**2021-12-6**

ICEG

Hydrants

**OVERVIEW**

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| --- | --- |
| Start date | TBD |
| End date | TBD |
| Chairman | TBD |
| Project team | TBD |
| Scheduled meetings | TBD |
| Decision criterion | Unanimity minus one (U-1)  (each party has one vote) |
| License | TBD |
| License documentation | TBD |
| Issue logging | [Issues · belgif/thematic (github.com)](https://github.com/belgif/thematic/issues)  (use Label "XXX") |

# Context

The National Geographic Institute has been expanding its role as Geobroker for several years. In this role, it coordinates the programme for uniform and shared cartography for the emergency services, in cooperation with those services. In this way, we ensure that emergency services have better (geo)data at their disposal more quickly and more easily. We do this by harmonising, uniformising, integrating and standardising data, and by making it findable, accessible, interoperable and reusable. This led, for example, to a standard for thematic data for natural fires (in cooperation with the regions), a uniform and shared printing tool for maps for the emergency services, workshops for prioritising business and functional requirements and data needs, a project to determine country-wide standards for the symbology and classification of thematic data, and digital tools for multidisciplinary strategic and operational cooperation of emergency services.

Part of this programme is the compilation and provision of data that is essential for the proper functioning of the emergency services. In many cases, these data are difficult to find, the sources are fragmented and too often they are not interoperable. As a result, both the users (no uniform supply) and the providers (no uniform demand) of those data waste a lot of resources. In this study the emergency services have indicated that amongst others hydrants, by extension extinguishing water sources, are a high priority dataset. An initial exploratory study on this subject in Belgium by the NGI led, among other things, to the insight that the data on this subject, both in the maturity of the providers and the 'standards' used, are very diverse, and that this is a problem for the rapid and uniform reuse of the data. This dataset covers an extensive multi-level-government landscape and therefore seems eminently suitable for treatment with the support of the ICEG.

## WHAT

Via this initiative, the various stakeholders proposes to semantically model the different data flows and standardize the structure of the data for the following subject:

* Extinguishing water sources
  + Hydrants (underground & above-ground)
  + Water supply in the form of basins, wells, and other sources
* PEB/PPB (Point of First Destination) for the emergency services to assemble at first spot
* Measuring points for dangerous substances during incidents.
* Major electricity transportation networks (capacities, voltage, dependencies, switches, …)
* Transport pipelines

The focus is on terms related to **extinguishing water sources**. We start from terms defined for these entities in the existing **extinguishing water source** Registers.

The objective is to make the data accessible as Linked Open Data and to define standard interfaces (APIs) in order to simplify collaboration and integration of the various services and tools. The objective is to make the data easily reusable for all stakeholders.

## WHY

A semantic standard makes sharing and exchanging data between different stakeholders easier. Each stakeholder can directly use and interpret the data of the other. This stimulates the exchange and reuse of data and reduces the cost of exchange.

In the semantic web, data is distributed in a different way so that the AI ​​driven machines and the digital gatekeepers of the future such as Siri, Alexa, Cortana, Google Assistant, etc. are able to use and interprete the data. The semantic standard provides machine-readable data.

Opening up semantic data initiates innovation and will enable companies to develop more intelligent products and services. By linking data, we also have richer data. Enriched data from which more knowledge can be obtained.

## USe cases

There are various use cases for which the standardisation of **extinguishing water sources** provides added value. These use cases will be discussed in the first business workshop.

### First use case

*Extinguishing water sources are objects with a location, meaning that they have a set of coordinates attached to them. They have an owner, often a water distribution company or an enterprise with a certain risk, it must be clear who is the owner, so a link can be made with amongst others the Enhanced Crossroad Bank for Enterprises.*

### Second use case

*In order to make an extinguishing water source meaningful for emergency services, they need standardised attributes such as unique-id, type, capacity, source (e.g. a certain main pipe), hose connection type, availability, accessibility, contact point to inform owner about use of the source so he can take appropriate action …*

### Third use case

*Some owners, emergency services, municipalities and provinces have a system and process to register the status of the extinguishing water sources (broken, checked-and-working, last-check-date). It must be possible to establish a link with the water source and its management status/follow-up.*

### Fourth use case

*Create a link between the attributes and establish a standardised symbol to be shown in cartographic interfaces.*

# Scope

The objective of the business workshop is to map, define and standardise information related to extinguishing water sources. Based on our use cases the scope will be defined.

The following are within the scope:

* Extinguishing water sources
* Hydrants (above/underground), wells, basins, …
* Location
* Owner
* Maintenance status
* Parcel
* Address
* …

In the business workshop, we will evaluate the different use cases of the stakeholders to determine the detail scope.

# Stakeholders

The stakeholders of this process include:

|  |  |
| --- | --- |
| **Stakeholder type** | ***Examples*** |
| * Emergency Services (users of the sources) * Responsibles/experts from Interior Affairs concerned with legislation (Civil Security) | *Firefighters, Emergency Zones, municipalities, Experts from the regions, umbrella networks of firefighters like Netwerk Brandweer and Réseau des Zones de Secours de Wallonie* |
| * Owners of the extinguishing water sources * National Geographic Institute (NGI/IGN) * Crossroads Bank for Enterprises (KBO/BCE) * KLIM-CICC (Federal Cable and Pipeline Management Database) and KLIP (Flemish Cable and Pipeline Portal register) * Vlaamse Milieumaatschappij (VMM) / Department Omgeving / SPW Territoire, Logement, Patrimoine, Energie (TLPE) - Département de l'énergie et du bâtiment durable * Vlaamse Vereniging van Vlaamse Steden en Gemeenten (VVSG) * The Union of Cities and Municipalities of the Walloon Region (UVCW) | *Water production and distribution companies, Municipalities, Regional and National Umbrella Organisations of Water production and distribution companies* |

# SuccesS criteria

This process will be considered a success when the deliverables are widely used and applied. Initially within the Government in Belgium, but also beyond. In particular, we list the following criteria:

1. There is maximum coordination with all stakeholders - mentioned in point 3 - who are represented in at least one of the workshop sessions
2. The workshops result in a stable candidate standard that represents a consensus of all participants
3. The specification is accepted by the data standards workshop and the Steering Board
4. The specification is implemented and at least the framework data is published semantically.

# Deliverables

The workshops will deliver the following deliverables:

* Drawing up an overview of information needs based on analysis of available documentation and existing standards.
* Organizing a business workshop with stakeholders to validate and further expand the information needs.
* Organizing and facilitating 4 workshops composed of domain experts and processing their feedback.
* Preparation of reusable documentation for the information model and publication on belgif.be:
  + RDF vocabulary
  + HTML documentation for the vocabulary with terms and definitions
  + UML diagram
  + HTML documentation for the UML diagram
  + SHACL validation rules
  + JSON-LD context file
* Integration in the ICEG system of vocabularies
* Integration in the OSLO system of vocabularies

# Milestones and timing

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| --- | --- |
| **Date[[1]](#footnote-2)** | **Milestone** |
| **2021-12-08** | ICEG meeting: go/no-go |
| **2022-01** | Prepare a letter of intent and invite interested parties to the first business workshop. |
| **2022-03** | Business workshop with stakeholders to validate the information needs and further refine scope. |
| **2022-04** | Validation of charter by Workshop Data standards |
| **2022-05** | Workshop 1 |
| **2022-06** | Workshop 2 |
| **2022-09** | Workshop 3 |
| **2022-10** | Workshop 4 |
|  | Start of public review period - Recognition "Candidate Standard" – Workshop Data Standards |
| **2022-11** | Public review period |
|  | End of public review period - Recognition of "Standard" - Workshop Data Standards |
| **2022-12** | Standard communication to the ICEG Committee |

# dependencies

* …
* …

1. Specific data te be confirmed after sourcing consultants [↑](#footnote-ref-2)