



Sovereign by Design

Recommendations for the European Union on rural data, artificial intelligence and territorial capability

Outcome of the PoliRuralPlus Policy Brief, built on three years of PoliRuralPlus work and the development of JackDaw GeoAI solutions

Karel Charvat, CCSS | Pavel Kordik, FIT CVUT



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101136910

Built on three years of evidence and technology

These recommendations are the outcome of the **PoliRuralPlus Policy Brief**.

3 years

of PoliRuralPlus work with rural and urban communities, regional authorities, farmers, enterprises and citizens

10 pilot regions

from Ireland to Malta and from Finland to Spain, each with its own regional action plan

JackDaw

GeoAI solutions developed and tested in real use, turning European, national and local geodata into answers people can check

Not theory: lessons from what worked, what failed and what Europe must fix.

THE CORE MESSAGE

Europe must be able to govern its own rural data and artificial intelligence.

*Not rent it. Not merely host it. **Govern it.***

1

Control

Who owns the data, the models and the exit route.

2

Competence

People able to question, verify and correct the machine.

3

Continuity

Services that outlive the project that built them.

Hosting in Europe is not sovereignty

WHAT LOOKS SOVEREIGN

Servers located in Europe

A local interface on a foreign model

Open-source code released once

A positive pilot workshop

Answers translated from English



WHAT IS SOVEREIGN

Proven ability to export, restore and switch supplier

Documented, replaceable models under European control

Funded maintenance, hosting, security and support

Verified performance and sustained everyday use

Models that work in local languages, terms and place names

Public money must buy control, not just access.

Seven decisions for Europe

1

**Make data sovereignty
enforceable**

2

**Build European
solutions and the
capacity to run them**

3

**Give national
geoinformation
strategies real authority**

4

**Treat artificial
intelligence literacy as
infrastructure**

5

**Prove performance
before scaling**

6

**Fund territorial
outcomes, not
platforms**

7

**Turn strategies into
financed action**

1 Make data sovereignty a condition of every euro

EVERY PUBLICLY FUNDED SERVICE MUST DECLARE

- Who owns the data and who may access it
- Which reuse is permitted, and which is not
- Where the data is processed
- Which model providers are used
- Every external dependency in the chain

Protect personal and commercially sensitive data while enabling accountable sharing.

BEFORE ACCEPTANCE, PROVE IT

Export the data.

Restore the service.

Replace the supplier.

If any test fails, the service is not accepted.

Extend metadata to models and agents: record origin, valid scope, permissions and limits, and check they are enforced across the whole workflow.

2 Build European, and keep it running

1

FUND

- European small and medium-sized enterprises
- Research organisations and public infrastructures
- Open-source communities
- European models in every local language

2

REQUIRE

- Documented, open interfaces
- Clear licences
- Replaceable components
- A credible exit plan

3

SUSTAIN

- Shared European computing where performance, security and cost justify it
- Local deployment where it serves users better
- Maintenance and user support for the whole service life

A launch is not a service. Europe must fund the years after it.

3 Give national geoinformation strategies real authority

European layer

Shared, interoperable components and open standards

National layer

Authoritative reference data, common identifiers, update duties

Regional and local layer

Local knowledge, classifications and accuracy

- Connect artificial intelligence, data, rural development and education strategies in one funded geoinformation plan
- Name a lead authority and assign regional responsibilities
- Build on European spatial data rules and open standards
- Keep national classifications and local knowledge when integrating European data

Continental coverage cannot replace local accuracy.

People and proof come before scale

4 Literacy is infrastructure

- Do not assume rural society is ready: fund recurring, practical training
- Farmers, enterprises, municipal staff, advisers, teachers and data stewards
- Teach source checking, uncertainty, privacy and spotting unsupported answers
- Measure tasks completed, not attendance
- Keep a human route, local language and essential skills without the machine

5 Prove it before you scale it

- Separate prototype, technical check, user validation and real impact
- Test whole workflows against reference data, missing data and failures
- Record methods, versions and uncertainty
- Competent human approval for consequential decisions
- A clear route to challenge and correct results

From platforms to outcomes, from plans to money

6 Fund territorial outcomes, not platforms

- Tie digital investment to food systems, public services, circularity, culture, water and climate resilience
- Before expansion: a service owner, a data steward, an operating budget and a continuity plan
- Pay for preparation, local coordination and participation of small organisations

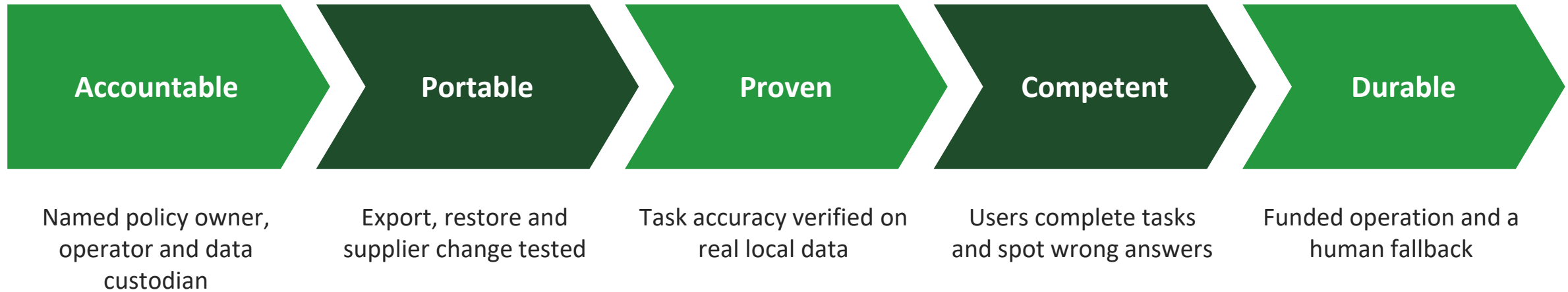
Platform use is not economic or environmental gain.

7 Turn strategies into financed action

- Every measure names its responsible actor, cost, financing and timetable
- Community endorsement is not institutional adoption: secure both
- Stress-test plans against climate, energy, price and demographic shocks

A list of funding programmes is not a financing commitment.

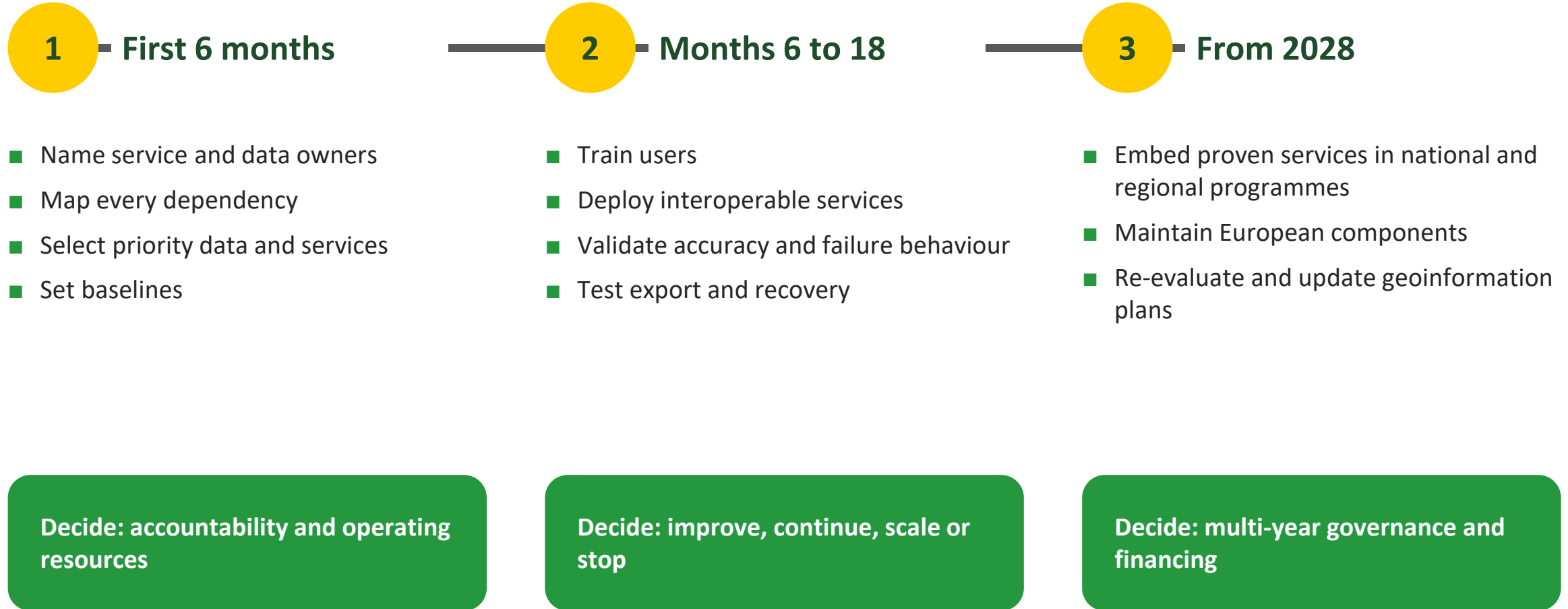
The sovereignty test: five gates before any service scales



Release further European funding only when all five gates are passed.

Hosting location alone never passes the test.

A phased path to sovereign rural services



THE BOTTOM LINE OF THREE YEARS OF POLIRURALPLUS AND JACKDAW

Sovereignty is a capability, not a location.

Europe should scale only what it can control, understand and sustain.

Invest together

in European technology, national geoinformation and local institutions.

Scale selectively

only services that are controlled, competent, reliable and continuous.

Judge by outcomes

food systems, public services, climate resilience and community life.

Speak the local language

services must work in the languages, terms and place names of every region.

Pilot regions: what to do next (1 of 2)

Ireland

County Monaghan

Give the regional circular economy hub permanent staff and multi-year funding. Build a trusted resource inventory with commercial confidentiality, linked to community energy.

Slovakia

National rural policy

Embed artificial intelligence readiness and rural proofing in rural strategy. Launch a literacy programme through municipalities, schools and libraries; every public service keeps a human route.

Greece

Central Greece and the islands

Integrate artificial intelligence advice into agricultural advisory services while keeping qualified advisers in charge. Back Greek-language European models and local digital champions.

Italy

Apulia

Let producers govern short food supply chain platforms. Farmers keep control of business data, with no model training on it without consent. Fund logistics and collection points alongside software.

Finland

Mallusjoki

Fund a paid community coordinator and shared governance of event data. Back European open-source tools only with secured hosting, security and maintenance; stop relying on unpaid volunteers.

Pilot regions: what to do next (2 of 2)

Czechia

Czech and Bavarian border

Give the Klatovy Innovation Hub a mandate and multi-year funding. Connect authoritative national land, cadastral and forestry data to regional services and a cross-border training academy.

Germany

Bavaria

Run a joint Bavarian and Czech service programme with bilingual support. Require disclosure of model and interface dependencies, tested alternatives and German-language validation.

Spain

Sierra y Mancha Conquense

Adopt a joint municipal plan for the Segóbriga, Valeria and Ercávica heritage corridor. Protect community rights over cultural content; measure benefit to residents, not visitor numbers.

Latvia

Vidzeme

Agree a common indicator dictionary before expanding dashboards. Keep methods public and reproducible, fund data stewards, and have people validate every policy comparison.

Malta

Malta and Gozo

Create shared data stewardship for smallholders with full export rights. Localise European tools in Maltese; prove irrigation advice against measured water use before claiming savings.

Name of the project:

Fostering Sustainable, Balanced, Equitable, Place-based and Inclusive Development of Rural-Urban Communities' Using Specific Spatial Enhanced Attractiveness Mapping ToolBox

Thank You for Your Attention



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101136910