ELF- Providing Platforms for Accessing INSPIRE Based Reference Data

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Why ELF?

Crowdsourcing

Authorysourcing = 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 Geo-Tools for Reference Data:
- edge matching,
- generalisation,
- transformation,
- change detection
- visualization,
data quality analysis
- and improvement
- service testing

National Mapping &
Cadastral Authorities

NSDIs

Other Data Providers

ELF Platform:
Reference Data &
Services

- NMCA data
- ELF Oskari
- Geo Product Finder
- Geo Locator
- INSPIRE/ELF data

Applications:
Use Reference Data and
other data in any application
environment

Map applications
Value-added Web Services

GIS Platforms:
Data and Application Hubs of
the ELF Infrastructure

- feature data,
gridded data,
map tiles

Web Services
JavaScript APIs
Mobile SDKs
Map Applications

Other Data Providers

locationframework.eu
elf.maps.arcgis.com

locationframework.eu
elf.maps.arcgis.com
ELF Data in 2017

- **Project partner countries (13)**
- **Joining to the project in 2015 (6)**
- **Data provider (3)**
- **EG Global Data available**

(Regional only missing Ukraine, Bulgaria, Croatia, Makedonia, and Kosovo)
### Data Content by themes and Level of Detail

#### EuroGeographics EBM/ERM and EGM

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<th>MASTER LoD0</th>
<th>Master LoD1/2</th>
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<th>GLOBAL</th>
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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)
Oskari Showcase app
Available services

Currently 40 national services available -> 104 by end 2015

- Possibility to add thematic Data (now for example EEA Services)
- Also other national Data (now for example Finnish postal code areas)
- Bring your own data (for registered users)
**Basemap** – *a WMTS service populated from national WMS services*

Master level now piloted – Norway, Finland, Sweden and Netherlands
Automated sync from ELF Platform services provided by NMCAs to ArcGIS Online using FME; includes optimization of the data for use in ArcGIS

Publish the data as Hosted Feature Service in ArcGIS Online

1. NSFIs
2. National Mapping & Cadastral Authorities

ArcGIS Online: A Data and Application Hub in the ELF Infrastructure

elf.maps.arcgis.com

INSPIRE Network Services

ArcGIS Online: Value-added Web Services

Map Applications

Web Services
JavaScript APIs
Mobile SDKs
Map Applications

Other Data Providers

INSDIs

ELF Platform: Reference Data & Services

Applications: Use Reference Data and Other Data in any Application Environment

Map Applications

Value-added Web Services

data, gridded data, map tiles

feature data,
ELF in ArcGIS Online

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

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
ELFs role in European Public Services (ELF2)

European Cross-Border Users

European Data Providers

Open/Paid

Statistics

Enablers

Other Directives

ISA

MS

ELF Platform

GPF, GeoLocator, Basemap, Cadastral Map

Download and View Services (Themes)

Edge-matched, Joined-up, Single Access Point, Quality Checked, Security

Authoritative Reference Data

Other Data

Statistics

NMCAS (National Broker Role)

National Users

National Data Providers

European Data Providers

Other Data

Statistics

NMCAS (National Broker Role)

National Users

Authoritative Reference Data

Statistics
A scenario – ELF-EULF-ITS

ELF (INSPIRE) TN information as WFS, WMS

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

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

platform
Heath 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 neigbouring 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](http://www.elfproject.eu)
Twitter @ELFProjectEU
See what is available [www.locationframework.eu](http://www.locationframework.eu)