

## The space industry in Norway and Germany

A DESCRIPTION OF MARKETS AND OPPORTUNITIES FOR COLLABORATION





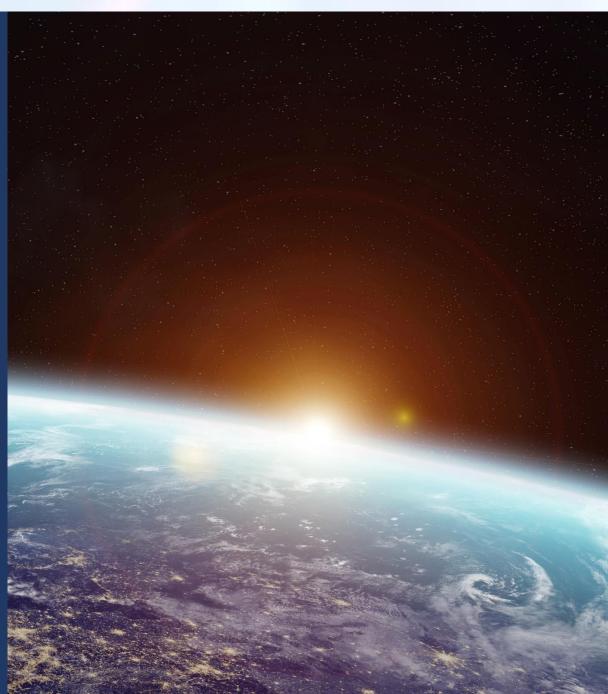
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## Foreword

The space industry is growing rapidly, and the "new space age" is characterized by more players and a high level of activity. Space technology is important for many value chains, and for security and emergency preparedness. The increased im-portance of space technology has created a commercialization trend called "newspace". At the same time, high costs and complex technology make players dependent on international cooperation to succeed. This provides opportunities for Norwegian-German space cooperation, which is already taking place both bilaterally and multilaterally through ESA and the EU, among others.

This report was written by the German-Norwegian Chamber of Commerce as an introduction to the markets in both countries. The report emphasizes the use of space technology in the defense sector and in civil security.

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## The Norwegian space industry

The launch of the Ferdinand 1 rocket from Andøya in 1962 made Norway one of the first "space nations" in the world. Norway is a small player internationally, but has cutting-edge expertise in some fields, as well as geographical advantages. Large ocean areas and a high level of natural resource extraction make Norway dependent on space capabilities to communicate, navigate and monitor – especially in the north. Norway participates in the European space market through the EEA Agreement, ESA and EU space programs.



## Market structure

Top heavy, with mainly small and medium-sized businesses

The Norwegian space sector consists mainly of small and medium-sized enterprises (SMEs), with some non-commercial players. The industry is topheavy, with five players accounting for 71% of economic activity.<sup>1</sup> According to a report by Oslo Economics, the Norwegian space sector consisted of 138 players in October 2023. This amounted to approximately 2,700 jobs and a total economic activity of about NOK 11.7 billion annually. Of this, NOK 11 billion is linked to commercial players, while NOK 700 billion can be linked to universities, institutes and agencies. <sup>2</sup>

Important actors reflect a strong degree of public-private partnerships Due to high costs and close relationship with security policy, the sector is characterized by a strong public-private partnership. The public initiative is handled by **the Norwegian Space Agency**, which is an agency under **the Ministry of Trade, Industry and Fisheries**. The main tasks of the Space Agency are to advise the Norwegian administration and industry and follow up Norwegian participation in international space cooperation.<sup>3</sup> Another important public player is **Space Norway**, which is wholly owned by the Ministry of Trade, Industry and Fisheries. Space Norway safeguards functions that require satellite information and sends satellite data to customers all over the world. Because of its connection to the defense sector, the sector is also characterized by the same "triangular cooperation" between public authorities, research institutions and the industry as the rest of the defense industry. This means that **FFI** (the Norwegian Defense Research Establishment) and **Ministry of Defense** are also important public players.<sup>4</sup>

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On the industrial side, there are around 40 companies involved in spacerelated activities in Norway. The largest player is **Kongsberg Gruppen**, which has several space-related subsidiaries. For example, **Kongsberg Satellite Services** (KSAT) has a global network for downloading satellite data and a station in Svalbard for downloading data from polar satellites.<sup>5</sup> **Kongsberg Defence & Aerospace** also collaborates with the Ministry of Trade, Industry and Fisheries to operate **Andøya Space**. Examples of smaller Norwegian players are **Bredengen** and **Tycho Space Technologies**. Important research institutions are **SINTEF**, **UiO CENSS** and **NTNU CIRIS**. Employers and employees in the space industry are also united in **the Tekna Space network**.<sup>6</sup>

<sup>&</sup>lt;sup>1</sup> Norwegian Space Agency, "Norske rombedrifter omsetter for 11 milliarder."

<sup>&</sup>lt;sup>2</sup> Norwegian Space Agency.

<sup>&</sup>lt;sup>3</sup> Ministry of Trade, Industry and Fisheries, "Norsk Romsenter (NRS)."

<sup>&</sup>lt;sup>4</sup> FFI, "Norge trenger et nasjonalt romprogram."

<sup>&</sup>lt;sup>5</sup> Tekna, "Romfartsutdanning i Norge."

<sup>&</sup>lt;sup>6</sup> Tekna, "Nettverket Tekna Romfart."