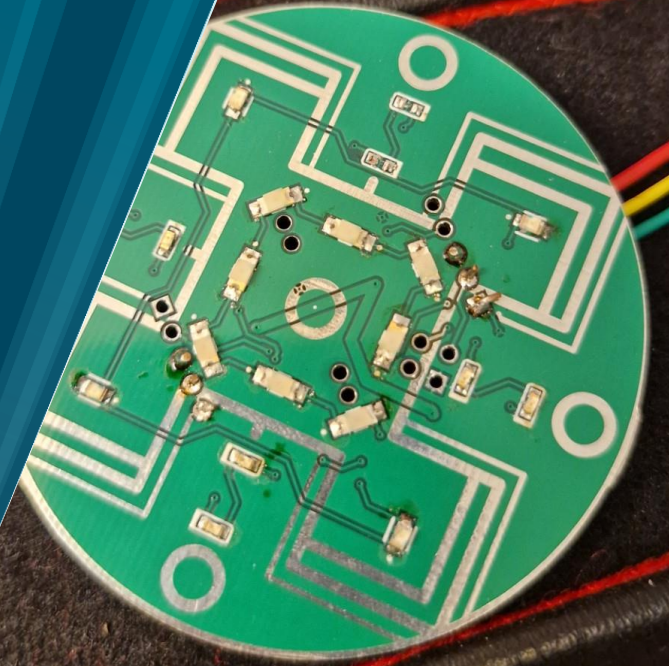




UiT Norges arktiske universitet

Approches for data management, collaboration and co-ownership in Sámi engineering Science

Per Anton Ø. Olsen
Prof. Vegard Nergård
Viššal – Samisk Ingeniørvitenskap og Teknologi
2025



This presentation:

- Introduction: Viššal and Verddevuohta
- Case and context: Drones in reindeer husbandry
- Proposed dual-data model
- Towards a Sámi Engineering Science

Viššal – Samisk Ingeniørvitenskap og teknologi

- Focus on technological development based on sámi principles and values
- Members have affiliation to
 - Drone technology
 - Automation
 - Aeronautics/Aviation



Gowa: Droneteknologi UiT

Verddevuohta – form of traditional collaboration

- Verdde – A friend/collaborator
- Siida – collection of people working as a unit
- Three-eyed seeing



Gova: Dielldanuori suohkan, Verddet-conference

Context case: Drones in reindeer husbandry

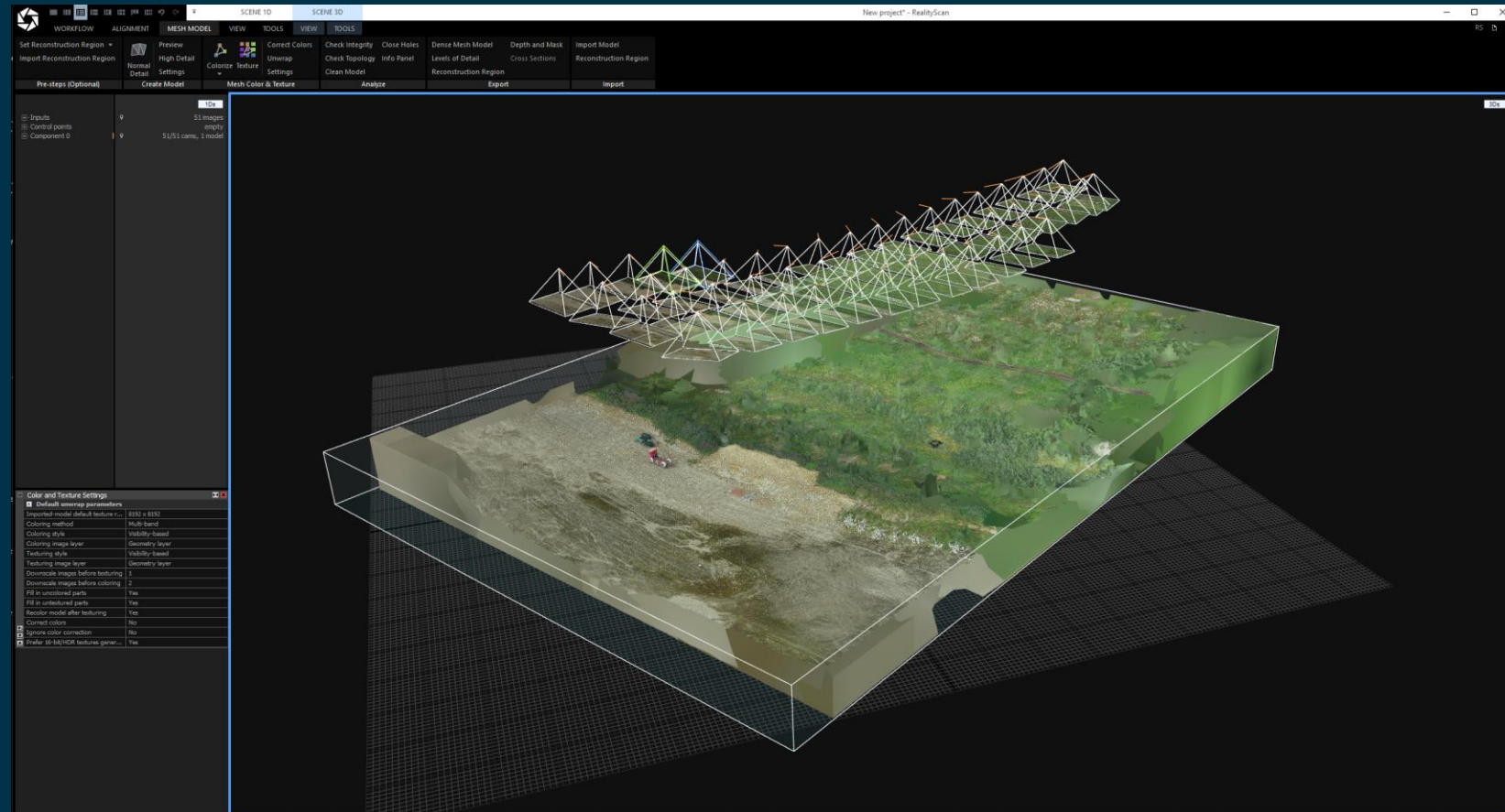
- Highly adaptive
- Knowledge based
- Tied to land
- The data:



Gova: «Reinflytting minutt for minutt» / NRK

Context case: Drones in reindeer husbandry

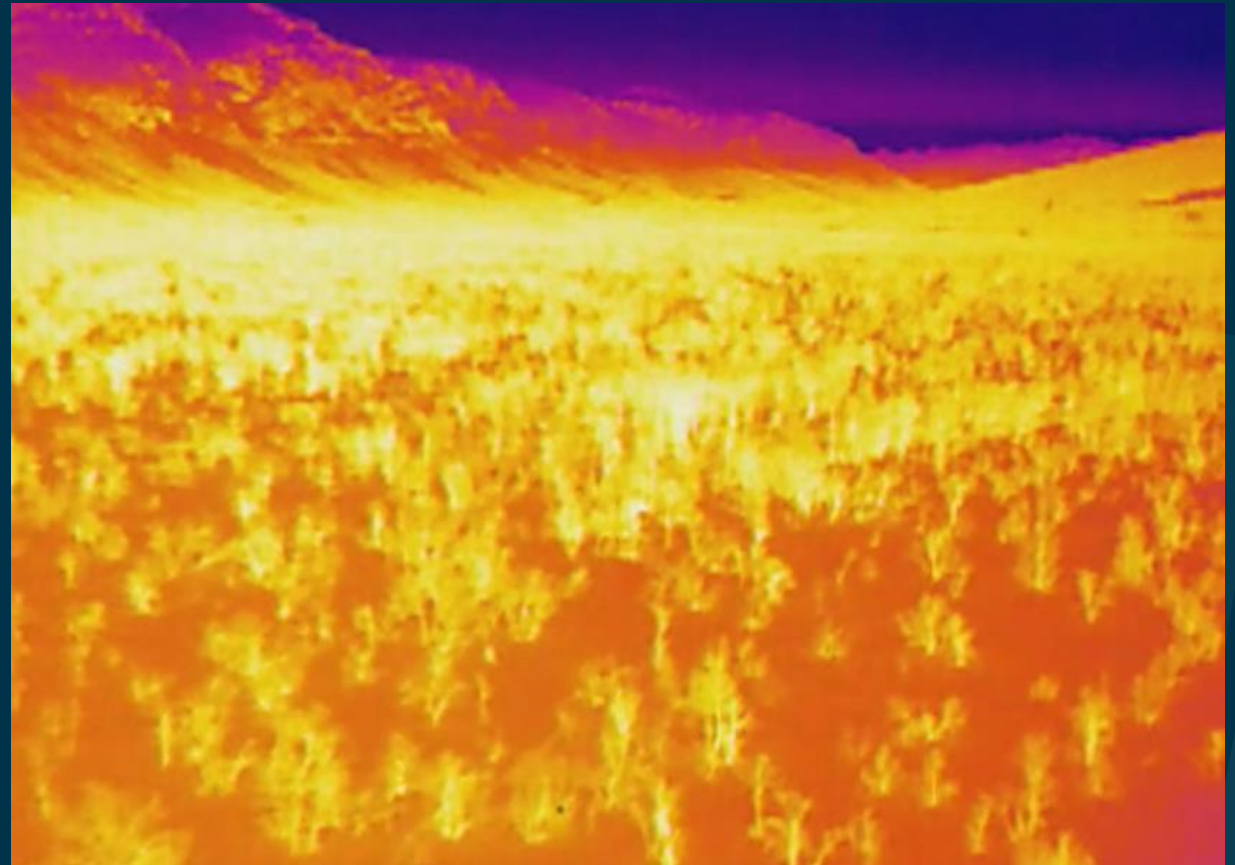
- Highly adaptive
- Knowledge based
- Tied to land
- The data:
- High resolution images with GPS
- Constructed 3D-model from data



Gowva: Drone photo analysis software and constructed 3D-model

Context case: Drones in reindeer husbandry

- Highly adaptive
- Knowledge based
- Tied to land
- The data:
- Thermal camera images from drone
- Variety of measured parameters



Gowa: Droneteknologi UiT

Conflicting interests

- Misuse of data
- Misrepresentation
- Legal battles and lawsuits



Gova: Heiko Junge / NTB / AFP

Conflicting interests

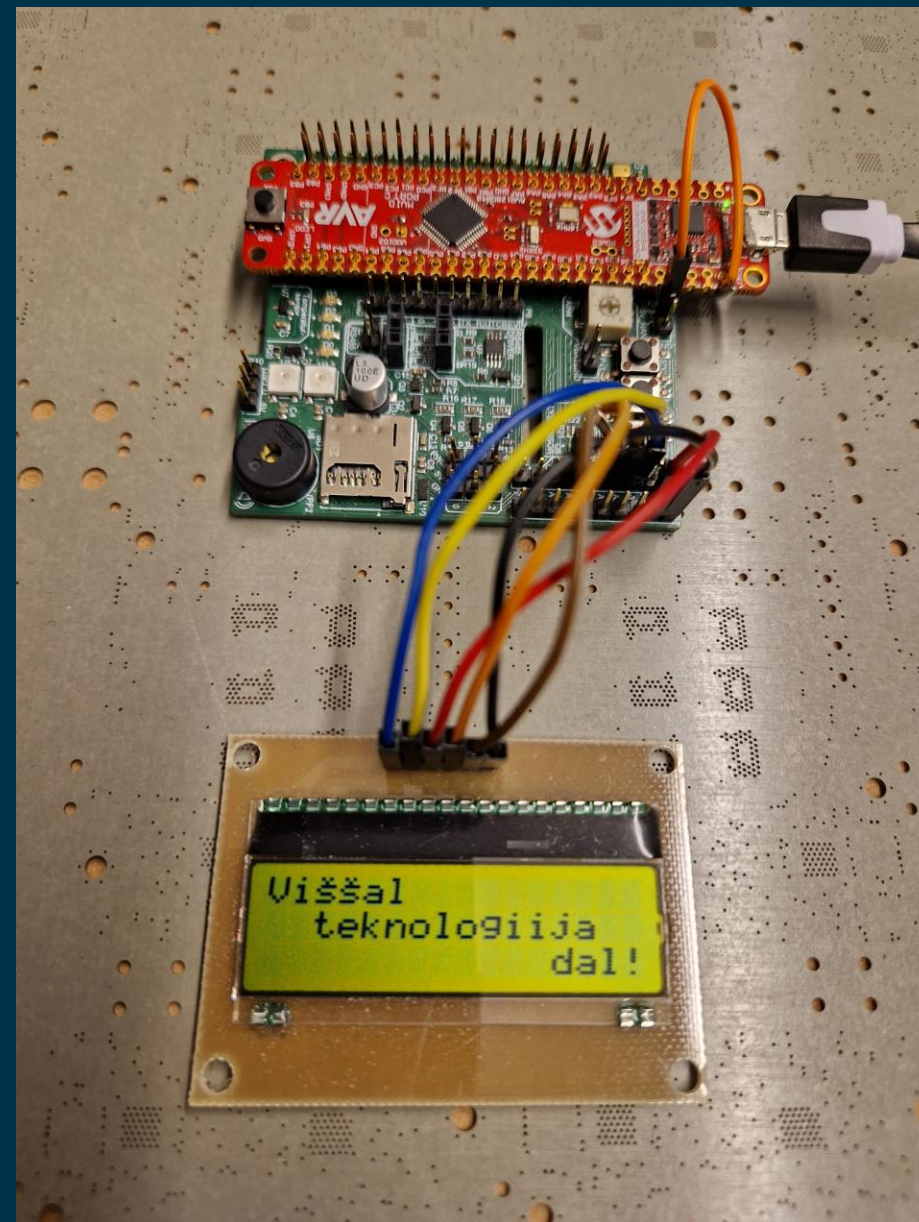
- Misuse of data
- Misrepresentation
- Legal battles and lawsuits



Gowva: Andrea Rygg Nøttveit

Proposal

- Dual-data governance model
- Siida
 - Owners of raw data
- UiT as verdde
 - Processing
 - Analysis
 - Archiving
- Community approved
- In line with SODA and CARE



Towards a Sámi Engineering Science

- Designing relationships around technology
- Understanding of openness
- Universities in Sápmi should become good verddet
- Good science and good co-existence

Giitu! Thanks!

- Questions?

Sources

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- The Canadian First Nations Information Governance Centre
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