

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Calling Planet Earth - Space Outreach to the General Public (6)

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## SHAPING THE NEW NORWEGIAN SPACE RACE AS A VOLUNTEER STUDENT ORGANIZATION

**Abstract**

Norway, as an industry-leading technological nation, is in a prime spot to establish itself as a dominating force in the new space race by utilizing the engagement and knowledge of student organizations. With its unique geographical position for polar launches as well as well-developed study programs and routines within cybernetics and STEM, Norway can use its engaged students to push the boundaries of Norwegian spaceflight technology, as well as create engagement and interest nationally.

Orbit NTNU is a student organization founded in 2018 with the goal to educate the space engineers of tomorrow and is currently the only volunteer student satellite organization in Norway. Its independence from universities allows the organization to pick mission concepts with the sole purpose of engaging the public, driven by the engagement of its members. Through its choice of mission concept with the SelfieSat mission and the Learn2Orbit programme, Orbit NTNU has managed to seed interest and passion about spaceflight in Norway, with a focus on developing engaging mission statements that the everyday person can enjoy. Its next mission, the FRAMSat-1, has the potential to be the spark that creates a new generation of Norwegian space engineers with its launch from Norwegian soil.

Orbit NTNU has seen great results by actively engaging with pupils and students from Primary school all the way to university level through technical presentations, school visits, and publicly engaging missions through the organization's four-year lifespan. This is an important contrast to the state of the current space industry: On one side, the Norwegian Space Agency has little effect due to its bureaucratic weight and lack of hands-on experience with spaceflight hardware. On the other side, the dominating private military-focused space industry has little care for exploration and growth. With Orbit NTNU's established position within Norwegian academics, education, as well as industry, it has managed to shape the image and expectations of spaceflight in Norway in a time critical for future space exploration and interest.

This paper will define the methods used to grow a volunteer student organization from a hobby project to a leading industry actor, how a scientific satellite project can ignite interest on a national scale where no one else succeeded, and how a juvenile student organization can position itself to best exploit the momentum of today's New Space revolution.