



Netherlands Enterprise Agency



# NIVA

# Machine data and e-CROP.

Frans van Diepen

>> *Sustainable. Agricultural.*  
*Innovative. International.*



# Content

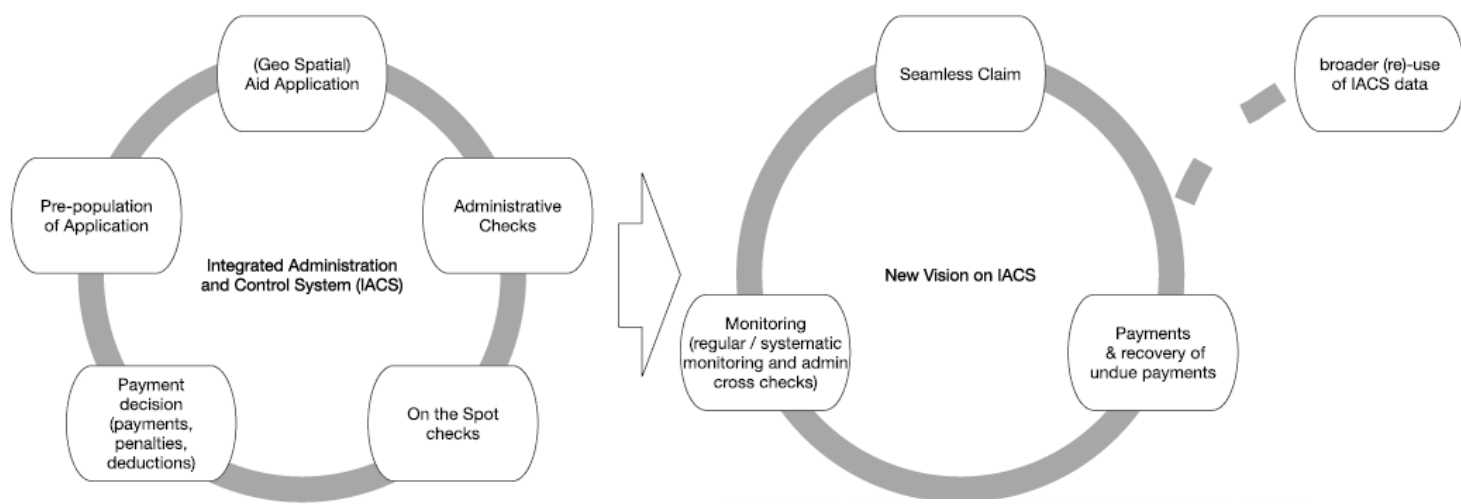
1. introduction of the NIVA program

2. the pilot 4b use of machine data

- Precision Farming
- User story Farmer
- User story Paying Agency
- Object Model
- Services and standards, FMIS, PA, eCrop, ISOBus
- Application Architecture
- Integration Architecture

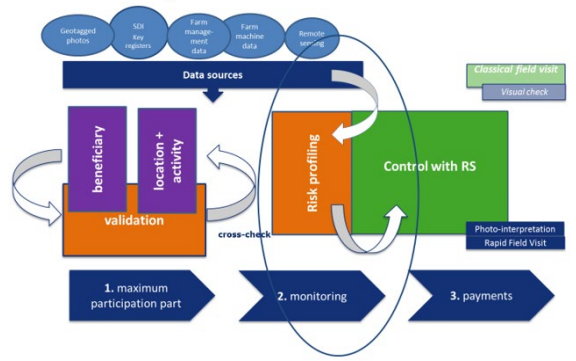
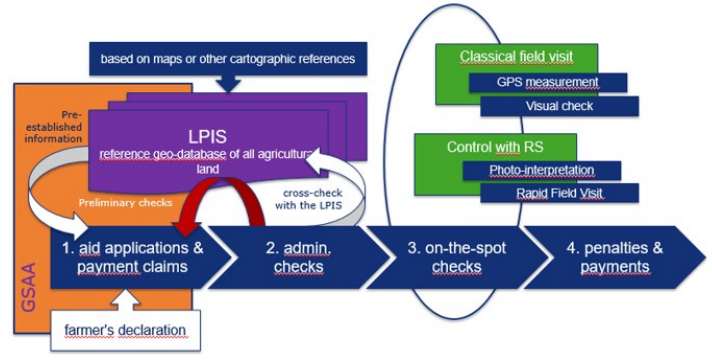


# Transition in NIVA



Integrated Administration and Control System

Integrated Administration and Control System (seamless claim)





# three main challenges and objectives:

- Absorbing innovations to simplify the governance;
  - Reducing socio-economic and administrative burden to farmers;
  - Reducing the gap between IACS data use and potential broader uses.
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- Through a lean multi-actor approach, incl. a 12 month operational pilot
  - Supporting the emergence of an innovation ecosystem, beyond NIVA's running time
  - All Components as Open Source available with an EU-PL

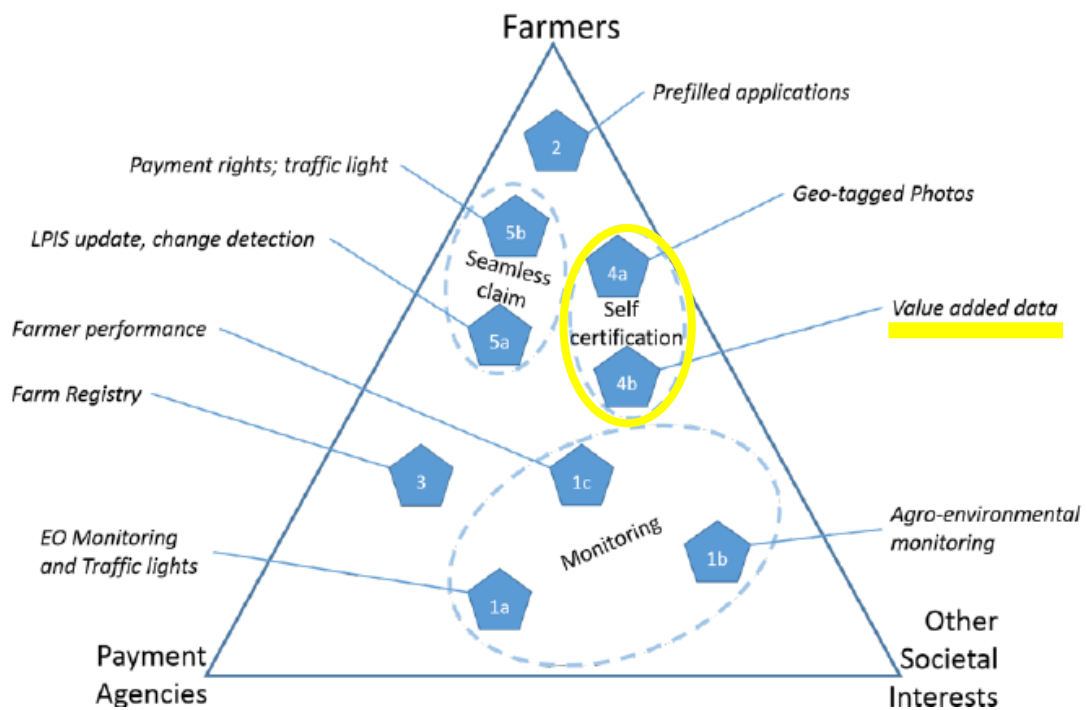


# Pilots at the core

| Use Case Group        | Use Case id | Use Case title   | Lead MS (PA)          | Testing PAs                 |
|-----------------------|-------------|--|-----------------------|-----------------------------|
| Monitoring            | UC1a        | Earth Observation Monitoring and Traffic Lights            | Greece (OPEKEPE)      | DAFM, ASP, ARIB, AGEA       |
|                       | UC1b        | Agro-environmental monitoring                              | France (ASP)          | RVO, DAA, FEGA (ITACYL)     |
|                       | UC1c        | Farmer Performance   | Estonia (ARIB)        | AGEA                        |
| Prefilled application | UC2         | Prefilled application, GSAA/Land link                      | Lithuania (NPA)       | FEGA                        |
| Farm Registry         | UC3         | Farm Registry  | Spain (FEGA)          | CAPDER                      |
| Self-Certification    | UC4a        | Geotagged photos   | Ireland (DAFM)        | NPA, ARIB, AGEA, OPEKEPE    |
|                       | UC4b        | Machine data in GSAA as added value data                   | The Netherlands (RVO) | DAA, FEGA (ITACYL), OPEKEPE |
| Seamless Claim        | UC5a        | LPIS: Update & Change detection                            | Denmark (DAA)         | ASP, FEGA                   |
|                       | UC5b        | Scheme Eligibility and Payment Eligibility: Click-and-Pay. | Italy (AGEA)          |                             |

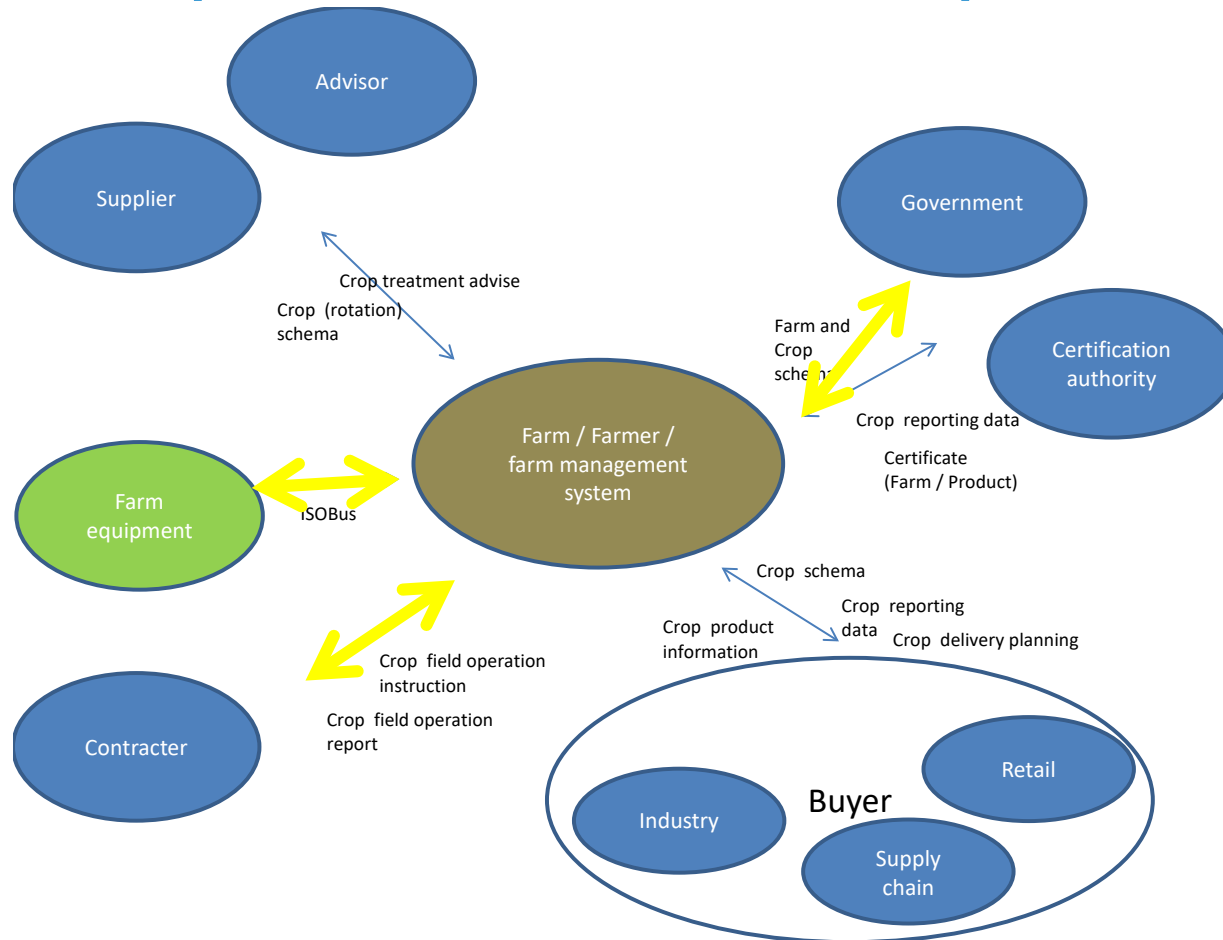


# NIVA pilots





# E-CROP scope and NIVA scope



# Content



- Precision Farming
- User story Farmer
- User story Paying Agency
- Object Model
- eCrop
- Application Architecture
- Integration Architecture
- Authentication



# Precision Farming



Task map =

Specification of the activities for the farming machine on the parcel. The farmer makes the task map on the FMIS

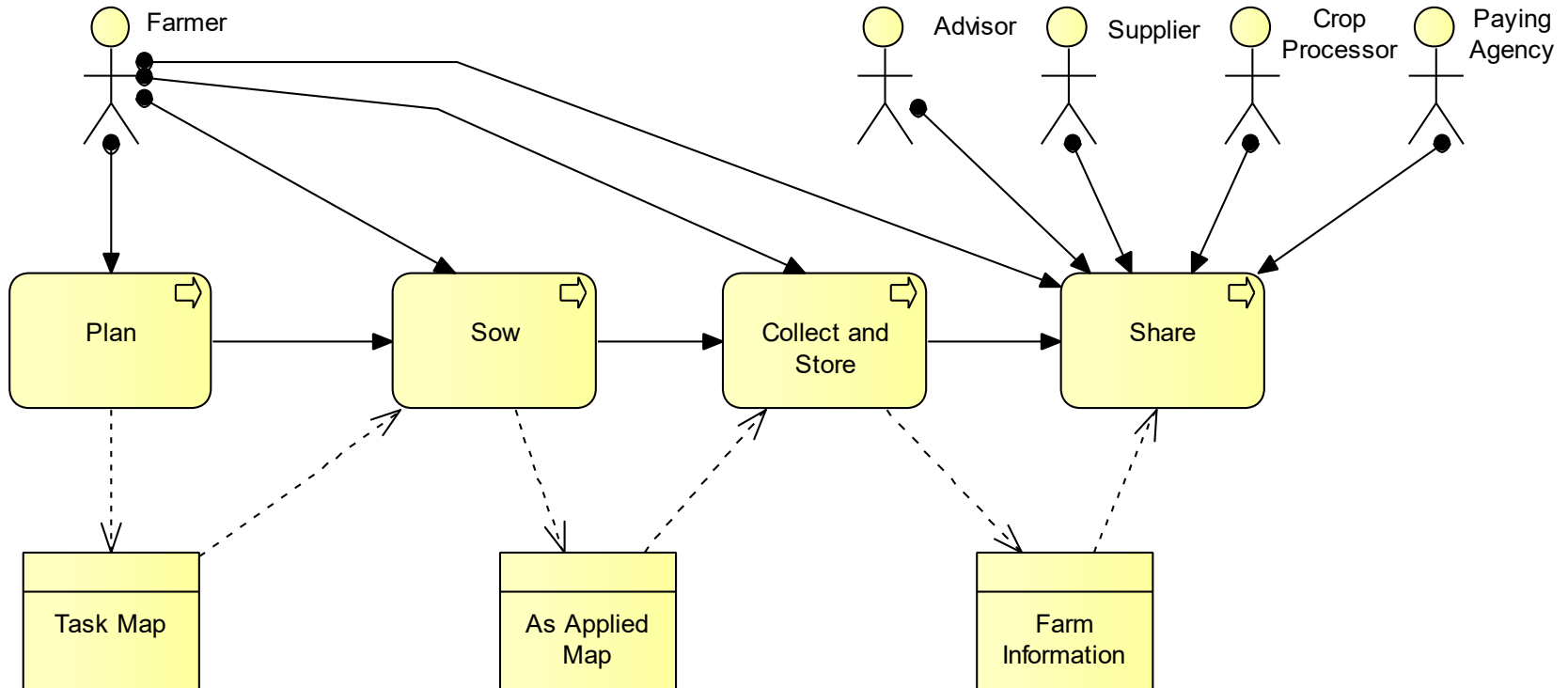
As applied map =

Logging of the executed activities of the farming machine, made by the farming machine during the rig of the parcel

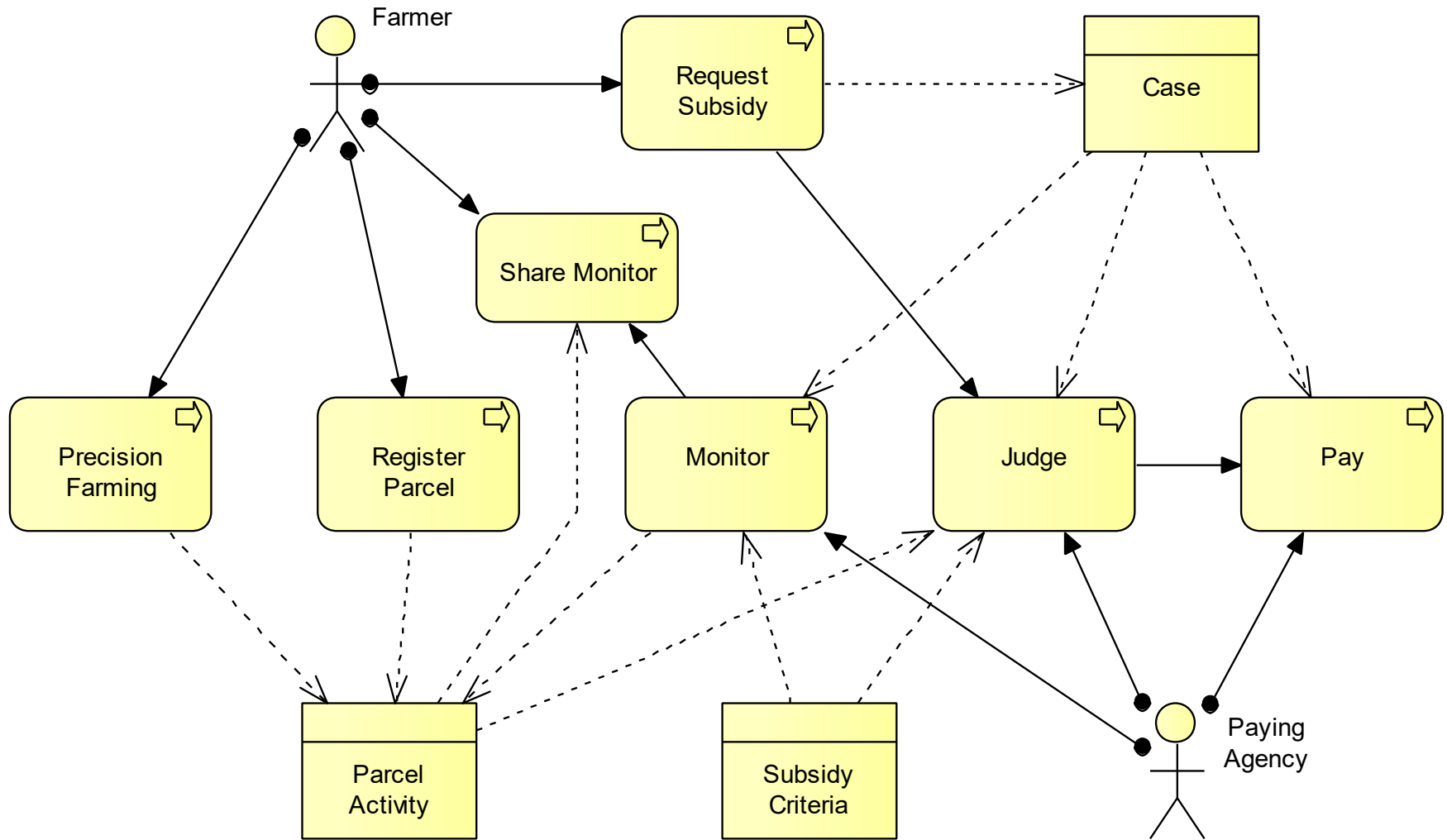


Task map

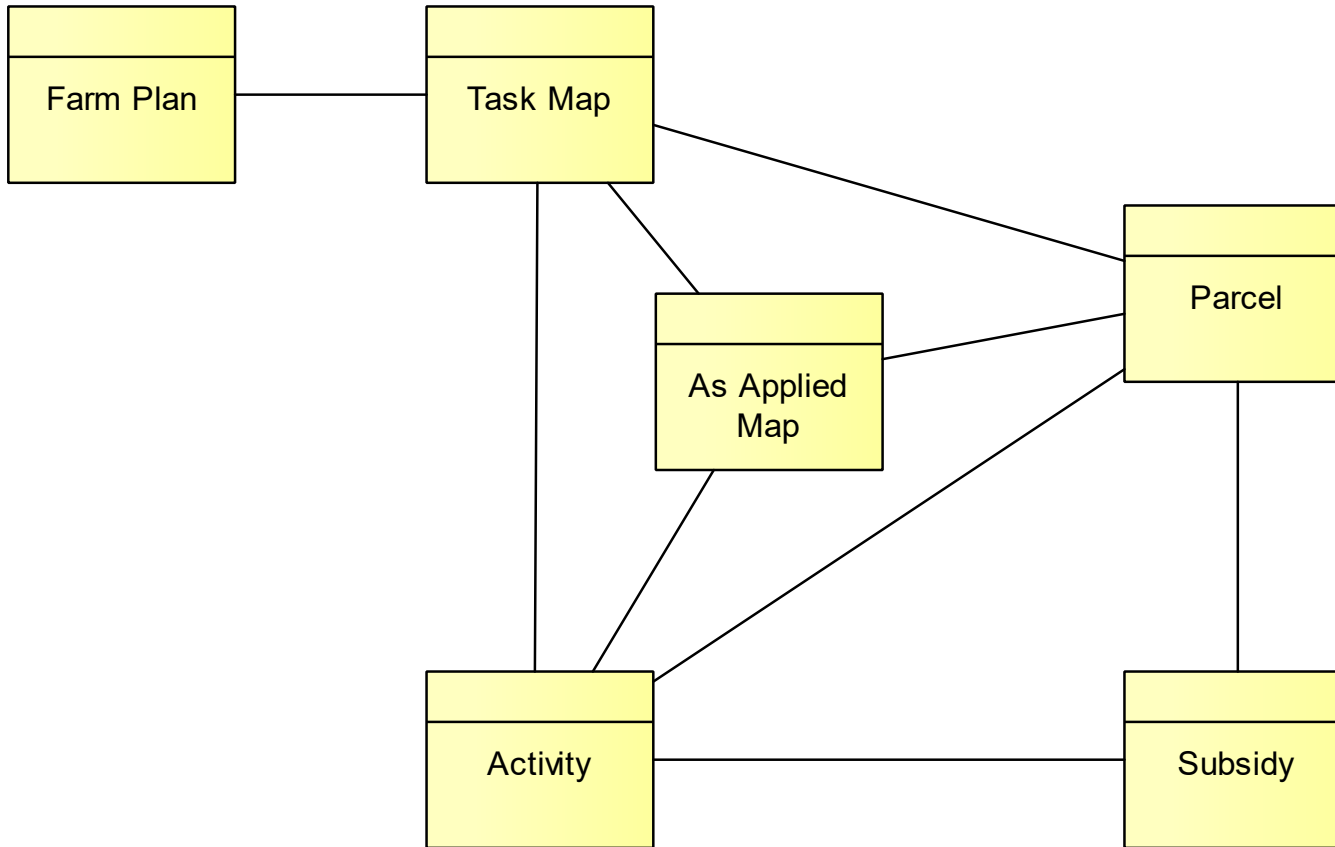
# Proces Farmer



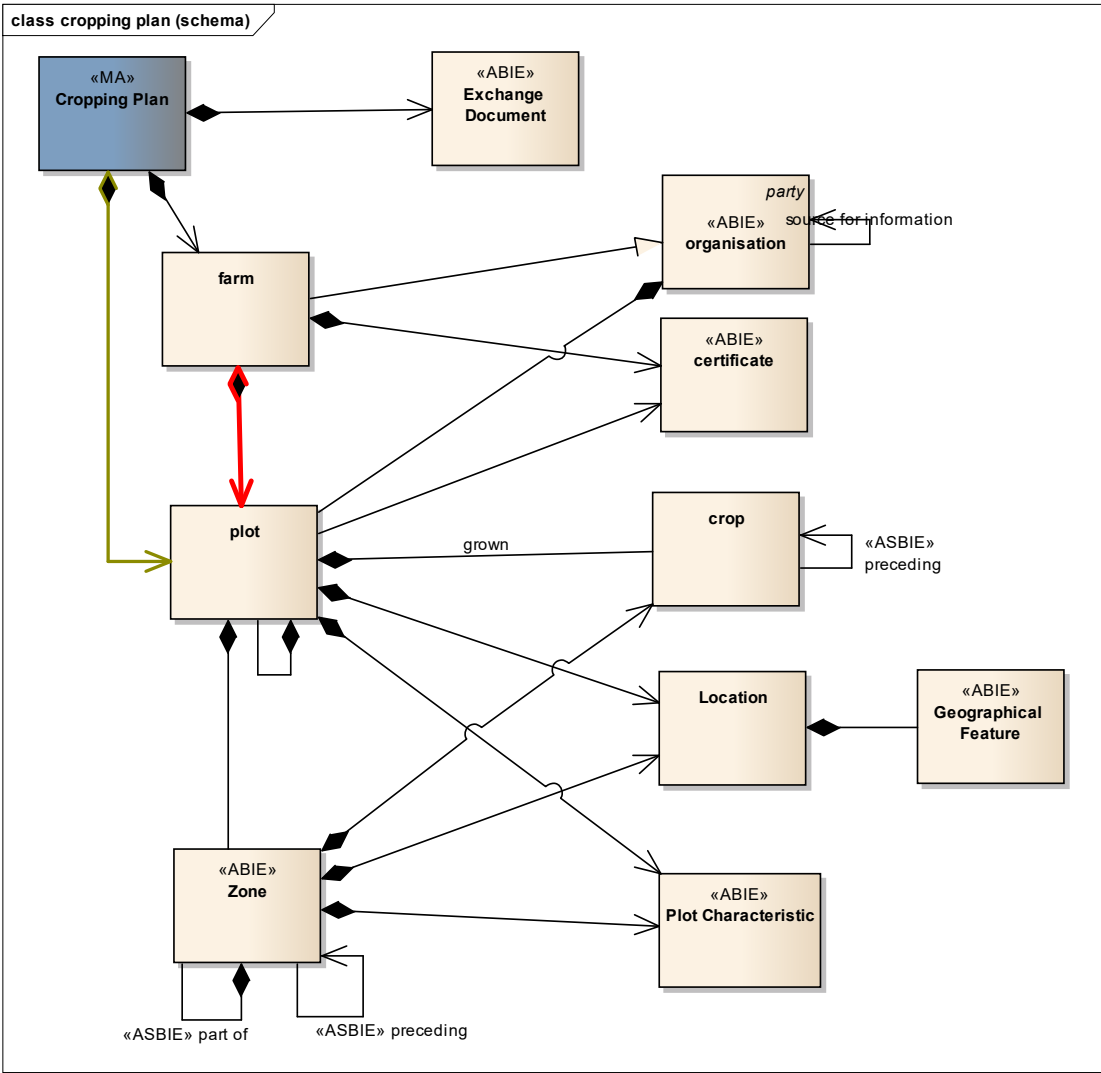
# Proces Paying Agency



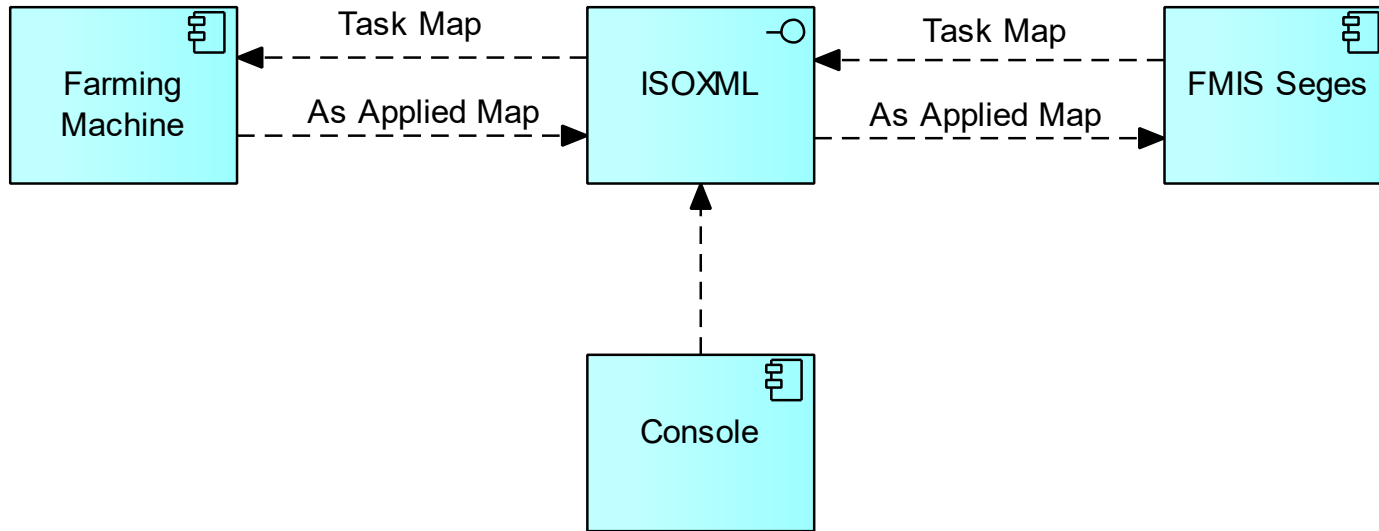
# Object Model



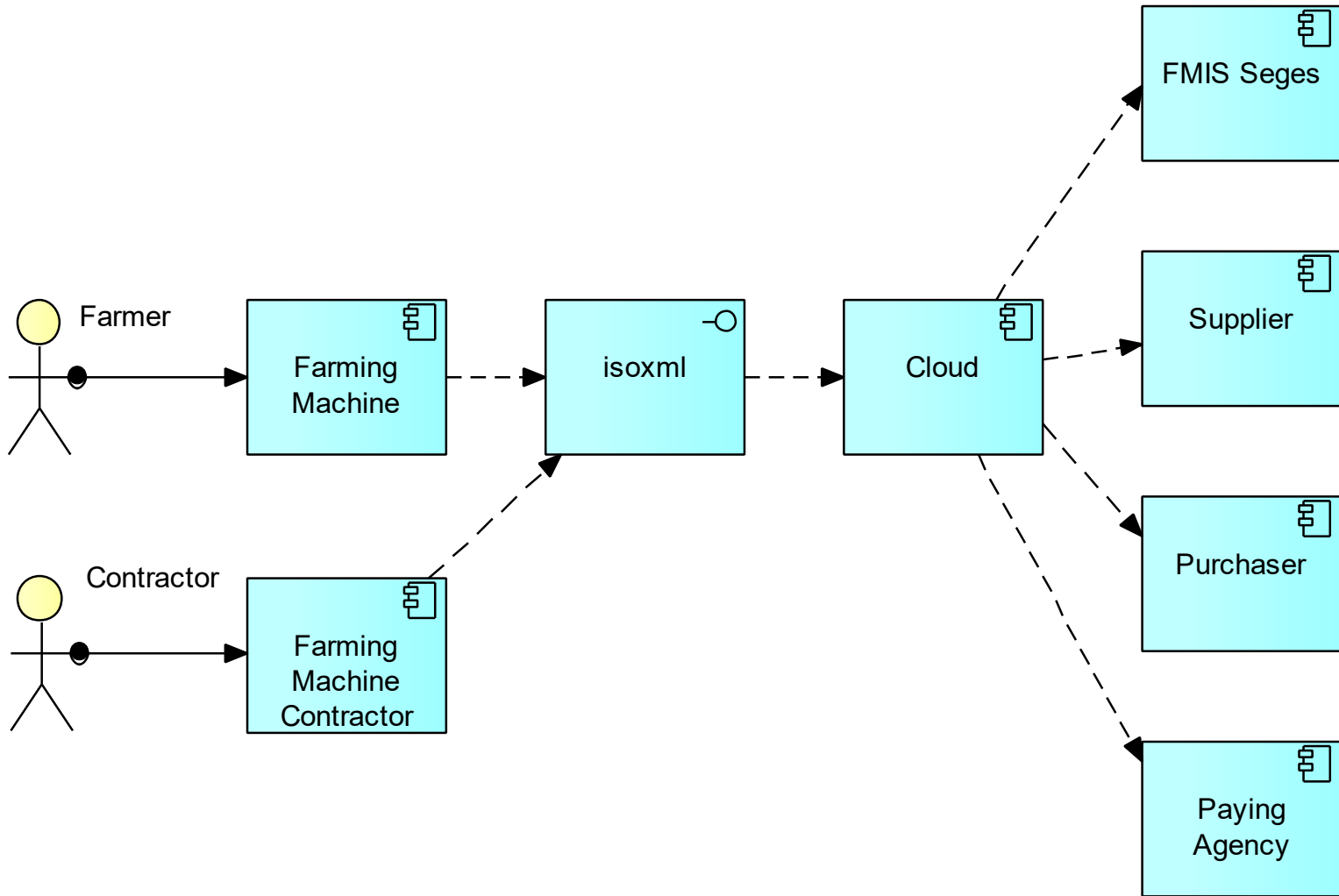
# Object model e-CROP

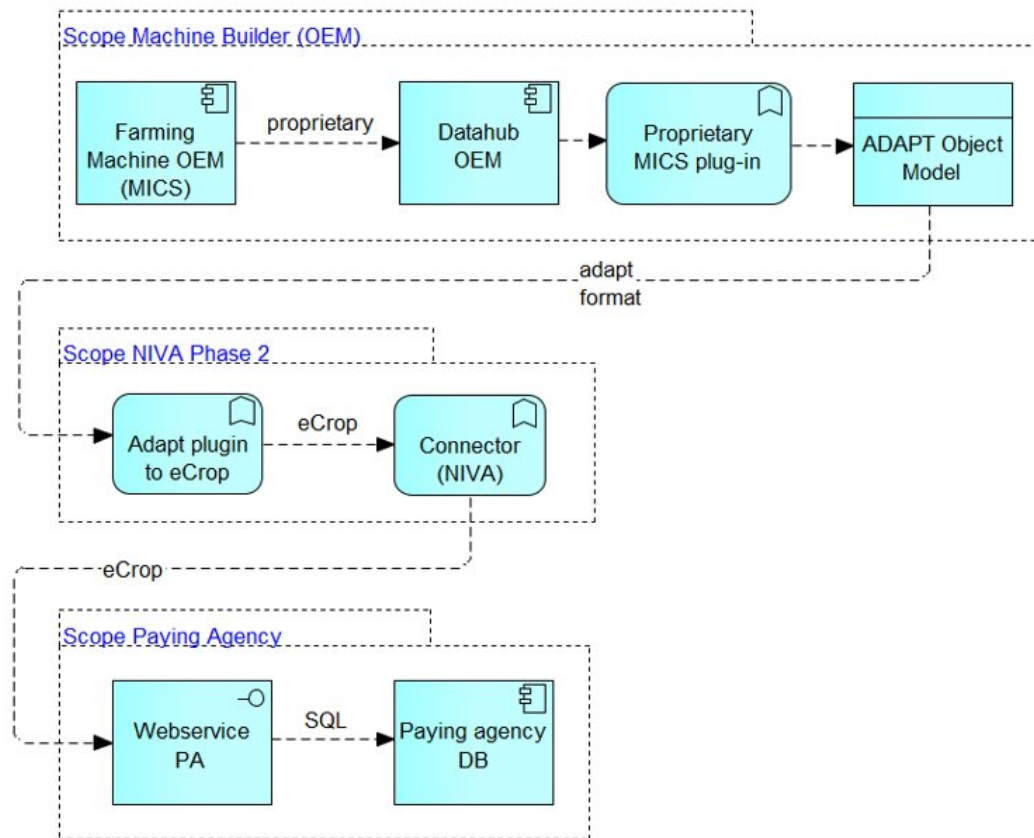


# Application Machine Builder IST



# Application Machine Builder SOLL

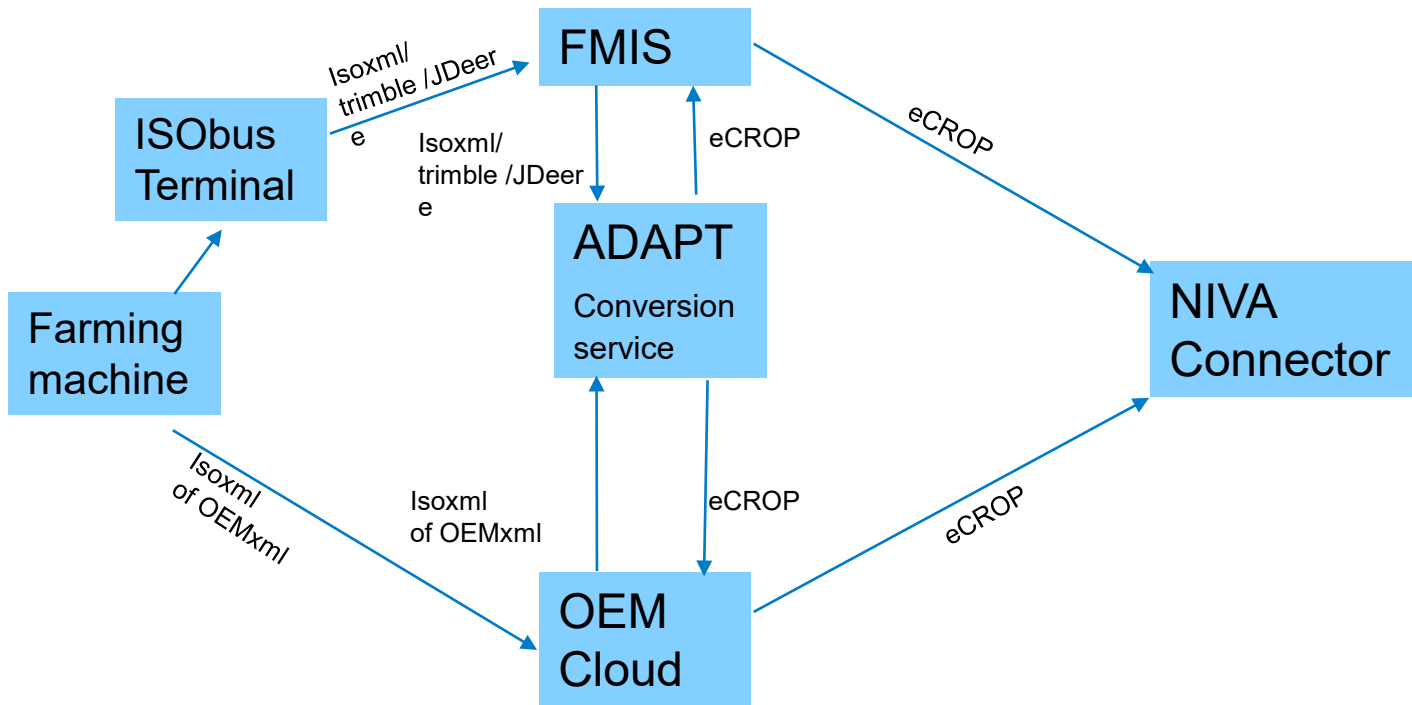








## Usage of ADAPT eCROP plugin



# Application Precision Farming

