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Geographic information — Land Administration Domain Model (LADM) —

Part 4: Valuation information

Information géographique — Modèle du domaine de l'administration des terres (LADM) —

Partie 4: Informations d'évaluation

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 287, *Geographic Information*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This edition of ISO 19152-4, together with all other parts of the ISO 19152 series, cancels and replaces the first edition (ISO 19152:2012), which has been technically revised. This document is a new part to the ISO 19152 series.

A list of all parts in the ISO 19152 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Property valuation is the process of estimating the value of a property at a particular moment in time. It is performed by public and private sector actors for several land administration (LA) processes, such as property taxation, compensation on expropriation, land readjustment, land consolidation, public value capture, insurance assessment, real estate financing and property transactions.

Appropriate systems are required for fair and timely valuation of tenure rights in order to promote broader social, economic, environmental and sustainable development objectives. One of the key components of an effective valuation system is access to information on the nature and extent of property units, together with the location and physical characteristics; uniform and accurate valuation of property units requires correct, complete and up-to-date property data. Therefore, property valuation systems require the establishment of links between multiple public registries that keep and maintain information about property units, such as cadastre, land registry, planning and permitting registries, and building and dwelling registries.

The fundamental elements underpinning immovable property valuation are public registries, which accommodate regular data maintenance and updating of property characteristics, ownership details, and transaction information. It is important for valuation processes to ensure that property units and rights have been unambiguously identified. This is supported by the land administration systems, including cadastre and land registry. ISO 19152:2012 provided a descriptive conceptual model with a reference for land administration systems. However, it focused on legal, geometric, and administrative aspects of land administration. The “semantics of value” component of LA was considered to be out of the scope.

This document defines property valuation system-related information in the context of LA and as an extension of the Land Administration Domain Model (LADM; see ISO 19152-1 and ISO 19152-2). This document is a conceptual model and not a data product specification (in the sense of ISO 19131).

The first goal of this document is to enable involved parties, both within one country and between different countries, to communicate based on the shared vocabulary implied by the model. This document is not intended to replace existing property valuation systems but rather to provide formal language for describing them so that their similarities and differences can be better understood.

The second goal is to provide an extensible basis for the development and refinement of efficient and effective property valuation systems based on a model-driven architecture (MDA). This document is designed to represent all stages of administrative property valuation, namely identification of properties, assessment of properties through single or mass appraisal procedures, recording transaction prices, generation and representation of sales statistics, and dealing with appeals. This document can provide public bodies with a common basis for the development of local or national information models, or both, and databases, enabling the integration of valuation databases with land administration databases. It can also act as a guide for the private sector. This document is designed especially for representing and refining administrative valuations (e.g. immovable property taxation, compensation on expropriation, land readjustment, land consolidation, and public value capture). However, it can be also used for other purposes.

This document is relevant for creating standardized information services in a local, national or regional context, where valuation domain semantics have to be shared between organizations or countries in order to enable necessary translations. Four considerations during the design of the model were:

— that it will cover the common aspects shared by objects created by the value component of land administration all over the world;[48]

— that it will be based on the conceptual framework of "Cadastre 2014" of the International Federation of Surveyors (FIG);[36]

— that it will be as simple as possible in order to be useful in practice;

— that the geospatial aspects will follow the ISO/TC 211 conceptual model and that the valuation aspects will follow international property valuation standards, e.g. International Valuation Standards of International Standards Council and Technical Standards of the International Association of Assessing Officers (IAAO).

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Conformance in relation to this document is specified in Clause 4, and a conformance test is specified in Annex A. Clause 5 provides the notation. Clause 6 gives a global overview of classes used in this document. Clause 7 introduces the classes, attributes, and associations in detail. Annex B presents an extension of the model (i.e. profiles) for representing 2D and 3D spatial analysis conducted for property valuation processes. A set of informative examples using instance-level diagrams is available in Annex C. Annex D gives an overview about the relationships between this document and international property valuation standards and guidelines. Annex E details an approach for the valuation of unregistered land. Annex F presents code lists as a basis to describe flexible enumeration. A set of country profiles is presented in Annex G. Annex H presents an overview of how the International Property Measurement Standards (IPMS) can be used within the context of this document.

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Geographic information — Land Administration Domain Model (LADM) —

Part 4: Valuation information

1 Scope

This document:

a) builds on the models established in ISO 19152-1 and ISO 19152-2 to cover the valuation aspect of the Land Administration Domain Model (LADM);

b) provides an abstract conceptual model covering:

   1) values (assessed values, valuation procedures, mass valuation);

   2) transaction prices;

   3) sales statistics;

   4) valuation units (parcel (legal space parcel), building, condominium unit, valuation unit group).

c) provides terminology for the valuation component of land administration/georegulation, based on various national and international systems, that is as simple as possible in order to be useful in practice. The terminology allows a shared description of different formal or informal practices and procedures in various jurisdictions;

d) specifies a content model independent of encoding that can be employed as a basis for local, national and regional profiles for valuation processes; and

e) enables the combining of valuation information from different sources in a coherent manner.

NOTE This document does not interfere with national property valuation-related regulations with potential legal implications.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4217, *Codes for the representation of currencies*

ISO 19103, *Geographic information — Conceptual schema language*

ISO 19105, *Geographic information — Conformance and testing*

ISO 19152-1, *Geographic information — Land Administration Domain Model (LADM) — Part 1: Generic conceptual model*

ISO 19152-2, *Geographic information — Land Administration Domain Model (LADM) — Part 2: Land registration*

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3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 19152-1, ISO 19152-2 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1.1
appraisal
<LADM> process of estimating the value of property

Note 1 to entry: ISO 19152-1 describes BAUnit as a synonym of a basic property unit, i.e. property.

3.1.2
accessory part
<LADM> privately owned building part, generally attached to one or more condominium unit

EXAMPLE A garage in the basement and a shop on the ground floor are examples of an accessory part.

Note 1 to entry: Adapted from OGC LandInfra 2016, 7.11.

3.1.3
assessed value
<LADM> monetary worth of property

Note 1 to entry: The assessed value of a property is generally used for tax purposes. On the other hand, the value of a property can be assessed for other purposes such as compensation on expropriation, land readjustment, land consolidation, public value capture, insurance assessment, etc.

3.1.4
building
construction works that have the provision of shelter for its occupants or contents as one of its main purposes, usually partially or totally enclosed and designed to stand permanently in one place

Note 1 to entry: Buildings are constructions above and/or underground that are intended or used for the shelter of humans, animals, things, the production of economic goods, or the delivery of services, and that refer to any structure permanently constructed or erected on the site.

Note 2 to entry: Buildings can be used for dwelling (e.g. detached and semi-detached), industrial, retail or other purposes. A condominium building contains condominium units established according to condominium schemes. A whole building or a part of a building can be subject to a valuation. A building can be considered a complementary part of the parcel(s) and can be valued separately from the parcels on which they are located. A building can represent a condominium building, which consists of:

a) condominium units (e.g. apartments, offices);

b) accessory parts assigned for exclusive use (e.g. garages, storage areas);

c) joint facilities covering parcel, structural components (e.g. foundations, roofs), accession areas (e.g. entrance halls, spaces), and other remaining areas of buildings (e.g. staircases, heating rooms).

[SOURCE: ISO 6707-1:2020, 3.1.13, modified — Note 1 to entry has been replaced; a new Note 2 to entry has been added.]

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