

## Model Driven Enterprise Engineering

A holistic approach to agile enterprises

### Business-driven IT

IT must be driven by the business – and not vice versa. The business defines the requirements for IT systems. In the end, the business perspective of an enterprise should be the motivation for any of its IT systems. **Model Driven Enterprise Engineering (MDEE)** is a holistic approach that addresses the design of a business as well as its supporting IT systems in a fully integrated way.

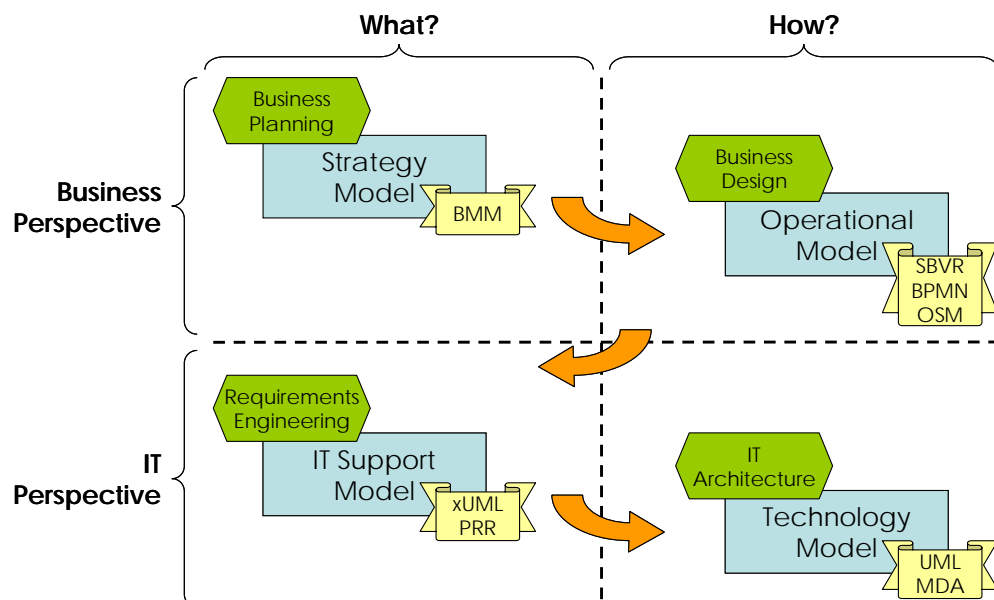
### Model Driven Enterprise Engineering

With the advent of model driven approaches such as OMG's **Model Driven Architecture (MDA®)**, models became prominent as a means to capture knowledge. While initially intended to represent knowledge about software systems, model driven approaches have been expanded to represent knowledge about complete systems including electrical and mechanical systems (SysML) and even enterprise knowledge (MDEE). Model Driven Enterprise Engineering comprises of the following four models:



- **Strategy Model:** Shows, based on an enterprise's vision, **what** goals shall be achieved and which strategies and policies are needed to be successful on the market.
- **Operational Model:** Shows **how** an enterprise's strategy is operationalized by means of its business processes, business rules and organizational structures.
- **IT Support Model:** Defines **what** kind of IT support is required in order to run the actual business of an enterprise in an effective, efficient and flexible manner.
- **Technology Model:** Defines **how** the required IT support is provided by means of the available technologies and resources.

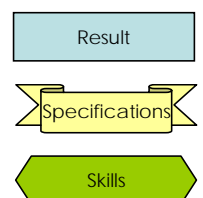
### Big Picture



### Components

Each quadrant of the Model Driven Enterprise Engineering comprises of:

- **Results:** The actual models that are used to represent the knowledge relevant to the particular quadrant.
- **Specifications:** The OMG specifications that give guidance on how these models should be represented.
- **Skills:** The techniques that are required and the procedures that help to develop these models.



## OMG Specifications

As far as possible, Model Driven Enterprise Engineering builds on the following OMG specifications and combines them to a comprehensive whole:

- **Business Motivation Model (BMM)**: Provides a comprehensive scheme for capturing, communicating and managing an enterprise's vision, its goals and objectives, its influencers and their assessments as well as its strategies, tactics and policies.
- **Semantics of Business Vocabularies and Rules (SBVR)**: Defines how to represent enterprise-wide business vocabularies and how structural and operative business rules may be formalized using such vocabularies.
- **Business Process Modeling Notation (BPMN)** and **Business Process Definition Metamodel (BPDM)**: Defines how business processes and workflows may be represented as well as formalized in a technology independent form.
- **Organization Structure Metamodel (OSM)**: Provides a formal scheme to capture structural information about an enterprise such as organizations, organization units, positions, and people responsible for carrying-out business processes.
- **Unified Modeling Language (UML)** and **executable UML (xUML)**: A formal, largely graphical language to represent artifacts that precisely document functional IT requirements (xUML) as well as technical IT solutions (UML).
- **Production Rule Representation (PRR)**: Defines how a special form of rules (production rules) may be integrated into UML models and how these rules may serve as the common basis to be automated on various number of rule engine platforms.
- **Model Driven Architecture (MDA)**: A comprehensive overall architecture over a number of specifications that support the model driven approach by means of standardized model representations as well as model transformations.

Please note that some of these OMG specifications are still "work in progress" and may not be publicly available.

## Services

KnowGravity Inc. provides the following services with respect to Model Driven Enterprise Engineering:

- **Training**: We offer tailored in-house as well as public training on all aspects of Model Driven Enterprise Engineering.
- **Consulting**: Our consultants may show you how any aspect of Model Driven Enterprise Engineering may be pragmatically applied in your specific environment.
- **Doing**: By taking the responsibility for turn-key solutions, our analysts and architects are able to exemplify the benefit of Model Driven Enterprise Engineering on your project.
- **Shaping**: As a member of the OMG, KnowGravity is actively involved in the development of a number of the specifications mentioned above.

## Tools

Model Based Enterprise Engineering is comprehensively supported by KnowGravity's enterprise-scale tool suite KnowEnterprise®.

## Contact

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