



DRONE-REG prosjektet

Bruk av droner for kartlegging av ungskogpleiebehov



NIBIO

NORSK INSTITUTT FOR
BIOØKONOMI



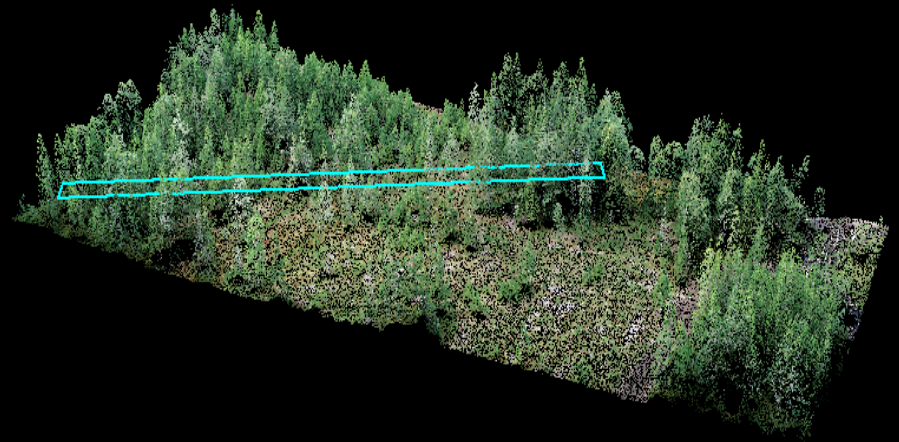
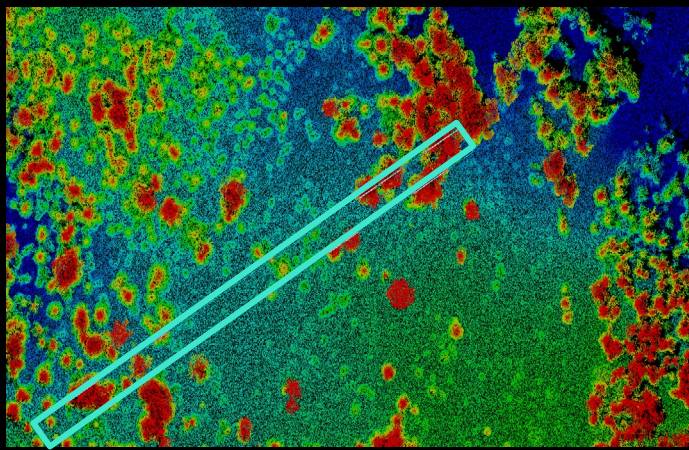
MJØSEN SKOG



ROMEDAL ALMENNING
& STANGE ALMENNING



Fylkesmannen i Hedmark



DRONE-REG prosjektet

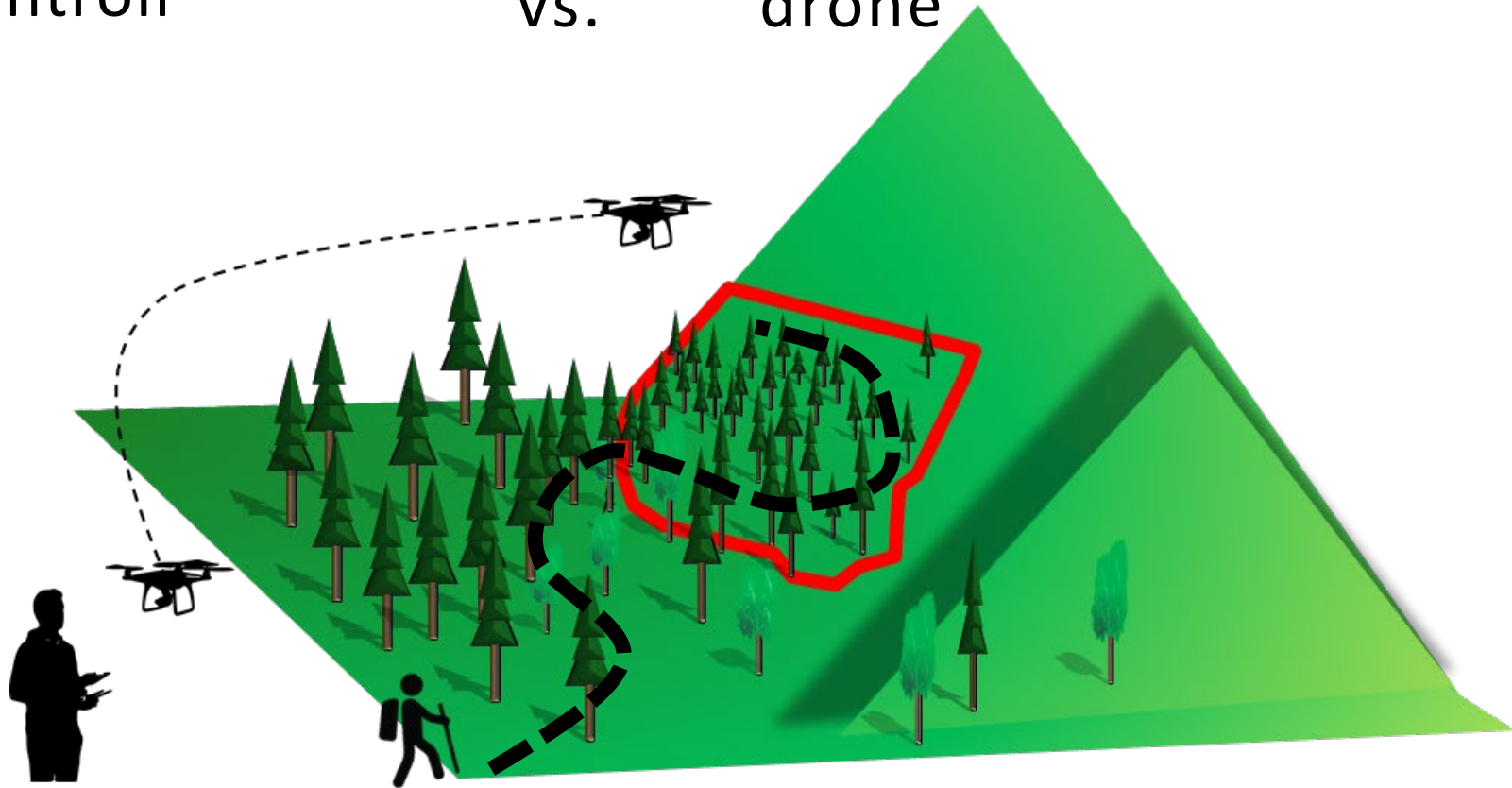
Finansiert av:
Utviklingsfondet for skogbruket
Verdiskapingsfondet



Feltkontroll

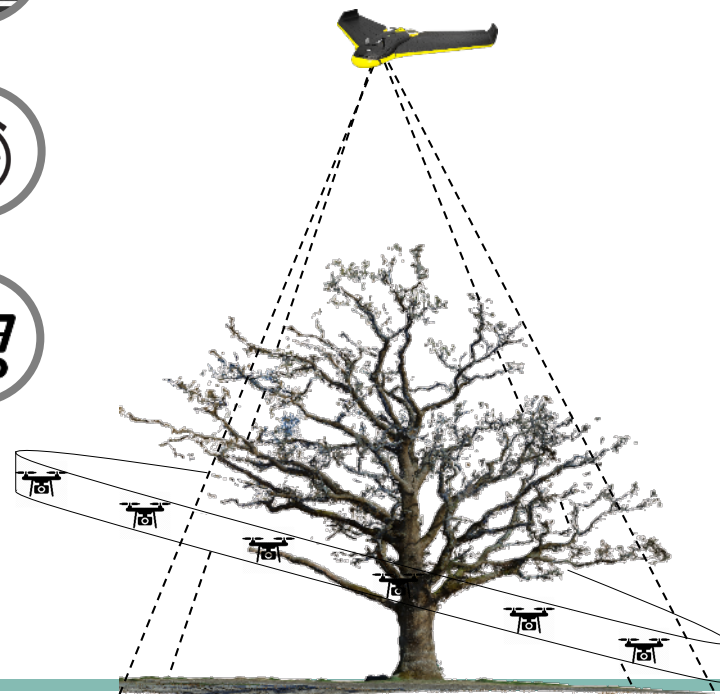
vs.

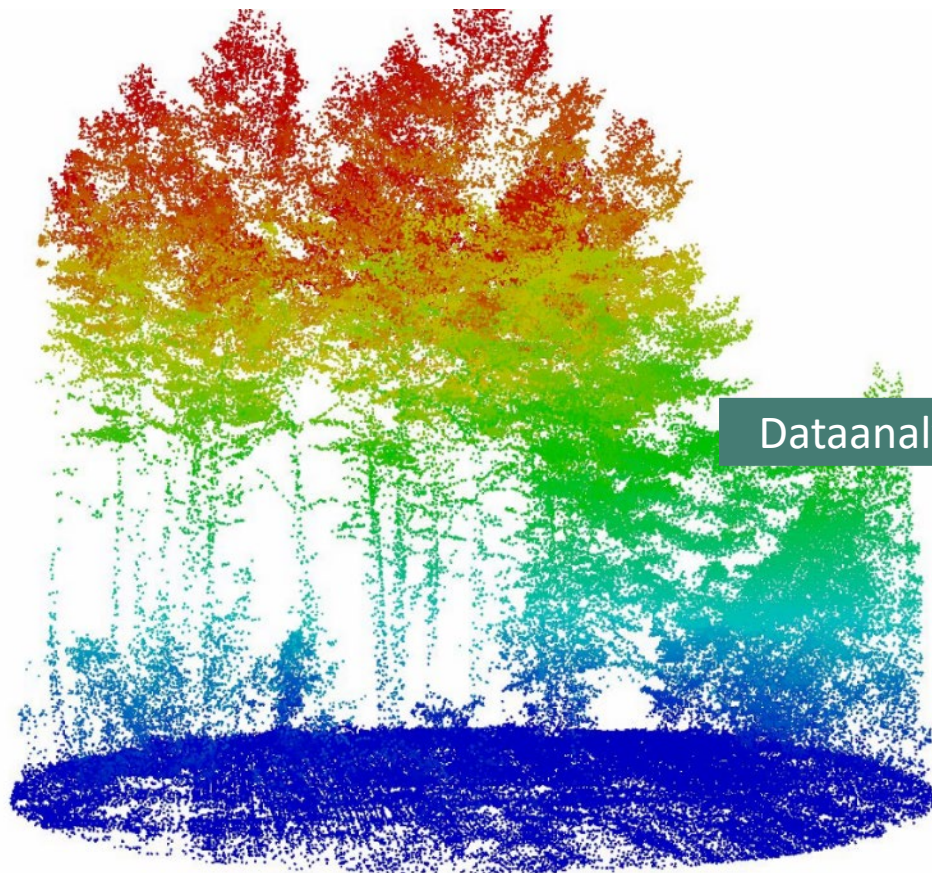
drone



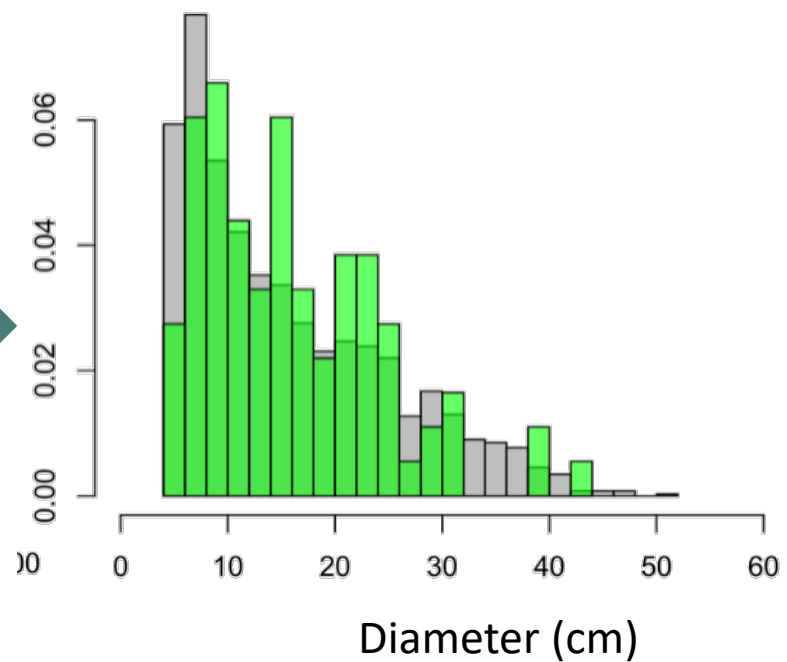
Droner

- «On-demand» undersøkelser
- Rask respons
- Lett tilgjengelige verktøy





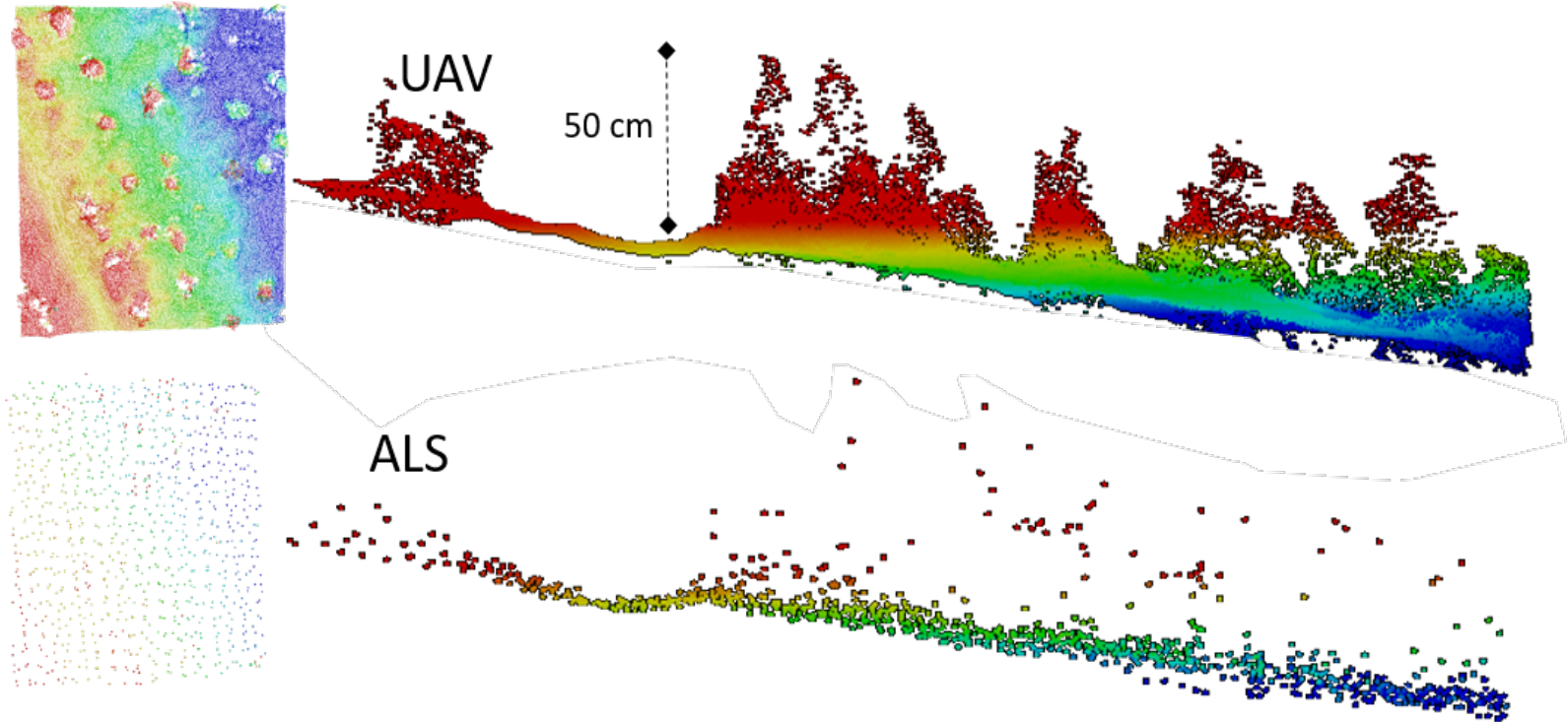
Dataanalyse



Hvorfor droner i ungskogen?



Hvorfor droner i ungskogen?



Hva vi gjorde

 **MJØSEN SKOG**
Måling av
prøveflatene



Feltbefaringer



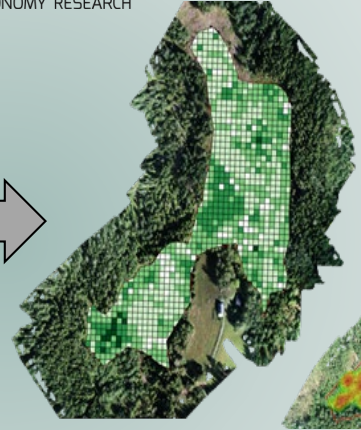
ROMEDAL ALMENNING
& STANGE ALMENNING



Drone



NIBIO
NORWEGIAN INSTITUTE OF
BIOECONOMY RESEARCH



**Kart: Treantall,
Trehøyde,
Treslagsfordeling**



**Ungskogpleie/
Kostnader**



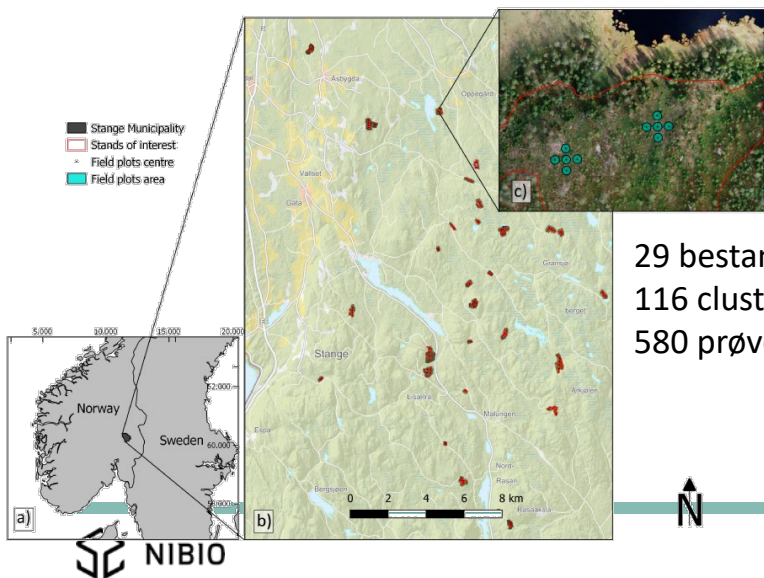
Article
Use of UAV Photogrammetric Data for Estimation of Biophysical Properties in Forest Stands Under Regeneration

Stefano Puliti ¹, Svein Solberg ² and Aksel Granhus

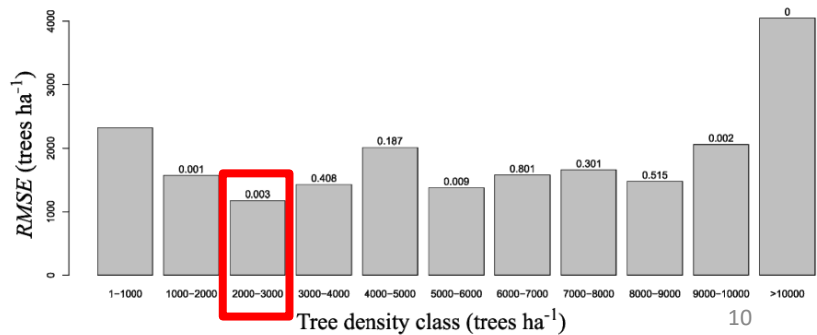
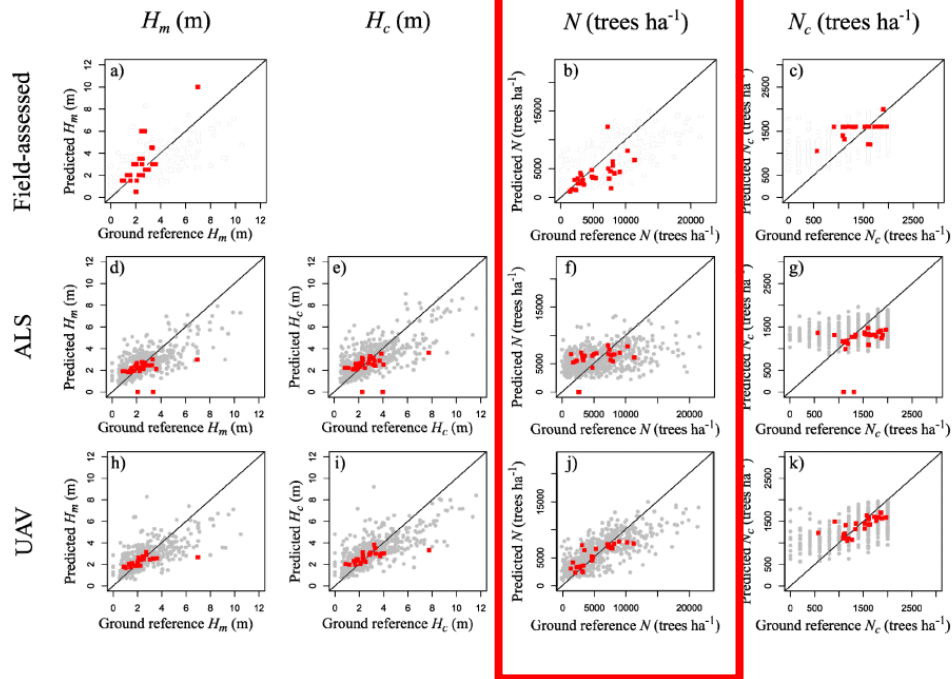
Norwegian Institute for Bioeconomy Research (NIBIO); Division of Forest and Forest Resources; National Forest Inventory. Høgskoleveien 8, 1433 Ås, Norway; svein.solberg@nibio.no (S.S.); aksel.granhus@nibio.no (A.G.)

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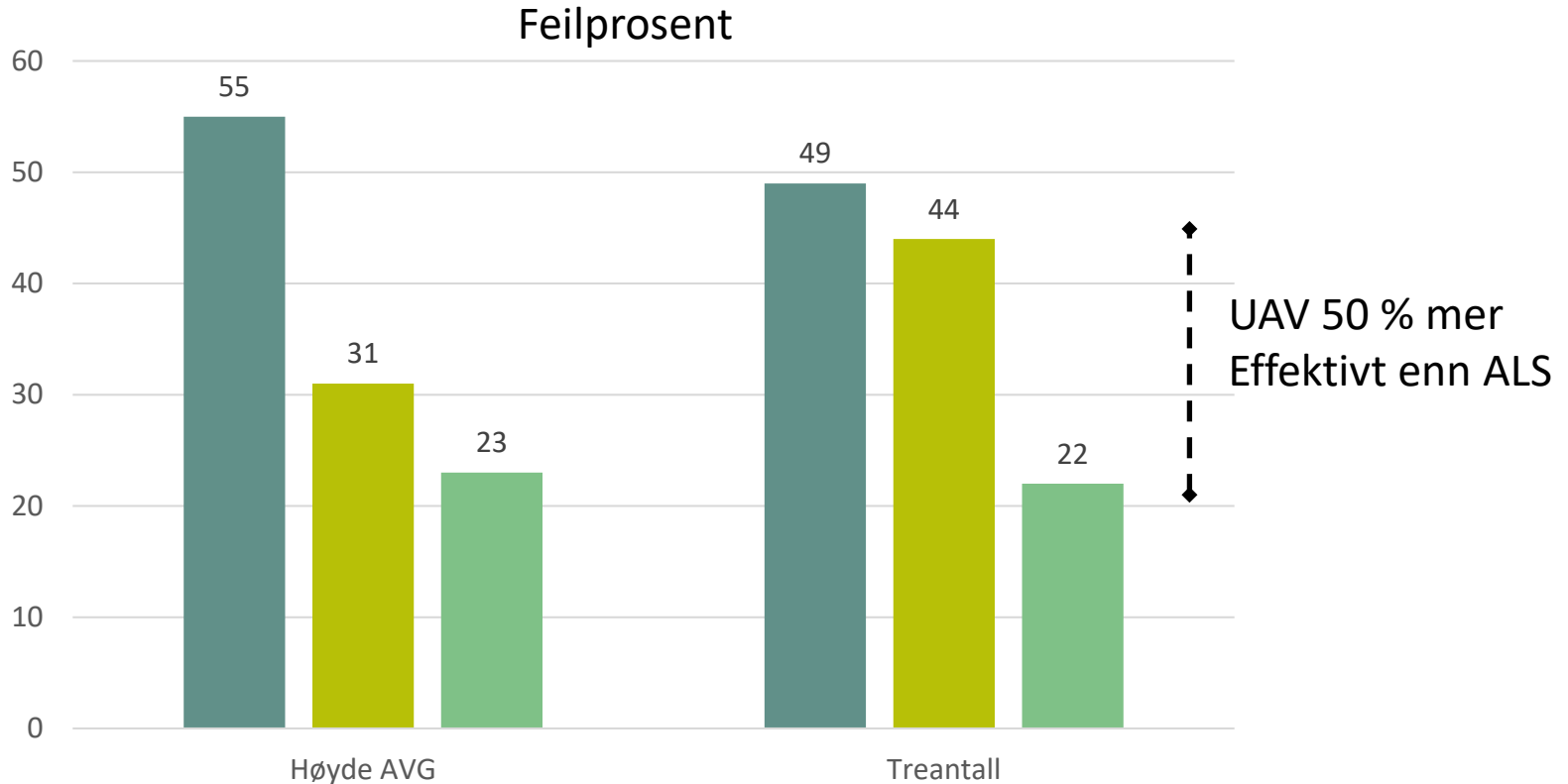
Received: 18 December 2018; Accepted: 22 January 2019; Published: 23 January 2019



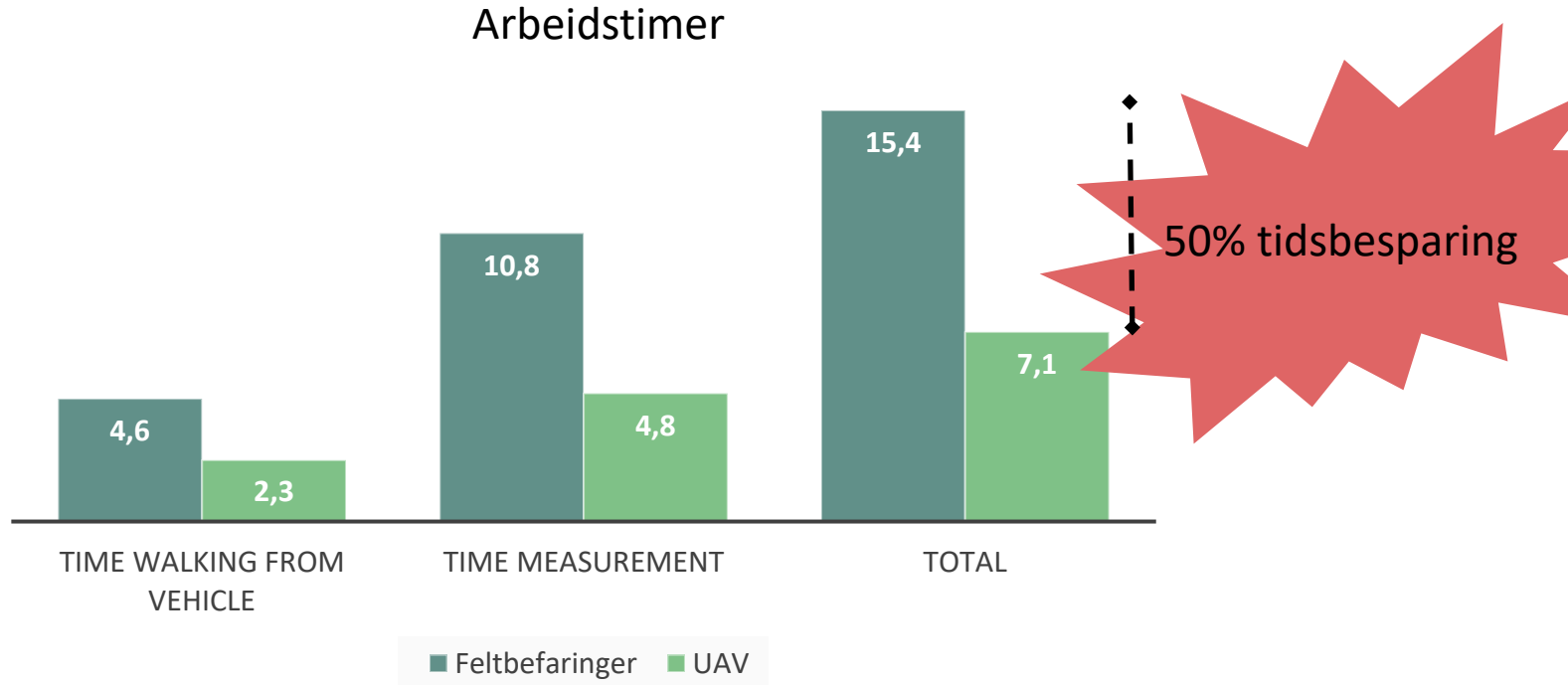
29 bestand
 116 cluster
 580 prøveflater



Nøyaktighet av høyde og treantall

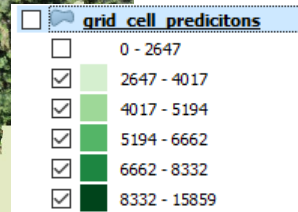
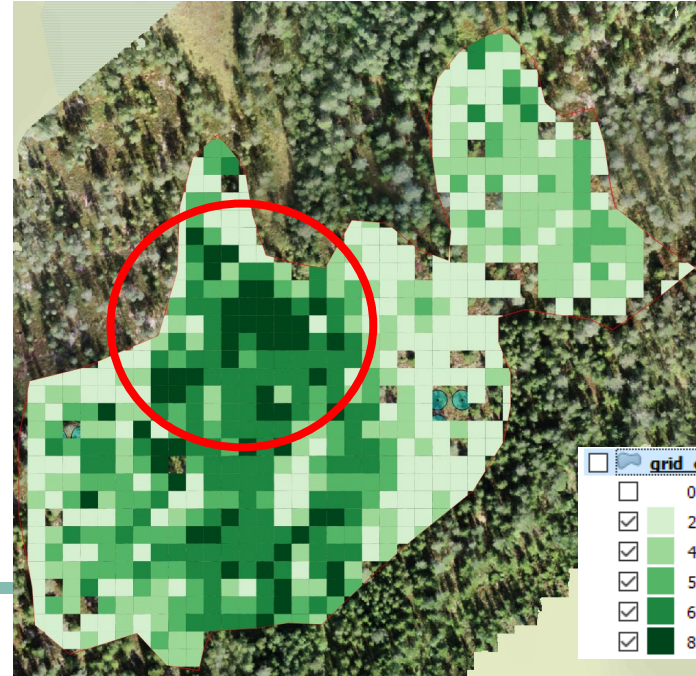
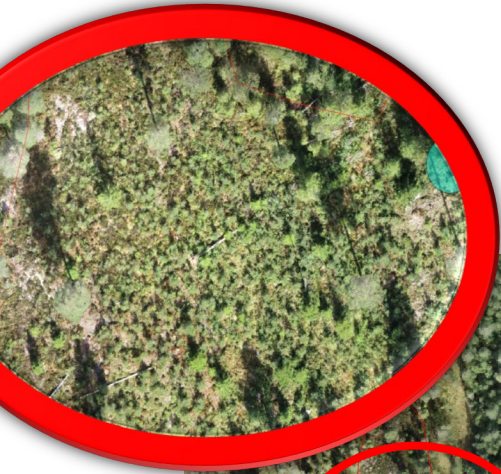


Tidsreduksjon





Et flybilde sier ikke alt!



N

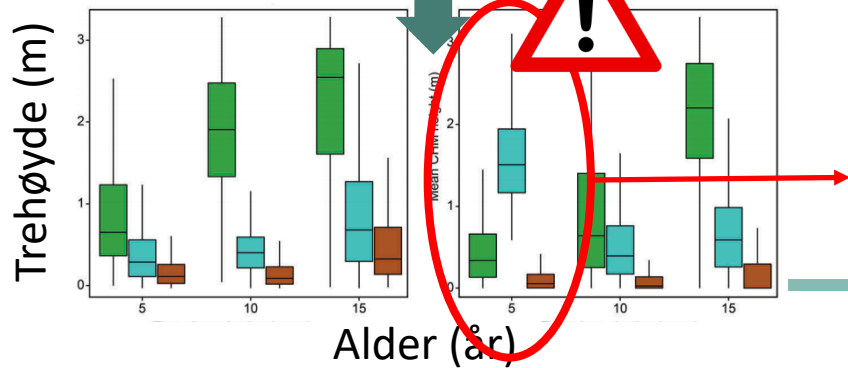
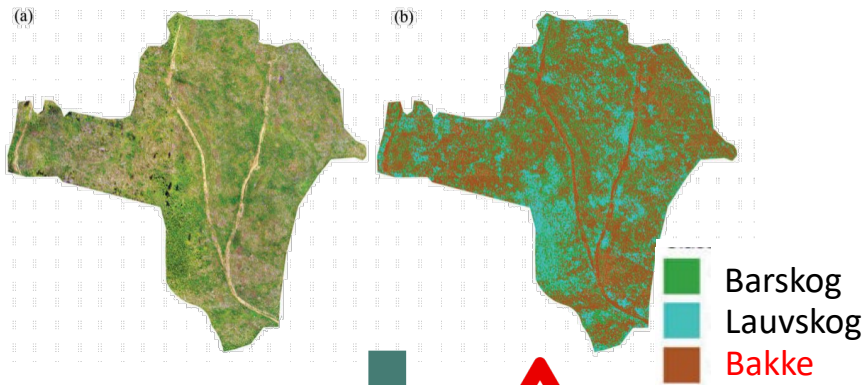
Kartlegging %



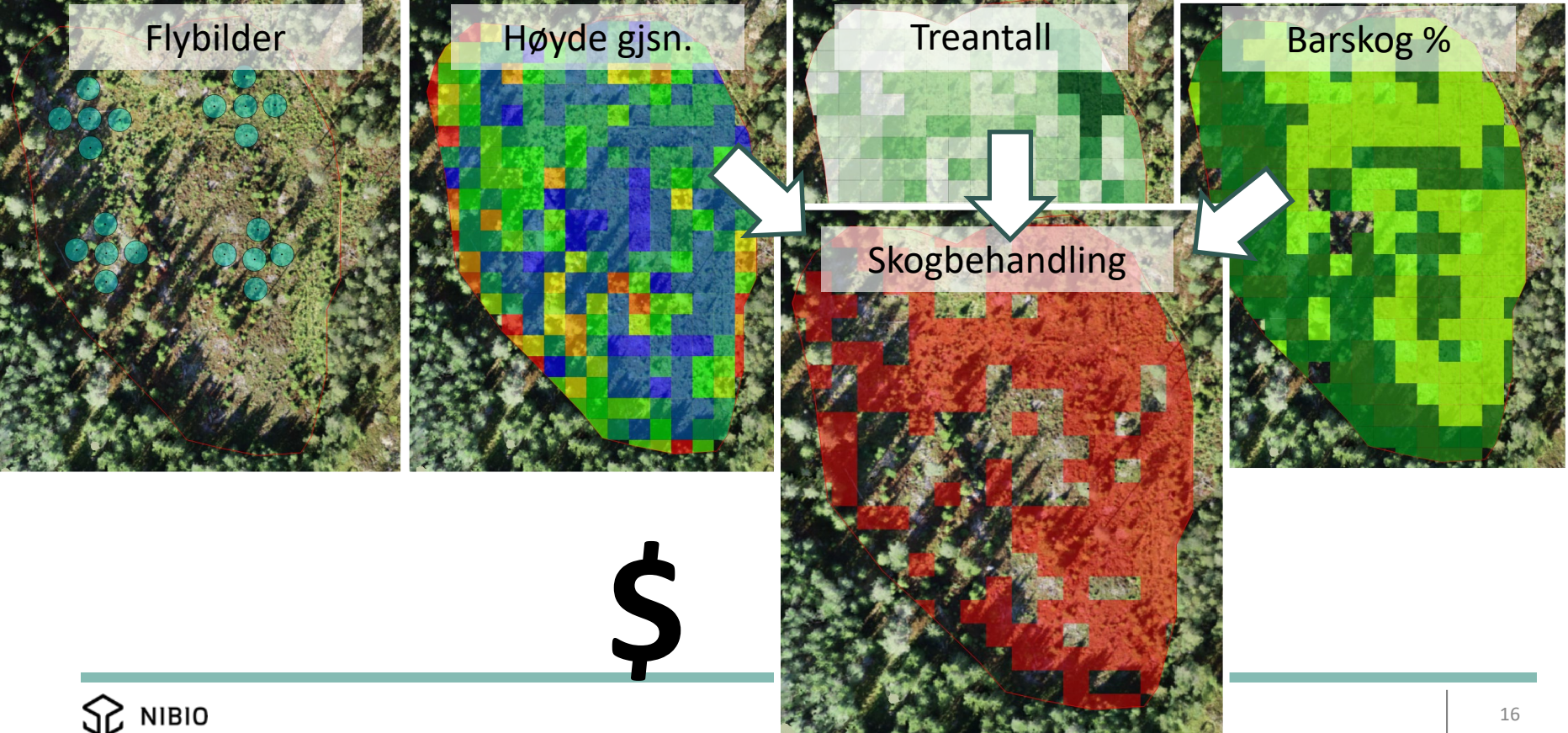
Vs



– Nøyaktighet 79%

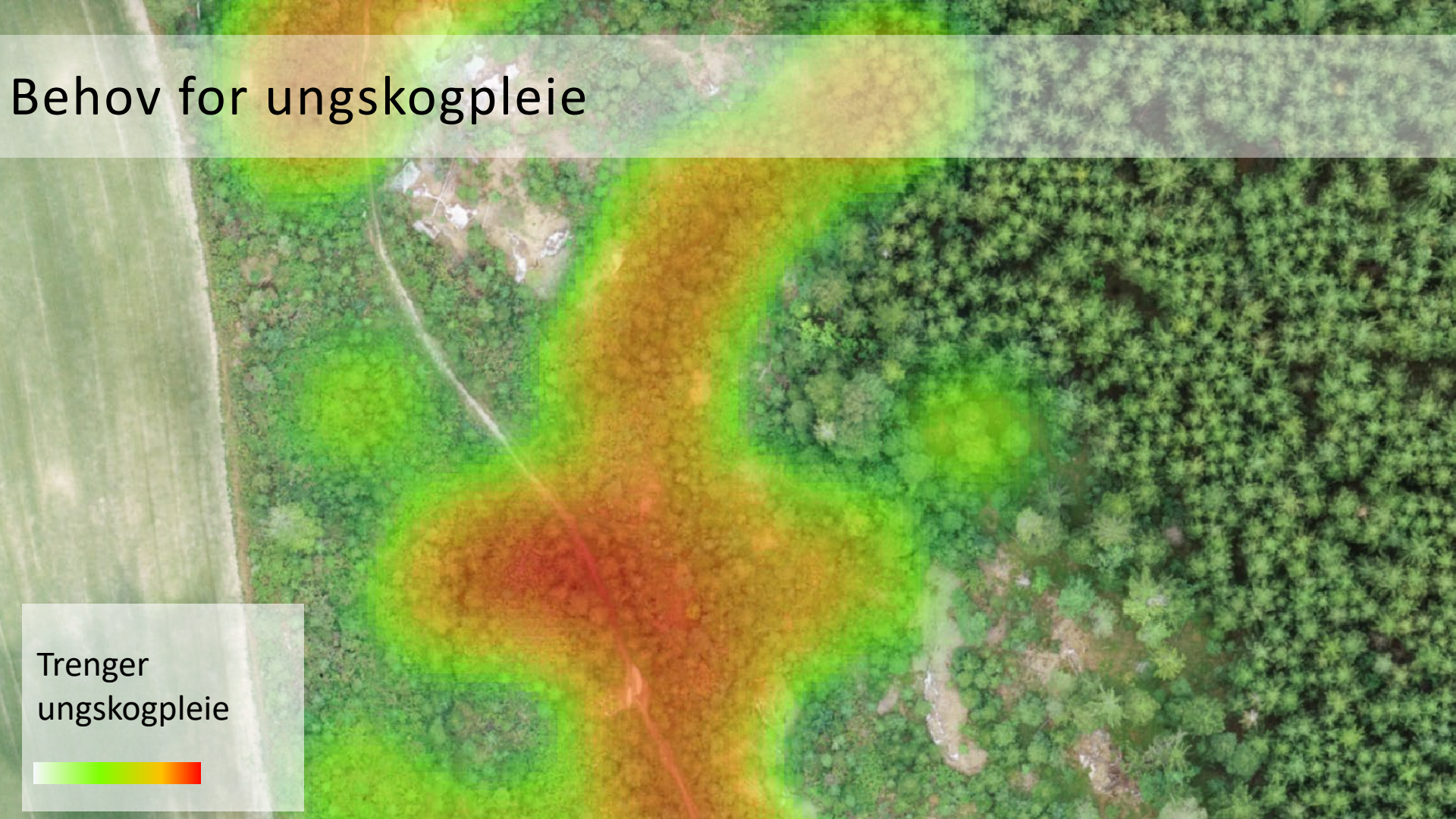


Dataanalyse for valg av tiltak (timing og behov)

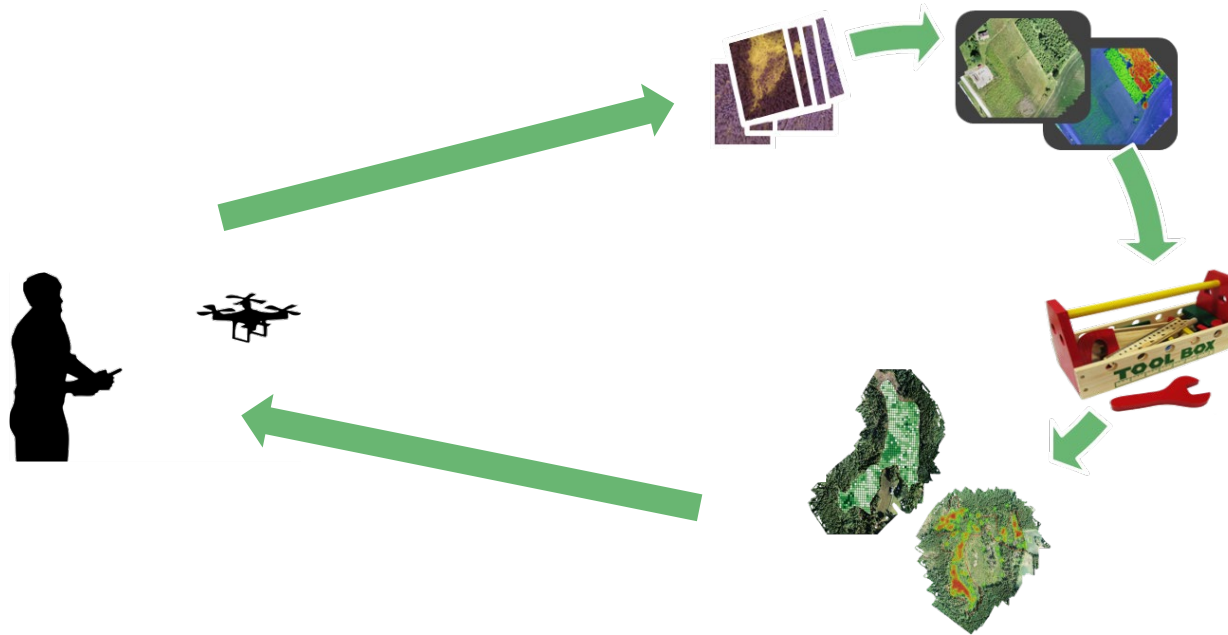


Behov for ungskogpleie

Trenger
ungskogpleie



NIBIO og fremtiden for bruk av droner i norsk skogsektor



«Take home»:

- Droner er et verktøy for nøyaktige og objektive registreringer i ungsbogen
- Bruk av droner reduserer tidsbruken i felt med om lag 50%
- Billigere og bedre beslutningsgrunnlag

