MINISTRY
OF ENVIRONMENT
OF THE SLOVAK REPUBLIC

From INSPIRE Compliance to a User-Oriented NSDI

Slovakia's Experience and Outlook

Martin Tuchyňa

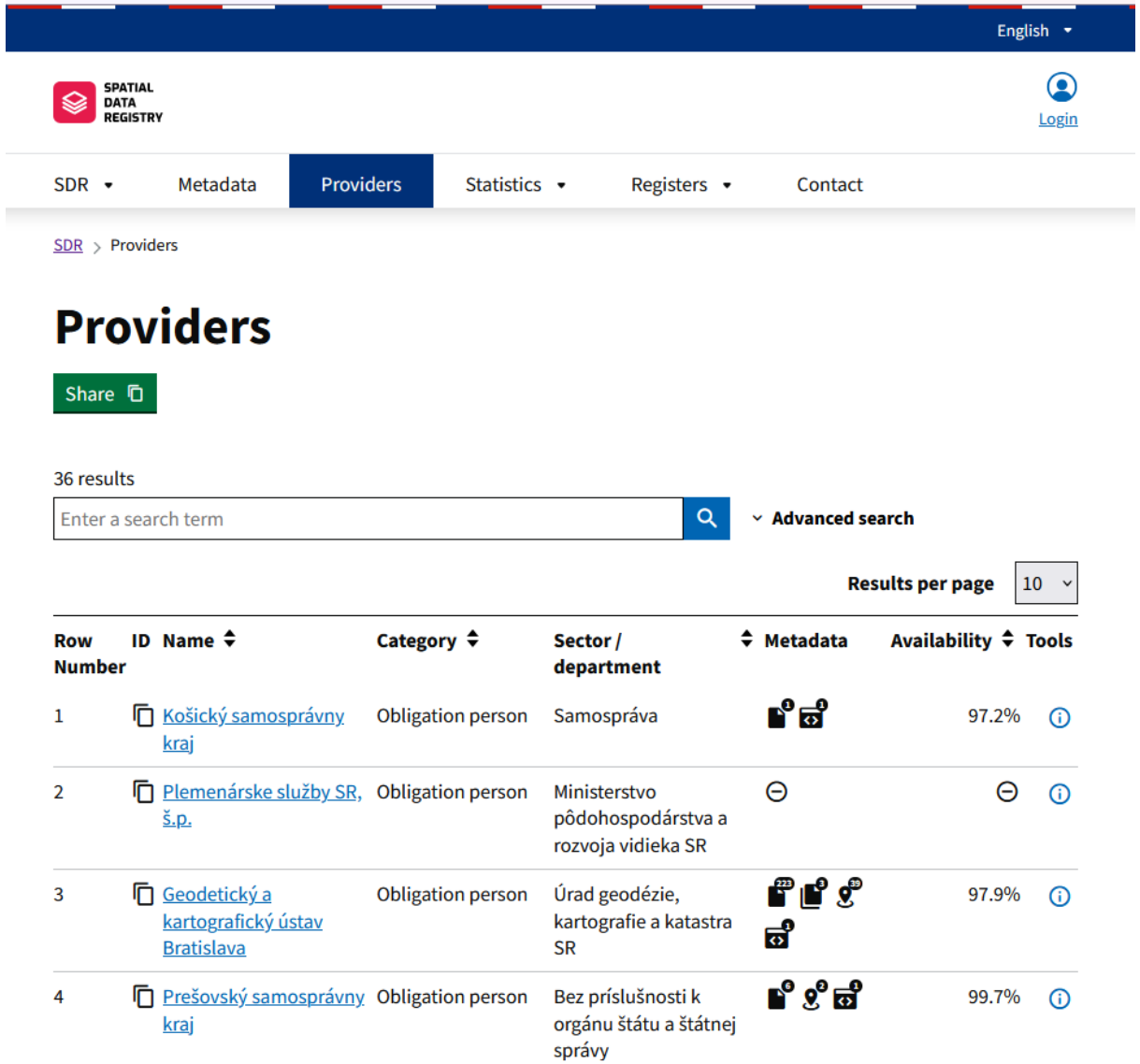
International Spatial Data Workshop

Budapest, 08.10.2026

"An infrastructure becomes valuable when people and machines can actually use it."

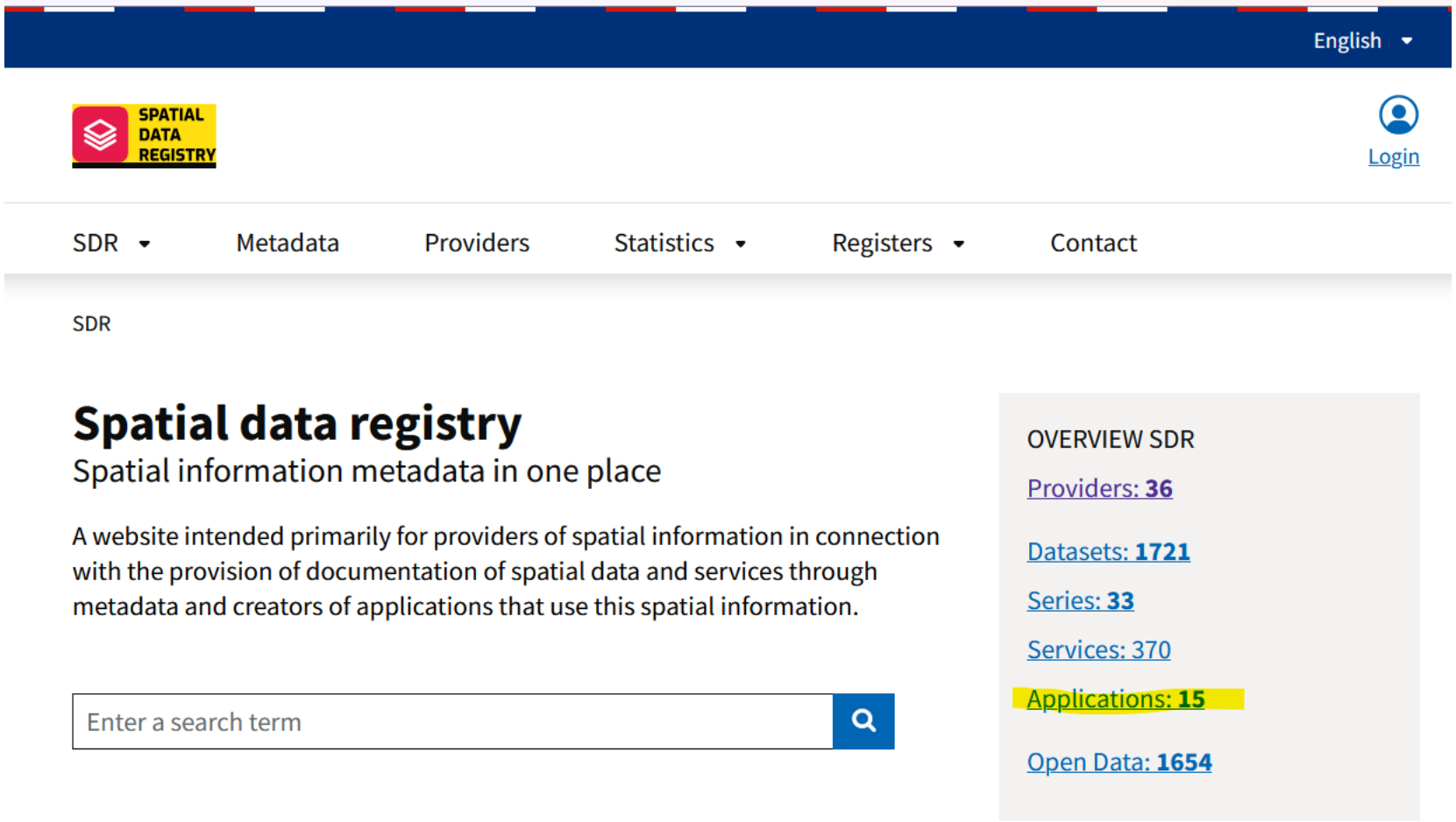
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We know our providers in detail



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1,721 datasets, 370 services – only 15 applications



Our journey: from obligation to ecosystem

PHASE 1

Comply

Transposing INSPIRE

- Act No. 3/2010 Coll. on NIPI, amended in 2015
- Obliged persons, metadata and network services
- Annual monitoring and Country Fiche

PHASE 2

Build

Shared national components

- Spatial Data Registry (RPI 2.0 deployed 2023)
- National Geoportal, renewed in 2023
- INSPIRE validator and GitLab-based provider support

PHASE 3

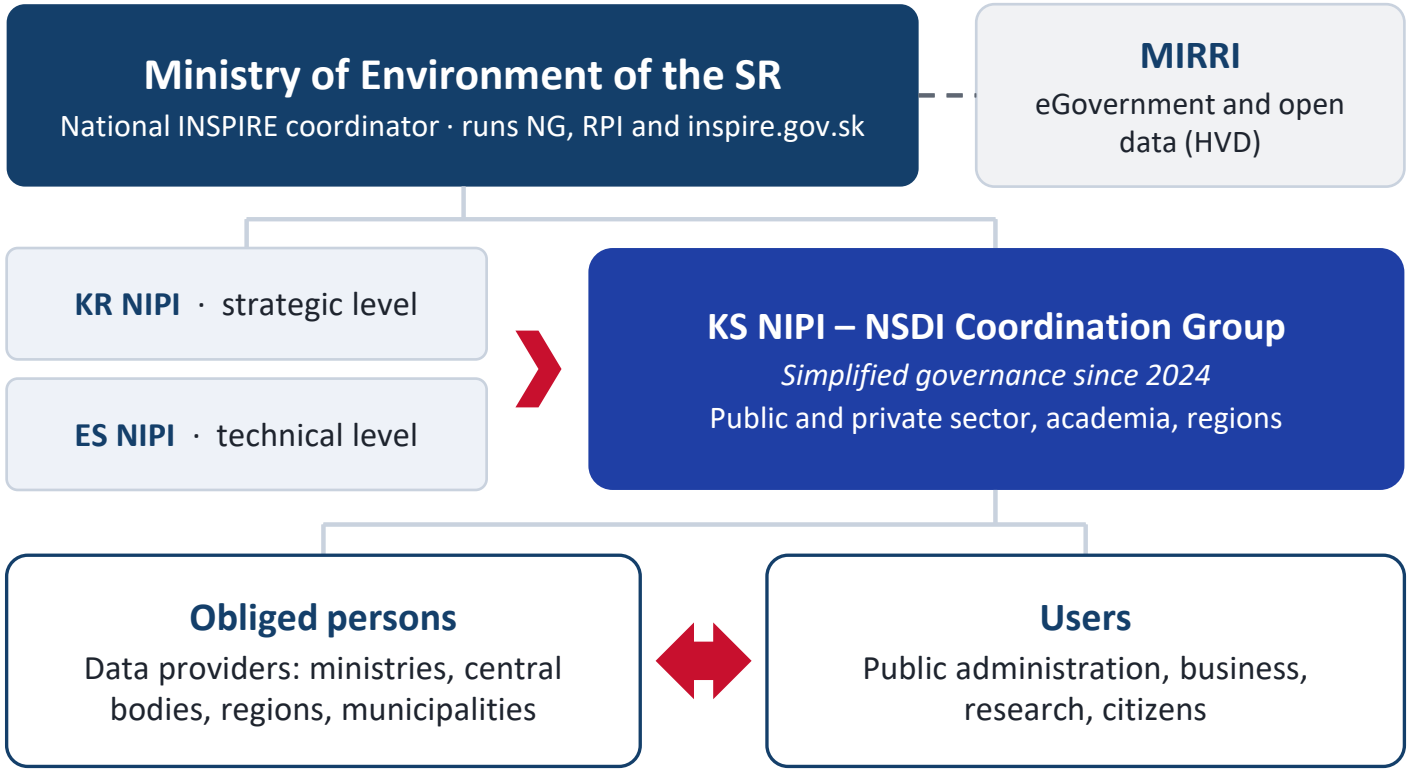
Serve

A user-oriented ecosystem

- Synergies with open data and High-Value Datasets
- APIs, Earth observation, regional and local SDIs
- Part of public-sector digital transformation

Compliance was the starting line – not the finish line.

Governance: one mandate, simplified coordination



KS NIPI established by Minister's Decision No. 28/2024-1.16.1 · Source: INSPIRE Country Fiche SK 2025

WHAT WORKS

- Act No. 3/2010 Coll., updated 2016 and 2024
- KS NIPI: one simplified coordination body
- Shared tools, transparent monitoring

STILL HARD

- Capacity and skills at providers, esp. regional and local
- Demonstrating costs and benefits
- Proactive involvement

Key infrastructure components

USERS

People
Public, experts, decision makers

Machines
Apps, analytics, AI agents

INFORMATION

inspire.gov.sk – NSDI information website
Guidance, news, coordination and monitoring documents

ACCESS

National Geoportal (NG)
Search, view, compose maps

Network services & APIs
Discovery, view, download

METADATA

Spatial Data Registry (RPI)
Metadata · registers · validation · monitoring – the single source of truth

DATA

Data and services of obliged persons and voluntary contributors
Distributed – maintained at source by each provider

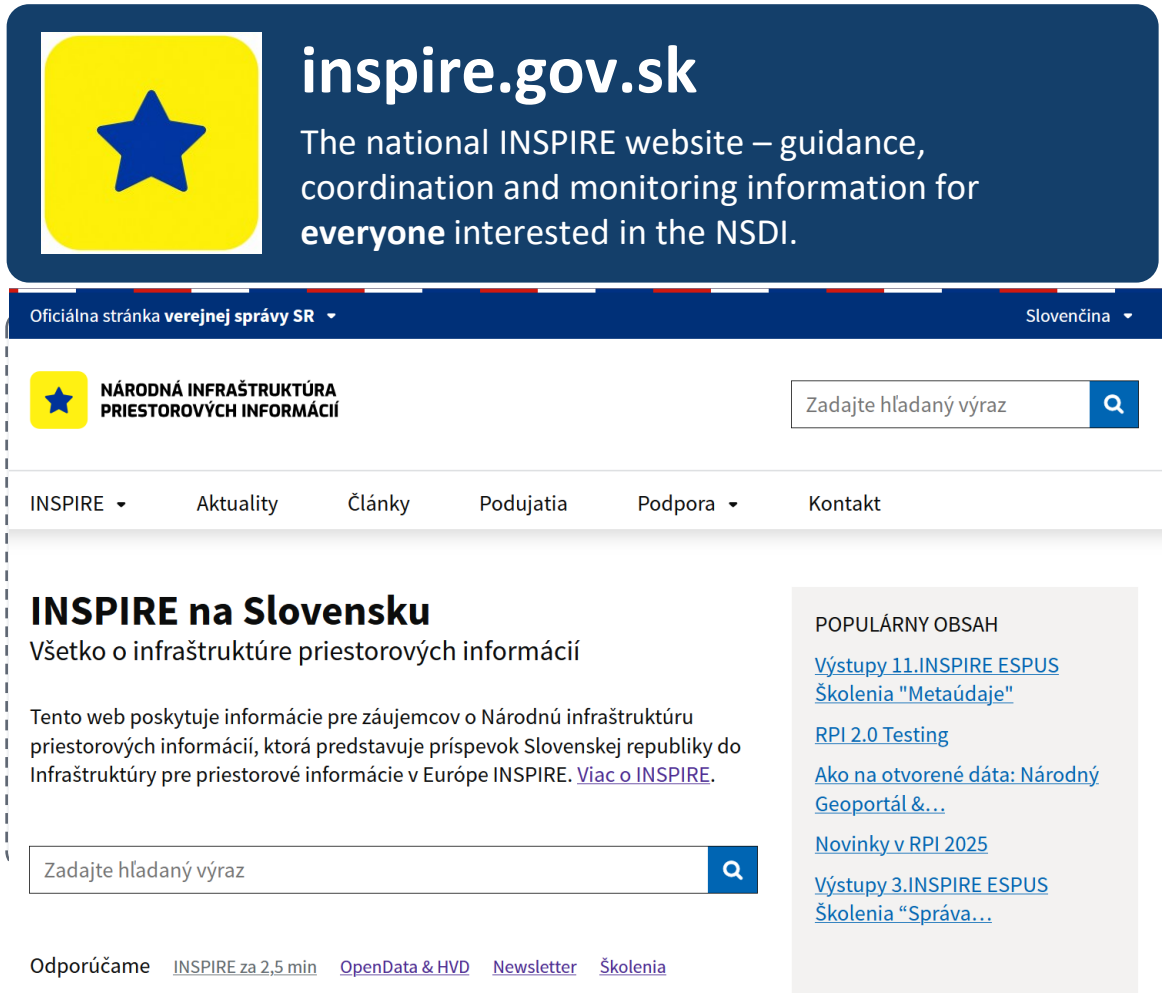
BEYOND THE NSDI

data.europa.eu
Harvesting to EU data portal

data.slovensko.sk
Harvesting to SK Open data portal

EO platforms (next step)
Copernicus, Destination Earth

inspire.gov.sk: the information hub of the NSDI



Learn

INSPIRE and NIPI explained – legislation, obligations, basics

Coordinate

KS NIPI, KR NIPI and ES NIPI – meetings, records, presentations

Monitor & report

Annual monitoring, Country Fiche and consultations

Stay connected

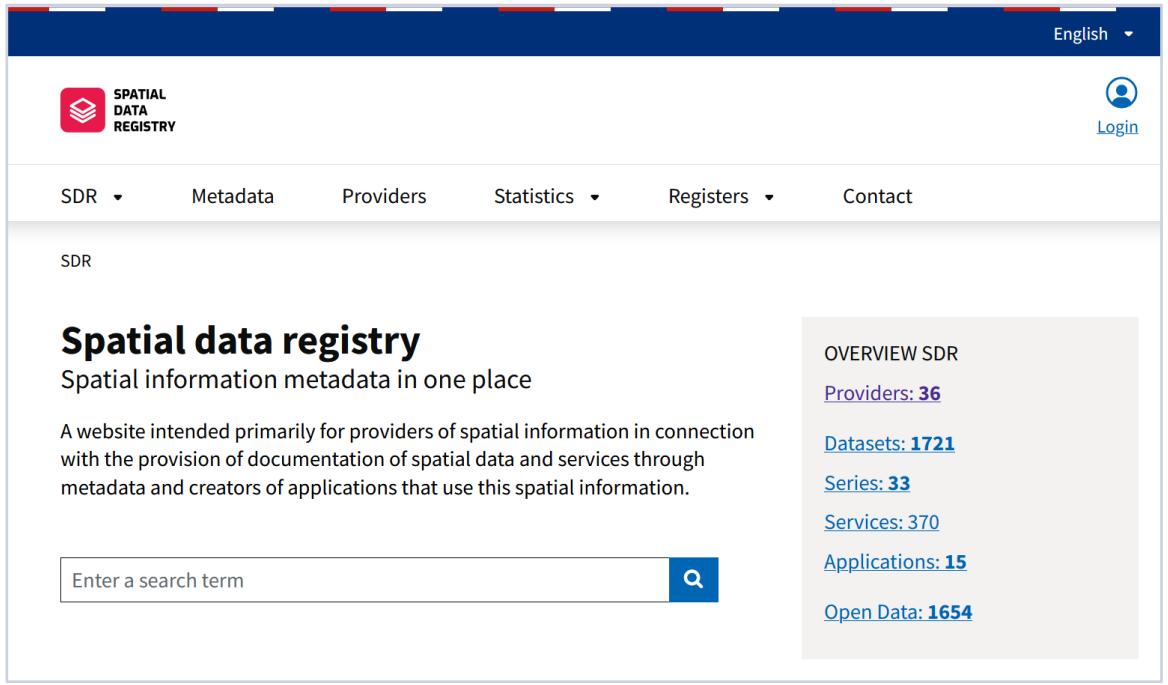
News, events and links to NG, RPI and GitLab support

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Spatial Data Registry (RPI): source of truth for providers

Spatial Data Registry (RPI)

A unified environment where **providers** create and manage metadata and registers – the backbone NG and every other component reads from.



Metadata management

One place for all obliged persons to create, edit and publish metadata

Registers

Providers, datasets and services described consistently, INSPIRE artefacts

Validation & quality

INSPIRE validator; metadata–service linkage checks

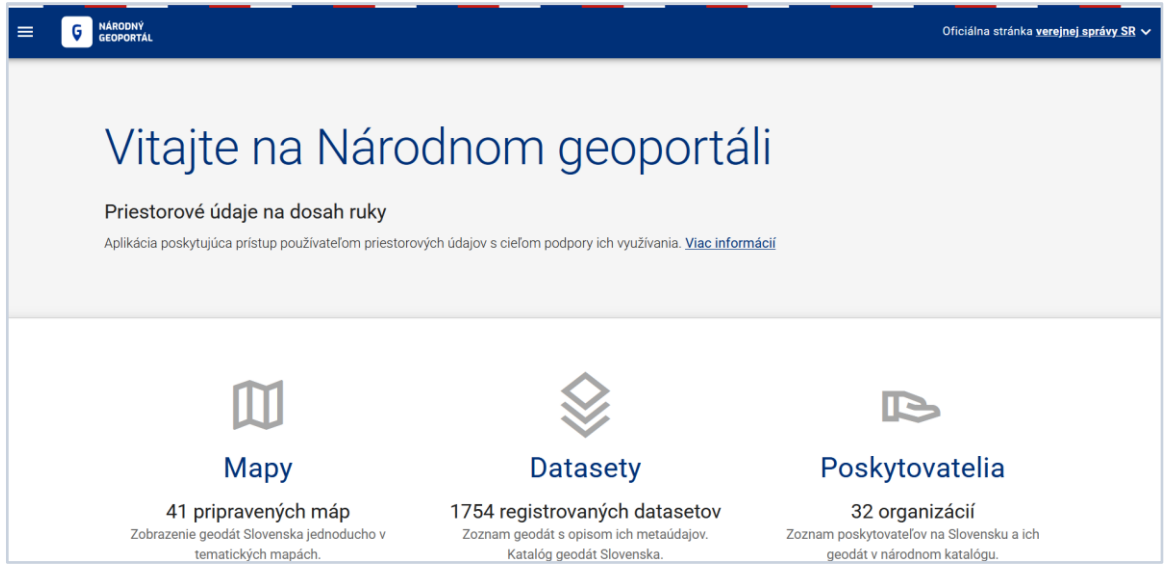
EU discovery & monitoring

Harvested to the EU data portal; indicators computed from metadata

National Geoportal: the front door for users

National Geoportal (NG)

Spatial data at your fingertips – the public entry point to ready-made maps, datasets and providers, built for **users**.



Discover

Search the national catalogue by place, theme or keyword

View & compose

Preview services and create your own digital maps, comparisons and animated timeseries

Access

Go straight to download services and data

Learn

Guidance, news and support for providers and users

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Lessons learned

01

Compliance ≠ use

Conformant services do not automatically mean used data.

02

Mandate needs capacity

Obliged persons need people, skills and funding – not only duties.

03

Shared components pay off

Central RPI and Geoportal lowered the barrier for small providers.

04

Metadata as broker

Metadata connects data with users – but only if it stays current.

05

Measure what matters

Availability, performance and use say more than counts.

06

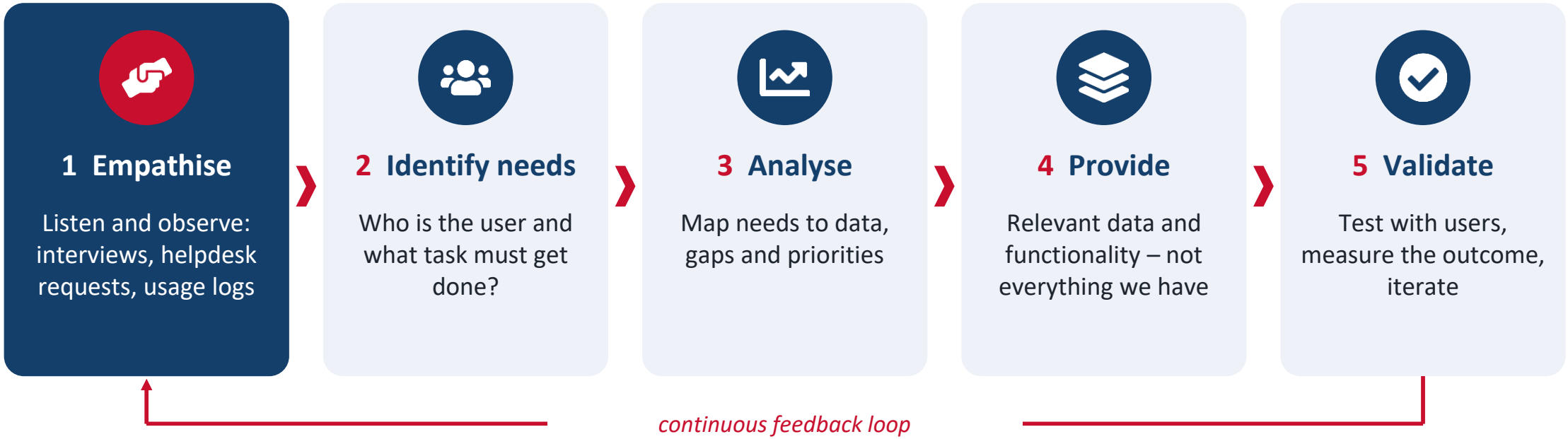
Users are diverse

Citizens, analysts, developers and machines need different interfaces.

The shift: from compliance to value

FROM		TO
Reporting to the EU	→	**Value for national users**
Services exist	→	**Services perform – availability, speed, use**
Metadata completeness	→	**Fitness for use and discoverability**
A portal for experts	→	**Interfaces for humans and machines**
A stand-alone SDI	→	**Part of the national data ecosystem**

Empathy first: start from the user's problem



*Ask **"What problem are you trying to solve?"** – not "Which INSPIRE theme do you need?"*

Future directions

Human & machine interfaces

- User-centred Geoportal: search by need
- OGC APIs, STAC and persistent URIs
- AI-ready metadata for agents

Infrastructure monitoring

- Automated availability and performance checks
- Usage analytics and feedback to providers
- Less manual effort in INSPIRE reporting

Earth observation integration

- Copernicus and national EO data in RPI
- Reference data combined with EO products
- Links to Destination Earth and data spaces

Public-sector digital transformation

- NSDI anchored in national IT governance
- High-Value Datasets via data.slovensko.sk
- EU data acquis, INSPIRE revision

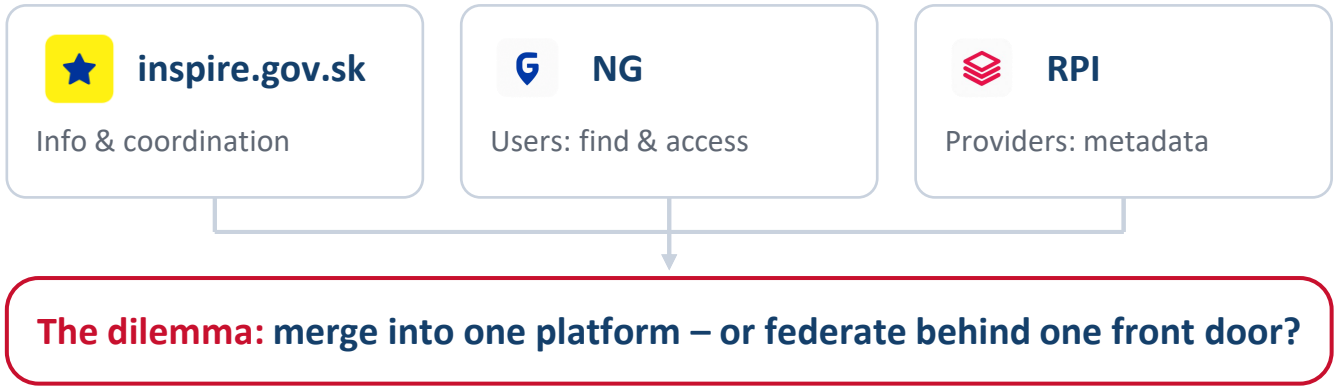
User-Oriented NSDI: one front door?

WHAT WE MEAN

An NSDI organised around users' tasks (agendas, life situations).

- One entry point, one search, one support
- Needs-driven content in plain language
- Human and machine interfaces on one source of truth
- Success measured by use and satisfaction

TODAY: THREE SITES, THREE AUDIENCES



The dilemma: merge into one platform – or federate behind one front door?

A Merge

One platform, one experience

+ Simplest for users, one brand
– Big-bang migration, mixed audiences

B Federate

One front door, many tools

+ Gradual, lower risk
– Coherence needs strong governance

Key takeaways

1

Compliance built the foundations

Legal mandate, shared registry, national geoportal.

2

Value comes from use

We now measure performance and users – not only conformity.

3

The NSDI is part of a wider ecosystem

Earth observation, open data, digital government and AI.

Thank you

Questions & discussion

inspire.gov.sk

inspire@enviro.gov.sk

"Compliance is the foundation – user value and satisfaction is the destination."