

# FIG WORKING WEEK 2019

22-26 April, Hanoi, Vietnam

Presented by the FIG Working Week 2019,  
April 22-26, 2019 in Hanoi, Vietnam

"Geospatial Information for a Smarter Life  
and Environmental Resilience"



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# Towards the Netherlands LADM Valuation Information Model Country Profile

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## Towards the Netherlands LADM Valuation Information Model Country Profile

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**Ruud Kathmann, Waarderingskamer, The Netherlands**

Peter van Oosterom, Delft University of Technology, The Netherlands

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## Content of presentation

- **LADM and the Valuation Information Model**
- **Property Valuation Practices in Netherlands**
- **Data Requirements in Property Valuation in the Netherlands**
- **The Netherlands Country Profile of LADM Valuation Information Model**
- **Conclusion**

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## LADM: Land Administration Domain Model

- **ISO 19152:2012**
- Model is based on the relationships between '**people–land**'.
- Modelled in three main packages:
  - **Parties** (people and organizations);
  - **Basic administrative units**
  - **RRR's** (rights; restrictions, responsibilities);
- Additional packages to make it work:
  - **Spatial units** (parcels, and the legal space of buildings and utility networks)
  - **Surveying, and representation** (geometry and topology).

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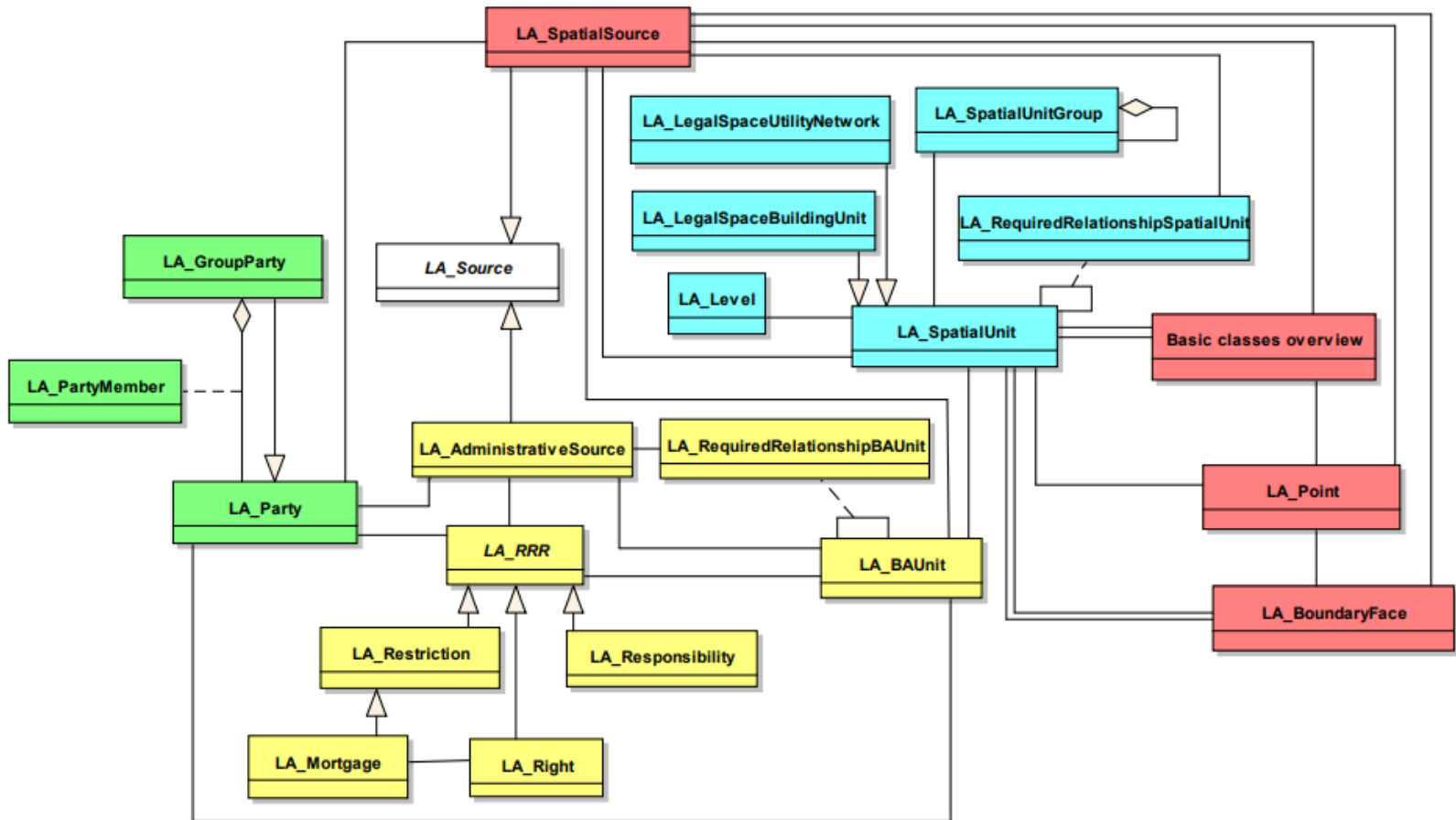


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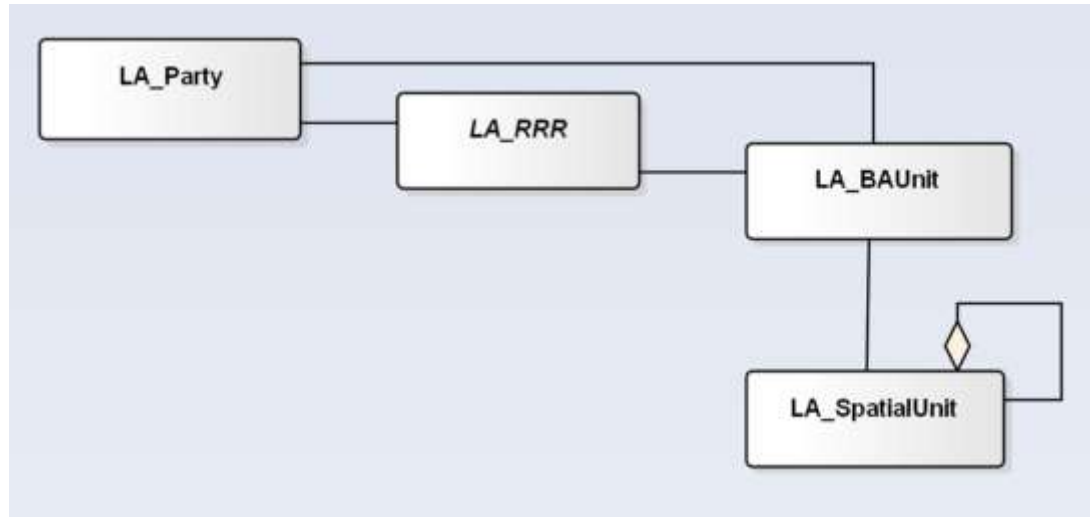
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## LADM: The base

- Land Administration Party
- LA RRR's
- LA Basic Administrative Unit
- LA Spatial Unit



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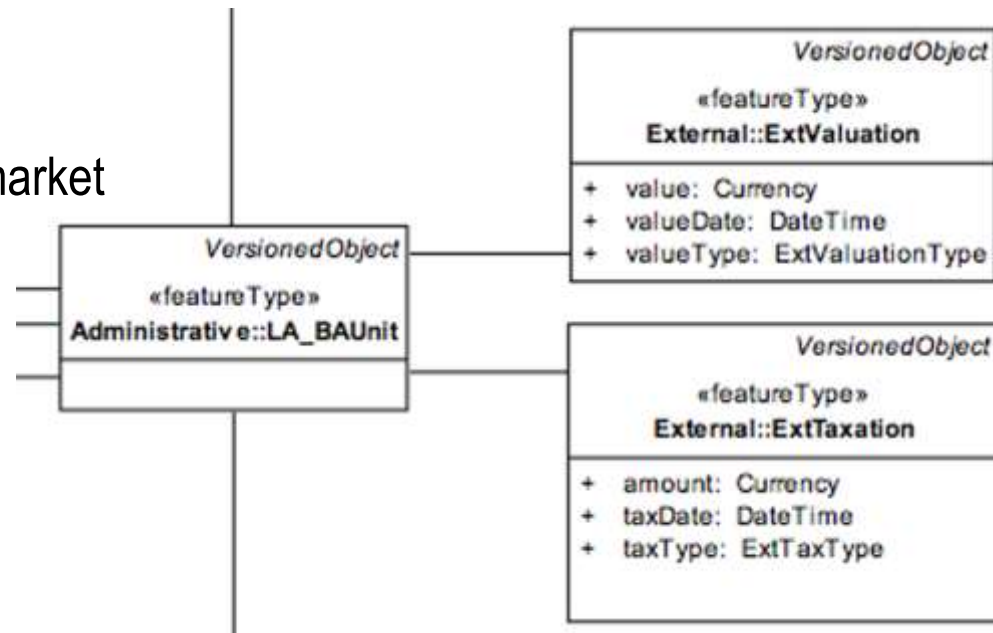
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## LADM: The importance of valuation and taxation

- Property tax as a source of revenues for
  - Costs of land administration
  - Costs of public services
- Valuation to stimulate transparent market
- Valuation and Taxation was **out of scope** of LADM
- But not entirely out of scope



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## LADM: Extension for valuation

- LADM based Valuation Information Model has been developed by extending ExtValuation class.
- It is designed especially for valuation for recurrent property taxes
  - but can be used for other purposes (e.g. compensation on expropriation, land readjustment, land consolidation, insurance assessment, mortgage, etc )
- Based on international valuation standards (IVSC, IAAO, TEGoVA)
- Based on international information standards (LADM, Inspire, OGC, CityGML)
- Valuation literature and questionnaire within FIG commissions 7 and 9
- The model must be flexible to allow for specific needs

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## LADM: Extension for valuation, where do we stand?

- Research of valuation standards and practices
- Model is defined and ready, but must be tested
- Turkish Country Profile of LADM Valuation Information Model was developed and the profile was implemented and tested (2018)
- In the 7th Land Administration Domain Model Workshop, it was decided that LADM Valuation Information Model should be evaluated with more country profiles and prototype systems
- Therefore this Country Profile for the Netherlands and in near future a prototype

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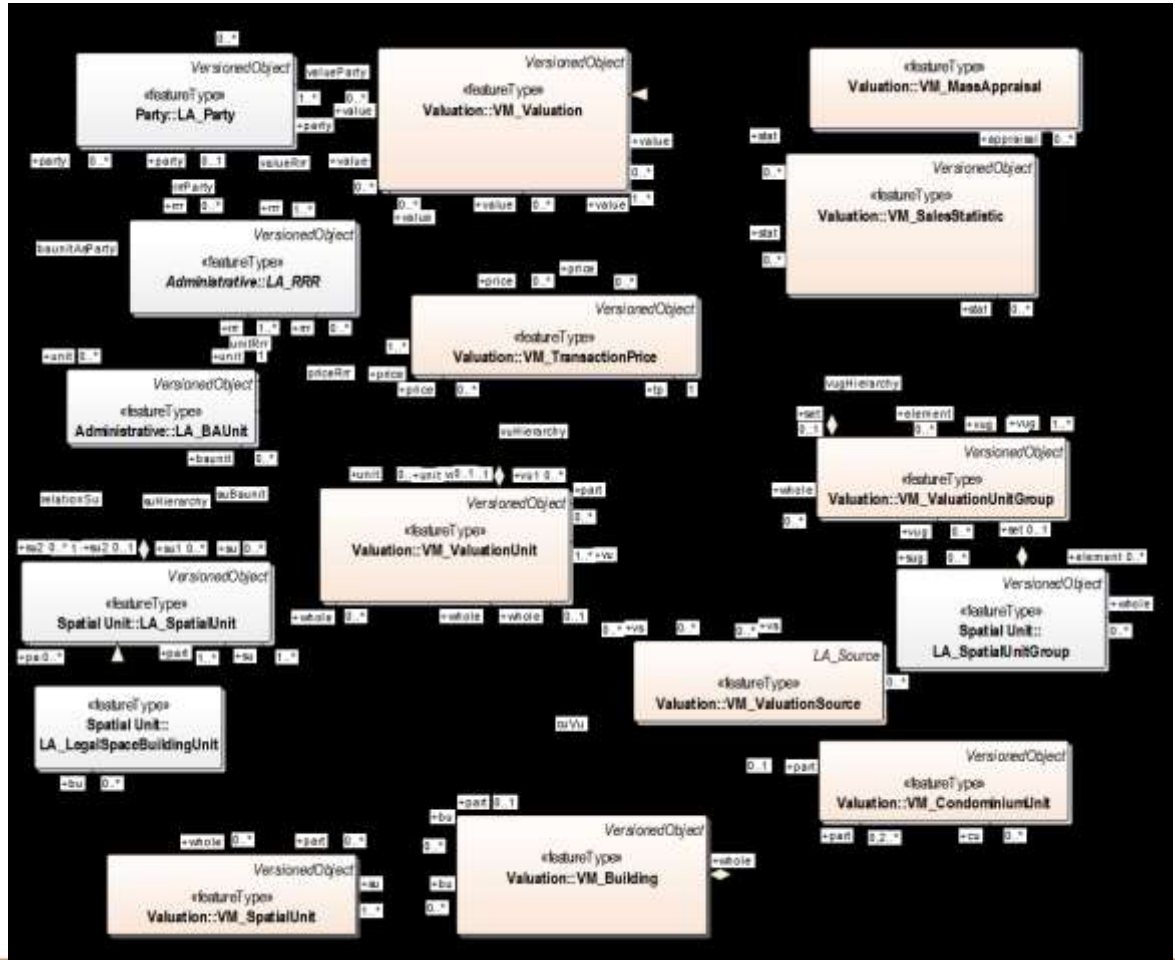
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## LADM: Extension for valuation



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## Property Valuation Practices in the Netherlands

- Approximately nine million properties (residential and other) are valued annually
- Assessed value is used for levying taxes and other (government) purposes
- Assessment is based on market value and done under responsibility of municipalities
  - Market value definition of IVS and EVS
- The mass valuation is regulated by **the Special Act for Real Estate Assessment**
  - (Wet Waardering Onroerende Zaken – Wet WOZ, therefore WOZ-value).
- **Council for Real Estate Assessment** (Waarderingskamer) supervises the valuation

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## Data needed for property valuation and taxation

- Different valuation methods and therefore different kinds of market data
  - Sales prices, rent prices, building costs
- In the Netherlands property tax is paid as well by owners as by users
  - Ownership of property (legal parcels and apartments)
  - Units that are used separately
- Physical characteristics of buildings
  - Size, age, type, garages, sheds etc.
  - Quality, maintenance condition,

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## Key register of assessed values

- Since 2009 the **property value register** is part of the **System of Key Registers**
- The register mainly contains information for the use of assessed values
  - **WOZ-value, valuation date**
  - **valuation object** (WOZ-object) with relations to cadastral parcels and buildings
  - Formal stakeholders (**owner, user**) (WOZ-Belang)
- The register does not contain all information needed for valuation

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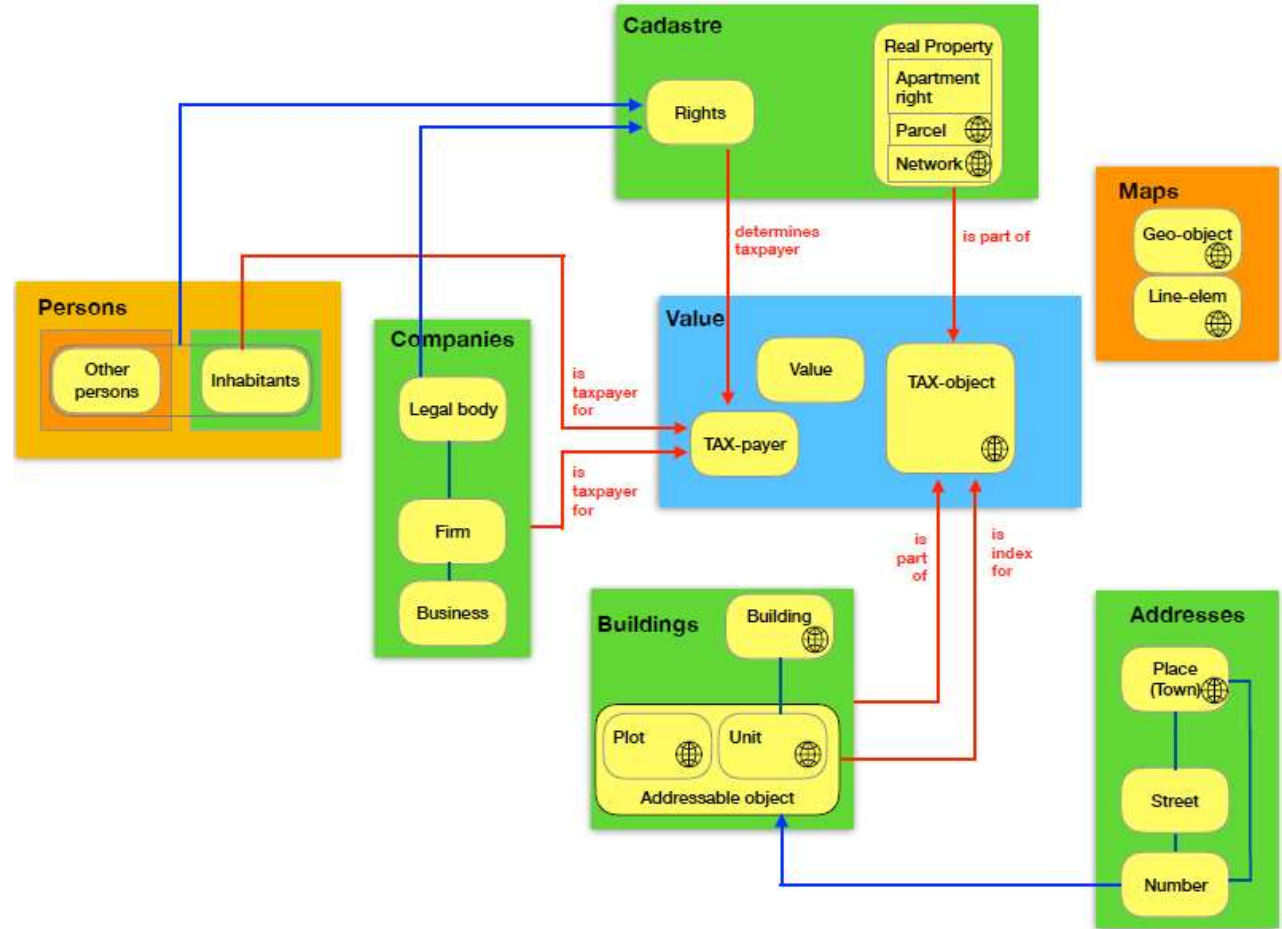
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## System of key-registers in the Netherlands



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## Information model for valuation

- Connecting administrative units and physical buildings
  - Market value is a result of both
  - Property characteristics
- Market data and results of market analysis
- Information to explain value (valuation report)
- Information for objections and appeal, for taxation etc.
- Information model for valuation before LADM extension

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## Transforming information model to LADM extension

- In the paper we show all details of the Netherlands profile
- We now only extract to topics:
  - Linking administrative units and building characteristics in a detailed model
  - How to describe quality of the assessed values

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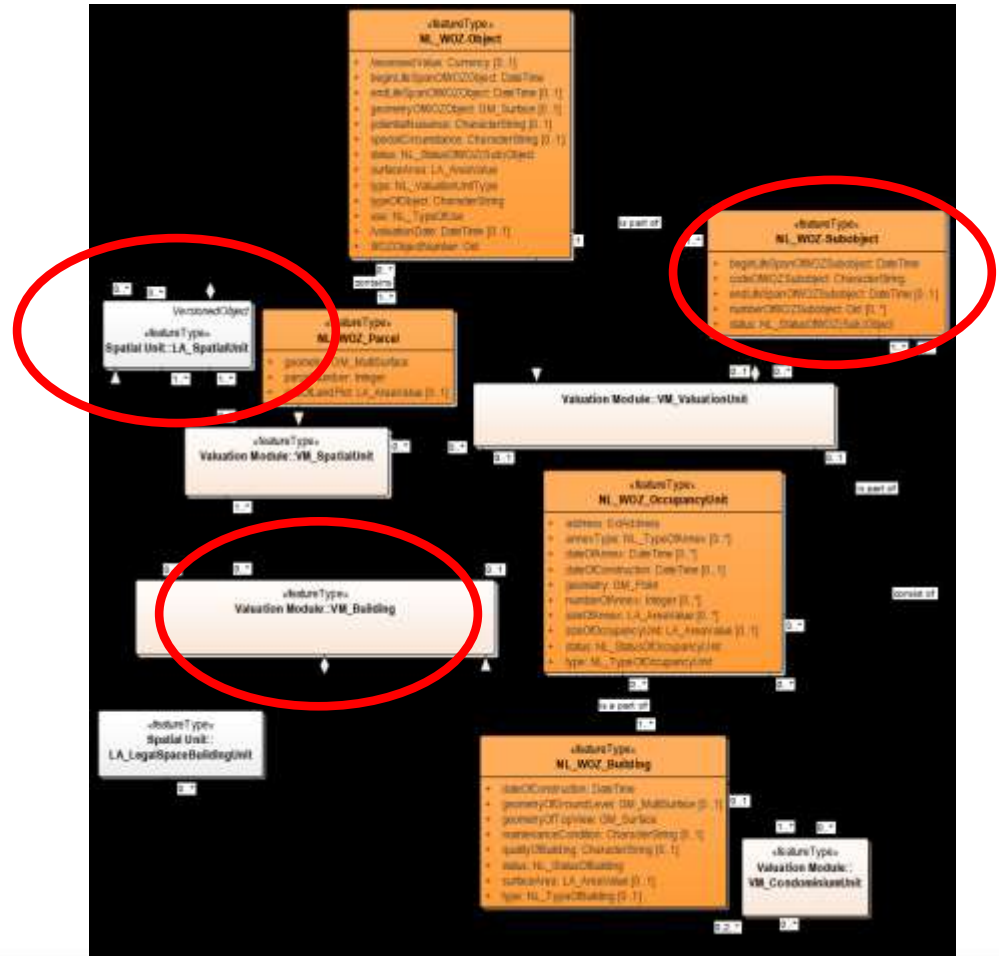
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## Linking valuation detail to administrative units and buildings



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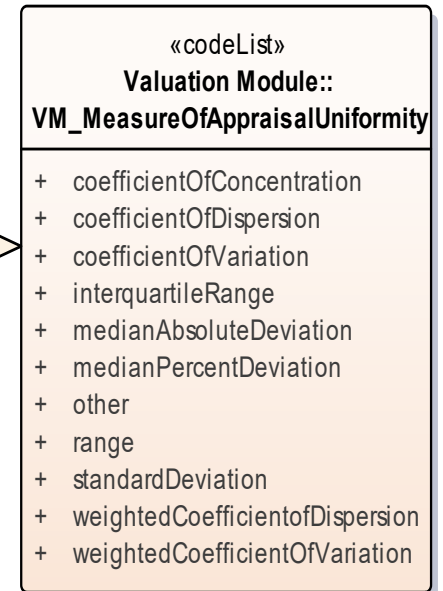
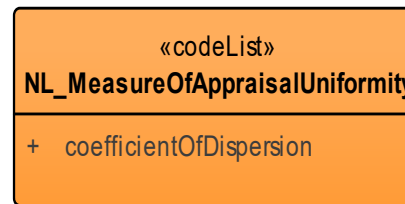
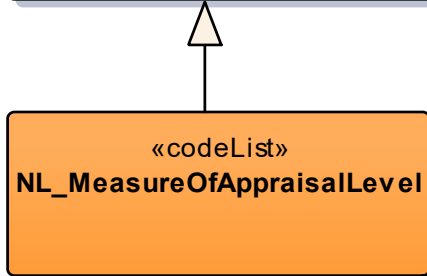
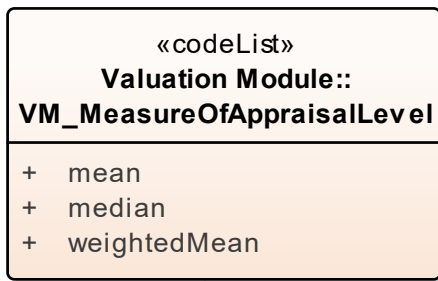
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## Define and register quality of assessed values

- Valuation level
  - E.g. 100% of market level
- Valuation uniformity
  - Equity for taxation





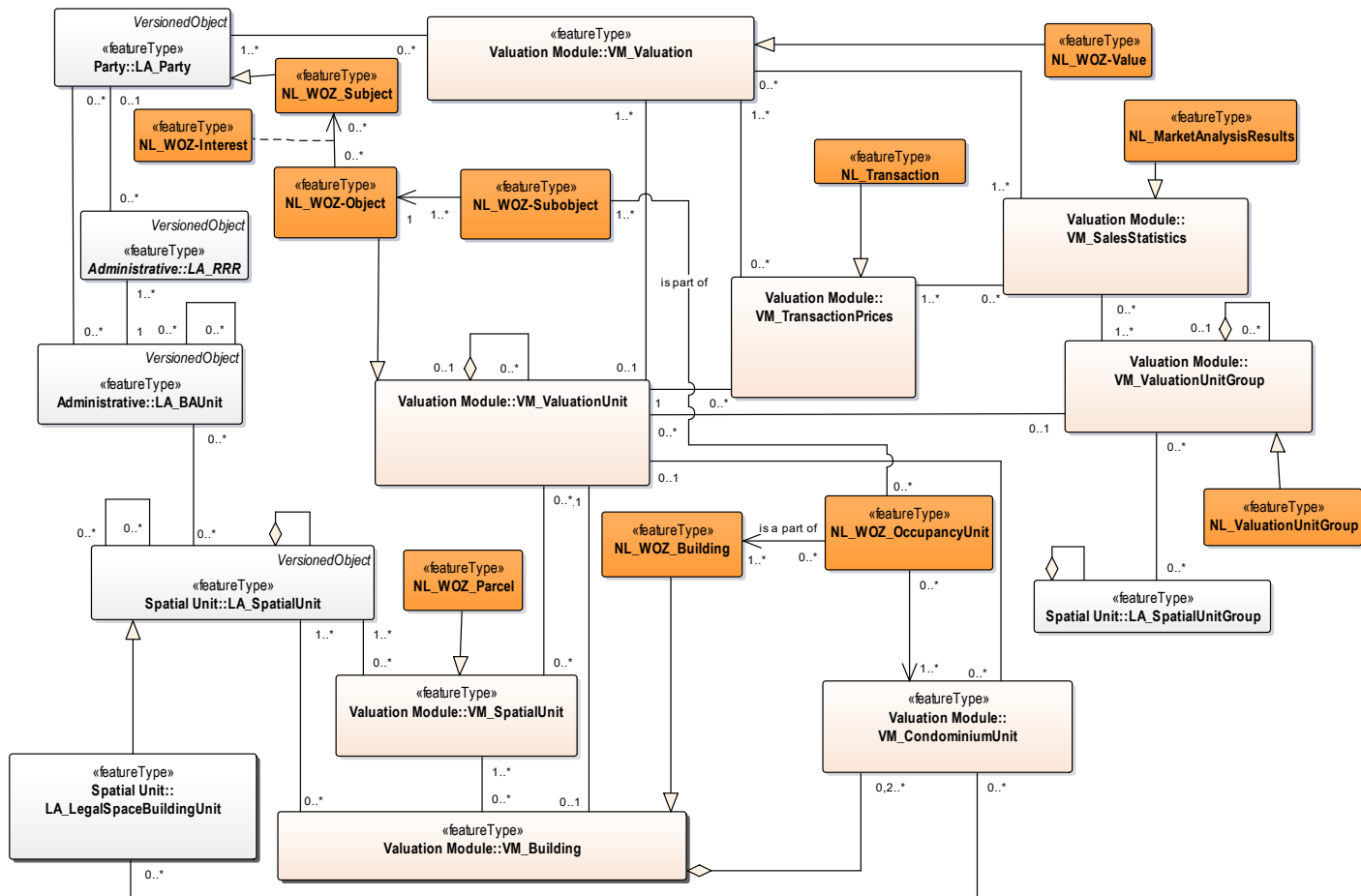
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## Dutch profile





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## Conclusions

- LADM Valuation Information Model is designed to enable recording of:
  - property objects that are subject of valuation, as well as their characteristics,
  - assessment of properties through single or mass appraisal procedures,
  - transaction prices, generation and representation of sales statistics, and
  - dealing with appeals.
- The flexibility of LADM provides for development of country specific data models
  - This is successfully done for the system in the Netherlands
- Since the complete valuation system in the Netherlands we conclude that LADM extension for valuation provides **a solid base for modeling property valuation data.**

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## Questions

- **Now, or:**
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- or

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# The 8th Land Administration Domain Model Workshop (LADM2019)

1-3 October 2019 Kuala Lumpur, Malaysia







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