

ICEG-OSLO: IMKL

Webinar

Start Public Review

Welcome!

28 November 2023

Microsoft Teams

We start at 11:05



Practical arrangements

Sound of audience is
muted by default



Use the **hand** icon if you want to say something.
Collaboration is greatly appreciated!



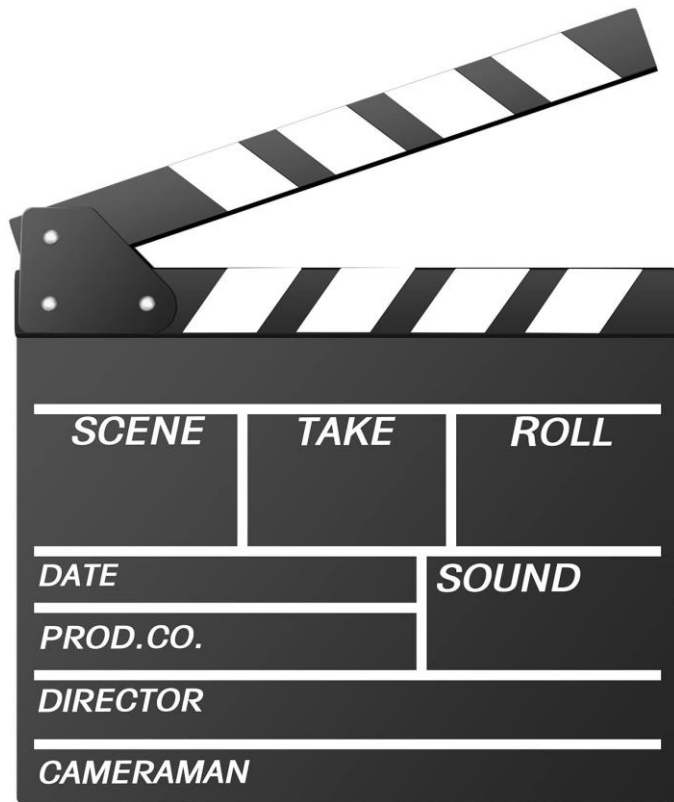
Questions, comments and suggestions can be shared via the chat function.
Interaction is encouraged!



Language

Slides: English
Spoken language: French
Q&A: NL/FR/EN

Recording?



Today's Goal



- Summary of the previous workgroups
- Presentation of the new model IMKL 3.0



- Next steps
- What is expected from you?
- How-to?



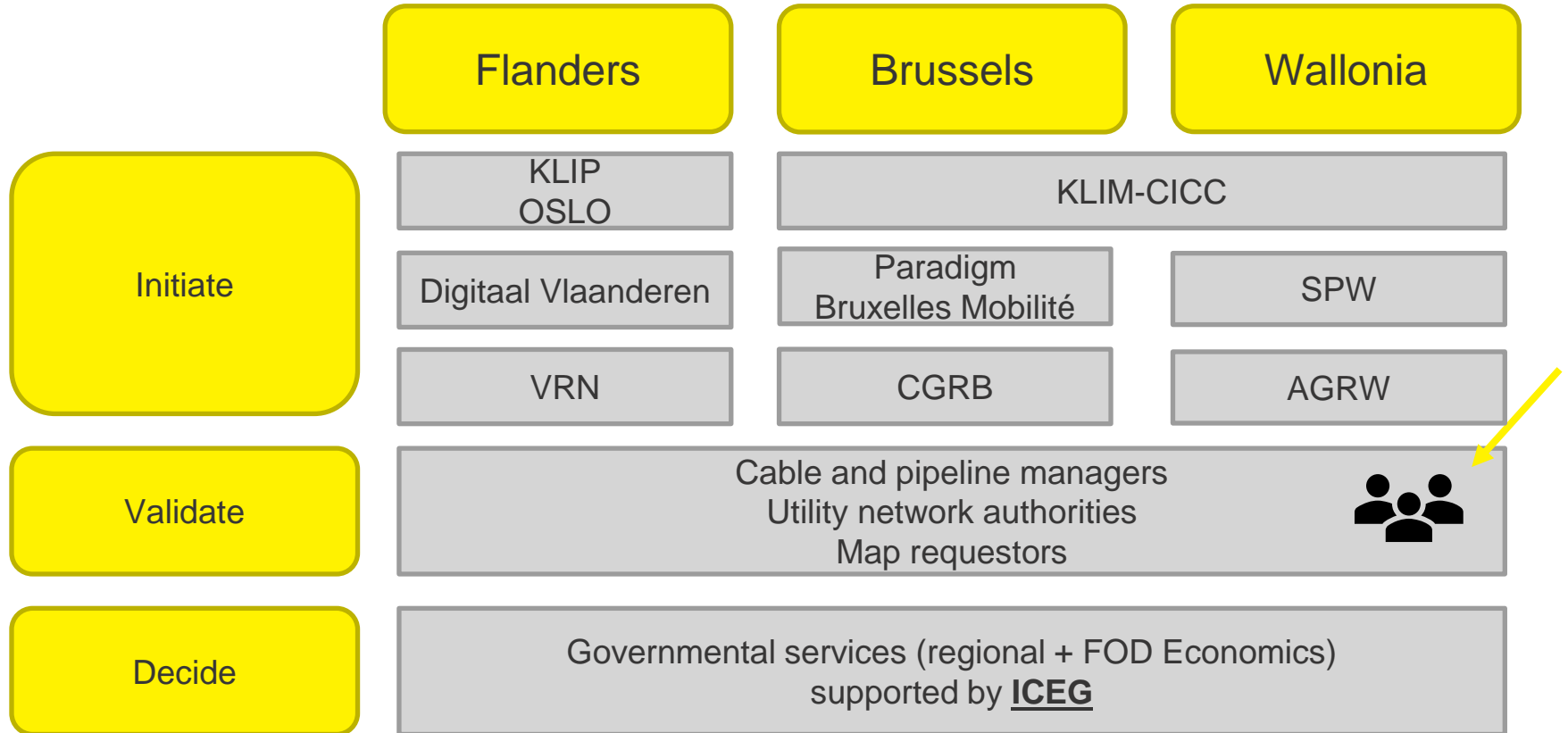
- Finalizing the revised theoretical model by end of january 2024
- Collaboration

Context IMKL-update



Vlaanderen
verbeelding werkt

Who is who?



IMKL

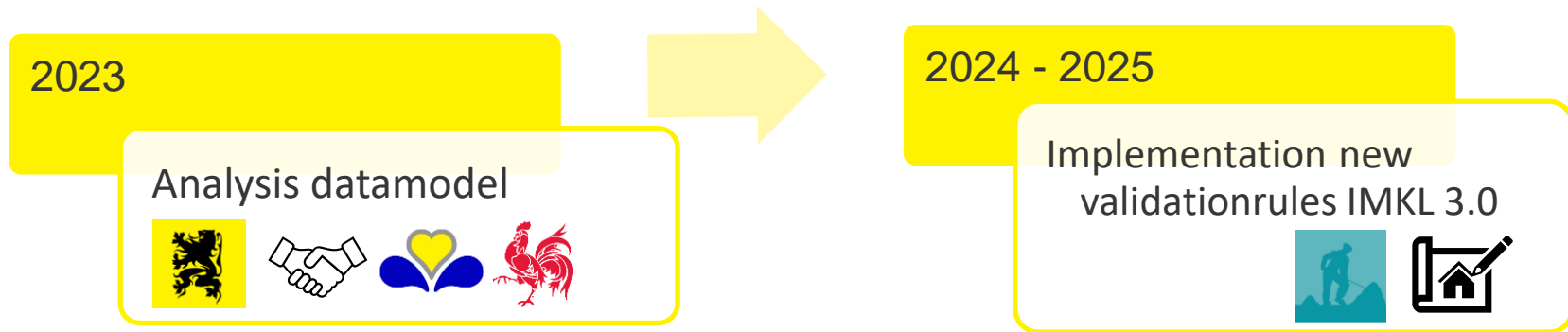
- Informatiemodel Kabels- en Leidingen (Information Model Cables and Pipes)
- Developed for 'KLIP Digital' in 2016
- Datamodel based on European standard: Inspire Utility Theme (INSPIRE US 3.0)
 - Extra addition: classifications, attributes and relations



IMKL-update: why?

- Current version (IMKL 2.3) in production since 24/08/2017
- Since 2017
 - Not yet implemented breaking changes in INSPIRE Data Specifications for Utility Services
 - Flemish Government commits to Open Standards for Linking Organisations (OSLO)
 - OGC-standard in development: “Model for Underground Data Definition and Integration (MUDDI)”
- New use cases detected
 - Policy preparation
 - Large infrastructure projects
- The current data model
 - Only XY-coordinates allowed (2D)
 - Only Lambert1972-coordinate system allowed
 - Mix of Dutch and English terminology
 - Maybe too complex

IMKL-update timeline and ambitions



IMKL 3.0 becomes a Flemish **OSLO-data standard**



Brussels (2026) and **Wallonia (2028)** want to oblige vectorial data exchange



Goal: to make the Flemish data standard a **national data standard**



Supported by **ICEG**

Cooperation on future development IMKL 3.X

Point of view: we are “x” years ahead in time and IMKL 3.X is in use.
We are working together with all Belgian regions on maintenance of the federal IMKL 3.X model.

Initiation

- Q3 2023: Draft document on cooperation agreement initiated by Flanders



Validation

- Q4 2023: First modifications by legal service Digitaal Vlaanderen
- Q1 2024: in coordination of ICEG
 - Consultation meetings between regions
 - Validation by legal services of all other concerned parties



Execution

- Ambition: signed in Q3/4 2024

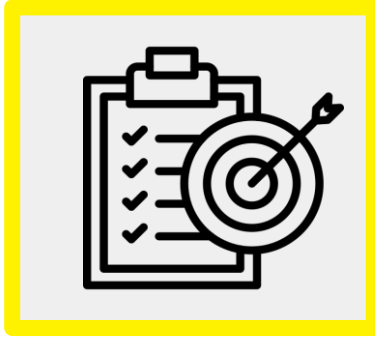


The renewed model



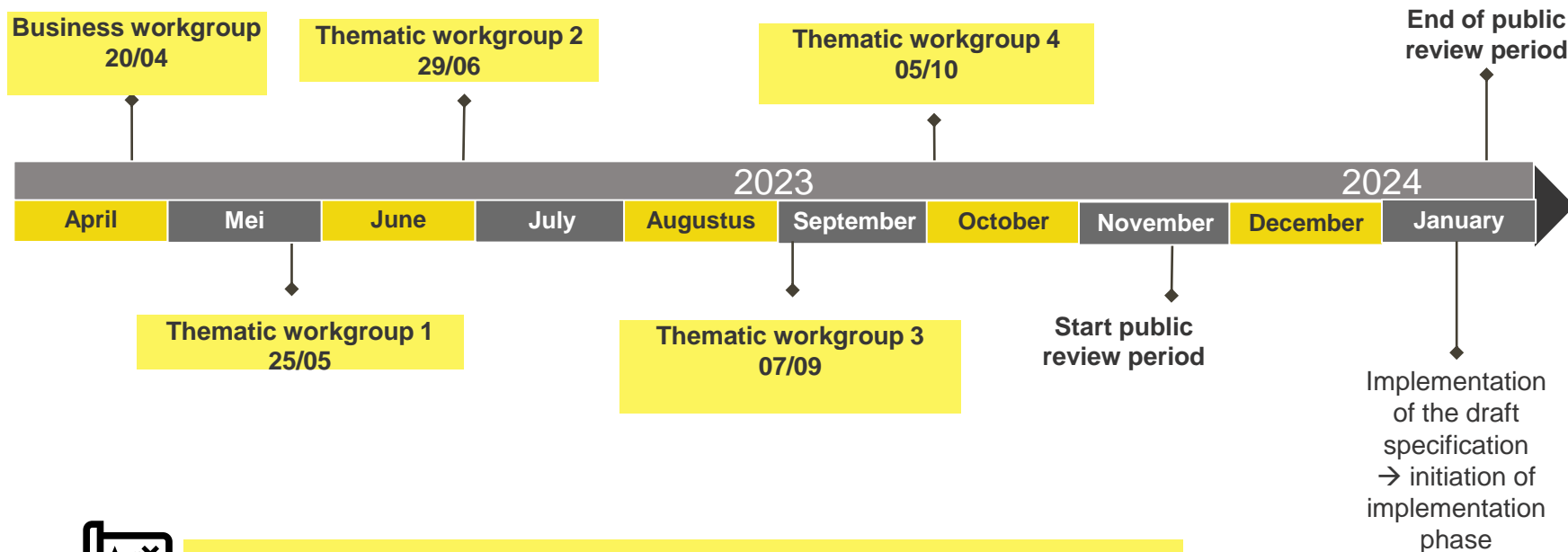
Vlaanderen
verbeelding werkt

Goal



Updating the 'old' IMKL 2.3 model to a new version **IMKL 3.0**, while keeping **existing models** and **European obligations** in mind.

OSLO timeline



We have worked on the 'construction plan' and definitions

Recap OSLO procedure 'IMKL 3.0'

Use cases



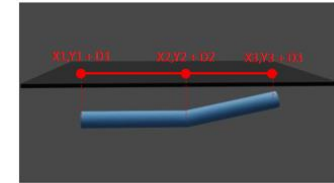
Scoping



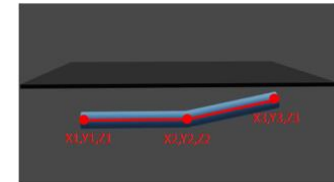
More accurate
and future
proof data



In Scope	Out Scope	Feature/implementation
Cables & Pipes	CAD implementation	Colour codes
Infrastructural elements		Feedback
Z-coordinates		
Overhead pipes		
Steered drilling		
Restricted Zones		



2D + diepte



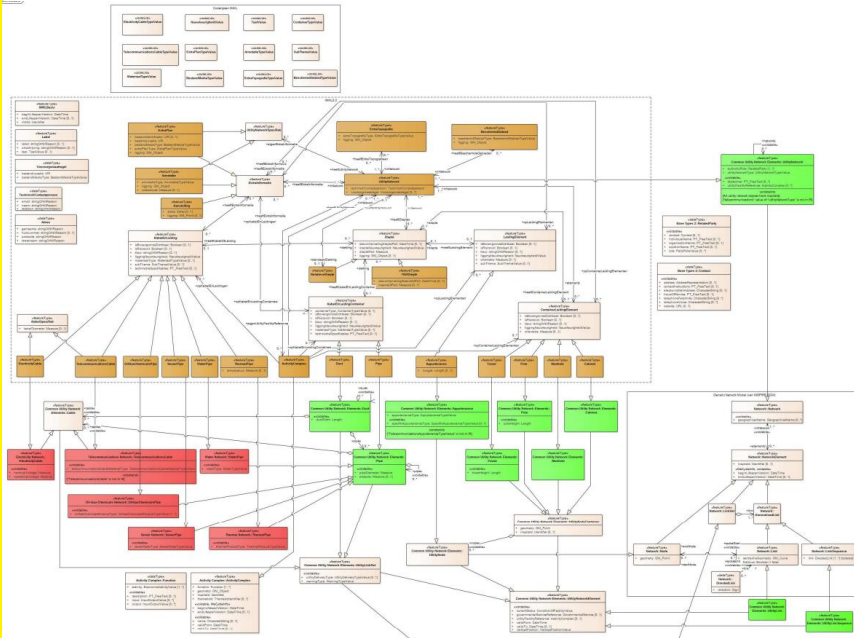
2.5D



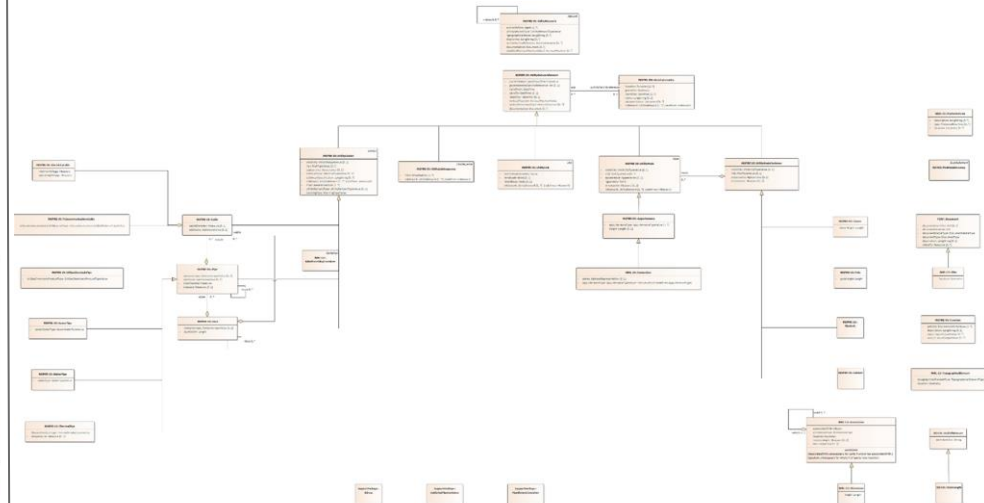
OGC guidelines (MUDDI) taken into account

Recap OSLO procedure 'IMKL 3.0'

From this



To this



Online specification

- Online specification where all classes, attributes and relations are explained
- It will be fully available in Dutch and English – French to be agreed in ICEG

This document describes an **application profile**, in this case **OSLO IMKL (Application Profile)**. This application profile answers the question of how the corresponding domain model can be applied in practice. The restrictions (cardinality, code lists) are explained and the corresponding (RDF) terms are listed.

Resume

The OSLO-IMKL application profile shows how terms from the corresponding [vocabulary](#) should be used to represent cable and pipeline information, both above-ground and underground.

With this data, the aim is to reduce excavation damage underground by mapping key elements.

The model consists of five parts. The first part is the upper part of the model. This describes the components of a network, as defined in INSPIRE's European standard - Utility Services.

The second part is on the left side of the model, under the Utility Link Set. Below this, it distinguishes between cables, pipes and ducts. In turn, ducts are also further subdivided into the different types of pipes.

The third section describes the subdivision of Utility Node and Utility Node Container. The Utility Node represents how a node is represented in the network. The Utility Node Container represents which elements comprise the node.

The fourth part is the code lists at the bottom. These non-terminal lists represent the completion of specific attributes.

The last part are the data types on the right-hand side. This section describes all the different data types.

DirectPosition

Description

Holder of the coordinates of a position in a coordinate reference system.

Usage

Typically used to describe the geometry of a spatial object or the geometric primitives (eg point, line, plane...) that make up that object. However, a DirectPosition can also stand alone to describe a position in space. The position is given in a coordinate reference system. That reference system is specified explicitly at the DirectPosition, unless it is part of a spatial object (eg a geometric primitive) where a reference system is already stated. FYI: A coordinate reference system differs from an indirect spatial reference system in that positions are specified directly by coordinates rather than indirectly by an address or place name.

Characteristics

The following properties are defined for this data type: [gml](#), [measurement](#), [wkt](#).

Characteristic	Expect Type	Cardinality	Description	Usage	Code list
gml	literal	0..1	Direct position expressed in gml format.	Use gml:literal as data type.	
geometry	measurement	0..1	The way the position was determined.		
wkt	literal	0..1	Direct position expressed in wkt format.	Use wkt:literal as data type.	

Geometry

Description

Shape and position characteristics of an object.

Usage

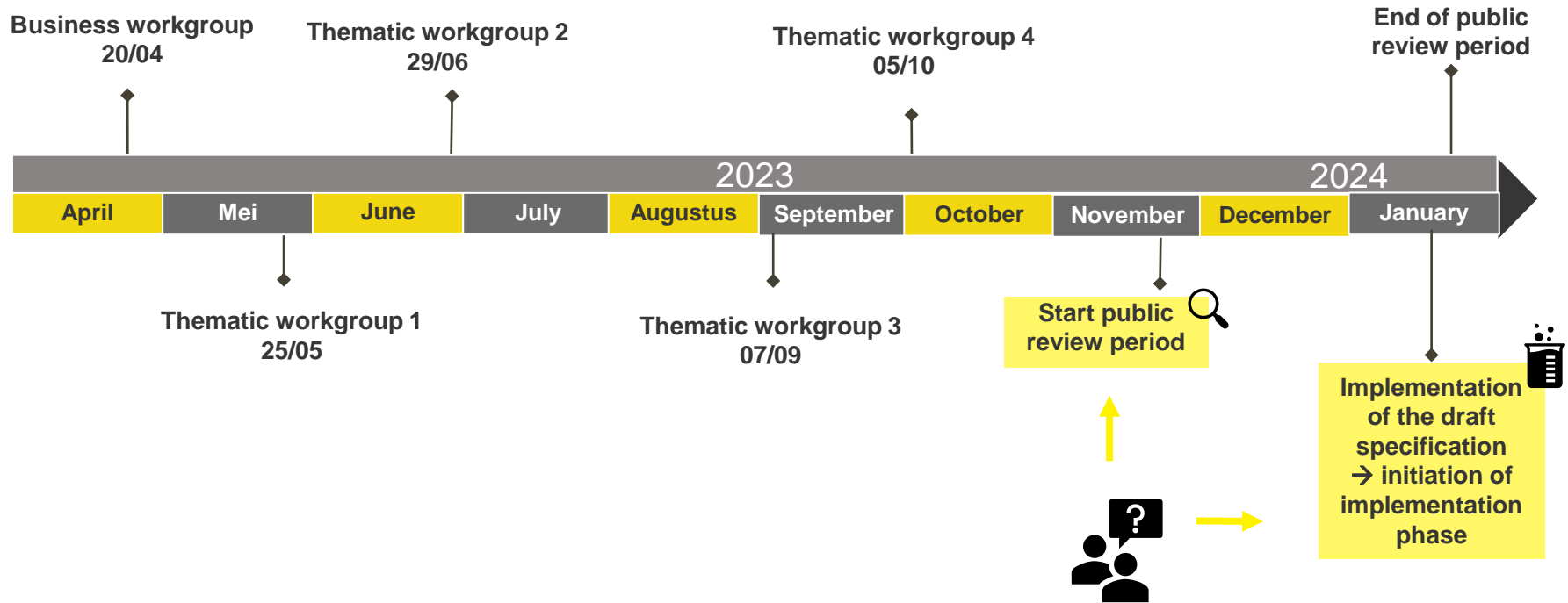
Describes these features using points, lines, polygons and coordinates.

Characteristics

The following properties are defined for this data type: [gml](#), [wkt](#).



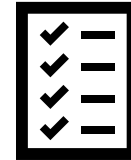
OSLO timeline



Public review



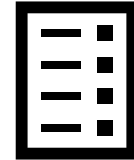
- Organising a **public review period**
 - Collect public feedback from anyone, no permission needed
 - Feedback can lead to minor or major changes
 - Think about your colleagues who might also have feedback to share!
- The duration depends on the number of issues and is estimated at 2 months (estimated ending: January 2024)
- Final version of the datamodel will be shared



What is expected from you?



- Point out any improvements during public review on the UML-model
 - **You are able to read/interpret UML-schemes**
 - Relations that should be specified?
 - Datatypes that should be defined differently?
 - Is there anything missing in the model?
- Improvements on the online specification
 - **You know the business/field**
 - If any definitions are unclear, please let us know!
 - Suggestions on domain-specific definitions
 - Improvements for the Dutch-English translation



- Where?



Demo

- [Online specification](#)
 - Vocabulary
 - UML-model
- [IMKL Github](#)
 - Free, online 'SharePoint' for IT projects
 - Documentation: reports and presentations on all workshops
 - Anyone can comment, so called 'issues'
 - If not for you, maybe for your colleagues?



Support implementation model



- Transition of 'theoretical' datamodel to a visible map in an application (like KLIP,...)
- A to B guide for changes between IMKL 2.3 and 3.0
- Focus lies on **business and/or technical profiles**, but any added value from anyone is welcome!

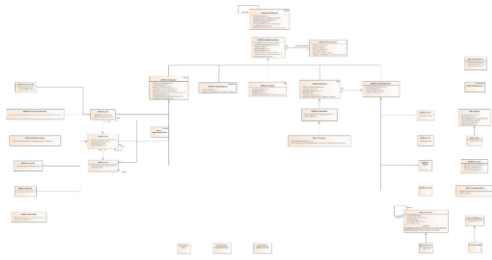
- Broad
- Semantic
- Multipurpose



- Narrow with restrictions
- Adapted to real life
- Single purpose



- Working application
- Data sharing

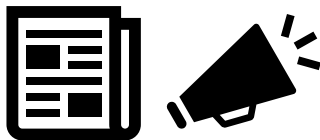


What is expected from you?



Take part in the implementation of the new IMKL 3.0 model

- As a **technical profile** for implementation details
- Or as a **field expert** for data specifications
- How should the data be delivered? (depth, restrictions, codelist, ...)
- What would I want to see as a user? (map requestor, cable and pipe operator,...)



Procedure will be launched in January 2024.
We will keep you informed!

Next Steps and Q&A

Next steps



Make a report and send the webinar to all stakeholders



Capturing feedback via the issues on GitHub:

- Minor change? Feedback will be immediately implemented
- Major change? Extra workshop(s) will be organized



- Review by external party
- Promote the IMKL3.0 to OSLO-datastandard and end the public review period.



- ICEG cooperation agreement on future development of the national standard
- Implementation of the theoretical model into practice

Feedback & Cooperation



Feedback can be given by e-mail to the following people:

- liesbeth.rombouts@vlaanderen.be
- ivy.vandekerchove@vlaanderen.be
- channecart@paradigm.brussels
- jef.lieken@vlaanderen.be



Feedback/input can be given via GitHub:

<https://github.com/Informatievlaanderen/OSLOthema-imkl>

Through the creation of **issues**

Why do we...?

Shouldn't we add ...?

Can't we ...?

What is ...?



**Thank you for your
interest and presence!**