

Open European Location Services (Open ELS)

Open ELS Data Supply Activities

Activity report of Open ELS project Task 3.3

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Change Summary

Version	Date	Author/Editor	Change Summary
1.0	24/04/2019	Saulius Urbanas	First draft
1.1	29/04/2019	Saulius Urbanas	Amendments, revision
1.2	30/04/2019	Saulius Urbanas	Comments from partners, corrections

References

Ref.	Title/Version/Publication Date/Author
[1]	European Location Framework (ELF) project, co-funded by the European Commission's Competitiveness & Innovation framework Programme (CIP) Information and Communication Technologies Policy Support Programme (ICT PSP), 2013-2016.
[2]	Documentation on Open ELS requirements: specifications, schema, feature catalogue, etc (for EuroGeographics Members Only). https://eurogeographics.org/products-and-services/european-location-services/documentation/

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I Background

The report provides information about the completed activities performing the Open ELS project's task 3.3 "Data contributor support".

The scope of the activities in the project task 3.3:

1. Support data providers contributing to Open ELS web-services;
2. Test national web-services from Data providers;
3. Help Data providers in solving issues in national web-services;
4. Assure a regular quality check of the available Open ELS web-services.

2 Organisation of Data Supply processes

Principle activities in accommodating new and updated data or web-services to Open ELS is presented in the Figure 1

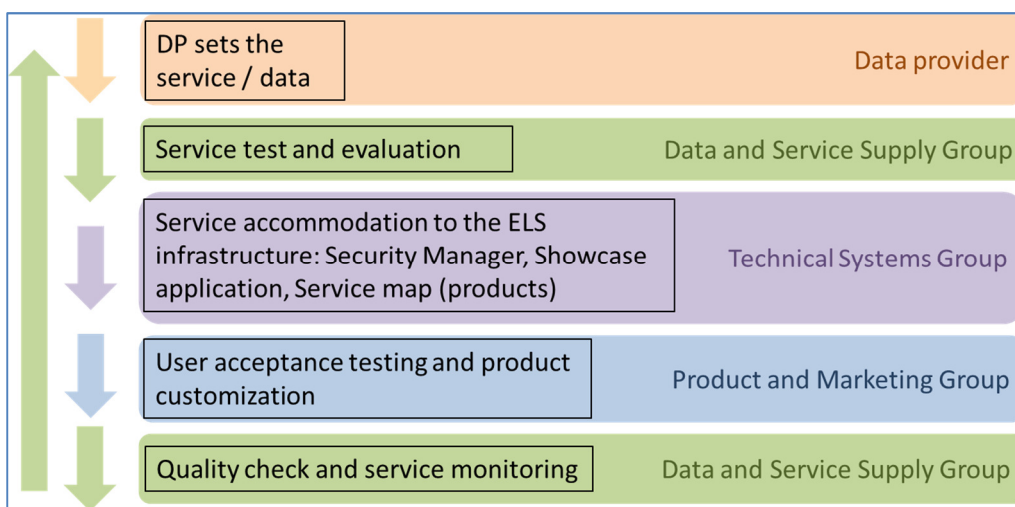


Figure 1. Step-wise actions accommodating Data provider's (DP) contribution.

Prior to providing the national data or web-service to Open ELS Data Supply team the Data provider shall:

1. Sign the [ELS Data provider agreement](#)
2. Arrange your data and services according to ELS requirements. See specifications, guidance, documentation [2].
3. Recommended, but not mandatory – agree the connecting features along borders with neighbouring countries for edge-matching purpose. See the Guidance on implementation of cross-border harmonisation [2].
4. Run a compliance and performance tests. Trigger the INSPIRE validator from the ELS infrastructure.
5. Fill the [service information spreadsheet](#).

After completed the actions above the filled Service Information spreadsheet and the test reports of triggering the INSPIRE validator shall be provided to the contact person at EuroGeographics Head Office for further actions.

Open ELS Data supply group tests the received web-services and metadata, fill the service testing template, and in case of major issues communicate back to DP. If the "web-service" passes the test

and validation, the information shall be provided to Open ELS Technical group for further action as presented in the Figure 2.

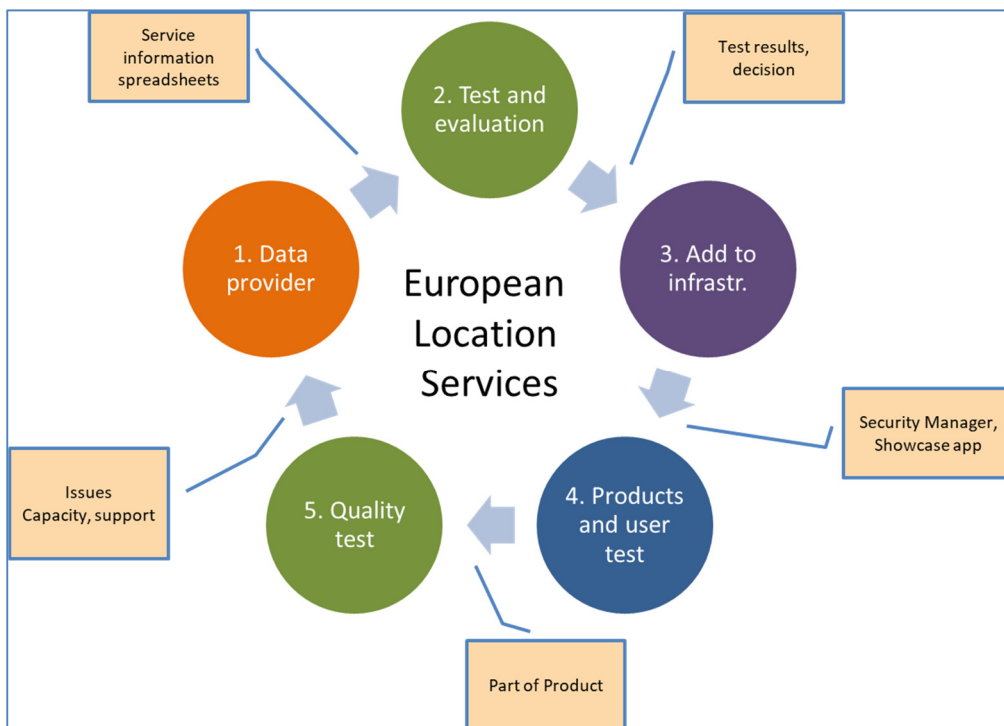


Figure 2. The loop of Data supply processes in Open ELS

Open ELS Data supply group continue to monitor the accessibility and quality of the national web-services through the Quality test activities.

The Data Supply process monitoring has been organised by the Trello web-application (www.trello.com) environment, assigning the cards and tracking the status/progress in activities. The summary reports of the completed tests and evaluations have been stored in the journals.

3 Government process

The government process of accommodating the contributions from Data providers, organising tests and evaluation of national contributions, reporting and communicating the test results, etc have been documented in the “Governance process of Service provisions in Open ELS” (Annex I to this document).

The government process description assigned individuals from partners organisations, responsible for each specific task and the time limits for each action.

4 Content of the tests

The content of the tests has been slightly different due to the type of the web-service. The following major elements have been tested by product:

Cadastral Index Map:

- Accessibility;
- Compliancy to technical specification;
- Random check of the completeness of data content (coverage, geometry, attributes);
- Availability and content of metadata;
- Performance of the service;
- Portray;
- Positioning (Coordinate Reference Systems).

Web Feature Service (WFS):

- Accessibility;
- Compliancy to technical specification;
- Compliancy to INSPIRE implementing rules (trigger a sample by the INSPIRE validator);
- Random check of the completeness of data content (coverage, geometry, attributes);
- Availability and content of metadata;
- Performance of the service;
- Positioning (Coordinate Reference Systems).

The tests have been organised for each type of product and the reports produced using the templates (Annex III). Overall process have been monitored by “ELS services: testing ” board in the interactive Trello tool (<https://trello.com>).

5 The Data Supply activity results

5.1 Scope and coverage

Initially the Data Supply group commenced evaluating the available national web-services (Annex II) from the ELF project [1], with specific focus on those web-services that are available under open license terms from DPs.

After the Open ELS Product and marketing group set the priority themes for Open ELS products the following web-services have been prioritized for testing and evaluation:

- WMS - Cadastral Index Map (CIM);
- WFS – Addresses (WFS-AD);
- WFS – Buildings (WFS-BU);
- WFS - Transport Network – Rail (WFS-TN-Rail);
- WFS - Transport Network – Road (WFS-TN-Road).

However the Data Supply group tested also DPs web-services of other INSPIRE Annex I and II themes , if DPs offered such web-services under open data provision.

Two products WFS of EuroGlobalMap and WFS of Regional Gazetteer have been produced centrally utilizing the information from the EuroGeographics pan-European datasets EuroGlobalMap, EuroRegionalMap and EuroBoundary Map. Project team did not request data or web-service contributions from Data Providers. Although, the work in the population of endonyms and variant names to geographical names of the Regional Gazetteer significantly improved capacities and usability of this product. More details on the completed work are described in the clause “Population of endonyms and variant names”.

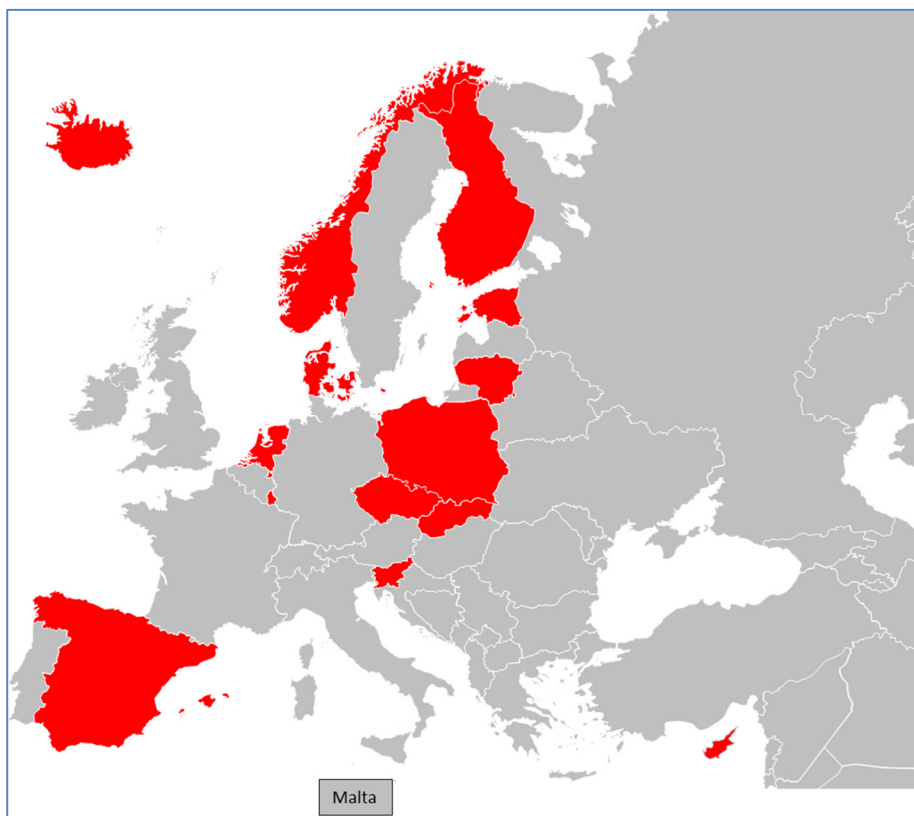


Figure 3. The DP country coverage of the tested national web-services.

Despite a wide number of the available web-services from NMCA's only those that confirmed the support to Open data policy terms have been tested and evaluated. Those 14 countries are shown in the Figure 3.

In total over 100 Trello cards have been assigned and completed. Some of the national web-services have been tested several times due to improvements and correction of the noticed issues.

5.2 Status of the DPs contributions after the completed tests

Cadastral Index Map (CIM)

	Available services from	Technical ready	Metadata ready
1	Finland	yes	yes
2	Netherlands	yes	yes
3	Czech Republic	yes	yes
4	Denmark (SDFE)	yes	yes
5	Spain (SDGC)	yes	yes
6	Poland (GUGIK)	yes	yes
7	Slovenia	yes	yes, but issues
8	Iceland	Issues	no
9	Slovakia	issues, only CP persist	no
10	Cyprus	no	no

WFS-AD

	Available services from	Technical ready	Metadata ready
1	Czech Republic	yes	yes, some issues
2	Netherlands	yes	yes
3	Norway	yes	yes, some issues
4	Spain	yes	yes
5	Iceland	yes in specified CRS	issues
6	Finland	issues	yes
7	Poland	issues	yes
8	Estonia	issues- limited content	no
9	Slovenia	major issues	issues

WFS-BU

	Available services from	Technical ready	Metadata ready
1	Czech Republic	yes	yes, some issues
2	Netherlands	yes	yes
3	Finland	issues	yes, some issues
4	Spain	yes, some issues	yes
5	Slovenia	major issues	issues
6	Iceland	yes in specified CRS	issues
7	Lithuania	yes for test service	yes

WFS-TN

Theme / service	Country	DP organisation	Service readiness to launch
WFS-TN-Rail	Finland	NLSFI	Issues
WFS-TN-Rail	Czech	CUZK	OK
WFS-TN-Rail	Denmark	SDFE	Issues
WFS-TN-Rail	Spain	CNIG	OK
WFS-TN-Rail	Netherlands	Kadaster	OK
WFS-TN-Road	Czech	CUZK	OK
WFS-TN-Road	Denmark	SDFE	Issues
WFS-TN-Road	Finland	NLSFI	Issues
WFS-TN-Road	Norway	Kartverket	Issues
WFS-TN-Road	Spain	CNIG	OK
WFS-TN-Road	Netherlands	Kadaster	OK
WFS-HY	Slovakia	GCCA	Issues
WFS-TN-Road	Slovakia	GCCA	Issues
WFS-TN-Rail	Slovakia	GCCA	Issues

WFS-TN-Rail	Estonia	NLB	Major issues
WFS-TN-Road	Estonia	NLB	Major issues
WFS-TN-Road	Iceland	NLS	Major issues

5.3 Help desk

The Open ELS help desk have been arranged in the Open ELS website : <https://openels.eu/help-desk/>

Data providers, users and other interested parties have a possibility to contact the project team by the interactive Open ELS help desk interface and choose a topic from the specified drop-down menu. (Figure 4.)

Figure 4. The user interface of the Open ELS help desk.

The process of handling the communication with DP is monitored in the Trello workspace. Following categories are assigned: Received, Acknowledged / Assigned, In progress, Pending, Complete.

All inquiries have been tracked and monitored by the Trello online tool (Figure 5). Each individual has been contacted by phone or email. Some of the inquires triggered many actions, while some have been solved by single responses.

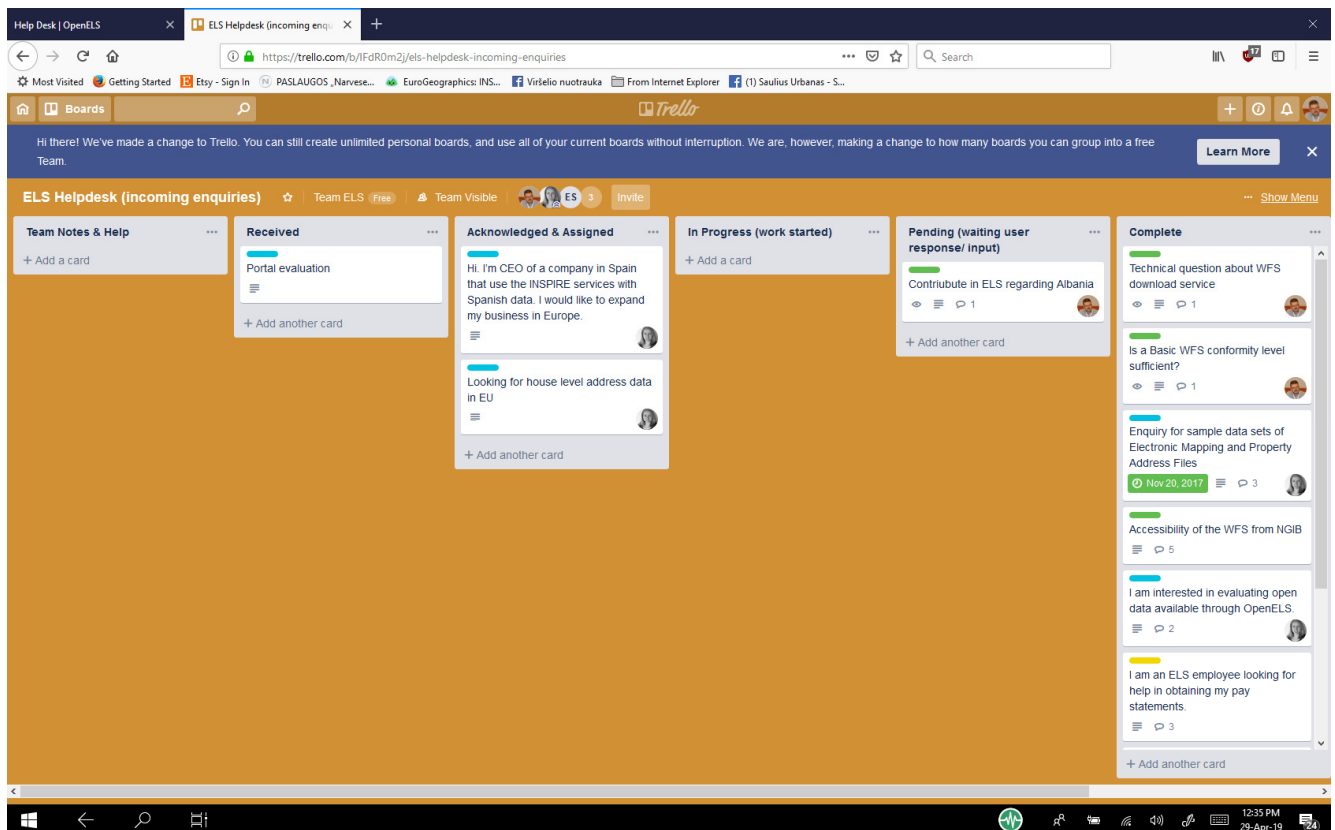


Figure 5. Monitoring of the Open ELS help desk inquiries by the interactive Trello tool

During the project period over 20 inquiries have been received and handled.

5.4 Population of exonyms and variant names

During the period of contract from June 2018 to April 2019, the Management of exonyms and variant names comprised the following work results.

About 6,000 exonyms and variant names have been recorded into the database of the European Regional Gazetteer. These exonyms are from 44 European countries and territories in 37 languages including all official languages of the European Union and in 4 different scripts.

Essential parts of the results of the previous projects EuroGeoNames and European Location Framework (ELF) have been integrated into the Open Regional Gazetteer Service product.

The detailed report on “Population of exonyms and variant names” (Annex IV) summarises the methodology of data collection and lists inconsistencies of the toponymic data occurring in the EuroRegionalMap and EuroGlobalMap geographical names. These inconsistencies are aggregated to certain types and are listed by country also.

6 Conclusions

- Project partners implemented well functioned government process accommodating new web-services from NMCAs and updating the available national services following up the achievements of the ELF project [1].
- The expert teams from project partners demonstrated excellent collaboration, obtained “know-how” and developed systematic standardised procedures for an evaluation and validation of Open ELS national services.
- Comprehensive tests have been executed for INSPIRE compliant national web-services (WMS and WFS) from 14 countries.
- Quality of national web-services has been improved. Due to the project activities the involved Data providers better understood Open ELS and INSPIRE technical requirements, and got familiar with a number of issues in national service setup and quality aspects of national data and web-services.
- NMCAs benefitted from regular webinars, workshops and Help desk support benchmarking the national technical arrangements, discussing discovered issues and receiving recommendations on necessary actions.
- About 6,000 exonyms and variant names from 44 European countries and 37 languages have been produced in consultation to national toponymic experts and amended to the available geographical names in the Regional Gazetteer product. The exonyms and variant names allow users to operate with the product in multi-language applications.
- Due to the complexity of INSPIRE implementing rules and a diversity of setups and technical infrastructures hosting national Web Feature Services (WFS) the composition of national web-services to pan-European cascaded web-services is challenging and complicated. Such process of harmonisation of national web-services is costly, time consuming and fully dependent to Data providers’ capacities. Therefore, more centralised approach of, first - harvesting/harmonising data content, and, second - establishing the centralised pan-European web-services, shall be considered for further developments of Open ELS products.

Annex I. Governance process of Service provisions in Open ELS

Background

The document provides process descriptions and procedures for interaction and communication with Data providers related to the Open European Location Services (Open ELS). The processes describe the responsibilities, information and communication flows and timescales for Data services provision and update and service support for Data providers.

The objective is to manage and improve the processes for service provision, the communication amongst the involved organisations and to ensure that a structured system of managing support, activities and requests is implemented.

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Accommodation of the new service

Actions by Data Provider arranging the service

1. Sign the [ELS Data provider agreement](#)
2. Arrange your data and services according to ELS requirements. See [specifications, guidance, documentation](#)
3. Recommended, but not mandatory – agree the connecting features along borders with neighbouring countries for edge-matching purpose.
4. Run a compliance and performance tests. Trigger the [INSPIRE validator from the ELS infrastructure](#).
5. Fill [the service information spreadsheet](#) and send it both the service information spreadsheet and the validation report triggering the INSPIRE validator to [Saulius Urbanas](#)
6. Saulius Urbanas opens the card in Trello board “ELS services:testing” and confirms to Data Provider about the received the spreadsheet in **2 working days**.

Details on the content of actions

Templates/ specifications/ tools (input)	Process activity	Comment	Responsible	Outcome from action
INSPIRE validator, Guidelines, INSPIRE implementing rules	Compliance testing of national services by triggering INSPIRE validator from ELS infrastructure or downloaded	DP tests compliancy to ELS requirements prior filling the spreadsheet	Data provider	Test results are stored by DP and to be passed to EGHO/Help desk by submitting the service information spreadsheet
Service information spreadsheets Guidelines (if available, version), Service compliancy test results	DP set/update the service, spreadsheet submitted to Saulius Urbanas (EGHO)	Any questions to be handled by Helpdesk	Data provider	Confirmation from EGHO to DP in 2 days, card in Trello testing board

The process description above and references to technical requirements for arranging web-services for Open ELS products are provided in the Data Supply for European Location Services webpages in the EuroGeographics website (Members Only):

<https://eurogeographics.org/products-and-services/european-location-services/>

Quality testing actions

Saulius Urbanas stores the Service information spreadsheets and the test reports in the dropbox (Dropbox\Open ELS project\03_Project_Activities\Activity3_Data_supply_content\Task_3_3\02_Documentation\National_Services). The process of assigning roles in testing the web service and monitoring is performed in the Trello workspace. Saulius Urbanas adds cards and monitors the progress. The testing process of new data provisions to ELS is considered to be executed operating in the ELS testing infrastructure.

List of the testing actions:

Action	Provisional duration	Testers' team (leaders of PPs teams)
Initial check of the web service: accessibility, performance test and visual check. The report about the completed action is provided as a comment in the card in Trello. Testers fill a test report using the test report templates (Dropbox\Open ELS project\03_Project_Activities\Activity3_Data_supply_content\Task_3_3\02_Documentation\Test_templates)	1 week	Marcin Grudzien (GUGIK) and Celia Sanchez (CNIG) on EuroGlobalMap; Jose-Miguel Olivares Garcia (SDGC), Marcin Grudzien (GUGIK) and Samuli Kytö (NLSFI) on CIM; Samuli Kytö (NLSFI), Cora van Oorschot (Kadaster) and Marcin Grudzien (GUGIK) on Regional Geographical Names Jose-Miguel Olivares Garcia (SDGC), Marcin Grudzien (GUGIK) on WFS-AD Jose-Miguel Olivares Garcia (SDGC), Cora van Oorschot (Kadaster) on WFS-BU Marcin Grudzien (GUGIK) and Celia Sanchez (CNIG) on WFS-TN
Check of the availability of metadata and its compliancy according to the INSPIRE requirements	1 week	Cora van Oorschot (Kadaster)
Check of the test reports (including those provided by the DP), summarise the major issues and provide recommendations concerning the service fitness to open ELS products. Compilation of the ELS Data providers testing summary journal (Dropbox\Open ELS project\05_Project_communication\Journals)	1 week	Saulius Urbanas in consultation with the testers' team leaders

The process timeframe shall be respected. In case of issues in related to the service composition, compliancy, accessibility or others those to be handled in the Issues management procedures.

The process of assigning roles in testing the web service and monitoring is performed in Trello workspace. Following categories are assigned: Request to test, Acknowledged / Assigned, In Progress, Completed. Saulius Urbanas adds cards and monitors the progress. The testing process of new data provisions to ELS is considered to be executed operating in the ELS testing infrastructure.

General tests of the Open ELS product pre-releases

On demand by Project group the testers' team has been involved to general tests activities for the pre-released versions of the Open ELS products.

Action	Provisional duration	Testers' team (leaders of PPs teams)
General checks of accessibility, performance and content of the web-service.	1 week	Marcin Grudzien (GUGIK) and Celia Sanchez (CNIG) on EuroGlobalMap; Jose-Miguel Olivares Garcia (SDGC), Marcin Grudzien (GUGIK) and Samuli Kytö (NLSFI) on cascaded CIM; Samuli Kytö (NLSFI), Cora van Oorschot (Kadaster) and Marcin Grudzien (GUGIK) on Regional Geographical Names Jose-Miguel Olivares Garcia (SDGC), Marcin Grudzien (GUGIK) on cascaded WFS-AD Jose-Miguel Olivares Garcia (SDGC), Cora van Oorschot (Kadaster) on cascaded WFS-BU Marcin Grudzien (GUGIK) and Celia Sanchez (CNIG) on cascaded WFS-TN
Metadata tests	1 week	Cora van Oorschot (Kadaster) for all products
Summary tests	1 week	Jari Reini (EGHO)

Findings in testing the web-services have been provided to the Product group according to the defined requirements.

Service processing actions

Since the decision is taken about the need of accommodating the web service to the ELS infrastructure the following actions to be executed:

Action	Provisional duration	Responsible individuals
Service accommodation (seeded, imported or cascaded) to Open ELS products	3 weeks – 6 weeks dependent to the size	Jaakko Kähkönen and Lassi Lehto (NLSFI) for CIM Lassi Lehto for cascaded WFS

Service amendment to the ELS Security Manager	1 weeks	Roy Mellum (KARTV)
Service amendment to performance testing application	1 weeks	Roy Mellum (KARTV)
User accepting testing of the web service or the updated ELS product	4 weeks / based on the release planning	Abigail Page
Check the web service pricing/licensing terms in the Data Provider Agreement and arrange the dissemination terms in the ELS infrastructure.	2 weeks	Abigail Page
Organizes the publishing of the web service or/and the updated ELS product (s) in the Operational ELS infrastructure	1 week / based on the release planning	Abigail Page and Roy Mellum

The process timeframe shall be respected. In case of issues in related to the service composition, compliancy, accessibility or others those to be handled in the Issues management procedures.

The process of assigning roles in processing the web service is performed in the Trello workspace. Following categories are assigned: Request to amend new service, Decision taken to amend, Service amendment to ELS product(s), Amended to Sec Mng, Amended to showcase app, User acceptance testing, Published.

Saulius Urbanas adds cards and monitors the progress.

In addition to the monitoring process in Trello the Service processing journal is maintained by Saulius Urbanas in the Open ELS dropbox (Dropbox\Open ELS project\05_Project_communication\Journals). A copy of the Service Processing journal shall be regularly uploaded to DPs attention to the ELS pages in the EuroGeographics website. In the meanwhile (by the upgrade of the EuroGeographics website) the journal shall be provided to the ELS Data Provision basecamp.

Content of the Service processing journal

Theme	Country	DP organisation and contact person	Date of Decision accepting the service (DSS)	Amendment to the Security manager (TG)	Amendment to the showcase application (TG)	User accepting test results (PMG)	Service publishing (PMG)

Update of the existing web service

In case the major update was implemented in the Data provider's web service the update of the web service in the ELS infrastructure shall follow the processes as presented in the previous clauses. The

updated version of the Service information spreadsheet shall be provided with the test results attached.

Data Provider support

Communication with DPs are performed through the Helpdesk (<http://openels.eu/help-desk/>) or by email communication.

The process of handling the communication with DP is monitored in the Trello workspace. Following categories are assigned: Received, Acknowledged / Assigned, In progress, Pending, Complete.

Action	Provisional duration	Responsible individuals
Response to DP inquires	1 week	Saulius Urbanas, Dorus Kruse, for general questions and monitors the responses. Cora van Oorschot (Kadaster) for metadata Lassi Lehto for cascaded WFS and CIM Pier Giorgio Zaccheddu (BKG) for Regional Geographical Names

Templates/ specifications/ tools (input)	Process activity	Comment	Responsible	Outcome
ELS Data/Product specifications, DP guidance Test results	DP inquires on how to interpret the test results and update service	DP tests the service triggering the ETF testing tool and the INSPIRE validator I	EGHO (Saulius Urbanas), Help desk	Confirmation to DP in 2 days, record in Trello and the Service issues journal
ELS Data/Product specifications DP guidance	DP pose a question that does not necessary considered as an issue (regarding the specification, tool to be used, etc.)	If the question concerns detailed technical response the Responsible contact passes it to the expert and informs DP.	EGHO (Saulius Urbanas), Help desk.	Response to DP by email in 5 days. Possible a record in the FAQ list

In case an inquiry concerns major issue, the question shall be handled in the Service Issues part.

The most common question shall be recorded in the Frequently Asked Questions journal, which will all be published in the EuroGeographics website (Members Only), in the ELS Data provision part.

Content:

Question	Response	Related documentation	Responsible technical contact
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Dates shall be recorded of the received question and provided response.

Service issues management

The process of identifying the issues and finding the solutions / monitoring is performed in the Trello workspace, through the board “ELS services: issues”. Following categories are assigned: New issue, Acknowledged / Assigned, In progress, Completed, Not possible to solve, Additional investigation needed.

Any individual involved to the testing or / and processing of the DP service is entitled opening the issue. The issues in the category of “Additional investigation needed” means that the ELS team members can’t find a solution solving the issues and those will be handled by involving third parties: consultants, software developments or others. The issue records are supervised by Dorus Kruse.

In addition to the Trello records the Service issues information is maintained by Saulius Urbanas in the “ELS_DP_services_detailed_status2.xlsx”, stored in the Open ELS dropbox (\\Dropbox\\Open ELS project\\03_Project_Activities\\Activity3_Data_supply_content\\Task_3_3\\02_Documentation). An extract from the spreadsheet shall be maintained as the Summary list of Data Providers status and regularly uploaded to DPs attention to the ELS pages in the EuroGeographics website.

Action	Provisional duration	Responsible individuals
Record issues, contribute to the processing (finding solutions) in the issues	1 week / issue	Saulius Urbanas, Dorus Kruse for general questions. Cora van Oorschot (Kadaster) for metadata Lassi Lehto for cascaded WFS and CIM Pier Giorgio Zaccheddu (BKG) for Regional Geographical Names Roy Mellum for service technical setup
Monitoring the roles in the investigation on issues	3 days	Saulius Urbanas, Dorus Kruse

Capacity building of DP

Requests, planning and progress in capacity building are managed in the Trello workspace. Following categories are assigned: *Request, Acknowledged / Assigned, In Action, Completed, Skipped/Rejected*. Saulius Urbanas and Thorsten Svard adds cards and monitors the progress. The testing process of new data provisions to ELS is considered to be executed operating in the ELS testing infrastructure.

Action	Provisional duration	Responsible individuals
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Demands for capacity building (The information might be received from meetings, workshops and communication with DPs / candidates DP)	2 days confirmation 1 week for planning	Thorsten Svard, Saulius Urbanas, Dorus Kruse.
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Summary list of DP services

The Summary list of Data Providers services is maintained as Excel spreadsheet by Saulius Urbanas in dropbox (Dropbox\Open ELS project\03_Project_Activities\Activity3_Data_supply_content\Task_3_3\02_Documentation).

All individuals involved to quality check and processing of DP services shall be entitled to edit the Summary list of DP services. However, in order to assure the consistent management of the list Saulius Urbanas shall be notified about the changes, and changes to be introduced in different colour.

The content of the Summary list of DP services

Country	Theme	Provider	Original url	Schema version	Status	Type of the Issue	Responsible DP contact	Comments re the services	Status of DPA	Comments re DPA
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A copy of the Summary list of Data Providers shall be regularly uploaded to DPs attention to the ELS pages in the EuroGeographics website. In the meanwhile (by the upgrade of the EuroGeographics website) the journal shall be provided to the ELS Data Provision basecamp.

Annex II. List of the web-services from National Mapping and Cadastral Authorities (open and not open)

Country	Theme	Provider	Schem a version	Status	Type of the Issue	Reponsible DP contact
Europe	ELF Topographic Basemap	KARTV	ELF	Ready		marcus.bruehl@bkg.bund.de
Europe	ELF Administrativ e Basemap	KARTV	ELF	Ready		marcus.bruehl@bkg.bund.de
Europe	CIM	KARTV	ELF	Ready		marcus.bruehl@bkg.bund.de
Europe	ELF Cacaded Download Inspire 3	KARTV	ELF	Ready		marcus.bruehl@bkg.bund.de
Europe	ELF Cacaded Download ELF 1.0/Inspire 4	KARTV	ELF	Ready		marcus.bruehl@bkg.bund.de
Europe	TN-Air					
Belgium	AU	IGNB	Inspire 3	Ready	Upgrade to Inspire 4 is needed	Nathalie Delattre - Nathalie.Delattre@ngi.be
Belgium	GN	IGNB	Inspire 3	Ready	Upgrade to Inspire 4 is needed	Nathalie Delattre - Nathalie.Delattre@ngi.be
Belgium	HY-PW	IGNB	Inspire 3	Ready	Upgrade to Inspire 4 is needed	Nathalie Delattre - Nathalie.Delattre@ngi.be
Belgium	TN-Air	IGNB	Inspire 3	Ready	Upgrade to Inspire 4 is needed	Nathalie Delattre - Nathalie.Delattre@ngi.be

Czech Republic	AD	CUZK	Inspire 4	Ready		Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz),
Czech Republic	AU	CUZK	Inspire 4	Ready		Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)
Czech Republic	BU	CUZK	Inspire 4	Ready		Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)
Czech Republic	CP	CUZK	Inspire 4	Ready		Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)
Czech Republic	GN	CUZK	Inspire 4	Ready		Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)
Czech Republic	HY-PW	CUZK	Inspire 4	Ready		Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)
Czech Republic	TN_AIR	CUZK	Inspire 4	Ready	namespace error returned by QGIS	Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)

Czech Republic	TN_CABLE	CUZK	Inspire 4	Ready	elf-tn:VerticalPosition - namespace error returned by QGIS	Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)
Czech Republic	TN-RAIL	CUZK	Inspire 4	Ready		Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)
Czech Republic	TN-Road	CUZK	Inspire 4	Ready	core attributes are missing: ConditionOfFacility, RoadName	Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)
Czech Republic	TN_WATER	CUZK	Inspire 4	Ready	elf-tn-w:PortType - namespace error returned by QGIS elf-tn-w:FerryCrossing - namespace error returned by QGIS	Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)
Denmark	AU	GST	ELF V.1	Issues	2017-10 Issues accessing the service.	Heidi Vanparys (hevan@sdfe.dk)
Denmark	CP	GST	Inspire 3	Issues	2017-10 Issues accessing the service.	Heidi Vanparys (hevan@sdfe.dk)
Denmark	GN	GST	ELF V.1	Issues	2017-10 Issues accessing the service.	Heidi Vanparys (hevan@sdfe.dk)
Denmark	HY-PW	GST	ELF V.1	Issues	2017-10 Issues accessing the service.	Heidi Vanparys (hevan@sdfe.dk)
Denmark	HY-NW	GST	Inspire 4	Issues	2017-10 Issues accessing the service.	Heidi Vanparys (hevan@sdfe.dk)
Denmark	LC	GST	Inspire 4	Issues	2017-10 Issues accessing the service.	Heidi Vanparys (hevan@sdfe.dk)
Denmark	TN-RAIL	GST	ELF v.1	Issues	Issues to access	Heidi Vanparys (hevan@sdfe.dk)

Denmark	TN-Road	GST	ELF v.1	Issues	Issues to access	Heidi Vanparys (hevan@sdf.dk)
Finland	AD	NLSFI	Inspire 4	Issues	The test of PostalDescription, PostalCode and AddressAreaName did not passed; addresses are not georeferenced correctly in QGIS; Issues on paging.	Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)
Finland	AU	NLSFI	Inspire 4	Ready		Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)
Finland	BU_2D	NLSFI	Inspire 4	Issues	Issues: paging is not supported, GetFeature response does not work correctly for all Coordinate Reference Systems: 1) The BBOX response is an empty GML without spatial objects for 3857 and 4326 CRS system, 2)in EPSG 3035, the response appears to work properly. However, while visualised GML result in QGIS, the buildings are not georeferenced correctly.	Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)
Finland	CP	NLSFI	Inspire 4	Ready		Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)
Finland	GN	NLSFI	ELF V.1	Ready		Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)
Finland	HY-PW	NLSFI	Inspire 4	Ready		Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)
Finland	LC	NLSFI	ELF V.1	Ready		Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)
Finland	PS	NLSFI	Inspire 4	Ready		Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)
Finland	TN-RAIL	NLSFI	ELF V.1	Ready, but issues	Issues: paging, Road class, RoadSurfaceCategory, RoadWidth, RoadLink	Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)

Finland	TN-Road	NLSFI	ELF V.1	Ready		Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)
France	AD	IGNF	Inspire 4	Ready		Romain Wieser (romain.wieser@ign.fr)
France	AU	IGNF	Inspire 4	Ready		Romain Wieser (romain.wieser@ign.fr)
France	GN	IGNF	Inspire 4	Ready		Romain Wieser (romain.wieser@ign.fr)
France	TN-Road	IGNF	Inspire 4	Ready		Romain Wieser (romain.wieser@ign.fr)
France	TN-RAIL	IGNF	Inspire 4	Ready		Romain Wieser (romain.wieser@ign.fr)
Germany	GN	BKG	Inspire 4	Issues	Not accessible (2017-10)	Marcus Bruehl (marcus.bruehl@bkg.bund.de)
The Netherlands	BU	KADAST	Inspire 4	Ready		Dorus Kruse (Dorus.Kruse@kadaster.nl)
The Netherlands	CP	KADAST	Inspire 3	Ready		Dorus Kruse (Dorus.Kruse@kadaster.nl)
Norway	AD	KARTV	Inspire 4	Ready		Roy Hellesjø Mellum (Roy.Mellum@kartverket.no)
Norway	AU	KARTV	Inspire 4	Ready		Roy Hellesjø Mellum (Roy.Mellum@kartverket.no)
Norway	GN	KARTV	Inspire 4	Ready		Roy Hellesjø Mellum (Roy.Mellum@kartverket.no)
Norway	HY-PW	KARTV	Inspire 4	Ready		Roy Hellesjø Mellum (Roy.Mellum@kartverket.no)
Norway	EL	KARTV	Inspire 4	Ready		Roy Hellesjø Mellum (Roy.Mellum@kartverket.no)
Norway	LC	KARTV	Inspire 4	Ready		Roy Hellesjø Mellum (Roy.Mellum@kartverket.no)

Norway	CP	KARTV	Inspire 4	Ready		Roy Hellesjø Mellum (Roy.Mellum@kartverket.no)
Norway	SR	KARTV	Inspire 4	Ready		Roy Hellesjø Mellum (Roy.Mellum@kartverket.no)
Poland	AD	GUGIK	Inspire 4	Issues	Shift in coordinates	Marcin Grudzien (marcin.grudzien@codgik.gov.pl)
Poland	AU	GUGIK	Inspire 3	Ready	Upgrade to Inspire 4 is needed	Marcin Grudzien (marcin.grudzien@codgik.gov.pl)
Poland	CP	GUGIK	Inspire 3	Ready	Upgrade to Inspire 4 is needed	Marcin Grudzien (marcin.grudzien@codgik.gov.pl)
Poland	GN	GUGIK	Inspire 3	Ready	Upgrade to Inspire 4 is needed	Marcin Grudzien (marcin.grudzien@codgik.gov.pl)
Poland	TN-AIR	GUGIK	Inspire 3	Ready	Upgrade to Inspire 4 is needed	Marcin Grudzien (marcin.grudzien@codgik.gov.pl)
Slovenia	AD	SMA	ELF 1.0	Issues	`to 'gml:id=' Attribute 'title' is not allowed in element <null:nativeness>. Must be changed to 'xlink:title=' The Same with 'href'. Must be changed to xlink:href. paging is not supported, CRS is not supported.	Uros Mladenovic (Uros.Mladenovic@gov.si)
Slovenia	AU	SMA	ELF 1.0	Ready, but issues	Issues on performance and accessibility	Uros Mladenovic (Uros.Mladenovic@gov.si)
Slovenia	BU_2D	SMA	ELF 1.0	Issues	Attributes titles do not correspond to specification, has not passed the INSPIRE validation, no return of attributes, limited return of geometry, incorrect coordinates.	Uros Mladenovic (Uros.Mladenovic@gov.si)
Slovenia	CP	SMA	ELF 1.0	Ready, but issues	Issues on performance and accessibility	Uros Mladenovic (Uros.Mladenovic@gov.si)

Slovenia	GN	SMA	ELF 1.0	Ready, but issues	Issues on performance and accessibility	Uros Mladenovic (Uros.Mladenovic@gov.si)
Spain	AD	SDGC	Inspire 3	Ready		amalia.velasco@catastro.minhap.es; jmiguel.olivares@catastro.minhafp.es
Spain	AU	CNIG	Inspire 4	Ready		pabad@fomento.es; elromero@fomento.es;
Spain	BU_ext	SDGC	Inspire 3	Ready	Issues: no features return in Building part and Other Constructions	amalia.velasco@catastro.minhap.es; jmiguel.olivares@catastro.minhafp.es
Spain	CP	SDGC	Inspire 3	Ready		amalia.velasco@catastro.minhap.es; jmiguel.olivares@catastro.minhafp.es
Spain	GN	CNIG	Inspire 4	Ready		pabad@fomento.es; elromero@fomento.es;
Sweden	AU	NLS-SE	ELF 1.0	Ready		Mauritz Bomark, +46702232496 mauritz.bomark@lm.se
Sweden	GN	NLS-SE	ELF 1.0	Ready		Mauritz Bomark, +46702232496 mauritz.bomark@lm.se
Sweden	HY-PW	NLS-SE	ELF 1.0	Ready		Mauritz Bomark, +46702232496 mauritz.bomark@lm.se
Sweden	LC	NLS-SE	Inspire 4	Ready		Mauritz Bomark, +46702232496 mauritz.bomark@lm.se

Sweden	PS	NLS-SE	Inspire 3	Ready	Update to Inspire 4 is expected	Mauritz Bomark, +46702232496 mauritz.bomark@lm.se
Sweden	PS2	NLS-SE	Inspire 3	Ready	Update to Inspire 4 is expected	Mauritz Bomark, +46702232496 mauritz.bomark@lm.se
Belgium	TN-Cable	IGNB	Inspire 3	Ready	Upgrade to Inspire 4 is needed	Nathalie Delattre - Nathalie.Delattre@ngi.be
Czech Republic	Basemap	CUZK	NA	Ready		Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)
Czech Republic	CIM	CUZK	NA	Ready	Some cosmetic issues.	Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)
Belgium	Basemap	IGNB	NA	Ready		Nathalie Delattre - Nathalie.Delattre@ngi.be
Denmark	SU	GST	Inspire 4	Ready		Heidi Vanparys (hevan@sdfe.dk)
Finland	Basemap	NLSFI		Ready		Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)
Finland	CIM	NLSFI	NA	Ready		Kähkönen Jaakko (jaakko.kahkonen@maanmittauslaitos.fi)
Finland	HY-NW	NLSFI	Inspire 4	Ready		Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)
Finland	TN-Air	NLSFI	ELF V.1	Ready		Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)

Finland	TN-Water	NLSFI	ELF V.1	Ready		Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)
Finland	TN-EL	NLSFI	Inspire 4	Ready		Samuli Kytö (samuli.kyto@maanmittauslaitos.fi)
France	TN-AIR	IGNF	Inspire 4	Ready		Romain Wieser (romain.wieser@ign.fr)
France	BU_2D	IGNF	Inspire 4	Ready		Romain Wieser (romain.wieser@ign.fr)
France	HY-PW	IGNF	Inspire 4	Ready		Romain Wieser (romain.wieser@ign.fr)
Norway	Basemap	KARTV		Ready		Roy Hellesjø Mellum (Roy.Mellum@kartverket.no)
Norway	CIM	KARTV	NA	Issues	No access to the service and metadata	Roy Hellesjø Mellum (Roy.Mellum@kartverket.no)
Poland	Basemap	GUGIK	NA	Ready		Marcin Grudzien (marcin.grudzien@codgik.gov.pl)
Poland	CIM	GUGIK	NA	Ready		Marcin Grudzien (marcin.grudzien@codgik.gov.pl)
Poland	LC	GUGIK	Inspire 3	Ready	Update to Inspire 4 is expected	Marcin Grudzien (marcin.grudzien@codgik.gov.pl)
Poland	TN-Road	GUGIK	Inspire 3	Ready	Update to Inspire 4 is expected	Marcin Grudzien (marcin.grudzien@codgik.gov.pl)
Poland	TN-RAIL	GUGIK	Inspire 3	Ready	Update to Inspire 4 is expected	Marcin Grudzien (marcin.grudzien@codgik.gov.pl)
Poland	TN-WATER	GUGIK	Inspire 3	Ready	Update to Inspire 4 is expected	Marcin Grudzien (marcin.grudzien@codgik.gov.pl)

Poland	TN-CABLE	GUGIK	Inspire 3	Ready	Update to Inspire 4 is expected	Marcin Grudzien (marcin.grudzien@codgik.gov.pl)
Slovenia	TN-Road	SMA	ELF 1.0	Issues	Accessibility and performance	Uros Mladenovic (Uros.Mladenovic@gov.si)
Slovenia	TN-RAIL	SMA	ELF 1.0	Ready, but issues	Accessibility and performance	Uros Mladenovic (Uros.Mladenovic@gov.si)
Slovenia	TN-AIR	SMA	ELF 1.0	Ready, but issues		Uros Mladenovic (Uros.Mladenovic@gov.si)
Spain	TN-Road	CNIG	Inspire 4	Ready		pabad@fomento.es; elromero@fomento.es;
Spain	CIM	SDGC	NA	Ready		amalia.velasco@catastro.minhap.es; jmiguel.olivares@catastro.minhafp.es
Spain	TN-RAIL	CNIG	Inspire 4	Ready		pabad@fomento.es; elromero@fomento.es;
Spain	Basemap	CNIG		Ready		pabad@fomento.es; elromero@fomento.es;
The Netherlands	Basemap	KADAST		Ready		Dorus Kruse (Dorus.Kruse@kadaster.nl)
The Netherlands	CIM	KADAST	NA	Ready	AdministrativeUnit layer is missing.	Dorus Kruse (Dorus.Kruse@kadaster.nl)
Czech Republic	GeoLocator GN	CUZK		Ready		Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)
Czech Republic	GeoLocator AU	CUZK		Ready		Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)

Czech Republic	GeoLocator CP	CUZK		Ready		Michal Med (michal.med@cuzk.cz), Bohumil Vlček (Bohumil.Vlcek@cuzk.cz)
Lithuania	CIM	Centre of Registers	NA	Issues	Issues: shift in EPSG:3035.	Saulius Milevičius (Saulius.Milevicius@registrucentras.lt), Renaldas Kalcas (Renaldas.Kalcas@registrucentras.lt)
Latvia	CIM	SLS	NA	Ready		dap_help@vzd.gov.lv
Denmark	CIM	SDFE	NA	Ready	Minor issues (Nov 2018): style names and titles are not according to the specification.	Jonas Lund Nielsen, jolni@sdf.dk
Latvia	CP	SLS	Inspire 4.0	Ready		dap_help@vzd.gov.lv
Latvia	AD	SLS	Inspire 4.0	Ready		dap_help@vzd.gov.lv
Latvia	AU	SLS	Inspire 4.0	Ready		dap_help@vzd.gov.lv
Latvia	HY-PW	LGIA		Issues		Arvids Ozols arvids.ozols@lgia.gov.lv)
Latvia	HY-PW	LGIA		Issues		Arvids Ozols arvids.ozols@lgia.gov.lv)
Latvia	HY-NW	LGIA		Issues		Arvids Ozols arvids.ozols@lgia.gov.lv)
Latvia	GN	LGIA		Issues		Arvids Ozols arvids.ozols@lgia.gov.lv)
Latvia	LC	LGIA		Issues	Issues to access	Arvids Ozols arvids.ozols@lgia.gov.lv)
Lithuania	AU	Centre of Registers	Inspire 4.0	Issues	Issues to access	Saulius Milevičius (Saulius.Milevicius@registrucentras.lt), Renaldas Kalcas (Renaldas.Kalcas@registrucentras.lt)

Lithuania	AD	Centre of Registers	Inspire 4.0	Issues	Issues to access	Saulius Milevičius (Saulius.Milevicius@registrucentras.lt), Renaldas Kalcas (Renaldas.Kalcas@registrucentras.lt)
Lithuania	CP	Centre of Registers	Inspire 4.0	Issues	Buildings are missing, issues with swams	Saulius Milevičius (Saulius.Milevicius@registrucentras.lt), Renaldas Kalcas (Renaldas.Kalcas@registrucentras.lt)
Lithuania	Basemap	GIS-C	Inspire 3.1	ok, but to be re-seeded		Andrius Balciunas (A.Balciunas@gis-centras.lt)
Lithuania	GN	GIS-C	Inspire 3.1	Issues	2017-11-14: Issues to access	Andrius Balciunas (A.Balciunas@gis-centras.lt)
Lithuania	HY-PW	GIS-C	Inspire 3.1	Issues	2017-11-14: Issues to access	Andrius Balciunas (A.Balciunas@gis-centras.lt)
Lithuania	LC	GIS-C	Inspire 3.1	Issues	2017-11-14: Issues to access	Andrius Balciunas (A.Balciunas@gis-centras.lt)
Lithuania	TN-Air	GIS-C	Inspire 3.1	Issues	2017-11-14: Issues to access	Andrius Balciunas (A.Balciunas@gis-centras.lt)
Lithuania	TN-Road	GIS-C	Inspire 3.1	Issues	2017-11-14: Issues to access	Andrius Balciunas (A.Balciunas@gis-centras.lt)
Lithuania	TN-RAIL	GIS-C	Inspire 3.1	Issues	2017-11-14: Issues to access	Andrius Balciunas (A.Balciunas@gis-centras.lt)
Lithuania	EL	GIS-C	Inspire 3.1	Issues	2017-11-14: Issues to access	Andrius Balciunas (A.Balciunas@gis-centras.lt)
Lithuania	BU_2D	GIS-C	Inspire 4	Issues	Only test service.	Andrius Balciunas (A.Balciunas@gis-centras.lt)

Lithuania	PS	GIS-C	Inspire 3.1	Issues	2017-11-14: Issues to access	Andrius Balciunas (A.Balciunas@gis-centras.lt)
The Netherlands	AU	KADAST	Inspire 4	Issues	Not the full content: Administrative Boundaries are missing	KlantContactCenter PDOK (beheerPDOK@kadaster.nl); Dorus Kruse (Dorus.Kruse@kadaster.nl); Johan.Keurentjes@kadaster.nl; Ghidey.Mosazghi@kadaster.nl>
Portugal	Basemap	DGT	NA	Issues		Cátia Saraiva (csaraiva@dgteritorio.pt)
Hungary	Basemap	FOMI	NA	Issues	Problems accessing the service	Tamas Palya, palya.tamas@bfkh.gov.hu
Hungary	CIM	FOMI	NA	Issues	Problems accessing the service	Tamas Palya, palya.tamas@bfkh.gov.hu
France	Basemap	IGNF	NA	Issues	Issues to access (21.12.2017)	Romain Wieser (romain.wieser@ign.fr)
Denmark	Basemap	SDFE	NA	Issues	2017-10 Issues accessing the service. Seeding stops at lvl 14.	Heidi Vanparys (hevan@sdfе.dk)
Germany	Basemap	BKG	NA	Ready	Buildings are missing, issues with swams	Marcus Bruehl (marcus.bruehl@bkg.bund.de)
Great Britain	Basemap	OSGB	NA	Ready		Michael J Gordon (Michael.Gordon@os.uk)
Iceland	Basemap	NLS-IS	NA	Issues	Issues accessing the service	Eydís Línal Finnbogadóttir (elf@lmi.is)
Iceland	AU	NLS-IS	Inspire 4	Ready		Eydís Línal Finnbogadóttir (elf@lmi.is)
Iceland	CP	REG-IS	Inspire 4	Issues	Issues in cascaded service	Bjarni K. Árnason (bka@skra.is)
Iceland	GN	NLS-IS	Inspire 4	Ready		Eydís Línal Finnbogadóttir (elf@lmi.is)

Open European Location Services (Open ELS)

Iceland	TN-Road	NLS-IS	Inspire 4	Issues	The service contains only RoadLink features. Core features and attributes are missing. EPSG 3035 is not supported	Eydís Líndal Finnbogadóttir (elf@lmi.is)
Iceland	HY-PW	NLS-IS	Inspire 4	Ready		Eydís Líndal Finnbogadóttir (elf@lmi.is)
Iceland	LC	NLS-IS	Inspire 4	Ready		Eydís Líndal Finnbogadóttir (elf@lmi.is)
Iceland	PS	NLS-IS	Inspire 4	Ready		Eydís Líndal Finnbogadóttir (elf@lmi.is)
Iceland	EL	NLS-IS	Inspire 4	Ready		Eydís Líndal Finnbogadóttir (elf@lmi.is)
Iceland	AD	REG-IS	Inspire 4	Ready, but Issues	The service works in EPSG: 3857, but the positioning in EPSG: 4326 is incorrect.	Bjarni K. Árnason (bka@skra.is)
Iceland	BU	REG-IS	Inspire 4	Ready, but issues	The service works in EPSG: 3857, but the positioning in EPSG: 4326 is incorrect.	Bjarni K. Árnason (bka@skra.is)
Iceland	CIM	REG-IS	NA	Issues	Issues accessing the service	Bjarni K. Árnason (bka@skra.is)
The Netherlands	AD	KADAST	Inspire 4	Ready		KlantContactCenter PDOK (beheerPDOK@kadaster.nl); Dorus Kruse (Dorus.Kruse@kadaster.nl); Johan.Keurentjes@kadaster.nl
The Netherlands	CP	KADAST	Inspire 4	Issues	Review the attributes of the spatial objects which are downloading in GML format, because they are in English language for cadastral parcels and in Dutch language for cadastral boundaries. o Check that it is possible to download parcels and boundaries using different coordinate reference systems (4326, 4258, 3034, 3035, 3857, 25831) like the getcapabilities response reports.	KlantContactCenter PDOK (beheerPDOK@kadaster.nl); Dorus Kruse (Dorus.Kruse@kadaster.nl); Johan.Keurentjes@kadaster.nl

Spain	HY-PW	CNIG	Inspire 4	Ready		pabad@fomento.es; elromero@fomento.es;
Spain	AD	CNIG	Inspire 4	Ready		pabad@fomento.es; elromero@fomento.es;
Spain	EL-Grid	CNIG	Inspire 4	Ready		pabad@fomento.es; elromero@fomento.es;
Norway	TN-Road	KARTV	Inspire 4	Issues	(Nov 2018) The WFS only has RoadLinks without road attributes. Feature types and attributes are missing.	Roy Hellesjø Mellum (Roy.Mellum@kartverket.no)
Norway	BU	KARTV	Inspire 4	Ready		Roy Hellesjø Mellum (Roy.Mellum@kartverket.no)
Slovakia	GeoLocator AU	CUZK		Ready (imported)		Fojtl Matúš (matus.fojtl@skgeodesy.sk)
Slovakia	GeoLocator GN	CUZK		Ready (imported)		Fojtl Matúš (matus.fojtl@skgeodesy.sk)
The Netherlands	HY-PW	KADAST	Inspire 4	Issues	hy-p:Crossing - problem with swapped order of coordinates (axis order); the data is presented by the coast of Somalia hy-p:DamOrWeir - problem with order of coordinates; hy-p:Falls - problem with order of coordinates; hy-p:Lock - problem with order of coordinates; hy-p:ShorelineConstruction - problem with order of coordinates; hy-p:Sluice - problem with order of coordinates	KlantContactCenter PDOK (beheerPDOK@kadaster.nl); Dorus Kruse (Dorus.Kruse@kadaster.nl); Johan.Keurentjes@kadaster.nl
The Netherlands	BU	KADAST	Inspire 4	Ready		KlantContactCenter PDOK (beheerPDOK@kadaster.nl); Dorus Kruse (Dorus.Kruse@kadaster.nl); Johan.Keurentjes@kadaster.nl

Spain	LC	CNIG	Inspire 4	Ready		pabad@fomento.es; elromero@fomento.es;
Spain	LU	CNIG	Inspire 4	Ready		pabad@fomento.es; elromero@fomento.es;
Spain	GN	CNIG	Inspire 4	Ready		pabad@fomento.es; elromero@fomento.es;
France	TN-Water	IGNF	Inspire 4	Ready		Romain Wieser (romain.wieser@ign.fr)
France	TN-Cable	IGNF	Inspire 4	Ready		Romain Wieser (romain.wieser@ign.fr)
The Netherlands	SR	KADAST	Inspire 4	Ready		KlantContactCenter PDOK (beheerPDOK@kadaster.nl); Dorus Kruse (Dorus.Kruse@kadaster.nl); Johan.Keurentjes@kadaster.nl
The Netherlands	TN-Road	KADAST	Inspire 2	Ready	Service is limited to 1000 features. There is problem in GetCapabilities, tn-ro namespace is missing	KlantContactCenter PDOK (beheerPDOK@kadaster.nl); Dorus Kruse (Dorus.Kruse@kadaster.nl); Johan.Keurentjes@kadaster.nl; Ghidey.Mosazghi@kadaster.nl>
The Netherlands	TN-Rail	KADAST	Inspire 2	Ready	Minor issues: paging is not supported, service os limited to 1000 features, some attributes are missing: RailwayStationArea, ConditionOfFacility, VerticalPosition	KlantContactCenter PDOK (beheerPDOK@kadaster.nl); Dorus Kruse (Dorus.Kruse@kadaster.nl); Johan.Keurentjes@kadaster.nl; Ghidey.Mosazghi@kadaster.nl>

The Netherlands	TN-Water	KADAST	Inspire 2	Ready		KlantContactCenter PDOK (beheerPDOK@kadaster.nl); Dorus Kruse (Dorus.Kruse@kadaster.nl); Johan.Keurentjes@kadaster.nl; Ghidey.Mosazghi@kadaster.nl>
The Netherlands	SR	KADAST	Inspire 2	Ready		KlantContactCenter PDOK (beheerPDOK@kadaster.nl); Dorus Kruse (Dorus.Kruse@kadaster.nl); Johan.Keurentjes@kadaster.nl; Ghidey.Mosazghi@kadaster.nl>
Ireland	AU	OSI		Issues	No access	Maria Byrne (Maria.Byrne@osi.ie), Aiofe Shinnors (Aoife.Shinnors@osi.ie)
Ireland	GN	OSI		Issues	No access	Maria Byrne (Maria.Byrne@osi.ie), Aiofe Shinnors (Aoife.Shinnors@osi.ie)
Ireland	BU	OSI		Issues	No access	Maria Byrne (Maria.Byrne@osi.ie), Aiofe Shinnors (Aoife.Shinnors@osi.ie)
Ireland	EL	OSI		Issues	No access	Maria Byrne (Maria.Byrne@osi.ie), Aiofe Shinnors (Aoife.Shinnors@osi.ie)

Ireland	Basemap	OSI		Issues	No access	Maria Byrne (Maria.Byrne@osi.ie), Aoife Shinnors (Aoife.Shinnors@osi.ie)
Ireland	Basemap	OSI		OK	Not full content	Maria Byrne (Maria.Byrne@osi.ie), Aoife Shinnors (Aoife.Shinnors@osi.ie)
Ireland	Ortophotos	OSI		OK		Maria Byrne (Maria.Byrne@osi.ie), Aoife Shinnors (Aoife.Shinnors@osi.ie)
Slovakia	CIM	GCCA	NA	Issues	Major issues: missing mandatory features - buildings, addresses and administrative units.	Fojtl Matúš (matus.fojtl@skgeodesy.sk)
Slovakia	CIM	GCCA	NA	Issues	Major issues: missing mandatory features - buildings, addresses and administrative units.	Fojtl Matúš (matus.fojtl@skgeodesy.sk)
Cyprus	CIM	DLS	NA	Issues	Not according the CIM specification. AD layer is missing	Marios Themistocleous (mthemistocleous@dls.moi.gov.cy)
Estonia	AD	ELB	Inspire 4	Issues	The service does not contain neither PostalDescriptor nor AddressAreaName address components.	Tanel Hurt (tanel.hurt@maaamet.ee)
Luxembourg	AD	GIM on behalf of NMCA		Issues	Test service. Problems with getting content (TYPENAMES) in QGIS, paging issues, errors on GML validation in FeatureCollection	Stijn Goedertier (stijn.goedertier@gim.be)
Slovakia	HY-PW	GCCA		Issues	INSPIRE validation did not pass, issues to connect by QGIS	Fojtl Matúš (matus.fojtl@skgeodesy.sk)

Slovakia	TN-Road	GCCA		Issues	around 50% GetFeature requests returns an empty response, as if 50% of WFS servers in cluster were not working properly. Some of the feature types are missing	Fojtl Matúš (matus.fojtl@skgeodesy.sk)
Slovakia	TN-Rail	GCCA		Issues	around 50% GetFeature requests returns an empty response, as if 50% of WFS servers in cluster were not working properly. Some of the feature types are missing	Fojtl Matúš (matus.fojtl@skgeodesy.sk)
Cyprus	TN-Road	DLS		Issues	Only two feature types: RoadLinks (Road Transport Network) and PortNodes (Water Transport Network). Core features and attributes are missing. Only 50 features return in bbox	Marios Themistocleous (mthemistocleous@dls.moi.gov.cy)
Cyprus	TN-Water	DLS		Issues	Only two feature types: RoadLinks (Road Transport Network) and PortNodes (Water Transport Network). Core features and attributes are missing. Only 50 features return in bbox	Marios Themistocleous (mthemistocleous@dls.moi.gov.cy)

Annex III. Templates of the testing reports.

Cadastral Index Map (WMS)

Features	
Mandatory	
Cadastral Parcel	Yes / No
Addresses	Yes / No
Buildings	Yes / No
Administrative Units	Yes / No
Optional	
Cadastral Zoning	Yes / No
Cadastral Boundaries	Yes / No
Basic Property Units	Yes / No
GetFeatureInfo for CP	
Mandatory	
NationalCadastralReference	Yes / No
InspireId	Yes / No
Output format (xml or html)	Yes / No
GetFeatureInfo for AD	
Mandatory	
fullAddressText	Yes / No
Output format (xml or html)	Yes / No
Reference Systems	
Mandatory	
WM WGS 84 3857	Yes / No
LAE 3035	Yes / No
Update frequency	
updates (max monthly)	information
Scales	
1:100 to 1:2.000	
BU BU.Building.ELFCadastre	what scale is available (details)
BU BU.BuildingPart.ELFCadastre	what scale is available (details)
CP CP.CadastralParcel.ELFCadastre (boundaries plus labels)	what scale is available (details)
CP CP.CadastralZoning.ELFCadastre	what scale is available (details)
AD AD.Address.Number.ELFCadastre	what scale is available (details)
AU AU.AdministrativeUnit.ELFCadastre	what scale is available (details)
1:2.000 to 1:5.000	
BU BU.Building.ELFCadastre	Yes / No
CP CP.CadastralParcel.ELFCadastre (without to display labels)	Yes / No

CP CP.CadastralZoning.ELFCadastre	Yes / No	
AU AU.AdministrativeUnit.ELFCadastre	Yes / No	
1:5.000 to 1:10.000		
BU BU.Building.ELFCadastre	Yes	
CP CP.CadastralParcel.ELFCadastre (without to display labels)	Yes	
AU AU.AdministrativeUnit.ELFCadastre	Yes	
Delivery medium		
Available through ELF platform	Yes	
WMS should at least support the OGC WMS Implementation specification version 1.1.1	Yes	
Display ELF style		
Cannot support SLD, they will provide directly the ELF styles	Yes / No	
Can support SLD	Yes / No	
Style Name	BU.Building.ELFCadastre	Yes / No
Style Title	Building ELF Cadastral Index Map style	Yes / No
Style Abstract	Style for surface geometries: red light with dark red outline	Yes / No
	• Fill colour: light red (#ffebeb)	Yes / No
	• Outline colour: red (#ff0000)	Yes / No
	• Outline width: 1 px	Yes / No
Style Name	CP.CadastralParcel.ELFCadastre	Yes / No
Style Title	CadastralParcel ELF Cadastral Index Map style	Yes / No
Style Abstract	Style for surface geometries: hollow with black outline	Yes / No
	• Fill colour: none	Yes / No
	• Outline colour: black (#000000)	Yes / No
	• Outline width: 1 px	Yes / No
	For scale from 1:100 to 1:2000 both the parcel outlines and the labels are shown.	Yes / No
	For scale from 1:2000 to 1:10000 only the parcel outlines are shown.	Yes / No
Style Name	CP. CadastralZoning.ELFCadastre	Yes / No
Style Title	CadastralZoning ELF Cadastral Index Map style	Yes / No
Style Abstract	Cadastral zoning outline carried by the attribute geometry+ text with attribute label	Yes / No
	• Fill colour: none	Yes / No
	• Outline colour: black (#000000)	Yes / No
	• Outline width: 2 px	Yes / No
Style Name	AD.Address.Number.ELFCadastre	Yes / No
Style Title	Address Number	Yes / No
Style Abstract	The address number is rendered in Arial 7 black (#000000).	Yes / No

	position is: the postal delivery point, a point of utility service, the access point from the thoroughfare, or the entrance door or gate.	Yes / No
Style Name	AU.AdministrativeUnit.ELFCadastre	Yes / No
Style Title	Administrative Unit	Yes / No
Style Abstract	Style for surface geometries: hollow with red outline	Yes / No
	• Fill colour: none	Yes / No
	• Outline colour: red (#ff0033)	Yes / No
	• Outline width: 4 px	Yes / No
	font is Arial	Yes / No
	font size 20 (When the layer is portrayed at scales above 1:10.000 the font size should be reduced to Arial font size 12.)	Yes / No
Completeness		
Data coverage		Yes / No

Addresses (WFS)

Service	Service URL e.g. http://geoportal-inspirewfs.cuzk.cz/WFS_INSPIRE_TN_ROAD/WFService.aspx		
User/password	login if relevant	password if relevant	
WFS version	2.0.0		
Provider	Name of service provider e.g. Czech Office for Surveying, Mapping and Cadastre		
Initial tests			
Validation in INSPIRE validator	Summary of test results in INSPIRE validator		
General metadata review	Very general service metadata tests		
Verification of service capabilities	Validation of service getcapabilities response against application schema and general visual check		
Features			
Feature type/data type/attribute	Validation of core ELF data returned by a service		QGIS with WFS 2.0 Client test
core: Address	No errors		No errors
core: AdminUnitName	Minor errors or issues - please provide clarifications e. g. optional feature missing		Minor errors or issues - please provide clarifications
core: name/language	Major error or issues - please provide clarifications e. g. core feature missing		Major error or issues - please provide clarifications
core: Postal Descriptor			
core: Postcode			
core: ThoroughfareName			
core: name/language			
	Validation of optional INSPIRE data returned by a service		QGIS with WFS 2.0 Client test
AddressAreaName			

CRS support		
WM WGS 84 EPSG:3857		
LAE EPSG: 3035		
Completeness		
Data coverage	Random check whether features are available for the territory of tested country and are not crossing tested country boundaries	
Paging tests		
Paging supported	Check whether service properly supports the paging. Sample TN requests: 1. http://services.cuzk.cz/wfs/inspire-ad-wfs.asp?service=WFS&REQUEST=GetFeature&VERSION=2.0.0&COUNT=2&TYPENAME=ad:Address&STARTINDEX=1 2. http://services.cuzk.cz/wfs/inspire-ad-wfs.asp?service=WFS&REQUEST=GetFeature&VERSION=2.0.0&COUNT=2&TYPENAME=ad:Address&STARTINDEX=2 Check whether second feature from first request is first feature in second request	
Number of returned features		
Limit of returned features (at least 10 000)	Check whether service returns at least 10 000 features For example send request http://services.cuzk.cz/wfs/inspire-ad-wfs.asp?service=WFS&REQUEST=GetFeature&VERSION=2.0.0&COUNT=10000&TYPENAME=ad:Address and calculate the number of returned features	
Authentication		
Supported authentication method	Check whether service is open or uses standard authentication method e.g. http basic	
Performance		
Service performance	Check initial response time when downloading 10 000 features. Make few request and calculate average initial response. 1. Below 30 seconds - ok (green colour) 2. 31-60 seconds - minor problem (yellow colour) 3. Above 60 seconds - mayor issue (red colour)	

Buildings (WFS)

Service	Service URL e.g. http://geoportal-inspirewfs.cuzk.cz/WFS_INSPIRE_TN_ROAD/WFService.aspx		
User/password	login if relevant	password if relevant	
WFS version	2.0.0		
Provider	Name of service provider e.g. Czech Office for Surveying, Mapping and Cadastre		
Initial tests			
Validation in INSPIRE validator	Summary of test results in INSPIRE validator		

General metadata review	Very general service metadata tests		
Verification of service capabilities	Validation of service getcapabilities response against application schema and general visual check		
Features			
Feature type/data type/attribute	Validation of core ELF data returned by a service		QGIS with WFS 2.0 Client test
core: Building	No errors Minor errors or issues - please provide clarifications e. g. optional feature missing (mark in yellow) Major error or issues - please provide clarifications e. g. core feature missing (mark in red)		No errors Minor errors or issues - please provide clarifications e. g. optional feature missing (mark in yellow) Major error or issues - please provide clarifications e. g. core feature missing (mark in red)
	Validation of optional INSPIRE data returned by a service		QGIS with WFS 2.0 Client test
BuildingPart			
BuildingUnit (extended 2D)			
Installation (extended 2D)			
OtherConstruction (extended 2D)			
BoundarySurface (extended 3D)			
ClosureSurface (extended 3D)			
Door (extended 3D)			
GroundSurface (extended 3D)			
InteriorInstallation (extended 3D)			
Opening (extended 3D)			
OuterCeilingSurface (extended 3D)			
OuterFloorSurface (extended 3D)			
ParameterizedTexture (extended 3D)			
RoofSurface (extended 3D)			
Room (extended 3D)			
WallSurface (extended 3D)			
Window (extended 3D)			
CRS support			
WM WGS 84 EPSG:3857			
LAE EPSG: 3035			
Completeness			
Data coverage	Random check whether features are available for the territory of tested country and are not crossing tested country boundaries		
Paging tests			

Paging supported	Check whether service properly supports the paging. Sample TN requests: 1. http://services.cuzk.cz/wfs/inspire-bu-wfs.asp?service=WFS&REQUEST=GetFeature&VERSION=2.0.0&COUNT=2&TYPENAME=bu:Building&STARTINDEX=1 2. http://services.cuzk.cz/wfs/inspire-bu-wfs.asp?service=WFS&REQUEST=GetFeature&VERSION=2.0.0&COUNT=2&TYPENAME=bu:Building&STARTINDEX=2 Check whether second feature from first request is first feature in second request	
Number of returned features		
Limit of returned features (at least 10 000)	Check whether service returns at least 10 000 features For example send request http://services.cuzk.cz/wfs/inspire-bu-wfs.asp?service=WFS&REQUEST=GetFeature&VERSION=2.0.0&COUNT=10000&TYPENAME=bu:Building and calculate the number of returned features	
Authentication		
Supported authentication method	Check whether service is open or uses standard authentication method e.g. http basic	
Performance		
Service performance	Check initial response time when downloading 10 000 features. Make few request and calculate average initial response. 1. Below 30 seconds - ok (green colour) 2. 31-60 seconds - minor problem (yellow colour) 3. Above 60 seconds - mayor issue (red colour)	

Transport Network – Road (WFS)

Service	Service URL e.g. http://geoportal-inspirewfs.cuzk.cz/WFS_INSPIRE_TN_ROAD/WFService.aspx		
User/password	login if relevant	password if relevant	
WFS version	2.0.0		
Provider	Name of service provider e.g. Czech Office for Surveying, Mapping and Cadastre		
Initial tests			
Validation in INSPIRE validator	Summary of test results in INSPIRE validator		
General metadata review	Very general service metadata tests		
Verification of service capabilities	Validation of service getcapabilities response against application schema and general visual check		
Features			
Feature type/data type/attribute	Validation of core ELF data returned by a service	QGIS with WFS 2.0 Client test	
core: RoadLink	No errors	No errors	
optional: name/spelling/text	Minor errors or issues - please provide clarifications e. g. optional feature missing	Minor errors or issues - please provide clarifications	

optional: Name/language		
optional: TransEuropeanNet work		
optional: RoadNode		
core: Road	Major error or issues - please provide clarifications e. g. core feature missing	Major error or issues - please provide clarifications
core: nationalRoadCode		
core: ERoad		
core: europeanRouteNum ber		
optional: InterchangePoint		
optional: SchengenBorderP oint		
core: ConditionOfFacilit y (common TN)		
optional: RoadSurfaceCateg ory		
core: FormOfWay		
core: FunctionalRoadCl ass		
optional: NumberOfLanes		
core: VerticalPosition (common TN)		
core: RoadName		
core: name/language		
optional: AccessRestriction s		
	Validation of optional INSPIRE data returned by a service	QGIS with WFS 2.0 Client test
RoadArea		
RoadLinkSequenc e		
RoadServiceArea		
RoadServiceType		
RoadWidth		
SpeedLimit		
VehicleTrafficArea		
MaintenanceAutho rity (common TN)		
OwnerAuthority (common TN)		

TrafficFlowDirection (common TN)		
RestrictionForVehicles (common TN)		
AccessRestriction (common TN)		
CRS support		
WM WGS 84 EPSG:3857		
LAE EPSG: 3035		
Completeness		
Data coverage	Random check whether features are available for the territory of tested country and are not crossing tested country boundaries	
Paging tests		
Paging supported	Check whether service properly supports the paging. Sample requests: 1. http://mapy.geoportal.gov.pl/wss/geosrv/tn/wfs?service=WFS&REQUEST=GetFeature&VERSION=2.0.0&COUNT=2&TYPENAME=tn-ro:FunctionalRoadClass&STARTINDEX=1 2. http://mapy.geoportal.gov.pl/wss/geosrv/tn/wfs?service=WFS&REQUEST=GetFeature&VERSION=2.0.0&COUNT=2&TYPENAME=tn-ro:FunctionalRoadClass&STARTINDEX=2 Check whether second feature from first request is first feature in second request	
Number of returned features		
Limit of returned features (at least 10 000)	Check whether service returns at least 10 000 features For example send request http://mapy.geoportal.gov.pl/wss/geosrv/tn/wfs?service=WFS&REQUEST=GetFeature&VERSION=2.0.0&COUNT=10000&TYPENAME=tn-ro:FunctionalRoadClass and calculate the number of returned features	
Authentication		
Supported authentication method	Check whether service is open or uses standard authentication method e.g. http basic	
Performance		
Service performance	Check initial response time when downloading 10 000 features. Make few request and calculate average initial response. 1. Below 30 seconds - ok (green colour) 2. 31-60 seconds - minor problem (yellow colour) 3. Above 60 seconds - mayor issue (red colour)	

Transport Network – Rail (WFS)

Service	Service URL e.g. http://geoportal-inspirewfs.cuzk.cz/WFS_INSPIRE_TN_RAIL/WFSservice.aspx		
User/password	login if relevant	password if relevant	
WFS version	2.0.0		
Provider	Name of service provider e.g. Czech Office for Surveying, Mapping and Cadastre		
Initial tests			

Validation in INSPIRE validator	Summary of test results in INSPIRE validator	
General metadata review	Very general service metadata tests	
Verification of service capabilities	Validation of service getcapabilities response against application schema and general visual check	
Features		
Feature type/data type/attribute	Validation of core ELF data returned by a service	QGIS with WFS 2.0 Client test
core: RailwayLink	No errors	No errors
optional: transEuropeanTransportNetwork	Minor errors or issues - please provide clarifications e. g. optional feature missing	Minor errors or issues - please provide clarifications
optional: RailwayStationNode	Major error or issues - please provide clarifications e. g. core feature missing	Major error or issues - please provide clarifications
optional: facilityType		
optional: geographicalName		
optional: name/language		
core: RailwayStationArea		
core: ConditionOfFacility (common TN)		
core: RailwayType		
optional: RailwayUse		
optional: RailwayClass		
optional: RailwayElectrification		
optional: NominalTrackGauge		
optional: NumberOfTracks		
core: VerticalPosition (common TN)		
optional: DesignSpeed		
optional: RailwayStationCode		
	Validation of optional INSPIRE data returned by a service	QGIS with WFS 2.0 Client test
FormOfRailwayNodeValue		
RailwayArea		
RailwayLine		
RailwayLinkSequence		
RailwayNode		

RailwayStationCode		
RailwayYardArea		
RailwayYardNode		
MaintenanceAuthority (common TN)		
OwnerAuthority (common TN)		
TrafficFlowDirection (common TN)		
RestrictionForVehicles (common TN)		
AccessRestriction (common TN)		
CRS support		
WM WGS 84 EPSG:3857		
LAE EPSG: 3035		
Completeness		
Data coverage	Random check whether features are available for the territory of tested country and are not crossing tested country boundaries	
Paging tests		
Paging supported	Check whether service properly supports the paging. Sample requests for TN-RO: 1. http://mapy.geoportal.gov.pl/wss/geosrv/tn/wfs?service=WFS&REQUEST=GetFeature&VERSION=2.0.0&COUNT=2&TYPENAME=tn-ro:FunctionalRoadClass&STARTINDEX=1 2. http://mapy.geoportal.gov.pl/wss/geosrv/tn/wfs?service=WFS&REQUEST=GetFeature&VERSION=2.0.0&COUNT=2&TYPENAME=tn-ro:FunctionalRoadClass&STARTINDEX=2 Check whether second feature from first request is first feature in second request	
Number of returned features		
Limit of returned features (at least 10 000)	Check whether service returns at least 10 000 features For example send request http://mapy.geoportal.gov.pl/wss/geosrv/tn/wfs?service=WFS&REQUEST=GetFeature&VERSION=2.0.0&COUNT=10000&TYPENAME=tn-ro:FunctionalRoadClass and calculate the number of returned features	
Authentication		
Supported authentication method	Check whether service is open or uses standard authentication method e.g. http basic	
Performance		
Service performance	Check initial response time when downloading 10 000 features. Make few request and calculate average initial response. 1. Below 30 seconds - ok (green colour) 2. 31-60 seconds - minor problem (yellow colour) 3. Above 60 seconds - mayor issue (red colour)	

Annex IV. Population of exonyms and variant names

<to be filled based on the final report from Roman Starni-Ferl>