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Junta de Castilla y León

How we checked 340,000 ha and paid 63 million € from 1st Pillar using monitoring

Outcomes, 2019 findings and Status Plan for 2020

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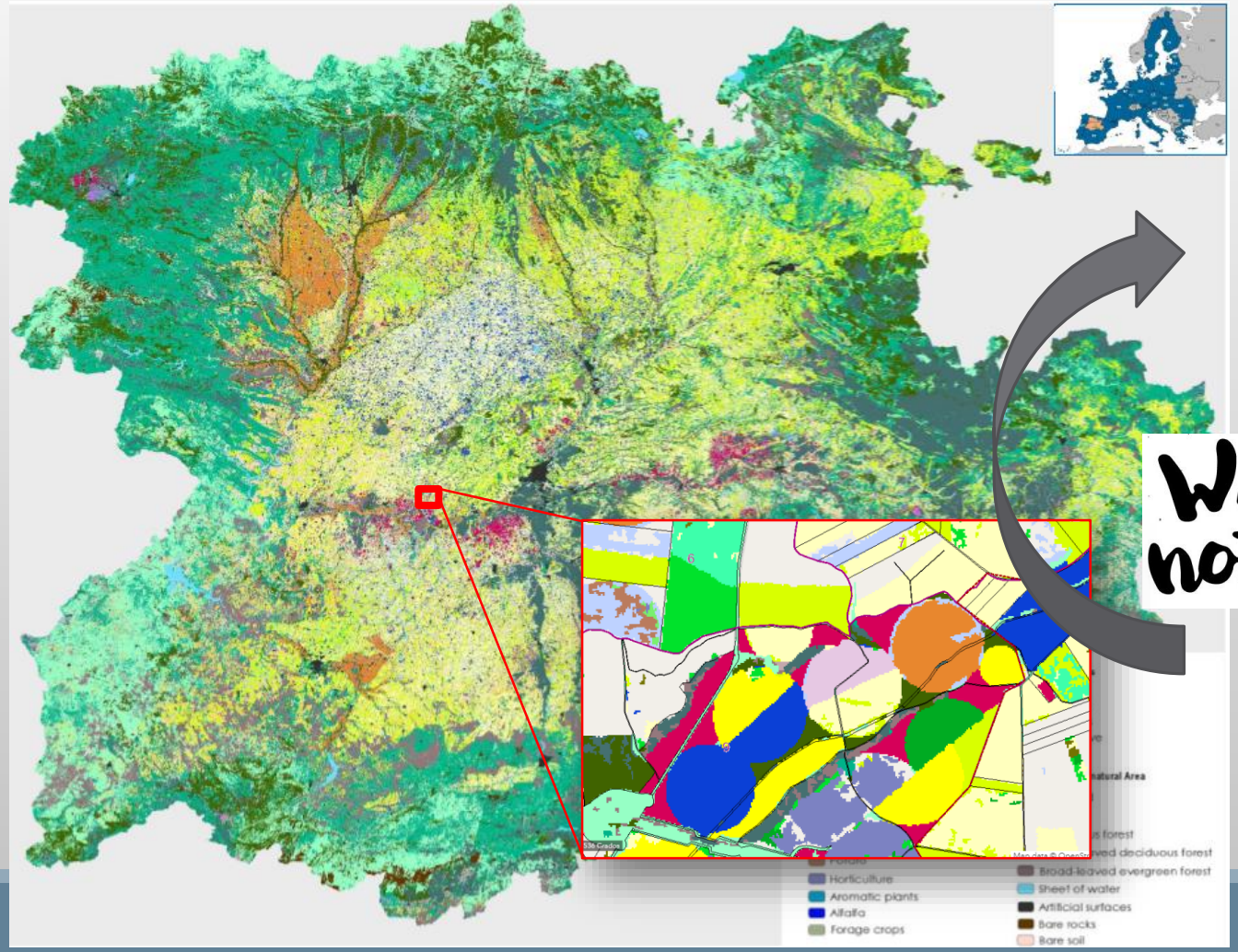
The starting point at 2014



Why not?

OTSC / CwRS

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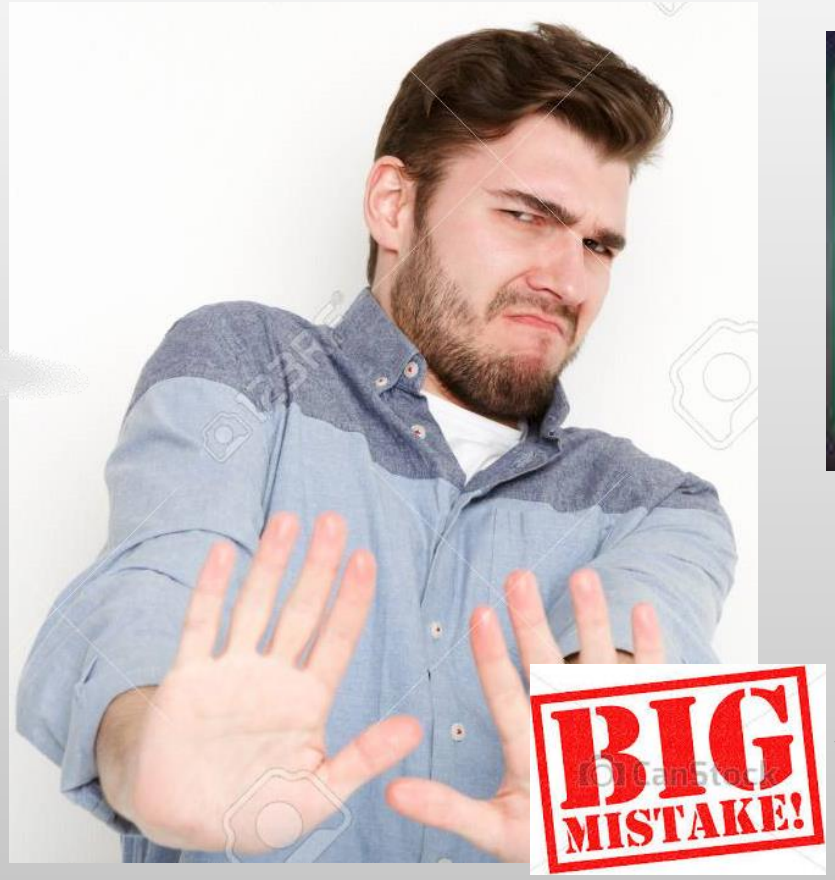
The starting point



Never!!

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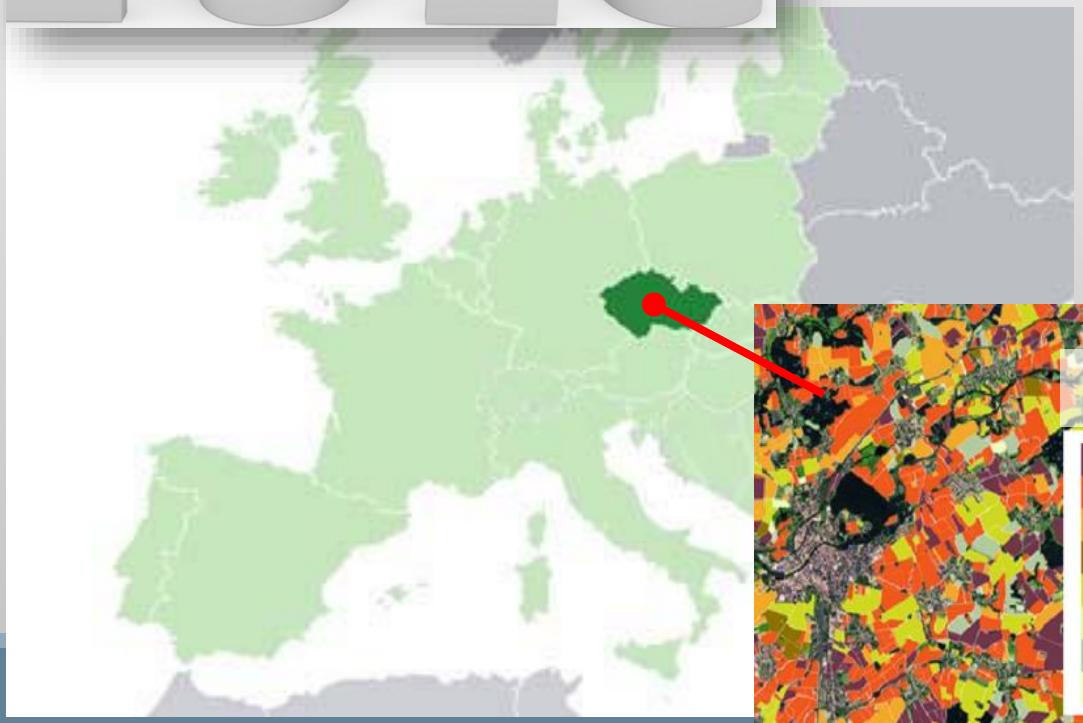
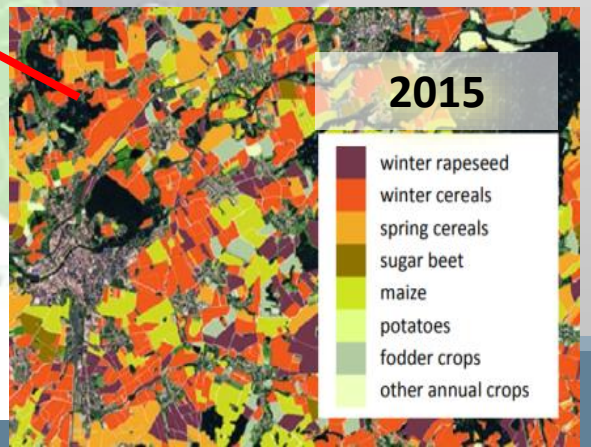
The following years

sen4cap
common agricultural policy





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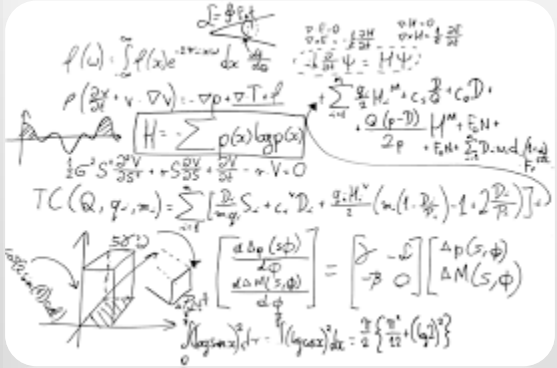
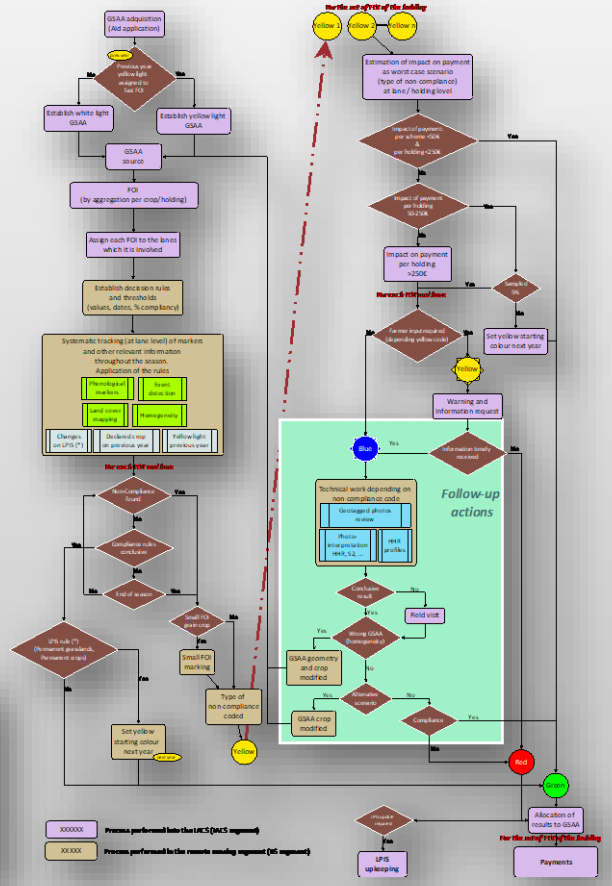
The following years





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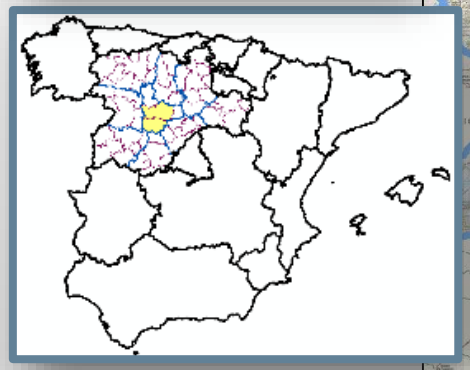
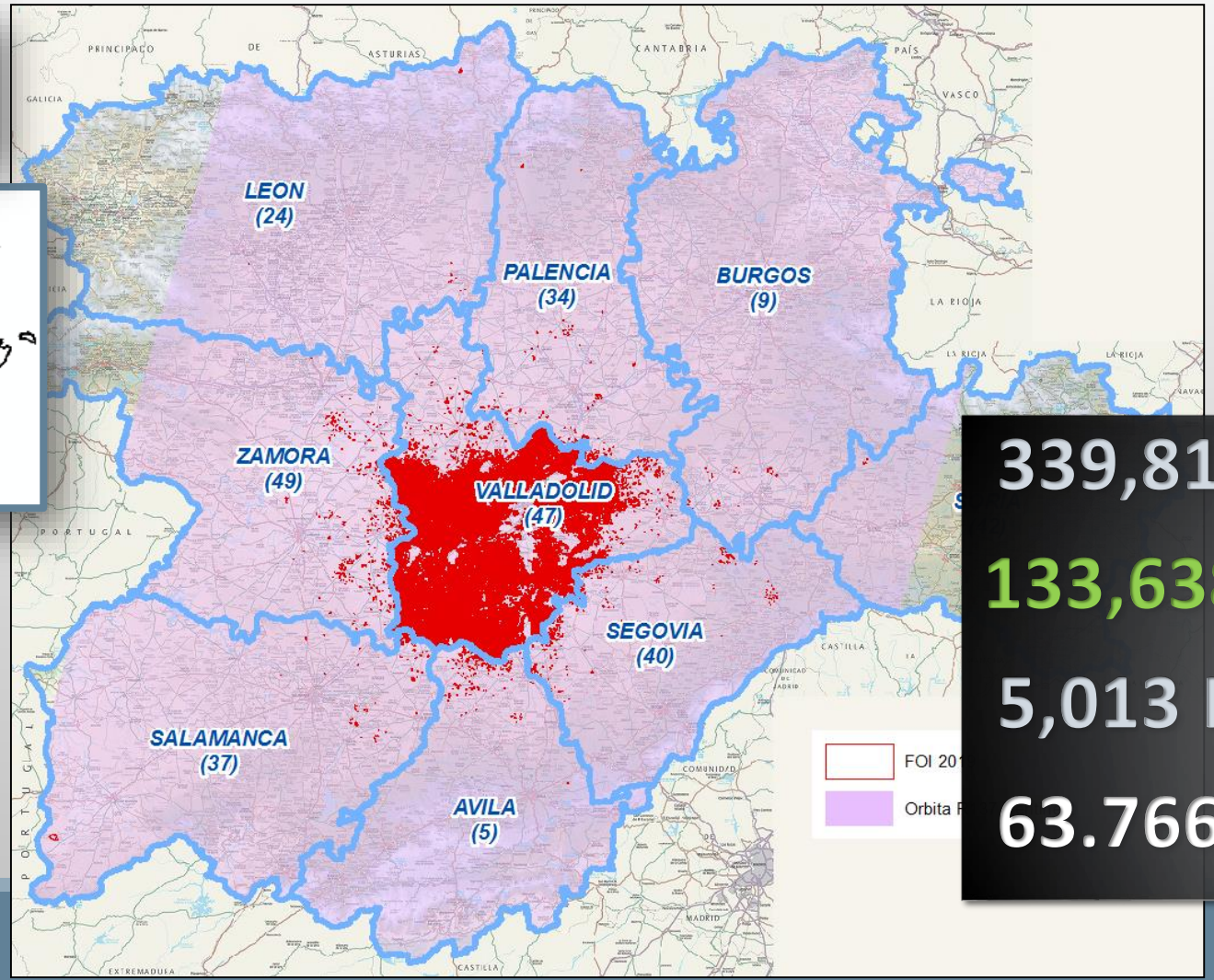
Phase-In area

2019





All the dossiers will be monitored, unless the parcels that fall outside Sentinel 2 orbit number 137 that will be controlled by OTSC.

339,812 ha

133,638 GSAA /98,035 FOI

5,013 Holdings

63.766.400 €

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Two main ideas

Why ALL 1ST PILLAR direct payments schemes?

To avoid problems related with having 2 control systems (even 3)

- Extra effort.
- Missed interactions between control systems in different schemes
- Troubles in sharing of software components and following the same calendar as the old system
- Monitoring requires more farmer interaction and that requires time

- ✓ **BPS / SFS**
- ✓ **Greening:**
  - **Crop Diversification**
  - **EFA**
  - **Grasslands**
- ✓ **Protein Crops**
- ✓ **Oilseeds**
- ✓ **HQ Legumes**
- ✓ **Sugar Beet**
- ✓ **Nuts and Carob Beans**

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Two main ideas

All 1st Pillar 1 schemes →NEED OF AUTOMATED CROP IDENTIFICATION

Greening and VCS requirements focused on specific crops

- Signatures/NDVI analysis not enough to achieve conclusive results
- Crop identification recycled as an evidence of agricultural practices (BPS) → optimum performance
- Pixel oriented Crop Map: very interesting markers source (crop itself, heterogeneity, non-elegible areas)
- Object oriented Crop Map: alternative and complementary approach. SEN4CAP

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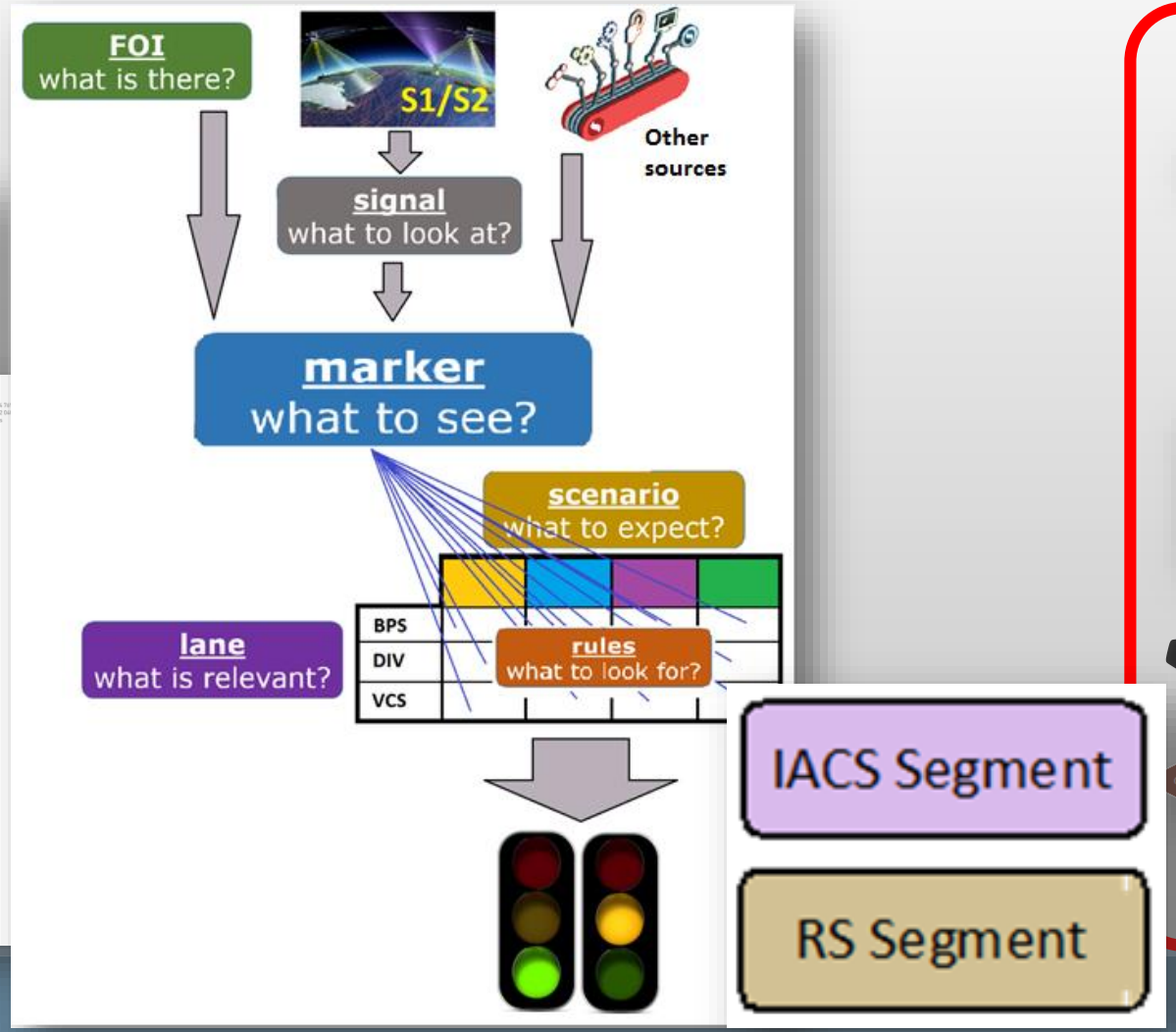
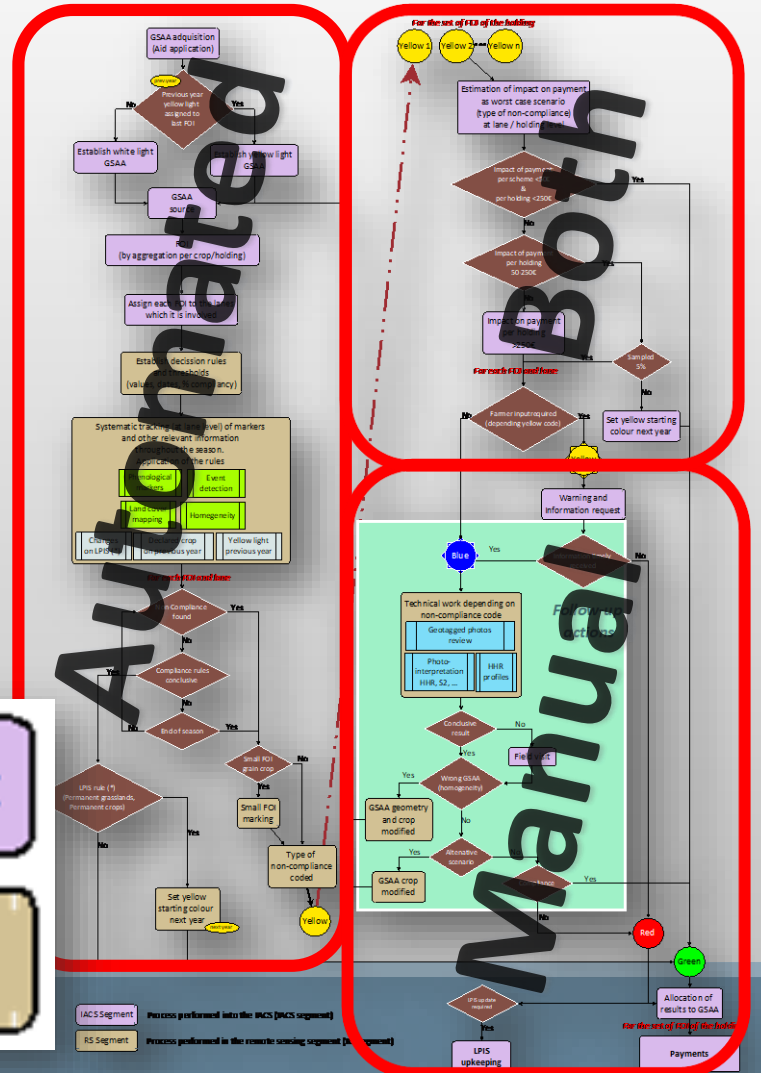
Monitoring procedure

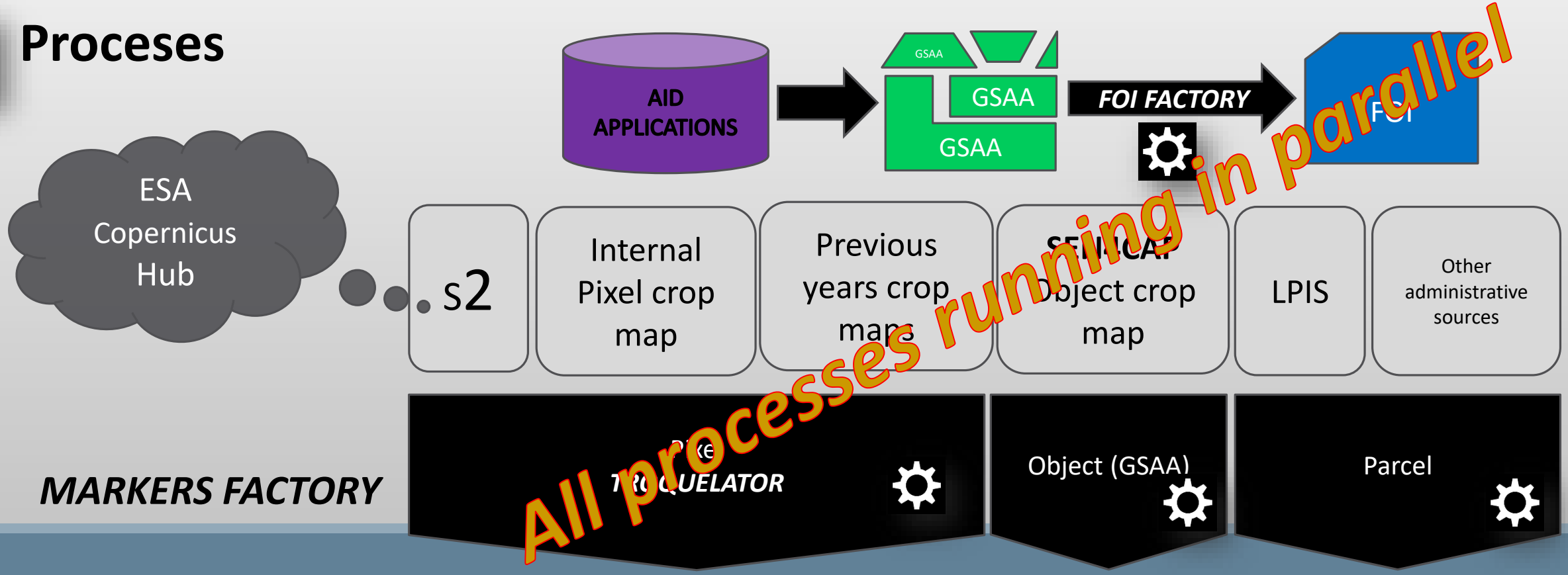




RS Segment implementation

Tuning up the RSS system: AUTOMATED + UNATTENDED = SCALABLE

Proceses



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RS Segment implementation

Tuning up the RSS system: AUTOMATED + UNATTENDED = SCALABLE

Proceses

MARKERS FACTORY

Pixel
TROQUELATOR

Object (GSAA)

Parcel

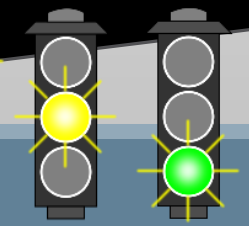
MARKERS

TRAFFIC LIGHT FACTORY

	C. Herb. Invierno *CHI*	C. Herb. Verano *CHV*	Alfalfa y Esparceta *CHP*	Barbecho SIN cubierta vegetal *BSO*	Barbecho CON cubierta vegetal *FLC*	Cultivos permanentes *PCR*	Pastos permanentes *GRA*
BPS (BPS-SPS-YFS)	REGLA CHI-BPS	REGLA CHV-BPS	REGLA CHP-BPS	REGLA BSO-BPS	REGLA FLC-BPS	REGLA PCR-BPS	REGLA GRA-BPS
SIE (FLW-NFC)	REGLA CHI-SIE	REGLA CHV-SIE	REGLA CHP-SIE	REGLA BSO-SIE	REGLA FLC-SIE		
DIV	REGLA CHI-DIV	REGLA CHV-DIV	REGLA CHP-DIV	REGLA BSO-DIV	REGLA FLC-DIV	REGLA PCR-DIV	REGLA GRA-DIV
GRA							REGLA GRA-GRA
PRO	REGLA CHI-PRO	REGLA CHV-PRO	REGLA CHP-PRO				
OLE	REGLA CHI-OLE	REGLA CHV-OLE					
LGC	REGLA CHI-LGC						
REM		REGLA CHV-REM					
NUT						REGLA PCR-NUT	

RULES

All processes running in parallel



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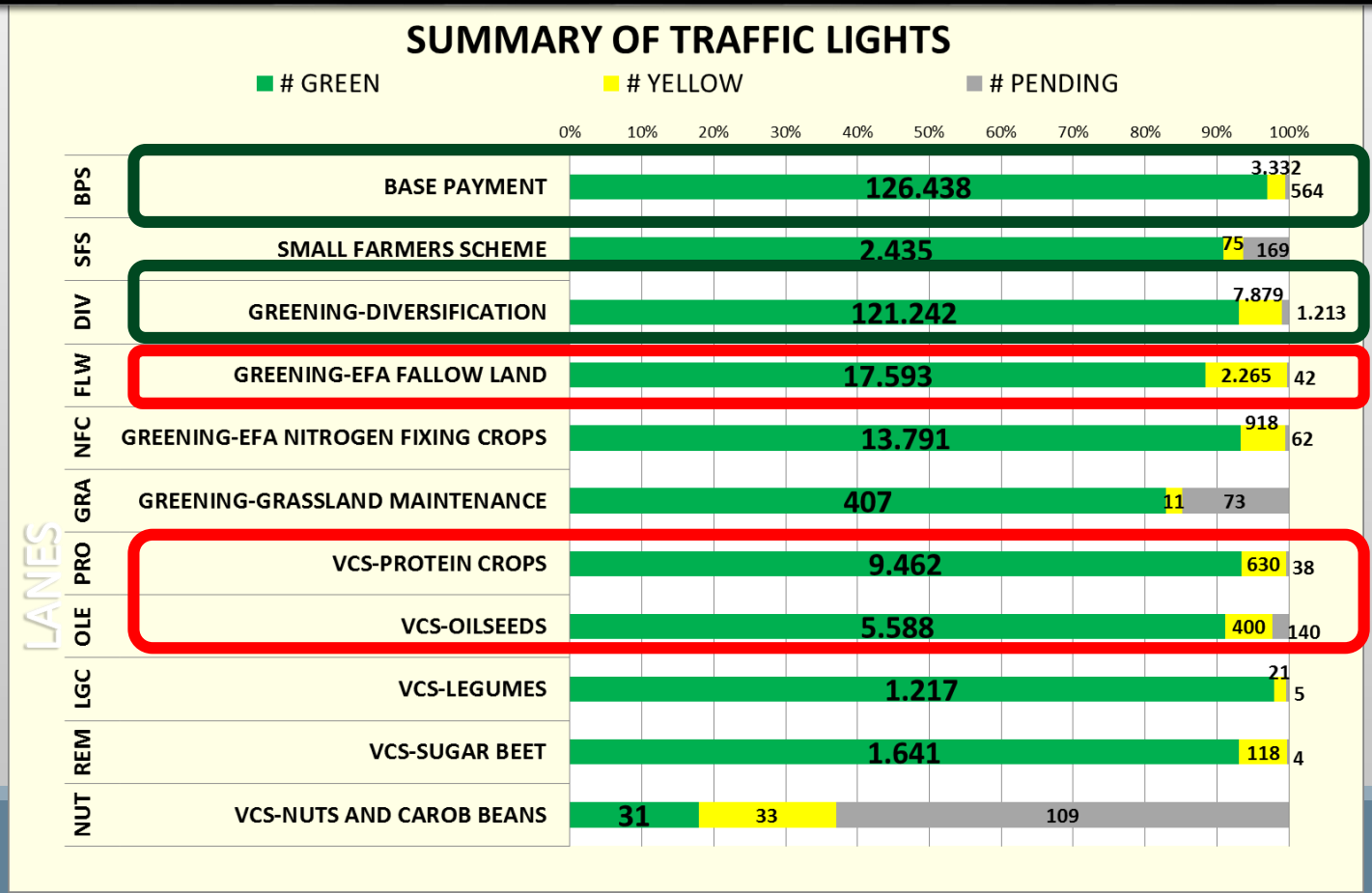
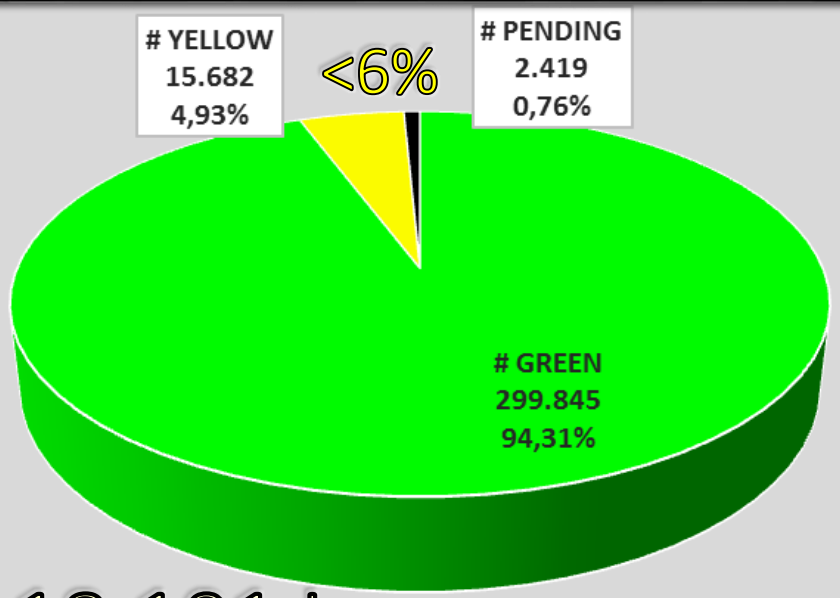
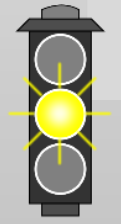
RS Segment Outcomes

Remote Sensing Segment results: AFFORDABLE AMOUNT YELLOW LIGHTS







18,101 Lanes (GSAA x Scheme)

11,366 GSAA

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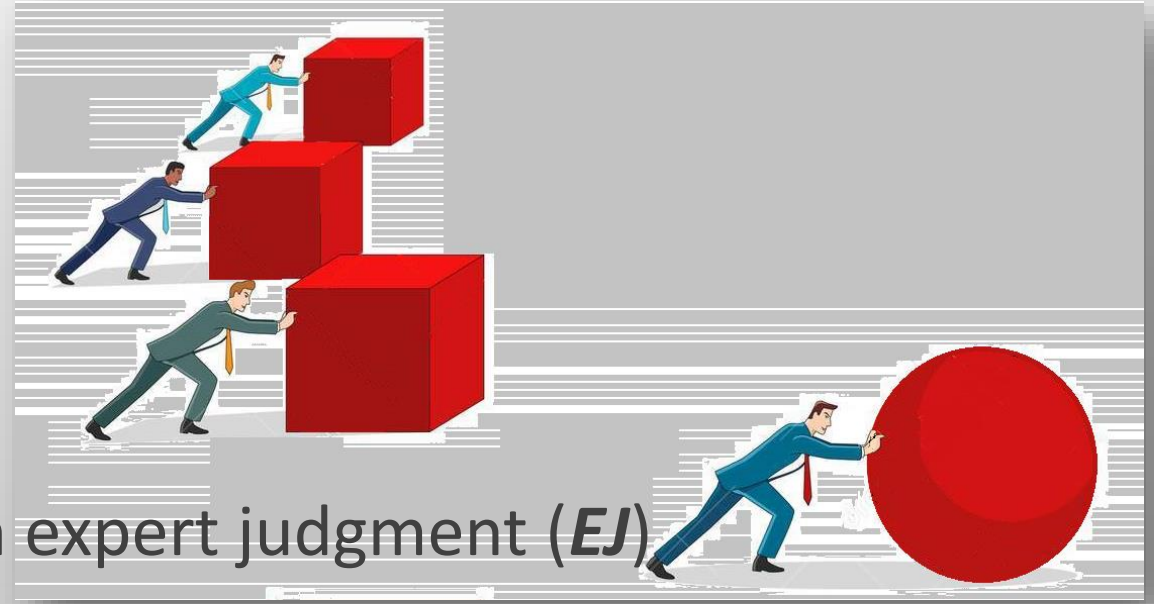
IACS Segment implementation

Tuning up IACS Segment: AVOID WHAT IS NON RELEVANT → EFFICIENCY

If possible, do not disturb the farmer:

- 1st automated Impact on payments
- 2nd Expert judgment
- 3rd Farmer interaction
- 4th field visits



Impact on payments repeatedly calculated on expert judgment (***EJ***)

Lean on S2 to propose GSAA modification (cases with lower risk of financial impact)

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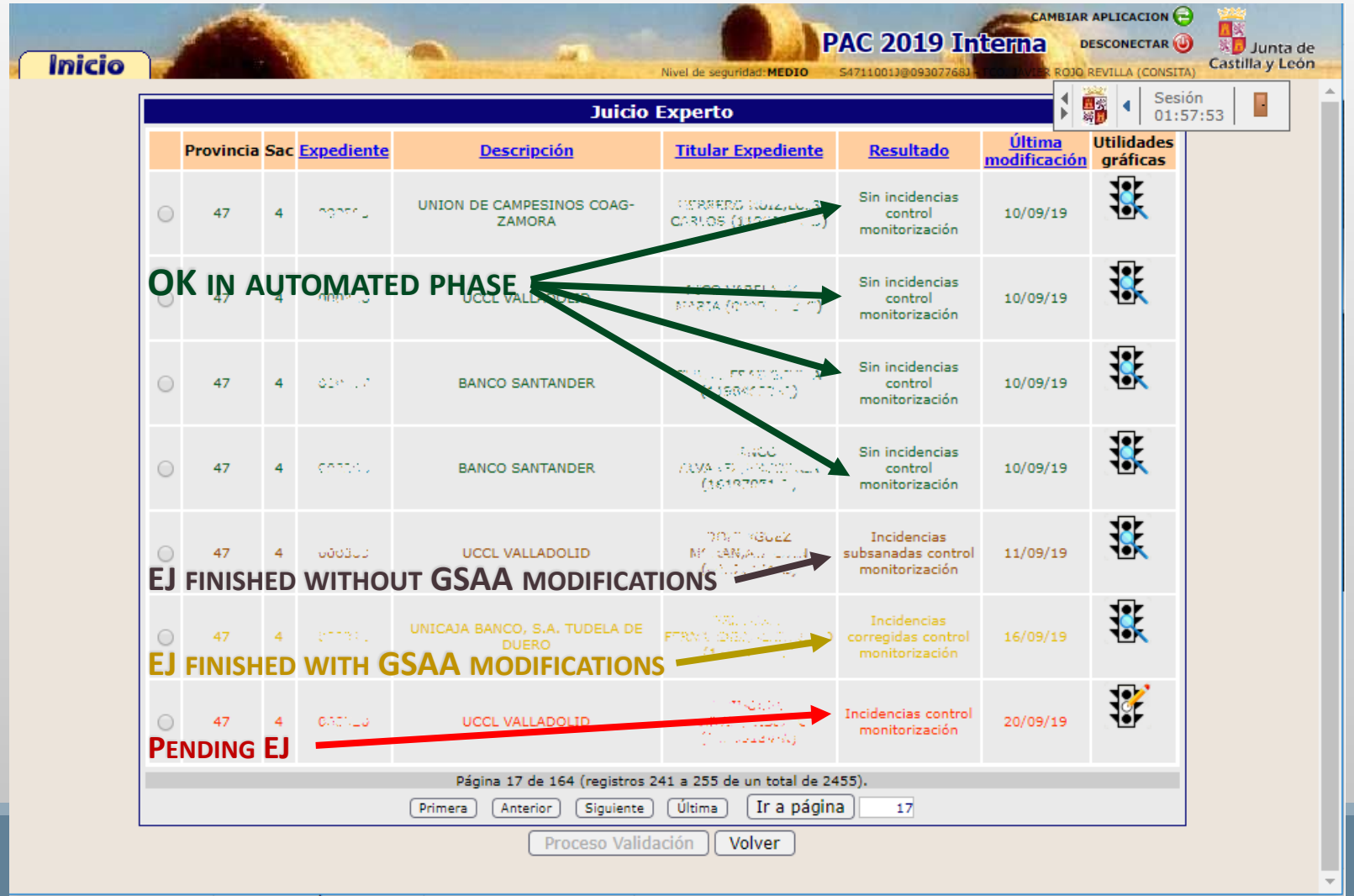
IACS Segment implementation

Follow-up App:

- **Logistics organization**
- Impact on Payments
- Technical tools:
  - ✓Photointerpretation
  - ✓Signature analysis
  - ✓Geotagged Photos review
  - ✓New GSAA proposal
  - ✓Farmer Interaction
  - ✓Integrate Field Visits Results
  - ✓Final validation



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IACS Segment implementation

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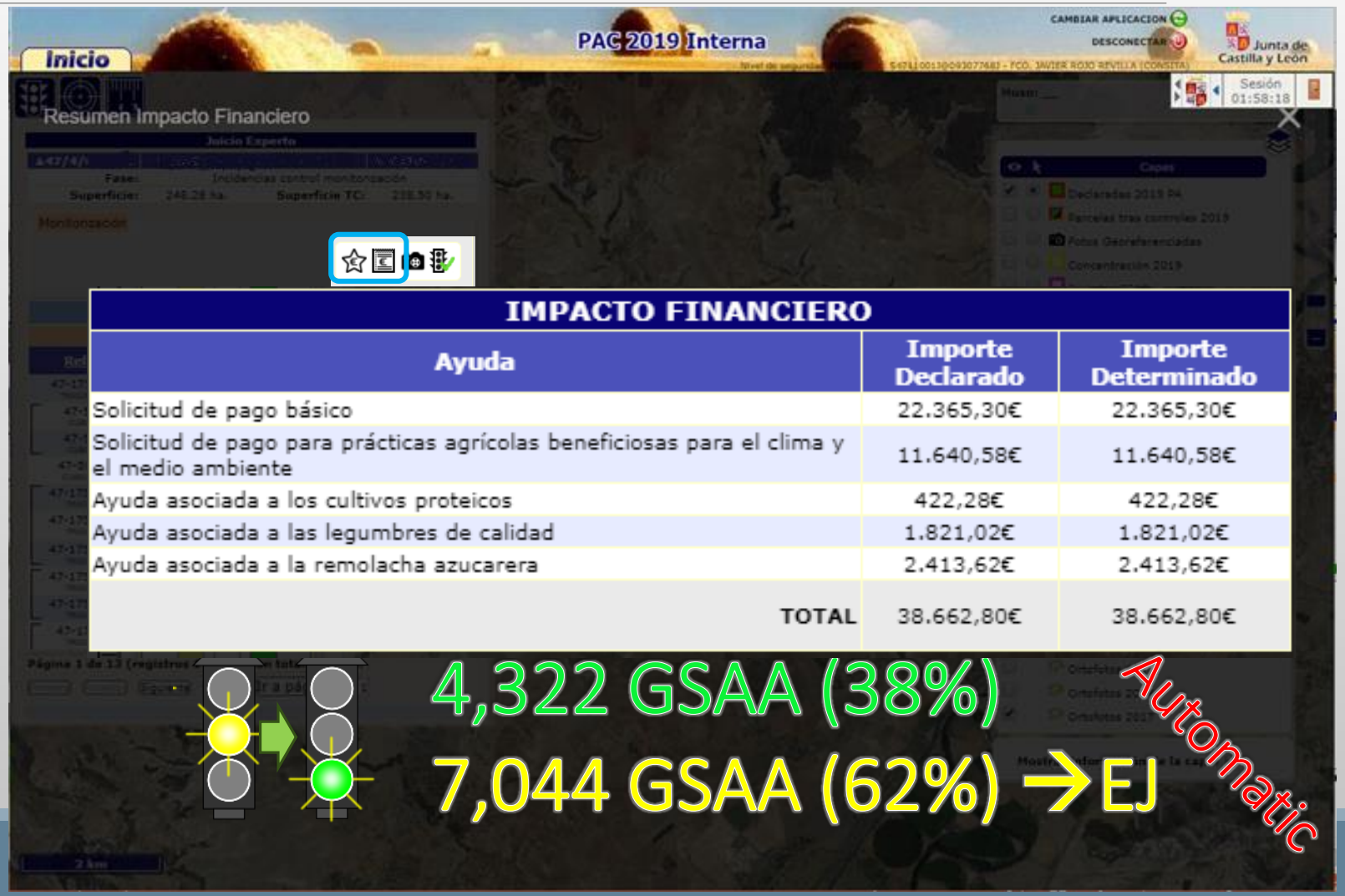

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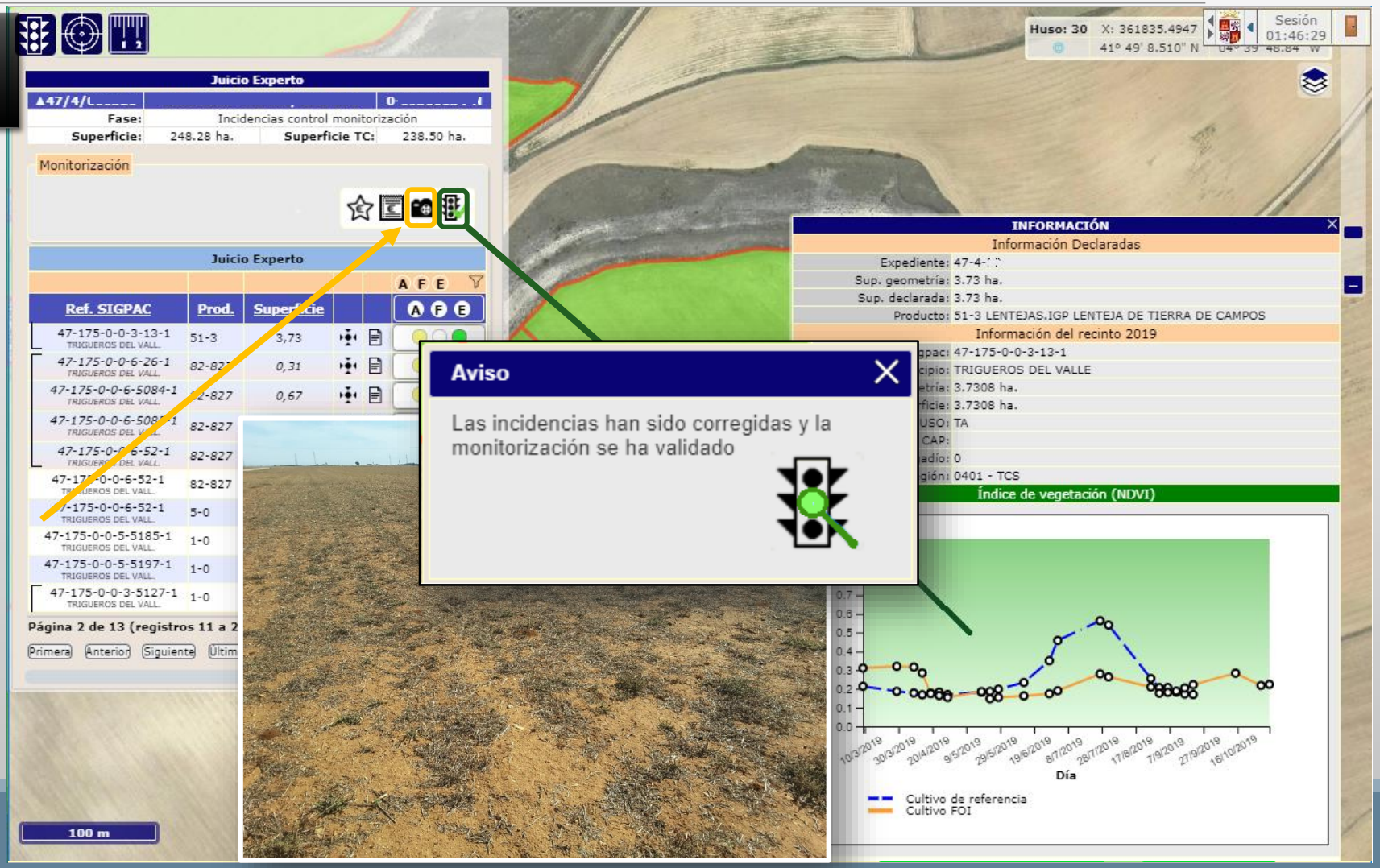

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The Team

3 Teams

Many tasks

RS Segment

SENTINEL ADQUISITION

CROP IDENTIFICATION

FOI FACTORY

TROQUELATOR

MARKERS FACTORY

TRAFFIC LIGHT FACTORY

IACS Segment

EXPERT JUDGEMENT

FARMER INTERACTION

FIELD VISITS

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IACS Segment implementation

IACS Segment target: REDUCE THE FIELD VISITS TO THE MAXIMUM

133,638 GSAA overall 2019

94.7% automated / 4.7% expert judgment

835 GSAA visit on the spot (0.6%)

0,7% GSAA modified in follow-up actions

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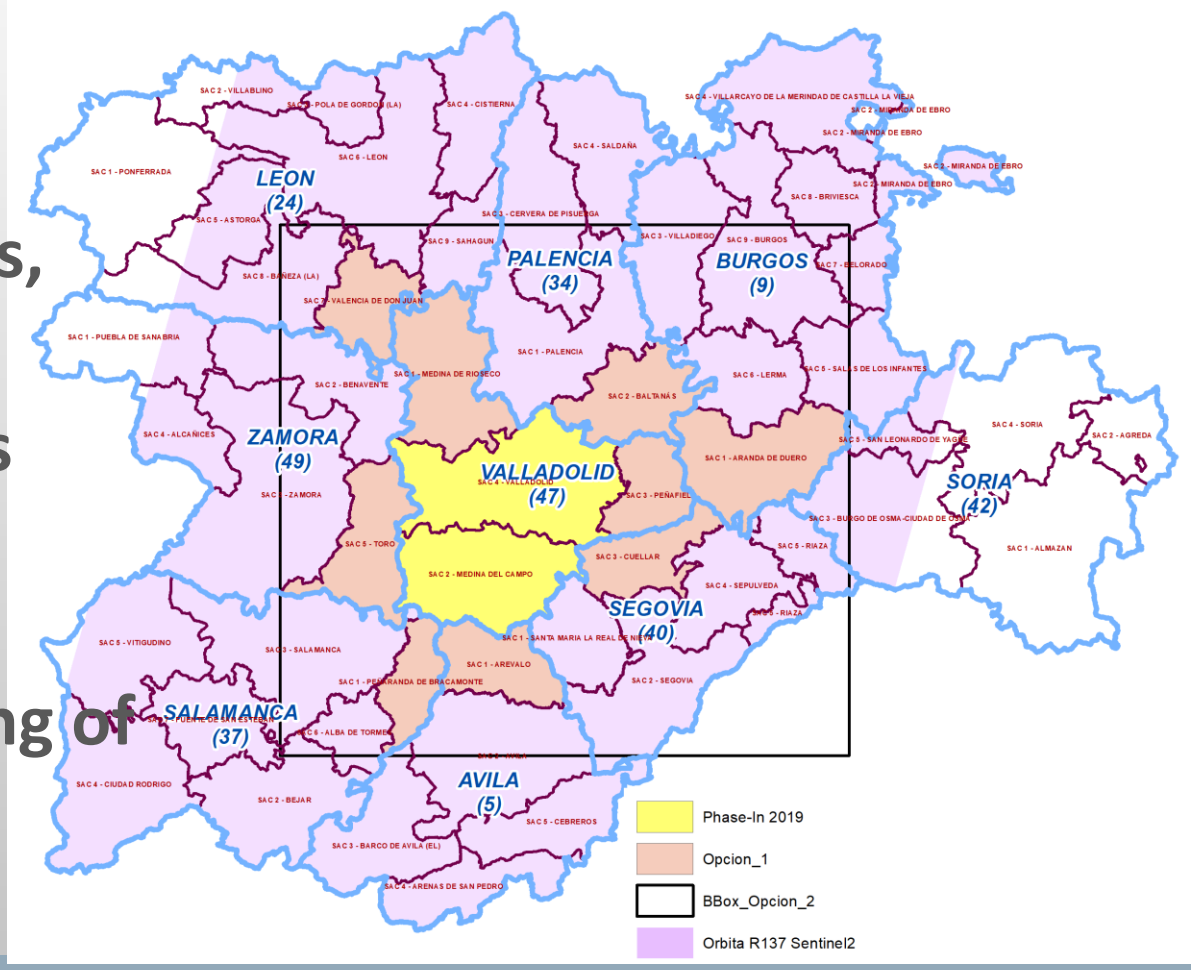
2020 plan

- ✓ Add S1 signal
- ✓ Development of new markers (grasslands, tillage,…)
- ✓ Improve performance of current markers (tricky crops, lack of homogeneity, land abandonment, grasslands,…)
- ✓ Follow-up actions from the very beginning of the season



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Thanks and good luck in CbM! ☺

Outcomes, Findings and Status Plan for 2020

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