



Netherlands Enterprise Agency



From compliance to performance... the potential of farm (machine) data...

Marc Middendorp
Geospatial Business Consultant
Netherlands Enterprise Agency (RVO)
NIVA UC4b lead machine data



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Content

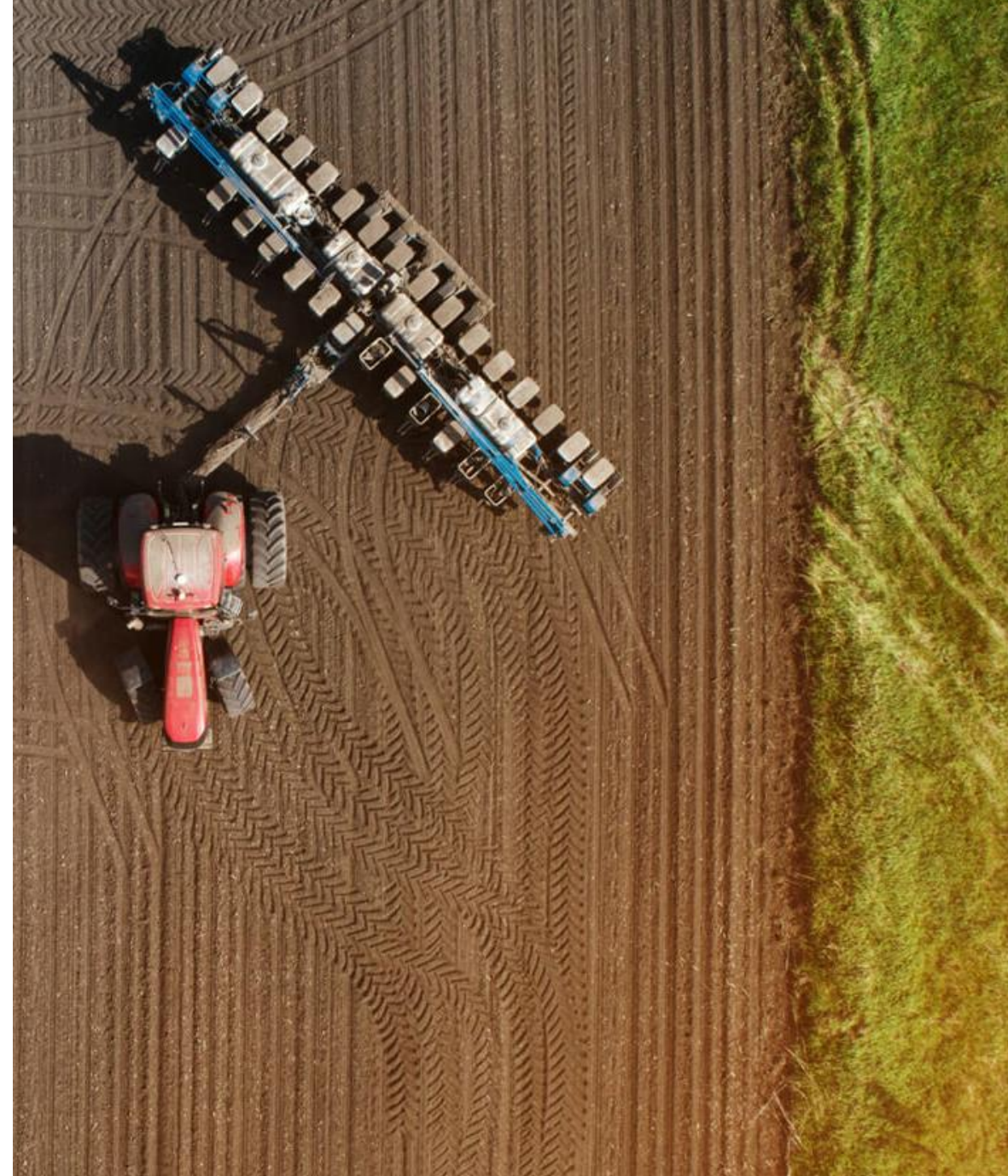
Compliance to performance in CAP

Changes in IACS

Monitoring

NIVA

Farm data exchange tools





New CAP from compliance to performance

New CAP 23-27 should be an instrument to seduce farmers to contribute to important CAP objectives

More influence to member states - National Strategic Plans

Farmer oriented:

Compliance to performance

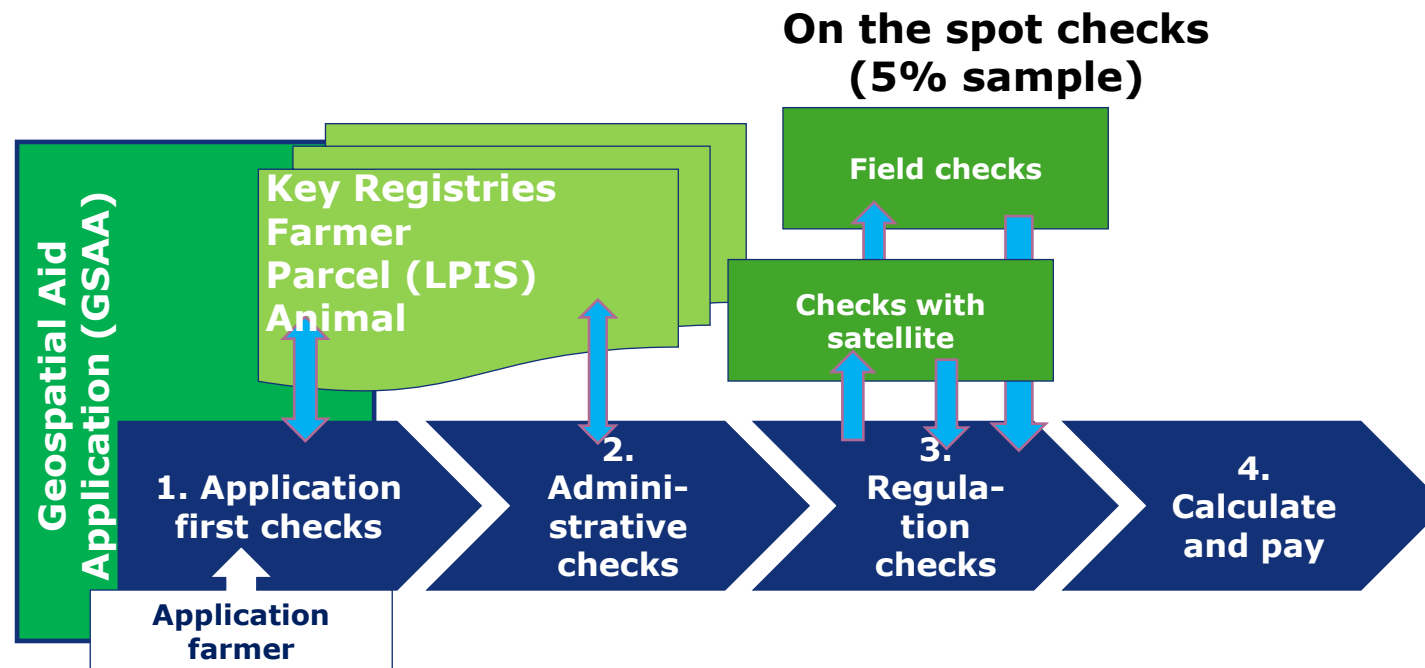
Change in IACS

- › Move to more near real time systems (Monitoring)
- › Facilitating farmers on their performance throughout the year



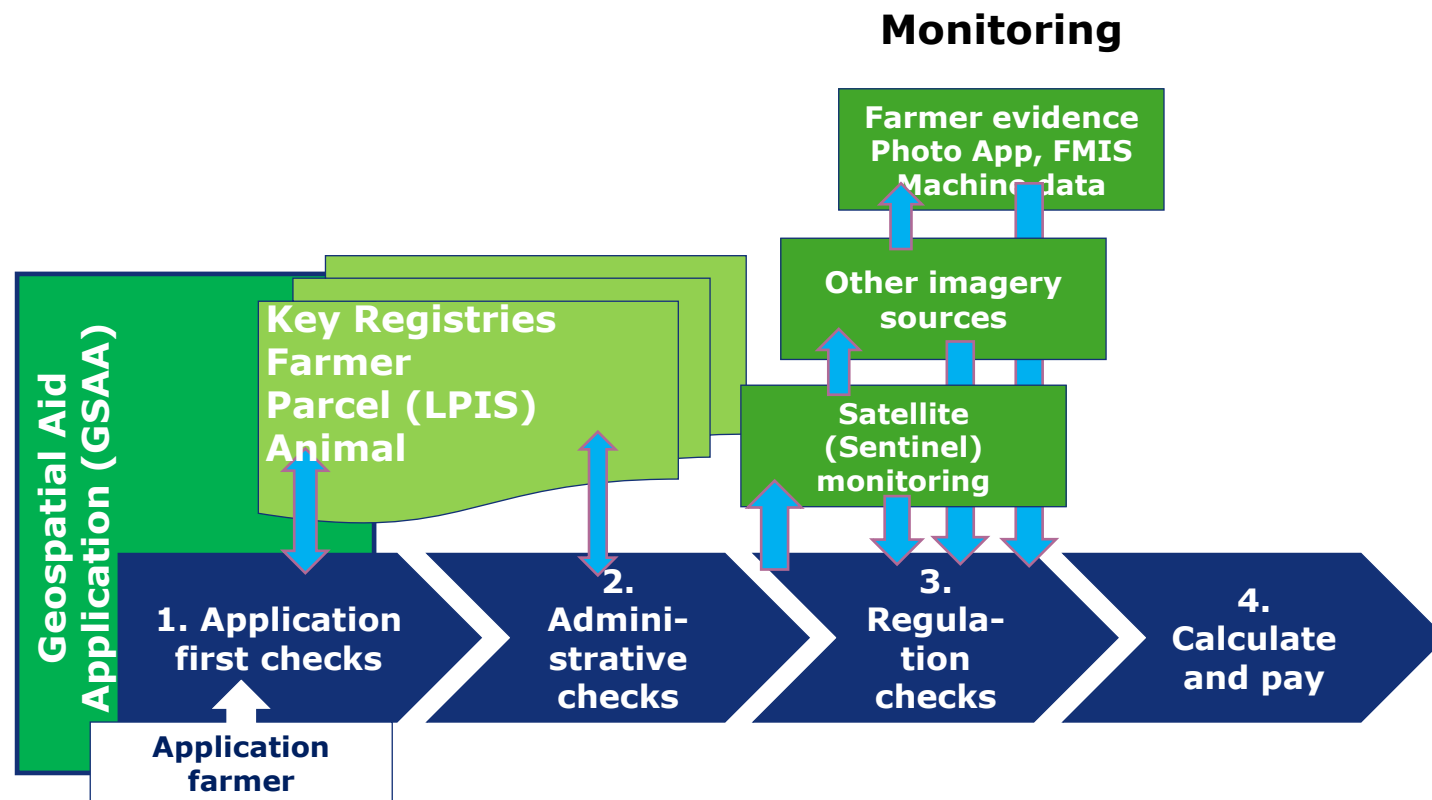


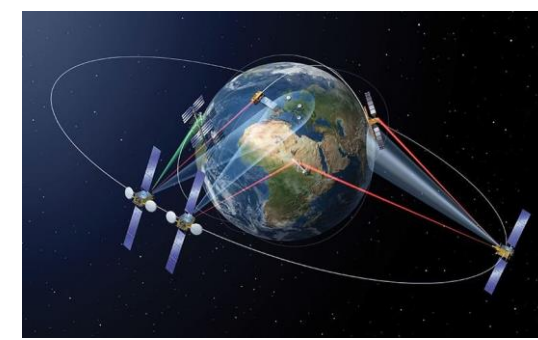
Integrated Administration and Control System (IACS)





IACS and monitoring





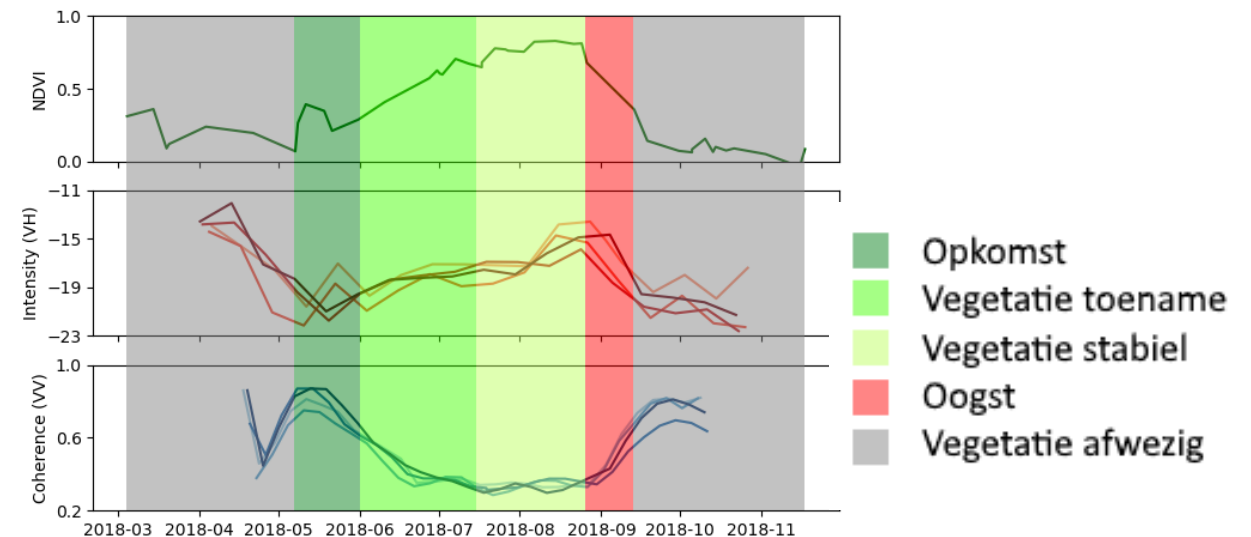
Monitoring

Regular and systematic observation of the entire population, of one (or more) (parts of) land-related subsidy scheme(s), over a certain period, with data available (satellite data), to assess the conformity of the activities with regard to that scheme.

Satellite monitoring



Biomass arable land



Developed markers on Sentinel 1 and 2:

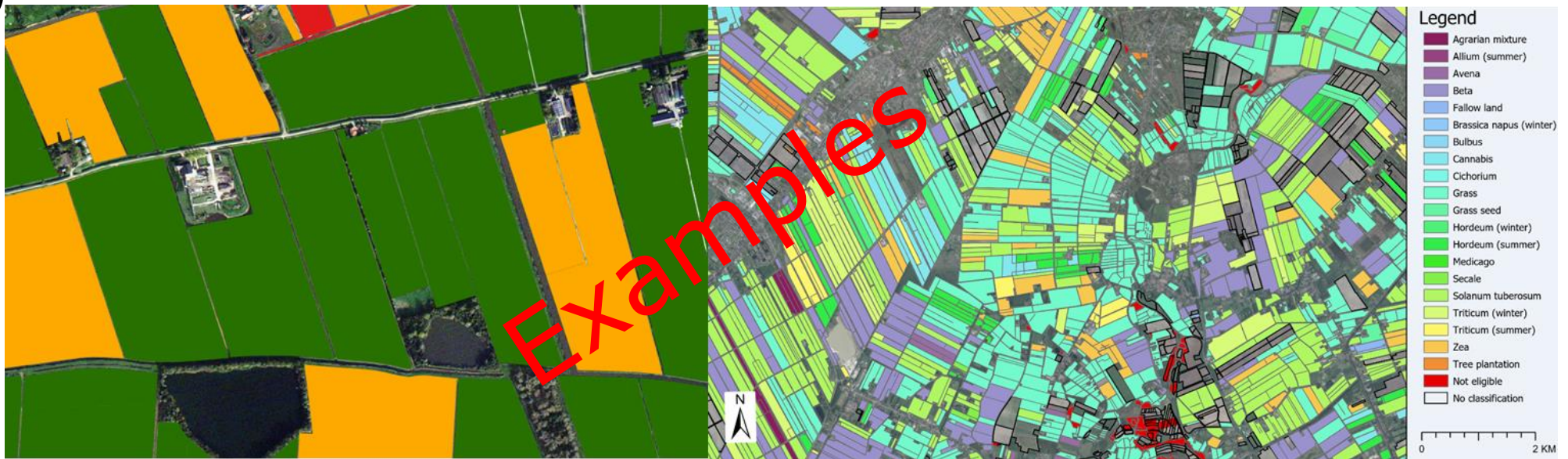


Monitoring

- Give signals when expected markers are not seen
- Help to meet to the regulation requirements
- Offer a good clear user interface
- Offer services to provide field activity evidence (data sharing tools)

Now: Checks by PA unannounced,
no warning, no repair possible...

New: Involve farmer in what is
observed with (satellite) data near
real-time



Green: expected,
Yellow: questionable
Red: unexpected/unlikely

Crop classification: this is what we found



Data sharing tools



Currently Payment Agencies are preparing for monitoring and looking into data sharing possibilities



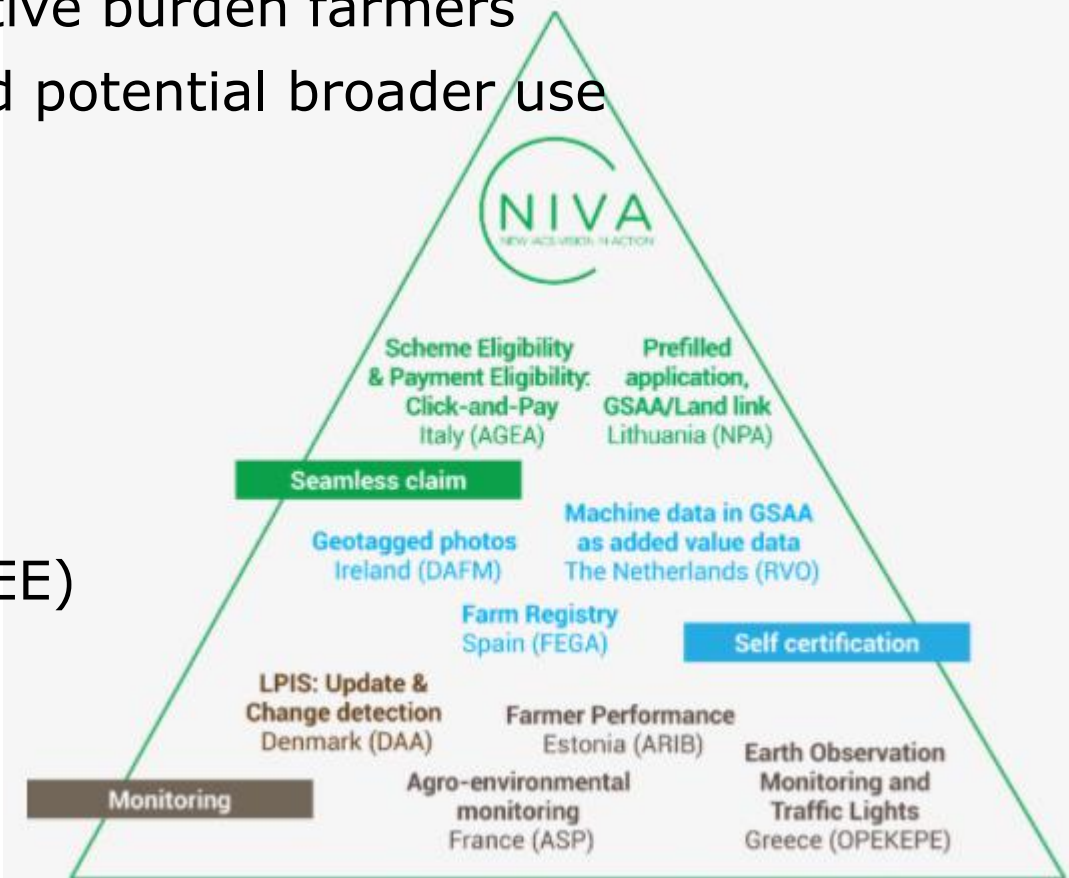
- › Separately but also together ...
in **NIVA**



New IACS Vision in Action (NIVA)



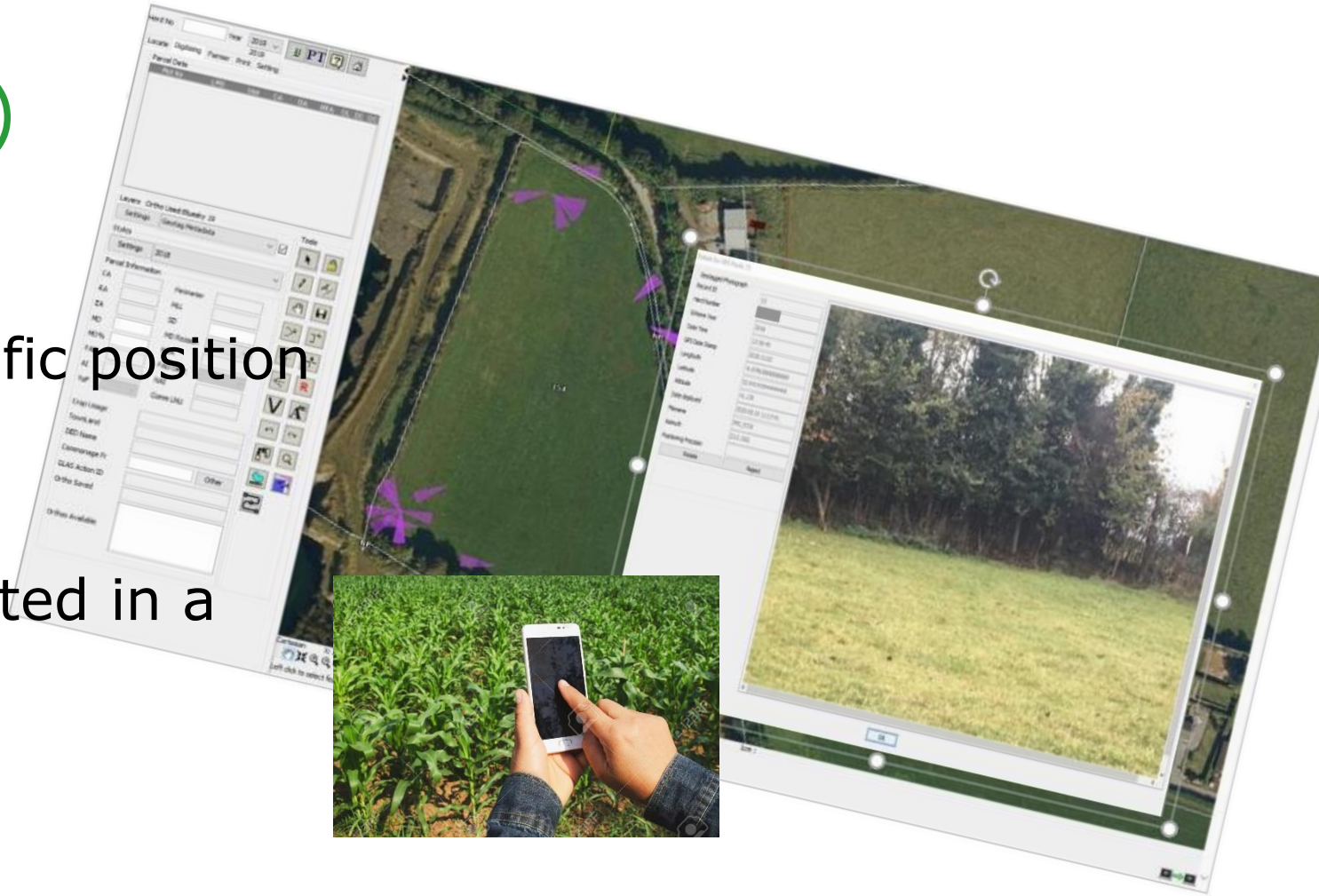
- Aim NIVA
 - Absorbing innovations to simplify governance
 - Reducing socio-economic and administrative burden farmers
 - Reducing gap between IACS data use and potential broader use
- Deliverables: open source e-tools
- Farm data UC's
 - 1c farmer performance field book FMIS (EE)
 - 4a geotagged photo (IR)
 - 4b machine data (NL)





Geotagged photo (IR)

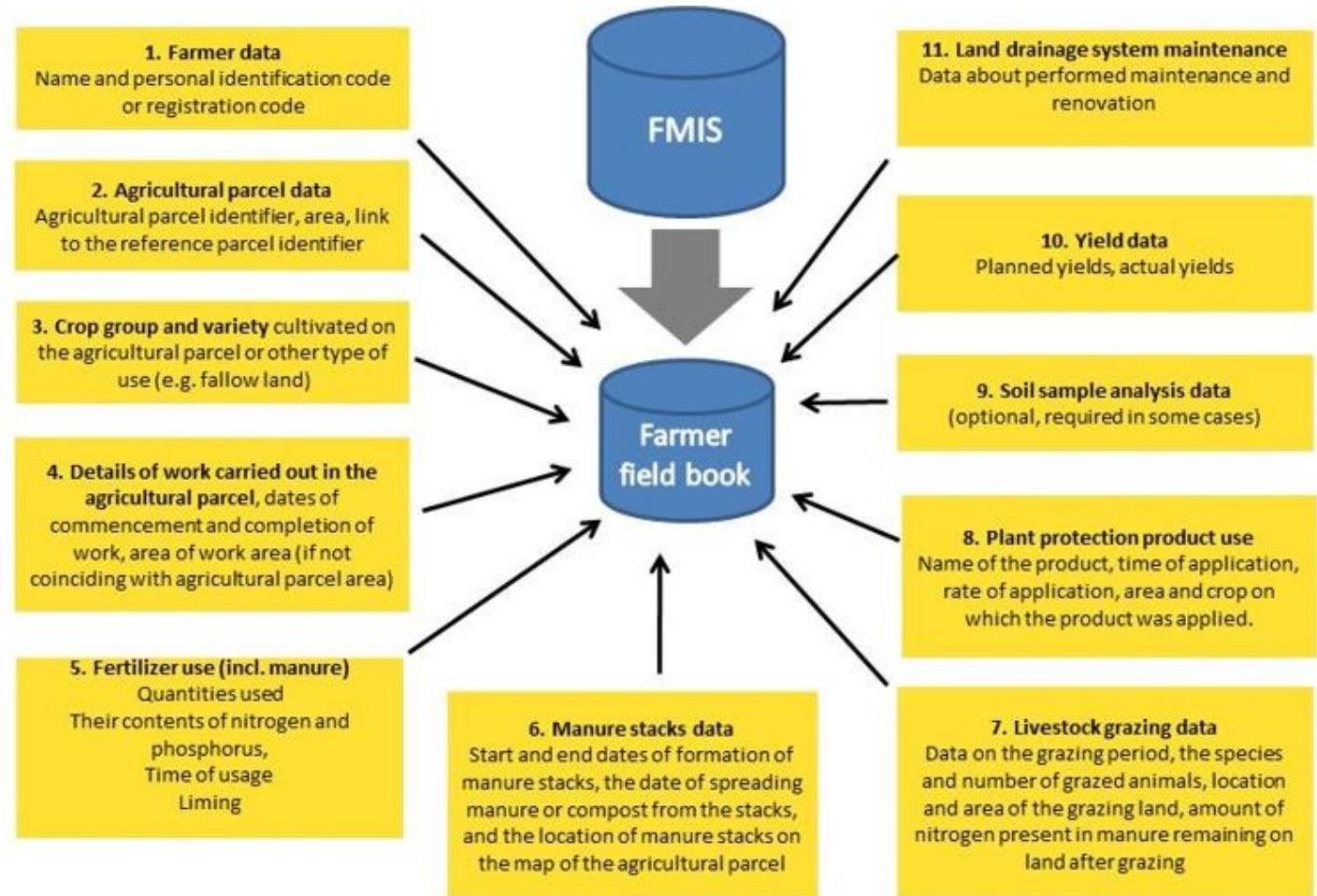
- › Smart Phone App
- › PA can send farmer to specific position to collect information.
- › Data integrity measures
- › High maturity -> Implemented in a number of EU countries





FMIS -Field book (EE)

- FMIS – field book contains information on field activities
- In NIVA prototype, FMIS can:
 - Request parcel data from IACS
 - Send parcel data to IACS
- No double entry and differences
- Complex (standards etc)
- In some countries this is already in place



Other relevant data related to agricultural activities may be captured in field book. Data on performed work must be entered within 10 calendar days after the completion of the work. Data must be stored for 10 years after the entry of the data in the field book. Field book (in paper or electronic format) is mandatory in Estonia.



Machine data (NL)



Machine



FMIS



Paying agency

- > Machine data has a close link with activities needed for CAP
- > Monitoring with satellite (Sentinel) alone will not do the trick (for Dutch situation at least)
- > Precision agriculture data has high quality (spatial and temporal)
- > Ties in with event driven data exchange
- > Complexity with different steps in exchange process (farmer, machine builder, FMIS and PA)



Conclusions


- › A change is going to come in executing the CAP
 - > Compliance to performance**
- › Payment Agencies are developing tools to support farmers with demonstrating performance
 - Geotagged Photo App is most practical to realise
 - FMIS – IACS connection more complex but logical step
 - Machine data flow is most experimental but closer to event driven communication
- › **More control of data sharing for the farmer**

For a more sustainable agriculture



Questions?

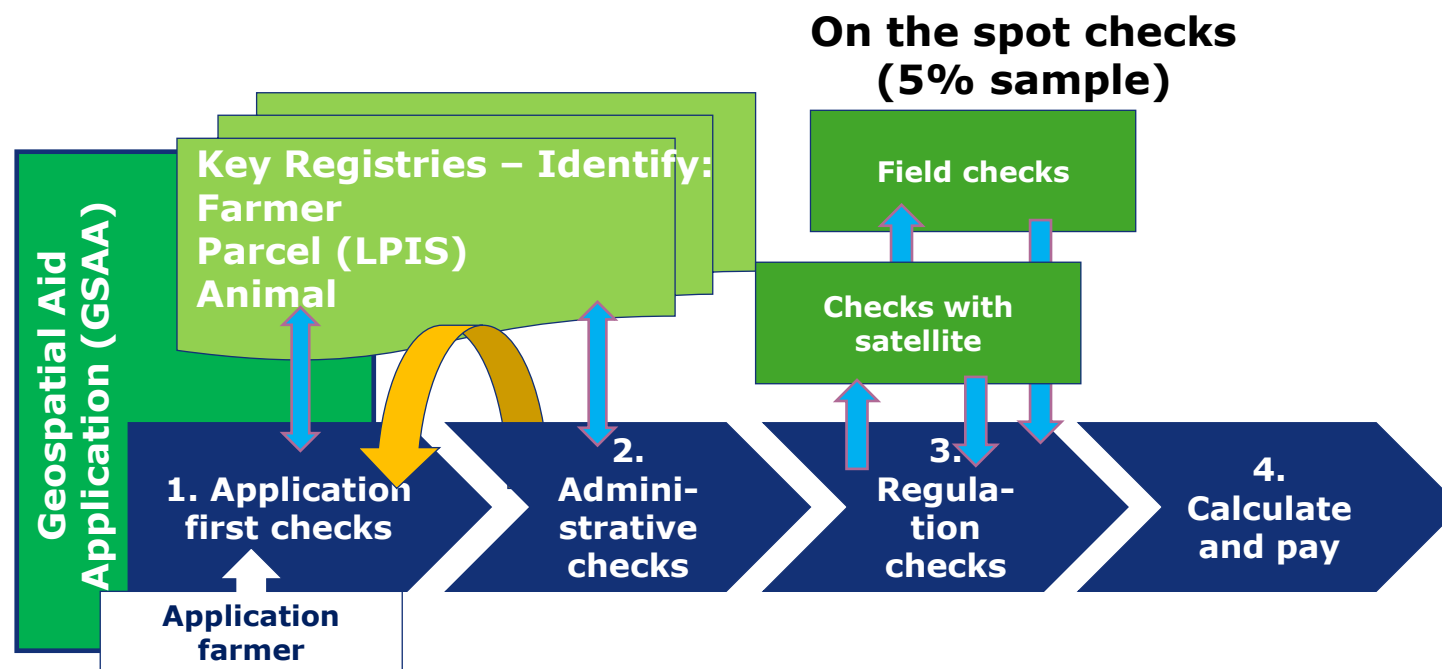


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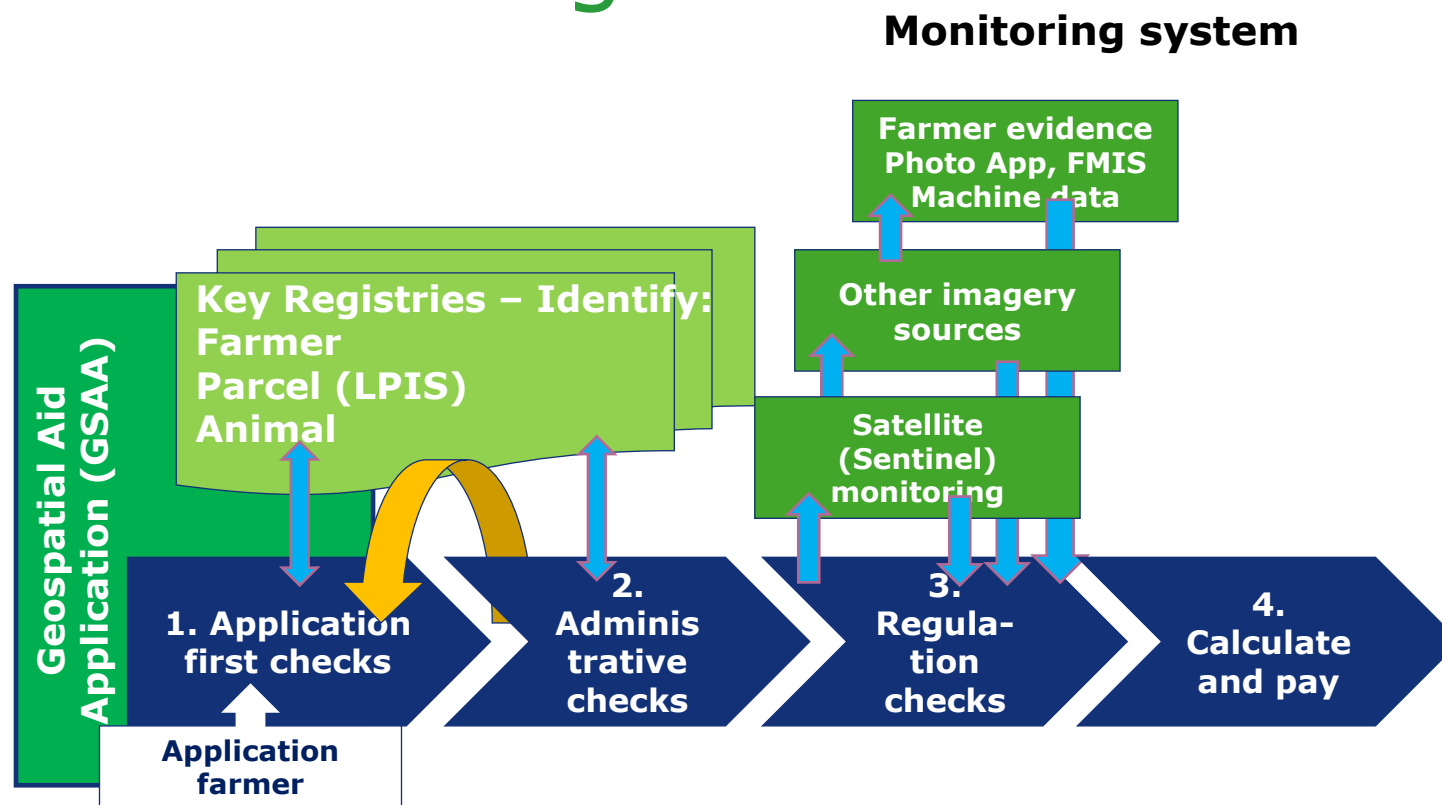


Integrated Administrative Control System (IACS)



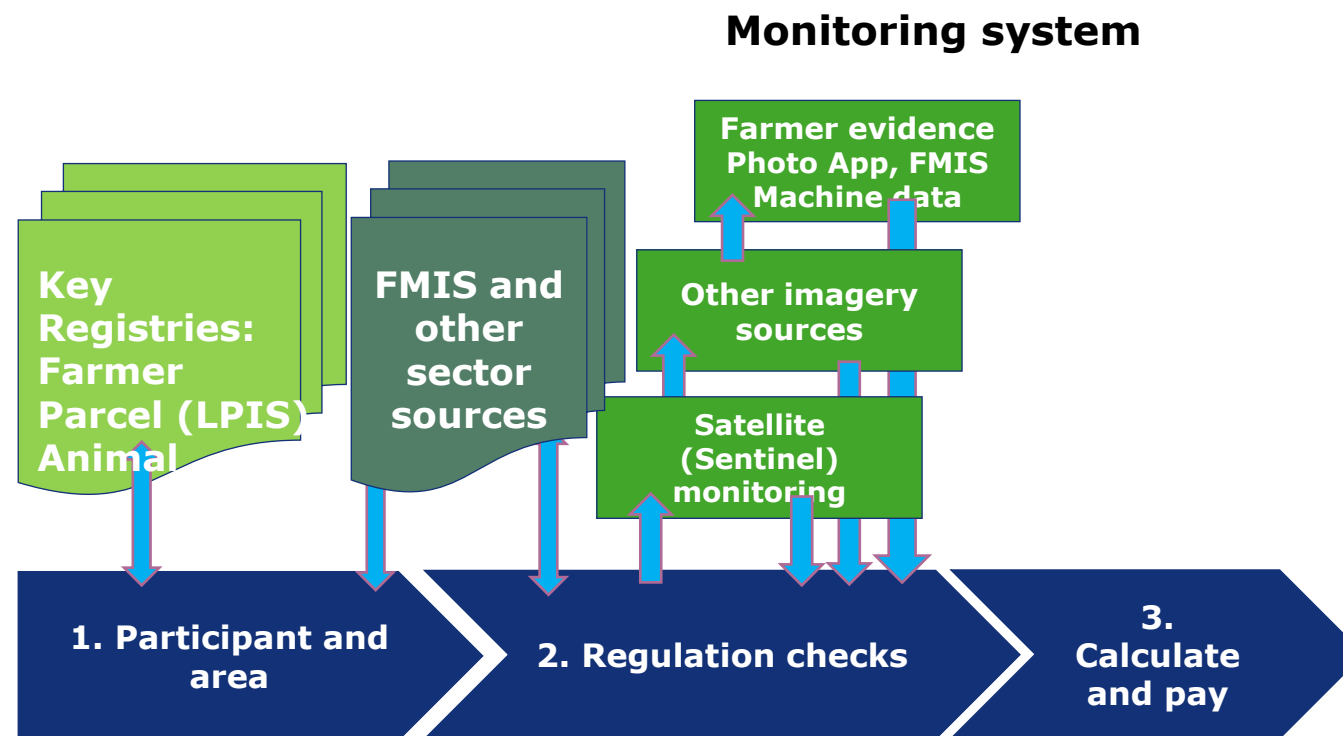


IACS with monitoring





IACS seamless claim



NIVA's vision is an seamless claim. This is when data abundant enough and technology is strong enough to draw conclusions from is data. An application will no longer be necessary.



End-to-end dataflow

Use case 4b has performed field demos.
This links to a short clip.

NL & DK field demo May-June 2020:

<https://www.seges.tv/secret/63394698/12f485addabc966242098e89c446a6f0>

NL & DK field demo September 2020:

https://www.youtube.com/watch?v=yX2F3kKml_yQ

