



ELF EUROPEAN
LOCATION
FRAMEWORK

ELF- Providing Platforms for Accessing INSPIRE Based Reference Data

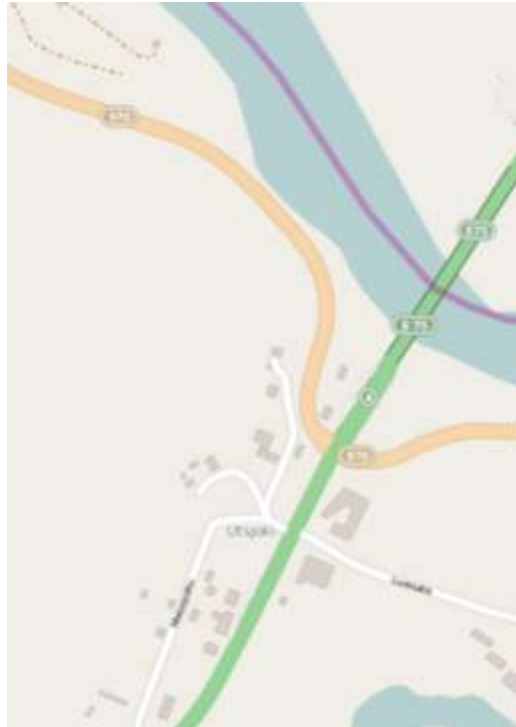


Presentation to: Geospatial World Forum 25-29 May 2015

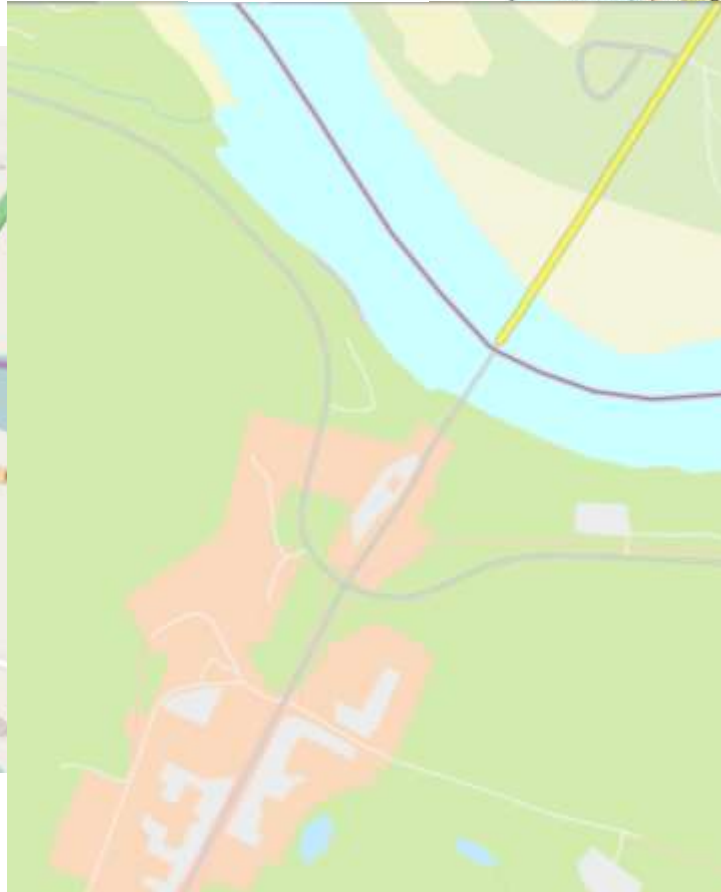
By: Antti Jakobsson

Date: 27^h May 2015

Why ELF?



Crowdsourcing



Authoritysourcing = ELF



National Service

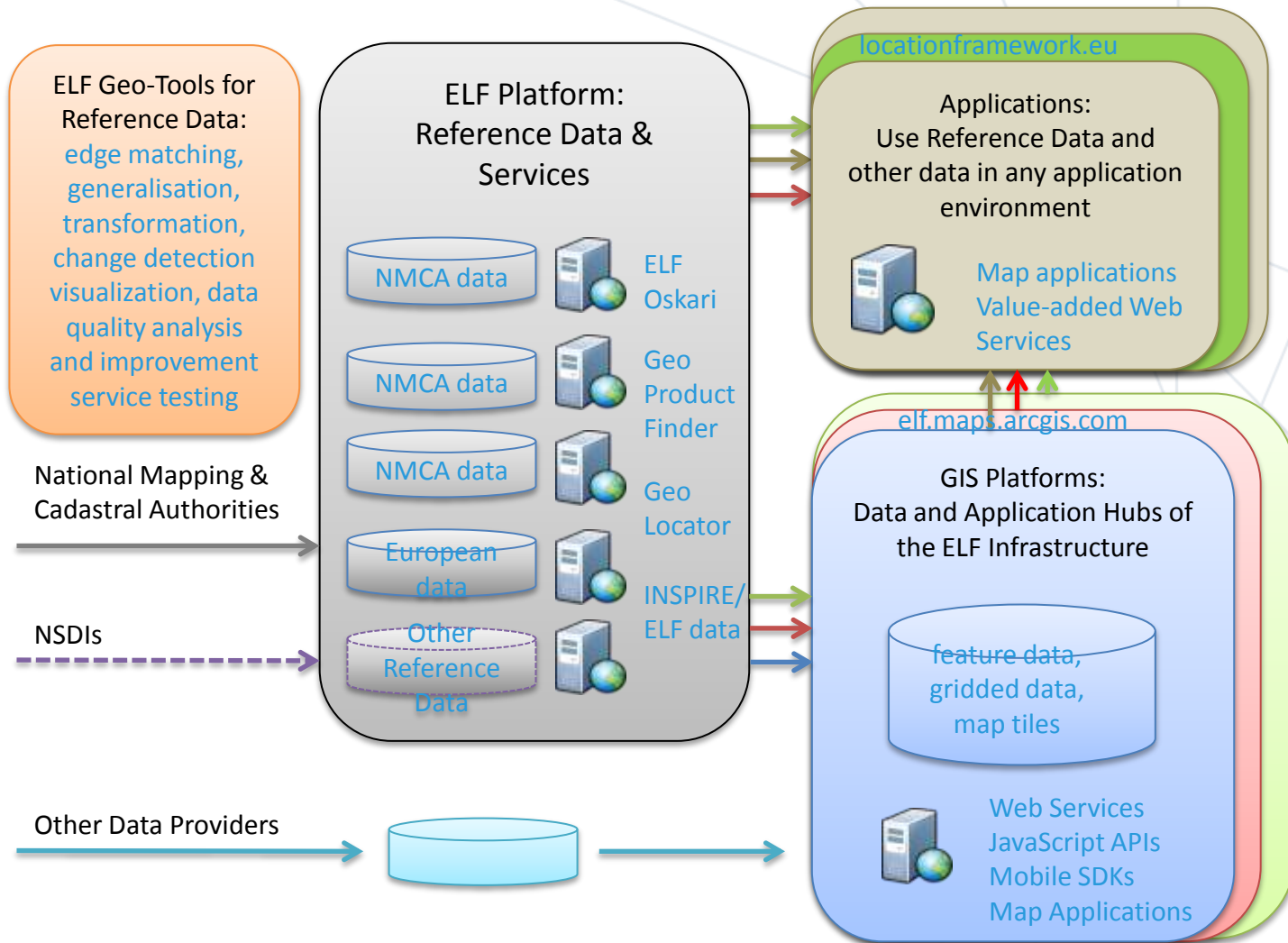
ELF project in a nutshell

- 30 partners, 13 National Mapping Authorities + 10 more joining
- 19 countries
- Part funded by the ICT-PSP budget , 13 million euro
- Runs between 2/2013-2/2016 (8/2016 proposed)
- To deliver the European Location Framework (ELF) required to provide up-to-date, authoritative, interoperable, cross-border, reference geo-information for use by the European public and private sectors

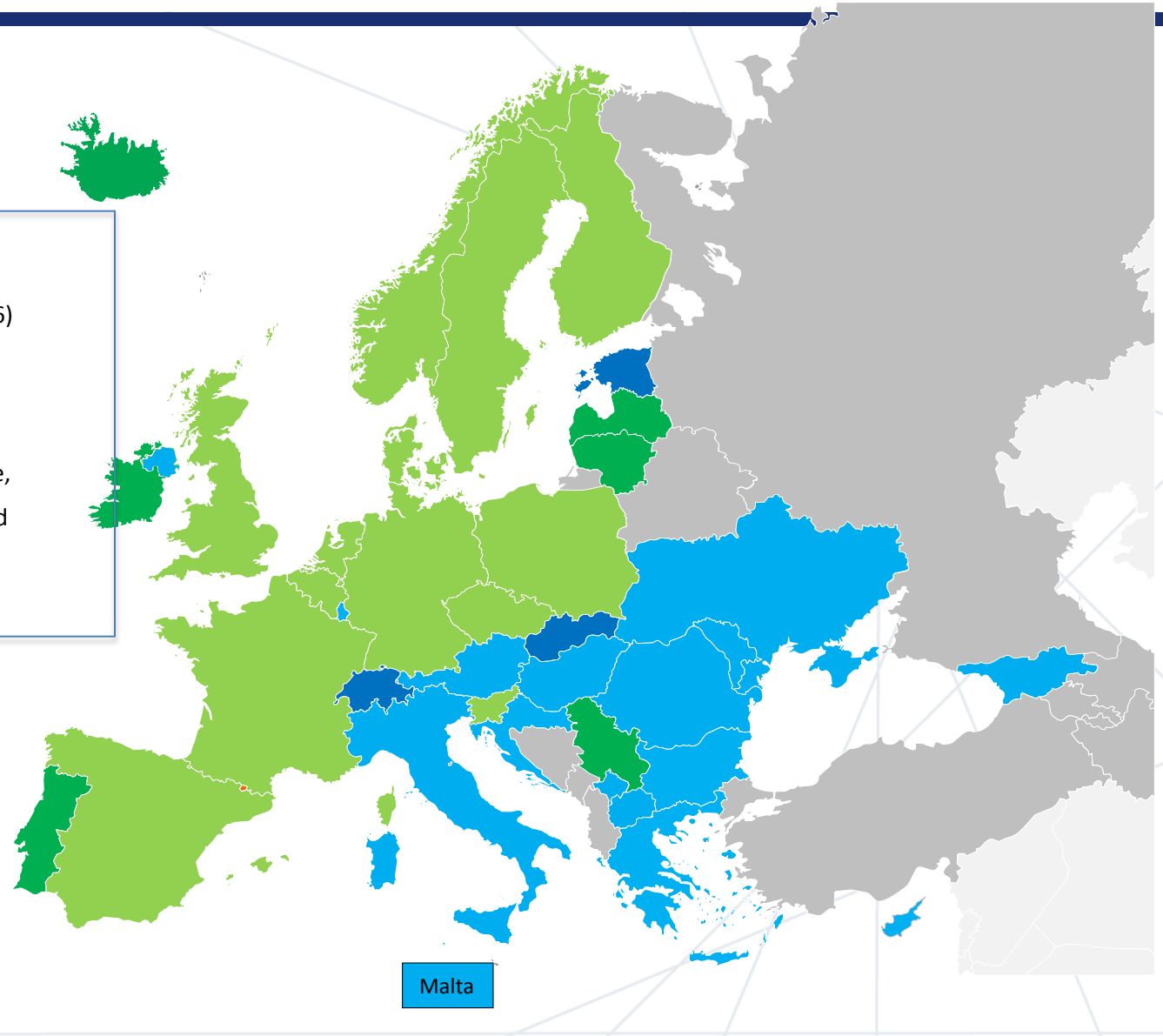
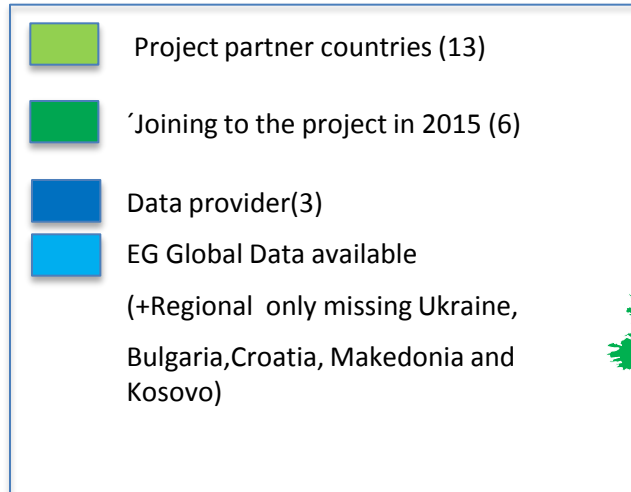


www.elfproject.eu

ELF Components



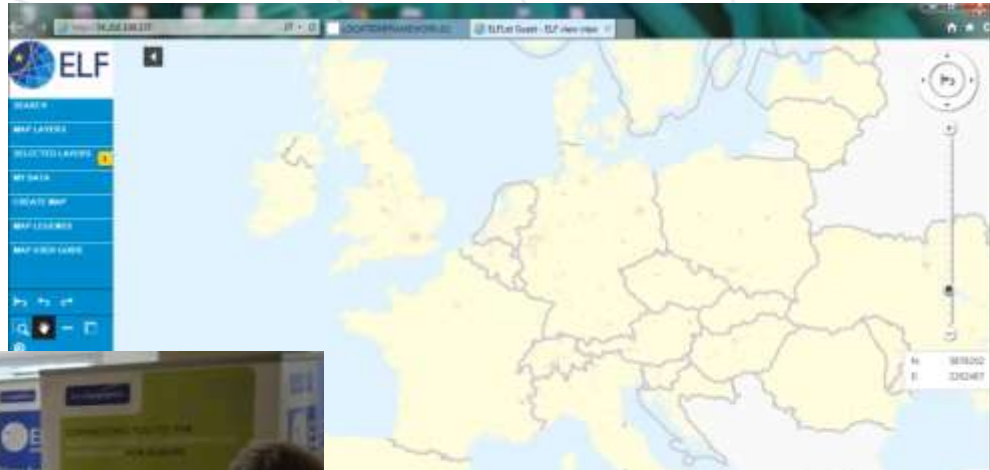
ELF Data in 2017



EuroGeographics EBM/ERM and EGM

MASTER LoD0	Master LoD1/2	REGIONAL	GLOBAL
Cadastral Parcels (CP)	Administrative Units (AU)	Administrative Units (AU): AU & NUTS	Administrative Units (AU)
Addresses (AD)	Hydrography (HY)	Hydrography (HY): HY & SR	Hydrography (HY): HY & SR
	Sea Regions (SR)		
	Transport Networks (TN)	Transport Networks (TN)	Transport Networks (TN)
Geographical Names (GN)	Geographical Names (GN)	Geographical Names (GN): GN & POP	Geographical Names (GN): GN & POP
Elevation (EL)	Elevation (EL)	Elevation (EL)	Elevation (EL)
	Land Cover (LC)	Land Cover (LC): POP & VEG	Land Cover (LC): POP
Buildings (BU)	Buildings (BU)	Buildings (BU)	
	Protected Sites (PS)	Protected Sites (PS)	
		Miscellaneous (MISC)	

www.locationframework.eu



**ELF preoperational launch at the INSPIRE conference
June 2014**

Locationframework.eu

- Showcase Application demonstration what is available
- ArcGIS Online access point
- Documentation (access point to services)
- (Registration)
- (GeoProductFinder)

The screenshot displays the homepage of the European Location Framework (ELF) service. At the top, there is a navigation bar with the ELF logo and the text "EUROPEAN LOCATION FRAMEWORK". To the right of the logo, there are links for "Showcase Application", "Demos", "Terms of Use", "Links", "Contact", and "ELF Project". Below the navigation bar, there is a row of flags representing various European countries. The main content area is divided into several sections:

- Welcome to the European Location Framework (ELF) service:** A blue box containing text that describes the service as a single point of access for harmonised reference data from National Mapping, Cadastre and Land Registry Authorities. It mentions that the website is being developed as part of the ELF Project to create the technical infrastructure for delivering authoritative, interoperable, cross-border geospatial reference data. It also states that global and regional level reference data is currently available along with a showcase application demonstrating search and selection options. The service is jointly funded by the European Commission's Competitiveness and Innovation Framework Programme and the Project Partners. For more information, it directs users to www.elfproject.eu.
- See the power of ELF:** A section with four buttons: "Showcase Applications", "ELF in ArcGIS Online", "Documentation", and "Application Developers". Each button has a gear icon.
- A window into ELF:** A section featuring a map of Europe with various cities marked, including Glasgow, Edinburgh, Belfast, London, Paris, Frankfurt, Munich, and many others.
- Twitter Feeds:** A section with a blue header and a tweet from @INSPIRE_Geosports. The tweet reads: "Daily trend of the average level of ISO metadata conformity to INSPIRE by Country #inspire_eu http://t.co/YZ1pzdmi1l 4 days 17 hours ago".

Oskari Showcase app

The screenshot displays the Oskari Showcase app interface. The main area shows a map of Europe with a yellow overlay. The sidebar on the left contains a menu with the following items: SEARCH, MAP LAYERS, SELECTED LAYERS (with a notification icon), MY DATA, CREATE MAP, MAP LEGENDS, and MAP USER GUIDE. Below the menu are navigation icons, a search bar, and a login form with fields for Username and Password, and a Log in button. The bottom left corner shows the language set to English and a link to Change language. The bottom right corner displays coordinates: N: 7589971 and E: 5277847. The browser address bar shows the URL: https://54.216.109.137/.

Available services

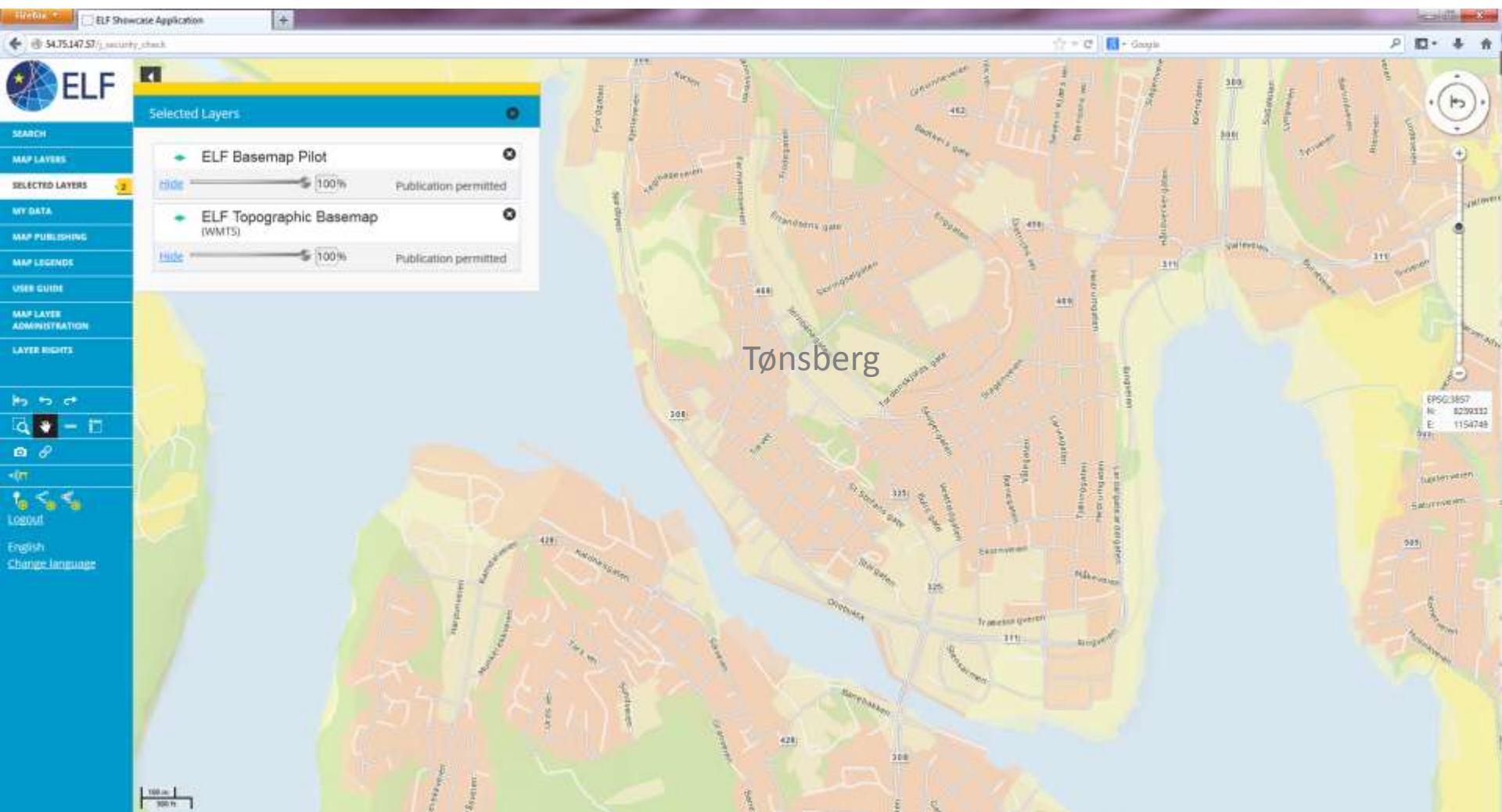
Bring your own data (for registered users)

Possibility to add thematic Data (now for example EEA Services)

Also other national Data (now for example Finnish postal code areas)

Currently 40 national services available -> 104 by end 2015

Basemap – a WMTS service populated from national WMS services



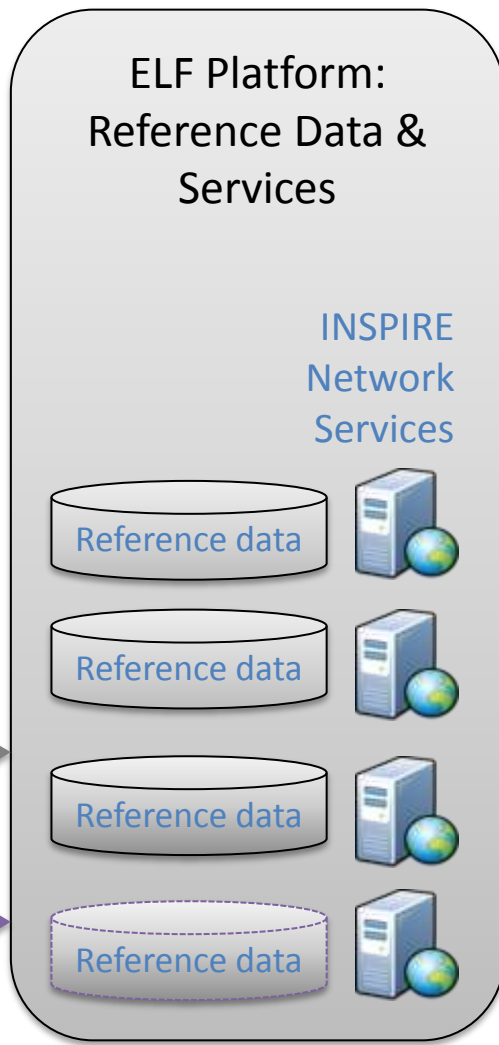
Master level now piloted – Norway, Finland, Sweden and Netherlands

1

Automated sync from ELF Platform services provided by NMCAs to ArcGIS Online using FME; includes optimization of the data for use in ArcGIS

2

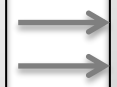
Publish the data as Hosted Feature Service in ArcGIS Online



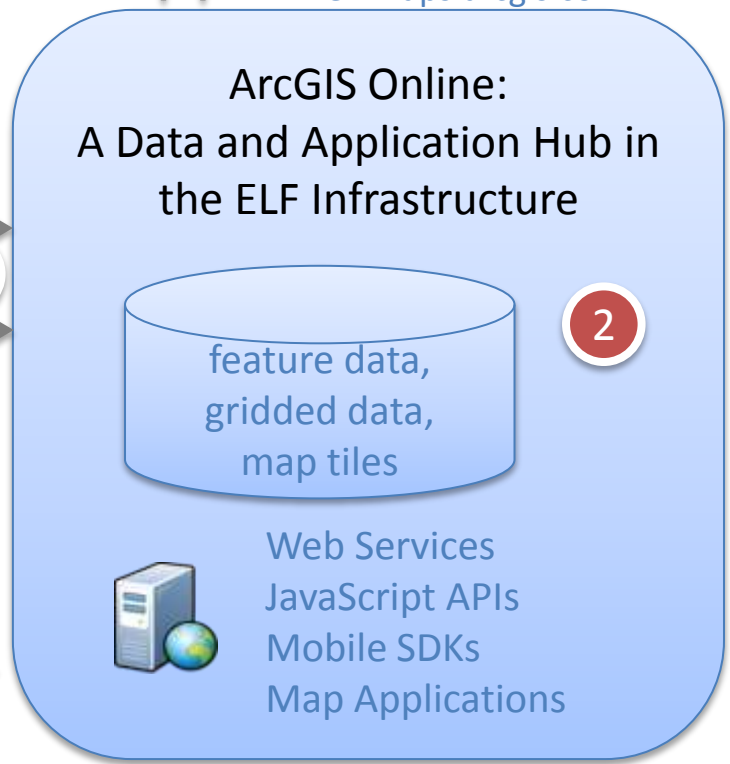
National Mapping & Cadastral Authorities

NSDIs

Other Data Providers



elf.maps.arcgis.com



2




ELF in ArcGIS Online

<http://elf.maps.arcgis.com/>



The screenshot shows the ArcGIS Online interface for the European Location Framework (ELF). At the top, there is a navigation menu with links for HOME, GALLERY, MAP, GROUPS, MY CONTENT, and MY ORGANIZATION. A search bar on the right contains the text 'Clomens' and a search icon. The main content area features a large banner with the ELF logo and the text 'EUROPEAN LOCATION FRAMEWORK'. Below the banner are four map thumbnails, each with a caption: 'Population density', 'ELF demo application with elevation points, airports and', 'ELF map apps demo: administrative and statistical', and 'ELF web map: administrative and statistical units'. Below the thumbnails is a text box with a welcome message and a paragraph about the framework's goals. At the bottom of the text box, it says 'Cloud GIS platforms like ArcGIS Online are hubs of the ELF infrastructure. They integrate feature data and'.

HOME GALLERY MAP GROUPS MY CONTENT MY ORGANIZATION Clomens

 **ELF** EUROPEAN
LOCATION
FRAMEWORK

Population density

ELF demo application with elevation points, airports and

ELF map apps demo: administrative and statistical

ELF web map: administrative and statistical units

Welcome to the European Location Framework (ELF) in ArcGIS Online - a single point of access for harmonised reference data from National Mapping, Cadastre and Land Registry Authorities for users of the ArcGIS platform. The European Location Framework aims at fostering the wider use of geo-information in Europe and enable the creation of innovative value-added services.

Cloud GIS platforms like ArcGIS Online are hubs of the ELF infrastructure. They integrate feature data and



European Commission



European Cross-Border Users

European Data Providers



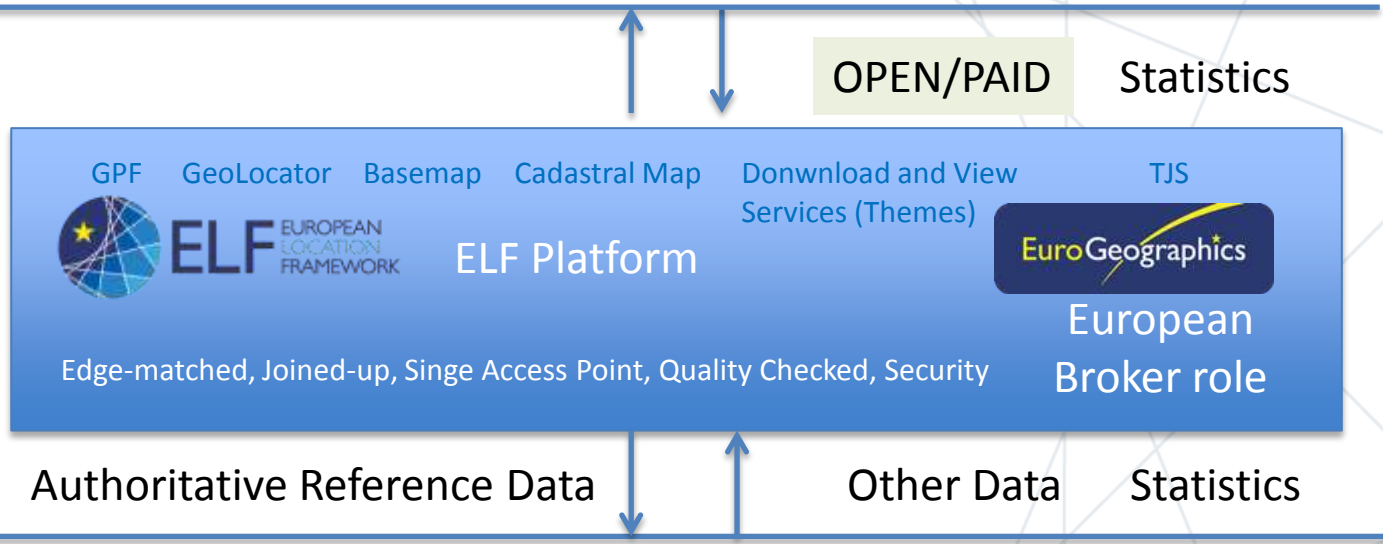
Other Directives



ISA

MS

Enablers



NMCAS (National Broker Role)

National Users

National Data Providers

A scenario – ELF-EULF-ITS



compelling transportation pilot(s)
ITS map providers – application providers

ELF (INSPIRE) TN
information
as WFS, WMS

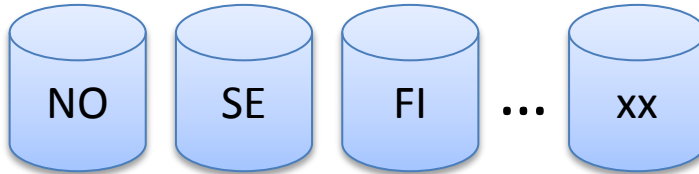


pan-European
seamless
platform

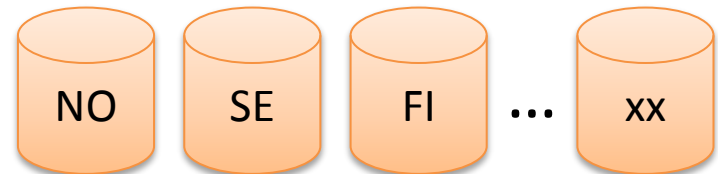
or, not necessarily
pan-European
seamless platform
for the pilot



TN-ITS
(enhanced
ROSATTE)
feed

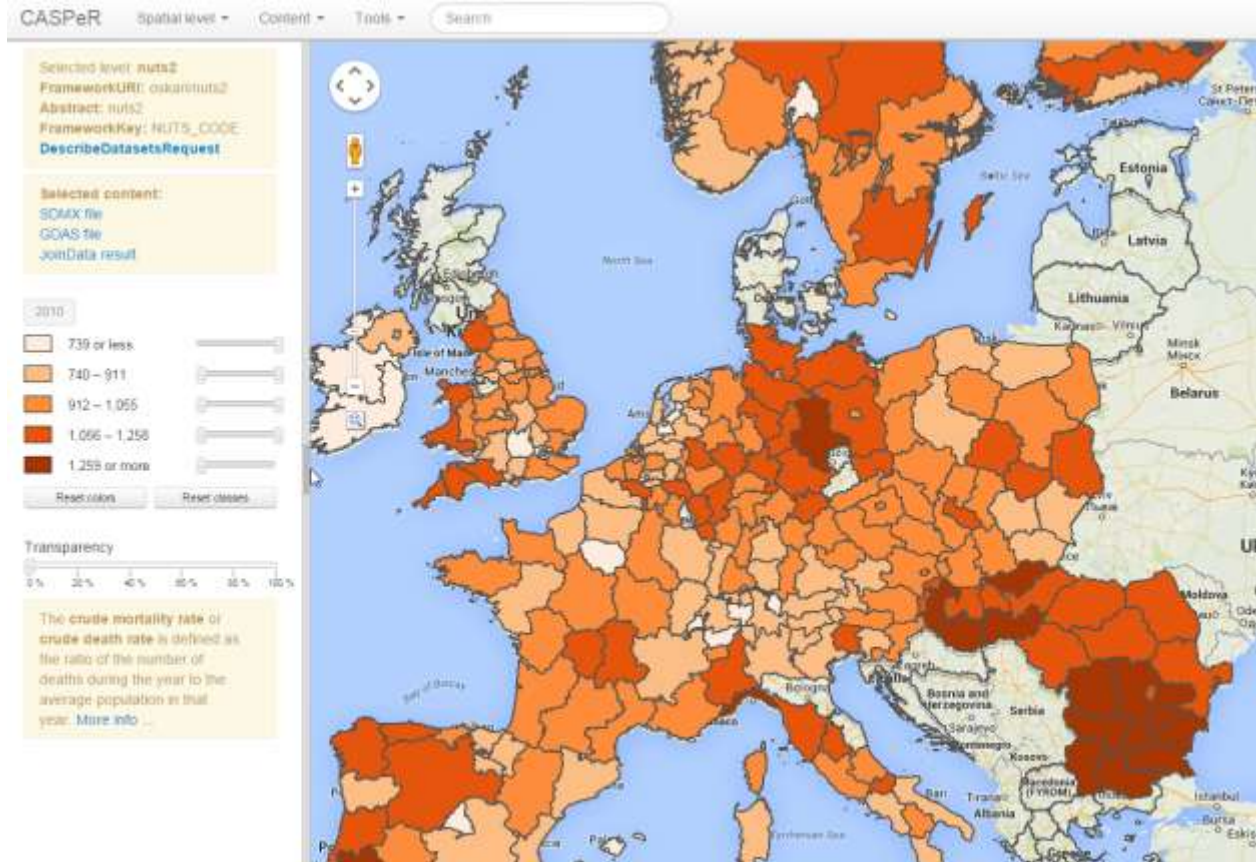


TN data coming from mapping agencies and
road administrations - combined

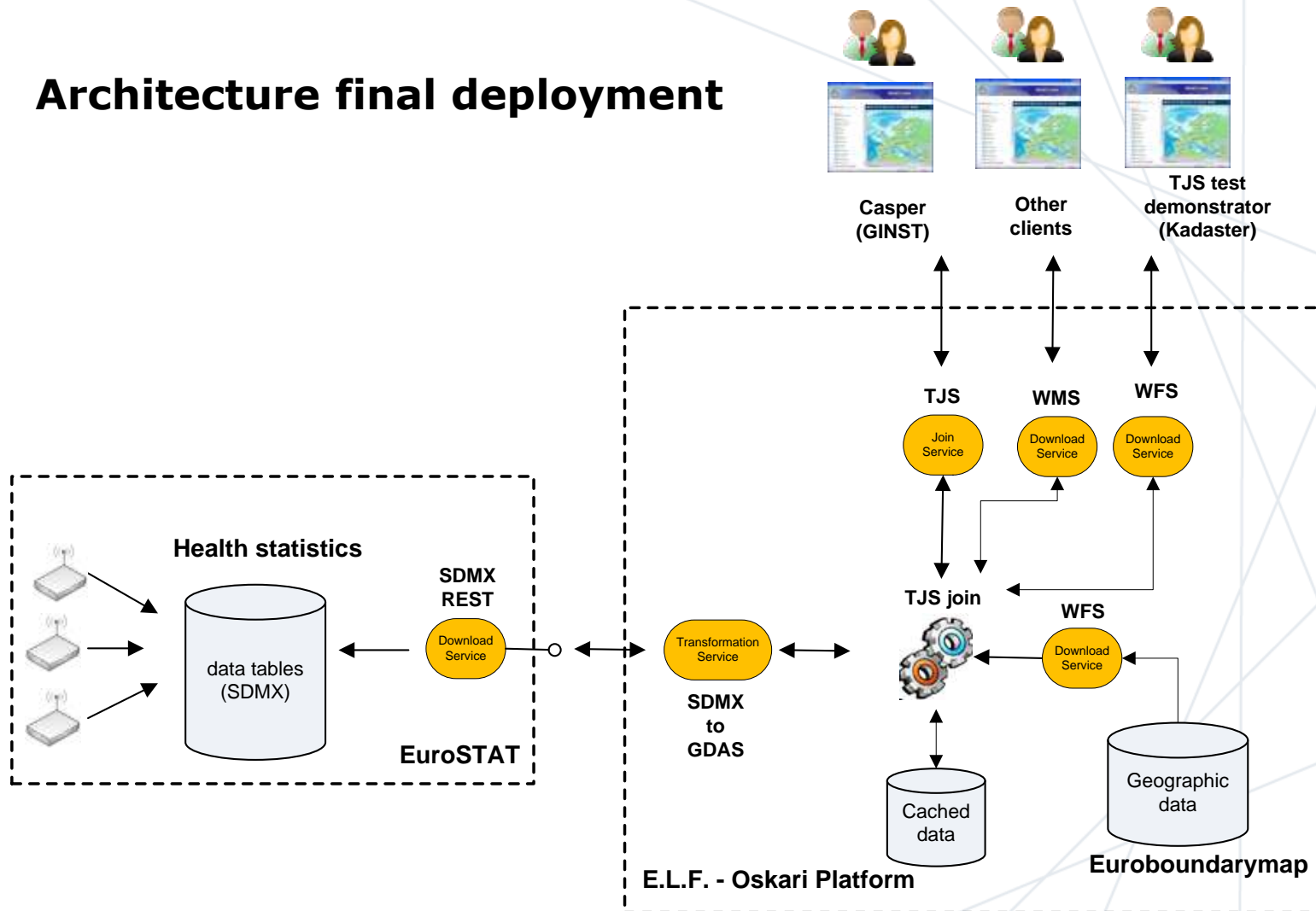


national road databases

Health Statistics application - CASPER Client



Architecture final deployment



Additional features we are working on

- **Administrative (WMS) and Topographic Basemap (WMST)**
- **ELF Cadastral Map WMS supporting Feature Info, Service uses national CP,AU,BU,AD WMS**
- **Orthophoto inclusion**
- **More national download services**
- **National Tours and ELF Innovation Award 2016**
- **Thematic Data**
- **More features in Geo Product Finder (user feedback, licenses, quality)**
- **Publish own embedded maps (using Showcase app)**
- **TJS (using EuroBoundaryMap)**

What benefits does ELF provide?



- **Creates business opportunities in Europe (startups, application developers, SMEs)**
- **Linking national INSPIRE services through ELF e.g. for EC / EEA Copernicus, PSI etc.**
- **Provides INSPIRE services on behalf of the MS;**
- **edgematching, combined services, access to services, licences, open data...**
- **Regional co-operation with neighbouring MSs**
- **Use ELF nationally when needed to use similar data from other countries e.g. Cross border security, migration trends, etc.**
- **Improves interoperability and quality of Public Sector Information**
- **ELF is already in the pre-operational phase (Applications using it already developed and extension for more applications will start 2016)**



Follow the ELF project www.elfproject.eu

Twitter @ELFProjectEU

See what is available www.locationframework.eu