



To Vector, or to Raster?

Coverage Processing and Publishing for INSPIRE

Annex II/III

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Agenda & Introduction

- Coverages in INSPIRE
- Example: Land Cover
- Integration of Raster and Vector Workflows
- Conclusion



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Coverage Themes and Encodings in INSPIRE



II Elevation



Raster

→ Vector



TIN



II Orthoimagery



Raster



II Land Cover



Raster

→ Vector



III Statistical Units



Grid

→ Vector



III Energy Resources



Coverage

→ Vector



III Species Distribution...



Raster*

→ Vector

Example: Land Cover



Raster

- ft LandCoverGridCoverage
 - domainSet
 - location (0..1)
 - beginLifespanVersion
 - boundedBy (0..1)
 - coverageFunction (0..1)
 - description (0..1)
 - nomenciatreDocumentation
 - rangeSet
 - choice
 - AbstractScalarValueList (1..n)
 - DataBlock
 - File
 - choice
 - fileName
 - fileReference
 - compression (0..1)
 - fileStructure
 - mimeType (0..1)
 - rangeParameters
 - ValueArray (1..n)
 - rangeType

→ Vector

- ft LandCoverDataset
 - ft LandCoverUnit
 - location (0..1)
 - beginLifespanVersion
 - boundedBy (0..1)
 - description (0..1)
 - descriptionReference (0..1)
 - endLifespanVersion (0..1)
 - geometry
 - id
 - identifier (0..1)
 - inspireId
 - landCoverObservation (1..n)
 - LandCoverObservation
 - class
 - mosaic (1..n)
 - LandCoverValue
 - class
 - coveredPercentage
 - nilReason (0..1)
 - observationDate
 - metaDataProperty (0..n)
 - name (0..n)

Example: Land Cover



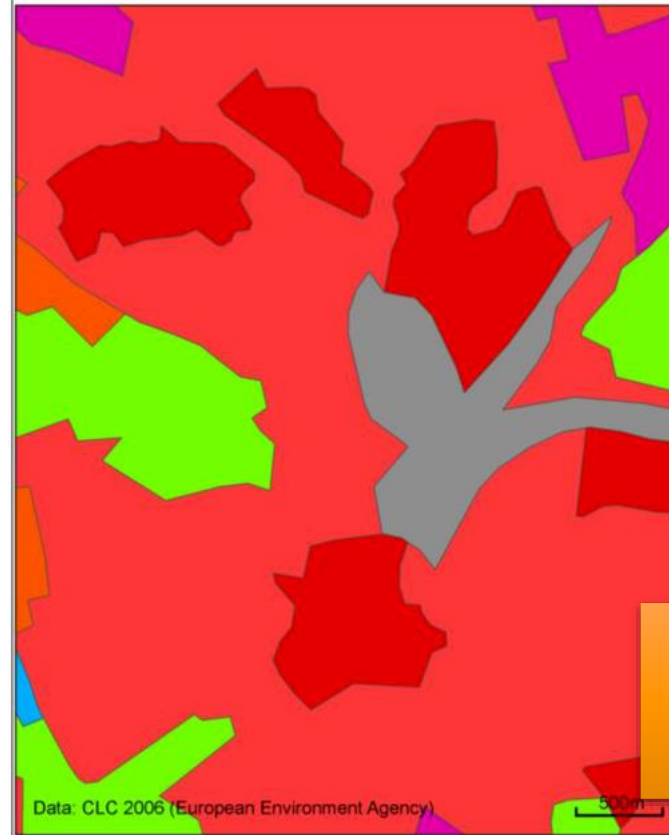
 Raster



Geo
TIFF

GML

→ Vector



GML

Criteria for making a selection

Criterion	Raster	Vector
What structure does the Source Data have?	Raster Coverage	Vector Coverage
What data analysis should be executed?	Combination with other raster data	Combination with other vector data
How compact should the target data be?	Not so compact Example data set in paletted GeoTIFF LZW 100m Raster: 121 MB	Very compact Example data set in GML 1:100.000, Gzipped: 4MB

Bringing both together...

... by integrating novaFACTORY with inspire gis

hale connect inspire»gis in 3 Points

- Data harmonisation projects and service provision are expensive. Often, no personal and financial resources are available.
- **inspire»gis** is the first **fully integrated, easy to use solution** for the harmonisation and publication of INSPIRE Data
- Reduce costs for hosting, application management, training and implementation by 70% to 80%.



novaFACTORY in 3 Points

- Automated Data Production (e.g.3D)- and Distribution
- Quality Assured preparation of the Data
- Freely definable data-processing workflows

Use Cases

1

Transform and
Publish Data Set
managed in
novaFACTORY

2

Transform and
Publish Data Set
managed in hale
connect

3

Convert between
Raster and Vector
representation

UC1: Raster managed in existing novaFACTORY Installation

Preconditions:

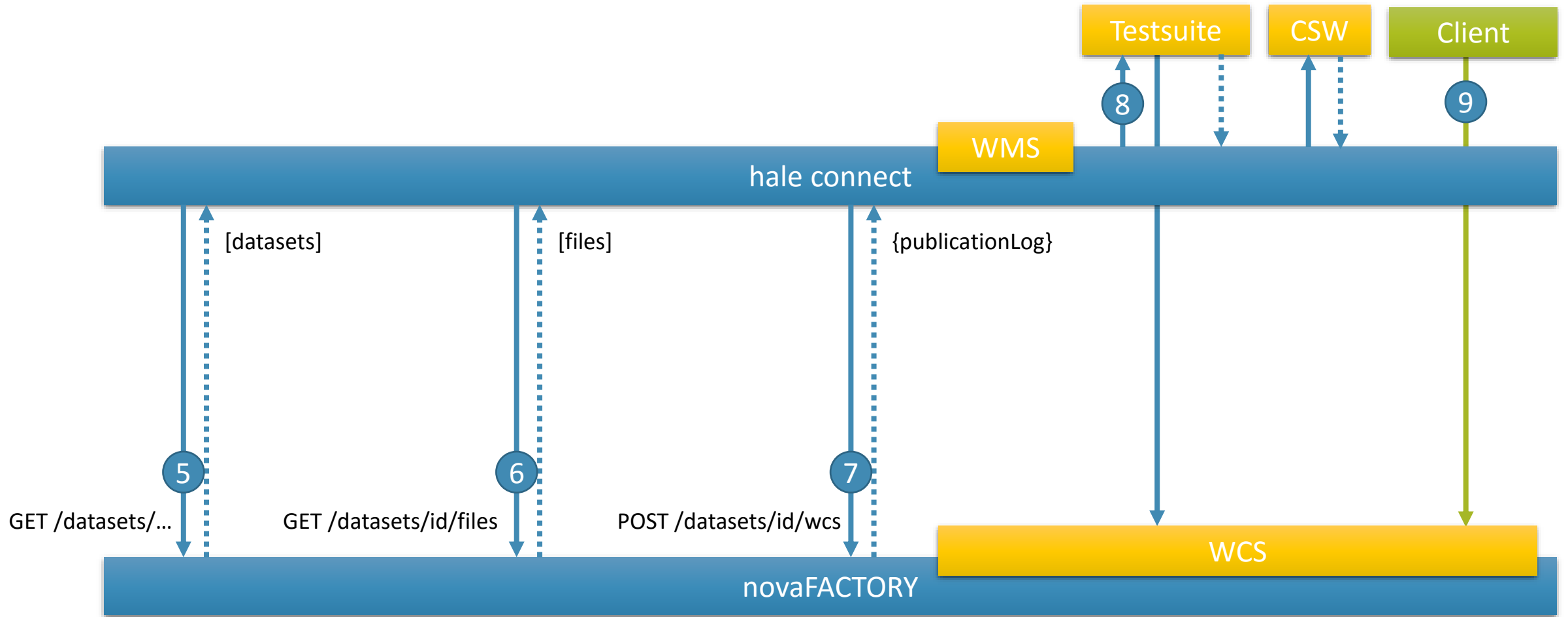
- Data set (Layer) is managed in novaFACTORY
- Integration with token is activated
- Uses is logged in
- No WCS for the dataset in novaFACTORY published
- Theme configured



Postconditions:

- WCS published by novaFACTORY (MOSS Cloud)
- WMS published by hale connect (WETR Cloud)
- Metadata generation + integration + publication executed by hale connect
- Service and data validation executed in hale connect
- (Optional) Spatineo Monitoring triggered

UC1: System View



UC2: Upload & management in hale connect

Preconditions:

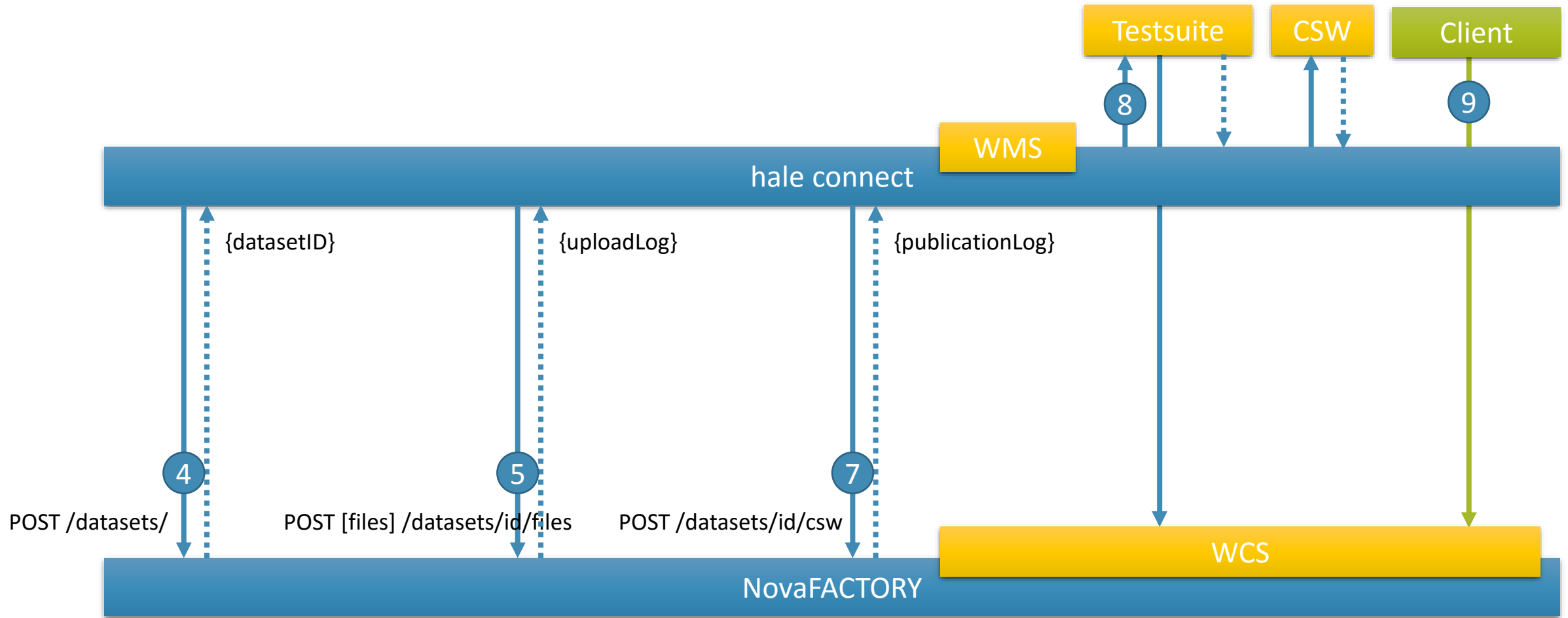
- Public Cloud /Private Cloud Setup with active Integration
- Uses is logged in
- Theme configured



Postconditions:

- WCS published by novaFactory (MOSS Cloud)
- WMS published by hale connect (WETR Cloud)
- Metadata generation + integration + publication executed by hale connect
- Service and data validation executed in hale connect
- (Optional) Spatineo Monitoring triggered

Use Case 2: Systemsicht



Summary & Outlook

- Seamless, automated processing and publishing across systems and use cases
- Consistent Metadata
- Consistent Monitoring
- Re-use of existing data sets
- Support both options in parallel for different applications
- Added value beyond INSPIRE

Questions? Feedback?

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