



UC4B: Machine Data

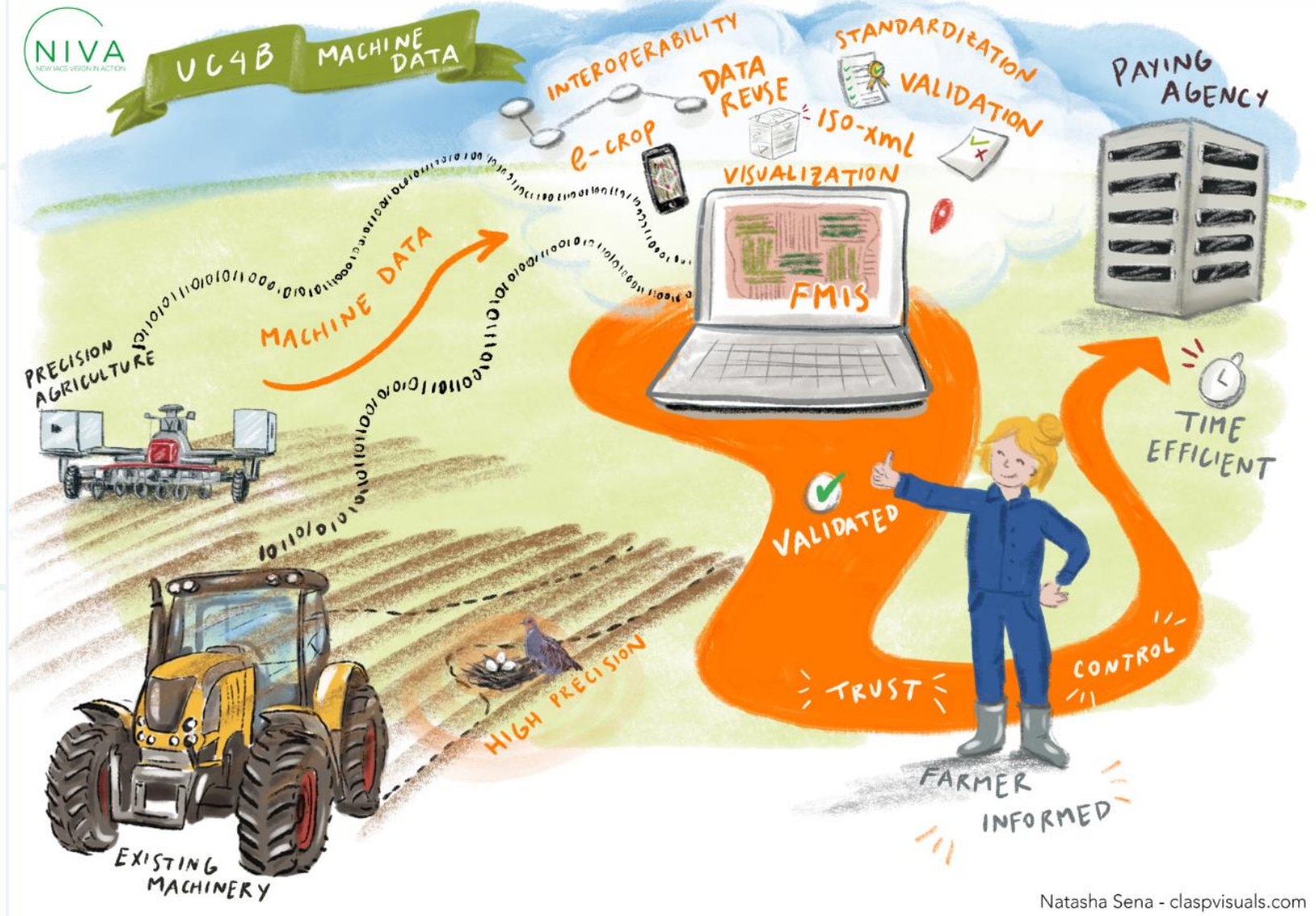
Marc Middendorp

NIVA stakeholder forum meeting Santorini
29 September 2022



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UC objective



The rationale behind UC4B

GNSS enabled equipment is gaining ground in farming

Field data is closely linked to certain, for CAP interesting, field activities.

Fear for sharing data
will turn into an
interest in sharing data

Movement in CAP from compliance to performance

-> Monitoring

-> Seamless claim



Machine

Precision Ag data
has high quality
characteristics



FMIS



Paying agency

Can fill the **monitoring void** for small elements
strip cultivation and buffer strips

UC objective

Exploring the possibilities of using implement (machine) data for monitoring of the CAP

- Create a single message toward GSAA and FMIS's.
- Create a data flow from machine to PA database

UC results

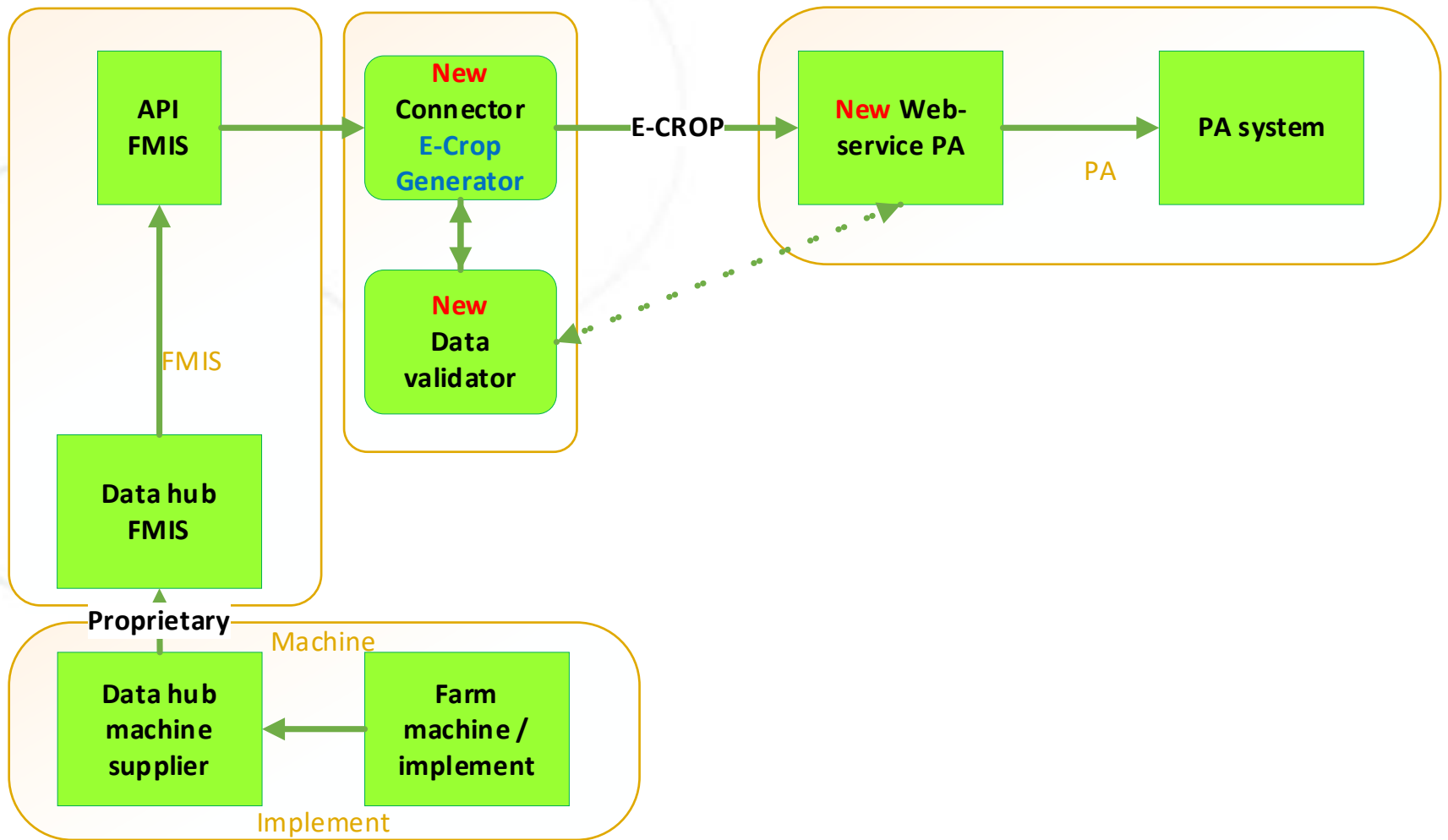
UC results



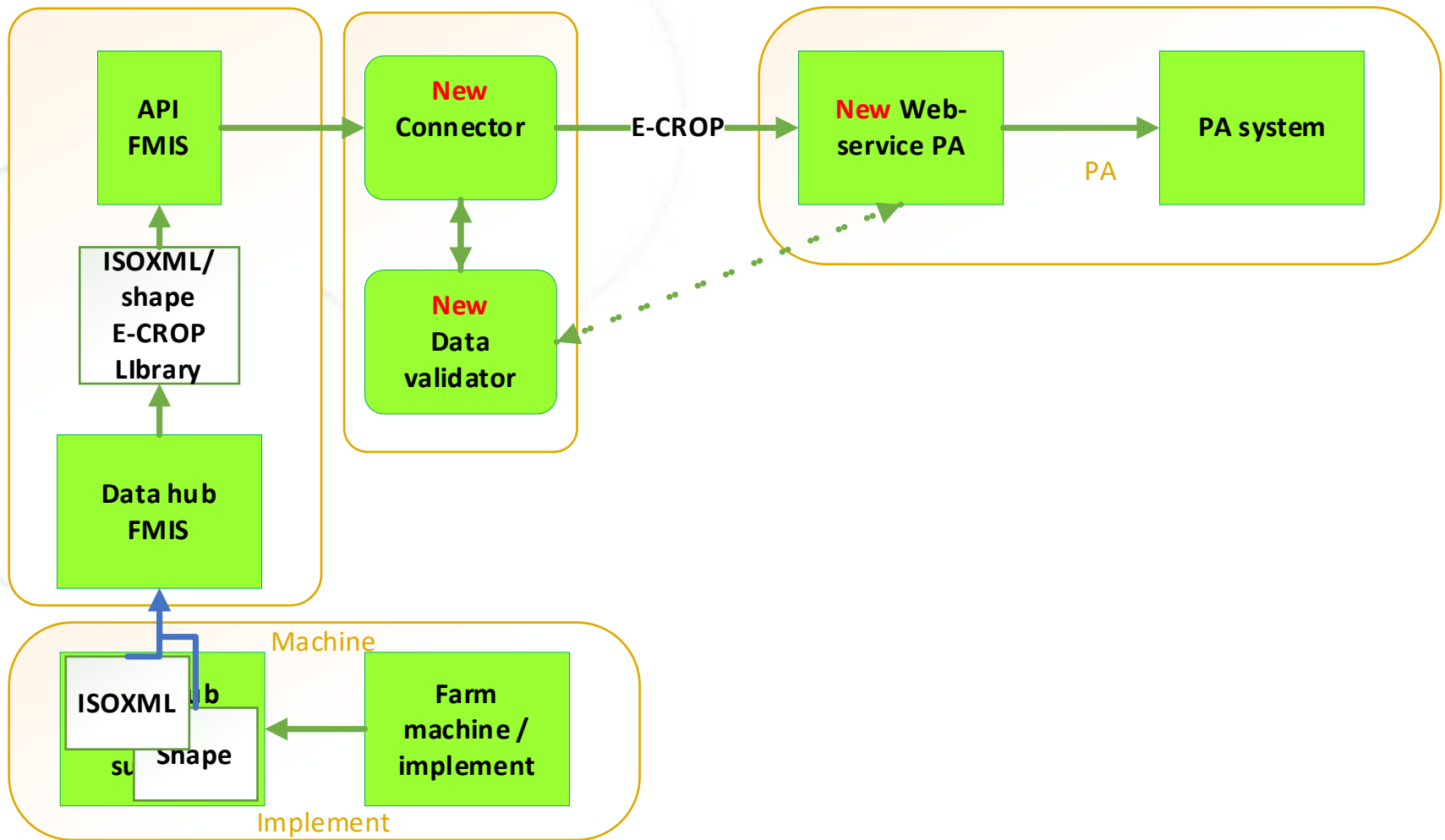
- What are the main results of UC4B
 - Flows tested in different multimember state circumstances.
 - Application of ISO xml and shape data into e-crop Standard
- What components did the UC4B deliver?
 - NivalsoXmlToEcropLibrary
 - NivaShapeToEcropLibrary
 - NivaConnector API
 - NivaConnector Frontend
 - NivaValidator API
 - Webservice PA with database

Video on the results <https://youtu.be/yX2F3kKmlyQ>

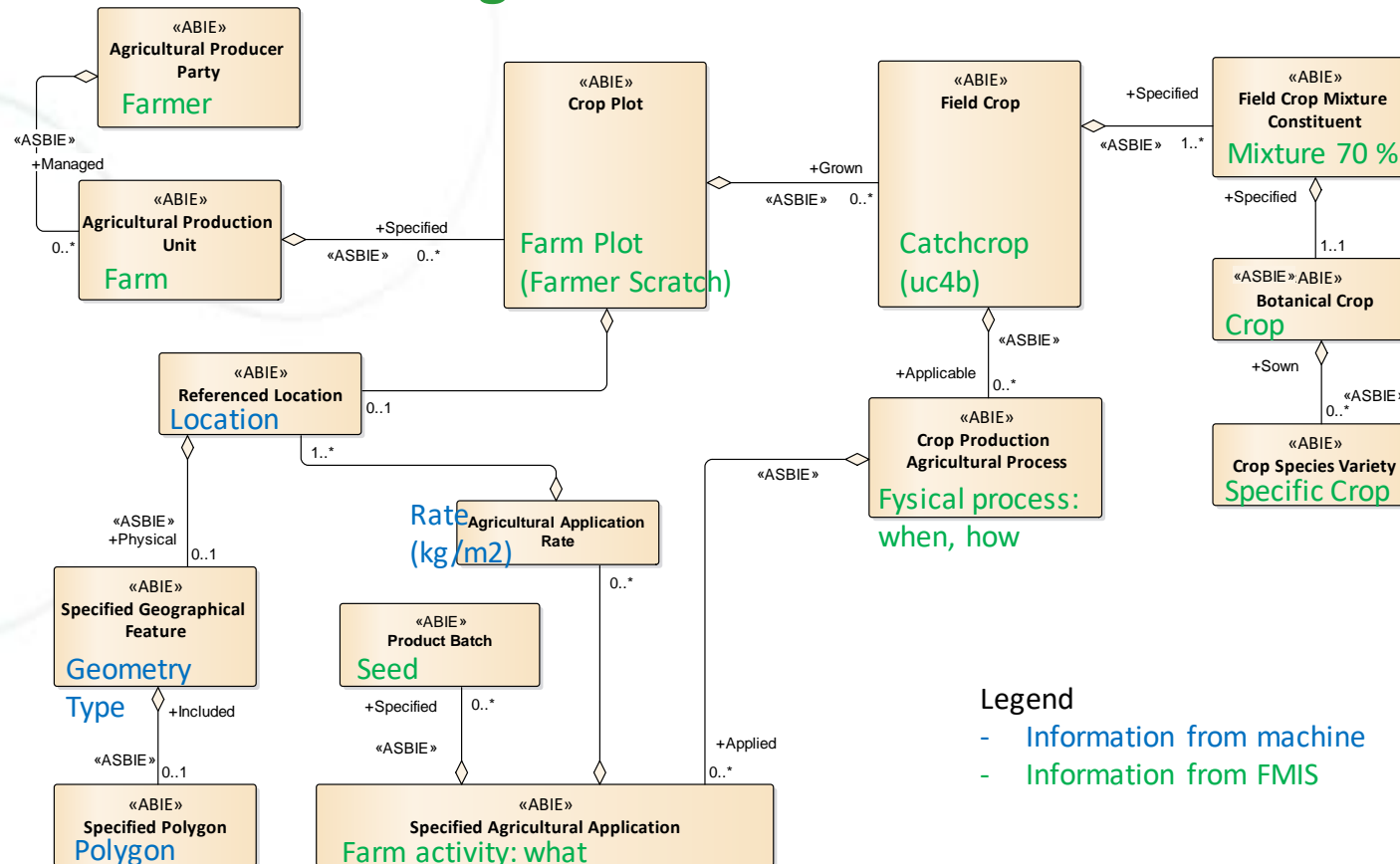
2020 Proprietary to E-CROP

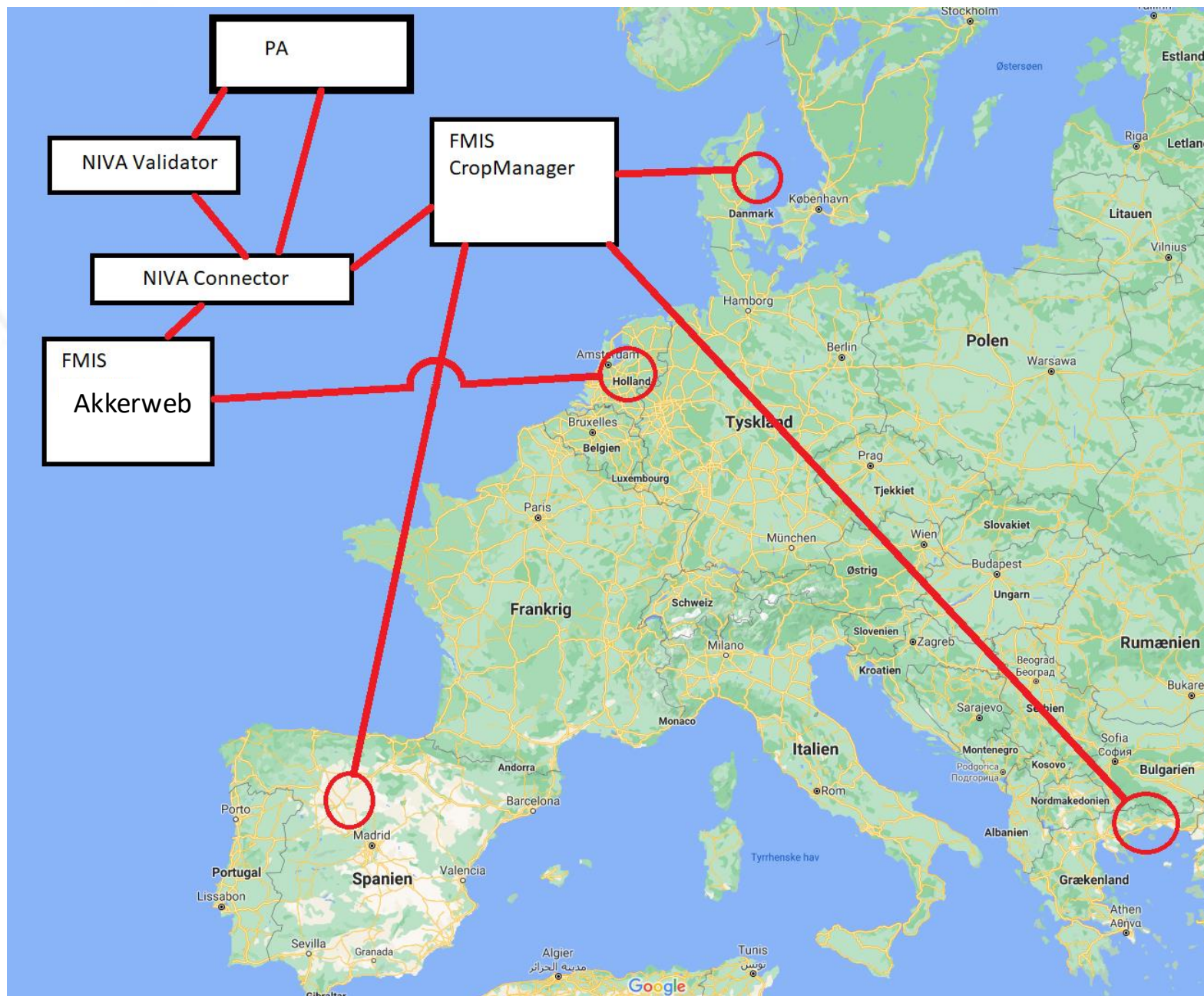


2021 ISOXML / shape to E-CROP



E-CROP message NIVA UC4b





UC benefits

UC Benefits

- What are the benefits?
 - Opening the potential of additional data sources in a monitoring process
- Contribution to the CAP and IACS?
 - Monitoring more complicated (small) elements
 - Monitoring specific conditions (seed mixture, date)
- When will the benefits are available for the user?
 - Policy makers need to acknowledge these data by defining schemes
 - PA needs to embrace the potential new technology and implement this
- Who or what benefits most from this UC?
 - Farmers have additional tools to prove their performance
 - Policy / PA -> add more detailed schemes -> more specific measures to meet social challenges

UC challenges

UC challenges

- PA:
 - Has to develop an entrance to its system (business case?!)
 - Data integrity
- Machinery:
 - At this stage, manual actions are needed to get the data flowing – FMIS is needed
- Farmer
 - Trust sharing data - what is happening with the data
 - Investment readiness of farmer
 - Awareness of the benefits of the technology
- Which pitfalls are identified?
 - Farmer should feel Safe about sharing
 - PA integrity of the received data
- Which ideas are there to challenge these pitfalls?
 - Small scale upscaling; connect to existing practices
 - Learn from UC4A

NL 54% of farmer have PAg tech in use
(62% have plans for investments)
DK 36% of farmers (73% of area)

THANK YOU!



Waterford Institute of Technology



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Sample data from NIVA demos - DK

- DK test farm, fertilization April 2021
- Data source was an as applied log from isoxml from a Fendt terminal and a Kverneland spreader
- <https://youtu.be/oa-BvH0tqsg>

