

NPA experience with CAP monitoring

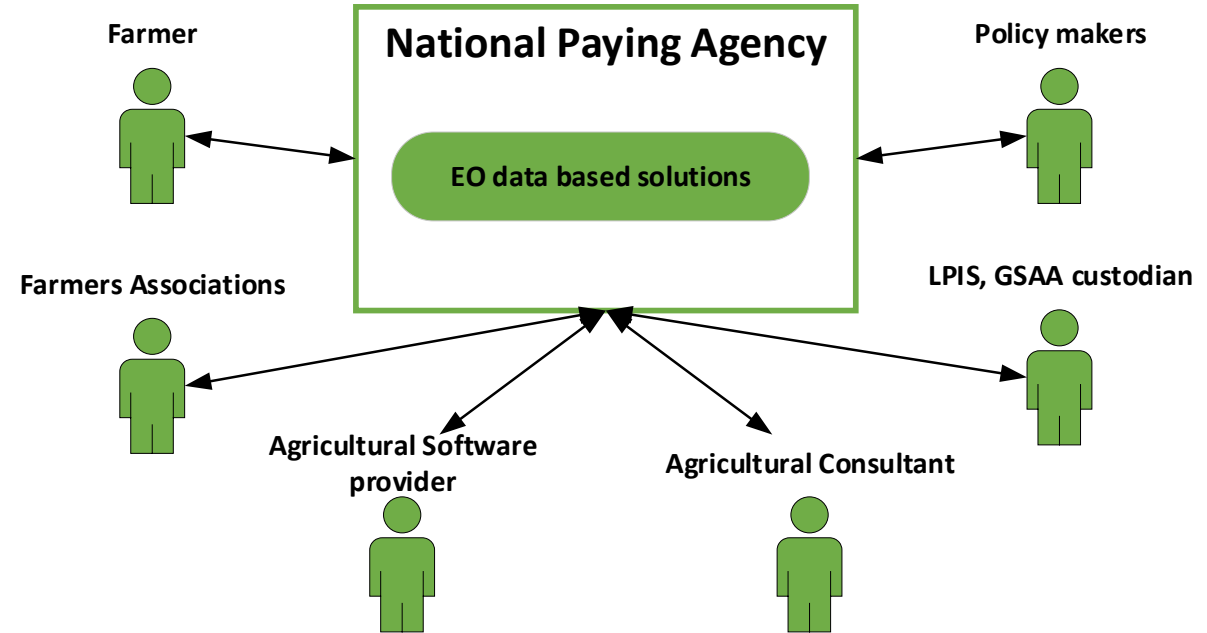
Control Department Director
Liutauras Šimkus



- **Main Expertise:** manage state and European Union (EU) support for agriculture, rural development and fisheries as well as is responsible for all IACS controls in Lithuania. Over 200 support measures and activities, more than **130,000 applicants** and beneficiaries who receive over EUR 900 million of support each year.

- **Main tools:** NPA developed all necessary elements of software and registers (100% geo-spatial applications, e-documents forms, statistical reports etc.) including robotic software for the evaluation of applications

- **External projects:** finalized – Re.CAP, EO4AGRI, Sen4CAP. Ongoing -



Usage of satellite observation results

2020 season for 3%
sample check



Sen4CAP – Crop type (all),
Grassland mowing



CAPCON – Grassland mowing

CAPCON – internal project with Lithuanian SME

2021 season for 3%
sample check



CAPCON – Crop type (18
algorithms), Grassland mowing



DIONE – Crop type (19
algorithms)

2022 season for 3-5%
sample check



CAPCON –
Crop type, Grassland mowing



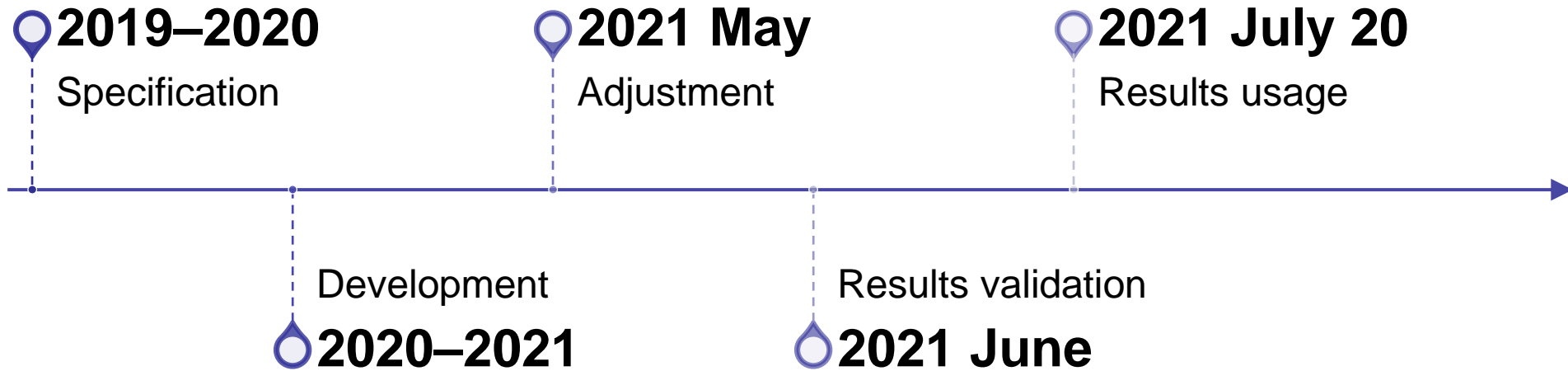
DIONE – Crop type



ENVISION, EIFFEL,
Crop type (organic farming), Grassland
mowing, EFA, CC requirements, CAP
indicators (validation)



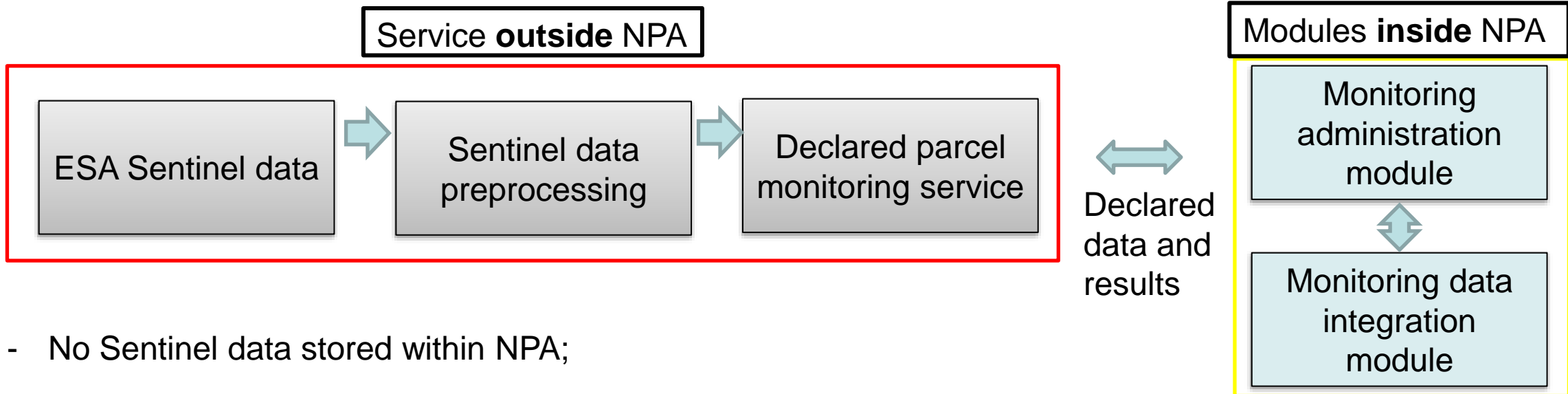
In-house monitoring solution timeline



Saved working hours on field visits by using green fields – 6 500 hours



In-house solution parts



- No Sentinel data stored within NPA;
- Provide declared parcel data and receive result value for each field;
- Fully integrated new modules in line with current NPA system;
- Option to combine results of several algorithms via Monitoring administration module;
- Integrated traffic light rules in line with administration and control systems;
- Results validation methodology based on collected *in-situ* data.



Algorithms developed until now

- Sentinel 1 as primary and S2 as secondary input data
- 24 algorithms in use
- 4 algorithms under development

- 19 different crops
 - Cover 86% parcel and 92% area
 - Results every 10 days

Crop type

19



- Good accuracy for grass cut – 94%
- Lower accuracy in farms without animals

Grassland mowing

1



- Once a year:
 - Arable land
 - Grassland
 - Abandoned land
 - Non-eligible objects

Land cover

4



- Organic farming
- Non tillage
- Alfalfa crop
- Clover crop

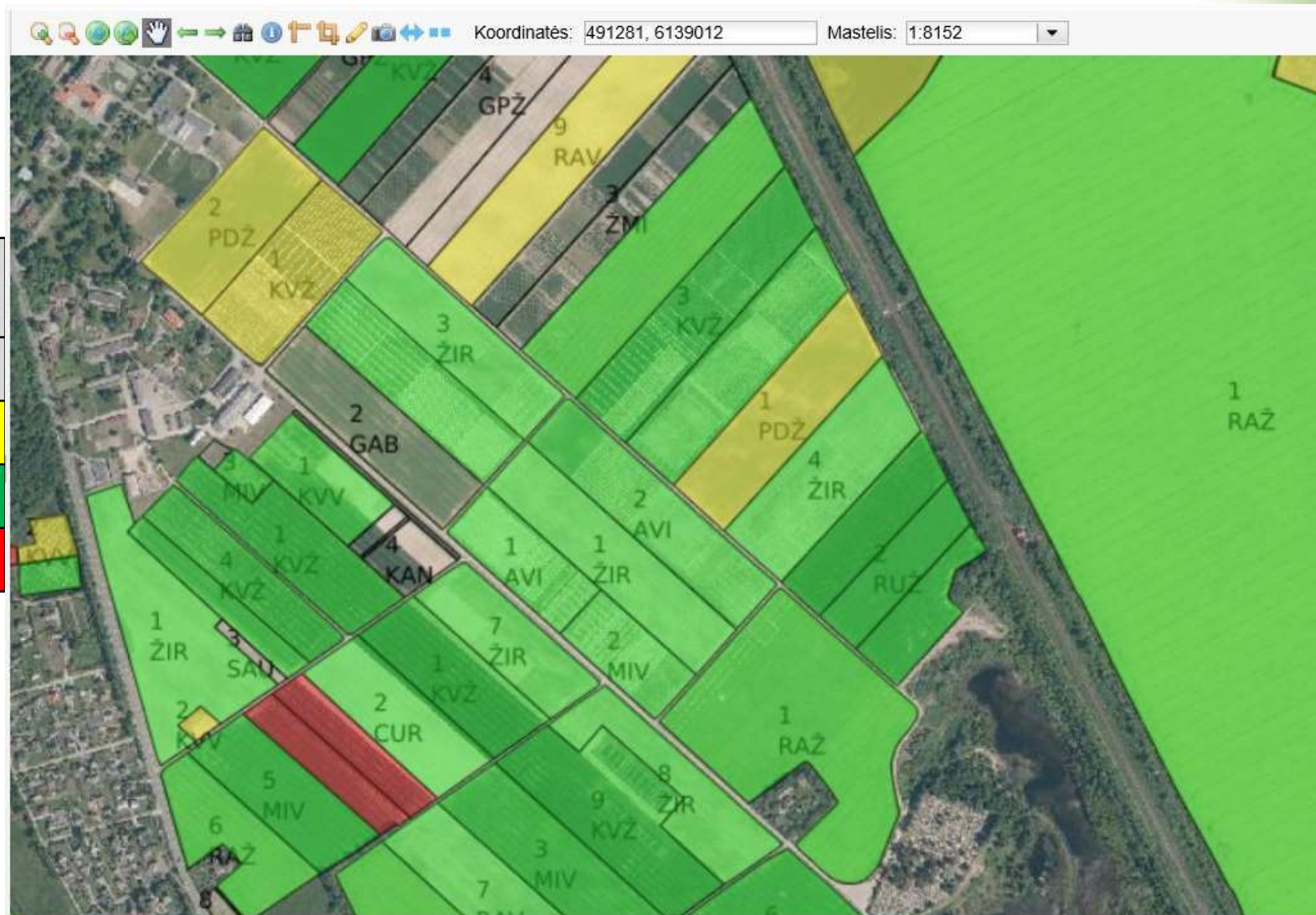
Under development

4



Results in map

Value	Parcel color
Result date 2021-07-12	
Not confirmed yet	Yellow
Confirmed	Green
Not confirmed	Red



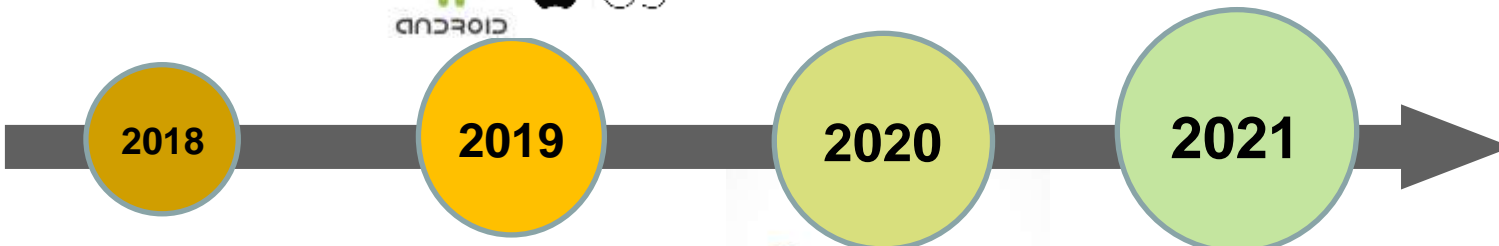
Mobile app NMA agro



- ✓ New activities
- ✓ Auto-Heading
- ✓ 5000 users



- ✓ NEW Front page!
- ✓ NPA news, calendar
- ✓ Portal integration
- ✓ Weather forecast
- ✓ 20 000 users



2018

2019

2020

2021



- ✓ 3 layers
- ✓ 500 users
- ✓ Geotagged photo solution



- ✓ Location search
- ✓ Increasing variety of activities
- ✓ Thematic layers
- ✓ 1000 OTSC replaced
- ✓ 11 000 users



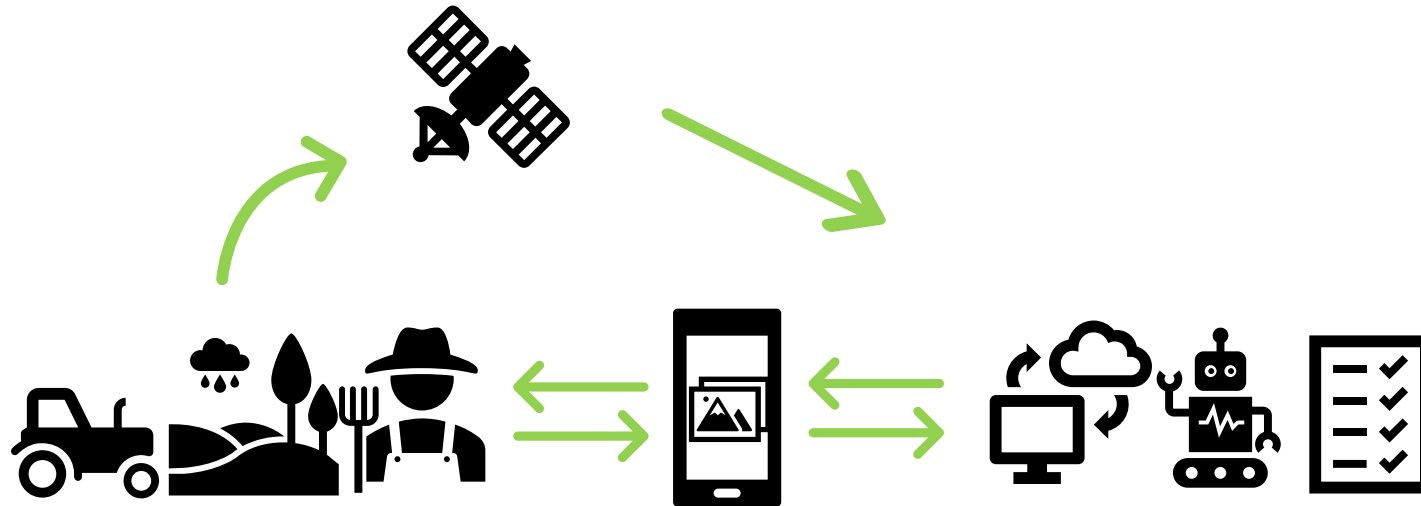
Lessons learned

- Only 48% of 3 % selected OTSC parcels in 2021 could be monitored;
- New national legislation rules with non-monitorable eligibility criteria increased the number of field visits and greatly decreased the effectiveness of the algorithms;
- Algorithm code (and specification) has to be in PA ownership;
- Algorithm results validation based on JRC guidelines – easier than expected;
- IACS software development/update for data incorporation into IACS processes – harder than expected;
- Results from the different algorithm providers let to compare, share insights and raise the overall quality.



Future plans

- Continue algorithms development
- Go operationally from 2023 season on full scale - AMS
- Add monitoring results to NPA portal and mobile app
- Use external projects tools and move from testing to deployment



THANK YOU FOR YOUR ATTENTION

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