

## Proposal for workshops – AGILE 2023

Delft, Tuesday 13 June 2023

<https://agile-online.org/conference-2023>

### 1. Workshop name/title (and acronym is applicable)

Introduction to the Land Administration Domain Model (LADM)

### 2. Description of the workshop by listing topic(s), objective(s) and planned outcome(s)

#### 2.1 Topic(s)

Land administration (LA) is defined as *'the processes of determining, recording and disseminating information about the ownership, value and use of land when implementing land management policies'* (UNECE, 1996). All the stages of 3D LA from the data acquisition, till its implementation, is a multi-disciplinary challenge, where the theory and applications of the geospatial field play an important role.

The UN has acknowledged the urgency for member nations to have an information system for managing land-related information. Following this recognition, the UN and FIG highlight the role of Land Administration System (LAS) and the Spatial Data Infrastructure (SDI) to facilitate the sharing of information among government institutions and to the citizens in supporting land management. The 2030 Agenda for sustainable development implicitly calls for a commitment to the use of information technology and enables all stakeholders to participate in land administration and spatial planning to protect rights, improve lives, and ensure better land management (UN, 2015). The world of land administration is getting more international and information is used beyond country boundaries; implying that land administration standards are crucial for interoperability. The International Organization for Standardization (ISO) standard 19152 "Land Administration Domain Model" (LADM) was published in 2012 to address basic information-related components of LA. It is a knowledge domain specific standard capturing the semantics of the LA domain. LADM aims to support *'an extensible basis for efficient and effective cadastral system development based on a Model Driven Architecture (MDA)'* and to *'enable involved parties, both within one country and between different countries, to communicate based on the shared ontology implied by the model'* (ISO, 2012). The domain model was described in an UML class diagram, forming the basis for country/jurisdiction specific profiles and implementations.

In the June 2019 Plenary Meeting Week of ISO/TC 211, it was decided that LADM Edition II will be designed as a multipart standard:

- Part 1 – Generic Conceptual Model
- Part 2 – Land Registration
- Part 3 – Marine Georegulation
- Part 4 – Valuation Information

- Part 5 – Spatial Plan Information
- Part 6 – Implementation Aspects

## **2.2 Objective(s)**

In a tutorial-style workshop the participants will be introduced to the domain of land administration (in the broad sense) with a mix of theoretic introductions and practical assignments. The role of the geospatial technologies and professionals in Land Administration is very significant, through various aspects (survey, spatial data management and dissemination, etc.), hence the following topics will be covered:

- Introduction to land administration
- Background of ISO19152:2012 LADM
- UML modelling
- Generic Conceptual Model of LADM (Part 1, including 3D legal spaces)
- Land Registration (Part 2 of LADM, including the survey model, and the Rights, Restrictions and Responsibilities in buildings)
- Marine Georegulation (Part 3 of LADM, optional)
- Valuation Information (Part 4 of LADM)
- Spatial Plan Information (Part 5 of LADM)

## **2.3 Planned outcome(s)**

*The workshop organizers are involved in the creation of the book 'LADM in the Classroom' to be published by the FIG. The book will be used during the workshop, and based on the feedback, it will be further refined.*

*At the end of the workshop, the participants should get back understanding of land administration, the importance of standardization, and get initial practice in using the LADM standard.*

## **3. Abstract**

*In a tutorial-style workshop, the participants will be introduced to the domain of land administration (covering land tenure, land value, and land use planning) including water and land spatial units, as well as elements above and below the surface of the earth (such as buildings/ apartment rights, legal space for utilities/tunnels, mining rights, air space rights, etc.). Information on land ownership, land-use policy, and rights, restrictions and responsibilities (RRRs) is vital in spatial planning and valuation, particularly in densely and intensively used spaces, particularly in the urban area.*

*The workshop will be a mix of theoretic introductions and practical assignments.*

**4. Short description of the intended length (half or full day) and the format of the workshop**

It is a half day workshop, with a mix of lectures explaining the different parts of LADM and hands-on modelling in pairs (or small groups) using the UML model of LADM (adding some country specific functionality to the standard).

**5. Brief statement of the relevance of the workshop for AGILE**

Land administration is a black spot in AGILE, it is a very rich domain, including many GIS aspects ranging from data acquisition (survey, design), data modelling, data storage, data dissemination, and data visualization. The various Land Administration functions, land registry, land tenure, marine georegulation, valuation information, and spatial plan information, are all part of the new edition of the ISO standard 19152LADM, which is currently ongoing. .

**6. What is the approximate number of expected participants?**

No Maximum

**7. Names and e-mail addresses of the organizing member(s)**

*Leading AGILE member (or sponsor) and contact person: Peter van Oosterom*  
[P.J.M.vanOosterom@tudelft.nl](mailto:P.J.M.vanOosterom@tudelft.nl)

*Contributing AGILE members (including the persons involved) – at least one seconding AGILE member is needed: Chrit Lemmen, [c.h.j.lemmen@utwente.nl](mailto:c.h.j.lemmen@utwente.nl), Abdullah Kara, [A.Kara@tudelft.nl](mailto:A.Kara@tudelft.nl), Eftychia Kalogianni, [E.Kalogianni@tudelft.nl](mailto:E.Kalogianni@tudelft.nl)*

*Contributing non-AGILE members (including the persons involved) – if applicable: Abdullah Alattas, [afalattas@kau.edu.sa](mailto:afalattas@kau.edu.sa)*

*Organizing Committee (if applicable):*

*Programme Committee (if applicable):*

**8. Additional information about previous workshops, if held.**

This workshop is different from earlier LADM workshop (see <http://iso;adm.org/>), which were based on open call for papers, peer review and selection, and presentations and discussions in a 3-day workshop. This workshop is tutorial-style and the content will be presented by the developers of the LADM ISO standard.

## **9. Expected resources needed**

*Just a projector and stable internet connection.*

## **10. Other information**

Participants will be asked before the workshop to install UML editor (e.g. trial version of EA) and download the latest ISO TC211 UML models.