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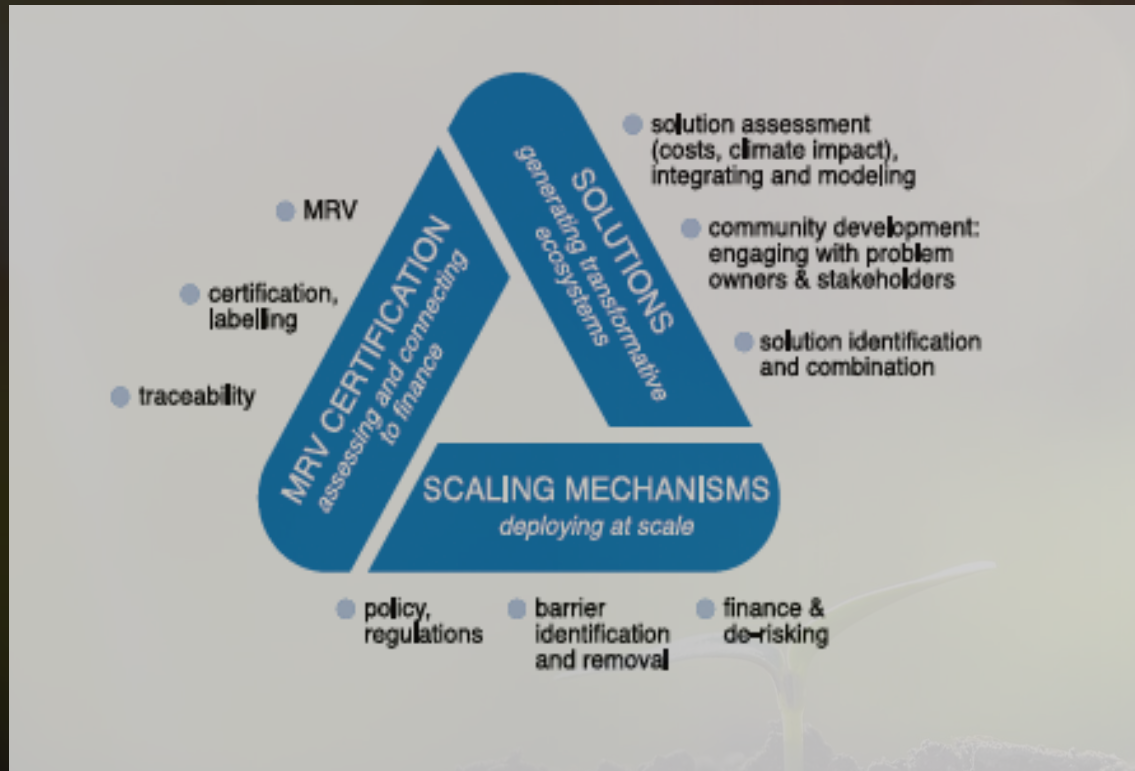


Soil Carbon Farming

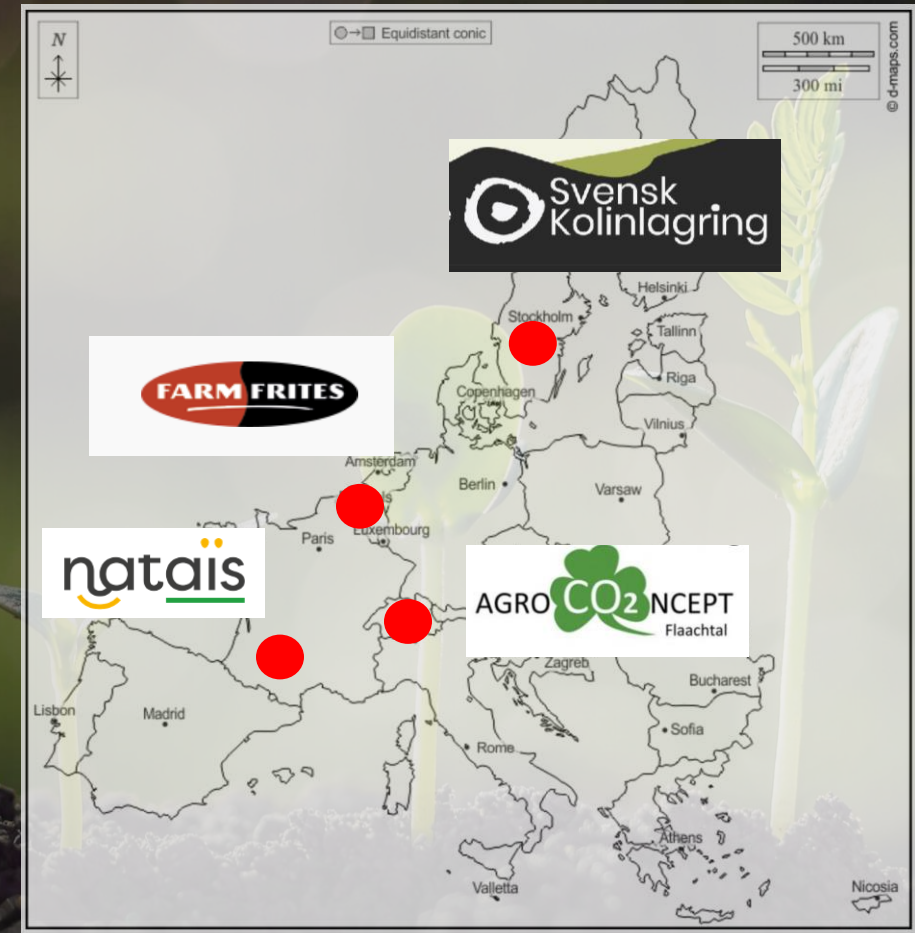


Daniel Zimmer, 15/10/2021

In a nutshell: 3 pillars



4 transformative cases



Many solutions under development,
often by the farmers themselves

Cover crop selection



Machinery design

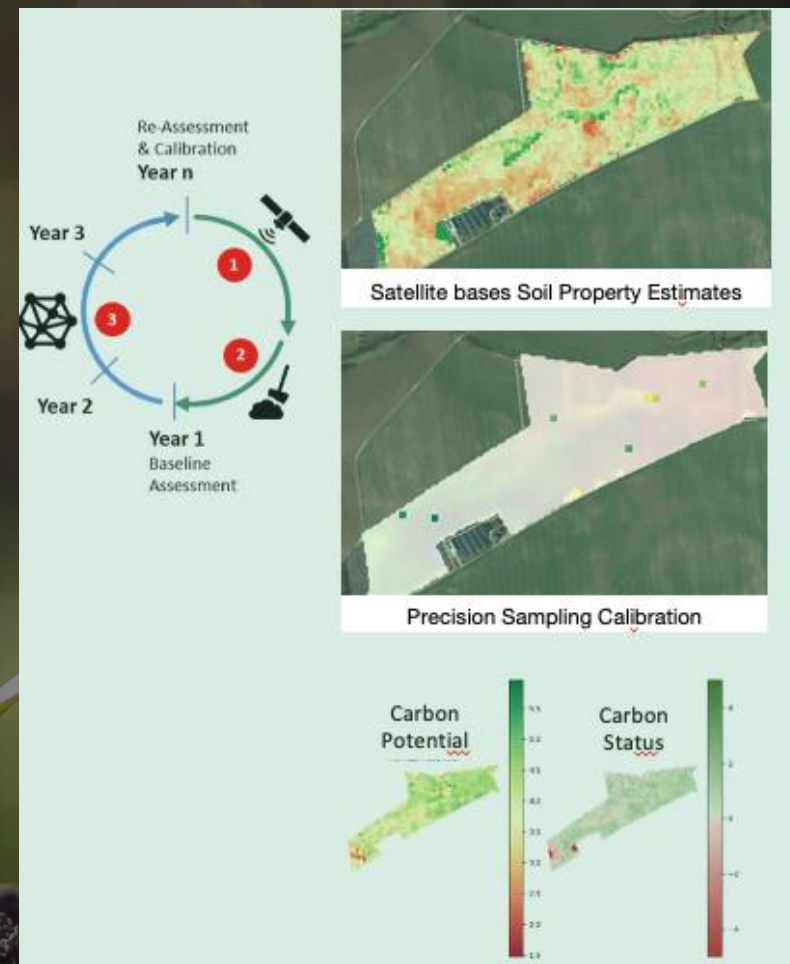


Compost and biochar production



MRV and certification

- Progress with remote sensing tools: 2 complementary approaches developed:
 - SAFYE-CO2 (INRAe, Cesbio), based on annual carbon balance
 - AgriCircle: based on Sentinel data and machine learning
- Critical : certification approach, need a common framework



Deployment, scaling: many obstacles !

- Carbon farming solutions are not profit-positive for the farmers
- Costs are often $> 50\text{€}/\text{T}$ of CO_2eq sequestered and order of magnitude of C sequestration is $1\text{T}/\text{ha}$
- Few value chain actors ready to pay that amount: there is a need to combine reward mechanisms (public +private)
- Combination difficult (additionality, double counting issues, lack of coordination)
- Market payments: consumers value carbon neutral products but carbon neutrality needs to be approached at farm level
- Fairness issue: how to reward the first movers?





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