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Building Information Models — Information Delivery Manual — Part 1: Methodology and format

Part 1: Methodology and format

Part 2: Management communication

Part 3: Model View Definitions

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Introduction(1/2)

Building information modelling provides methods for describing and displaying information required in the design, construction and operation of constructed facilities. It can bring together the diverse sets of information used in construction into a common information environment - reducing, and often eliminating, the need for the many types of paper document currently in use.

To get the full benefit from using BIM, the quality of communication between different participants in the construction process needs to be improved. If the information required is available when it is needed and the quality of information is satisfactory, the construction process will itself be greatly improved.

Introduction(2/2)

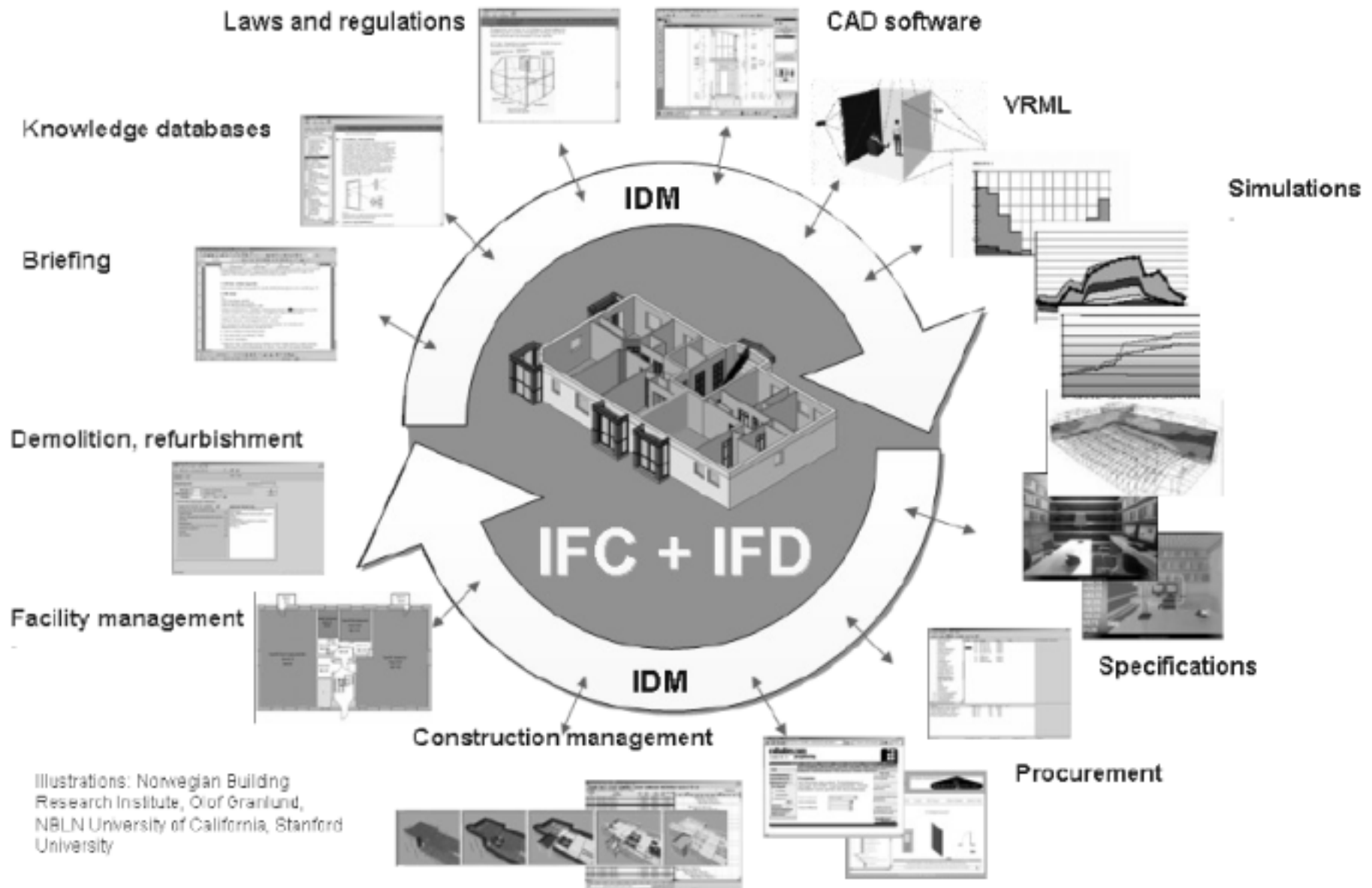
For this to happen, there should be a common understanding of the building processes and of the information that is needed for and results from their execution. This standard sets out a methodology and format for the provision of an integrated reference for process and data required by BIM. **It describes how to identify and describe the processes undertaken within construction, the information required for their execution and the results. It also describes how the information can be further detailed to support solutions provided by building information system providers in a form that enables its reuse and also how it can be configured to meet national, local and project needs.** In doing so, it provides a basis for reliable information exchange/sharing for users so that they can be confident that the information they are receiving is accurate and sufficient for the activities they need to perform. It is reliability that users need in information exchange and that motivates this standard.

Terms and definitions

Building Construction Information Model BIM

A shared digital representation of physical and functional characteristics of any built object including buildings, bridges, roads, process plants etc. forming a reliable basis for decisions

NOTE Building Information Model is frequently used as a synonym for BIM



buildingSMART's framework of BIM

exchange requirement ER

The set of information that needs to be exchanged to support a particular business requirement at a particular process stage (or stages)

functional part FP

A unit of information within an exchange requirement that may be fully specified in its own right

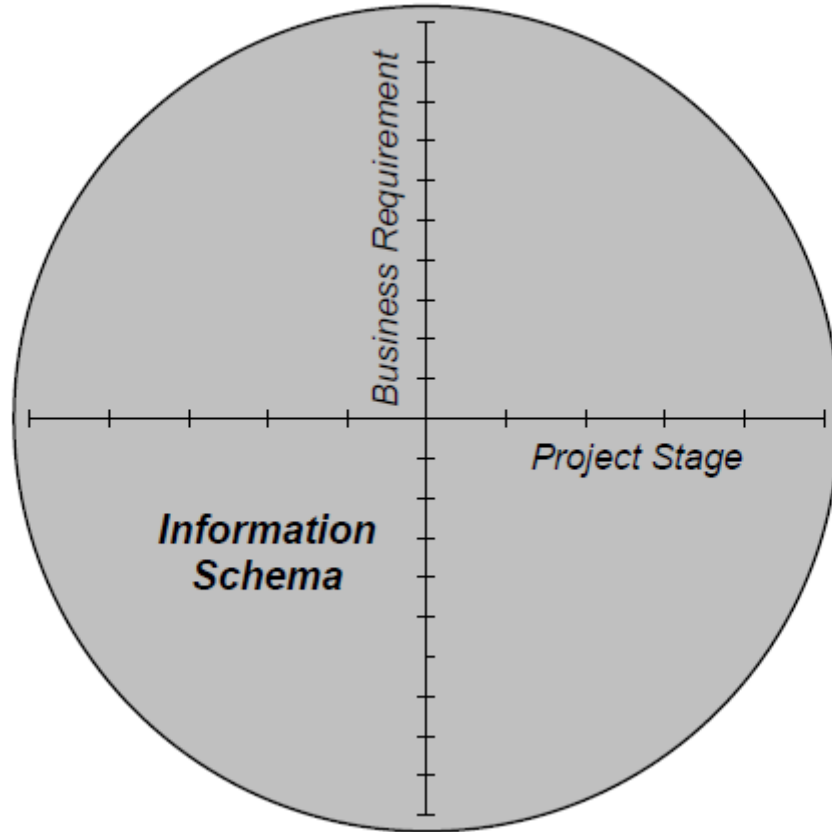
process map PM

A representation of the relevant characteristics of a process for a defined purpose

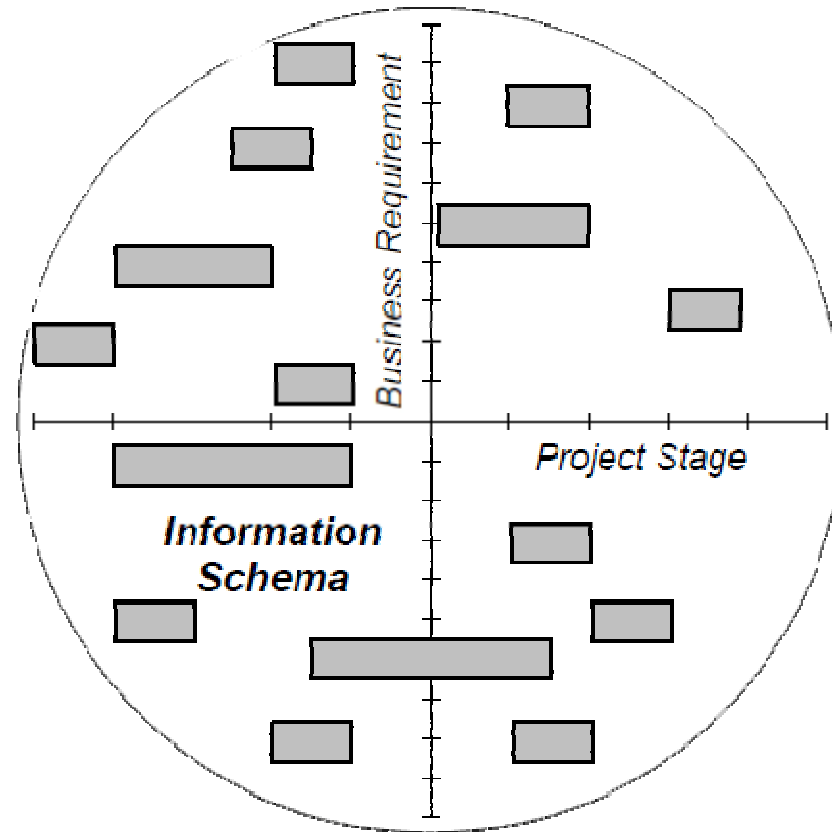
business rule

A statement that formally defines or constrains some aspect of the business, a rule under which an organisation operates or a policy or decision that influences a process

What is the IDM

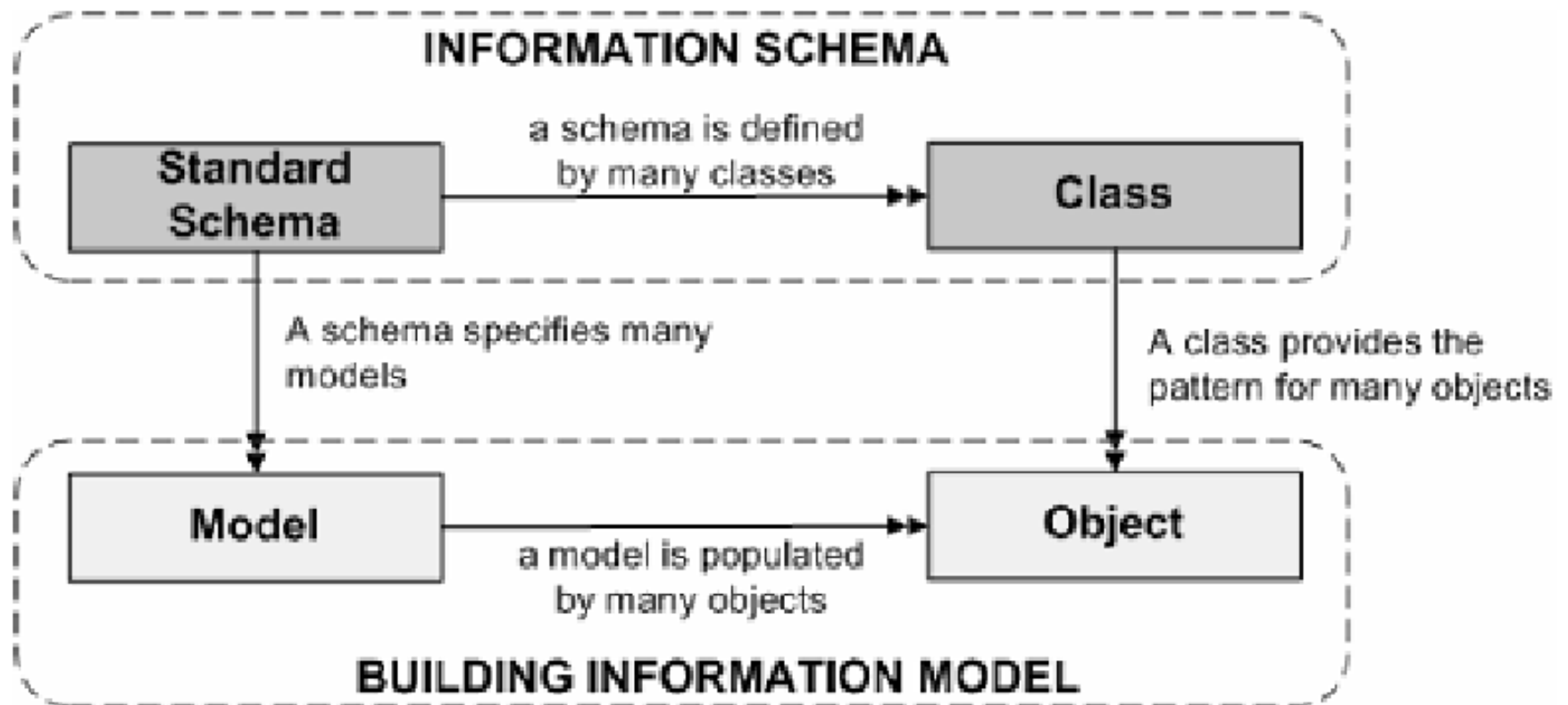


The Information Schema supports all business requirements at all lifecycle stages



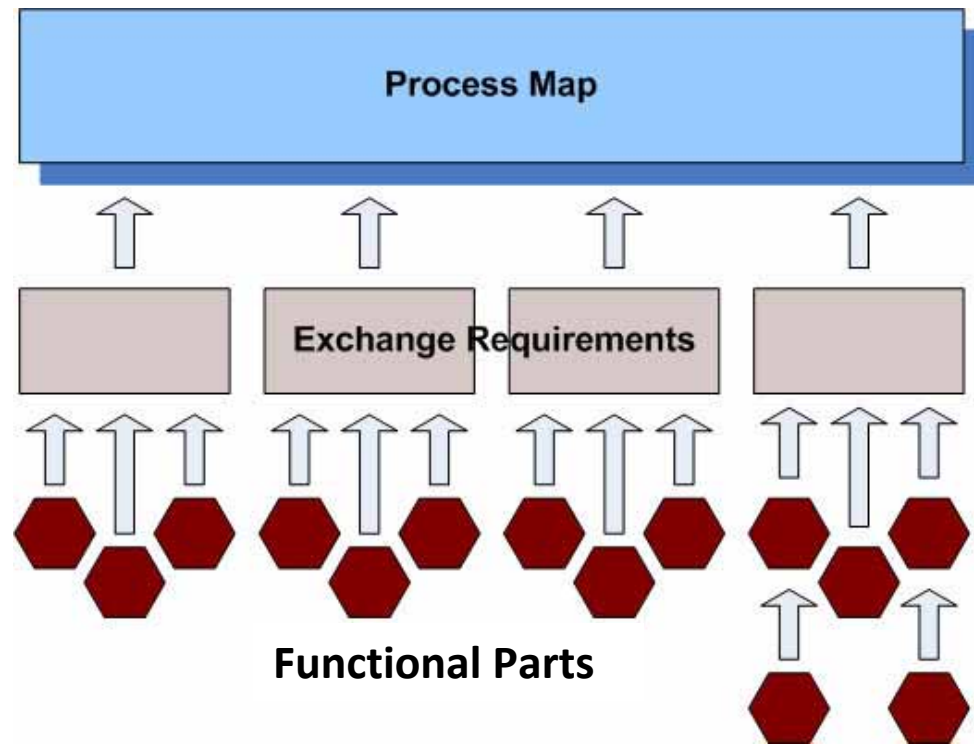
Need to support a business requirement at a lifecycle stage

Elements of the overall information schema are used in a BIM. For a particular business requirement, only certain classes of information are required. Multiple objects are derived from each class, each object having an identity (determined by a unique identifier) and a state (determined by the values given to each attribute of the object). The classes that support the business requirement form a unique and identifiable standard schema.



Supporting the Building Information Model

Software solutions typically support users across several exchange requirements. Exchange requirements are used to support an overall construction process. The connection between exchange requirements and a construction process is captured within **a process map**.



IDM basic framework

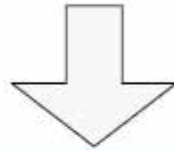
To do this means that the set of information that needs to be exchanged to support a particular business requirement in the relevant lifecycle stages must be established. This is termed **an exchange requirement**.

The technical content required by solution providers to support an exchange requirement is provided as a series of units of information. A unit of information is termed **a functional part**.

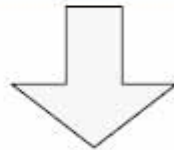
Requirements Definition (IDM)



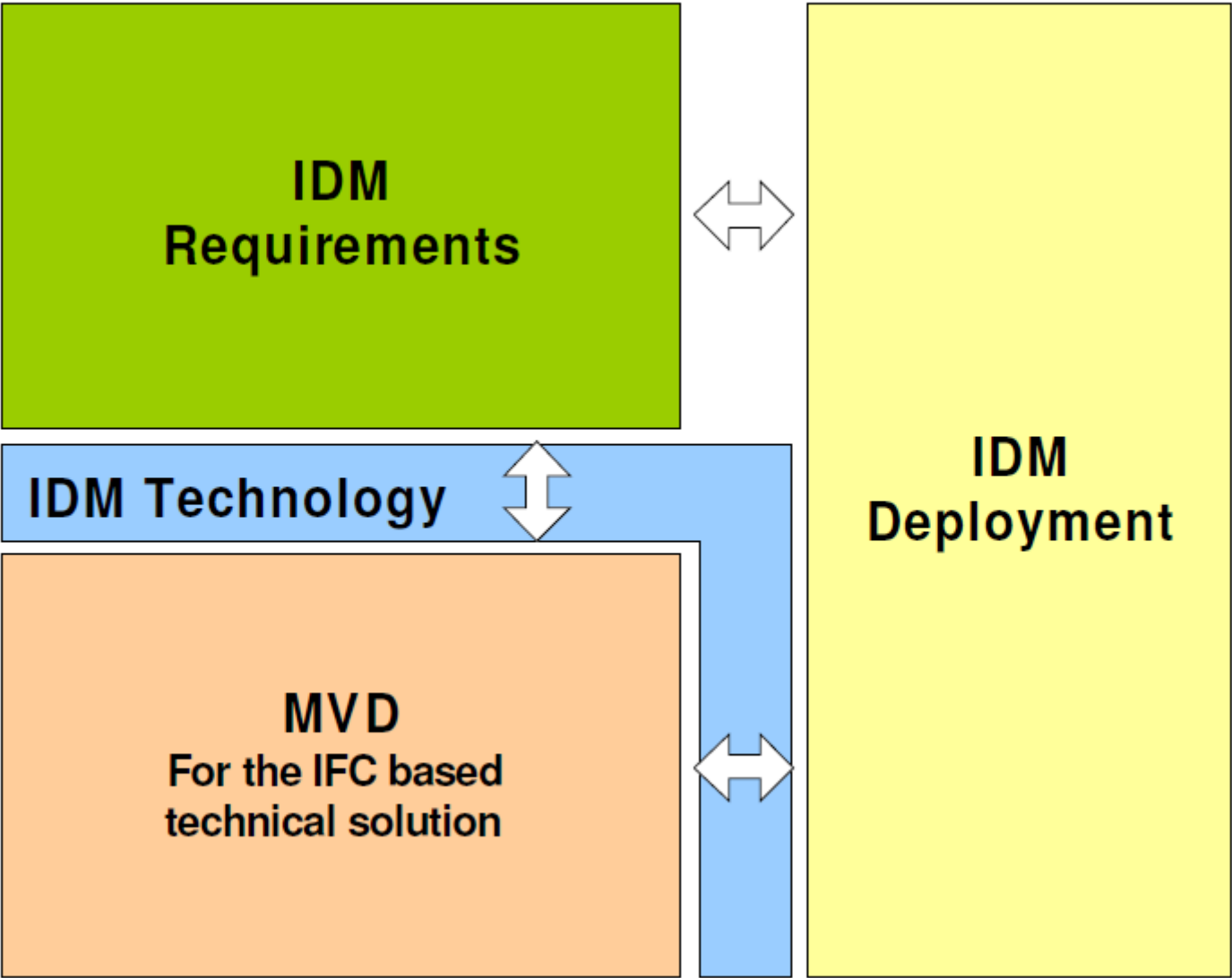
Model View Definition (MVD)



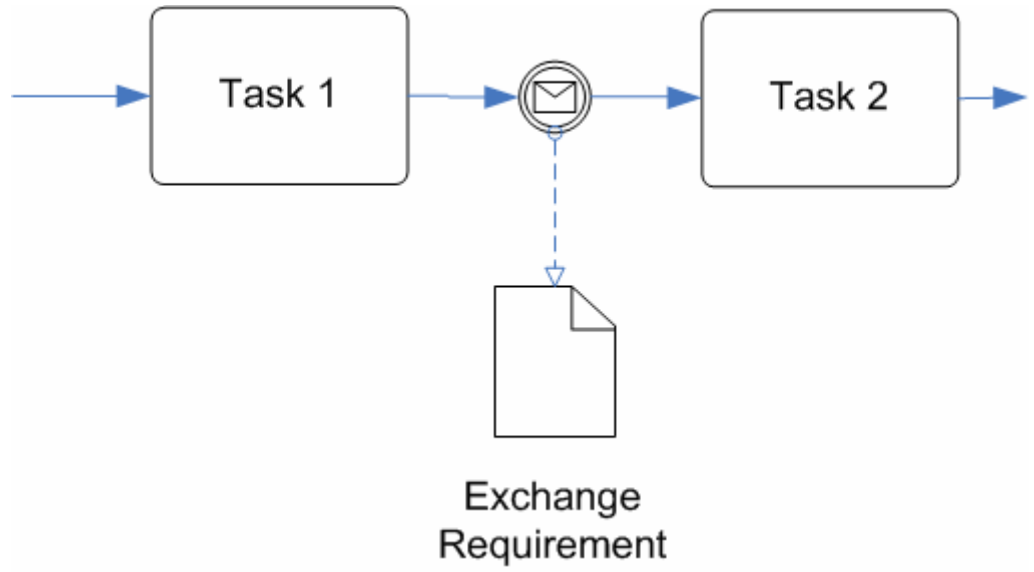
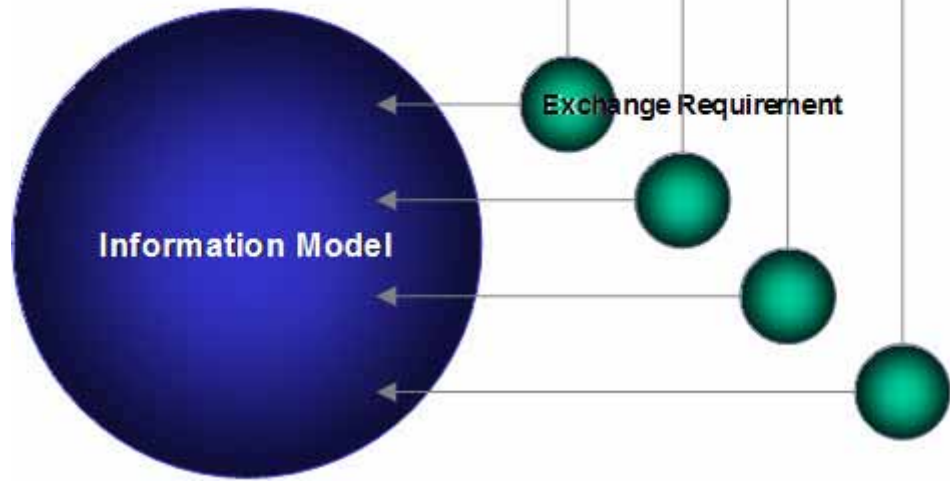
Software Implementation & Certification



Validation and Use in Projects



Building Construction Processes



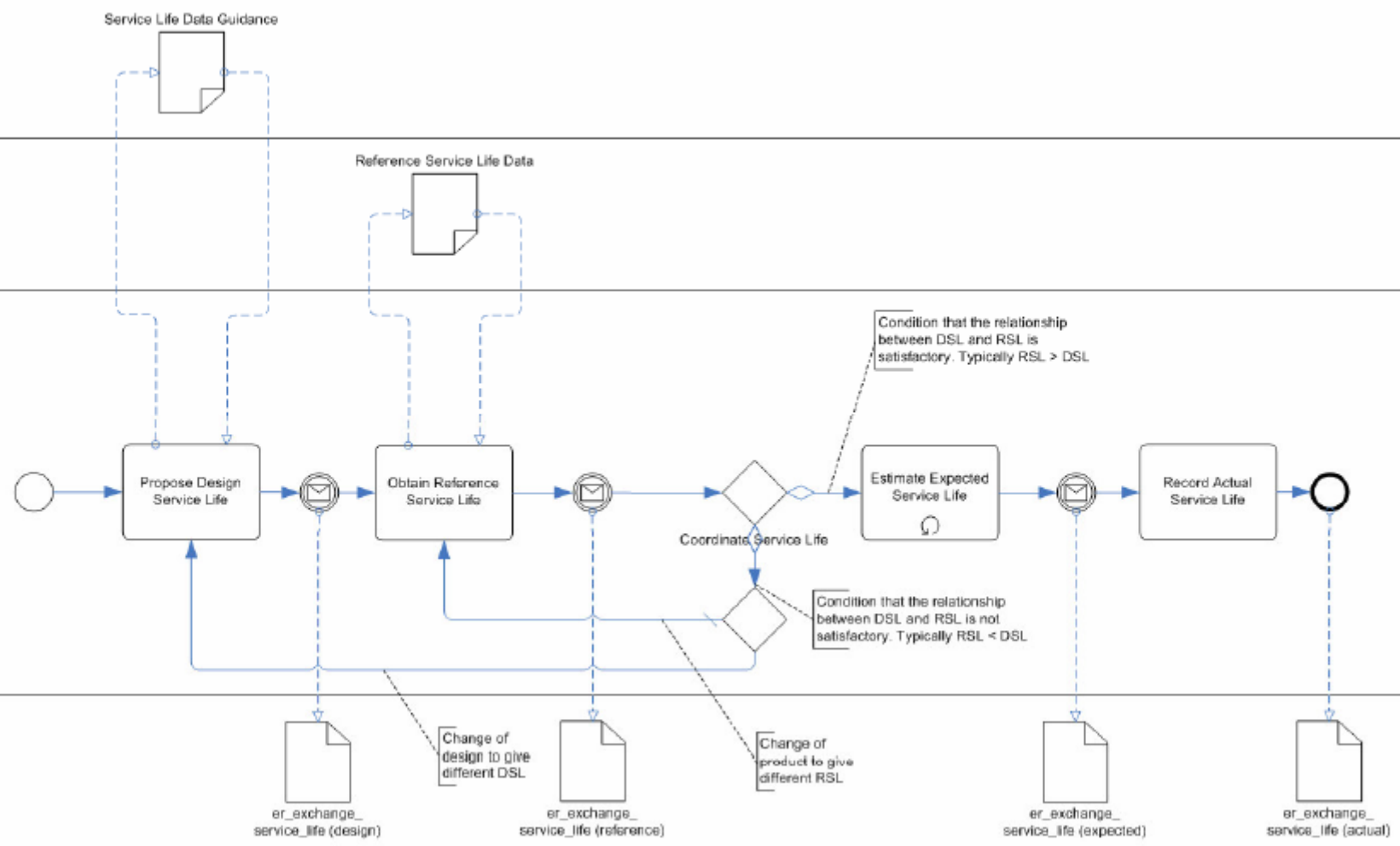
Service Life Planning

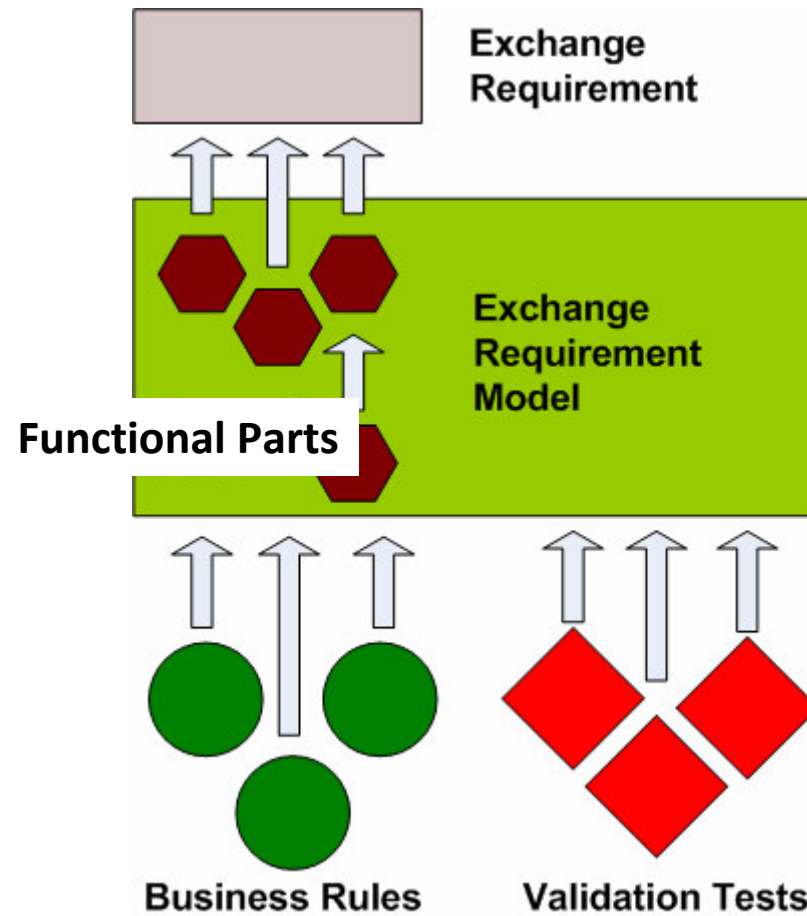
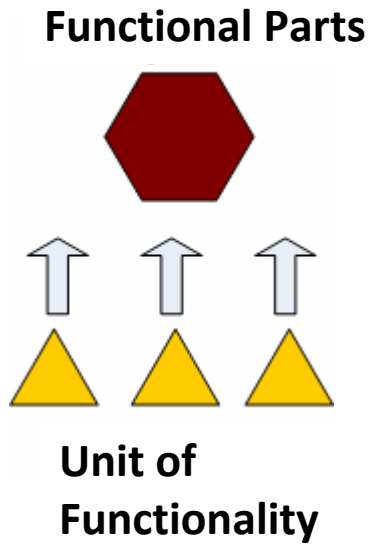
External Body

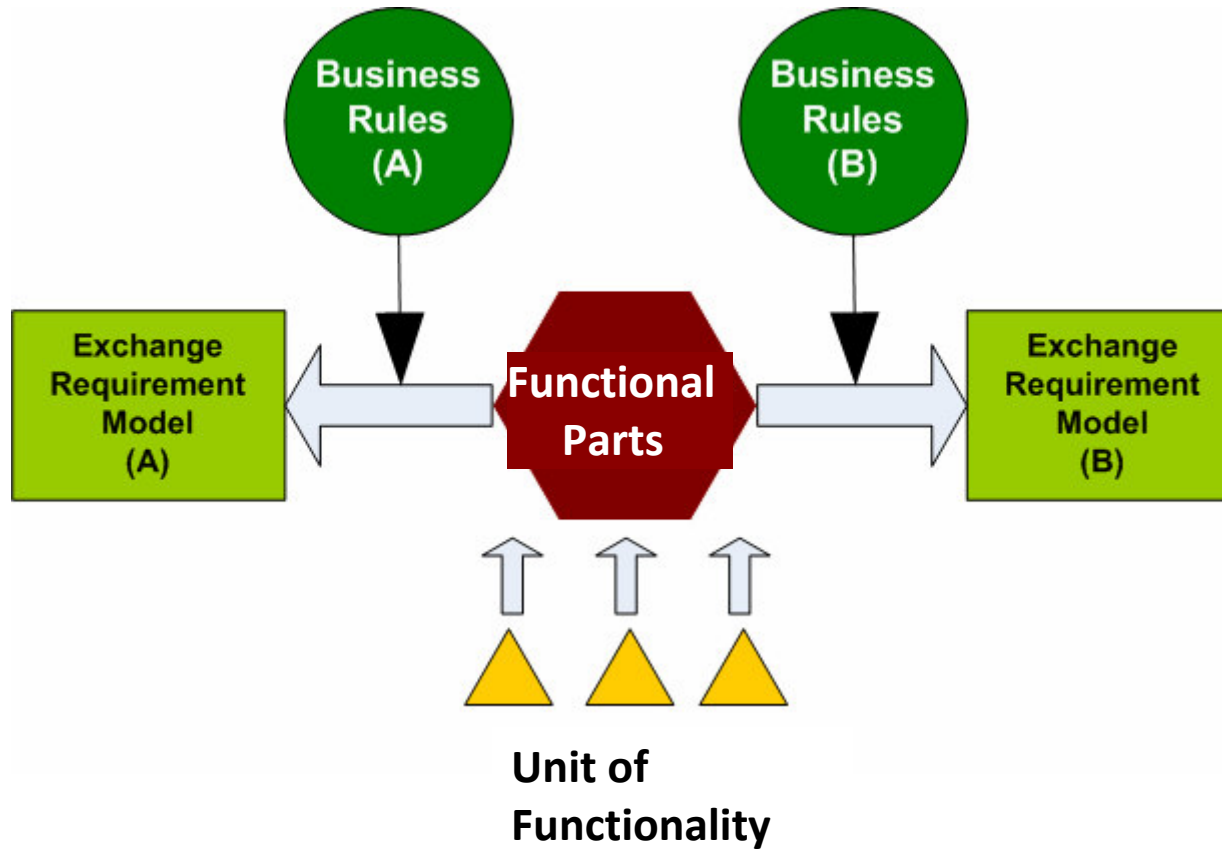
Equipment Supply

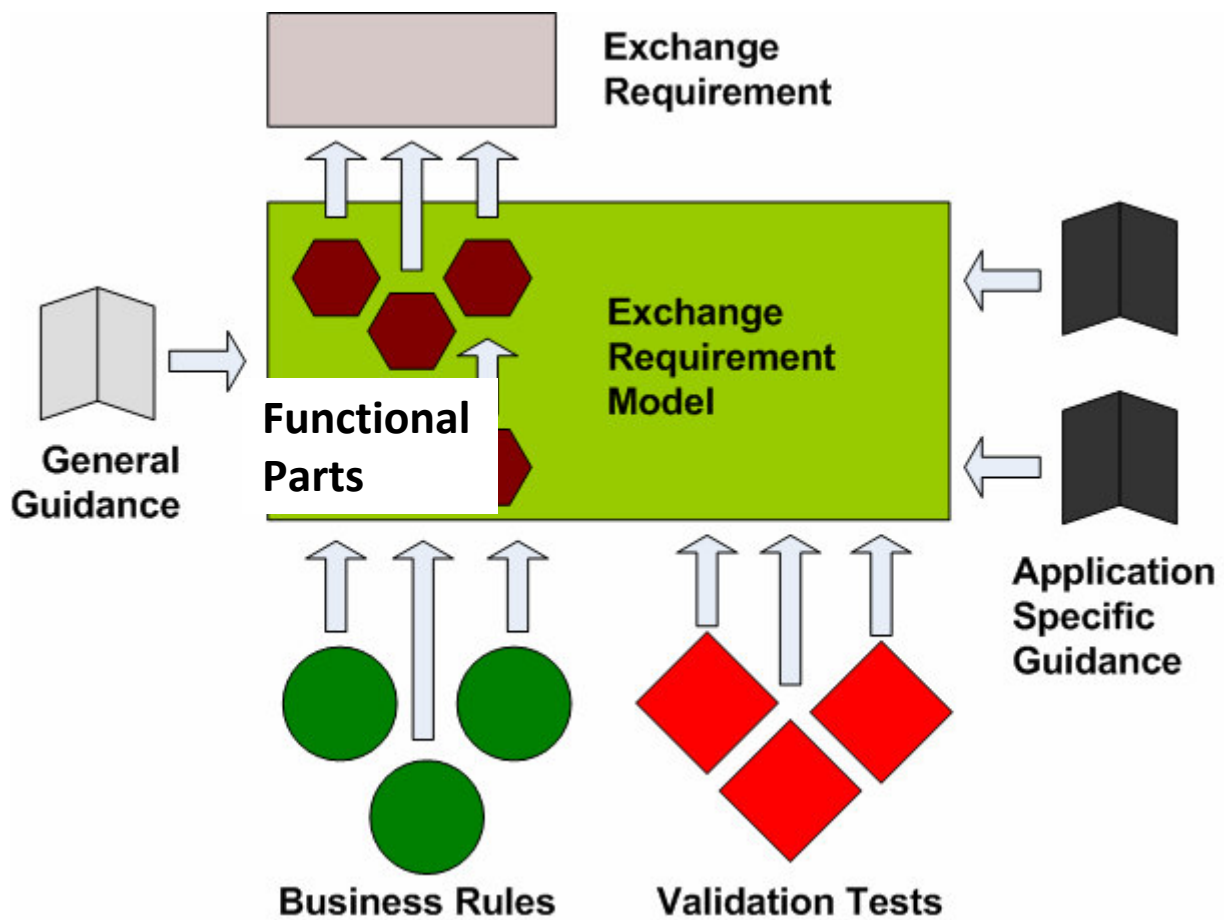
Facilities Management

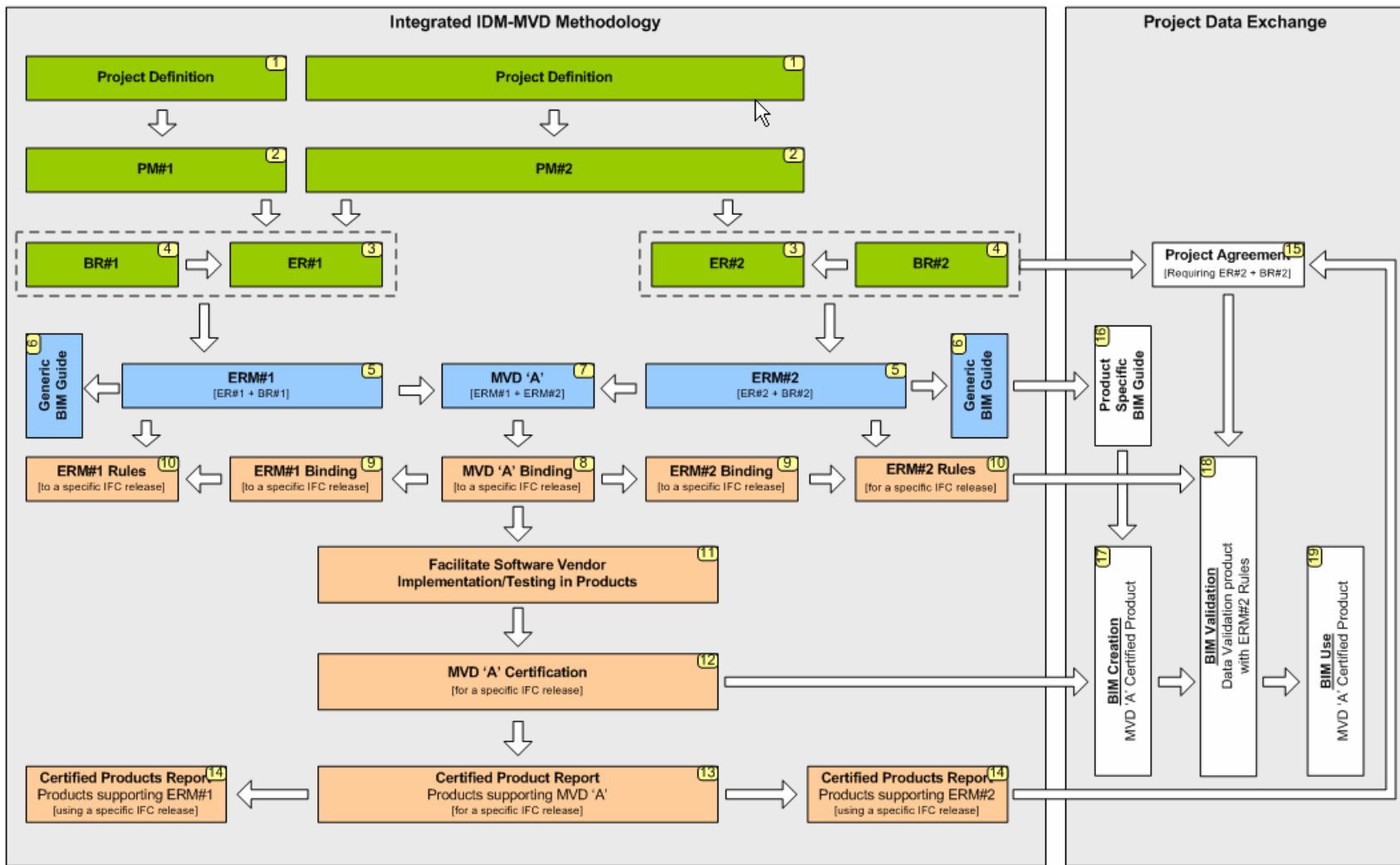
Building Information Model





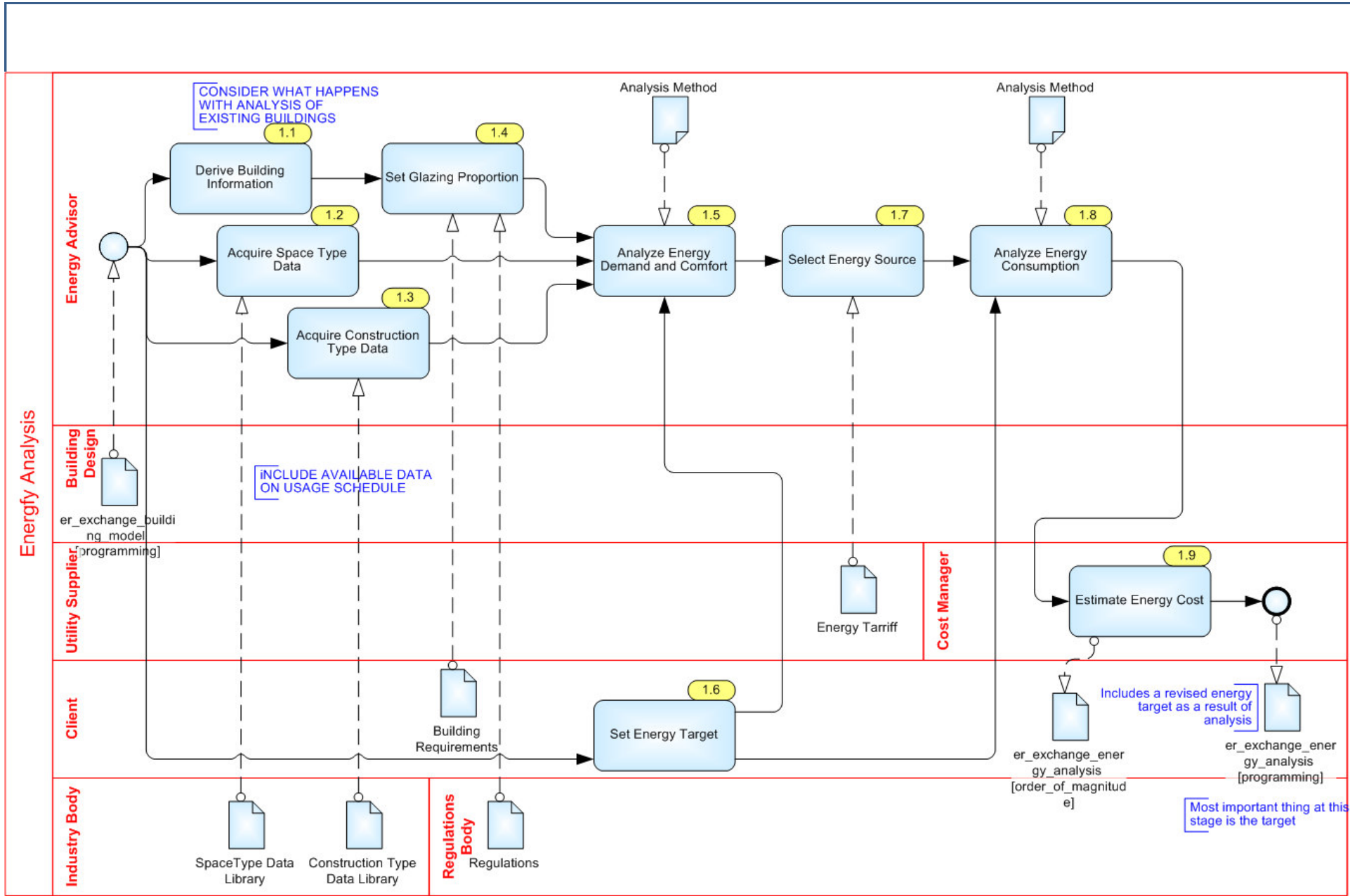






TERMS

IDM = Information Delivery Manual
 PM = Process Model
 ER = Exchange Requirements
 BR = Business Rules
 ERM = ER Model
 MVD = Model View Definition



Energy Analysis	author: Jeffrey Wix	created: 05/01/2006 09:23:44	
Analyze Energy (Programming)	version: 1.2	modified: 11/02/2006 23:11:16	
	status: modified		
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