



Polish cadastral system in comparison to Land Administration Domain Model

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2. Overview of Land Administration Domain Model
3. Brief description of cadastral system in Poland
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Why standardization in Land Administration?



The road of standarization of Land Administration Domain Model:

- April 2002 - the idea to develop a domain model
- October 2006 - the first version of „FIG Core Cadastral Domain Model” presented at the FIG Congress in Munich
- February 2008 - submitting the document to the ISO/TC 211
- January - June 2011 - voting and commenting (positive results)

ISO: LADM needs to pass Approval Stage and Publication Stage to become a standard

CEN: The document is under approval (foreseen date of availability – October 2012)

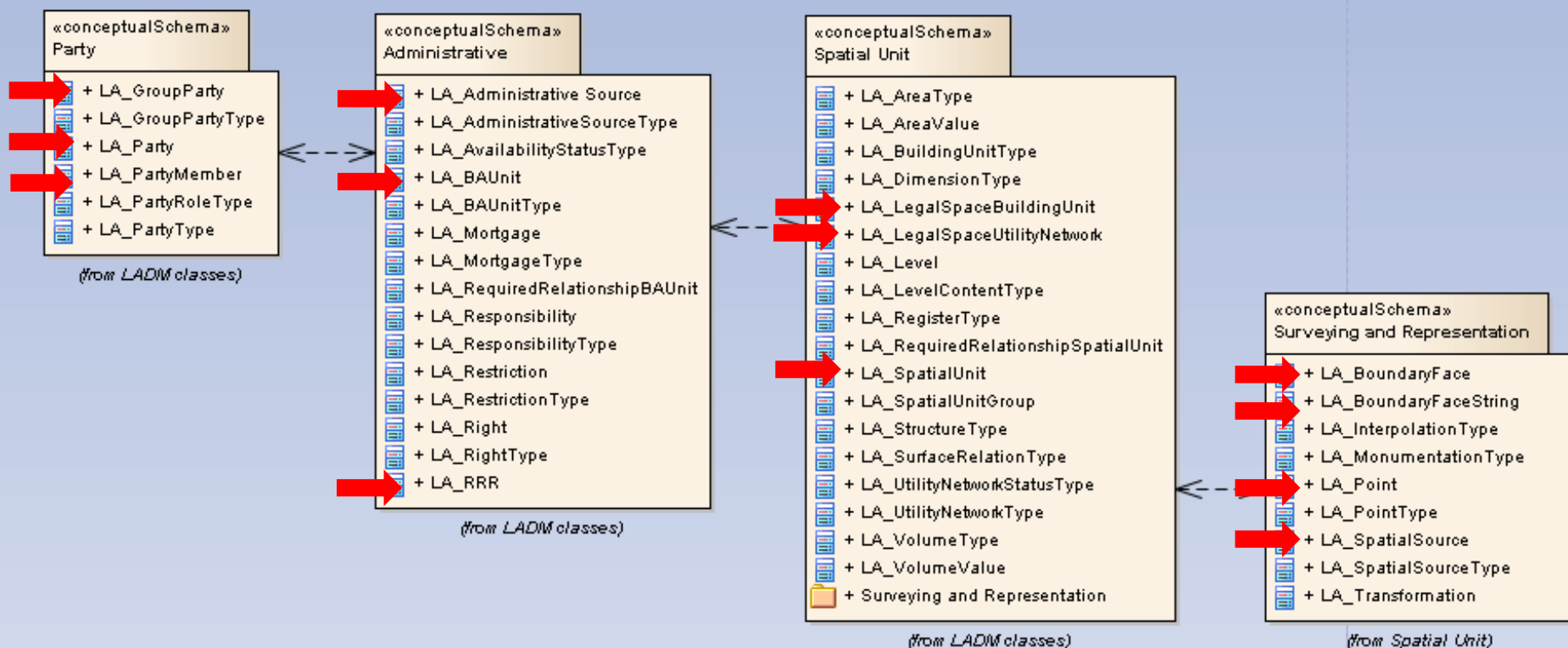
PKN: formal voting – up to December 2012; accepting European Standard as Polish Standard – up to December 2013

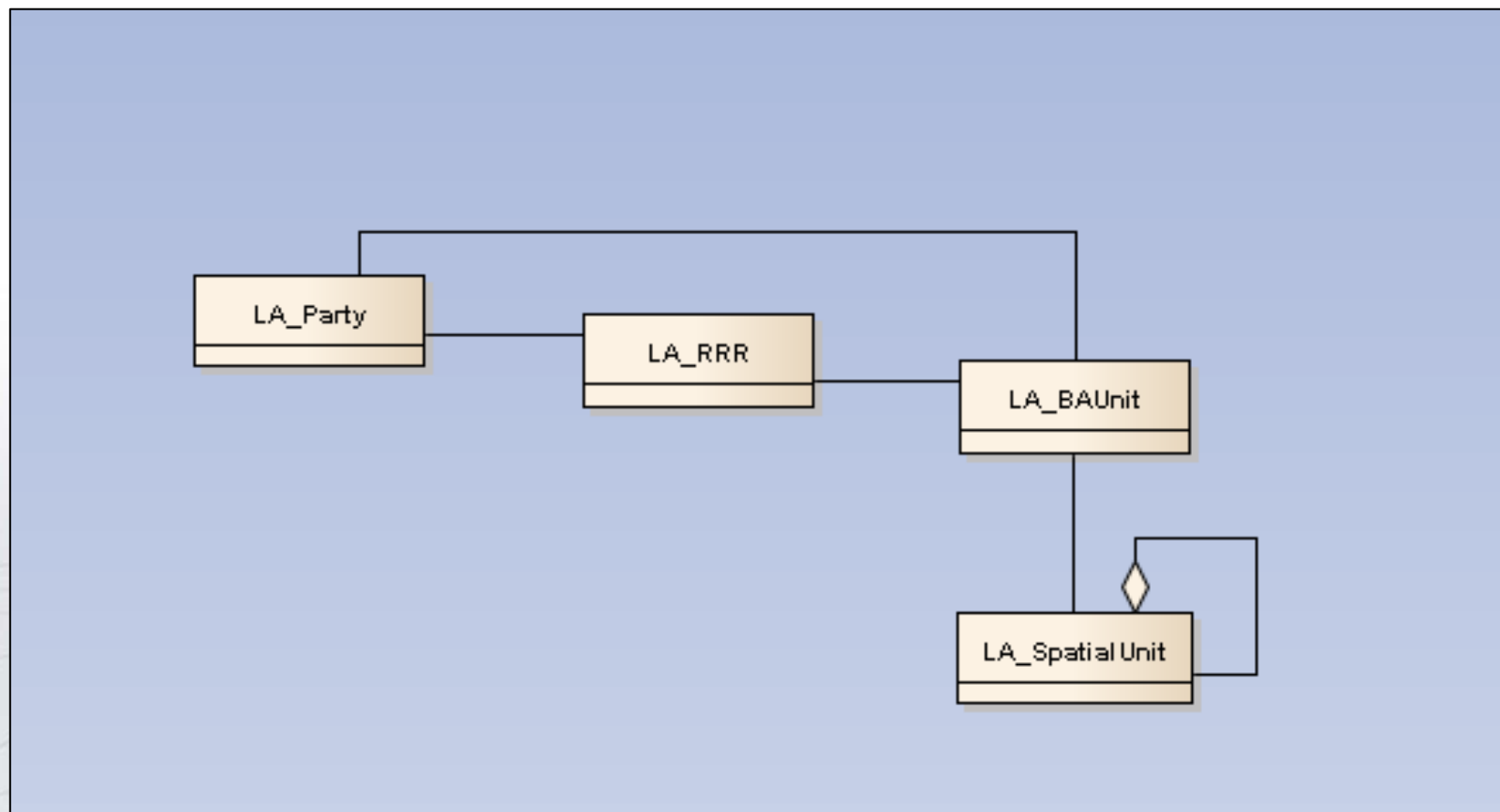


Scope of international standard ISO 19152:

- defines a reference to Land Administration Domain Model
- provides an abstract, conceptual schema with four basic packages related to:
 - 1) *parties (people and organizations)*
 - 2) *basic administrative units*
 - 3) *spatial units*
 - 4) *spatial sources and spatial representations*
- provides a terminology for land administration
- enables the combining land administration information from different sources in a coherent manner

Overview of LADM







Definition of real estate cadastre:

Real estate cadastre is a uniform collection of systematized for the whole country, updated data on land, buildings and premises, their owners and other natural persons and corporate bodies holding these land, buildings and premises.



Functioning of real estate cadastre:

- responsibility of Surveyor General of Poland
- maintenance is a governmental task but delegated to the self-governmental bodies at county (powiat) level
- covering continuously the whole territory of Poland
- basic cadastral units:
 - cadastral complexes
 - cadastral sections
 - cadastral parcels
- two parts of real estate cadastre:
 - descriptive (100% of data in digital form)
 - graphical (75% of data in vectorised form)





Links between real estate cadastre and land books:

- Both registers – real estate cadastre and land and mortgage register (land books) are two independent real estate data sets.
- Real estate cadastre contains full information of land, buildings and premises and limited information on legal status of real estates .
- Land and mortgage register contains full legal status of real estates and limited information of real estates' designation.

Directions for improvement:

- implementation of the Integrated System of Real Property Information



PROJECT

„Preparation and implementing innovative methods of integration of cadastral data, base map and Topographical Database and modernisation of public services provided by Geodetic and Cartographic Service”

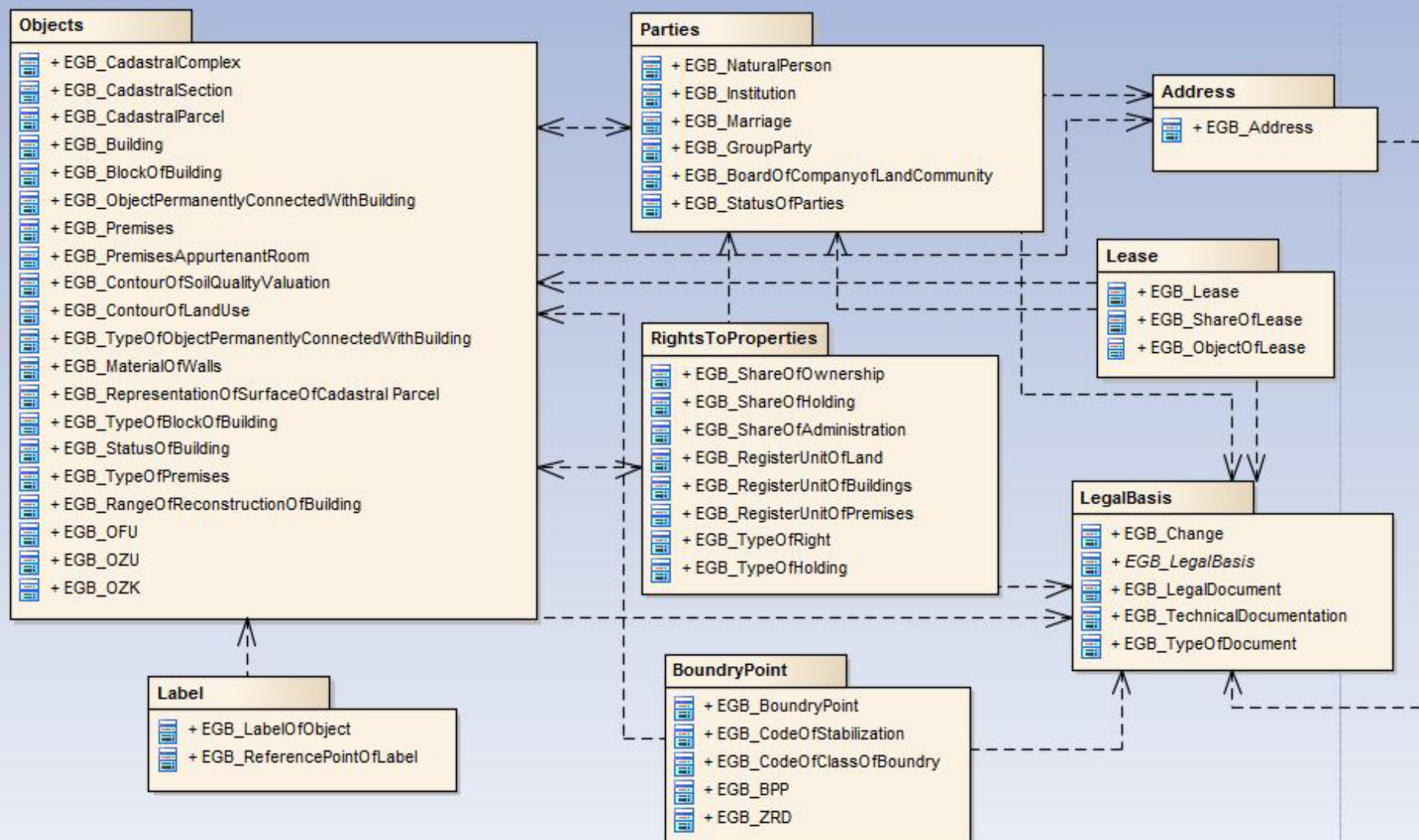


Specification of the data of real estate cadastre

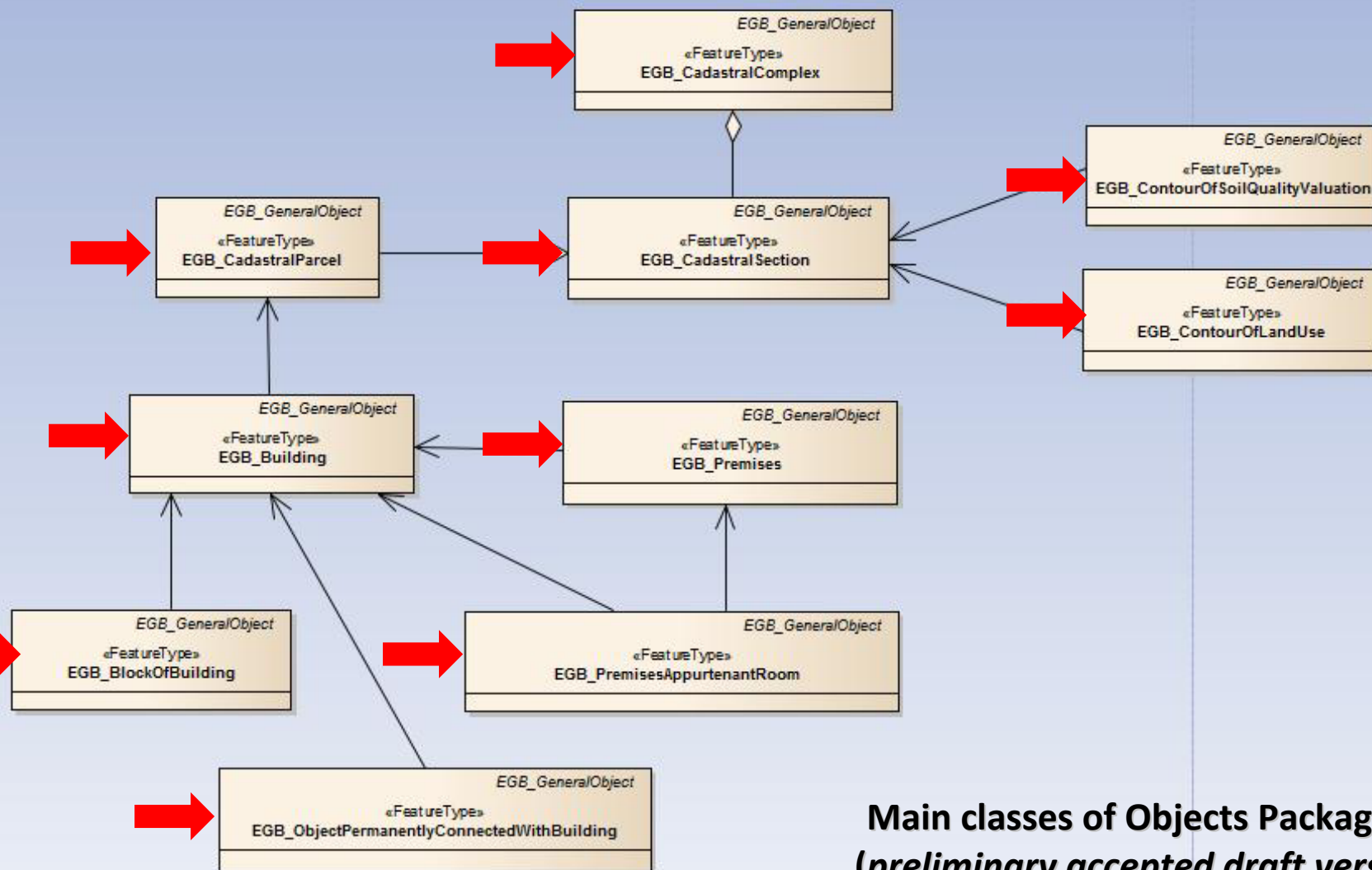


Amendment of the ordinance on land and building register (draft version)

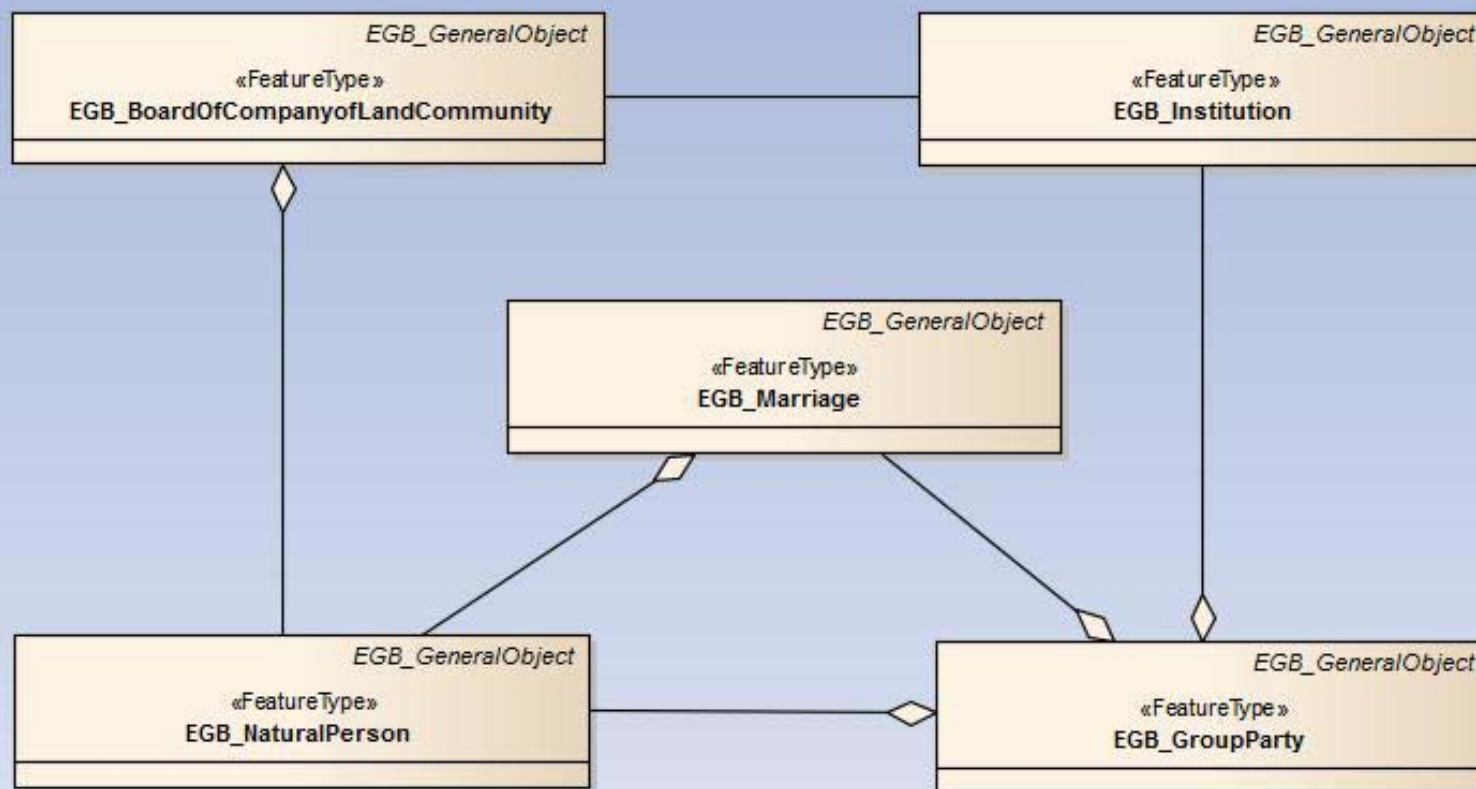
Application schema for Polish cadastral database



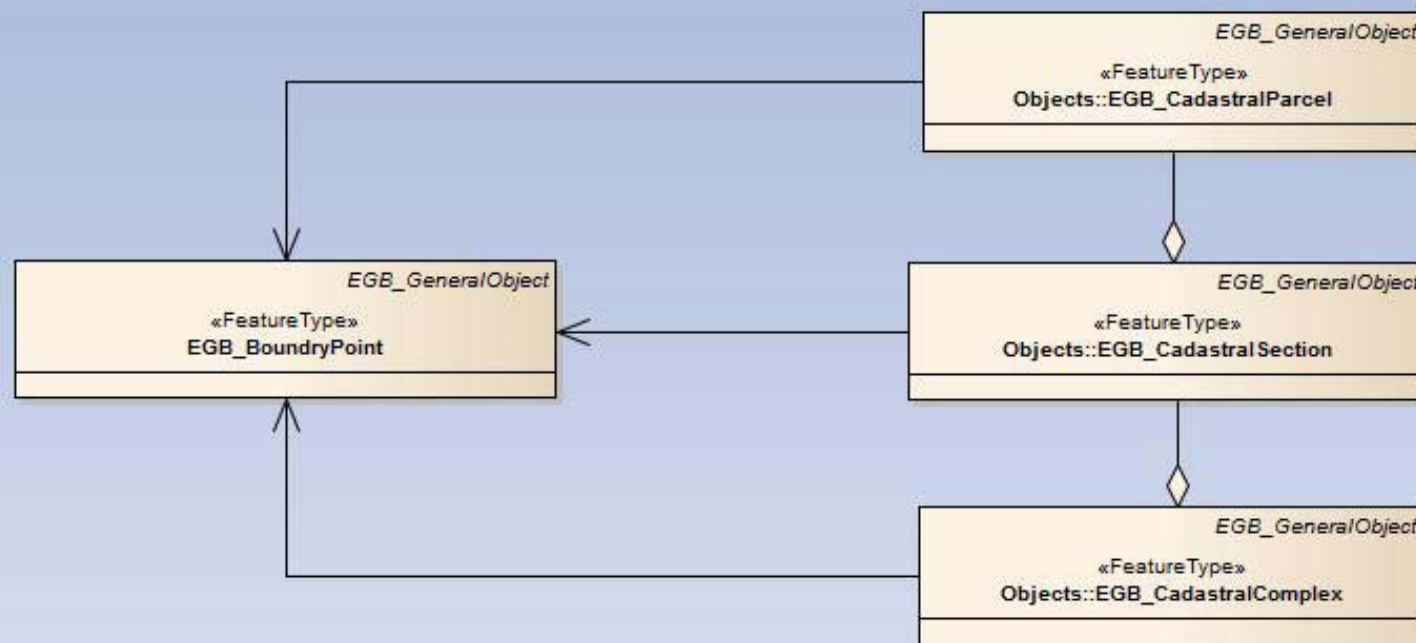
Application schema for Polish cadastral database



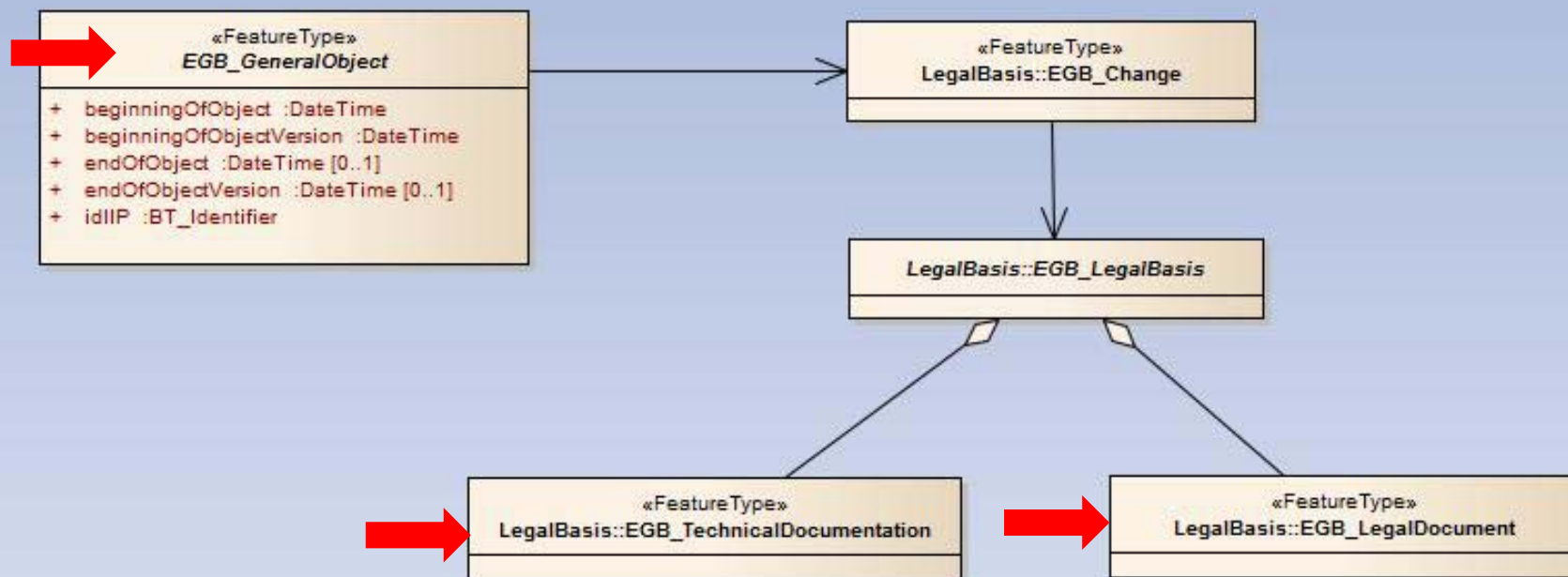
Main classes of Objects Package
(preliminary accepted draft version)



Main classes of Parties Package
(preliminary accepted draft version)



**Main classes of BoundaryPoint Package
(preliminary accepted draft version)**



Main classes of LegalBasis Package
(preliminary accepted draft version)



Article 7:

- Implementing rules laying down technical arrangements for the interoperability and, where practicable, harmonisation of spatial data sets and services, designed to amend non-essential elements of this Directive by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 22(3).
- Relevant user requirements, existing initiatives and international standards for the harmonisation of spatial data sets, as well as feasibility and cost-benefit considerations shall be taken into account in the development of the implementing rules.
- Where organisations established under international law have adopted relevant standards to ensure interoperability or harmonisation of spatial data sets and services, these standards shall be integrated, and the existing technical means shall be referred to, if appropriate, in the implementing rules mentioned in this paragraph.



Party Package

Land Administration Domain Model class	Class meaning and explanation	Class in Polish Cadastral Model
LA_Party	a person or organisation that plays a role in a rights transaction	Party– it is an abstract class. Examples of subclasses are: EGB_NaturalPerson, EGB_Institution,
LA_GroupParty	any number of parties, forming together a distinct entity, with each party registered	EGB_GroupParty EGB_Marriage



Administrative Package

Land Administration Domain Model class	Class meaning or explanation	Class in Polish Cadastral Model
LA_BAUnit	administrative entity consisting of zero or more spatial units against which unique and homogeneous rights, responsibilities or restrictions are associated to the whole entity	EGB_RegisterUnitOfLand EGB_RegisterUnitOfBuildings EGB_RegisterUnitOfPremises – example of possible classes. The LADM class LA_BAUnit has wider meaning.
LA_Right	action, activity or class of actions that a system participant may perform on or using an associated resource	EGB_RightsToProperties – this class in polish model concerns only some rights, the rights are generally part of Land and Mortgage Register.
LA_AdministrativeSource	source with the administrative description of the parties involved, the rights, restrictions and responsibilities created and the basic administrative units affected	EGB_LegalBasis
LA_AdministrativeSourceType	The type of document.	EGB_TypeOfDocument



Surveying and Representation SubPackage

Land Administration Domain Model class	Class meaning or explanation	Class in Polish Cadastral Model
LA_Point	0-dimensional geometric primitive, representing a position. Points can be observed by terrestrial surveying, photo interpretation, image interpretation, or identification on an existing map	EGB_BoundaryPoint
LA_SpatialSource	source with the spatial representation of one (part of) or more spatial units	Spatial sources are instances of EGB_TechnicalDocumentation



Spatial Unit Package

Land Administration Domain Model class	Class meaning or explanation	Class in Polish Cadastral Model
LA_SpatialUnit	single area (or multiple areas) of land and/or water, or a single volume (or multiple volumes) of space	Generally: EGB_CadastralParcel), but it also may be: EGB_Building EGB_Premises
LA_SpatialUnitGroup	any number of spatial units, considered as an entity, not necessarily continuous	Subclasses may be: EGB_CadastralSection EGB_CadastralComplex
LA_LegalSpaceBuildingUnit	An instance of this class is building unit	EGB_BlockOfBuilding



- Land Administration Domain Model covers wide range of land administration,
- The ISO 19152 is one of ISO 19100 series (Geographic Information) standards,
- It does not deliver the solutions for particular countries, but the general model,
- The Land Administration Domain Model, when adopted should be implemented (taken into account) in country regulations - INSPIRE directive (Article 7)
- The polish cadastral model is generally build with the application of requirements and conditions of Land Administration Domain Model
- The verification of compliance of polish cadastral model with LADM requires further research – may be performed when ISO 19152 is adopted.



Thank you for your attention