

How can a spaceport be used for educational purposes at university level?

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Aim and goals

- Challenge:** Assess the government's identified need to increase talent pipelines in the Norwegian space industry. Further, strengthening and developing the education, between educational institutions and the space industry.
- Goal:** Be an active partner for Norwegian universities, supporting and performing complementary activities at Andøya, employing the Norwegian as an "extracurricular".
- Expected:** Integrated cooperation with universities.

Pilot activities

- Preparing virtual CSM/AT activities.
- Preparing space education.
- Workshop model.

Challenges

- Flight:** To what degree will hardware integration and software integration fit students into the actual scenario of spaceport operations?
- Funding:** We need a significant decline in research funding in Norway or local funding for university students. Activities at Andøya will need extra funding. Funds, operating expenses, and how many from the local company.

Partners

- Andøya Space Education
- Herlev
- ISN
- KONGSBERG
- NEWSPACE
- NOESPACE
- EDLAS
- NTNU

Norwegian Space Academy

AIT pilot (clean-room & ESD training, environmental test & test)

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AIM AND GOALS

Motivation: Answer the government's identified need to educate future employees in the Norwegian space industry. Further, strengthening and developing the relations between educational actors and the space industry.

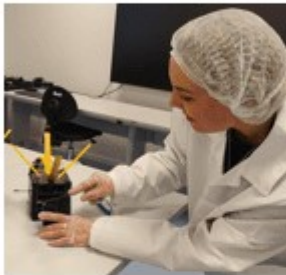
Solution: Be an active partner for Norwegian universities, supporting and performing complementary activities at Andøya, employing the Spaceport as an "extended lab".

Requirement: Integrated cooperation with universities.

NORWEGIAN SPACE ACADEMY



The primary objective is to educate, train, and enhance the **recruitment** of professionals within the space industry, with a particular focus on nurturing the emerging ecosystem surrounding the spaceport in Andøya.



This initiative aims to serve as a **bridge** between academia and the space sector, easing the **transition** from students to skilled professionals willing to contribute to the expansion and strengthening of this crucial economic sector.



In pursuit of these goals, we are establishing a **collaborative** platform, a **network** of experts from both the academic and the industrial sector dedicated to formulating strategic approaches and tailored educational and training programs.



These offerings are specifically designed for the **university community** in Norway, based on the unique and distinctive **infrastructures** available at Andøya.

Read more at the [website](#).

PILOT ACTIVITIES

Supporting student CubeSat missions

[VIDEO] https://res.cloudinary.com/amuze-interactive/video/upload/q_auto/v1727336136/iaf/F7-84-FD-51-2F-9F-98-20-3B-B4-A9-C7-FF-33-CB-5C/Video/FS-1-shaketest_xpccke.mp4

Preparing space missions



Student rocket

[VIDEO] <https://www.youtube.com/embed/DkL6NrsX6QU?rel=0&fs=1&modestbranding=1&rel=0&showinfo=0>

CHALLENGES

Logistics

To what degree will launcher companies and satellite integrators let students into the actual process of spaceport operations?

Funding

We see a significant decline in research funding in Norway as base funding for universities declines.

Activities at Andøya will need extra funding: Travel, operating expenses, and time away from the local campus.

PARTNERS



Find many of us at the Norwegian booth!

AIT PILOT (CLEAN-ROOM & ESD TRAINING, ENVIRONMENTAL TEST & FUN!)

[VIDEO] https://res.cloudinary.com/amuze-interactive/video/upload/q_auto/v1728851804/iaf/F7-84-FD-51-2F-9F-98-20-3B-B4-A9-C7-FF-33-CB-5C/Video/slideshow_v2_slkiiie.mp4

TRANSCRIPT

ABSTRACT

One of Europe's first spaceports on the European mainland is under construction on Andøya in northern Norway. Andøya has been a site for space science exploration and sounding rocket launches for more than 60 years. Now, new activity is turned toward the small satellite value chain. Since 2000, Andøya Space Education (previously known as NAROM – the Norwegian Center for Space Related Education), has been co-located with Andøya Space infrastructure. Andøya Space Education has a national mandate from the government as responsible for space-related education and outreach, from kindergarten to universities. Norwegian and international students and universities have benefited from attending courses providing hands-on training and experience within the space ecosystem at Andøya. Activities include physical and virtual courses spanning from “Mission to Mars” through launching student rockets and CanSats to AIT training by making use of modern labs and training facilities for electronics, environmental testing, and integration. With the spaceport activities ramping up, we present if and how the emerging activities can be exploited to strengthen and enrich the education of university students and cooperation with national and international universities. The co-location with the rocket range, and now the spaceport, has been a key point arguing for an increased added value, where university students can attend courses where they “live and breathe” the vibe of the spaceport. However, this co-location, the increased activity at the spaceport, and the current funding situation pose some challenges. These challenges can be categorized into several groups, such as 1) the balance between logistics and security versus student access to spaceport activities, 2) funding and organizational sustainability, in addition to 3) the balance between the university's own courses and activities versus the added value -- and direct costs, for an on-site stay. In this work, we map and describe these challenges, as well as surveying student involvement at other similar locations. Finally, we aim to present how they can be overcome.

