Over the past semester, Navier USN ran a full-cycle community engagement program that connected real environmental challenges to hands-on robotics learning for children and youth. In partnership with Larvik Municipality and another local volunteer organization, we involved approximately 100 pupils from both primary and lower secondary schools in a structured design challenge focused on the Oslofjord.

The students were given a mission brief to **design an underwater drone (ROV)** concept that could (1) collect invasive Pacific oysters, (2) retrieve crabs if needed, and (3) help remove marine litter—explicitly emphasizing creativity, systems thinking, and environmentally responsible solutions rather than a single "correct" answer.

We deliberately designed the project to mirror an authentic engineering workflow:

1. **Challenge launch and guidance:** Classes received the assignment and a clear set of design considerations (mobility, tooling, sensing, buoyancy, control, safety, and environmental impact), enabling teachers to integrate the work across STEM, sustainability, and creative subjects.
2. **Student execution and delivery:** Over the semester, pupils developed and submitted a total of **62 concepts**, demonstrating impressive breadth in mechanical ideas, collection tools, and operational approaches.
3. **External jury evaluation:** Because the initiative was run as a competition, a jury of relevant domain stakeholders reviewed contributions and selected winners, giving students the experience of professional feedback and merit-based recognition.
4. **Celebration and visibility:** We visited schools to highlight student work, and the program received **extensive media coverage**, amplifying youth voices and reinforcing the legitimacy of their contributions. The **Mayor** was also actively involved, helping signal civic importance and community pride.

To deepen the impact, we hosted participating groups on campus: students were **bussed to the university** for a structured experience of university life, robotics demonstrations, and interactive stations tied to autonomy and marine technology. The day concluded with **diplomas and prizes**, reinforcing achievement and creating a tangible link between curiosity today and educational pathways tomorrow.

Our overarching goal is to build early, inclusive motivation for technology, autonomy, higher education, research, and community-minded problem solving—showing young people that they can contribute to solutions that matter.