



PROGRAMME OF THE  
EUROPEAN UNION

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European  
Commission

# On-Demand Mapping

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EC JRC

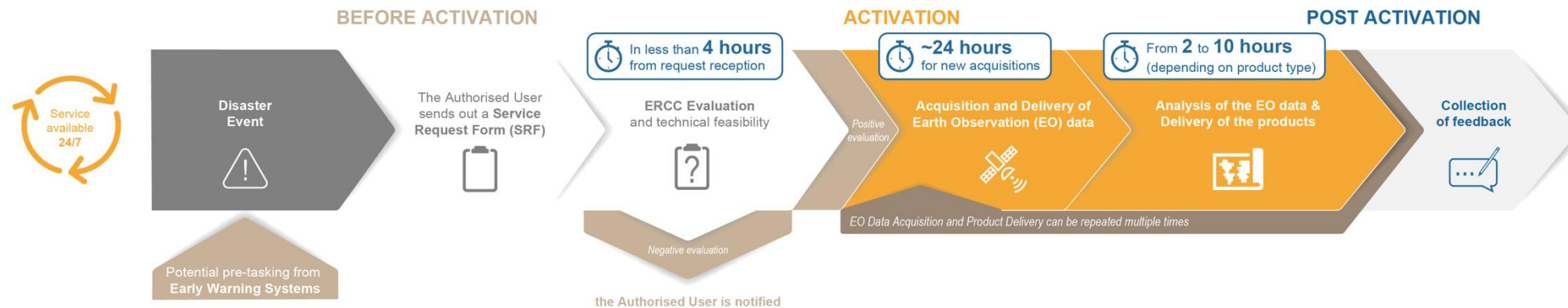
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**COPERNICUS**  
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# On Demand Mapping

## Rapid Mapping - Timeline for Emergency Response



ERCC: Emergency Response and Coordination Centre

## Timeline for Risk and Recovery Mapping



\*ERCC: Emergency Response and Coordination Centre

\*\*JRC: European Commission's Joint Research Centre

# Rapid Mapping: Standardisation and Speed are key

Request activation, feasibility analysis, and image order ~ 1 hour

## **Data production (from image receipt):**

First Estimate -> 2 hours

Delineation -> 7 hours

Grading -> 10 hours

Situational Reporting -> 4 hours from activation start

# Risk and Recovery

The RRM service can benefit from in situ data to enhance accuracy, improve remote sensing products quality.

## Vector Data

- **Topographic Features** (land cover/use, hydrographic network, transport networks)
- **Assets** (settlements, industry, utilities)
- **Building Footprints** (for scales > 1:10,000)
- **Geological and Cadastral Datasets** (scales from 1:50,000 to 1:1,000)
- **Bathymetry of Rivers & Reservoirs**
- **River Gauges & Precipitation Records**
- **Census Data** (population, infrastructure)
- **Agricultural & Forest Types, Protected Areas**

## Raster Data

- **Aerial Ortho-Imagery** (VHR satellite images with 0.25m accuracy)
- **Cartographic Maps** (regional maps, scale 1:5000 – 1:2000)
- **Digital Elevation Models (DEM)** (application-dependent resolution; COP-DEM <4m vertical error, GSD 10m)

**LiDAR Data** (high-accuracy terrain mapping)



# Geospatial Database

- Objective:
- Make high-resolution LiDAR, Digital Terrain Model (DTM), and Digital Surface Model (DSM) data over Europe readily accessible to our Service Providers and the Joint Research Center (JRC) community.

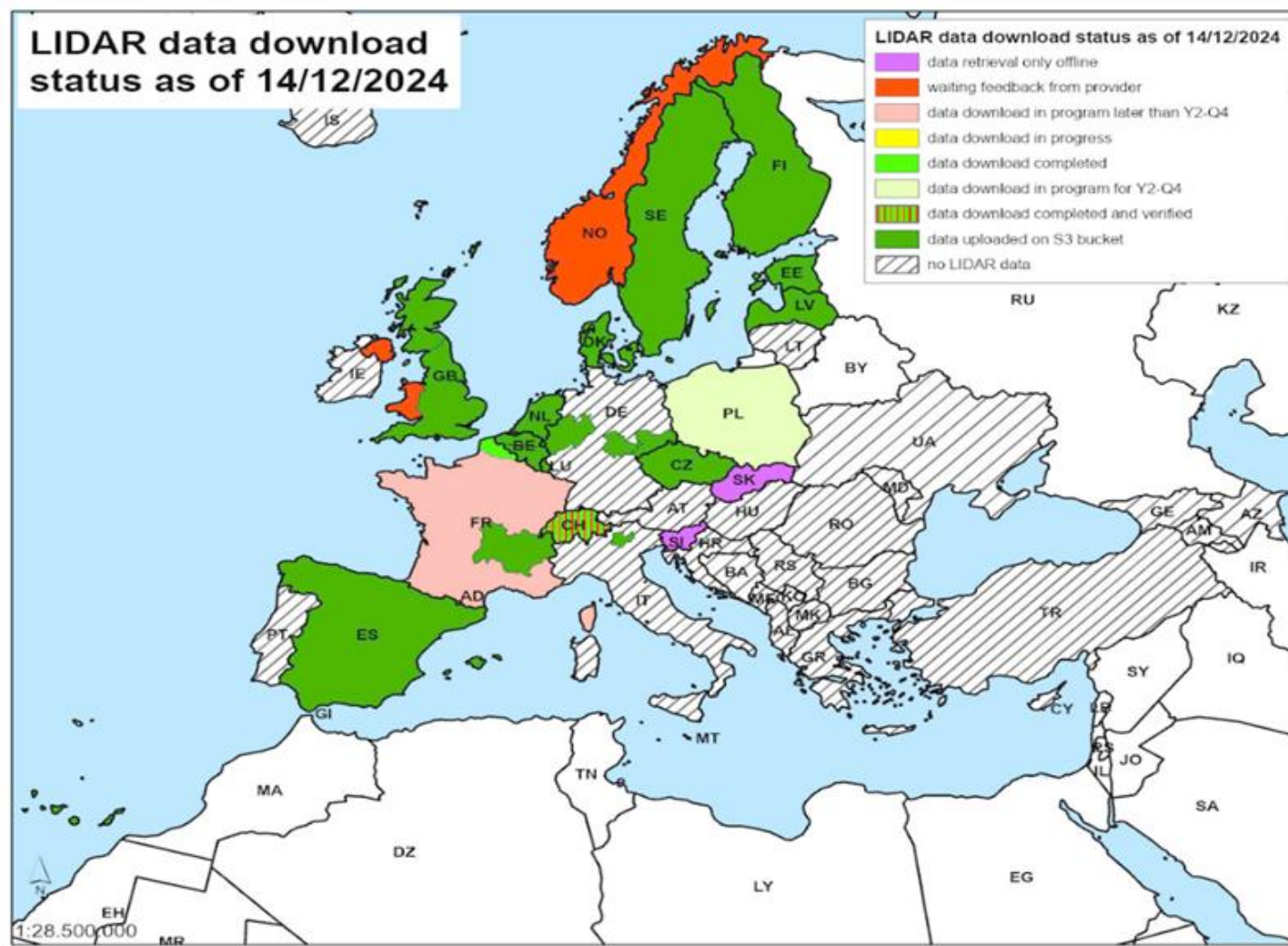
- **Key Features:**

- **1. User-Friendly Interface.** Design an intuitive platform for visualization, access, and download of the data, facilitating easy exploration and utilization by the JRC community.
- **2. Regular Updates.** Ensure the data remains up-to-date by implementing a regular update cycle, reflecting changes in the European landscape and guaranteeing the accuracy and reliability of the information.

## • Data Storage and Management:

- The data are currently stored in a dedicated Amazon S3 bucket within the CEMS Rapid Mapping environment.
- **Current Status: Work in Progress**
  - **Automated Data Catalogue.** Development of a comprehensive stack catalogue is in progress, which enables efficient and automated management of the data, streamlining data organization and retrieval.
  - **Secure Data Interface.** A user-friendly interface is being created to provide controlled access to the data, allowing users to 1) download data with ease, 2) manage metadata, 3) utilize permission-based access controls to ensure data security, 4) establish reliable references for data usage and citation

# • LiDAR Data Status

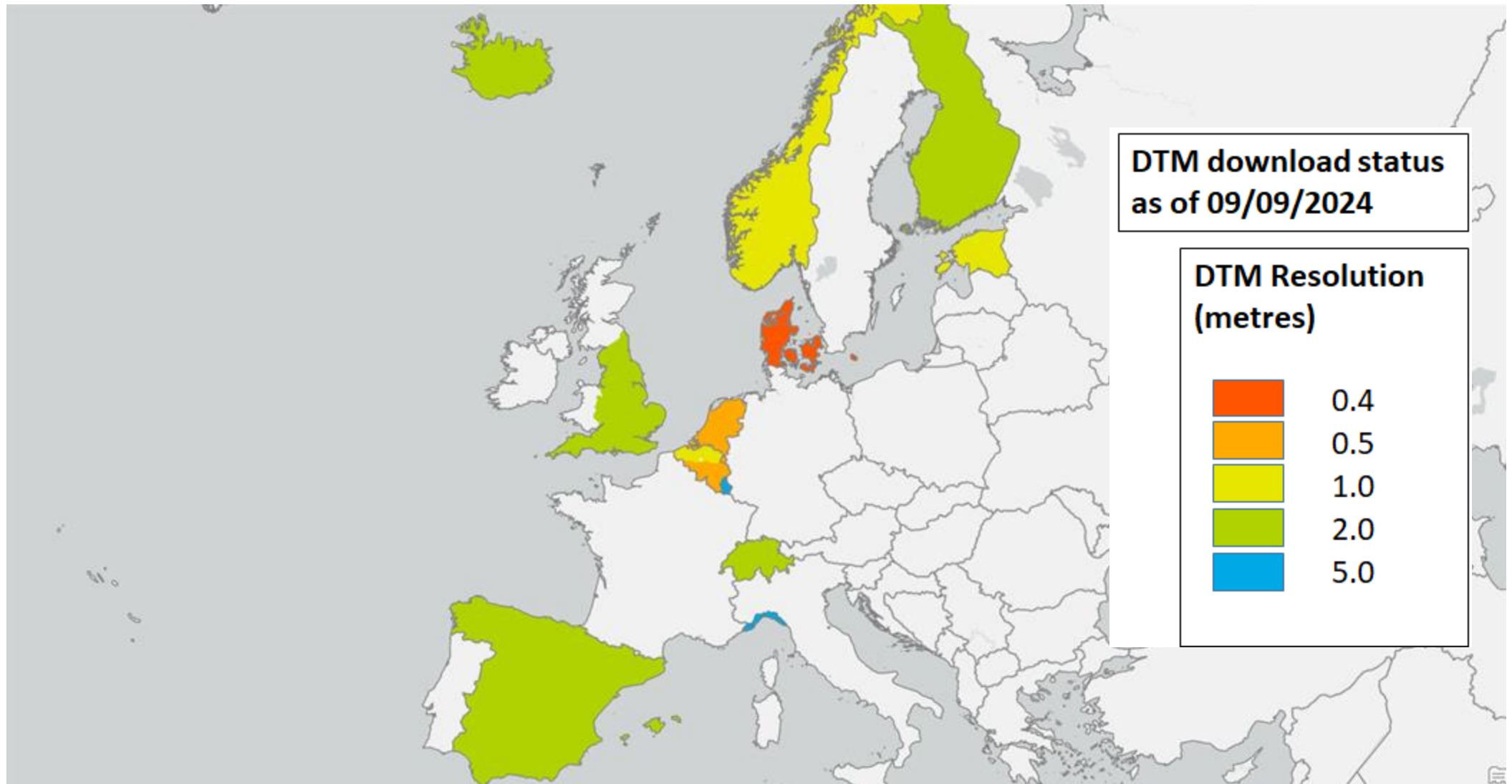


LIDAR data download status	Geographic coverage
Data retrieval only offline	Slovakia, Slovenia (offline hard drive)
Waiting feedback from provider	Norway, Northern Ireland (UK), Wales (UK)
Download in program for later than Y2-Q4	France (metropolitan area), Canton of Zurich (CH)
Download in program for Y2-Q4	Poland
Data download in progress	-
Data downloaded (to be verified)	Andorra, Alicante (ES), Canton of Bern (CH), Nord-Pas de Calais (FR)
Data downloaded and verified (to be uploaded on S3 bucket)	Switzerland, Zagreb (HR)
Data uploaded on S3 bucket	Auvergne-Rhône-Alpes (FR), Denmark, Estonia, England (UK), Finland, Flanders (BE), Latvia, Luxembourg, Netherlands, North Rhine-Westphalia (DE), Saxony (DE), Scotland (UK), Spain, Sweden, Thuringia (DE), Trento Province (IT), Wallonia (BE)
No LIDAR data	Albania, Armenia, Austria, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Cyprus, Georgia, Gibraltar, Greece, Hungary, Iceland, Ireland, Kosovo, Liechtenstein, Lithuania, Macedonia, Malta, Moldova, Montenegro, Portugal, Romania, Serbia, Türkiye, Ukraine

The data download procedure considers the LIDAR data availability presented in Appendix 1\_WG6\_CORDA\_LiDAR\_Data\_Availability\_v2\_v06062023\_D RAFT reference document.



## • DTM Data Status



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