



# ARCTIC TEST ARENA

## OFOTBANEN AND MALMBANAN

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# STRATEGIC IMPORTANCE

- Key export corridor: Kiruna to the ice-free port of Narvik
- Critical for European raw material supply
- Important link in a shifting security context
- Supports regional growth
- Low-emission alternative to road transport
- Ongoing investments boost capacity and resilience







# WHY

- Heavy Loads and Infrastructure Wear
- Extreme Arctic Conditions
- Safety Challenges
- Cross-Border Transport Complexity

# A JOINT NORDIC INITIATIVE WITH GLOBAL AMBITIONS





# AMBITION

Develop Ofofbanen and  
Malmbanan into an  
international Arctic Test Arena  
for Railway Technology

**IF IT WORKS HERE,  
IT WORKS ANYWHERE**

# GOALS

- Improve operational reliability
- Develop climate-resilient solutions
- Promote innovation
- Enable testing activities







# AREAS OF FOCUS

- Testing of infrastructure and rolling stock
- Develop solutions for cold climate and heavy freight
- Research on maintenance and operational reliability
- Share data and drive digital collaboration
- Build skills through education and events
- Promote the test arena internationally

# TEST ACTIVITIES

- Advanced sensors and AI-driven monitoring
- Bridge monitoring via sensors and satellites
- Detection of ground movement, landslides, and rail breaks
- Measurement of track geometry, forces, and wear
- Full-scale testing of rails, sleepers, and fastenings under 32.5-ton axle loads





# **PARTNERS AND COLLABORATION MODEL**

## **Partnership Structure**

- Main Partners
- Associated Partners
- Strategic Partnerships
- **Memorandum of Understanding (MoU)**

## **Organization**

- Steering Group
- Working Group
- Test/Project Portfolio

# Operation & Maintenance Engineering



# **WATCH THE FILM:**

[Arctic Test Arena – Ofotbanen and Malmbanan - versjon2 on Vimeo](#)



# WHAT'S NEXT

- Official launch: 4 November 2025
- Partner access expands from 2026
- Broader deployment expected within 3–5 years







# LAUNCH & SEMINAR NOVEMBER

**4 November:** Launch ceremony Narvik station, Arctic Innovation Train Journey whit demos, and evening networking dinner

**5 November:** Seminar & lab visit at UiT – including lessons from the 2023 derailment, ongoing and future test activities, and collaboration models

**Meet partners and explore collaboration opportunities**



**Register**

<https://forms.office.com/e/u3wnkScgJv>





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