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Information management in LPIS

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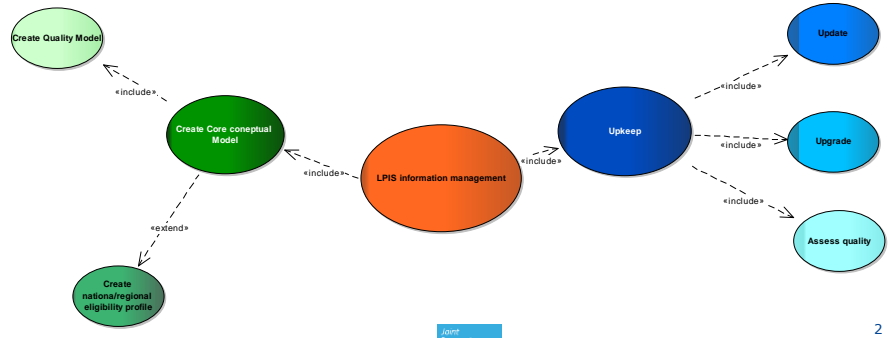
Evidence-based scientific and technical support
Cooperation with policy Directorates-General
Sharing its know-how with the Member States



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About this presentation...

- **Purpose:**
 - Explain how procedures and information content are interlinked
 - Highlight the role of the eligibility profile
 - Show examples how legal requirements can be tackled through technical concepts
- **Overview:**





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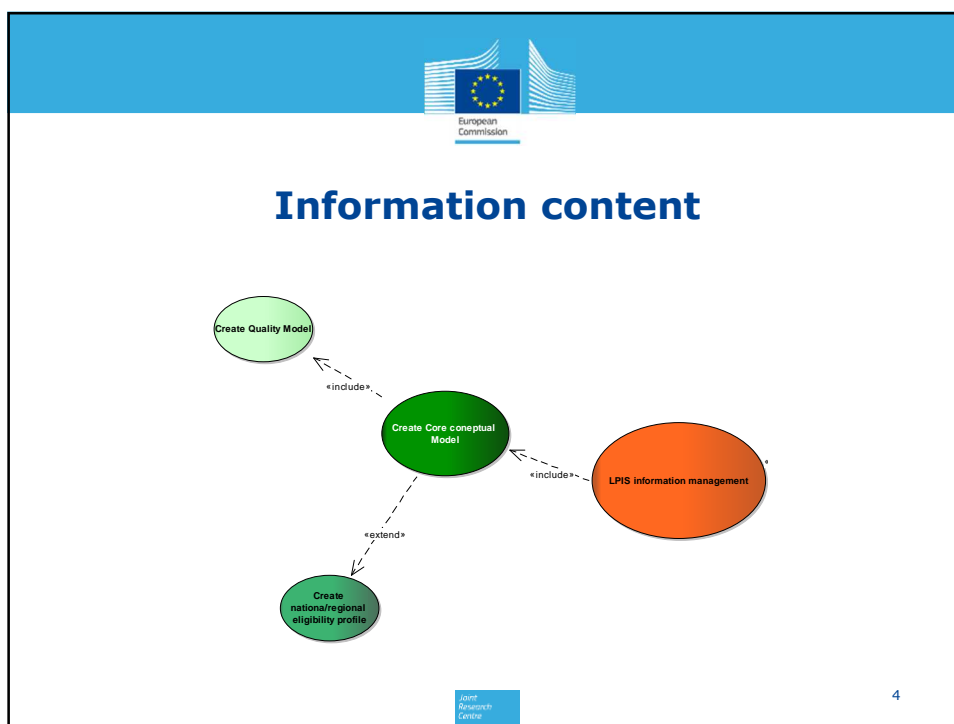
LPIS information management

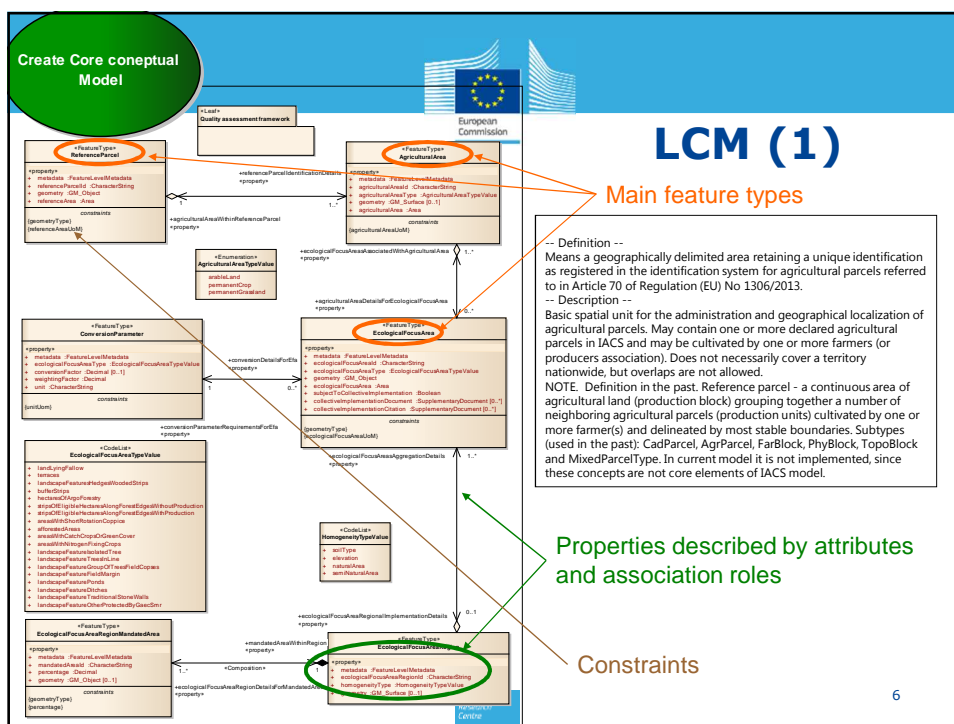
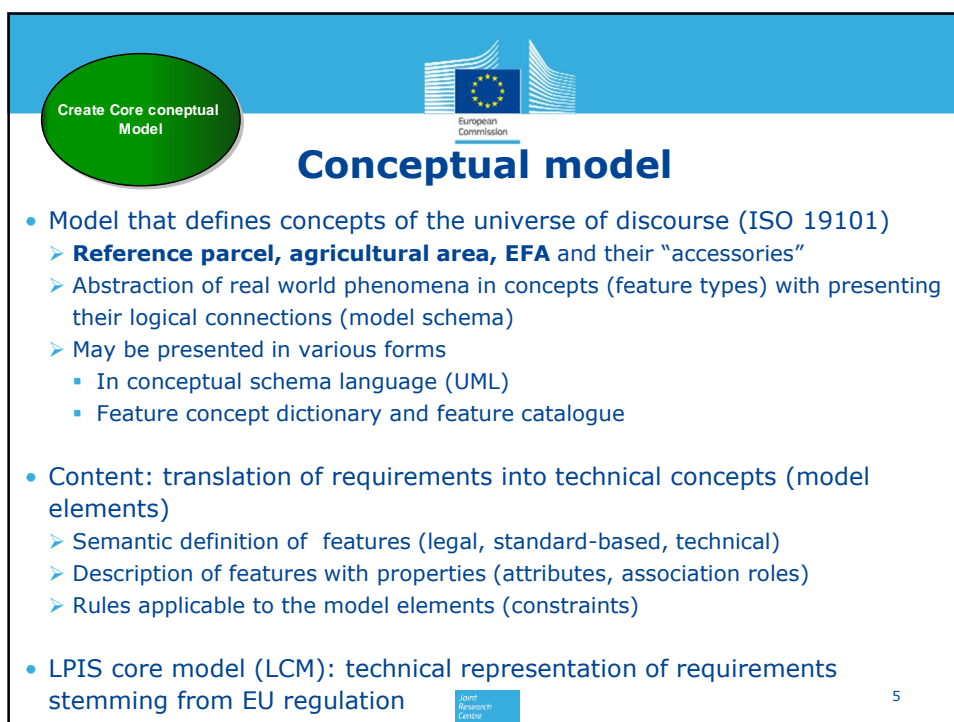
LPIS as part of IACS

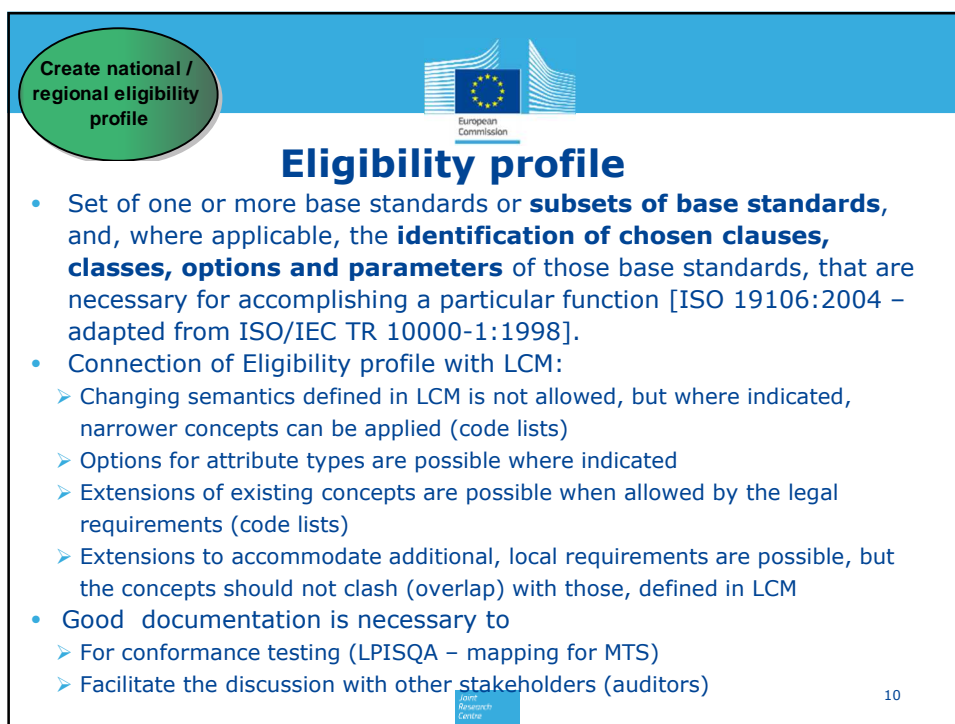
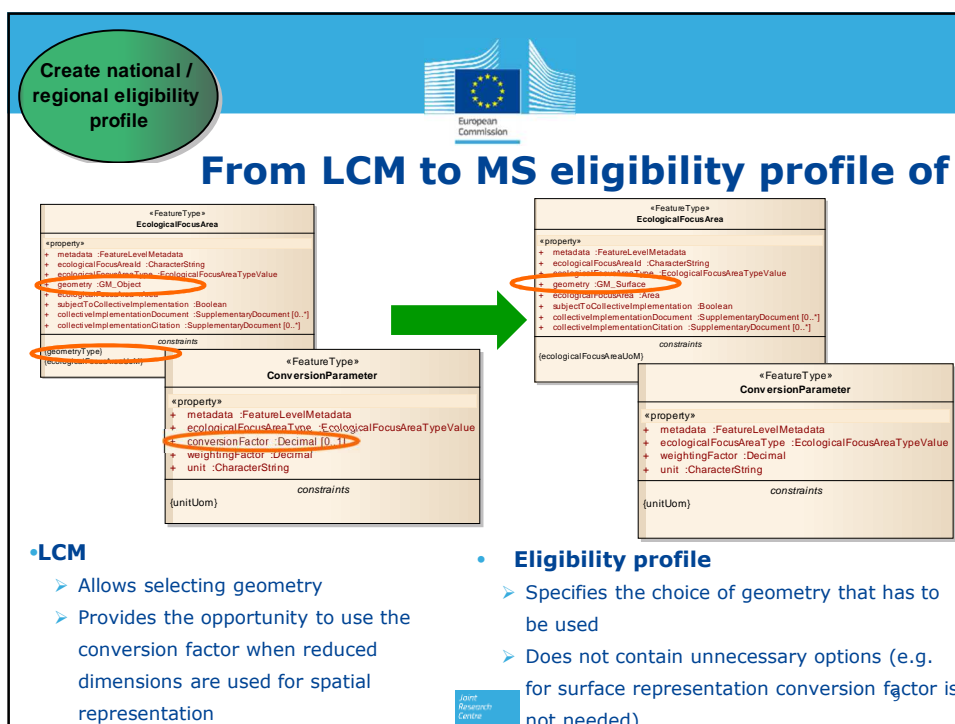
- Subsystem of IACS based on GIS technology
- Requirements are defined in legal acts
- Main functional requirement: identification and quantification of agricultural land potentially eligible for aid applications
- User requirements:
 - current and accurate data (farmers, inspectors, auditors)
 - well documented information system with precisely defined concepts and clear structure (auditors)
 - clear business processes with the necessary information support (database custodian, inspectors)
 - interoperability with other sub-systems of IACS (third parties, users, auditors)
- Information management in LPIS means to understand the
 - Information content
 - Business processes
 - And how they are interlinked

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Create Quality Model



European Commission

GML Identification system for agricultural...

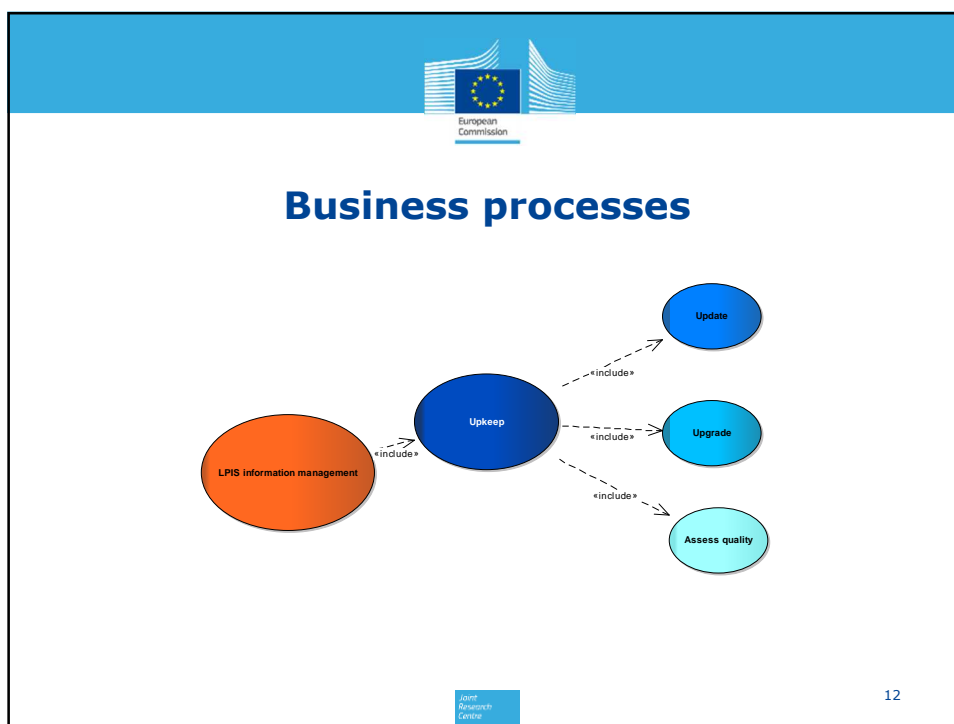
«Leaf»
Quality assessment framework

LPIS quality model

- Is necessary to define
 - data quality measures and elements against which the quality assessment process can be performed
 - Concepts of sample based testing
 - Support data and model test suites (DTS and MTS)
- Is a devoted part of the LCM (leaf)
- Is based on standards (ISO 19105, 19157 and ISO 2859-2)
- Like to LCM, LPISQA also need to have a national / regional profile
- Great historic legacy – even with the new regulations no need for radical changes.

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Upkeep

Upkeep

uc: Manage identification system for agricultural parcels

- Upkeep is the process of operating the GIS component of IACS, in order to
 - keep it fit for the purpose i.e. to respond to the requirements (**upgrade**)
 - guarantee that the data residing in are current and accurate (**update**).
- Upkeep also comprises the quality assessment process both at schema and data level.
- These high level use cases are further described in detailed use cases and activity flows (diagrams)
- Diagrams are only a possible way of documentation

Example of narrative documentation

Manage Identification system for agricultural parcels
(A.k.a.: LPS-upkeep)

Upkeep is the process of operating the geographic information system component of IACS, in order to keep it fit for the purpose (upgrade) and guarantee that the data residing in it allow to uniquely identify its elements (reference parcels and EFA) and correctly quantify their area (update). Upkeep also comprises the quality assessment process both at schema and data level.

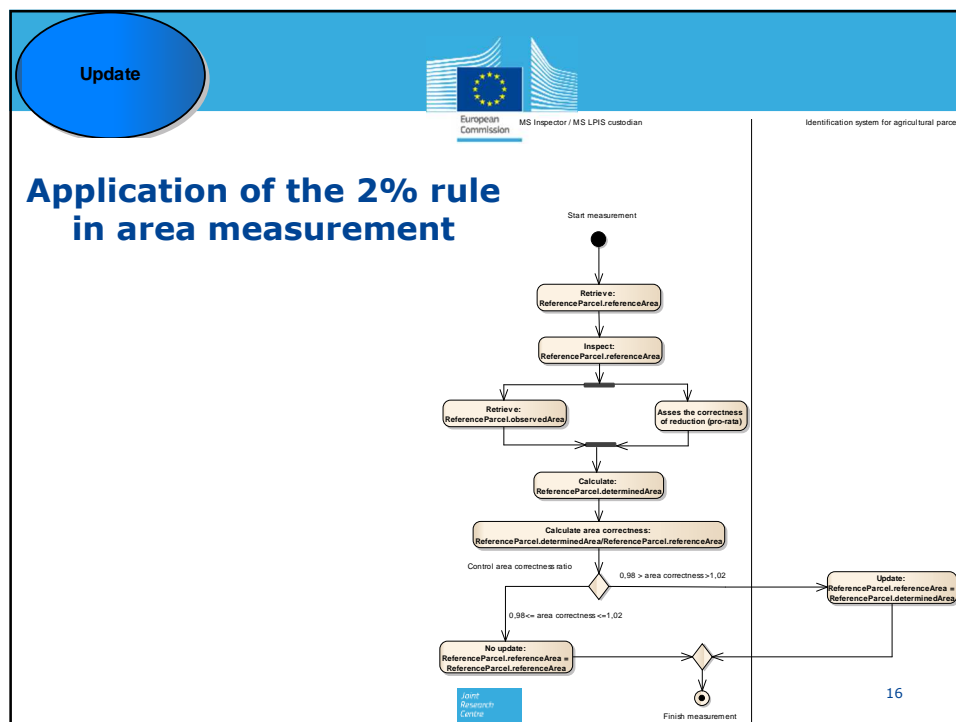
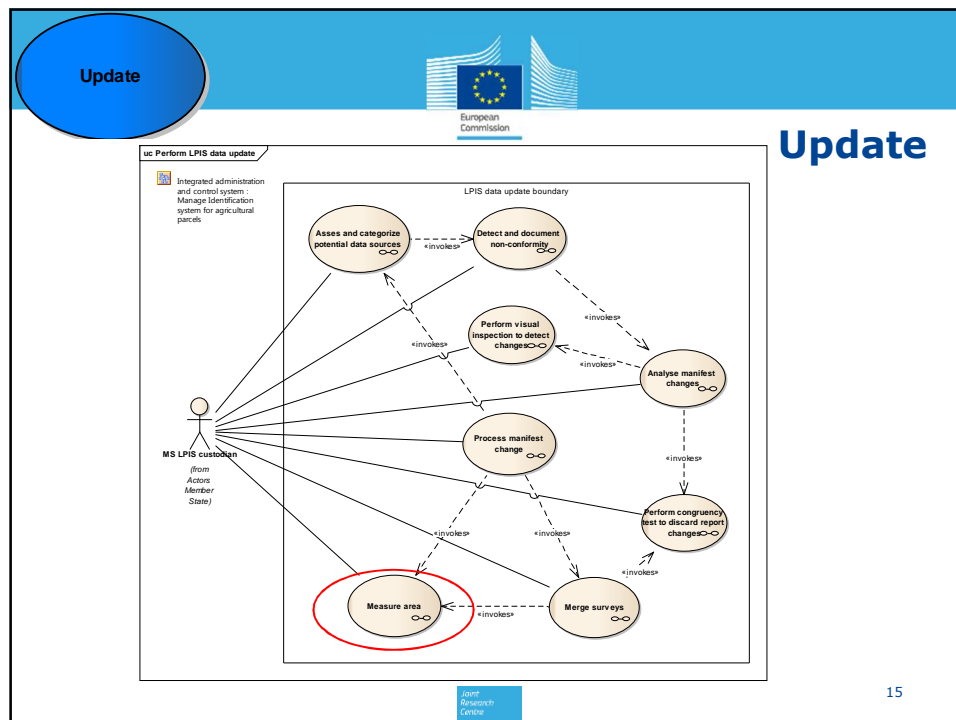
| Use Case Description | |
|----------------------|--|
| Name | Perform LPS system upgrade |
| Description | Upgrade is the process of formalizing the change requests stemming from the legal requirements. NOTE: upgrade is implemented at application schema level of LCM and/or MS/Region eligibility profile. |
| Pre-condition | New legal requirements (legal change requests) have been prepared for processing. |
| Post-condition | Documentation of the new schema has been prepared. |

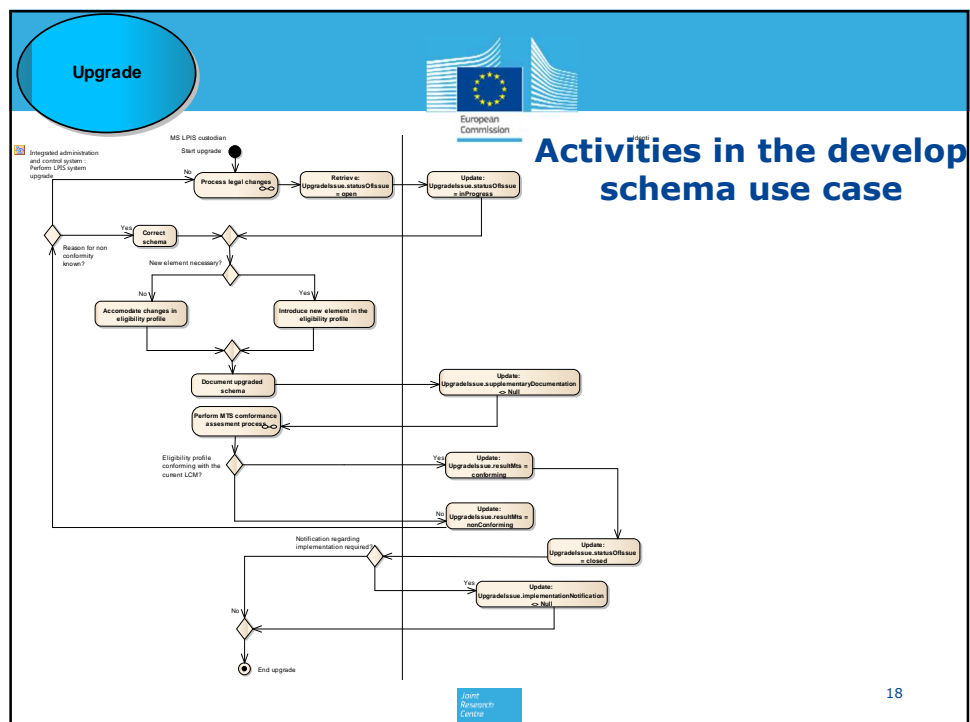
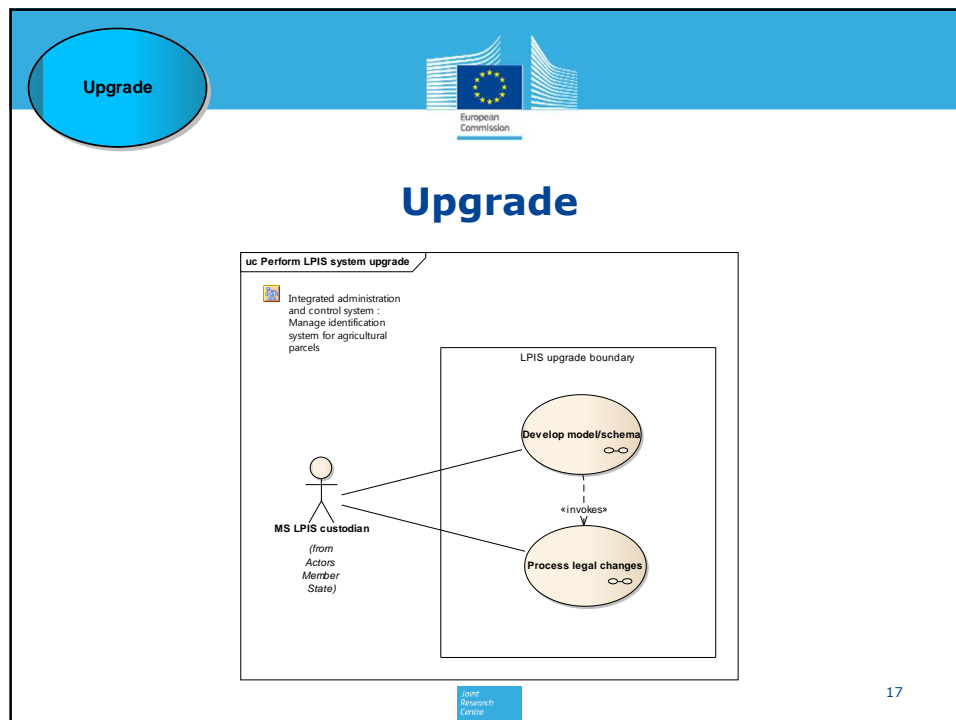
| Use Case Description | |
|----------------------|--|
| Name | Perform LPS update |
| Description | Update is the process of addressing change requests of the data due to the changes on the land. It involves all the operations and database interventions necessary to give a reference parcel up-to-date RP attribute values. |
| Pre-condition | Data change requests have been prepared for processing. |
| Post-condition | Appropriate data records have been updated. |

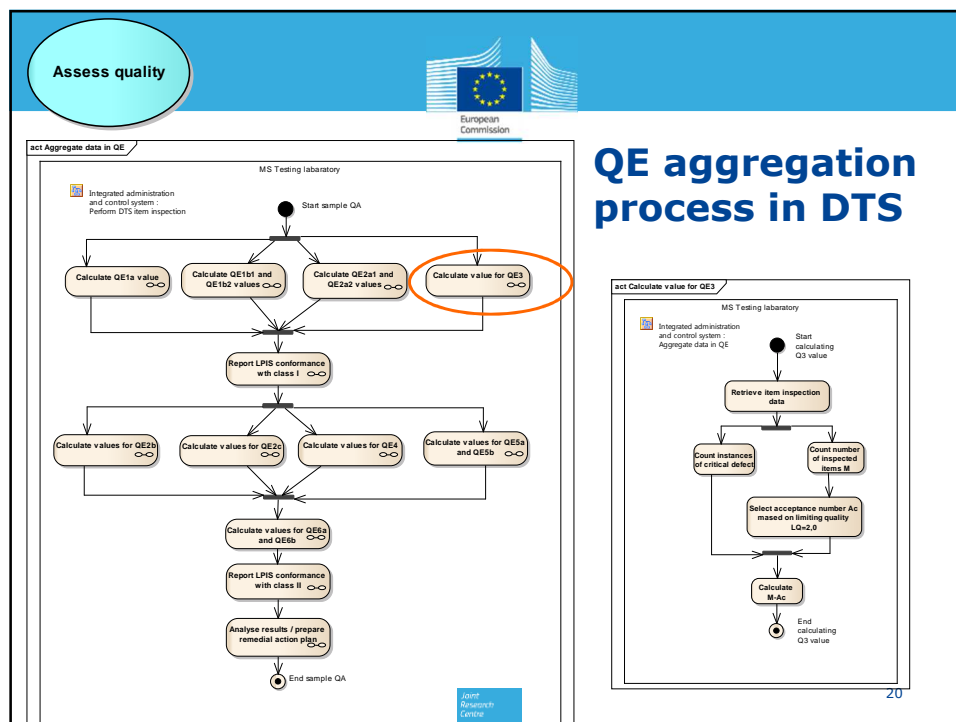
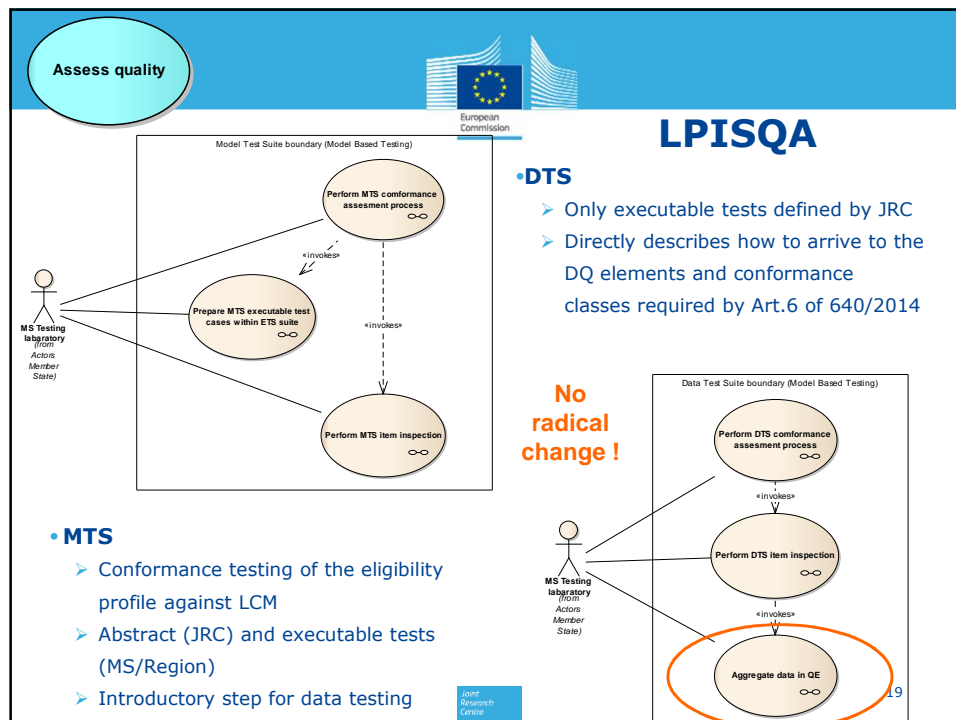
| Use Case Description | |
|----------------------|--|
| Name | Prepare for testing (from the "Develop eligibility profile" use case) |
| Description | Preparatory work necessary for testing the conformity of the eligibility profile against the requirements formalized in the core conceptual model. |
| Pre-condition | LCM has been formalized. |
| Post-condition | ATS and ETS for the eligibility profile has been formalized. |

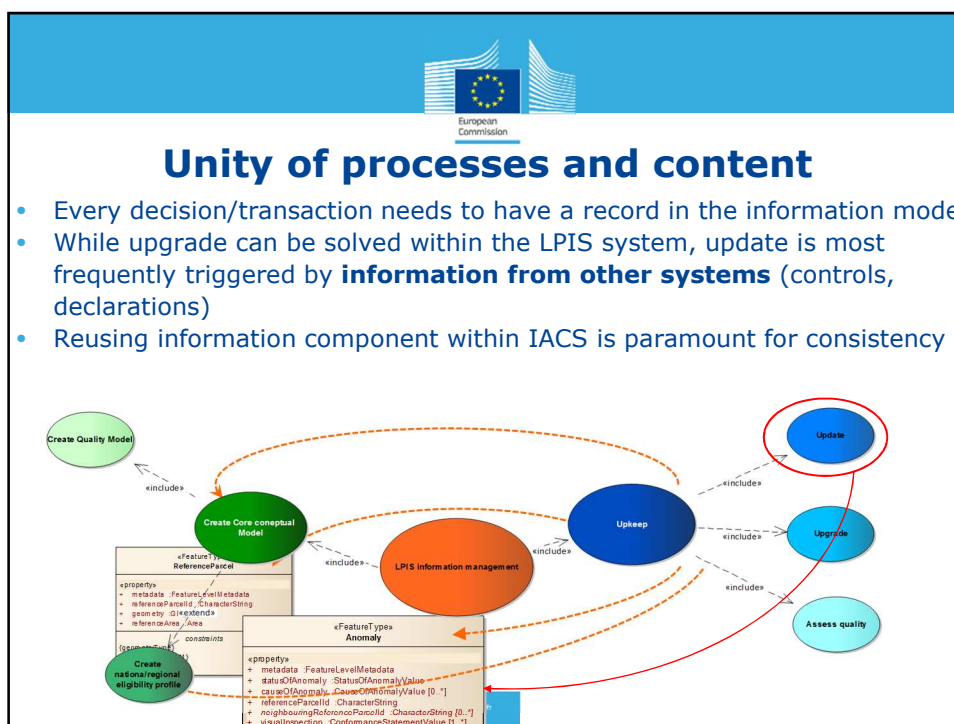
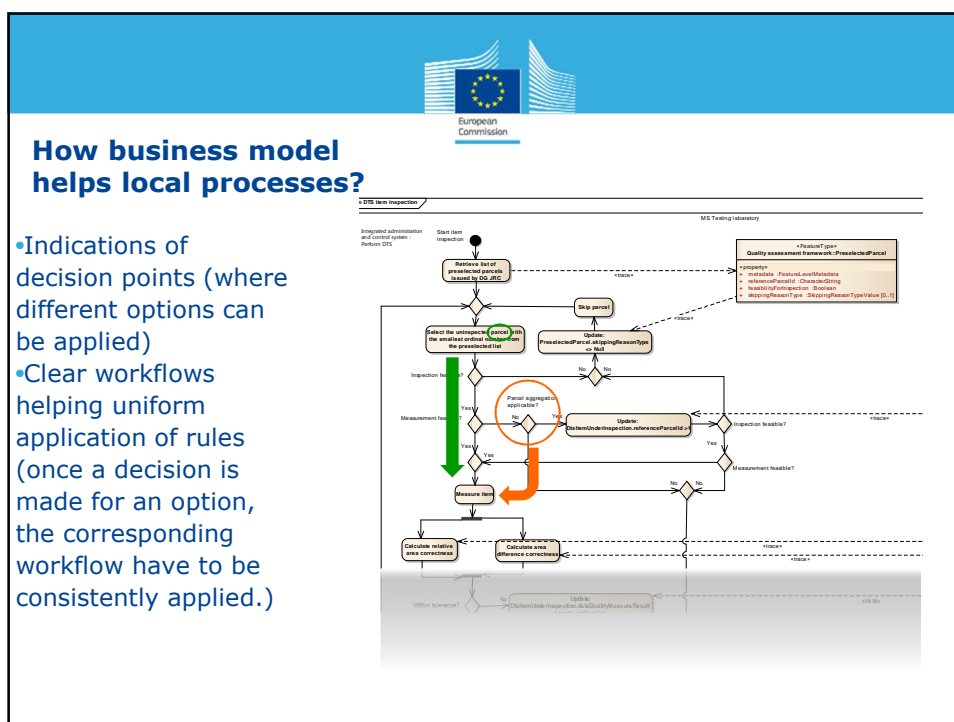
| Use Case Description | |
|----------------------|---|
| Name | Perform Module Test Suite (MTS) |
| Description | Conformance testing of the eligibility profile against the LCM. |
| Pre-condition | Conformance clauses at abstract and executable level has been prepared. Critical waivers for Data Test Suite (DTS) has been prepared. NOTE: Waivers are upgrade requests addressed at the level of the conceptual model, but not yet implemented in the implementation model. Whenever the results indicate non-conformity of data occurring as systematic error. |

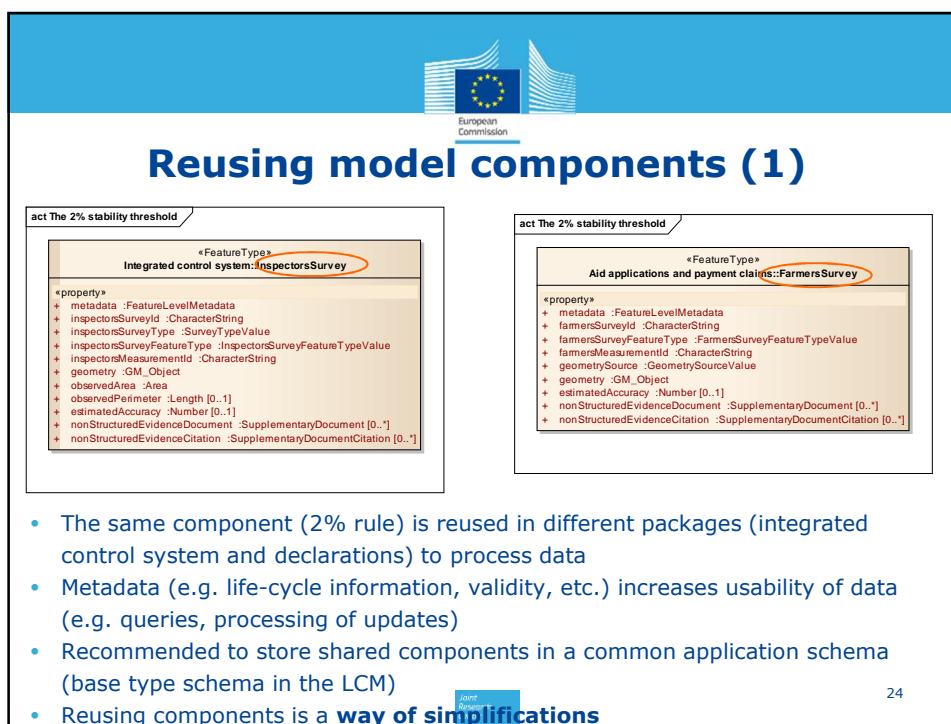
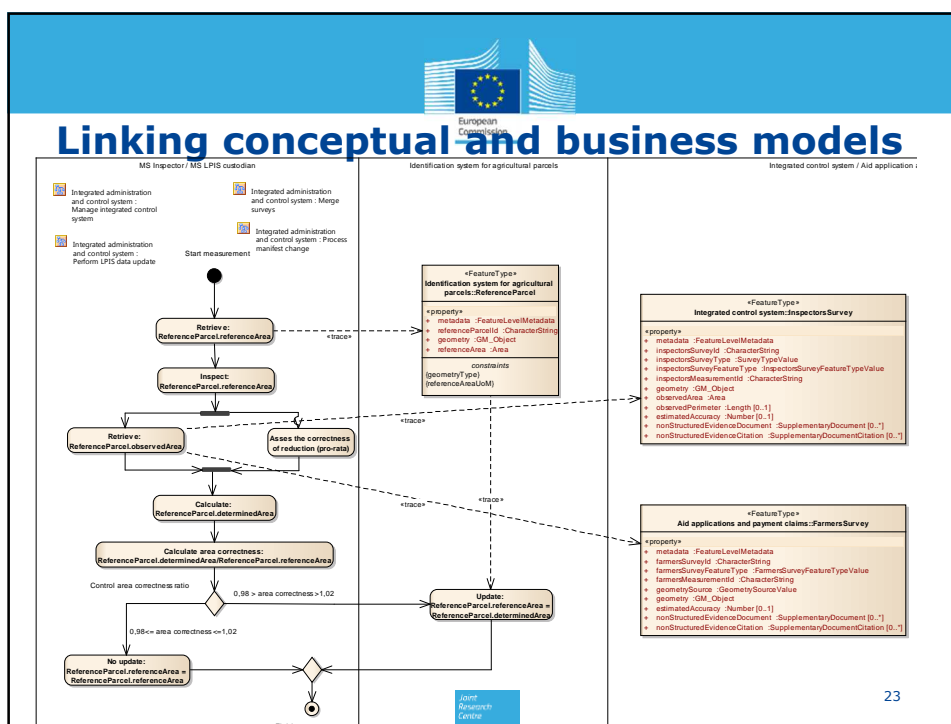
| Use Case Description | |
|----------------------|---|
| Name | Perform Data Test Suite (DTS) |
| Description | Data quality assessment process based on the quality elements specified in the data quality model developed for LPS. |
| Pre-condition | Data quality elements have been defined. Assessment methodology (data quality evaluation process) has been described. |
| Post-condition | Assessment results and verdicts are used for system improvement (removal of action plan). |





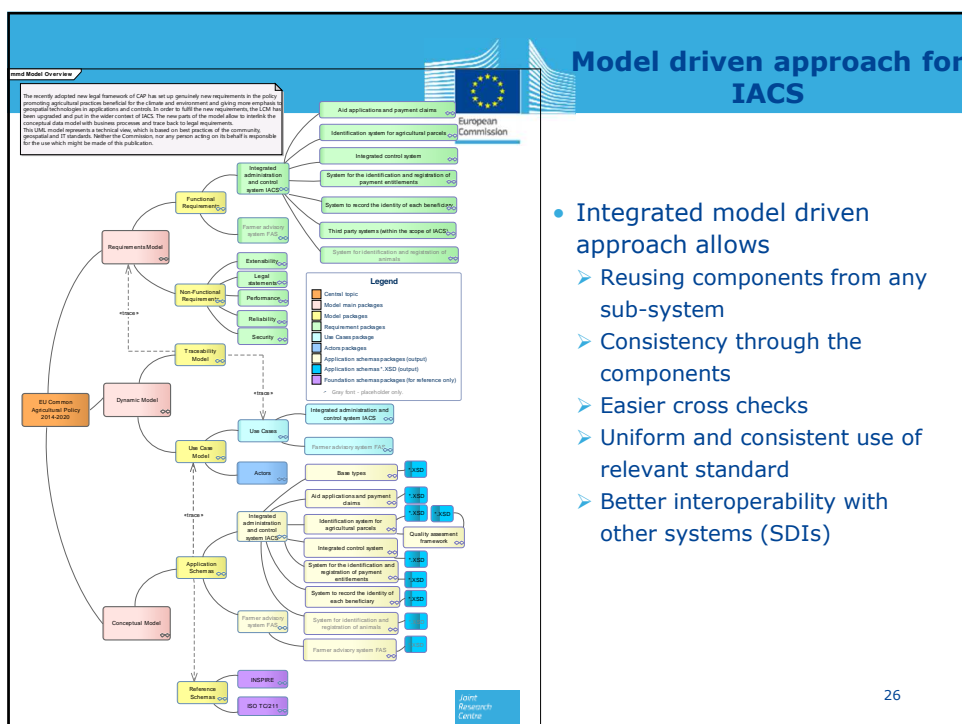






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How LCM and Upkeep models can be used?

- Integrated view of the information system and business processes
 - Checklist of information content and functionalities required by the regulations
 - Indications for extension and decision points
 - Showcase of additional information concepts (not directly defined in legislative requirements) needed for correct upkeep of the system
- LCM and Upkeep models should be regarded as **examples** that can be used for
 - development of implementation models
 - checking functionalities of existing implementations
- Specific components (LPISQA, Upkeep) with narrative documentation may become technical guidance documents



Conclusions

In order to successfully manage information in LPIS

- **Document**
 - concepts (definitions)
 - decisions (applicable elements and methodology)
 - transactions (time stamps and metadata)
- Reuse components (both in conceptual and business models all over IACS)
- Look for interoperability (SDI, standards, widely accepted best practices)

Focusing at one reference can bring together all information and get better synergies between components.

...land is the core, the reference to direct payments



Last, but not least

- Please help us to improve the model
- Last version is available:
ftp://mars.jrc.ec.europa.eu/LPIS/models/CAP_IACS_UML/CAP_IACS_V2.zip
- In case you have comments – please contact us for access of our discussion platform (JIRA)
<https://webgate.ec.europa.eu/CITnet/jira/browse/CAPUML>

Thank you!