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# Business Motivation Model (BMM) Specification

# Adopted Specification dtc/2006-08-03

This OMG document replaces the BMM RFC submission documents ("The Business Motivation Model ~ Business Governance in a Volatile World", bei/2005-12-03 and bei/2005-09-11) and the Final Adopted Specification (dtc/06-08-02). This is the first Interim Specification.

Comments on the content of this document are welcomed, and should be directed to *issues@omg.org* until September 15, 2006.

You may view the pending issues for this specification from att the OMG revision issues web page http://www.omg.org/issues.

The FTF Recommendation and Report for this specification will be published on December 9, 2006. If you are reading this after that date, please download the available specification from the OMG Specifications Catalog.



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# **Preface**

### **About the Object Management Group**

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**Note** – Terms that appear in *italics* are defined in the glossary. Italic text also represents the name of a document, specification, or other publication.

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### 1 Scope

### 1.1 Introduction

The Business Rules Group (BRG) developed the Business Motivation Model and published Version 1.0 on the BRG web site (www.businessrulesgroup.org) in November 2000. The latest version, version 1.2, was published in September 2005

The Business Motivation Model provides a scheme or structure for developing, communicating, and managing business plans in an organized manner. Specifically, the Business Motivation Model does all of the following:

- It identifies factors that motivate the establishing of business plans.
- It identifies and defines the elements of business plans.
- It indicates how all these factors and elements inter-relate.

Among these elements are those that provide governance for and guidance to the business — Business Policies and Business Rules.

The structure of the BMM provides the basis for logical design of easily-constructed tools for storing, cross-referencing and reporting the elements of business plans for business enterprises.

### 1.2 What is the Business Motivation Model?

The Business Motivation Model contains:

- A set of built-in concepts that define the elements of business plans. They are associated in a structure that is methodology-neutral; it will support a range of approaches for creating and maintaining a Business Motivation Model for an enterprise, and is particularly strong in support of processes that are driven by business change.
- Roles in the structure for three essential concepts: Business Process, Business Rule and Organization Unit. They participate in associations within the Business Motivation Model, but also (it is assumed) in other associations outside its scope as is the case in SBVR<sup>1</sup> and the submissions for BPDM<sup>2</sup> and OSM<sup>3</sup>. They are regarded as references to elements that will be defined and maintained outside an enterprise's Business Motivation Model.

The Business Motivation Model is simple. Most of its concepts have only basic attributes - identifier, text description (plus capabilities for traceability, including change date & author). Most of its associations are unconstrained: optional and many-to-many.

Software tools that support the Business Motivation Model usually provide simple recording and reporting functionality, with some analysis capabilities - e.g. reporting of objectives that are not quantified, business rules that are not derived from any business policy.

The Business Motivation Model is not:

- · A specification for a business development management process or tool
- 1. OMG Adopted Specification "Semantics of Business Vocabulary and Business Rules
- 2. OMG RFP "Business Process Definition Metamodel"
- 3. OMG RFP "Organization Structure Metamodel"

- A specification for a project definition or management process or tool
- A specification for a full business model.

It could be included in such specifications, but that is beyond the scope of this one.

There are two major areas of the Business Motivation Model.

- The first is the Ends and Means of business plans. Among the Ends are things the enterprise wishes to achieve for example, Goals and Objectives. Among the Means are things the enterprise will employ to achieve those Ends for example, Strategies, Tactics, Business Policies, and Business Rules.
- The second is the Influencers that shape the elements of the business plans, and the Assessments made about the impacts of such Influencers on Ends and Means (i.e., Strengths, Weaknesses, Opportunities, and Threats).

The Ends, Means, and Influencers are related to each other in order to answer the following two fundamental questions:

- What is needed to achieve what the enterprise wishes to achieve? This question is answered by laying out the particular elements of the business plans in other words, the Means necessary to achieve the desired Ends.
- Why does each element of the business plan exist? This question is answered by identifying the particular Ends that each of the Means serves, and the Influencers that underlie the choices made in this regard. This is what is meant by motivation.

All elements of the Business Motivation Model are developed from a business perspective. The basic idea is to develop a business model for the elements of the business plans before system design or technical development is begun. In this manner, the business plans can become the foundation for such activity, connecting system solutions firmly to their business intent.

### 1.3 Other Elements of a Full Business Model

The Business Motivation Model is not a full business model. For example, the elements of business plans do not prescribe in detail any of the following, each of which is an essential part of a full business model:

- **Business Processes:** business plans include Courses of Action what the enterprise has to do to achieve its Ends transformed into Business Processes that encompass activities, sequencing, dependencies, interactions, triggering by business events, etc. Business Process specification is outside the scope of business plans. However the Business Motivation Model does include a placeholder for Business Process, to provide for integration with emerging Business Process standards.
- Workflows: the basis of workflow is assignment of responsibilities for Business Processes to roles in the organization. Design of workflow is outside the scope of business plans. However, the business plans may include Strategies or Tactics that configure organization structure to achieve effective workflow.
- **Business Vocabulary:** also needed is full specification of the terms and facts needed to support the business. However, the business plans do provide a business basis for such development namely, the concepts and vocabulary used in the elements of the business plans, particularly in its Business Rules.

Refer to Appendix D for comments about additional elements of a full business model.

### 1.4 Business Rules in the Business Motivation Model

Business Rules play an important role in development of business plans. For example, they can serve the following purposes:

- Make business tactics sufficiently well developed to guide the actual performance of work.
- Provide fallback positions when some element of the business plans fails.
- Resolve conflicts when the Ends the business seeks are in conflict with one another.

Because of this key role — which is often make-or-break for the very success of business plans — developing the motivation for Business Rules from the business perspective is fundamentally important.

### 1.5 Methodologies and the Business Motivation Model

It is important to note that the Business Motivation Model is not in any sense a methodology. Indeed, it is entirely neutral with respect to methodology or particular approach, with only several general exceptions as follows:

- The requirements development process should be business-driven.
- Organized business plans should be a fundamental deliverable in any such process.
- Business Rules and Business Processes are key elements of such business plans.

One way to think of the Business Motivation Model is as a blueprint purposely designed to support a range of methodological approaches. Implementation of the Model would result in the elements of business plans being stored and related to other information about the enterprise, no matter what methodology was used for discovering and defining them.

In the design for any such implementation, each concept of the Business Motivation Model (i.e., each concept listed in the Concepts Catalog) should be assigned two attributes — 'name' and 'description' — to be included in the implementation. User enterprises and repository vendors could, of course, choose to include additional attributes.

### 1.6 Beneficiaries of the Business Motivation Model

Three types of people are expected to benefit from the Business Motivation Model

### 1.6.1 Developers of business plans

The Business Motivation Model is a conceptual tool for engineering the business itself. It provides developers of business plans with:

- A set of concepts that acts as a check-list of factors to be considered
- · A standard vocabulary
- · A flexible model to support their development processes

They also use tools that implement the Business Motivation Model for storage and management of their business plans.

#### 1.6.2 Business modelers

Modelers who develop detailed business models will, in the future, use standards and models based on the OMG's specifications for BPDM, SBVR and OSM.

The Business Motivation Model will support them in two ways:

• The content of their enterprise's Business Motivation Model will help to guide and shape their more detailed models

Eventually specifications such as BPDM, SBVR and OSM, together with the Business Motivation Model (or something with similar scope) should be merged into a single business-oriented modeling architecture, and implemented in integrated tool suites. Until then, tools based on the Business Motivation Model could provide a straightforward way of relating business processes, business rules and organization units to each other, and to the desired results, courses of action and business policies that affect them.

### 1.6.3 Implementers of software tools and repositories

The Business Motivation Model provides the basis of a logical data design that has been implemented in the databases of tools that support the model.

Tool developers might also choose:

- To elaborate on the Business Motivation Model, with additional attributes, more-normalized entities, and more refined associations.
- To use the Business Motivation Model in specifications of tools that support models with broader scope than the Business Motivation Model.

Both of these are beyond the scope of this specification.

### 2 Conformance

Software that conforms with the specification will be able to import and export XMI documents that conform with the XMI rules applied to the normative metamodel contained in OMG document bei/05-09-12

## 3 Normative References

The following normative documents contain provisions which, through reference in this text, constitute provisions of this specification. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply.

- Merriam-Webster Unabridged Dictionary [MWUD]
- Oxford Dictionary of English [ODE]
- Semantics of Business Vocabulary and Business Rules (SBVR)

### 4 Terms and Definitions

For the purposes of this specification, the terms and definitions given in the normative reference and the following apply.

#### enterprise

"a business or company" [Oxford Dictionary of English, definition 2]. An enterprise can be either for-profit or not-for-profit — similar concepts apply. Also, the 'enterprise' can be some subset of a larger enterprise; again, similar concepts should apply.

#### concept

"unit of knowledge created by a unique combination of characteristics" [SBVR, adopted from ISO 1087-1 (English)]

#### fact

"proposition that is taken as true" [SBVR]

#### fact type

"concept whose instances are all actualities and that is a basis for atomic formulation, having at least one role" [SBVR]. For example, the fact type "city is in country" has the roles "city" and "country" and some actualities are "Paris is in France", "Geneva is in Switzerland", "Melbourne is in Australia". In a UML model, would typically be represented as an association.

### necessity

"fact that is necessarily true, always true" [SBVR]

### noun concept

"concept that is not a fact type" [SBVR], For example, "city", "country", "person", "car", Paris, France. In a UML model, would typically be represented as a class or an instance.

#### verb concept

Synonym for "fact type" [SBVR]

# 5 Symbols

BPDM Business Process Definition Metamodel - OMG RFP

BRG Business Rules Group (www.businessrulesgroup.org)

MWUD Merriam-Webster Unabridged Dictionary

NODE New Oxford Dictionary of English

ODE Oxford Dictionary of English (replacement for NODE)

SBVR Semantics of Business Vocabulary and Business Rules - adopted OMG specification

### 6 Additional Information

### 6.1 Changes to Adopted OMG Specifications

This specification does not require changes to any OMG adopted specifications.

SBVR has adopted the definition of "Business Policy" from the BMM as published by the BRG, which is the basis of this specification. If this definition is revised in future versions, the impact on SBVR will need to be taken into account.

### 6.2 How to Read this Specification

The rest of this document contains the technical content of this specification. It is organized (as is the BRG-published version of the BMM) around the core concepts of the BMM - Ends, Means and Influencers & Assessments.

Although the chapters are organized in a logical manner and can be read sequentially, this is a reference specification and is intended to support being read in a non-sequential manner. Cross-references are provided to facilitate browsing and search.

### 6.3 Acknowledgements

The following OMG member organizations submitted this specification:

- · Adaptive Inc.
- Business Semantics Ltd.
- Business Rule Solutions LLC.
- · Mega International

The following OMG member organizations supported this specification:

- Business Rules Group
- EDS
- Fair Isaac Corporation
- · Hendryx and Associates
- KnowGravity Inc.
- · Neumont University

### 7 The Business Motivation Model

### 7.1 Overview

Fundamental to the Business Motivation Model is the notion of *motivation*:: if an enterprise prescribes a certain approach for its business activity, it ought to be able to say why; that is, what result(s) the approach is meant to achieve.

Sometimes it is difficult to uncover such motivation, especially in operations that have been going on for some time. All too often it turns out to be "...because we had to find a workaround for a system that didn't do quite what was needed." This may describe business work practice, information systems, or both.

A cornerstone of any work addressing motivation has to be the enterprise's aspirations (its Vision) and its action plans for how to realize them (its Mission). Refinements were introduced — Vision into Goals and Objectives, and Mission into Strategies for approaching Goals, and Tactics for achieving Objectives. The general term End was adopted to refer broadly to any of the 'aspiration' concepts (Vision, Goal, Objective) and the term Means to refer generally to any of the 'action plan' concepts (Mission, Strategy, Tactic). This conjunction of Ends and Means — being and doing — provides the core concepts of the Model<sup>1</sup>.

An enterprise, however, cannot operate on this Model alone — the business needs to take into account the numerous Influencers that can hinder or assist its operation. These Influencers provide Opportunities that would help the enterprise operate, as well as Threats that would thwart it. Influencers also represent Strengths from within that the enterprise could exploit, or Weaknesses that it should compensate for.

But is an Influencer inherently a Strength or Weakness — is it always a Threat or Opportunity? That determination comes from an Assessment of the impact of an Influencer on the stated Ends and Means — an Assessment such as is developed in SWOT<sup>2</sup> analysis. In this commonly-used technique, Internal Influencers (assessed to be Strengths and Weaknesses) and External Influencers (assessed to be Opportunities and Threats) are analyzed as a part of business plan development.

Once an Assessment has identified relevant Influencers in terms of their impact on Ends and Means, Directives (Business Policies and Business Rules) can be put in place to govern and guide the enterprise Courses of Action. Directives keep the enterprise on course and moving toward its Desired Results. Because of their integral role in guiding Courses of Action, Directives are included in the set of Means concepts.

Business Rules are noteworthy in that regard. Business Rules sharpen the Business Tactics because they make Courses of Action concrete at the operational level. Business Rules can also provide specific remedies when a Course of Action fails, and specific resolutions to conflicts that inevitably arise among the Ends. In short, Business Rules provide the leverage needed for building effective, adaptable business solutions and systems.

Understanding the motivation for Business Rules is crucial in that regard.

- When a Business Rule is encountered, you can ask where it would fit which Influencer, on which End or Means, does it address?
- When a Business Rule does not seem to fit, it can be challenged. Does it perhaps support some older Means or End that

<sup>1.</sup> In fact, this is the essential distinction between Ends (the being — "what you aspire to be") and Means (the doing — "the actions you intend to take to get there"). We express this distinction in our terms 'Desired Result' and 'Course of Action'.

<sup>2.</sup> Note that SWOT is an example of a well-established technique: other techniques (and specializations of Assessment) may be substituted – but they should be adequate replacements for SWOT.

is no longer relevant to the enterprise? Was it a workaround for some historical information system deficiency or organizational issue that is no longer relevant?

### 7.2 Key Ideas in the Business Motivation Model

### 7.2.1 Business perspective

All elements of an enterprise Business Motivation Model are developed from a business perspective. The idea is to develop a business model for the elements of the business plans before beginning system design or technical development, or even detailed business modeling. The business plans then become the foundation for such activity, connecting system solutions firmly to their business intent

#### 7.2.2 Motivation

Enterprises do not - or should not - act randomly. When an enterprise executes a business process or applies a business rule, it should be able to say why.

Business processes realize courses of action. Courses of action are undertaken to ensure that the enterprise makes progress towards one or more of its goals (which might include "to stay where we are, relative to our market and competitors"). Goals are defined because people in authority in the enterprise:

- · Assess the effect of some influences on the enterprise
- Decide what the goals should be.

Some of the logic of business processes may be expressed in business rules. Business rules are derived from business policies. Business policies are defined because people in authority in the enterprise:

- · Assess the effect of some influences on the enterprise
- Decide what the policies should be.

Since much of the motivation for what an enterprise does is based on people in the enterprise deciding what is best for it, the enterprise should be able to say who decided, and on what assessments of what influences. And when.

In practice, real businesses do not have complete traceability of motivation. But, as and when they choose to move towards it, the Business Motivation Model will support it.

### 7.2.3 Reaction to change

A fundamental assumption of the Business Motivation Model is that what an enterprise does is driven not by change, but by how the enterprise decides to react to change. The recognition of changes caused by influencers (or, sometimes, no change when change was anticipated) and the assessment of their impact on the enterprise is crucial.

The Business Motivation Model does not require a specific process for reaction to change. Whatever process is used, the model supports traceability:

- Forward, from impact of influence to specification of business processes, business rules and organization responsibilities
- Backward, for an enterprise to demonstrate why it does what it does the way it does it

Both are important for governance, and especially for regulatory compliance.

### 7.2.4 Separation of concerns

Substantial effort went into making the concepts in the Business Motivation Model as simple as possible. One effect of this is separation of concerns - the distinctions between:

- Ends and means what an enterprise wants to be, as opposed to what it has decided to do. Means can be changed without changing the ends; vice versa is, perhaps, not so common.
- Changes caused by influencers and assessment of their impact. The impact of a given change may be assessed differently by different people in the enterprise.
- Assessments, and the decisions based on them as expressed in business policies and ends.
- Courses of action (decisions on how to exploit resources and capabilities) and business policies (directives that enable and constrain courses of action).
- "How" and "How well". Courses of action define how capabilities will be used; measures of how well they are used are defined within objectives they support. Objectives can be changed without changing courses of action.

### 7.2.5 Decomposition

The Business Motivation Model is applicable to any enterprise large enough to need to define and manage business plans. This can mean that different organization units in the same enterprise each have their own Business Motivation Models, which may include elements refined from corresponding elements owned by higher-level organization units.

There are three decomposition ('composed of/part of') associations in the Business Motivation Model, on:

- · Desired Result
- Course of Action: there is also a also a separate relationship, 'enabled by'
- · Business Policy

Keeping these decompositions in step is left as a matter for methodology and tools.

In practice, organization boundaries have usually been determined by organization structure<sup>3</sup>. Decomposition of desired results, courses of action and business policies have been guided by this.

### 7.2.6 Metrics

Measures of performance are defined in an enterprise's Business Motivation Model as objectives. They may be based on risks and potential rewards identified in assessments.

Key Performance Indicators (KPI) / Critical Success Factors (CSF) are not especially distinguished in the model; enterprises can make the distinction if they choose to.

### 7.3 Overview of BMM Structure

Figure 7.1 provides an overview of the Business Motivation Model.

<sup>3.</sup> There has been some limited experience of decomposition by collaborative groups and shared-practice groups, but most has been by organization structure.

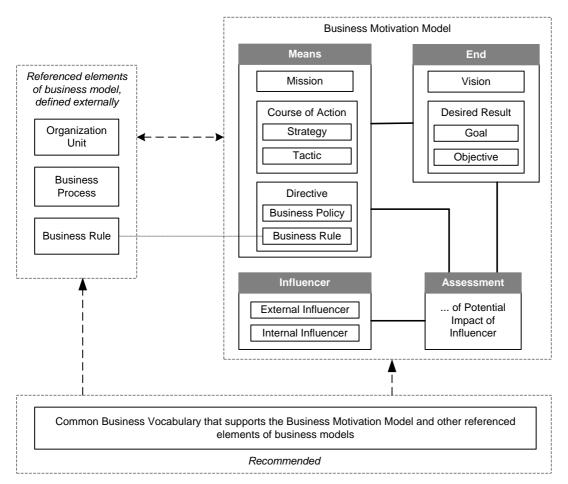


Figure 7.1 BMM Overview

### 7.3.1 End

Ends are about what an enterprise wants to be.

Ends can be about changing what the enterprise is - e.g. developing new lines of business, moving into new markets - or about maintaining its current position relative its market and competition. The definition of an end does not say how it will be achieved.

In the Business Motivation Model, Ends are categorized as Vision and Desired Results, and Desired Results as Goals and Objectives.

A Vision is an overall image of what the organization wants to be or become. An enterprise can use the Business Motivation Model without defining a Vision explicitly.

Desired Results - Goals and Objectives - are more specific.

A Goal tends to be longer term, and defined qualitatively rather than quantitatively. it should be narrow - focused enough that Objectives can be defined for it.

An Objective is a step along the way towards a Goal. It must have an end date, and criteria to determine whether it has been reached or not. Objectives provide the basis for measuring whether progress is being made towards Goals.

#### **7.3.2** Means

Means are about what an enterprise has decided to do in order to become what it wants to be.

A Means is some "device, capability, regime, technique, restriction, agency, instrument, or method that may be called upon, activated, or enforced to achieve Ends". It does not include either the tasks (business processes and workflow) necessary to exploit it, nor responsibility for such tasks.

In the Business Motivation Model, Means are organized into Mission, Courses of Action and Directives.

A Mission indicates the ongoing operational activity of the enterprise. Its definition should be broad enough to cover all Strategies and the complete area of operations. An enterprise can use the Business Motivation Model without defining a Mission explicitly.

### 7.3.3 Course of Action

Courses of Action are what the enterprise has decided to do. A Course of Action is more than simply a resource, skill, or competency that the enterprise can call upon. It is a way of configuring some aspect of the enterprise (things, processes, locations, people, time) to channel efforts towards Desired Results - the result of a decision by the enterprise about the best way to use its resources, skills, and competencies.

A Course of Action defines what has to be done, not how well it has to be done. Measures of performance are defined in Objectives that are supported by the Courses of Action.

In the Business Motivation Model, Courses of Action are categorized as Strategies and Tactics. The model does not make a hard distinction between the two. Enterprises define their own criteria.

Strategies tend to be long term and fairly broad in scope. Each Strategy is implemented by Tactics, which tend to be shorter term and narrower in scope. A Tactic may contribute to the implementation of more than one Strategy.

There is a de-facto correspondence between Course of Action and Desired Results. Generally, Strategies are selected to move the enterprise towards its goals, and Tactics to ensure that it meets its Objectives. But this is not hard-wired into the model; enterprises can make the correspondences they need.

Courses of Action do not necessarily have to support Desired Results directly; some are selected to enable other Courses of Action.

### 7.3.4 Directive

In the Business Motivation Model, Directives are categorized as Business Policies and Business Rules.

In general, Business Policies exist to govern – that is, control, guide, and shape – the Strategies and Tactics. They define what can be done and what must not be done, and may indicate how or set limits on how it should be done.

Compared to a Business Rule, a Business Policy tends to be less formally-structured; it may not be atomic - i.e. not focused on a single aspect of governance or guidance - and may be less formally articulated.

Business policies are not directly actionable. Actionable Directives are Business Rules, and they need to be defined and managed as such - tested for violation, enforced, managed for consistency and completeness. Business Rules are derived from Business Policies.

Apart from its role in the structure, 'Business Rule' is outside the scope of the Business Motivation Model. Its place in the structure provides a "hook" to another model, where 'Business Rule' is defined and associated with other concepts. This is discussed further in "Externally-referenced Business Model Elements", below.

#### 7.3.5 Influencers

An Influencer is something that can cause changes that affect the enterprise in its employment of its Means or achievement of its Ends. Alternatively, it might confirm that there are no changes where changes might have been expected.

Influencers may be Internal (from within the enterprise) or External (from outside the enterprise boundary). If the enterprise being modeled is an Organization Unit within a larger organization, it may chose to treat the larger organization as an External Influencer.

The Business Motivation Model provides an example set of categories of Influencer. In practice, enterprises define their own set.

### 7.3.6 Assessments

An influence - a change caused by an Influencer - is neutral. It is more or less simply just 'there' until the enterprise decides how to react to it. An Assessment is a judgment about the influence on the enterprise's ability to employ its Means or achieve its Ends. The decisions are reflected in changes to the Ends and/or Means.

Different people might make different Assessments of a given influence on the same Ends and Means - perhaps even the same people at different points in time. The model supports a record of which people made which Assessments and when, providing an audit trail for future reference.

The Business Motivation Model suggests SWOT (Strength, Weakness, Opportunity, Threat) as an example of an approach for making assessments. In practice, enterprises can substitute different approaches.

The model also includes Potential Impacts that can be identified to support Assessments. Potential Impacts are categorized as Risk and Potential Reward.

As well as more general associations between Assessment, Ends and Means, there is a direct association "Directive is motivated by Potential Impact". This is one of the minor enhancements in version 1.1 of the Business Motivation Model, based on experience of using the model in risk management.

### 7.3.7 Externally-referenced Business Model Elements

Three concepts - Organization Unit, Business Process and Business Rule - have roles in the structure of the Business Motivation Model but actually belong in other standards, where they are defined and associated with related concepts needed for detailed business modeling.

The BRG anticipated that the best sources for the required external standards would be the OMG's specifications for the Organization Structure Metamodel (OSM), Business Process Definition Metamodel (BPDM) and Semantics of Business Vocabulary and Business Rules (SBVR). This is reflected in version 1.1 of the Business Motivation Model . In practice, enterprises could use alternative external standards.

### 7.3.7.1 Organization Unit

Organization Unit has two roles:

- It is a concept in the Business Motivation Model, participating in the following associations:
  - defines Ends
  - establishes Means
  - · makes Assessments
  - recognizes Influencers
  - · may be defined by a Strategy
  - may be responsible for Business Processes.
- It is usually the basis for defining the boundaries of the enterprise being modeled. The decomposition of Business Policies, Courses of Action and Desired Results and assignment of responsibilities within the enterprise is often guided by (or, at least, consistent with) the definition of units within the organization structure.

One way in which the model supports this is that a Directive (a Business Policy or Business Rule) at one level can act in the role of a Regulation for units lower down the organization structure.

'Organization Unit' in version 1.2 of the Business Motivation Model is a placeholder, anticipating a definition to be adopted from OSM when it is further developed.

#### 7.3.7.2 Business Process

Business Processes realize Courses of Action. They provide processing steps, sequences, (including cycles branches and synchronization), structure (decomposition and reuse), interactions, and connection to events that trigger the processes.

Courses of Action are governed by Business Policies; Business Processes are also governed by Business Policies.

'Business Process' participates in the following associations:

- · realizes Courses of Action
- · is governed by Business Policies
- · may be guided by Business Rules
- is the responsibility of one or more Organization Units

'Business Process' in version 1.2 of the Business Motivation Model is a draft definition, taken from the August 2004 draft of BDPM and anticipating a definition to be adopted from BDPM when it is further developed.

#### 7.3.7.3 Business Rule

Business Rules provide specific, actionable guidance to implement Business Policies. Some Business Rules could be automated in software; some are actionable only by people.

- 'Business Rule' participates in the following associations:
- · is derived from Business Policy
- may guide Business Processes
- may have an enforcement level effected by a Tactic.

'Business Rule' in version 1.2 of the BMM is adopted from SBVR .

### 7.3.7.4 Associations between Externally-referenced Concepts

The Business Motivation Model includes associations between externally-referenced concepts: 'Organization Unit is responsible for Business Process' and 'Business Process is guided by Business Rule'.

These are loosely defined. It is recognized, for example, that there can be several kinds of responsibility for a business process; for example: definition, execution, compliance. In practice, categories of responsibility can be defined as needed.

However, when the OMG specifications for BPDM, SBVR and OSM are eventually integrated, they will, presumably, contain specific associations between Business Process, Business Rule and Organization Unit. In that case, the loose associations in the Business Motivation Model might not be needed, except perhaps as a short-term measure when an enterprise Business Motivation Model is being developed.

### 7.3.8 Common Business Vocabulary

In practice, it is helpful if an enterprise uses a common vocabulary for its Business Motivation Model, its business processes and business rules, and its allocation of responsibilities.

However, this is not essential for use of use of the Business Motivation Model, and is outside the scope of this submission.

### 7.4 Processes supported by the Business Motivation Model

The Business Motivation Model is neutral with respect to methodology. One way to think of it is as a blueprint that will support a range of methodological approaches. Implementation of the model would result in a repository in which the elements of business plans could be stored, connected and related to other information about the enterprise, no matter what methodology were used for discovering and defining them.

There are some general assumptions:

- Creation and population of an enterprise's Business Motivation Model should be business-driven.
- Organized business plans should be a fundamental deliverable.
- Business rules, business processes and organizational responsibilities are needed to realize the plans, and it is valuable to trace them back to the relevant elements of the plans.

One example of a methodological approach is an implied progression through the model for an enterprise, illustrated below. The boxes represent ongoing activities, and the arrows indicate logical dependencies. An arrow drawn from 'A' to 'B' means: "If you are doing 'B', you also need to be doing 'A'". How the activities are undertaken will vary from methodology to methodology.

This progression forms the basis of an end-to-end process for dealing with change, from recognition of influence to implemented response.

The progression can be fully traced in the Assessments, Ends and Means stored in the Business Motivation Model for the enterprise, and the connections to Business Processes, Business Rules and Organization Responsibilities stored in the related business models for the enterprise. The traceability is reversible, so that an enterprise can show why it has the processes and rules it has.

These capabilities are important for governance, and essential for Regulatory Compliance.

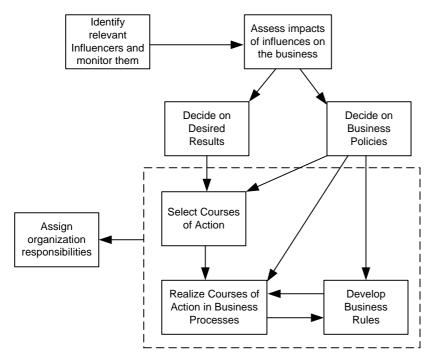
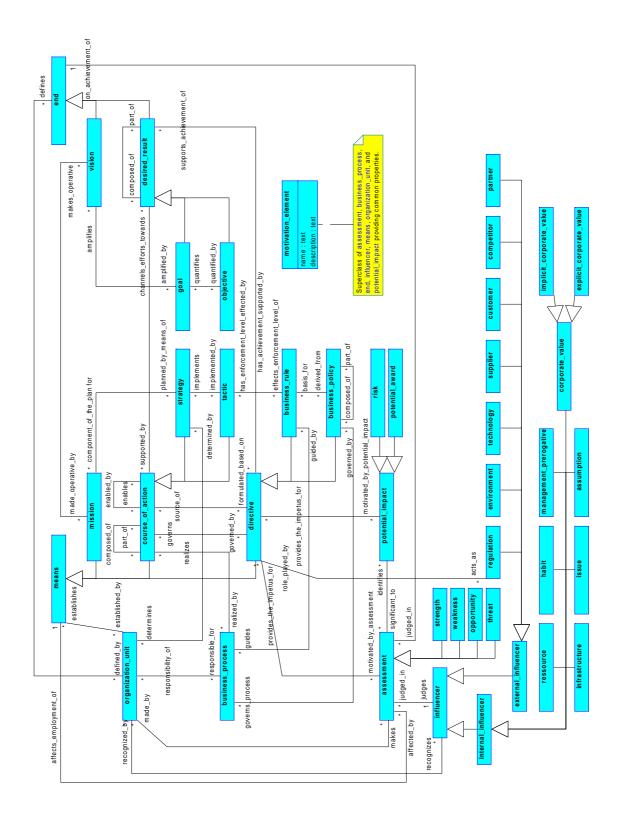


Figure 7.2 Logical progression through the Business Motivation Model

This implied progression would support processes for three typical business scenarios for using the Business Motivation Model:

- "Stay where we are": the enterprise reacts to change in its environment, e.g. Regulation and Competition, (rather than seeking to change its business) and undertakes defensive activity to maintain its current position relative to its market and competitors.
- Expand/Diversify: the enterprise retains its business model substantially unchanged, and adds Ends and Courses of Action to introduce new products/services and/or operate in new territories.
- New business: the enterprise will need a 'starter' model. Industry reference models (e.g. eTOM, for the telecommunications industry, from the Telemanagement Forum) may provide a good basis.

# 7.5 Business Motivation Model Structure



### 8 The Core Elements of the Business Motivation Model

The main elements of the business plans are its Ends and Means. These fundamental terms represent two hierarchies, as shown in Figure 8.1 and Figure 8.5:.

### 8.1 The End Concepts

An End is something the business seeks to accomplish. The important thing to remember about an End is that it does not include any indication of **how** it will be achieved.

In describing Ends, it is useful to document who *defined* the End and at what point in time, so that an audit trail exists for future reference. This, of course, cannot always be mandated.

### 8.1.1 Categories of End

End concepts can be arranged in a hierarchy, as shown in Figure 8.1.

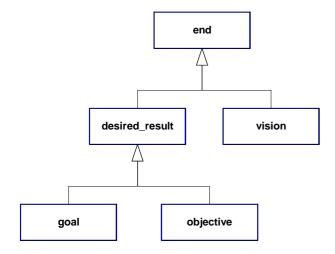


Figure 8.1 - The Hierarchy of "End" concepts

An End may be either a Vision or some Desired Result (a Goal or an Objective). The essence is that these are kinds of things, in varying detail, that the enterprise is trying to accomplish.

Vision is an overall image of what the organization wants to be or become. It usually encompasses the entire organization and is long-term in its perspective. Desired Results, on the other hand, are the more specific Goals and Objectives that the enterprise, or some part of it, intends to achieve.

### **8.1.2** Vision

A Vision describes the future state of the enterprise, without regard to how it is to be achieved.

A Vision is the ultimate, possibly unattainable, state the enterprise would like to achieve. A Vision is often compound, rather than focused toward one particular aspect of the business problem. A Goal, in contrast, should generally be attainable and should be more specifically oriented to a single aspect of the business problem.

A Vision is supported or made operative by Missions. It is amplified by Goals.

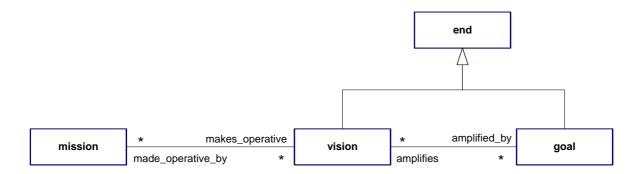


Figure 8.2: - Vision

Examples of Vision include the following:

Table 8.1: Examples of Vision

| Enterprise                     | Vision  |  |
|--------------------------------|---|--|
| EU-Rent                        | Be the car rental brand of choice for business users in the countries in which we operate   |  |
| Pizza Company                  | Be the city's favorite pizza place.   |  |
| Consulting Company             | Be the premier consulting company in the industry.  |  |
| Retail Pharmacy                | Be the low-cost health care provider with the best customer service.  |  |
| Municipal Police<br>Department | Be a professional, trusted provider of police services — a leader in cooperative efforts with the neighborhood and other agencies to make our city safer. |  |

### 8.1.3 Desired Result

A Desired Result is an End that is a state or target that the enterprise intends to maintain or sustain. A Desired Result is supported by Courses of Action.

### 8.1.3.1 Categories of Desired Result

Desired Result includes the following concepts:

- Goal
- · Objective

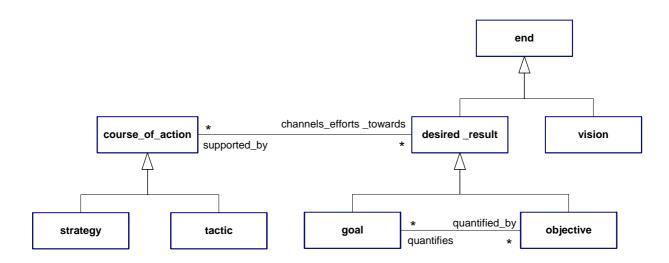


Figure 8.3: - Desired Results — Goals and Objectives

Compared to an Objective, a Goal tends to be longer term, qualitative (rather than quantitative), general (rather than specific), and ongoing. Compared to a Goal, an Objective tends to be short term, quantitative (rather than qualitative), specific (rather than general), and not continuing beyond its timeframe (which may be cyclical).

Objectives differ from Goals in that Objectives should always be time-targeted and measurable. Goals, in contrast, are not specific in these ways.

Desired Results are supported by Courses of Action, which can be either Strategies or Tactics. Generally, Goals are supported by Strategies, and Objectives are achieved by Tactics<sup>1</sup>.

In many enterprises there is a continuum from major Strategies that impact the whole of the business to minor Tactics with limited, local effects. The dividing line between 'minor Strategy' and 'major Tactic' is blurred. Also, over time, some Courses of Action may evolve from Tactic to Strategy, and some Strategies may devolve into Tactics. Some enterprises do make a hard distinction between Strategies and Tactics; these enterprises may choose to pair Strategies only with Goals, and Tactics only with Objectives.

Other enterprises use other bases for distinguishing Strategies and Tactics. For example, some enterprises distinguish between Strategy and Tactic based on planning horizon. In this case, Strategies are put into place to support the long-term Goals — i.e., a planning horizon that is typically several years or more — while Tactics are the Courses of Action implemented to deal with the shorter planning horizon of a year or less (the current operational plans). Still other enterprises distinguish Strategy (a Course of Action that is for "the gaining of a specific advantage") from Tactic which is a Course of Action that is for "the deployment of specific resources to gain that advantage."

**BMM Adopted Specification** 

<sup>1.</sup> An enterprise that prefers to strictly maintain this pairing can do so by specifying an appropriate constraint. It may also want to specialize the Model for its own use by replacing the fact type 'Desired Result *is supported by* Course of Action' with two more specific fact types: 'Goal *is supported by* Strategy'; 'Objective *is achieved by* Tactic'.

#### 8.1.4 Goal

A Goal is a statement about a state or condition of the enterprise to be brought about or sustained through appropriate Means. A Goal *amplifies* a Vision — that is, it indicates what must be satisfied on a continuing basis to effectively attain the Vision.

A Goal should be narrow — focused enough that it can be *quantified by* Objectives. A Vision, in contrast, is too broad or grand for it to be specifically measured directly by Objectives. However, determining whether a statement is a Vision or a Goal is often impossible without in-depth knowledge of the context and intent of the business planners.

Table 8.2: Examples of Goal

| Enterprise         | Goal  |  |
|--------------------|---|--|
| EU-Rent            | To be a 'premium brand' car rental company, positioned alongside companies such as Hertz and Avis |  |
| EU-Rent            | To provide industry-leading customer service  |  |
| EU-Rent            | To provide industry-leading customer service  |  |
| EU-Rent            | To provide well-maintained cars.  |  |
| EU-Rent            | To have vehicles available for rental when and where customers expect them.                       |  |
| Pizza Company      | To deliver pizzas in an expedient amount of time.   |  |
| Consulting Company | To improve customer satisfaction (over the next five years)                                       |  |
| Publishing Company | To improve customer satisfaction (over the next five years)                                       |  |
| e-Business Company | To have more customers than any other e-business.   |  |

### 8.1.5 Objective

An Objective is a statement of an attainable, time-targeted, and measurable target that the enterprise seeks to meet in order to achieve its Goals.

- Attainable. It is self-evident that Objectives should be attainable. If they are not, the business plans are unrealistic and will likely fail.
- **Time-targeted**. All Objectives should be time-targeted. This means that either an absolute timeframe (e.g., "by January 1, 2007") or relative timeframe (e.g., "within two years") should be included in each Objective. This timeframe indicates when the Objective is to be met.
- Measurable. Objectives should be measurable. This means they must include some explicit criteria for determining whether the Objective is being met in practice. This criteria may be fairly exacting (for example, "on-time 95% of the time"). At the very minimum, the criteria must provide a basis for making a "yes or no" determination (e.g., "up and running"). Such criteria may be the basis for certain Business Rules, created specifically to compute or derive the relevant evaluation.

This understanding of 'Objective' is consistent with the industry's popular "SMART" criteria that an Objective be: Specific, Measurable, Attainable, Relevant, and Time-Based.

Statements of Objective should always begin with the time-targeted phrase, followed by a quantified noun. Example time-targeted phrases:

- By 09/01/2001, ...
- Effective immediately, ...
- After 2 years, ...
- Within 5 weeks, ...
- On or before June 1, 2007, ...
- On April 15, 2007, ...

An Objective *quantifies* a Goal — that is, it provides the basis for measures to determine whether the Goal is being achieved. Conversely, the Goal *is quantified* by these measurable Objectives. For example, the Goal "To provide industry-leading customer service" is quantified by the Objective "Effective immediately, a ranking of 8 or better on a monthly customer satisfaction scale of 1-10" and by the Objective "By Jan. 1, 2007, a B+ grade level on the annual Better Business Bureau ratings."

Table 8.3: Examples of Objective

| Enterprise         | Objective   |  |
|--------------------|---|--|
| EU-Rent            | By end of current year, be rated by A C Nielsen in the top 6 car rental companies in each operating country within the European Community         |  |
| EU-Rent            | By end of current year, be rated by A C Nielsenin the top 9 car rental companies in all other operating countries.                                |  |
| EU-Rent            | By end of current year, to score 85% on EU-Rent's quarterly customer satisfaction survey.   |  |
| EU-Rent            | During 4th quarter of current year, no more than 1% of rentals need the car to be replaced because of mechanical breakdown (excluding accidents). |  |
| Pizza Company      | By January 1, 2007, 95% on-time pizza delivery.   |  |
| Consulting Company | By June 30, 2008, an operational customer call center.  |  |
| e-Business Company | Within six months, 10% increase in product sales.   |  |

### 8.1.5.1 Facts that Organize Ends

Besides those mentioned above, other logical connections (i.e., fact types) are required to fully organize the Ends. These logical connections provide additional structure among elements of the Ends themselves.

#### **Interrelating Desired Results**

One Desired Result can be *composed of* other Desired Results; a Desired Result can be *part of* some other Desired Result. In other words, there can be a 'parts explosion' of Desired Results. This connection should only be used to associate like instances — that is, Goals only to other Goals and Objectives only to other Objectives.

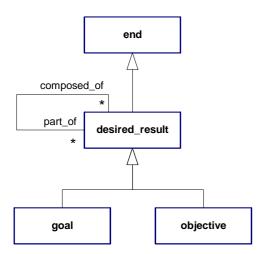


Figure 8.4: - Interrelating Desired Results

A 'parts explosion' of Desired Results happens when there is a decomposition of some higher-level Goal (or Objective) into lower-level Goals (or Objectives). Such decomposition occurs, for example, when elements of the business plans created by one level of management are handed down to a lower organizational level for more detailed planning or implementation. This creates a 'recursion' among the elements, from higher level to lower level. For example, the Goal "To keep customers satisfied" is composed of the sub-Goal "To deliver pizzas in an expedient amount of time" and the sub-Goal "To produce tasty pizzas."

### 8.2 The Means Concepts

A Means represents any device, capability, regime, technique, restriction, agency, instrument, or method that may be called upon, activated, or enforced to achieve Ends. Remember that a Means does not indicate either the steps (business processes and workflow) necessary to exploit it, nor responsibility for such tasks, but rather only the capabilities that can be exploited to achieve the desired Ends.

In describing Means, it is useful to document who *established* the Means and at what point in time, so that an audit trail exists for future reference. This practice, of course, cannot always be mandated.

### 8.2.1 Categories of Means

Means concepts can be arranged in a hierarchy, as shown in Figure 8.5:.

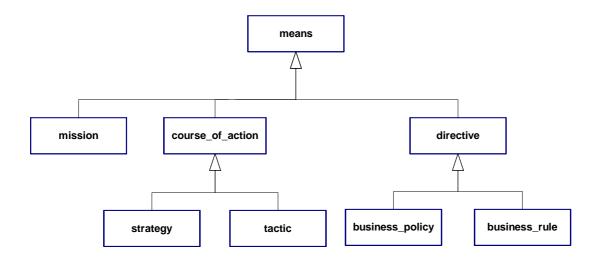


Figure 8.5: - The Hierarchy of 'Means' Concepts

A Means may be either a Mission, a Course of Action (a Strategy or Tactic), or a Directive (Business Policy or Business Rule).

Mission, like its counterpart Vision, indicates a correspondingly long-term approach — one that is focused on achieving the Vision. Like Vision, Mission is not very specific; it is something broadly stated, in terms of the overall functioning of the enterprise.

Apart from the basic Mission of the enterprise, the Means of the Business Motivation Model have been carefully organized into Courses of Action and Directives.

In some respects, Courses of Action are the more basic of the two. In and of themselves, however, Courses of Action tend to be rather blunt instruments. They require Directives to have any real chance of success.

In contrast to Courses of Action, Directives cannot really stand on their own. They exist to give the Courses of Action a fine edge — in other words, to ensure that the Courses of Action will be applied intelligently and within the boundaries of what is acceptable or optimal for the enterprise. In short, Directives represent encoded (i.e., written down) knowledge that ensures the highest possible chances of success for the Courses of Action.

A Directive always has to do with governance or guidance. A Course of Action, in contrast, identifies an active approach in moving toward the Ends. A Course of Action is always action-dominated (action-oriented).

#### 8.2.2 Mission

A Mission indicates the ongoing operational activity of the enterprise. The Mission describes what the business is or will be doing on a day-to-day basis.

A Mission makes a Vision operative — that is, it indicates the ongoing activity that makes the Vision a reality. A Mission is planned by means of Strategies.

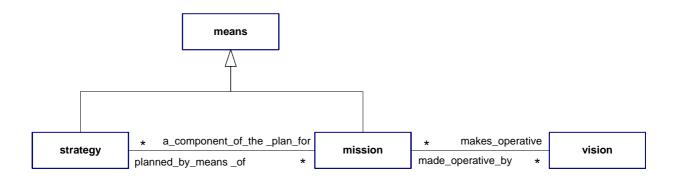


Figure 8.6: - Mission

A Mission statement should consist of the following three items only and should be formed using brief statements of them.

- 1. An action part. For example, "provide"
- 2. A product or service part. For example, "pizzas"
- 3. A market or customer part. For example, "customers city-wide"

The Mission statement should be focused on day-to-day operations, generic enough to cover all Strategies, and broad enough to cover the complete area of operations.

Examples of Mission are:

**Table 8.4: Examples of Mission** 

| Enterprise         | Objective  |
|--------------------|--|
| EU-Rent            | Provide car rental service across Europe and North America for both business and personal customers. |
| Pizza Company      | Provide pizza to customers city-wide.  |
| Consulting Company | Provide consulting, outsourcing, and staff augmentation services to companies in North America.      |
| Retail Pharmacy    | Provide generic and ethical drugs to the retail market.  |

### 8.2.3 Course of Action

A Course of Action is an approach or plan for configuring some aspect of the enterprise involving things, processes, locations, people, timing, or motivation, undertaken to achieve Desired Results. In other words, a Course of Action *channels efforts towards* Desired Results. To help ensure success in this regard, Courses of Action *are governed by* Directives.

Courses of Action, which include Strategies and Tactics, represent the basic elements of a general plan or overall solution — in other words, an overall approach — that the enterprise will take to achieve its Desired Results. It is important to remember that Courses of Action are not Business Processes; rather, Courses of Action can be *realized* by Business Processes – that is, made operative by Business Processes.

# 8.2.3.1 Categories of Course of Action

Course of Action includes the following concepts:

- Strategy
- Tactic

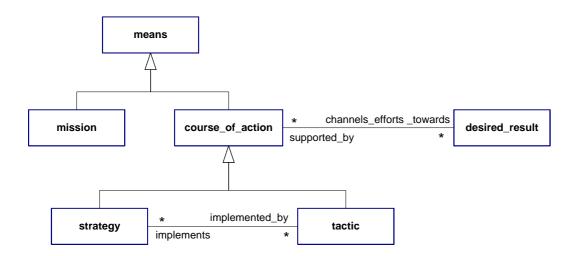


Figure 8.7: - Courses of Action

Compared to Tactics, Strategies tend to be longer term and broader in scope. A Strategy *is implemented by* Tactics. Strategies usually *channel efforts towards* Goals, rather than Objectives.

Compared to a Strategy, a Tactic tends to be shorter term and narrower in scope. Tactics *implement* Strategies; they are courses of action that will support those Strategies. Tactics generally *channel efforts towards* Objectives, rather than Goals.

Determining whether a Course of Action is a Strategy or a Tactic may be impossible without in-depth knowledge of the context and intent of the business planners. In fact, in the course of developing and analyzing business plans, some elements may change category as the target problem is understood better. For example, an element originally defined as a Tactic may subsequently be elevated to a Strategy. The reverse is also likely to occur. In other words, the business plans will gradually evolve toward greater accuracy in specification, as well as greater coherence and completeness.

# 8.2.4 Strategy

A Strategy is one *component of* the plan for the Mission. A Strategy represents the essential Course of Action to achieve Ends — Goals in particular. A Strategy usually *channels efforts towards* those Goals.

A Strategy is more than simply a resource, skill, or competency that the enterprise can call upon; rather, a Strategy is accepted by the enterprise as the right approach to achieve its Goals, given the environmental constraints and risks.

Examples of Strategy include the following:

Table 8.5: Examples of Strategy

| Enterprise         | Strategy   |  |
|--------------------|--|--|
| EU-Rent            | Operate nation-wide in each country of operation, focusing on major airports, competing head-to-head, on-airport, with other premium car rental companies. |  |
| EU-Rent            | Manage car purchase and disposal at local area level, with national (operating country) guidance covering:   |  |
|                    | What models may be bought from which manufacturers;  |  |
|                    | <ul> <li>Overall numbers and mix of models;</li> </ul>   |  |
|                    | When to dispose of cars, by mileage and age;   |  |
|                    | Phasing of purchasing and delivery.  |  |
| EU-Rent            | Join an established rewards scheme run by a third party (i.e., outsource rather than building own scheme).   |  |
| Pizza Company      | Deliver pizzas to the location of the customer's choice.   |  |
| Consulting Company | Implement a Customer Relationship Management System.   |  |
| Consulting Company | Increase repeat business   |  |
| e-Business Company | Buy other e-business mailing lists.  |  |

# **8.2.5** Tactic

A Tactic is a Course of Action that represents part of the detailing of Strategies. A Tactic *implements* Strategies. For example, the Tactic "Call first-time customers personally" implements the Strategy "Increase repeat business."

Tactics generally *channel efforts towards* Objectives. For example, the Tactic "Ship products for free" channels efforts towards the Objective "Within six months, 10% increase in product sales."

Examples of Strategy include the following:

Table 8.6: Examples of Tactic

| Enterprise    | Tactic   |
|---------------|--|
| EU-Rent       | Encourage rental extensions.   |
| EU-Rent       | Outsource maintenance for small branches.  |
| EU-Rent       | Create standard specifications of car models, selecting from options offered by the manufacturers.  Note: these will be trade-offs between 'rentable' and 'high residual value for sales'. |
| EU-Rent       | Equalize use of cars across rentals so that mileage is similar for cars of the same car group and age.   |
| EU-Rent       | Comply with car manufacturer's maintenance schedules.  |
| Pizza Company | Hire drivers with their own vehicles to deliver pizzas.  |

**Table 8.6: Examples of Tactic** 

| Enterprise         | Tactic   |
|--------------------|--|
| Consulting Company | Provide each member of the sales force with a palmtop. |
| Consulting Company | Call first-time customers personally.                  |
| e-Business Company | Ship products for free.                                |

#### 8.2.6 Directive

As the name suggests, Directives indicate how the Courses of Action should, or should not, be carried out — in other words, they *govern* Courses of Action. Specifically, a Directive defines or constrains or liberates some aspect of an enterprise. It is intended to assert business structure or to control or influence the behavior of the business, and is stated in declarative form.

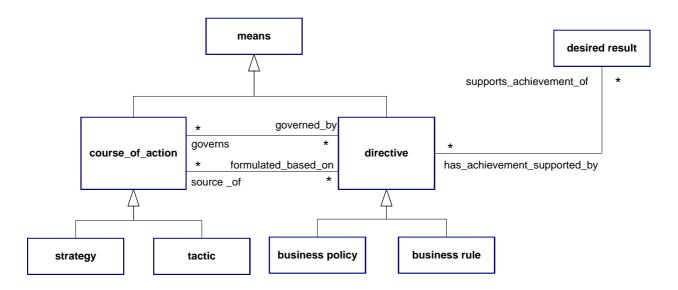


Figure 8.8: - Interrelating Directives with Courses of Action and Ends

Directives *govern* Courses of Action. For example, the Business Rule "Pizzas may not be delivered beyond a radius of 30 miles" governs the Strategy "Deliver pizzas to the location of the customer's choice." This governance applies to Tactics as well. For example, the Tactic "Encourage rental extensions" is governed by the Business Policy "Allow extension of rentals by phone."

It is expected that all Courses of Action should *be governed by* some Directive, especially as the business plans evolve and become more coherent and complete. Any Course of Action not *governed by* a Directive should be examined carefully to discover potential omissions.

On the other hand, having too many Directives may become unduly constraining. The correct balance in this regard can only be identified by having in-depth knowledge of the context and intent of the business people participating in the planning.

In striking this balance it should be remembered that, unless a Directive is made explicit, it is assumed that no constraint on other elements of the business plans will be exercised. 'Unstated' Directives simply cannot be addressed in the Model – quite literally, they can be recognized only by stating them<sup>2</sup>. To be taken into account within the Model, every Directive must be explicit and recorded in an official manner<sup>3</sup>.

It is also possible for the Courses of Action to be *formulated based on* Directives. For example, the Tactics 'Comply with manufacturer's maintenance schedules' and 'Equalize use of cars across rentals so that mileage is similar for cars of the same car group and age' are both formulated based on the Business Policy 'Depreciation of cars must be minimized'. The Directive thereby serves as the source of the Course of Action.

Occasionally a Directive is defined to support the achievement of a Desired Result directly. For example:

- The Business Policy "The cell phone numbers of customer representatives should be available to customers" supports achieving the Goal "To provide high-quality customer support."
- The Objective "Within six months, 10% increase in product sales" is supported by this Business Rule that defines product sales: "Product sales must be computed as total sales, minus all of the following: sales tax, shipping charges, and maintenance contract fees."

#### 8.2.6.1 Business Rule Enforcement Level

A Business Rule has an enforcement level. Enforcement levels represent alternatives in a graded or ordered scale, each of which indicates the severity of action imposed to put or keep a rule in force. An example of a range of enforcement levels, from 'strictly enforced' to 'guideline' is shown in Table 8.7:.

Table 8.7: Enforcement levels

| Value                     | Meaning  |
|---------------------------|--|
| strictly enforced         | If the rule is violated, the penalty is always applied.  |
| deferred enforcement      | Strictly enforced, but enforcement may be delayed — e.g., waiting for resource with required skills.             |
| pre-authorized override   | Enforced, but exceptions allowed, with prior approval for actors with before-<br>the-fact override authorization |
| post-justified override   | If not approved after the fact, you may be subject to sanction or other consequences.                            |
| override with explanation | Comment must be provided when the violation occurs   |
| guideline                 | Suggested, but not enforced  |

<sup>2.</sup> For Business Policies in particular, this represents a de facto boundary between Model and methodology. To be workable, a practical methodology must address the reality of implicit Business Policies within the business.

<sup>3.</sup> Making Business Rules explicit is a fundamental principle of the Business Rule approach. Refer to the Business Rule Manifesto [BRMAN].

<sup>4.</sup> From the OMG specification for "Semantics of Business Vocabulary and Business Rules [SBVR]

Examples of Enforcement Level include the following:

Table 8.8: Examples of enforcement level

| Enterprise         | Directive   | <b>Enforcement Level</b>  |
|--------------------|---|---------------------------|
| EU-Rent            | A EU-Rent agent who is found, after a managerial review, to have rented a vehicle to a customer without a valid driver's license, is to be fired. | strictly enforced         |
| Pizza Company      | A driver who is convicted of one moving traffic violation while driving for the company will be counseled by a manager concerning safe driving.   | pre-authorized override   |
| e-Business Company | A customer rated negative by more than ten other customers will be blocked forever from doing business.   | override with explanation |

Deciding what enforcement level is to be applied to a Business Rule is often a Tactic within business plans. In the BMM, Tactic *effects enforcement level of* Business Rule.

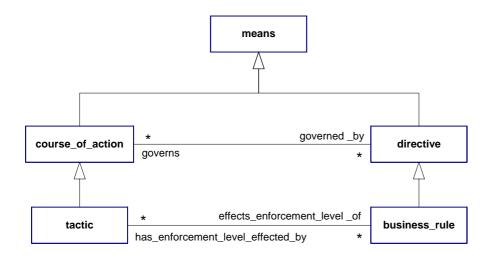


Figure 8.9: - Setting Enforcement Level

# 8.2.6.2 Directive as Regulation

A Directive may *act as* some other Organization Unit's Regulation. The Business Rules and Business Policies determined at one level in an organization may be effectively the *law* (Regulation) for lower-level organizations.

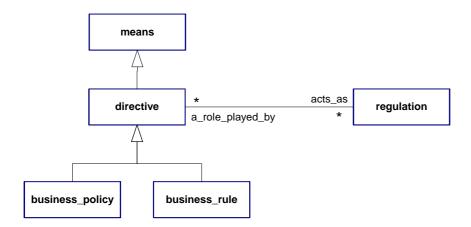


Figure 8.10: - Directive as Regulation

For example, production and sales divisions both have to comply with company policy on safety at work. These units in turn have to determine their own local policies and rules for their particular compliance with the 'law' (company policy) imposed from above. Furthermore, the rules and policies they come up with will most likely be unique; rules for safety within the production division are different from those in sales.

# 8.2.6.3 Categories of Directive

Directive includes the following concepts:

- · Business Policy
- · Business Rule

Compared to a Business Rule, a Business Policy tends to be less structured<sup>5</sup>, less discrete, and usually not atomic — that is, not focused on a single aspect of governance or guidance. Also compared to a Business Rule, a Business Policy tends to be less compliant with standard business vocabulary, and less formally articulated<sup>6</sup>.

In contrast to a Business Policy, a Business Rule is highly structured and is carefully expressed in terms of standard vocabulary. A Business Rule should be discrete and atomic — that is, represent only a single aspect of governance or guidance.

Business Policies provide broader governance or guidance that is not directly *actionable*. Business Rules provide specific, *actionable* governance or guidance to implement Business Policies. 'Actionable' means that a person who understands a Business Rule could observe a relevant situation (including his or her own behavior) and decide directly whether or not the business was complying with the rule.

Some Business Rules could be automated in software; some are actionable only by people. Business Policies are not directly automatable.

<sup>5.</sup> This means 'structured' in a natural language sense, not 'structured' in any technical sense

<sup>6. &#</sup>x27;Less formally' should not be interpreted as 'less carefully'.

# 8.2.7 Business Policy

A Business Policy is a non-actionable Directive whose purpose is to govern or guide the enterprise. Business Policies provide the *basis for* Business Rules. Business Policies also *govern* Business Processes.

The formulation of a Business Policy, which is always under the enterprise's control, is by some party who is authorized to manage, control, or regulate the enterprise by selecting from a variety of alternatives in response to one or more Assessments.

Business Policies that exist merely to enable a Strategy in a direct and trivial manner should be avoided. For example, suppose the enterprise has the Strategy "Encourage repeat business." A Business Policy that says "Repeat business should be encouraged" is trivial and does not need to be expressed.

In general, Business Policies exist to govern – that is, control, guide, and shape – the Strategies and Tactics. For example, the Business Policy "We will not make on-site visits" governs the Strategy "Encourage repeat business," as well as the specific Tactics that might be selected to implement the Strategy. Specifically, no Tactic requiring on-site visits will be permitted to support the Strategy — even though on-site visits would probably be effective in that regard. On the other hand, a Tactic involving sending coupons by mail would be acceptable under the Business Policy since it involves no on-site visits.

Examples of Business Policy include the following:

Table 8.9: Examples of Business Policy

| Source  | Business Policy  |
|---------|--|
| EU-Rent | Depreciation of rental cars must be minimized  |
|         | Compare the (non-actionable) Business Policy with related (actionable) Business Rules:   |
|         | • The Car assigned to a Rental must be: at the time of assignment, of the available Cars in the requested Car Group, the one with the lowest mileage.                        |
| EU-Rent | Depreciation of rental cars must be minimized  |
|         | Compare the (non-actionable) Business Policy with related (actionable) Business Rules:   |
|         | • The Car assigned to a Rental must be: at the time of assignment, of the available Cars in the requested Car Group, the one with the lowest mileage.                        |
|         | <ul> <li>A Rental cannot be extended by phone if the Car's odometer reading is greater than (next<br/>service mileage – 500).</li> </ul>                                     |
| EU-Rent | Rental payments must be guaranteed in advance  |
|         | Compare with Business Rule based on this policy:   |
|         | <ul> <li>A provisional charge for the estimated cost of the Rental must be made against a valid<br/>credit card held by the Renter before the Car is handed over.</li> </ul> |
| EU-Rent | Rental cars must not be exported   |
|         | Compare with Business Rule based on this policy:   |
|         | • An 'out of country' car can be rented only on a one-way rental with drop-off at a branch in its country of registration.   |

Table 8.9: Examples of Business Policy

| Source             | Business Policy   |
|--------------------|---|
| EU-Rent            | Rental contracts are made under the law of the country in which the pick-up branch is located |
| EU-Rent            | Rentals must comply with relevant laws and regulations of all countries to be visited         |
| Pizza Company      | Safety in the kitchen, and in the streets, comes first.                                       |
| e-Business Company | A business representative will personally contact each customer who makes a complaint.        |

# 8.2.8 Business Rule

A Business Rule is a Directive, intended to govern, guide or influence business behavior, in support of Business Policy that has been formulated in response to an Opportunity, Threat, Strength, or Weakness. It is a single Directive that does not require additional interpretation to undertake Strategies or Tactics. Often, a Business Rule *is derived from* Business Policy. Business rules *guide* Business Processes.

Formally, a Business Rule is a rule that is under business jurisdiction<sup>7</sup>. A rule always introduces an obligation or necessity.

Table 8.10: Examples of Business Rule

| Source             | Business Rule   |
|--------------------|---|
| EU-Rent            | Each Car purchased must match the standard specification of its Car Model.  |
| EU-Rent            | The Car assigned to a Rental must be: at the time of assignment, of the available Cars in the requested Car Group, the one with the lowest mileage.       |
| EU-Rent            | A customer must present a valid driver's license in order to rent a EU-Rent vehicle.  |
| EU-Rent            | A Car whose odometer reading is greater than (next service mileage – 200) must be scheduled for service.  |
| EU-Rent            | A Rental cannot be extended by phone if the Car's odometer reading is greater than (next service mileage – 500).  |
| EU-Rent            | The rental of a car whose odometer reading is greater than (next service mileage – 500) may be extended only if the car is exchanged at a EU-Rent branch. |
| EU-Rent            | Every driver on a rental must be over 21 years old.   |
| Pizza Company      | Pizzas must be delivered within one hour.   |
| Pizza Company      | Pizzas may not be delivered beyond a radius of 30 miles.  |
| e-Business Company | The order tax amount must be calculated at the time the order is placed.  |
| e-Business Company | An order must not contain more than 25 order items  |

<sup>7.</sup> This definition is adopted from the OMG specification for "Semantics of Business Vocabulary and Business Rules" (SBVR)

# 8.2.8.1 Facts that Organize Means

Besides those mentioned above, other logical connections (i.e., fact types) are required to fully organize the Means. These logical connections provide additional structure among elements of the Means themselves.

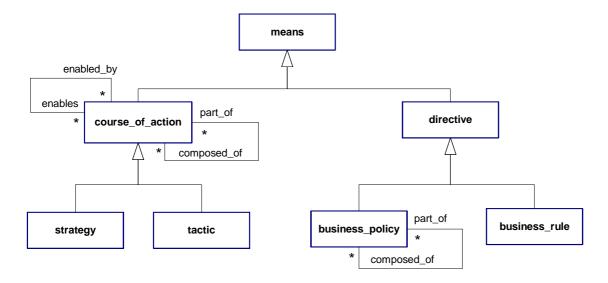


Figure 8.11: - Facts involving Means

#### Interrelating Courses of Action — Composition

One Course of Action can be *composed of* other Courses of Action; a Course of Action can be *part of* other Courses of Action. In other words, there can be a 'parts explosion' of Courses of Action. This connection should be used only to associate like instances — that is, Strategies only to other Strategies and Tactics only to other Tactics.

Such 'parts explosion' happens when there is a decomposition of some higher-level Course of Action into lower-level Courses of Action. This decomposition occurs, for example, when elements of the business plans created by one level of management are handed down to a lower organizational level for more detailed planning or implementation. This creates a 'recursion' among the elements, from higher level to lower level. For example, the Strategy "Ensure that the stock of available vehicles never falls below an acceptable level" is composed of sub-Strategies appropriate to each geographic region.

#### Interrelating Courses of Action — Enabling

One Course of Action can *be enabled by* another Course of Action. In other words, the latter Course of Action provides basic support that makes the former Course of Action viable. This connection should generally be used to associate like instances — that is, Strategies only to other Strategies and Tactics only to other Tactics.

For example, the Strategy "Ensure that the stock of available vehicles never falls below an acceptable level" is enabled by the Strategy "Maintain vehicles in good working condition." For another example, the Tactic "Provide each member of the sales force with a palmtop" enables the Tactic "Input sales orders at the source."

# **Interrelating Business Policies**

One Business Policy can be *composed of* other Business Policies; a Business Policy can be *part of* other Business Policies. In other words, there can be a 'parts explosion' of Business Policies. For example, the Business Policy "Safety first" can be decomposed into more specific policies that deal with vehicle safety and workplace safety.

# 8.3 Expressing Core Elements of the Business Motivation Model

It is expected that statements an enterprise gives representing its Ends and its Directives will be laden with words that are judgmental, qualitative, and/or comparative. Indeed, the inclusion of such words is one fundamental characteristic of these elements.

| Best          | Biggest    | Clear        |
|---------------|------------|--------------|
| Closest       | Convenient | Courteous    |
| Durable       | Effective  | Efficient    |
| Expedient     | Fast(est)  | Leading-Edge |
| Low(est)-cost | Premier    | Professional |
| Reliable      | Responsive | Quickest     |

Table 8.11: Examples of "qualitative" words

These 'qualitative' (judgmental or comparative) words should be avoided in expressing Missions, Strategies, and Tactics when the words actually refer to a desired end-state. Statements containing such words should be carefully analyzed and then re-stated as appropriate Desired Results or Directives. Indeed, the absence of adjectives suggesting desired end-states is one fundamental way in which Courses of Action are distinguished from Desired Results and Directives.

However, qualitative words may be used in Courses of Action if the words do not refer to the end-state desired. For example, the Tactic "ship products for free" includes the adjective 'free.' This is valid word usage in a Course of Action since it does not describe the Desired Result.

### 8.4 Influencers and Assessments

To fully understand the elements of business plans, it is necessary to identify the Influencers that shape them. This helps communicate the full intent of the Means and Ends by explaining the context in which they were formulated.

Influencers, however, are neutral — they are more or less simply just 'there' until someone makes an Assessment about how they are likely to impact some End or Means. Influencers should always be stated in a neutral, factual manner. Therefore, Influencers should be devoid of qualitative words. The presence of qualitative words indicates a statement *about* an Influencer — in other words, an Assessment.

This section describes the concepts that define these aspects of the Business Motivation Model. Understanding these elements supports intelligent revision of the business plans, possibly well after the business plans and related application system(s) have been implemented.

#### 8.4.1 Influencers on the Ends and Means

An Influencer can be anything that has the capability to 'produce an effect without apparent exertion of tangible force or direct exercise of command, and often without deliberate effort or intent.' The Influencers specifically of concern to business plans are those that can impact the enterprise in its employment of Means or achievement of its Ends. This impact *has influence that is judged in* Assessments.

Influencers should not simply be named but described as well. Such amplification communicates sufficient background and/or contextual information for other planning participants to make appropriate, relevant Assessments.

In describing Influencers, remember they are always neutral, and must be *assessed* to determine implications for business plans. Suppose a statement is made that ostensibly describes some Influencer. If it appears that a Business Rule can be derived *directly* from the statement, then the statement is almost certainly not an Influencer. For example, consider the statement "The company color is blue." This leads directly to the Business Rule "Each web site screen must contain the company color blue." Because no Assessment needs to be made, the statement is of another kind – in this case mostly likely a Business Policy.

In describing Influencers, it is also useful to document who *recognizes* the Influencer and at what point in time, so that an audit trail exists for future reference. This practice, of course, cannot always be mandated.

# 8.4.1.1 Categories of Influencer

There are two general categories of Influencer, as follows.

- · External Influencer
- · Internal Influencer

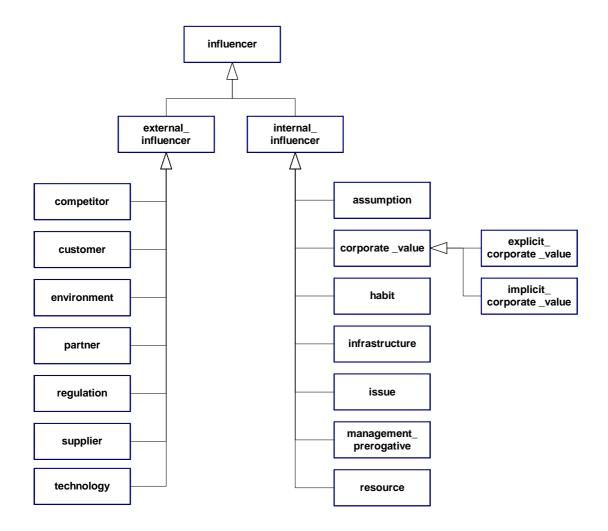


Figure 8.12: - Influencers

As the names imply, the distinction between the categories is based on whether the Influencer falls outside the organization's boundary (and hence outside its direct control) or inside its boundary.

### 8.4.1.2 External Influencer

External Influencers are those outside an enterprise's organizational boundaries that can impact its employment of Means or achievement of Ends. Categories include the following.

Table 8.12: Categories of External Influencer

| Influencer  | Description   |
|-------------|---|
| Competitor  | A rival enterprise in a struggle for advantage over the subject enterprise.   |
| Customer    | A role played by an individual or enterprise that has investigated, ordered, received, or paid for products or services from the subject enterprise.  |
| Environment | The aggregate of surrounding conditions or Influencers affecting the existence or development of an enterprise.   |
| Partner     | An enterprise that shares risks and profit with the subject enterprise (or is associated with the subject enterprise to share risks and profit) because this is mutually beneficial.          |
| Regulation  | An order prescribed by an authority such as a government body or the management of an enterprise.   |
| Supplier    | A role played by an individual or enterprise that can furnish or provide products or services to the subject enterprise.  |
| Technology  | The role of technology, including its developments and limitations — there may be prerequisites for use of technology; there may be enterprise activity that technology enables or restricts. |

This list of External Influencers is not necessarily exhaustive. The enterprise may choose to add additional categories or even introduce its own categorization scheme (i.e., the list above is replaceable as a whole).

Also, the categories are not necessarily mutually exclusive. A particular instance of External Influencer actually may have than one of these categories.

Eamples of External Influencer include the following:

Table 8.13: Examples of External Influencer

| Enterprise | External Influencer  | Category   |
|------------|--|------------|
| EU-Rent    | Two smaller competitors have merged and the joint enterprise is now bigger than EU-Rent in several European countries                  | Competitor |
| EU-Rent    | 'Premium brand' car rental companies such as Hertz and Avis have a 'high quality, value for money' image – and can charge higher rates | Competitor |
| EU-Rent    | Budget airlines offering low-cost, short-haul flights, often to secondary airports   | Competitor |
| EU-Rent    | EU-Rent's primary target is business customers, but it recognizes the need to appeal also to personal renters                          | Customer   |

Table 8.13: Examples of External Influencer

| Enterprise    | External Influencer   | Category                  |
|---------------|---|---------------------------|
| EU-Rent       | Market research has determined that customers:  | Customer                  |
|               | generally accept that the rates for 'premium brand' car rental companies will be higher than the 'cheap and cheerful' competition.  |                           |
|               | <ul> <li>tend to see 'on-airport' companies as premium and 'off-airport' as<br/>cheap and cheerful</li> </ul>   |                           |
| EU-Rent       | Car parking and storage in city centers is limited and expensive  | Environment               |
| EU-Rent       | The car rental market in Eastern Europe growing year-on-year by at least 5% per year  | Environment               |
| EU-Rent       | All on-airport car rental companies offer similar types of car, and are physically lined up in a row. If any promotes a special offer, others react almost immediately, so there is very little room for maneuver against competitors on product, service or price.                         | Environment & Competitors |
| EU-Rent       | EC-Lease, which finances cars for EU-Rent at preferential terms within several EC countries, in return for a share of EU-Rent profits in those countries  | Partner                   |
| EU-Rent       | Laws and regulations in each country of operation for:  | Regulation                |
|               | driver license and insurance;   |                           |
|               | <ul> <li>roadworthiness of cars, including emissions;</li> </ul>  |                           |
|               | protection of customer personal information.  |                           |
| EU-Rent       | Car manufacturers – car models and options offered, prices, contract terms and conditions   | Supplier                  |
| EU-Rent       | Insurers – cover offered, options, premiums   | Supplier                  |
| EU-Rent       | Vehicle identification and tracking systems   | Technology                |
| EU-Rent       | Availability and cost of (environment-friendly) electric and LPG cars   | Technology                |
| EU-Rent       | Internet support for self service rental reservations   | Technology                |
| Pizza Company | "Depreciation starts when you first use the property in your business or for the production of income. It ends when you take the property out of service, deduct all your depreciable cost or other basis, or no longer use the property in your business or for the production of income." | Regulation                |
|               | IRS 1999 1040 Forms and Instructions, 1999 Instructions for Schedule C, Profit and Loss from a Business Part II. Expenses, p. C-3   |                           |

# 8.4.1.3 Internal Influencer

Internal Influencers are those from within an enterprise that can impact its employment of Means or achievement of Ends. Categories include the following.

Table 8.14: Categories of Internal Influencer

| Influencer                | Description   |  |
|---------------------------|---|--|
| Assumption                | Something that is taken for granted or without proof.   |  |
| Corporate Value           | An ideal, custom, or institution that an enterprise promotes or agrees with (either positive or negative).          |  |
| - Explicit Value          | A Corporate Value explicitly set forth and declared.  |  |
| - Implicit Value          | A Corporate Value not explicitly declared but nonetheless understood by some or all of the people in an enterprise. |  |
| Habit                     | A customary practice or use.  |  |
| Infrastructure            | The basic underlying framework or features of a system.   |  |
| Issue                     | A point in question or a matter that is in dispute as between contending partners.                                  |  |
| Management<br>Prerogative | A right or privilege exercised by virtue of ownership or position in an enterprise.                                 |  |
| Resource                  | The resources available for carrying out the business of an enterprise, especially their quality.                   |  |

This list of Internal Influencers is not necessarily exhaustive. The enterprise may choose to add additional categories or even introduce its own categorization scheme (i.e., the list above is replaceable as a whole).

Also, these categories are not necessarily mutually exclusive. A particular instance of Internal Influencer actually may have more than one of these categories.

Eamples of Internal Influencer include the following:

Table 8.15: Examples of Internal Influencer

| Enterprise | Internal Influencer  | Category       |
|------------|--|----------------|
| EU-Rent    | EU-Rent needs to expand its business year on year.   | Assumption     |
| EU-Rent    | A loyalty rewards program is essential for attracting business customers.  | Assumption     |
| EU-Rent    | Managers are generally promoted from within the company  | Habit          |
| EU-Rent    | Successful branch managers are usually allowed to remain at their branches for as long as they want to   |                |
| EU-Rent    | Branch counter staff receive two days' introductory training. Further training is informal, on the job   | Habit          |
| EU-Rent    | Rental branches are clustered in and around major cities, with large branches at airports and city centers, medium-sized branches in suburbs and nearby towns, and small agencies in hotels and travel agents' premises. |                |
| EU-Rent    | Cars are owned by local areas, not by rental branches. The cars owned by a local area are available to all branches in the area.   | Infrastructure |

Table 8.15: Examples of Internal Influencer

| Enterprise            | Internal Influencer   | Category                    |
|-----------------------|---|-----------------------------|
| EU-Rent               | Rental reservations can be made by telephone, via Internet, or in person.  A rental branch can accept an in-person reservation for any other EU- Rent branch  | Infrastructure              |
| EU-Rent               | The internet rentals software was developed for individual rentals. It has few facilities to support corporate rental agreements  | Infrastructure              |
| EU-Rent               | To what extent car maintenance and servicing should be outsourced.  | Issue                       |
| EU-Rent               | The EU-Rent board has decided to give priority to Eastern Europe for business expansion in the next three years.  | Management<br>Prerogative   |
| EU-Rent               | Branch managers have authority to offer ad-hoc discounts in reaction to competitors' offers. They use their discretion in doing so, as the reduced price will affect branch financial performance.  | Management<br>Prerogative   |
| EU-Rent               | Cars – popular models from reputable manufacturers, low mileage, environment-friendly, low-cost maintenance   | Resource                    |
| EU-Rent               | <ul> <li>Branch staff:</li> <li>Counter clerks - high turnover, variable quality</li> <li>Managers - low turnover, high quality.</li> </ul>   | Resource                    |
| EU-Rent               | EU-Rent is environment-friendly. All the car models it offers for rental have good fuel economy and low emissions.  | Explicit Corporate<br>Value |
| EU-Rent               | EU-Rent offers quality, service and value for money, rather than lowest possible price.  Explicit Corpo Value   |                             |
| EU-Rent               | Rental branch staff are supportive of colleagues and customers.  For example, if there is a long queue of customers, they will help colleagues on the counter without needing direction from the manager to do so, and may delay a rest break until the queue is cleared.  Implicit Corporate Value |                             |
| EU-Rent               | Rental branch staff take good care of cars.  For example, if they notice problems, (e.g., oil leaks, muffler noise, tire wear) they ensure that maintenance staff are alerted, even if it is not their direct responsibility to do so   | Implicit Corporate<br>Value |
| e-Business<br>Company | Short lunch hours.  | Implicit Corporate<br>Value |
| Accounting Company    | Regional managers have considerable latitude.   | Management<br>Prerogative   |

# 8.4.2 Assessing the Impact of Influencers on Ends and/or Means

Influencers are neutral — they are more or less simply just 'there' until someone makes an Assessment of them as they relate to Ends and/or Means. Such an Assessment represents a *judgment about* an Influencer with respect to its *impact on* Ends and/or Means. Specifically, the Assessment indicates that the Influencer affects the employment of Means and/or the achievement of Ends, in certain ways.

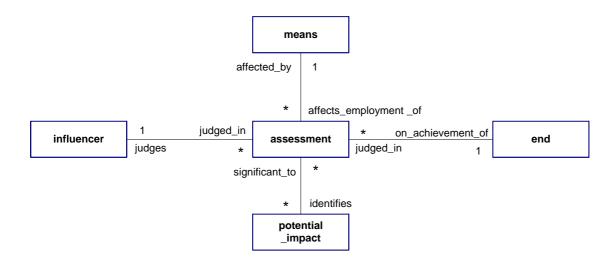


Figure 8.13: - Concepts for Assessments of Influencers on Ends and/or Means

If an Assessment is related to both a Means and an End, then this suggests that the particular Means is somehow related to the particular End. Specifically, if there is not a fact relating them — such as 'Course of Action channels efforts towards Desired Result' or 'Directive supports achievement of Desired Result' — then careful consideration should be given to that omission.

#### 8.4.2.1 Assessment

An Assessment is a *judgment about* some Influencer that affects the organization's ability to employ its Means or achieve its Ends. In other words, an Assessment expresses a logical connection (i.e., fact type) between Influencers and the Ends and/or Means of the business plans. In this way, an Assessment indicates which Influencers are relevant to which Ends and/or Means.

Different people or groups of people<sup>8</sup> might make different Assessments of the very same Influencers on the very same Ends and Means — and perhaps even the same person or group of people at different points in time. It is very important to indicate which person or group of people *makes* which Assessment of an Influencer at which point in time, so that an audit trail exists for future reference. This practice, of course, cannot always be mandated.

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<sup>8.</sup> Organization Unit. The BMM does not elaborate organizational structures – their importance is recognized, but they are outside scope of the model.

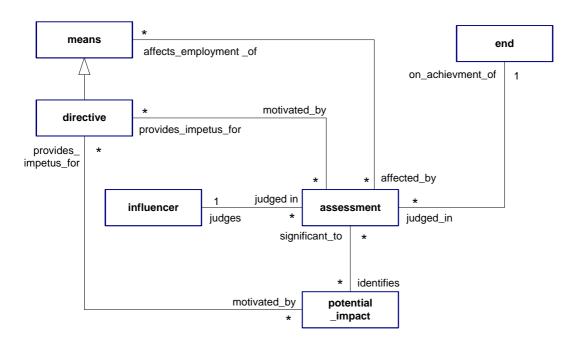


Figure 8.14: - Assessment and Directive

An Assessment can provide the impetus for Directives that govern Courses of Action and/or support the achievement of Ends. In other words, the Directive is motivated by the Assessment.

# **Categories of Assessment**

When applying SWOT<sup>9</sup> to making assessments, Assessments are categorized as follows:

- Strength
- Weakness
- · Opportunity
- Threat

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<sup>9.</sup> SWOT is one approach that can be used in making assessments. The BMM does not specify SWOT as the technique. These categories of Assessment are illustrative.

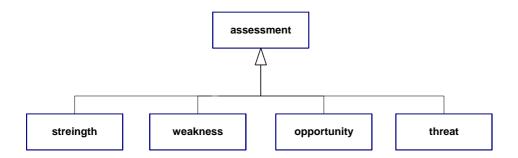


Figure 8.15: - Categories of Assessment

# Strength

This category of Assessment indicates some advantage or area of excellence within the enterprise that can impact its employment of Means or achievement of Ends.

Some examples of Strength Assessments are:

Table 8.16: Examples of Strength Assessments

| Enterprise | Strength  | Affects  |
|------------|---|--|
| EU-Rent    | Infrastructure: geographical distribution of branches   | Appeal to business customers.                              |
| EU-Rent    | Implicit corporate values: environment-friendly, value rather than price – good positioning of EU-Rent, differentiating from competitors. | Promotion to all customers as a 'premium brand'.           |
| EU-Rent    | <b>Resource</b> : rental branch managers – ground-level leaders of the customer-facing business.  | Building branch networks around major cities and airports. |

# Weakness

This category of Assessment indicates some area of inadequacy within the enterprise that can impact its employment of Means or achievement of Ends.

Some examples of Weakness Assessments are:

Table 8.17: Examples of Weakness Assessments

| Enterprise | Weakness   | Affects  |
|------------|--|--|
| EU-Rent    | Ihe software for internet rentals has few facilities for self-service of corporate rental agreements – e.g., analyzing car usage by employees, removing people who have left their employment with the corporate customer. | Appeal to businesses for corporate agreements. |
| EU-Rent    | High turnover of branch counter staff frequently causes shortage of experienced staff in branches. This can cause delays in dealing with exceptions and problems.  | Provision of high-quality customer service.    |

# **Opportunity**

This category of Assessment indicates that some Influencer can have a favorable impact on the organization's employment of Means or achievement of Ends. For example, the bankruptcy of Pizza Company's major competitor in Region-Y is assessed to be an Opportunity in its Goal "To increase market share."

Some examples of Opportunity Assessments are:

Table 8.18: Examples of Opportunity Assessments

| Enterprise | Opportunity   | Affects   |
|------------|---|---|
| EU-Rent    | EU-Rent thinks there is room for competition in the 'premium brand' car rental market.  | Appeal to business users. Increase in rental rates.     |
| EU-Rent    | Depreciation on cars between their purchase, new, and their sale at the end of their rental life is a critical factor in financial success. their employment with the corporate customer. | Improved management of depreciation would reduce costs. |

#### **Threat**

This category of Assessment indicates that some Influencer can have an unfavorable impact on the organization's employment of Means or achievement of Ends.

Some examples of Threat Assessments are:

**Table 8.19: Examples of Threat Assessments** 

| Enterprise | Threat   | Affects   |
|------------|--|---|
| EU-Rent    | Budget airlines provide low-cost flights to major cities,<br>but using secondary airports where EU-Rent does not<br>have branches                        | Appeal to business users. Expansion into Eastern Europe.  |
| EU-Rent    | Budget airlines offer a cost effective and faster alternative to car rental for short distances (say, up to 200 miles).                                  | Building 'premium' business from major airports.  |
| EU-Rent    | Congestion charges in European city centers:  • Discourage customers from renting cars in city centers  • Increase EU-Rent operational costs when moving | Positioning city offices – moving them outside congestion zones will reduce convenience for business customers. |

### 8.4.2.2 Potential Impact

An Assessment records judgments about the impact (or potential for impact) of some Influencer on Ends and/or Means in terms of Potential Impacts. In other words, an Assessment *identifies* some Potential Impact(s) that *is/are significant to* that Assessment. Each Potential Impact is an evaluation that quantifies or qualifies some aspect of an Assessment in specific terms, types, or dimensions.

A Potential Impact significant to an Assessment can provide the impetus for Directives that govern Courses of Action or support the achievement of Ends. An Influencer may lead to the creation of a Business Policy only through an Assessment having been made that identifies some Potential Impact.

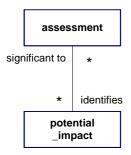


Figure 8.16: - Assessment and Potential Impacts

# **Categories of Potential Impact**

Potential Impacts are categorized as follows:

- Risk
- · Potential Reward

Risks are typically regarded to be negative impacts, whereas Rewards are considered positive.

Where there is more than one Assessment associated with a single instance of an End or Means, the total impact should be evaluated to uncover tradeoffs between Risks and Potential Rewards. This is the basis of risk/benefit analysis.

#### Risk

A Risk is a category of Impact Value that indicates the impact and probability of loss.

Table 8.20: Examples of Risk

| Enterprise | Assessment  | Risk   |
|------------|---|--|
| EU-Rent    | Opportunity: room for competition in the 'premium brand' car rental market.   | Failure to position EU-Rent as a premium brand risks loss of an estimated 15% of current customers without replacement by new customers. |
| EU-Rent    | <b>Opportunity</b> : targeting business customers & increasing rental rates.  | Many unrented cars at weekends, with rates undercut by the 'cheap and cheerful' competition.   |
| EU-Rent    | <b>Threat</b> : stringent emission control requirements in Scandinavia – have to be met by any EU-Rent car that might be driven in Scandinavia. | Severe financial penalties for failure to comply.  |

#### **Potential Reward**

A Potential Reward is a category of Potential Impact that indicates the probability of gain.

Table 8.21: Examples of Potential Reward

| Enterprise | Assessment  | Potential Reward  |
|------------|---|---|
| EU-Rent    | Opportunity: room for competition in the 'premium brand' car rental market. | Market acceptance would support an average increase of 12% on rental rates.  In moving up-market, EU-Rent expects to replace at least 15% of its current customers. |
| EU-Rent    | Opportunity: improved management of depreciation of cars                    | Reduction of depreciation costs by 3%.  |

# 8.4.3 EU-Rent Example: Reaction to Influencers

EU-Rent needs to decide how it wants to position itself in the car rental market.

- 'Premium' car rental companies, such as Hertz and Avis, have a 'high quality, value for money' image. (*These EU-Rent Competitors are External Influencers.*)
- Customers generally accept that the rates for premium companies will be higher than the 'cheap and cheerful' competition. Customers tend to see 'on-airport' companies as premium, and 'off-airport' companies as cheap and cheerful. (These Customers determined by market research are External Influencers for EU-Rent.)
- EU-Rent thinks there is room for competition in the premium market. (This is an Opportunity Assessment.)
- EU-Rent decides that it wants to be a premium car rental company. (This is a Goal.)
- To achieve this, EU-Rent decides to be nation-wide in each of its countries of operation, focusing on major airports, and to compete head-to-head, on-airport, with other premium car rental companies. (*This is a Strategy.*)
- A problem for on-airport car rental companies is that all the competitors offer similar types of car, and are physically lined up in a row. (This Environment is an External Influencer for EU-Rent.) There is very little room for maneuver on product, service, or price. (*This is a Weakness Assessment.*)
- This on-airport constraint on pricing means that depreciation on cars between their purchase as new cars, and their sale at the end of their rental life will be a critical factor in financial success (This is an Opportunity Assessment.) In response to this, EU-Rent decides that depreciation of cars must be minimized. (*This is a Business Policy*.)
- EU-Rent has a Strategy for car purchase and disposal, covering:
  - What models to buy from which manufacturers.
  - What overall numbers and mix and cars to buy.
  - When to dispose of cars, by mileage and age.
  - How to phase purchasing and delivery of cars.
  - etc.
- Within this Strategy, EU-Rent develops Tactics<sup>10</sup> for its "minimize depreciation" Business Policy, and Business Rules to govern and guide these Tactics. For example:

• Create standard specifications of car models, selecting from options offered by the manufacturers – this is a tradeofff

Table 8.22: Examples of Tactics and Business Rules

| Tactics  | Business Rules   |
|--|--|
| Create standard specifications of car models, selecting from options offered by the manufacturers – this is a trade-off between 'rentable' and 'high residual value for sales' | Each Car purchased must match the standard specification of its Car Model.   |
| Equalize of use of cars across rentals.  | The Car assigned to a Rental must be: at the time of assignment, of the available Cars in the requested Car Group, the one with the lowest mileage.                                  |
| Comply with manufacturer's maintenance schedule.   | Any Car whose odometer reading is greater than (next service mileage – 200) must be scheduled for service.   |
|  | A Rental cannot be extended by phone if the Car's odometer reading is greater than (next service mileage – 500). The Customer must bring it to a EU-Rent branch for a change of car. |

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<sup>10.</sup> These Tactics will be realized in Business Processes. As before, however, the detailing of these Business Processes is outside the scope of the BMM.

# 8.5 Placeholders

Three concepts - Organization Unit, Business Process and Business Rule - have roles in the structure of the Business Motivation Model but actually belong in other standards, where they are defined and associated with related concepts needed for detailed business modeling.

The defaults for the required external standards are the OMG's specifications for the Organization Structure Metamodel (OSM), Business Process Definition Metamodel (BPDM) and Semantics of Business Vocabulary and Business Rules (SBVR). In practice, enterprises could use alternative external standards.

Business Rule is a core concept of the BMM (albeit that its definition is adopted from SBVR). Organization Unit and Business Process are placeholders for association with concepts in OSM and BPDM respectively.

# 8.5.1 Organization Unit

It is difficult to avoid references to 'Who' in discussions of 'Why.' Generally, it is not adequate to say, "the motivation is that the company wants it that way." This leads to the perpetuation of unnecessary rules — unnecessary either because the business requirement for them has passed, or because they were not Business Rules in the first place (e.g., they were imposed as workarounds in systems that did not fully support business needs).

Being able to pin down the motivation more precisely is essential. After all, if a responsible party cannot be found for a rule, it should probably be challenged. The Model therefore supports identifying those parties who play key roles with respect to motivation.

This capability is reflected in the Model by linking elements of the business plans to specific parts of the organization (i.e., its Organization Units). This has been done where the connection is important for developing, analyzing, challenging, and maintaining the business plans.

These logical connections (i.e., fact types) include the following:

- Organization Unit defines Ends
- Organization Unit establishes Means
- Organization Unit recognizes Influencers
- Organization Unit makes Assessments
- Organization Unit is defined by Strategies
- Organization Unit is responsible for Business Processes

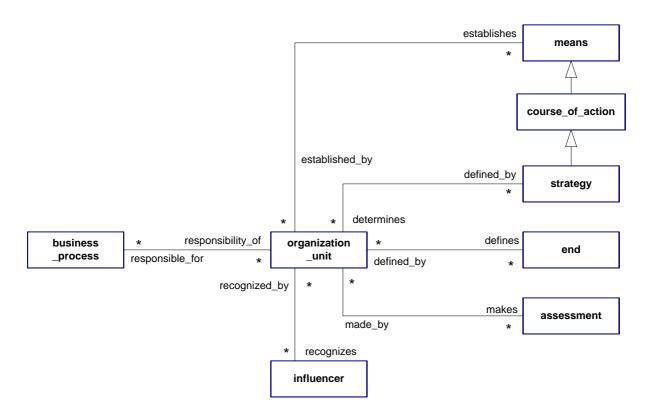


Figure 8.17: Organization unit

### 8.5.2 Business Process

To expand on the 'being-doing' relationships between Ends and Means, Business Processes need to be considered.

It is widely recognized that Business Processes and Business Rules are closely related. It is important to be clear on the differences.

Business Processes *realize* Courses of Action – they provide detail of activities, plus sequencing, control, and synchronization that enable the enterprise to undertake its Courses of Action. Business Rules *guide* Business Processes – they provide the basis for decisions that need to be made within Business Processes.

Business Processes, Courses of Action, and Business Rules are all developed to help the enterprise reach its Goals. They need to be coherent and consistent. This is feasible if they are governed by a coherent and consistent set of Business Policies.

Business Processes are governed by Business Policies, which:

- Provide guidance (both directly and via Courses of Action) on what Business Processes have to do.
- Set limits on how Business Processes may undertake what they have to do.

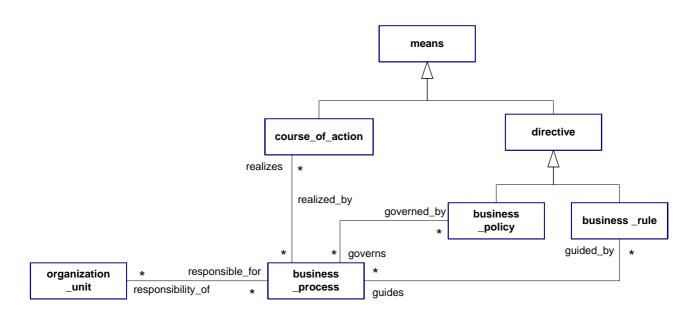


Figure 8.18: Business Process

'Business Process' in the Model is a placeholder for a concept to be adopted from an external standard. As a placeholder, an informal description is::

"A unit of work to accomplish a transformation of information or resources contributing to the business objective of a conventional or orchestrated process." [BPDM 'Activity']<sup>11</sup>

Each Business Process is *the responsibility of* some Organization Unit (the process owner). There are other facts connecting Business Process and Organization Unit; for example, assignment of activities in Business Processes to roles in the organization is the basis of workflow. However, these connections are again outside the scope of the BMM, and are appropriately addressed by other standard(s).

<sup>11.</sup> Adopted from the June 2006 draft submission for the OMG's RFP "Business Process Definition Metamodel" (BPDM)

# 9 BMM Concepts Catalog

This chapter presents the full Concepts Catalog for the BMM in SBVR Structured English. The Catalog is presented in alphabetic order of noun concepts, with each noun concept followed by the fact types (verb concepts) in which it plays one or more roles.

# 9.1 Concepts

#### assessment

General Concept: <u>motivation element</u>

Definition: judgment that an influencer affects the employment of means and/or the achievement

of ends

Dictionary Basis: to analyze critically and judge definitively the nature, significance, status, or merit of:

determine the importance, size, or value of [MWUD 'assess' (4)]

Note: Categories of assessment include: strength, weakness, opportunity, threat

Note: If an <u>assessment</u> is related to both a <u>means</u> and an <u>end</u>, then this suggests that the

particular <u>means</u> is somehow related to the particular <u>end</u>. Specifically, if there is not a fact relating them — such as '<u>course of action</u> <u>channels efforts towards desired</u>

<u>result'</u> or '<u>directive</u> supports achievement of <u>desired result'</u> — then careful

consideration should be given to that omission.

#### assessment expresses impact of influencer on end or means

Necessity: Each assessment must express impact of influencer on at least one end or at least

one means

assessment affects employment of means

Synonymous Form: means is affected by assessment

assessment (is) on achievement of end

Synonymous Form: end is judged in assessment

assessment judges influencer

Synonym: <u>influencer</u> is judged in assessment

assessment provides impetus for directive

Synonymous Form: <u>directive</u> is motivated by <u>assessment</u>

assessment identifies potential impact

Synonymous Form: <u>potential impact</u> is significant to <u>assessment</u>

Necessity: Each assessment must identify at least one potential impact

assessment is made by organization unit

Synonymous Form: <u>organization unit makes assessment</u>

Necessity: Each assessment must be made by at least one organization unit.

assumption

Definition: <u>internal influencer</u> that is taken for granted or without proof

Dictionary Basis: a thing that is accepted as true or as certain to happen, without proof NODE

'assumption' (1)]

business policy

Definition: <u>directive that is not actionable</u>

Dictionary Basis: a definite course or method of action selected (as by a government, institution, group,

or individual) from among alternatives and in the light of given conditions to guide and

usually determine present and future decisions [MWUD 'Policy' (5a)]

Description: The purpose of a business policy is to govern or guide the enterprise. The formulation

of a <u>business policy</u> is under an enterprise's control by a party authorized to manage, control, or regulate the enterprise, by selection from alternatives in response to a

combination of assessments.

Note: Compared to a <u>business rule</u>, a <u>business policy</u> tends to be: less structured; less

discrete; less atomic; less compliant with standard business vocabulary; less formally

articulated.

business policy is the basis for business rule

Synonymous Form: <u>business rule</u> is derived from <u>business policy</u>

business policy governs business process

Synonymous Form: <u>business process</u> is governed by <u>business policy</u>

business policy is composed of business policy business policy

Synonymous Form: business policy, is part of business policy,

business process

General Concept: <u>motivation element</u>

Note: The concept 'business process' is to be adopted from an external standard once such

standard has been established. A placeholder definition is given below:

Definition: "A unit of work to accomplish a transformation of information or resources contributing

to the business objective of a conventional or orchestrated process." [June 2006 draft submission for the OMG's RFP "Business Process Definition Metamodel" (BPDM): "Activity"]

business process is responsibility of organization unit

Synonymous Form: <u>organization unit</u> is responsible for <u>business process</u>

business process realizes course of action

Synonymous Form: course of action is realized by business process

business process is guided by business rule

Synonymous Form: <u>business rule guides business process</u>

business process is governed by business policy

Synonymous Form: <u>business policy governs business process</u>

business rule

Definition: directive that is actionable

Necessity: Each business rule is under business jurisdiction.

Necessity: Each <u>business rule</u> introduces an obligation or necessity.

Dictionary Basis: one of a set of explicit or understood regulations or principles governing conduct or

procedure within a particular area of activity: a law or principle that operates within a particular sphere of knowledge, describing or prescribing what is possible or allowablestandard on which a judgment or decision may be based [ODE "rule"]

Note: A <u>business rule</u> is: highly structured; discrete; atomic; carefully expressed in terms of

standard vocabulary.

business rule is derived from business policy

Synonymous Form: <u>business policy</u> is the basis for <u>business rule</u>

business rule guides business process

Synonymous Form: <u>business process</u> is guided by <u>business rule</u>

business rule has enforcement level effected by tactic

Synonymous Form: tactic effects enforcement level for business rule

competitor

Definition: <u>external influencer</u> that is a rival enterprise in a struggle for advantage over the

subject enterprise.

Dictionary Basis: an organization or country that is engaged in commercial or economic competition

with others [ODE 'competitor', bullet]

Dictionary Basis: a contest between rivals: a match or trial between contestants [MWUD 'competition'

(2)1

Dictionary Basis: a market condition in which a large number of independent buyers and sellers

compete for identical commodities, deal freely with each other, and retain the right of

entry and exit from the market [MWUD 'competition' (4b)]

corporate value

Definition: internal influencer that is an ideal, custom, or institution that an enterprise promotes or

agrees with. It may be positive or negative, depending on point of view.

Dictionary Basis: principles or standards of behavior; one's judgment of what is important in life [ODE

'values' (2)]

course of action

Definition: means that is an approach or plan for configuring some aspect of the enterprise

involving things, processes, locations, people, timing, or motivation undertaken to

achieve ends

Note: Categories of <u>course of action</u> include: <u>strategy, tactic</u>

Dictionary Basis: a mode of action; "if you persist in that course you will surely fail"; "once a nation is

embarked on a course of action it becomes extremely difficult for any retraction to take

place" [www.dictionary.com - Source: WordNet® 2.0 'course of action']

Dictionary Basis: a chosen manner of conducting oneself: way of acting "our wisest course is to retreat"

[MWCD 'course' (3b)]

# course of action is governed by directive

Synonymous Form: <u>directive governs course of action</u>

#### course of action is formulated based on directive

Synonymous Form: <u>directive</u> is source of <u>course of action</u>

### course of action<sub>1</sub> enables course of action<sub>2</sub>

Synonymous Form: course of action, is enabled by course of action,

Necessity: If course of action, is a strategy then course of action, must be a strategy (and vice

versa)

Necessity: If course of action, is a tactic then course of action, must be a tactic (and vice versa)

### course of action, is composed of course of action,

Synonymous Form: course of action, is part of course of action,

Necessity: If course of action<sub>1</sub> is a strategy then course of action<sub>2</sub> must be a strategy (and vice

versa)

Necessity: If course of action<sub>1</sub> is a tactic then course of action<sub>2</sub> must be a tactic (and vice versa)

Note: 'strategy' and 'tactic' are related via a separate, distinct fact type 'implements / is

implemented by.

#### course of action channels efforts towards desired result

Synonymous Form: <u>desired result</u> is supported by course of action

# course of action is realized by business process

Synonymous Form: <u>business process</u> realizes <u>course of action</u>

<u>customer</u>

Definition: external influencer that is a role played by an individual or enterprise that has

investigated, ordered, received, or paid for products or services from the subject

enterprise.

Dictionary Basis: a person or organization that buys goods or services from a shop or business ODE

'customer' (1)]

#### desired result

Definition: end that is a state or target that the enterprise intends to maintain or sustain

Dictionary Basis: a favorable outcome of an undertaking or contest [ODE 'result' (bullet 1)]

Note: Categories of desired result include: goal, objective

# desired result has achievement supported by directive

Synonymous Form: <u>directive</u> supports achievement of <u>desired result</u>

# desired result<sub>1</sub> is composed of desired result<sub>2</sub>

Synonymous Form: <u>desired result</u><sub>2</sub> is part of <u>desired result</u><sub>1</sub>

Necessity: If <u>desired result\_1</u> is a <u>goal</u> then <u>desired result\_2</u> must be a <u>goal</u> (and vice versa)

Necessity: If <u>desired result\_1</u> is an objective then <u>desired result\_2</u> must be an <u>objective</u> (and vice

versa)

Note: 'qoal' and 'objective' are related via a separate, distinct fact type 'quantifies / is

quantified by.

### desired result is supported by course of action

Synonymous Form: <u>course of action</u> channels efforts towards <u>desired result</u>

directive

Definition: means that defines or constrains some aspect of an enterprise

Note: A <u>directive</u> is intended to assert business structure or to control or Influence the

behavior of the enterprise.

Dictionary Basis: an official or authoritative instruction [ODE 'directive']

Note: Categories of directive include: business policy; business rule

directive is actionable

Definition: the <u>directive</u> does not require additional interpretation to undertake <u>strategies</u> or

tactics

Description: "Actionable" means that a person who understands a <u>directive</u> could observe a

relevant situation (including his or her own behavior) and decide directly whether or not the business was complying with that directive. In contrast to business rules,

business policies are not actionable in that sense.

#### directive governs course of action

Synonymous Form: <u>course of action</u> is governed by <u>directive</u>

# directive is source of course of action

Synonymous Form: <u>course of action</u> is formulated based on <u>directive</u>

#### directive supports achievement of desired result

Synonymous Form: <u>desired result has achievement supported by directive</u>

# directive acts as regulation

Synonymous Form: <u>regulation</u> is role played by <u>directive</u>

Note: A directive made at some level in an enterprise may have the effect of a regulation for

organization units at lower levels inthe enterprise.

directive is motivated by assessment

Synonymous Form: <u>assessment provides impetus for directive</u>

directive is motivated by potential impact

Synonymous Form: <u>potential impact provides the impetus for directive</u>

<u>end</u>

General Concept: <u>motivation element</u>

Definition: something that is to be accomplished.

Dictionary Basis: an outcome worked toward especially with forethought, deliberate planning, and

organized effort [MWUD 'end' (4a)]

Note: Categories of end include: vision; desired result

end is impacted by influencer

Note: The <u>potential impacts</u> of <u>influencers</u> on an <u>end</u> are expressed in <u>assessments</u>.

end is judged in assessment

Synonymous Form: assessment (is) on achievement of end

end is defined by organization unit

Synonymous Form: <u>organization unit</u> defines end

Necessity: Each end must be defined by at least one organization unit.

environment

Definition: external influencer that is the aggregate of surrounding conditions or Influencers

affecting the existence or development of an enterprise.

Dictionary Basis: the surroundings or conditions in which a person, animal, or plant lives or operates

[ODE 'environment' (1)]

explicit corporate value

Definition: <u>corporate value</u> that is explicitly declared

Dictionary Basis: See corporate value

external influencer

Definition: influencer outside an enterprise's organizational boundaries that can impact its

employment of means or achievement of ends

Note: Categories of external influencer include: competitor; customer; environment; partner;

regulation; supplier; technology.

goal

Definition: end that is a state or condition of the enterprise to be brought about or sustained

through appropriate means

Dictionary Basis: the end toward which effort or ambition is directed [MWUD 'goal' (2)]

Dictionary Basis: the object of a person's ambition or effort; an aim or desired result [ODE 'goal' (2)]

Note: Compared to an <u>objective</u>, a <u>goal</u> tends to be: ongoing; qualitative (rather than

quantitative).; general (rather than specific); longer term.

goal amplifies vision

Synonymous Form: vision is amplified by goal

Necessity: Each goal amplifies at most one vision.

goal is quantified by objective

Synonymous Form: <u>objective</u> quantifies goal

<u>habit</u>

Definition: <u>internal influencer</u> that is a customary practice or use.

Dictionary Basis: a settled or regular tendency or practice, especially one that is hard to give up [ODE

'habit' (1)]

implicit corporate value

Definition: corporate value that is not explicitly declared but understood by some or all of the

people in an enterprise.

Dictionary Basis: See corporate value

<u>influencer</u>

General Concept: motivation element

Definition: something that has the capability of producing an effect without apparent exertion of

tangible force or direct exercise of command, and often without deliberate effort or

intent.

Dictionary Basis: the capacity to have an effect on the character, development, or behavior of someone

or something, or the effect itself [NODE 'influence' (1)]

Note: Categories of influencer include: external influencer; internal influencer

influencer has effect on end or means judged in assessment

influencer is judged in assessment

Synonymous Form: assessment *judges* influencer

influencer is recognized by organization unit

Synonymous Form: <u>organization unit recognizes influencer</u>

<u>Infrastructure</u>

Definition: <u>internal influencer</u> that is the basic physical and organizational structures and facilities

needed for the operation of the enterprise.

Dictionary Basis: the basic physical and organizational structures and facilities (e.g., buildings, roads,

power supplies) needed for the operation of a society or enterprise [ODE]

'infrastructure']

internal influencer

Definition: influencer from within an enterprise that can impact its employment of means or

achievement of ends

Dictionary Basis: See <u>influencer</u>.

Note: Categories of internal influencer include: assumption; corporate value; habit;

infrastructure; issue.

issue

Definition: <u>internal influencer</u> that is a point in question or a matter that is in dispute as between

contending partners.

Dictionary Basis: an important topic or problem for debate or discussion [ODE 'issue' (1)]

management prerogative

Definition: internal influencer that is a right or privilege exercised by virtue of ownership or

position in an enterprise.

Dictionary Basis: a right or privilege exclusive to a particular individual or class [ODE 'prerogative']

means

General Concept: motivation element

Definition: device, capability, regime, technique, restriction, agency, instrument, or method that

may be called upon, activated, or enforced to achieve ends

Dictionary Basis: an action or system by which a result is brought about; a method [ODE means (1)]

Note: Categories of means include: mission; course of action; directive

means is established by organization unit

Synonymous Form: <u>organization unit</u> establishes <u>means</u>

means is impacted by influencer

Note: Impact of influencer on means is expressed in assessments.

means is affected by assessment

Synonymous Form: <u>assessment</u> affects employment of <u>means</u>

mission

Definition: means that is the ongoing operational activity of an enterprise.

Dictionary Basis: the chief function or responsibility of an organization or institution [MWUD 'mission'

(4b)

mission makes operative vision

Synonymous Form: vision is made operative by mission

Necessity: Each mission makes operative at most one vision.

mission is planned by means of strategy

Synonymous Form: <u>strategy</u> is a component of the plan for <u>mission</u>

**objective** 

Definition: end that is a specific time-targeted, measurable, attainable target that an enterprise

seeks to meet in order to achieve its goals

Dictionary Basis: something toward which effort is directed: an aim or end of action [MWUD 'objective'

(1)

Note: Compared to a goal, an objective is: short-term; not continuing beyond its timeframe

(of course such timeframes can be cyclical – i.e., monthly, quarterly, etc.).

objective quantifies goal

Synonymous Form: goal is quantified by objective

Note: Objectives provides the basis for measures to determine that progress is being made

towards a goal.

opportunity

Definition: assessment that an influencer can have a favorable impact on its employment of

means or achievement of ends.

Dictionary Basis: a combination of circumstances, time, and place suitable or favorable for a particular

activity or action [MWUD 'opportunity' (1a)]

Dictionary Basis: an advantageous circumstance or combination of circumstances especially when

affecting security, wealth, or freedom (as from constraint): a time, place, or condition

favoring advancement or progress [MWUD 'opportunity' (1b)]

Dictionary Basis: a time or set of circumstances that makes it possible to do something ODE

'opportunity']

organization unit

General Concept: <u>motivation element</u>

Definition: organization that is part of another organization (with an 'organization' being "a named

group of people with a purpose and a budget")

Dictionary Basis: a group of people that has a more or less constant membership, a body of officers, a

purpose, and usually a set of regulations [MWUD 'organization' (2a)]

organization unit defines end

Synonymous Form: end is defined by organization unit

organization unit establishes means

Synonymous Form: means is established by organization unit

organization unit makes assessment

Synonymous Form: <u>assessment</u> is made by <u>organization unit</u>

# organization unit recognizes influencer

Synonymous Form: <u>influencer</u> is recognized by <u>organization unit</u>

organization unit is defined by strategy

Synonymous Form: <u>strategy determines organization unit</u>

organization unit is responsible for business process

Synonymous Form: <u>business process</u> is responsibility of <u>organization unit</u>

partner

Definition: external influencer that is an enterprise that shares risks and profit with the subject

enterprise (or is associated with the subject enterprise to share risks and profit)

because this is mutually beneficial.

Dictionary Basis: a person who takes part in an undertaking with another or others, especially in a

business or firm with shared risks and profits [ODE 'partner']

potential impact

General Concept: <u>motivation element</u>

Definition: evaluation that quantifies or qualifies an assessment in specific terms, types, or

dimensions.

Note: Categories of impact value include: potential reward; risk

potential impact is significant to assessment

Synonymous Form: <u>assessment</u> identifies potential impact

potential impact provides the impetus for directive

Synonymous Form: <u>directive</u> is motivated by potential impact

potential reward

Definition: <u>potential impact</u> that indicates the probability of gain

Dictionary Basis: something that is given in return for good or evil done or received and especially that

is offered or given for some service or attainment [MWUD 'Reward' (1)]

Note: Some Potential Rewards are expressible as formulae, e.g.

Probability of gain (e.g., 30% probability) Potential gain (e.g., \$40,000 gain) Unit-of-measure (e.g., gain in USD)

regulation

Definition: external influencer that is an order prescribed by an authority such as a government

body or the management of an enterprise

Dictionary Basis: a rule or directive made and maintained by an authority [ODE 'regulation' (1)]

Dictionary Basis: a rule or order having the force of law issued by an executive authority of a

government [MWUD: 'regulation' (2b)]

#### regulation is role played by directive

Synonymous Form: <u>directive</u> acts as regulation

Example: A business policy or business rule made by senior management may be obeyed as

regulation lower down in the organization.

resource

Definition: <u>internal influencer</u> that is a stock or supply of money, materials, staff, and other assets

that can be drawn on by an enterprise in order to function effectively

Dictionary Basis: a stock or supply of money, materials, staff, and other assets that can be drawn on by

a person or organization in order to function effectively [ODE 'resource(s)' (1)]

<u>risk</u>

Definition: potential impact that indicates the possibility of loss, injury, disadvantage, or

destruction.

Dictionary Basis: the possibility of loss, injury, disadvantage, or destruction [MWUD 'risk' (1)]

Note: Some Risks are expressible as formulae.

Probability of loss. (e.g., 5% probability) Potential loss (e.g., \$500,000 loss) Unit-of-measure (e.g., loss in USD)

strategy

Definition: course of action that is an element of a plan devised through the science and art of

business leadership exercised to ensure the most advantageous conditions

Dictionary Basis: the science and art of military command exercised to meet the enemy in combat

under advantageous conditions [MWUD 'strategy' (1a2)]

Dictionary Basis: a careful plan or method or a clever stratagem [MWUD 'strategy' (2a)]

Note: Compared to a <u>tactic</u>, a <u>strategy</u> tends to be: longer term; broader in scope.

strategy is a component of the plan for mission

Synonymous Form: mission is planned by means of strategy

strategy determines organization unit

Synonymous Form: <u>organization unit is defined by strategy</u>

strategy is implemented by tactic

Synonymous Form: <u>tactic implements strategy</u>

strength

Definition: assessment that an influencer indicates an advantage or area of excellence within an

enterprise that can impact its employment of means or achievement of ends

Dictionary Basis: a good or beneficial quality or attribute of a person or thing [ODE 'strength' (4)]

supplier

Definition: external influencer that is a role played by an individual or enterprise that can furnish

or provide products or services to the subject enterprise.

Synonym: vendor

Dictionary Basis: make (something needed or wanted) available to someone; provide [ODE 'supply']

**tactic** 

Definition: <u>course of action</u> that is a device or expedient to be employed as part of a strategy

Dictionary Basis: a device or expedient for accomplishing an end [MWUD 'tactics' (2b)]

Dictionary Basis: a plan, method or trick with a particular aim [ODE 'device' (2)]

Note: Compared to a strategy, a tactic tends to be: shorter term; narrower in scope.

tactic implements strategy

Synonymous Form: <u>strategy</u> is implemented by <u>tactic</u>

tactic effects enforcement level for business rule

Synonymous Form: <u>business rule</u> has enforcement level effected by tactic

**technology** 

Definition: <a href="mailto:external influencer">external influencer</a> that is caused by developments in and limitations of technology.

Dictionary Basis: the application of scientific knowledge for practical purposes, especially in industry:

machinery and equipment developed from such scientific knowledge [ODE

'technology']

Note: There may be prerequisites for use of technology; there may be enterprise activity that

technology enables or restricts.

threat.

Definition: assessment that an influencer can have an unfavorable impact on the enterprise's

employment of means or achievement of ends

Dictionary Basis: something that by its very nature or relation to another threatens the welfare of the

latter [MWUD 'threat' (2)]

Dictionary Basis: the possibility of trouble, danger, or ruin [ODE 'threat' (2, bullet 1)]

vision

Definition: end that is about the future state of the enterprise, without regard to how it is to be

achieved

Dictionary Basis: a mental image of what the future will or could be like [NODE 'vision' (2), bullet 1]

vision is made operative by mission

Synonymous Form: mission *makes operative* vision

vision is amplified by goal

Synonymous Form: <u>goal</u> amplifies <u>vision</u>

weakness

Definition: assessment that an influencer indicates an area of inadequacy within an enterprise

that can impact its employment of means or achievement of ends

Dictionary Basis: disadvantage or fault [ODE 'weakness' (bullet 1)]

Dictionary Basis: lacking in power to perform properly a function or office [MWUD 'weak' (4a)]

Dictionary Basis: lacking skill or proficiency [MWUD 'weak' (4b)]

#### 9.2 Attributes

#### motivation element

Definition: top-level concept in The BMM

Description: Created as a modeling construct (a "superclass") to simplfy the association of each

concept in The BMM with 'name' and 'description'.

Note: Categories of motivation element include: assessment, business process, end,

influencer, means, organization unit, potential impact

#### motivation element has motivation element description

Synonymous Form: <u>motivation element description</u> is of <u>motivation element</u>

#### motivation element has motivation element name

Synonymous Form: <u>motivation element name</u> is of <u>motivation element</u>

#### motivation element description

Definition: an account of a concept in an enterprise BMM

Dictionary Basis: a spoken or written account of a person, object, or event [ODE (1)]

#### motivation element description is of motivation element

Synonymous Form: motivation element has motivation element description

#### motivation element name

Definition: a word or set of words by which a concept in an <a href="mailto:enterprise BMM">enterprise BMM</a> is known or referred

to

Dictionary Basis: a word or set of words by which a person, animal, place, or thing is known, addressed,

or referred to [ODE 'name' (1)]

#### motivation element name is of motivation element

Synonymous Form: motivation element has motivation element name

# 9.3 Additional Vocabulary

#### enterprise BMM

Definition: Business Motivation Model for an enterprise; an instantiation of The BMM

Example: Business Motivation Model for EU-Rent

### The BMM

Description: The Business Motivation Model defined in this specification, as a metamodel,

Synonym: <u>The Business Motivation Model</u>

# Annex A:BMM Diagram as originally published

(INFORMATIVE)

This appendix presents the BMM as published by the BRG on www.businessrulesgroup.org.

The graphic representation of the Business Motivation Model is based on three non-normative conventions, as follows. These conventions have been purposely kept neutral of any particular modeling notations. The BRG selected conventions that are largely self-explanatory and visually intuitive.

- Box: A box of any size represents a core concept. The name in the box is the preferred term (name) given to that concept. Refer to the Concepts Catalog for the precise meaning of each term.
- Box-Within-A-Box: This indicates categorization in other words, a box within a box indicates that one concept is a category of the other concept. Another way to think about this is that the inner box represents a specific kind, type, class, or variation of the outside box.

This graphic representation of categories does not imply any constraints; specifically it does not imply that:

- The list of categories is mutual exclusive.
- The list of categories is exhaustive.
- Any category is mandatory.

When any of these constraints do apply, that fact is always documented explicitly in the Concepts Catalog.

• Connection-Between-Boxes: A line connecting any two boxes (or the same box twice) indicates a logical connection – that is, a fact type – between core concepts.

Crucial to any line is its labels. These labels are written carefully as verbs or verb phrases (in both directions) so that the logical connections of the Model can be read as simple English sentences. These sentences convey the exact meaning of the connections in the context of the Model; however, more explanation is given in the Concepts Catalog, along with the definitions for each of the terms involved.

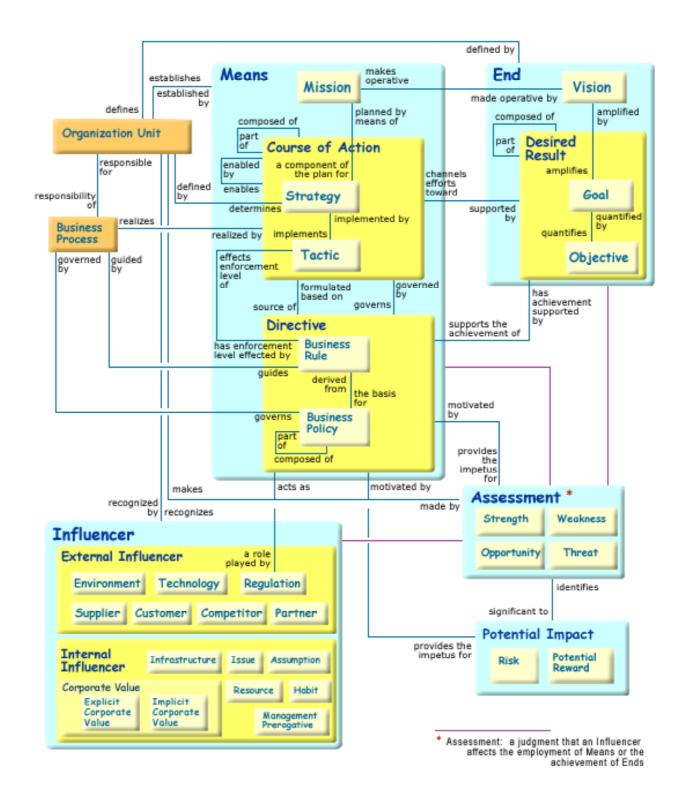
This graphic representation of logical connections (fact types) does not imply any constraints; specifically it does not imply that:

- · The logical connection is mandatory for any concept involved.
- Any upper or lower limits apply to the logical connection.

When any such constraint does apply, that fact is always documented explicitly in the Concepts Catalog. In the absence of such documented constraint, the connection lines can be taken to represent simple unconstrained fact types (i.e., 'many-to-many' and optional in both directions).

Two special conventions are worth noting.

- When a fact type involves three or more concepts, a simple line cannot be used to represent the fact type. In this case, the fact type is shown as a concept box, named with a term for the fact type (shown suffixed with \*) and having unlabeled lines radiating from the box to the fact type's participating concepts. One reading of the fact type is given in a Legend.
- A shaded (orange) box represents a concept that is related to concepts of the Model but this concept does not, itself, fall within the scope of the Model.



### Annex B: Metrics for the BMM

#### (INFORMATIVE)

Implicit in many areas of the Business Motivation Model is the subject of metrics. In almost all organizations there are 'things of interest' that are heavily measured and tracked. <sup>1</sup>These metrics govern, control, and influence a wide range of important aspects of the organization. The very fact these 'things' are so heavily measured makes them important.

Some of the most important metrics of an enterprise are established by its Goals. Each Goal can have one or more measures of performance. For example, a metric of the Goal "To be profitable" is the measure of performance 'annual net revenue.' Another measure of performance of this Goal might be 'monthly net revenue.'

Some of the example Goals presented earlier have been extended below to illustrate measures of performance:

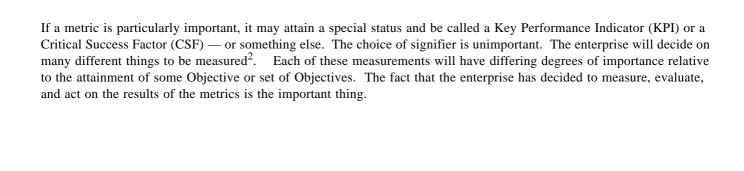
Table B9: Measures of performance

| Enterprise         | Goal  | Measure(s) of Performance  |
|--------------------|---|----------------------------|
| EU-Rent            | To provide industry-leading customer service.                               | market share               |
| EU-Rent            | To provide well-maintained cars.  | quality of product         |
| EU-Rent            | To have vehicles available for rental when and where customers expect them. | usage %, order fulfillment |
| Pizza company      | To deliver pizzas in an expedient amount of time.                           | elapsed time               |
| Publishing company | To improve customer satisfaction (over the next five years).                | customer satisfaction      |
| Consulting company | To improve customer satisfaction (over the next five years).                | customer satisfaction      |
| e-Business company | To improve customer satisfaction (over the next five years).                | market share               |

Objectives should always be measurable. Therefore Objectives, by definition, will have metrics. The metrics for an Objective are established by the measures of performance of the Goal that the Objective quantifies. To be able to do this, an appropriate unit-of-measure for the metric must be determined for each Objective. The Objective then expresses the target value that the metric should attain in the timeframe specified. In that way, while a Goal sets the direction, its corresponding Objectives set the milestones to be attained in pursuing the Goal. For example, to quantify the Goal "To be profitable" the enterprise might set one Objective to have a monthly net revenue of at least \$5 million (by a specified date) and another Objective to have an annual net revenue of at least \$100 million (by a specified date).

Metrics are imperative for Potential Impacts. Without thoughtful and careful identification of appropriate metrics, the Risk / Potential Reward evaluation becomes meaningless.

Rule management is outside of the scope of the Model; however, the enterprise should consider Business Rules to be one of the
'things of interest' that it carefully 'measures and tracks'. Management of rules over time is important not only to performance
assessment and improvement, but also addresses related issues, such as response to changes in Influencers.



2. In fact, if the Zachman Framework is used, it is possible to identify important 'things' to be measured in virtually every cell.

# **Annex C:Background for EU-Rent Examples**

(INFORMATIVE)

This annex provides an overview of the fictitious car rental company used for examples throughout the specification.

EU-Rent is a car rental company that operates in several countries in Western Europe and North America. In each of its countries of operation, EU-Rent has an operating company that defines a number of local areas in which it locates rental branches and service depots.

EU-Rent rents cars to customers, and offers standard models from major manufacturers. Car models are categorized into groups ranging from 'economy' to 'luxury', with a different tariff for each group.

Rental branches do not own specific cars. Each local area owns a pool of cars that are available to the rental branches in the area. Each branch has an allocation (capacity, not actual cars) from the pool, which it uses to meet demand for rental bookings. If it exhausts its allocation it can request additional capacity, which is provided from a reserve pool on a 'first come, first served' basis.

Tariffs are set nationally. The operational rental business is managed mainly at the local area and branch level, with fairly strong national guidance on car purchase and disposal – what models can be purchased, how long to keep them, etc. – and global guidance on customer service and the EU-Rent brand.

EU-Rent accepts both rental bookings in advance and walk-in rentals. Advance bookings are accepted by phone, Internet or in person in branches. A EU-Rent branch can accept a booking for pick-up at any EU-Rent branch world-wide.

EU-Rent is a medium-sized company catering to the general car rental market. It has two major concerns:

- It is facing increasing competition from companies offering lower rates, especially in vacation and resort areas.
- It sees opportunities for expansion as Eastern European countries enter the European Community, and business and trade increase.

In response, EU-Rent has decided to:

- Position itself in the market as a 'premium' brand, alongside the bigger players such as Hertz and Avis.
- Expand into Eastern Europe, focusing on major business centers.
- Target business renters, in two ways:
  - As individuals, offering convenient locations, high-quality service (value for money rather than lowest possible price), and an attractive loyalty rewards scheme for frequent renters
  - As companies, offering corporate agreements in which discounted rental tariffs are offered in return for 'captive business'

EU-Rent represents itself as environment-friendly and uses electric and LPG cars where suitable models are available.

# Annex D:The BMM in the Context of the Zachman Architecture Framework

(INFORMATIVE)

John Zachman has provided a useful context for discussing the architecture of an enterprise. His 'Framework for Enterprise Architecture' [ZACH] is a matrix that describes the various ways the stakeholders of an enterprise view the business and its systems.

The Framework characterizes architecture in terms of the perspectives of the different stakeholders (represented by rows in the matrix) and focuses on the different aspects (or 'abstractions') of architecture (represented by the columns). The rows represent, successively, the Planner, Owner, Designer, Builder, and Subcontractor perspectives. The columns reflect the abstractions dealing with the aspects of Data, Process, Location, Role, Timing, and Motivation (What, How, Where, Who, When, and Why).

The Business Motivation Model addresses the business Owner's perspective (i.e., row two) of the sixth aspect (i.e., the Motivation or 'Why' column)<sup>1</sup> Indeed, the name of the Model directly reflects this focus on motivation.

Also noteworthy is that the positioning of the Model in row two means that all references to Business Rules in the Model describe or prescribe elements involved in the structure and operation of the business — not its information systems or its technology.

### D.1 Relationship to Other Aspects of the Business Model

As acknowledged at the beginning of this document and again just above, motivation is just one aspect of a complete business model. So, while every effort was made to limit the scope of the Model to this single abstraction, selective reference to elements of other abstractions were sometimes necessary — specifically, to concepts of the 'Who' and 'How' columns.

#### D.1.1 The 'Who' Connections

It is difficult to avoid references to 'Who' in discussions of 'Why.' Generally, it is not adequate to say, "the motivation is that the company wants it that way." This leads to the perpetuation of unnecessary rules — unnecessary either because the business requirement for them has passed, or because they were not Business Rules in the first place (e.g., they were imposed as workarounds in systems that did not fully support business needs).

Being able to pin down the motivation more precisely is essential. After all, if a responsible party cannot be found for a rule, it should probably be challenged. The Model therefore supports identifying those parties who play key roles with respect to motivation.

This capability is reflected in the Model by linking elements of the business plans to specific parts of the organization (i.e., its Organization Units). This has been done where the connection is important for developing, analyzing, challenging, and maintaining the business plans.

**D.1** 

<sup>1.</sup> The BRG's 1995 paper [BRWATR] addressed the first and sixth aspects (that is, the data and motivation columns) from the Designer's perspective (that is, row three).

The Model uses the following definition for 'organization' on a provisional basis: "Any named group of people within the enterprise with a purpose and a budget." An Organization Unit is simply an organization that is part of another organization. These definitions should be considered merely placeholders<sup>2</sup>. As stated in the main body of the document, 'Organization Unit' does not fall within the scope of the Model. In terms of the Framework, Organization Unit remains part of the 'Who' abstraction.

#### D.1.2 The 'How' Connections

To expand on the 'being-doing' relationships between Ends and Means, the 'How' column of the Framework needs to be considered. 'How' is specified as Business Processes.

It is widely recognized that Business Processes and Business Rules are closely related. It is important to be clear on the differences.

Business Processes realize Courses of Action – they provide detail of activities, plus sequencing, control, and synchronization that enable the enterprise to undertake its Courses of Action. Business Rules guide Business Processes – they provide the basis for decisions that need to be made within Business Processes.

Business Processes, Courses of Action, and Business Rules are all developed to help the enterprise reach its Goals. They need to be coherent and consistent. This is feasible if they are governed by a coherent and consistent set of Business Policies.

Business Processes are governed by Business Policies, which:

- Provide guidance (both directly and via Courses of Action) on what Business Processes have to do.
- Set limits on how Business Processes may undertake what they have to do.

'Business Process' in the Model is a placeholder for a concept to be adopted from an external standard. The placeholder definition adopted into BMM is:

"A unit of work to accomplish a transformation of information or resources contributing to the business objective of a conventional or orchestrated process."

Each Business Process is the responsibility of some Organization Unit (the process owner). There are other facts connecting Business Process and Organization Unit; for example, assignment of activities in Business Processes to roles in the organization is the basis of workflow. However, these connections are again outside the scope of the Model, and are appropriately addressed by some other standard(s).

### D.1.3 Additional Aspects of the Business Model

The other abstractions of the Framework at row 2 are significant in a complete business model. For example,

• The 'Where' aspect — a Logistics Model identifying where the business will operate and how those locations are linked together. Such a model might also prescribe application of Business Rules in different places (including differences that need to be accommodated in globalization of the enterprise).

**D.2** 

<sup>2.</sup> In 2006, the OMG issued an RFP for an Organization Structure Metamodel, from which a standard is expected to emerge by 2007. The BRG anticipates that these placeholders will provide a link to this or other appropriate standards.

<sup>3.</sup> Definition of "Activity" adopted from the June 2006 draft submission for the OMG's RFP "Business Process Definition Metamodel" (BPDM). "Activity in BPDM was the closest match to BMM as envisaged in BMM.

• The 'When' aspect — an Event Model describing the events in the business cycle and how those events cause changes or activities in the enterprise.

In addition, all six abstractions of the Framework have potential interdependencies. For example, workflow to accomplish the same Ends may be different for different categories of location.

# Annex E:BMM History

(INFORMATIVE)

### E.1 Releases

The Business Motivation Model was developed by the Business Rules Group (BRG) and made freely avavailable from the BRG web site (www.business rulesgroup.org). There have been three releases: of the Business Motivation Model:

- Release 1.0 was published in November 2000 as "Organizing Business Plans ~ The Standard Model for Business Rule Motivation":
- Release 1.1, a general update in response to feedback from practice, was published in January 2005 under the revised title "The Business Motivation Model Business Governance in a Volatile World";
- Release 1.2, some minor changes in response to OMG RFC requirements, was published in September 2005.

### E.2 Release 1.0

#### E.2.1 Preface to Release 1.0

#### E.2.1.1 Background

In 1995, the Business Rules Group<sup>1</sup> (BRG), then under the auspices of GUIDE International published a seminal work, "Defining Business Rules ~ What Are They Really?" That document focused on understanding Business Rules from an information system perspective. That work provides key insights on the basic structure of Business Rules — that is, what Business Rules really are.

Since 1997, the BRG has focused its energies on understanding Business Rules from a business perspective. This in turn required a full, business-oriented understanding of how the elements of business plans should be organized. The BRG found that although many professionals have used planning methodologies over the years, no standard existed in that area, and many of the basic concepts were hazy and ad hoc. In particular, there was no inclusion of Business Rule in such approaches — a crucial omission.

This document presents the work of the BRG to correct these problems. It reflects the consensus of the BRG — and collectively the members' many years of practical experience — about business planning. The BRG believes that business plans, especially as they relate to engineering business processes that include automated components, can and should be organized according to the elements of the Model presented in this document.

#### E.2.1.2 Organization of this Document

This document centers on an explanation of the Model. It begins by describing two major topical areas and the role they play.

Section 2 describes the major concepts of the Model in broad terms — Ends and Means, Influences, and Assessments of those Influences on the Ends and Means.

1. For more on the background and history of the BRG, refer to [BRGHIST]

Sections 3 and 4 are the heart of the document, presenting Model concepts in detail. As well as providing the concept descriptions that define the Model, these sections contain numerous examples.

Many of these examples are based on a (fictitious) car rentals company, EU-Rent,<sup>2</sup> that continues the case study the BRG used in its earlier report. Although there are individual examples drawn from other sources, EU-Rent provides at least one example of every concept, within the context of a single organization. This provides some coherence across the examples and illustrates the relationships between many of the concepts.

The other examples were taken selectively from a wide set of enterprises. While the BRG used real-world samples as the basis for these examples, it discovered that real-world samples often do not conform exactly to the prescriptions for the various concepts presented in this document. The BRG found that the wording of these real-world statements is typically an amalgamation — using language designed for the consumption of vested audiences. Therefore, the samples have been reworded as appropriate for use with the Model. The BRG believes this is an important part of the value of its work.

Section 5 briefly discusses metrics in the context of the Model.

#### **E.2.1.3 The Appendices**

**Appendix A.** The Model is included in graphic form in Appendix A, which makes for handy reference.

**Appendix B.** The real meaning of the concepts in the Model is in the concept definitions. These definitions are an integral part of the Model — indeed, the Model diagram is meaningless without them. Appendix B contains all the definitions in the form of a Glossary of Definitions, which the BRG prefers to call the Concepts Catalog<sup>3</sup>.

**Appendix C.** The Model is diagrammatically presented in this document using neutral, non-normative conventions. These conventions, explained in Appendix C, are intended only for visual illustration of the Model's concepts and fact types.

**Appendix D.** The document uses many examples from the EU-Rent case study, an overview of which is presented in Appendix D.

**Appendix E.** The positioning of the Model with respect to the Zachman Architecture Framework is discussed in Appendix E, which also comments on other artifacts of business models, including Organization Unit and Business Process.

**Appendix F.** A bibliography of relevant reference material is presented in Appendix F.

#### E.2.1.4 Audiences for the Model

Who are the audiences for the Model? Primary audiences include the following:

- · Developers of business plans. For that audience, the Model is a conceptual tool for engineering the business itself.
- Analysts supporting the developers of business plans. For that audience, the Model is a tool for organizing and clarifying business plans.
- Implementers and users of software tools and repositories: For that audience, the Model is a formal scheme for structuring information about such business plans.

<sup>2.</sup> The EU-Rent case study was developed by John Hall of Model Systems.

<sup>3. &</sup>quot;Semantics of Business Vocabulary and Business Rules" [SBVR] focuses on concepts, rather than merely on terms. Therefore the Group prefers the name 'Concepts Catalog', rather than 'Glossary of Definitions'.

A final point is this. The BRG uses the word 'enterprise' in this document for convenience. The enterprise can be either for-profit or not-for-profit — similar concepts apply. Also, the 'enterprise' can be some subset of a larger enterprise; again, similar concepts should apply.

### E.2.2 Participants in Release 1.0

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- · Terry Moriarty, Inastrol
- · Warren L. Selkow

#### E.3 BMM Releases 1.1 and 1.2

#### E.3.1 Preface to Release 1.1

The time lapse between Release 1.0 and Release 1.1 of the Business Motivation Model is just over four years. The Model has shown remarkable stability during that period. This brief Preface to Release 1.1 identifies the relatively small number of updates and improvements to the Model that the Business Rules Group (BRG) has made. These changes were based on:

- application of the Model in actual practice.
- suggestions from various conferences and presentations in Europe and North America.

- world-wide feedback via the BRG's website.
- intense work starting in 2003 on "Semantics of Business Vocabulary and Business Rules" (SBVR), a response to an RFP produced by the Object Management Group (OMG) entitled "Business Semantics of Business Rules."

Perhaps the most notable changes in Release 1.1 are (a) the new name for the Model itself, "The Business Motivation Model," and (b) the new title of this document, "The Business Motivation Model ~ Business Governance in a Volatile World." The BRG received compelling arguments that the original name of the document, "Organizing Business Plans ~ The Standard Model for Business Rule Motivation," did not accurately reflect the purpose and content of the Model.

These arguments were centered on two main points:

- 'Business Plan' means many things to many people, and generally has broader connotations than the BRG intended. For example, "schedule of planned business activities" comes to mind for some people, whereas "proposed plan created to attract venture capital" comes to mind for others. Rather, the focus of the Model is on the elements of business governance (e.g., strategies, tactics, policies, goals, objectives, etc.); how these elements are inter-related; and what purposes they serve i.e., their business motivation.
- Although the Model does address the business motivation for business rules after all, business rules are certainly an element of business governance including 'business rule' in the title of the document gave it a prominence that outweighed its actual role. In fact, as noted below, the Model does not even define Business Rule, but rather will adopt the definition from "Semantics of Business Vocabulary and Business Rules" (SBVR).

As mentioned above, the structure of the Model in Release 1.1 has changed very little from Release 1.0. The most significant adjustments involve sharpened definitions. For example, a dictionary basis has been added for each term in the Model. Beyond that, several concepts have been renamed, and several fact types have been added or revised. In addition, numerous examples have been added throughout the document.

The only new concept added to the Model is a placeholder for Business Process. The BRG has recognized the need to indicate how Business Process is related to the elements of the Model, and this placeholder permits it to do so. By placeholder, the BRG emphasizes that it is not suggesting any standard view of Business Process; instead, that it intends to defer to other standards activities for relevant definition(s). For example, work is currently being undertaken in the OMG to develop a standard Business Process Definition Metamodel (BPDM).

The final noteworthy adjustment in Release 1.1 is that an outside definition has been adopted for 'Business Rule'. As noted earlier, the focus of this document is on the elements of business governance and, in the Model, Business Rules are viewed as simply one such element. As in the case of the placeholder for Business Process, the adopted definition for Business Rule permits the BRG to indicate how Business Rules relate to other elements of the Model, but to defer to other standards activities for comprehensive definition and treatment.<sup>4</sup>

#### E.3.2 Preface to Release 1.1

In September 2005, the Object Management Group (OMG) voted to accept the Business Motivation Model as the subject of a Request for Comment (RFC). This means that the OMG is willing to consider the Business Motivation Model as a specification to be adopted by the OMG, subject to comment from any interested parties.

Adoption as an OMG specification carries the intention that the Business Motivation Model would, in time, be submitted to the International Standards Organization (ISO) as a standard.

**E.4** 

<sup>4.</sup> For succinct discussion of the fundamental principles of the Business Rule approach, refer to [BRGMAN] available in a variety of languages, including: English, German, Dutch, French, and Turkish.

One of the OMG's conditions for RFC acceptance was an explicit statement about attributes that would be required to be included in compliant implementations of the Business Motivation Model. This has been included in Section 1.4.

### E.3.3 Participants in Releases 1.1 and 1.2

#### Co-editors:

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- Ronald G. Ross, Business Rule Solutions LLC

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# **Annex F:Related OMG Business Modeling Specifications**

(INFORMATIVE)

### F.1 Need for Integration

Business-oriented modeling in the OMG has been addressed by initiatives for several specifications independently and in parallel, with the intention of integrating them later. Compatibility between the developments is being handled informally in binary collaborations between submission teams.

This is different from the development of, for example, the UML, where all aspects of Platform Independent Models were developed as a coherent whole .

The three OMG developments of particular relevance to the Business Motivation Model are:

- Business Process Definition Metamodel (BPDM)
- Semantics of Business Vocabulary and Business Rules (SBVR)
- Organization Structure Metamodel (OSM)

These three need to be integrated because they are so closely related in business-oriented modeling.

A first step towards integration could be provision of simple cross-referencing in a Business Motivation Model for the enterprise. The minimum requirement would be:

- Reference schemes for Organization Unit, Business Process and Business Rule that supported unique identification of their instances.
- Availability of the references outside the tools that support the Business Process Definition Metamodel (BPDM),
   Semantics of Business Vocabulary and Business Rules (SBVR) and the Organization Structure Metamodel (OSM).
   Specifically, these references should be available to a tool that supports the Business Motivation Model.

# F.2 Business Process Definition Metamodel (BPDM)

The fragment of the Business Motivation Model that addresses Business Process is illustrated below:

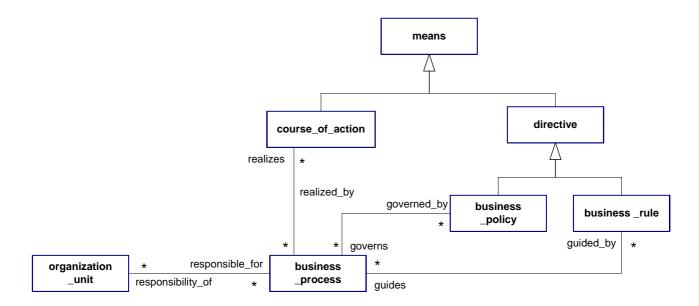


Figure F.1 Business Process fragment of BMM

The corresponding fragment of the current submission for BPDM (OMG document bmi/06-06-02) is:

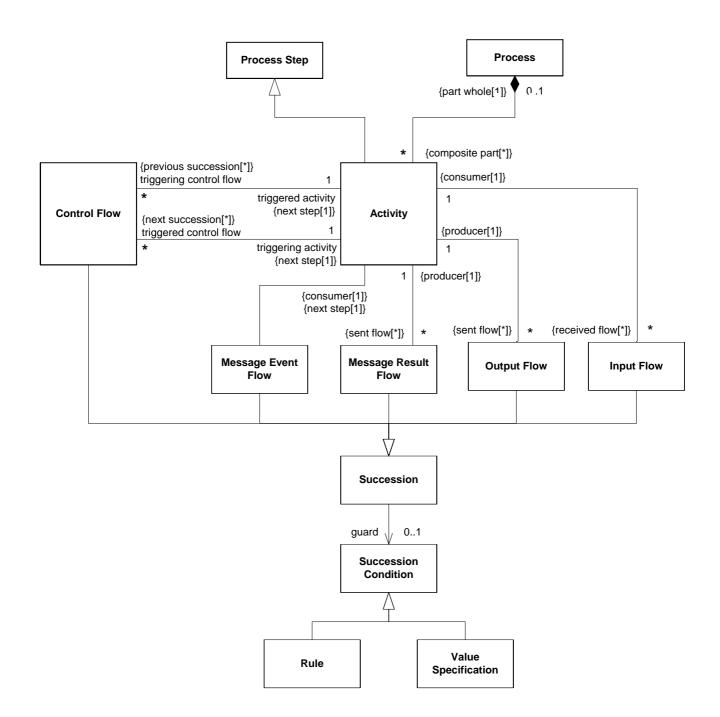


Figure F.2 Business Activity fragment of BPDM

From the two fragments, it would appear that the BPDM's *Activity* is the concept in closest correspondence with *Business Process* in the Business Motivation Model. The two models would need to be reconciled on these two respective elements, and also on *Business Rule* and (BPDM) *Rule*.

Then, unique identifiers of Tasks (if tools that implemented BPDM allowed access to them) could be used by tools that implemented the Business Motivation Model.

However, the BPDM submission is currently in process of substantial update, and the revised model is likely to be different in detail. At this time, the BRG goes no further than suggesting this broad approach for reconciliation.

# F.3 Semantics of Business Vocabulary and Business Rules (SBVR)

The fragment of the Business Motivation Model that addresses Business Rule and Business Policy is illustrated below

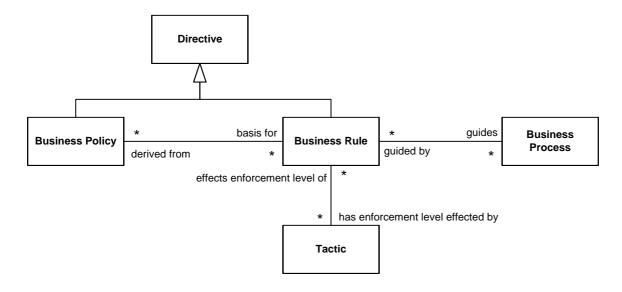


Figure F.3 Business Rule fragment of BMM

The corresponding part of the SBVR Final Adopted Specification (OMG document bmi/06-03-02) is:

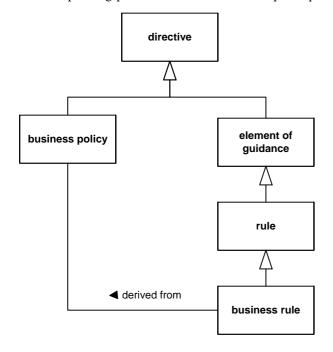


Figure F.4 Business Rule fragment of SBVR

Business Policy and Business Rule are already aligned in the two models.

## F.4 Organization Structure Metamodel

The fragment of the Business Motivation Model that addresses Organization Unit is illustrated below:

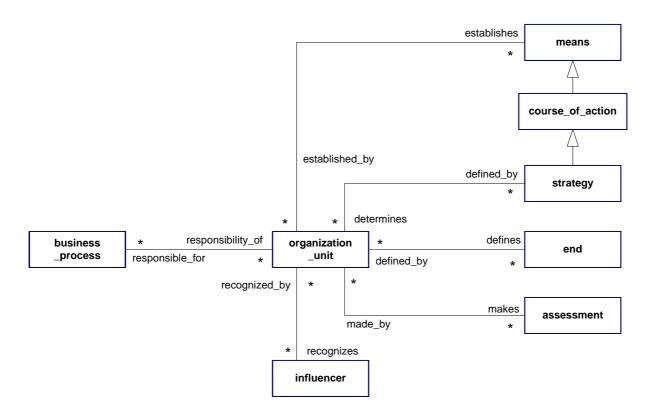


Figure F.5 Organization Unit fragment of BMM

Currently, there are 3 submissions for OSM (OMG documents bei/04-12-01, bei/05-01-03, bei/05-01-04). The submission teams are collaborating to produce a single submission. However, across all three there are several concepts that define organization units of various types, and in two of the submissions they are associated with processes.

So, it is not anticipated that mapping of concepts will be difficult, but suggestions for reconciliation of the OSM model with the Business Motivation Model will be deferred until a draft of the joint submission is available.

# **Annex G:Bibliography**

(INFORMATIVE)

**SBVR** 

BMM-XMI BMM in XMI, OMG document bei/05-09-12

BPDM Business Process Definition Metamodel, OMG RFP and responses, available (to OMG members)

from www.omg.org

BRGHIST A Brief History of the Business Rule Approach, Business Rules Journal, Vol. 6, No. 1 (January

2005), available from www.BRCommunity.com/a2005/b216.html

BRMAN Business Rules Manifesto Version 2.0, Business Rules Group (Nov 2003), available from

www.businessrulesgroup.org

BRWATR Business Rules ~ What are they Really? Revision 1.3, Business Rules Group (July 2000), available

from www.businessrulesgroup.org

MWUD Merriam-Webster Unabridged Dictionary, Merriam-Webster (January 2002), ISBN: 0877792011

ODE Oxford Dictionary of English, Oxford University Press (Aug 2005), ISBN: 0198610572

NODE New Oxford Dictionary of English, Oxford University Press (1998), *superseded by ODE* 

Semantics of Business Vocabulary and Business Rules, OMG Specification, available from

www.omg.org

SWOT Neal Fishman,, "SWOT Assessment", DataToKnowledge Newsletter, Volume 27, No. 6

(November/December 1999), pp. 3-4

ZACH John A. Zachman, "A Framework for Information Systems Architecture," IBM Systems Journal,

Vol. 26, No. 3 (1987).

BMM Adopted Specification G.1