY THANKS FOR YOUR ATTENTION!