



Fondazione Gran Sasso Tech

WP2: Data-Lake Infrastructure MAPS

Technical Design, Cloud Solution Design, Hosting Specifications

Version: 1.0

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1 WP3: SLO Algorithm Development

Work Package 3: Development of the algorithm for identifying Homogeneous Local Systems (SLO)

1.1 Overview

Development of the algorithm for identifying **Homogeneous Local Systems (SLO)** based on the three analytical pillars of the MAPS framework:

1. **Scope:** Multidimensional analysis of daily needs
2. **Space:** Identification of hierarchical territorial attractors
3. **Time:** Accessibility constraint within 1 hour

1.2 Timeline

- **Months:** M12-M18
- **Final deadline:** 30/09/2026

1.3 Planned Deliverables

1.3.1 D3.1 - SLO Algorithm Methodological Document

Document describing the methodology of the algorithm for identifying Homogeneous Local Systems (SLO): - Theoretical framework and analytical pillars - Mathematical formalization - Clustering criteria - Validation and metrics

1.3.2 D3.2 - Algorithm Implementation

Implementation of the algorithm in Python/R with: - Documented source code - Complete test suite - Jupyter Notebooks for exploratory analysis - Integration with WP2 infrastructure

1.3.3 D3.3 - Results Validation

Validation report with: - Comparison with existing territorial aggregations - Parameter sensitivity analysis - Statistical validation - Regional case studies

1.4 Status

In preparation - Documentation will be available during the implementation phase (M12-M18)

1.5 Links

- ← Back to Home
- WP2 - Data Lake - Data infrastructure for the algorithm
- WP5 - Simulator - Use of SLO results

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