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# **Organizing Business Plans**

*The Standard Model for Business Rule Motivation*

Prepared by

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## Preface

### Background

In 1995, the Business Rules Group, then under the auspices of GUIDE International published a seminal work, "Defining Business Rules ~ What Are They Really?"<sup>1</sup> 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. The document is the source of the fundamental idea that Business Rules are always Terms, Facts, or Rules.

Since 1997, the Business Rules Group 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. We 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 Rules* in such approaches — a crucial omission.

The current document presents the work of the Business Rules Group to correct these problems. It reflects the consensus of the Group — and collectively their many years of practical experience — about business planning. We believe 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 this work — that is, the Business Rule Motivation Model.

### Organization of this Document

This document centers on an explanation of the Business Rule Motivation Model. It begins by describing two major topical areas and the role they play in an overall model of the business.

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

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

Many of them are based on a (fictitious) car rentals company, EU-Rent, that continues the case study we used in our earlier report. Although there are individual examples drawn from other sources, EU-Rent<sup>2</sup> 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.

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<sup>1</sup> The Business Rules Group, "Defining Business Rules ~ What Are They Really?" rev. 1.3, July, 2000 — available at <http://www.BusinessRulesGroup.org>

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

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

Section 5 summarizes the discussion by placing the Business Rule Motivation Model and its concepts into the context of the Zachman Framework. We conclude with a look forward at some of the next topics that have been identified for further investigation.

The Business Rule Motivation Model is included in graphic form in Appendix A, which makes for handy reference. However, the real meaning of the concepts it presents is in the concept definitions. These definitions are an integral part of the Business Rule Motivation Model — indeed, the model diagram is meaningless without them. The Concepts Catalog (Appendix B) contains the concept definitions. Appendix C is a bibliography of relevant reference material.

### **Audiences for the Business Rule Motivation Model**

Who are the audiences for the Business Rule Motivation Model? Primary audiences include the following:

- **Developers of business plans.**  
For that audience, the Business Rule Motivation Model is a conceptual tool for engineering the business itself.
- **Analysts supporting the developers of business plans.**  
For that audience, the Business Rule Motivation Model is a tool for organizing and clarifying business plans.
- **Implementers and users of software tools and repositories.**  
For that audience, the Business Rule Motivation Model is a formal scheme for structuring information about such business plans — in other words, a *model*.<sup>3</sup>

A final point is this. We use the word "enterprise" in this document for convenience. Clearly, 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.

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<sup>3</sup> Such a formal scheme is sometimes called an *ontology*.

**For More Information**

Information about the Business Rule Motivation Model and the Business Rules Group can be obtained via the Internet from the Group's web site at <http://www.BusinessRulesGroup.org>.

## 1. Introduction

The Business Rule Motivation Model provides a scheme or structure for developing, communicating, and managing business plans in an organized manner. Specifically, the Business Rule 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 ones that provide guidance to the business — most notably, Business Rules.

### 1.1 What is the Business Rule Motivation Model?

There are two major areas of the Business Rule 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, Policies, and Business Rules.
- The second is the Influences that shape the elements of the business plans, and the Assessments made about the impacts of such Influences on Ends and Means (i.e., Strengths, Weaknesses, Opportunities, and Threats).

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

#### 1. 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.

#### 2. 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 Influences that underlie the choices made in this regard. This is what is meant by *motivation*.

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.

Indeed, all elements of the Business Rule 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.

## 1.2 Other Elements of a Full Business Model

The elements of the Business Rule Motivation Model are not complete as a full business model. For example, the elements of business plans prescribe neither of the following, both of which are essential parts of a complete business model.

- **Workflows.** The identification and sequencing of particular tasks, and the assignment of responsibilities for such tasks, still remains to be worked out even after the business planning is completed. However, the business plans will provide the outlines of the approach that can be used in developing such workflows.
- **Information Structure.** Also remaining to be developed is complete 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.

In addition to the above, a complete business model would also include a **Functional Model** of the business describing all the processes of the enterprise, a **Logistics Model** identifying where the business will operate and how those locations are linked together, and an **Event Model** describing the events in the business cycle and how those events cause changes or activities in the enterprise.

## 1.3 Methodologies and the Business Rule Motivation Model

It is also important to note that the Business Rule 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 are a key element of such business plans.

## 1.4 The Graphic Representation of the Business Rule Motivation Model

The graphic representation of the Business Rule Motivation Model is based on three conventions, as follows. These conventions have been purposely kept neutral of any particular modeling notations. We 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 subsetting — in other words, a box within a box indicates that one set of elements is a subset of another set of elements. Another way to think about this is that the subset box represents a specific kind, type, class, or variation of the larger box.

There is no assumption in this graphic representation that boxes within boxes imply mutual exclusivity or represent an exhaustive or mandatory list of subsets. When actual subsets in the Business Rule Motivation Model are in fact mutually exclusive this constraint is documented in the Concepts Catalog. When subsets are completely enumerated and required as shown, these constraints are documented in the Concepts Catalog.

- **Connection-Between-Boxes:** A line connecting any two boxes (or the same box twice) indicates a logical connection between core concepts. Such a line represents a type of Fact.

Actually, what is important about the lines are the labels. These are written carefully as verbs or verb phrases (in both directions) so that the Facts of the Business Rule Motivation Model can be read as simple English sentences. These sentences convey the exact meaning of the connections in the context of the Business Rule Motivation Model; however, more explanation is given in the Concepts Catalog, along with the definitions for each of the Terms involved.

The rules that apply to these constructs are also part of the Business Rule Motivation Model. However, these rules are not expressed in the model graphics. For example, the connection lines represent simple unconstrained Facts (i.e., "many-to-many" and optional in both directions). While the diagram may suggest some rules (for example, when boxes within boxes suggest mutually exclusive subsets), the final word on any rule is documented in the Concepts Catalog.

## 2. Overview of the Business Rule Motivation Model

In this document Business Rules are described from the enterprise perspective. The Group is not attempting to develop a methodology, rather to create a model that supports a range of methodological approaches. One way to think of the Business Rule Motivation Model is as a blueprint. If it were implemented, the result would be a database in which Business Rules could be stored and related to other information about the enterprise, whatever methodology were used for discovering and defining them.

But there are some broad principles that should be generally applicable. Perhaps the most fundamental of these is understanding *motivation*. Our rationale for approaching Business Rules from this direction was simple: if an enterprise imposes a rule, it ought to be able to say *why*.

Sometimes it is difficult to uncover the 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.

The Group realized early on that a cornerstone of any work addressing motivation had 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 Group adopted the general term *End* 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* — gave us the core concepts of our model.<sup>4</sup>

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

But is an Influence inherently a Strength or Weakness — is it always a Threat or Opportunity? That determination comes from an Assessment of the impact of an Influence on the stated Ends and Means — an Assessment such as is developed in SWOT analysis. In this popular technique, Internal Influences (assessed to be Strengths and Weaknesses) and External Influences (assessed to be Opportunities and Threats) are analyzed as a part of business plan development.<sup>5</sup>

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<sup>4</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>5</sup> Neal Fishman, "SWOT Assessment," *DataToKnowledge Newsletter*, Volume 27, No. 6 (November/December 1999), pp. 3-4.

Once an Assessment has identified relevant Influences in terms of their impact on Ends and Means, Business Policies and Business Rules can be put in place to guide the enterprise Courses of Action. 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. This is why understanding the motivation for Business Rules is so crucial.

These Elements of Guidance keep the enterprise on course and moving toward its Desired Results. Because of their integral role in guiding Courses of Action, Elements of Guidance are included in the set of *Means* concepts.

With these major concepts identified, the Business Rule Motivation Model now seems to provide a good framework for dealing with *rules* and *motivation*. When a Business Rule is encountered, you can ask where it would fit — which Influence, 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 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?

The next section examines each of the concepts of the Business Rule Motivation Model in detail to reveal how they work together to provide this kind of support.

### 3. The Core Elements of the Business Rule Motivation Model

The main elements of the business plans are its Ends and Means. These fundamental terms represent two hierarchies, as shown in Figures 1 and 5.

#### 3.1 The End Concepts

An End is a statement about what 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.

##### Types of End

End concepts can be arranged in a hierarchy, as shown in Figure 1.



Figure 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 types 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.

## Vision

A Vision is a statement about 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.

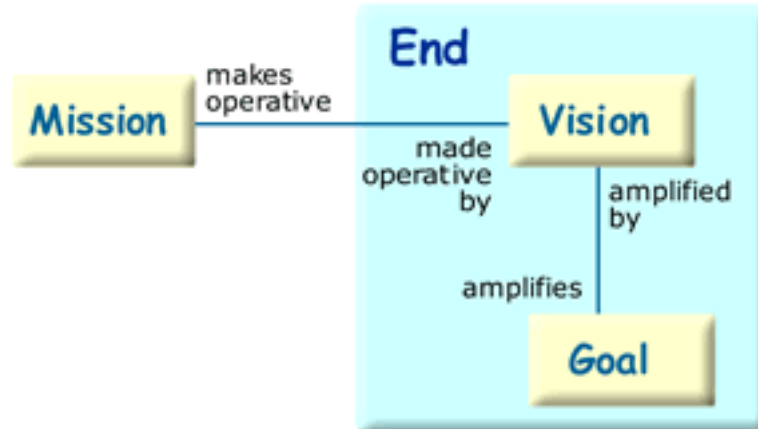


Figure 2: Vision

Examples of Vision include the following:

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

## ***Desired Result***

A Desired Result is an End that is a state or target that the enterprise intends to maintain or sustain.

### **Types of Desired Result**

Desired Result includes the following concepts:

- Goal
- Objective

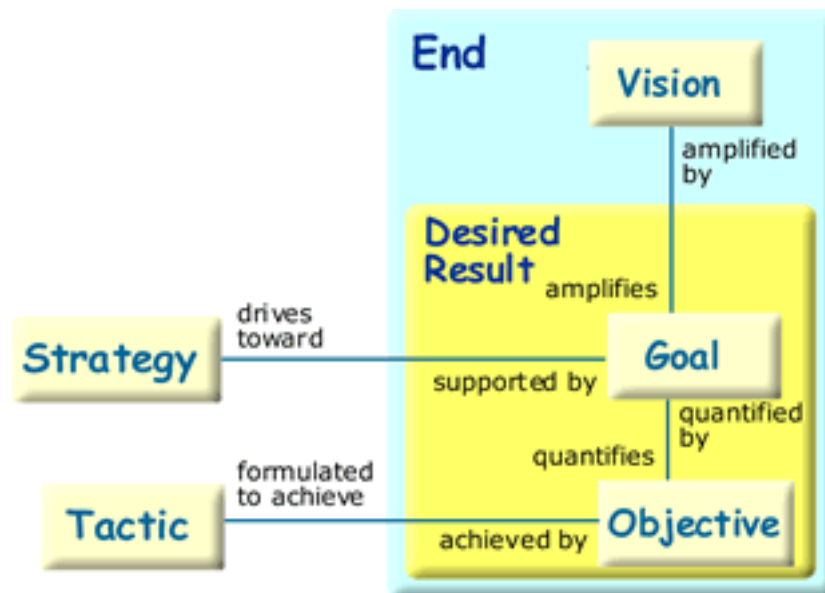


Figure 3: Desired Results -- Goals and Objectives

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). A Goal is *supported by* Strategies.

Objectives differ from Goals in that Objectives should always be time-targeted and measurable. Goals, in contrast, are not specific in these ways. An Objective is *achieved by* Tactics.

## 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 grandiose 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.

Examples of Goal include the following:

	Goal
EU-Rent	<i>To provide industry-leading customer service.</i>
EU-Rent	<i>To provide well-maintained cars.</i>
EU-Rent	<i>To have vehicles available for rental when and where customers expect them.</i>
Pizza Company	<i>To deliver pizzas in an expedient amount of time.</i>
Consulting Company	<i>To improve customer satisfaction (over the next five years).</i>
Publishing Company	<i>To improve customer satisfaction (over the next five years).</i>
E-Business Company	<i>To have more customers than any other e-business.</i>

## 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, 2001") 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.

The Group's understanding of "Objective" is consistent with the industry's popular "SMART" criteria that an Objective be: **S**pecific, **M**easurable, **A**ttainable, **R**elevant, and **T**ime-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, 2002, ...*
- *On April 15, 2001, ...*

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, 2001, a B+ grade level on the annual Better Business Bureau ratings."

Examples of Objective include the following:

	<b>Objective</b>
EU-Rent	<i>Effective immediately, 98% of customers who ask to rent a car get one.</i>
Pizza Company	<i>By January 1, 2001, 95% on-time pizza delivery.</i>
Consulting Company	<i>By June 30, 2002, an operational customer call center.</i>
E-Business Company	<i>Within six months, 10% increase in product sales.</i>

### ***Facts that Organize Ends***

Besides those mentioned above, other logical connections (i.e., Facts) 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 4: Interrelating Desired Results

This happens when there is a decomposition of some higher-level Goal (or Objective) into lower-level Goals (or Objectives). This 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."

### 3.2 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 (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, of course, cannot always be mandated.

#### Types of Means

Means concepts can be arranged in a hierarchy, as shown in Figure 5.



Figure 5: The Hierarchy of "Means" Concepts

A Means may be either a Mission, a Course of Action (a Strategy or Tactic), or an Element of Guidance (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 Rule Motivation Model have been carefully organized into Courses of Action and Elements of Guidance.

In some respects, Courses of Action are the more basic of the two because they lay out the basic Courses of Action to be taken to achieve the Desired Results. In and of themselves,

however, Courses of Action tend to be rather like blunt instruments. They require Elements of Guidance to have any real chance of success.

In contrast to Courses of Action, Elements of Guidance 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, Elements of Guidance represent encoded (i.e., written down) knowledge that ensures the highest possible chances of success for the Courses of Action.

An Element of Guidance always has to do with what is, or is not, permissible. There can be a meaningful Enforcement Level established for it. 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) rather than control-oriented. An Element of Guidance is always control-oriented.

### **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 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 include the following:

	<b>Mission</b>
EU-Rent	<i>Provide car rental service across the EC.</i>
Pizza Company	<i>Provide pizza to customers city-wide.</i>
Consulting Company	<i>Provide consulting, outsourcing, and staff augmentation services to companies in North America.</i>
Retail Pharmacy	<i>Provide generic and ethical drugs to the retail market.</i>

### **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. 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. To this end, a Course of Action is *guided by* Elements of Guidance.

#### **Types of Course of Action**

Course of Action includes the following concepts:

- Strategy
- Tactic



Figure 7: Course of Action

Compared to Tactics, Strategies tend to be longer term and broader in scope. A Strategy is *implemented by* Tactics. A Strategy always *drives toward* Goals, rather than being formulated to achieve 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. A Tactic always is *formulated to achieve* Objectives, rather than driving toward 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 type 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.

### **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 *drives toward* those Goals.

More than simply a resource, skill, or competency that the enterprise can call upon, a Strategy represents the **right** approach to achieve its Goals, given the environmental constraints and risks the enterprise faces.

Examples of Strategy include the following:

	<b>Strategy</b>
EU-Rent	<i>Join established rewards scheme (rather than building own scheme)</i>
Pizza Company	<i>Deliver pizzas to the location of the customer's choice.</i>
Consulting Company	<i>Implement a Customer Relationship Management System</i>
Consulting Company	<i>Increase repeat business</i>
E-Business Company	<i>Buy other e-business mailing lists</i>

### **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 *are formulated to achieve* Objectives. For example, the Tactic: "Ship products for free" is formulated to achieve the Objective: "Within six months, 10% increase in product sales."

Examples of Tactic include the following:

	<b>Tactic</b>
EU-Rent	<i>Encourage rental extensions.</i>
EU-Rent	<i>Outsource maintenance for small branches.</i>
EU-Rent	<i>Monitor vehicle mileage.</i>
Pizza Company	<i>Hire drivers with their own vehicles to deliver pizzas.</i>
Consulting Company	<i>Provide each member of the sales force with a palmtop.</i>
Consulting Company	<i>Call first-time customers personally.</i>
E-Business Company	<i>Ship products for free.</i>

### **Element of Guidance**

As the name suggests, Elements of Guidance indicate how the Courses of Action should, or should not, be carried out — in other words, they *guide* Courses of Action. Specifically, an Element of Guidance is a declarative statement (or set of such statements) that 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.



Figure 8: Interrelating Elements of Guidance with Courses of Action and Ends

The Elements of Guidance *guide* the Courses of Action. For example, the Business Rule: "Pizzas may not be delivered beyond a radius of 30 miles" guides the Strategy: "Deliver pizzas to the location of the customer's choice." This applies to Tactics as well. For example, the Tactic: "Encourage rental extensions" is guided by the Business Policy: "Allow phone rentals."

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

On the other hand, too many Elements of Guidance 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 Business Policy is made explicit, it is assumed that no constraint on other elements of the business plans will be exercised. In other words, there is no such thing as an "unstated" Business Policy. This also applies to Business Rules. Every Element of Guidance must be explicit and recorded in an official manner. This is a fundamental tenet of the Business Rule approach.

It is also possible for the Courses of Action to be *formulated based on* Elements of Guidance. For example, the Tactic: "Monitor car mileage" is formulated based on the Business Policy: "Cars should be serviced at the mileage intervals recommended by the manufacturer." The Element of Guidance thereby serves as the *source of* the Course of Action. Continuing on with the same example, the Business Policy: "Cars should be serviced at the mileage intervals recommended by the manufacturer" is the source of the Tactic: "Monitor car mileage."

Occasionally an Element of Guidance 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." For a second example, the Objective: "Within six months, 10% increase in product sales" is supported by the 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."



## Element of Guidance Enforcement Level

An Element of Guidance indicates its appropriate Enforcement Level. An Element of Guidance is *subject to* an Enforcement Level.

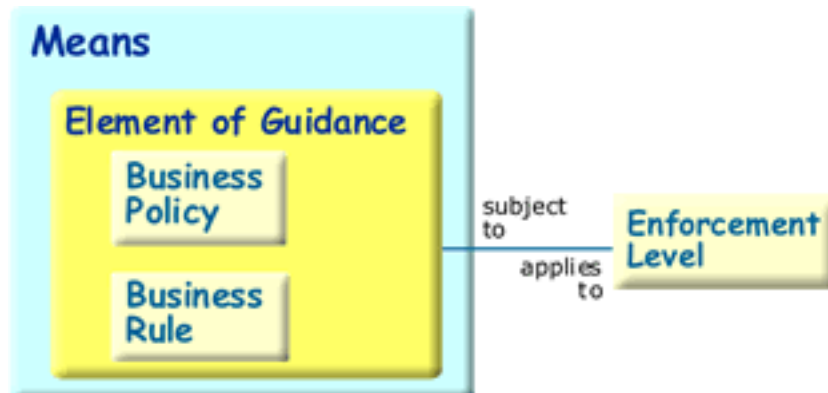


Figure 9: Element of Guidance with Enforcement Level

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 or policy in force. The values range from "strictly enforced" to "guideline (suggestion only)" as follows:

<i>Value</i>	<i>Meaning</i>
<b>strictly enforced</b>	If you violate the rule, you cannot escape the penalty.
<b>deferred enforcement</b>	Strictly enforced, but enforcement may be delayed — e.g., waiting for resource with required skills.
<b>pre-authorized override</b>	Enforced, but exceptions allowed, with prior approval.
<b>post-justified override</b>	If not approved, you may be punished.
<b>override with explanation</b>	Comment must be provided with violation.
<b>guideline</b>	Not enforced.

Examples of Enforcement Level include the following:

	<b>Element of Guidance</b>	<b>Enforcement Level</b>
EU-Rent	<i>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.</i>	<i>strictly enforced</i>
Pizza Company	<i>A driver who is convicted of one moving traffic violation while driving for the company will be counseled by a manager concerning safe driving.</i>	<i>pre-authorized override</i>
E-Business Company	<i>A customer rated negative by more than ten other customers will be blocked from doing business forever.</i>	<i>override with explanation</i>

### Element of Guidance as Regulation

An Element of Guidance 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 10: Element of Guidance 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.

### Types of Element of Guidance

Element of Guidance includes the following concepts:

- Business Policy
- Business Rule

Compared to a Business Rule, a Business Policy tends to be less structured,<sup>6</sup> less discrete, and usually not atomic — that is, not focused on a single aspect of guidance. Usually, its articulation will be less careful than that for a Business Rule — in other words, a Business Policy is less likely to follow a standard vocabulary.

In contrast to a Business Policy, a Business Rule is highly structured<sup>6</sup> in its expression 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 guidance.

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<sup>6</sup> This means “structured” in a natural language sense, not “structured” in any technical sense.

## ***Business Policy***

A Business Policy is a statement (or set of statements) whose purpose is to guide the enterprise. Business Policies provide the *basis for* Business Rules.

A Business Policy can be *motivated by* Assessments. 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 control, guide, and shape the Strategies and Tactics. For example, the Business Policy: "We will not make on-site visitations" shapes and guides 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:

	<b>Business Policy</b>
EU-Rent	<i>Always attempt to send a customer away with a rented vehicle, as long as the cost to EU-Rent for the rental is not greater than the rental payment.</i>
EU-Rent	<i>Safety first.</i>
Pizza Company	<i>Safety in the kitchen, and in the streets, comes first.</i>
E-Business Company	<i>A business representative will personally contact each customer who makes a complaint.</i>

**Business Rule**

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

Examples of Business Rule include the following:

	<b>Business Rule</b>
EU-Rent	<i>A customer must present a valid driver's license in order to rent a EU-Rent vehicle.</i>
EU-Rent	<i>The rental of a car within 500 miles of its next service mileage may not be extended by phone.</i>
EU-Rent	<i>The rental of a car within 500 miles of its next service mileage may be extended only if the car is exchanged at a EU-Rent branch.</i>
EU-Rent	<i>Every driver on a rental must be over 25 years old.</i>
Pizza Company	<i>Pizzas must be delivered within one hour.</i>
Pizza Company	<i>Pizzas may not be delivered beyond a radius of 30 miles.</i>
E-Business Company	<i>The order tax amount must be calculated at the time the order is placed.</i>
E-Business Company	<i>An order must not contain more than 25 order items.</i>

### ***Facts that Organize Means***

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



Figure 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 only be used to associate like instances — that is, Strategies only to other Strategies and Tactics only to other Tactics.

This happens when there is a decomposition of some higher-level Course of Action into lower-level Courses of Action. This 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 only 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.

### Interrelating Business Rules

One Business Rule can *relate to* other Business Rules. Tracking down and analyzing these connections is a crucial part of honing the business plans.

There are a variety of different ways in which Business Rules can relate to each other. The following are some of the manners in which Business Rules can be interrelated:

- duplicates (might duplicate)
- establishes enforcement scope for (extends)
- exception to
- conflicts with
- interpreted from
- replacement for
- replicates
- semantically equivalent to
- similar to
- subsumes
- supports

For example:

Interrelated Business Rules	Interrelationship Category
"The sum of all order items must not exceed \$10,000." "The total amount of an order must not be greater than \$10,000."	duplicates
"A rush order may not be accepted for specialty items." "A specialty item must not be included in a rush order."	semantically equivalent
"An order must have a destination." "A rush order must have a destination."	subsumes
"A shipment must include at least 3 orders." "An out-of-state shipment may include only 1 order."	conflicts with

In some instances Business Rule relationships call for additional rules. For example, in the "conflicts with" case, other rules may be needed to guide actions when the conflict arises.

### 3.3 Expressing Core Elements of the Business Rule Motivation Model

It is expected that statements an enterprise gives representing its Ends and its Elements of Guidance 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.

Examples of such words include the following.

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

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 Elements of Guidance. Indeed, the absence of adjectives suggesting desired end-states is one fundamental way in which Courses of Action are distinguished from Desired Results and Elements of Guidance.

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.

## 4. Influences and Assessments

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

Influences, 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. Influences should always be stated in a neutral, factual manner. Therefore, Influences should be devoid of qualitative words. The presence of qualitative words indicates a statement *about* an Influence — in other words, an Assessment.

This section describes the concepts that define these aspects of the Business Rule 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.

### 4.1 Influences on the Ends and Means

#### ***Influence***

An Influence is the act, process, or power of producing an effect without apparent exertion of tangible force or direct exercise of command, and often without deliberate effort or intent. The Influences of concern here are specifically those that can impact the enterprise in its employment of Means or achievement of its Ends. This impact is *judged in* Assessments.

The Group recommends that Influences 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 Influences, it is also useful to document who *recognizes* the Influence and at what point in time, so that an audit trail exists for future reference. This, of course, cannot always be mandated.



## Types of Influence

There are two general categories of Influence, as follows.

- External Influence
- Internal Influence

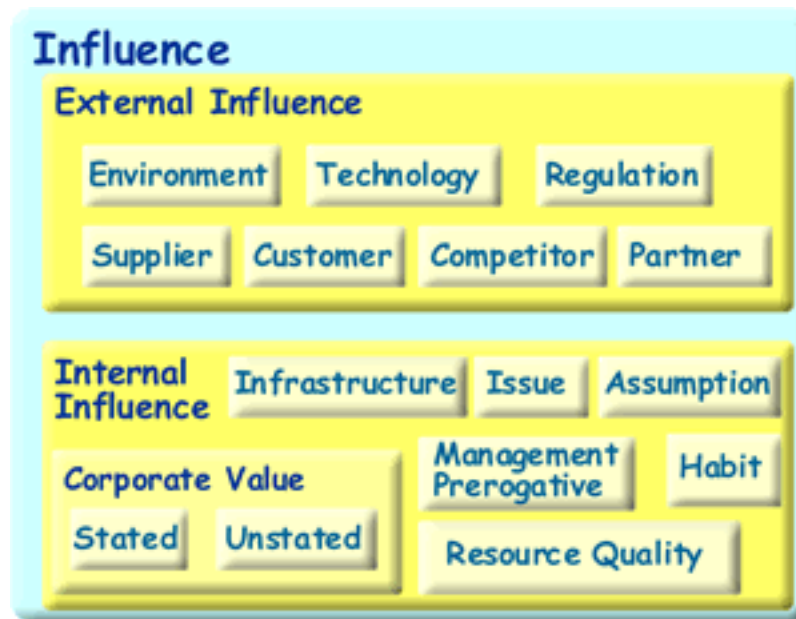


Figure 12: Concepts Reflecting Influences

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

**External Influence**

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

<b>Competitor</b>	A rival enterprise in a struggle for advantage over the subject enterprise.
<b>Customer</b>	A role played by an individual or enterprise that is a prospect, or has ordered, received, or paid for products or services from the subject enterprise.
<b>Environment</b>	The aggregate of surrounding conditions or influences affecting the existence or development of an enterprise.
<b>Partner</b>	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.
<b>Regulation</b>	A rule or order prescribed by an authority such as a government body or the management of an enterprise.
<b>Supplier</b>	A role played by an individual or enterprise that can furnish or provide products or services to the subject enterprise.
<b>Technology</b>	An influence that is caused by (typically, changing) technology — that is, the things that technology requires or will not allow to be done.

This list of External Influences is not necessarily exhaustive. The enterprise may choose to add additional types or even introduce its own categorization scheme (i.e., the list above is totally replaceable).

Also, these types are not necessarily mutually exclusive. A particular instance of External Influence actually may be classified as more than one of these types.

Examples of External Influence include the following:

	<b>External Influence</b>	<b>Influence Category</b>
EU-Rent	<i>Emission control regulations in Country-A.</i>	Environment, Regulation
EU-Rent	<i>Vehicle identification and tracking systems.</i>	Technology
EU-Rent	<i>A major competitor in Region-Y went bankrupt.</i>	Competitor
Pizza Company	<i>"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."</i> -- IRS 1999 1040 Forms and Instructions 1999 Instructions for Schedule C, Profit and Loss from a Business Part II. Expenses, p. C-3	Regulation

### **Internal Influence**

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

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

This list of Internal Influences is not necessarily exhaustive. The enterprise may choose to add additional types or even introduce its own categorization scheme (i.e., totally replaceable).

Also, these types are not necessarily mutually exclusive. A particular instance of Internal Influence actually may be classified as more than one of these types.

Examples of Internal Influence include the following:

	Internal Influence	Influence Category
EU-Rent	<i>EU-Rent is hierarchical, for both management authority and movement of information.</i>	Infrastructure
EU-Rent	<i>Clerks — high turnover, variable quality.</i>	Resource Quality
EU-Rent	<i>Branch managers — low turnover, high quality.</i>	Resource Quality
E-Business Company	<i>Short lunch hours.</i>	Unstated Corporate Value
Accounting Company	<i>Regional managers have considerable latitude.</i>	Management Prerogative

## 4.2 Assessing the Impact of Influences on Ends and Means

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

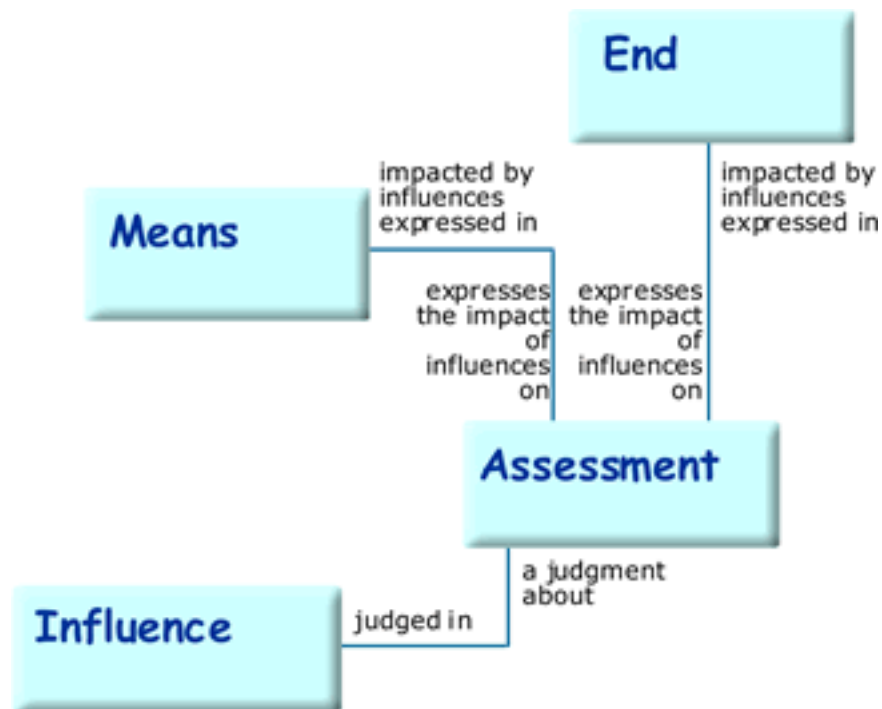


Figure 13: Concepts for Assessments of Influences on Ends and Means

If an Assessment is connected both to an Element of Guidance and a Desired Result (via their respective relationships for "*expresses the impact of influences on*") then this suggests that

particular Element of Guidance is somehow related to that particular Desired Result. If the Element of Guidance is not already connected to the Desired Result (via "*supports the achievement of*") then careful consideration should be given to that omission.

## Assessment

An Assessment is *a judgment about* some Influence 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) between Influences and the Ends and Means of the business plans. In this way, an Assessment indicates which Influences are relevant to which Ends and Means.

Clearly, different people might make different Assessments of the very same Influences on the very same Ends and Means — and perhaps even the same person at different points in time. It is very important to know which person makes which Assessment of an Influence at which point in time. In making Assessments, it is useful to document who *makes* the Assessment and at what point in time, so that an audit trail exists for future reference. This, of course, cannot always be mandated.

After an Assessment has been made, it can *provide the impetus for* the Business Policies that govern the Means and Ends. In fact, an Influence may lead to the creation of a Business Policy *only* through an Assessment having been made.

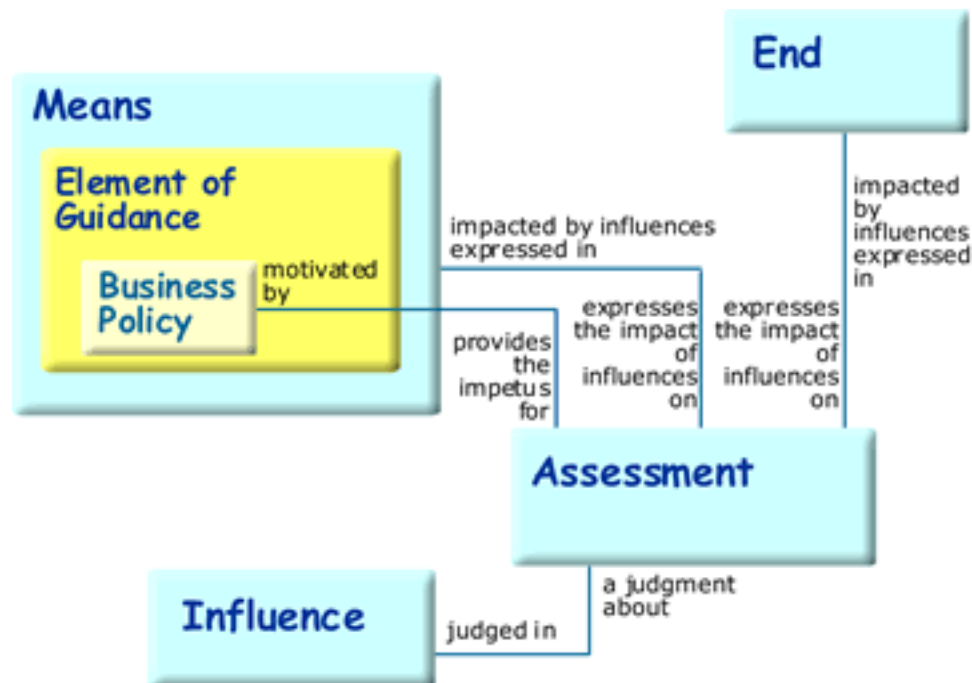


Figure 14: Assessment and Business Policy

This has the following implications. If it seems that a Business Rule can be derived directly from a statement, then the statement is more likely to be a Business Policy than an Influence. This is because Influences are always neutral in and of themselves, and must be assessed to determine implications for the business plans. 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." No Assessment needs to be made. Therefore, the statement is a Business Policy rather than an Influence.

### Types of Assessment

Assessment concepts come in the following varieties:

- Strength
- Weakness
- Opportunity
- Threat



Figure 15: Types of Assessment

### **Strength**

This type of Assessment indicates some advantage or area of excellence within the enterprise that can impact its employment of Means or achievement of Ends. For example, the Resource Quality of EU-Rent's branch managers is assessed to be a Strength for its Tactic: "Build branch networks outward from business centers."

### **Weakness**

This type of Assessment indicates some area of inadequacy within the enterprise that can impact its employment of Means or achievement of Ends. For example, the age and mix of EU-Rent's Technology and Infrastructure is assessed to be a Weakness in its Strategy: "Promote EU-Rent in the market as the car rental company for business users."

### **Opportunity**

This type of Assessment indicates that some Influence 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."

### **Threat**

This type of Assessment indicates that some Influence can have an unfavorable impact on the organization's employment of Means or achievement of Ends. For example, the Environmental Influence that anti-car political groups are active in country-A has been assessed to be a Threat to EU-Rent's Objective: "By year-end, be number 3 in country-A."

## Impact Value

An Assessment records judgments about the impact (or potential for impact) of some Influence on Ends and Means in terms of Impact Values. In other words, an Assessment's impact is *evaluated in terms of* its Impact Values. Each Impact Value is an evaluation that quantifies or qualifies some aspect of an Assessment in specific terms, types, or dimensions. In this way, it is one *characteristic of* the Assessment.



Figure 16: Assessment and Impact Values

### Types of Impact Value

Impact Value concepts come in two varieties, 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 type of Impact Value that indicates the impact and probability of loss. Some Risks are expressible as formulae of the type:

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

For example, EU-Rent's assessed Weakness is judged to represent a Risk, quantified in terms of probability that business users will not find its Strategy credible. EU-Rent's assessed Threat is judged to represent a Risk, quantified in terms of potential loss of vehicle rental days from damage by anti-car activists.

***Potential Reward***

A Potential Reward is a type of Impact Value that indicates the impact and probability of gain. Some Potential Rewards are expressible as formulae of the type:

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

For example, EU-Rent's assessed Strength is judged to offer a Potential Reward of increased ease of staff recruitment when a new branch is opened. EU-Rent's assessed Opportunity is judged to offer a Potential Reward that it can reach its Goal faster. On the other hand, this same Opportunity is judged to represent a Risk because EU-Rent could fail for the same reasons that drove its competitor into bankruptcy.



## 5. The Business Rule Motivation Model in Context

John Zachman has provided a useful context for discussing the architecture of an enterprise. His 'Framework for Enterprise Architecture' is a matrix that describes the various ways the stakeholders of an enterprise view the business and its systems.<sup>7</sup> It characterizes *architecture* in terms of the perspectives of the different stakeholders (represented by rows in the matrix) and focuses on the different aspects 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).

Continuing the approach used in the first document, the Group once again has used the Zachman Framework as a context for organizing our work. The material presented in this document addresses the sixth aspect (i.e., the *Motivation* or "Why" column) from the business *Owner's* perspective (i.e., *row two*).<sup>8</sup> In other words, the domain of the current effort is specifically the description of the motivation-related aspects of the enterprise business system. Our positioning in *row two* means that when we speak of *Business Rules* in this document we are describing elements involved in the definition and operation of the business — not its information systems or its technology.

### 5.1 Relationship to Other Aspects of the Business Model

The Group started with Zachman's "Why" column making the assertion that if an enterprise imposes a Business Rule, it ought to be able to say "why" — it ought to be able to state the *motivation*. But, as acknowledged at the beginning of this paper, motivation is just one aspect of a complete business model. So, while every effort was made to constrain the scope to this single abstraction, in some cases it was necessary to make selective reference to elements of other abstractions — specifically, to concepts of the "Who" column.

#### ***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).

Therefore, the Group felt it essential to be able to pin down the motivation more precisely. This led us to the need to document those parties who play some of the key roles with respect to *motivation*. It only makes sense, after all, that if you cannot find some responsible party you should be challenging the rules.

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<sup>7</sup> John A. Zachman, "A Framework for Information Systems Architecture," *IBM Systems Journal*, Vol. 26, No. 3, 1987.

<sup>8</sup> The Group's original document addressed the first and sixth aspects (that is, the *data* and *motivation* columns) from the *Designer's* perspective (that is, *row three*).

This is reflected in the Business Rule Motivation 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., Facts) include the following:

- An Organization Unit *defines* Ends.
- An Organization Unit *establishes* Means.
- An Organization Unit *recognizes* Influences.
- An Organization Unit *makes* Assessments.

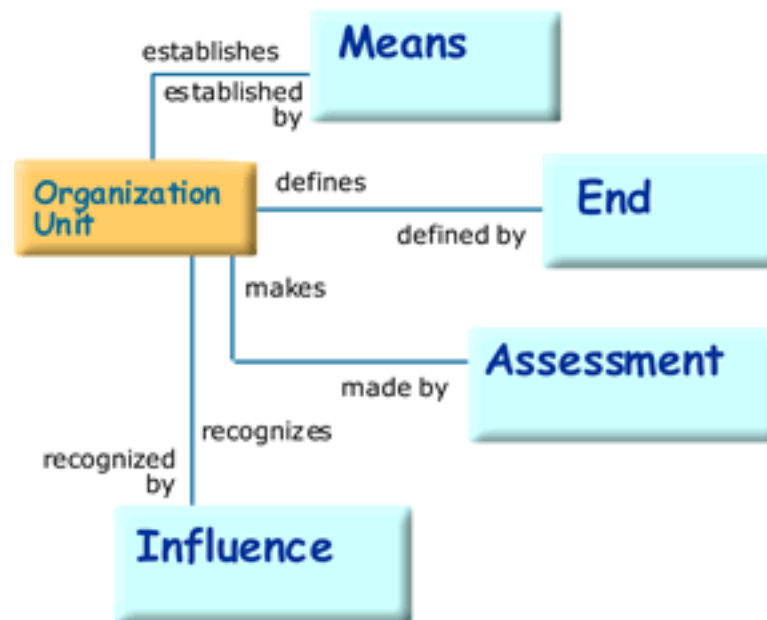


Figure 17: Organization Unit Roles

But, it is emphasized that the Organization Unit concept itself does not fall within the scope of the Business Rule Motivation Model; that concept remains a part of the "Who" aspect of the business model. For now, the following provisional definition for Organization Unit is offered: "An Organization Unit is any named group of people within the enterprise with a purpose and a budget."

Because this concept falls outside the scope of this paper, it should be treated as a *placeholder* for future development. The Group fully expects the above facts to evolve as the other aspects of a complete business model are addressed.

## 5.2 Additional Aspects of the Business Model

Other aspects and additional connections are beginning to emerge as areas of interest for future work. For example, there is the "Where" aspect — the application of rules in different places (including differences that need to be accommodated in globalization of the enterprise). Another is the management of rules over time.

To expand on the "being-doing" relationships between Ends and Means, the "How" column needs to be considered. Furthermore, many of the Business Rules refer to the "What" column; in EU-Rent, these would be the cars, customers, rental branches, servicing facilities, etc. — all things important to the business perspective.

These are not independent areas of study. Workflow to accomplish the same Ends may be different in different types of location. Management of rules over time is important to performance assessment and improvement, but it also addresses other issues as well, such as response to changes in Influences. The Group anticipates continuing to find the Zachman Framework useful in defining and managing this work.

## 5.3 The Metrics of the Business Model

Implicit in many areas of the model is the subject of metrics. In almost all organizations there are "things of interest" that are heavily measured and tracked. 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 the Goals of the enterprise. 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."

The example Goals presented earlier have been extended to illustrate measures of performance:

	Goal	Measure(s) of Performance
EU-Rent	<i>To provide industry-leading customer service.</i>	<i>market share</i>
EU-Rent	<i>To provide well-maintained cars.</i>	<i>quality of product</i>
EU-Rent	<i>To have vehicles available for rental when and where customers expect them.</i>	<i>usage % order fulfillment</i>
Pizza Company	<i>To deliver pizzas in an expedient amount of time.</i>	<i>elapsed time</i>
Consulting Company	<i>To improve customer satisfaction (over the next five years).</i>	<i>customer satisfaction</i>
Publishing Company	<i>To improve customer satisfaction (over the next five years).</i>	<i>customer satisfaction</i>
E-Business Company	<i>To have more customers than any other e-business.</i>	<i>market share</i>

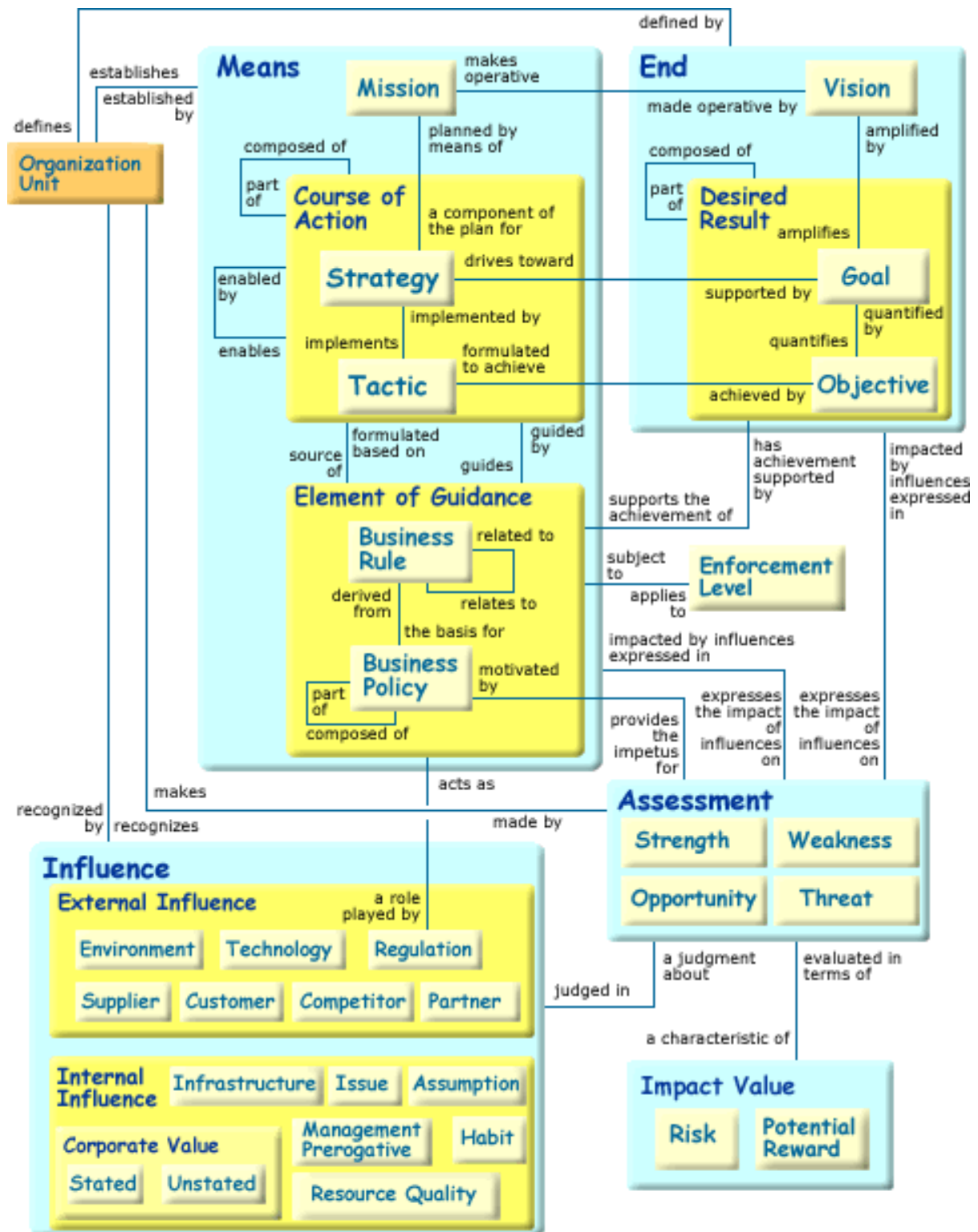
Objectives should always be measurable. Therefore Objectives, by definition, will have metrics. The metrics for an Objective are established by the measures of performance of the Goal that the Objective quantifies. To be able to do this, an appropriate unit-of-measure for the metric must be determined 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 Impact Values. Without thoughtful and careful identification of appropriate metrics, the Risk/Potential Reward evaluation becomes meaningless.

If a metric is particularly important, it may attain a special status and be called a *Key Performance Indicator* (KPI) or a *Critical Success Factor* (CSF) — or something else. The exact terms of identification are not the important issue. What is important is that the enterprise will decide on many different things to be measured. In fact, if the Zachman Framework is used, it is possible to identify important "things" to be measured in virtually every cell. Each of these measurements will have differing degrees of importance relative to the attainment of some Objective or set of Objectives. The fact that the enterprise has decided to measure, evaluate, and act on the results of the metrics is what is important.

## Appendix A

## Business Rule Motivation Model Diagram



## Appendix B

# Concepts Catalog

### Assessment

is a judgment that an Influence affects the employment of Means or the achievement of Ends.

Types of Assessment include:

- Strength
- Weakness
- Opportunity
- Threat

An Assessment ...

- expresses a logical connection between Influences and the Ends and Means of the business plans. Specifically, it ...
  - expresses the impact of Influences on Ends and/or Means.
  - is a judgment about Influences.
- provides impetus for Business Policies.
- is evaluated in terms of Impact Values.
- must be made by at least one Organization Unit.

Additional constraints:

- If an Assessment is related to both a Means and an End, those End and Means must be related to each other.

### Assumption

is an Internal Influence that is taken for granted or without proof.

### Business Policy

is an Element of Guidance that is a statement (or set of statements) whose purpose is to guide the enterprise.

Compared to a Business Rule, a Business Policy tends to be:

- less structured.
- less discrete or not atomic.
- less carefully expressed in terms of standard vocabulary.

Its formulation is under the enterprise's control by a party authorized to manage, control, or regulate an enterprise, by selection from alternatives in response to a combination of Assessments.

A Business Policy ...

- is the basis for Business Rules.
- is motivated by Assessments.
- may be composed of other Business Policies.
- may be part of other Business Policies.

## Business Rule

a directive, intended to influence or guide business behavior, in support of Business Policy that has been formulated in response to an Opportunity, Threat, Strength, or Weakness.

It is a single Element of Guidance that does not require additional interpretation to undertake Strategies or Tactics.

A Business Rule is:

- highly structured.
- discrete or atomic.
- carefully expressed in terms of standard vocabulary.

A Business Rule ...

- is derived from Business Policy.
- may relate to other Business Rules.
- may be related to by other Business Rules.

Business Rules may be related to each other in the following ways:

- duplicates (might duplicate)
- establishes enforcement scope for (extends)
- exception to
- in conflict with
- interpreted from
- replacement for
- replicates
- semantically equivalent to
- similar to
- subsumes
- supports
- etc.

This paper examines Business Rule from a *business* perspective (i.e., the Owner's perspective -- row 2 in the Zachman Framework). This definition reflects that perspective. The Group's earlier paper examined Business Rule from an *information system* perspective (i.e., the Designer's perspective -- row 3 in the Zachman Framework). The definition stated there reflects that perspective. The Group maintains that both definitions are necessary and useful -- and that there is no inconsistency between them.

## Competitor

is an External Influence that is a rival enterprise in a struggle for advantage over the subject enterprise.

**Corporate Value**

is an Internal Influence 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.

**Course of Action**

is a 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.

Types of Course of Action include:

- Strategy
- Tactic

A Course of Action ...

- is guided by Elements of Guidance.
- may be formulated based on Elements of Guidance.
- may enable other Courses of Action.
- may be enabled by other Courses of Action.
- may be composed of other Courses of Action.
- may be part of other Courses of Action.

Additional constraints:

- The related (enables/enabled by) Courses of Action must be of the same type.
- The related (composed of/part of) Courses of Action must be of the same type.

**Customer**

is an External Influence that is a role played by an individual or enterprise that is a prospect, or has ordered, received, or paid for products or services from the subject enterprise.

**Desired Result**

is an End that is a state or target that the enterprise intends to maintain or sustain.

Types of Desired Result include:

- Goal
- Objective

A Desired Result ...

- may have its achievement supported by Elements of Guidance.
- may be composed of other Desired Results.
- may be part of other Desired Results.

Additional constraints:

- The related (composed of/part of) Desired Results must be of the same type.



**Element of Guidance**

is a Means that is a declarative statement (or set of such statements) that defines or constrains some aspect of an enterprise. It is intended to assert business structure or to control or influence the behavior of the enterprise.

Types of Element of Guidance include:

- Business Policy
- Business Rule

An Element of Guidance...

- guides Courses of Action.
- may be the source of Courses of Action.
- supports the achievement of Desired Results.
- is subject to an Enforcement Level.
- may act as some other Organization Unit's Regulation.

**End**

is a statement of what is to be accomplished.

Types of End include:

- Vision
- Desired Result

An End ...

- may be impacted by Influences, expressed in Assessments.
- must be defined by at least one Organization Unit.

**Enforcement Level**

is a position in a graded or ordered scale of values that specifies the severity of action imposed in order to put or keep a Business Rule or Business Policy in force.

An Enforcement Level ...

- applies to Elements of Guidance.

Value list:

- strictly enforced -- if you violate the rule, you cannot escape the penalty.
- 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.
- post-justified override -- if not approved, you may be punished.
- override with explanation -- comment must be provided with violation.
- guideline -- not enforced.

**Environment**

is an External Influence that is the aggregate of surrounding conditions or influences affecting the existence or development of an enterprise.

**External Influence**

is an Influence outside an enterprise's organizational boundaries that can impact its employment of Means or achievement of Ends.

Types of External Influence include:

- Competitor
- Customer
- Environment
- Partner
- Regulation
- Supplier
- Technology

**Goal**

is a statement about a state or condition of the enterprise to be brought about or sustained through appropriate means.

Compared to an Objective, a Goal tends to be:

- ongoing.
- qualitative (rather than quantitative).
- general (rather than specific).
- longer term.

A Goal ...

- amplifies at most one Vision.
- is supported by Strategies.
- is quantified by Objectives.

**Habit**

is an Internal Influence that is a customary practice or use.

**Impact Value**

is an evaluation that quantifies or qualifies an Assessment in specific terms, types, or dimensions.

Types of Impact Value include:

- Potential Reward
- Risk

An Impact Value ...

- is a characteristic of an Assessment.

**Influence**

is the act, process, or power of producing an effect without apparent exertion of tangible force or direct exercise of command, and often without deliberate effort or intent.

Types of Influence include:

- External Influence
- Internal Influence

An Influence ...

- is judged in Assessments.
- is recognized by Organization Units.

**Infrastructure**

is an Internal Influence that is the basic underlying framework or features of a system.

**Internal Influence**

is an Influence from within an enterprise that can impact its employment of Means or achievement of Ends.

Types of Internal Influence include:

- Assumption
- Corporate Value
- Habit
- Infrastructure
- Issue
- Management Prerogative
- Resource Quality

**Issue**

is an Internal Influence that is a point in question or a matter that is in dispute as between contending partners.

**Management Prerogative**

is an Internal Influence that is a right or privilege exercised by virtue of ownership or position in an enterprise.

**Means**

is a device, capability, regime, technique, restriction, agency, instrument, or method that may be called upon, activated, or enforced to achieve Ends.

Types of Means include:

- Mission
- Course of Action
- Element of Guidance

A Means ...

- is established by Organization Units.
- may be impacted by Influences, expressed in Assessments.

**Mission**

is a Means that is the ongoing operational activity of an enterprise.

A Mission ...

- makes operative at most one Vision.
- is planned by means of Strategies.

**Objective**

is an End that is a statement of a specific time-targeted, measurable, attainable target that an enterprise seeks to meet in order to achieve its Goals.

Compared to a Goal, an Objective is:

- short-term.
- not continuing beyond its timeframe (which may be cyclical).

An Objective ...

- quantifies a Goal. (It provides the basis for measures to determine that the Goal is being achieved.)
- is achieved by Tactics.

**Opportunity**

is an Assessment that an Influence can have a favorable impact on its employment of Means or achievement of Ends.

**Organization Unit**

is an organization that is part of another organization (with an Organization being "a named group of people with a purpose and a budget").

An Organization Unit ...

- may define Ends.
- may establish Means.
- may make Assessments.
- may recognize Influences.

**Partner**

is an External Influence 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.

**Potential Reward**

is an Impact Value that indicates the impact and probability of gain.

Some Potential Rewards are expressible as formulae of the type:

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

**Regulation**

is an External Influence that is a rule or order prescribed by an authority such as a government body or the management of an enterprise.

A Regulation ...

- may be a role played by an Element of Guidance (e.g., policy or rule made by senior management may be obeyed as regulation lower down in the organization).

**Resource Quality**

is an Internal Influence that is implicit in the quality of the resources available for carrying out the business of an enterprise.

**Risk**

is an Impact Value that indicates the impact and probability of loss.

Some Risks are expressible as formulae of the type:

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

**Stated Corporate Value**

is a Corporate Value that is explicitly set forth and declared as fact.

**Strategy**

is a Course of Action that is one component of a plan for a Mission.

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

Compared to a Tactic, a Strategy tends to be:

- longer-term.
- broader in scope.

A Strategy ...

- is a component of the plan for a Mission.
- drives toward Goals.
- is implemented by Tactics.

**Strength**

is an Assessment that an Influence indicates an advantage or area of excellence within an enterprise that can impact its employment of Means or achievement of Ends.

**Supplier**

is an External Influence that is a role played by an individual or enterprise that can furnish or provide products or services to the subject enterprise.

Synonym: Vendor

**Tactic**

is a Course of Action that represents part of the detailing of Strategies.

Compared to a Strategy, a Tactic tends to be

- shorter term.
- narrower in scope.

A Tactic ...

- implements Strategies.
- is formulated to achieve Objectives.

**Technology**

is an External Influence that is caused by (typically, changing) technology. There are things that technology requires or will not allow to be done.

**Threat**

is an Assessment that an Influence can have an unfavorable impact on its employment of Means or achievement of Ends.

**Unstated Corporate Value**

is a Corporate Value that is not explicitly declared but understood by some or all of the people in an enterprise.

**Vision**

is an End that is a statement about the future state of the enterprise, without regard to how it is to be achieved.

A Vision ...

- is made operative by Missions.
- is amplified by Goals.

**Weakness**

is an Assessment that an Influence indicates an area of inadequacy within an enterprise that can impact its employment of Means or achievement of Ends.

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