Getting Results with the Object-Oriented Enterprise Model

by

Thornton Gale and Jim Eldred

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PREFACE

This book is about a process for establishing and maintaining a competitive, results-optimizing view of an enterprise — an *Object-Oriented Enterprise Model.* We have observed a basic need for an enterprise planning and leadership process reflecting the realities of the dramatically changing environments within which enterprises must operate. Current business planning environments are, in the main, mechanisms for justifying budgets and organizational structure within enterprises. They are almost always focused on the internal processes and operations of the businesses themselves. Consistency between any vision, a competitive strategy, and the current plan is spotty if it exists at all.

It should be clear that fundamental business planning must center on what is occurring in the global environment and on how an enterprise should best relate to, contribute to, and benefit from that environment. Businesses, like all individual enterprises, need to focus on the world in which they exist more than upon themselves. Doing so requires a planning and leadership discipline which is a match for the complexities of today's competitive world.

The Nature of the Leadership Need

Enterprise planning and leadership don't need additional technology or tools to ingest information and generate directives to action. There are more than enough tools (though there could always be better ones) for performing specific tasks within the domain of leadership and planning (we use "planning" here in the context of "vision" — that which establishes, characterizes, and "instantiates" some desired future and which does so in a logical, convincing, and compelling manner). What is lacking in enterprise planning and leadership, is an approach that provides landmarks and guidelines for navigating through the myriad competing enterprise "issues" and "solutions." Every business leader is beseiged by petitions to fund potential solutions originated from some narrow segment of the enterprise, but which promise to solve all of its problems. "Buy this approach to information systems and it will increase shop floor productivity, improve morale, increase sales, and drive profits through the roof.

Buy another approach to business process design and regenerate your business — claiming just the same results."

What we need, then, is a framework for applying the appropriate tools, methods, and procedures — a structure within which the changing value conditions of the business environment can be effectively managed. We require a structure which helps to identify these value conditions, establish — and then retain — their appropriate meanings, influences, and interrelationships. That structure is a process — a "system" as defined in our theoretical foundations — for thinking about the future and for compelling others to bring that future to reality.

This process must reflect the pragmatics of geo-politics, global economics and competition, as well as the utility of technology. We need a tool set which helps us to abstract from the most strategic and conceptual — competitive industry and market positioning strategies — to the most discrete levels of business operations — process use cases. Such a tool must also tangibly retain and reflect high-level esoteric business drivers and strategies for subsequent application to increasingly discrete and tactical planning (and ultimately operational) levels.

Such an approach provides a leadership system encompassing the global market, industry, and socio-political value systems within which an enterprise operates as well as effectively supporting the internal value-adding system that makes up the enterprise itself.

A Systemic Solution

A planning method or tool can be considered from two perspectives: One — from the point of view of the scope and nature of the elements and factors being used to plan; and two — from the perspective of the components of planning itself and how they are organized in order to achieve enterprise leadership. This section discusses some of both but is primarily focused upon presenting the appropriate content and context for visioning, planning, and leading an enterprise.

The motivating concept for this book might be distilled down to the following:

> *"To instantiate a vision of a future state — to make it reality — requires that the vision be abstracted into concepts, terms, and semantics which are understandable to and manageable by those who will implement it ... and*

that if this is so, the concepts and principles of General Systems Theory, and of the Object-Oriented paradigm should most efficiently support the requirements of abstraction."

Making vision into reality requires the following three things:

- that specifics of the concept or future condition can be articulated and communicated ubiquitously within the enterprise
- that the future state specifics be correlated with current state specifics in order to enable creation of a plan for achieving the vision
- that information about specific implementation actions and resources called for in the plan be articulated and communicated effectively within the enterprise

Translating this to the venue of business, tangible relationships and dependencies between the following elements must be established and maintained:

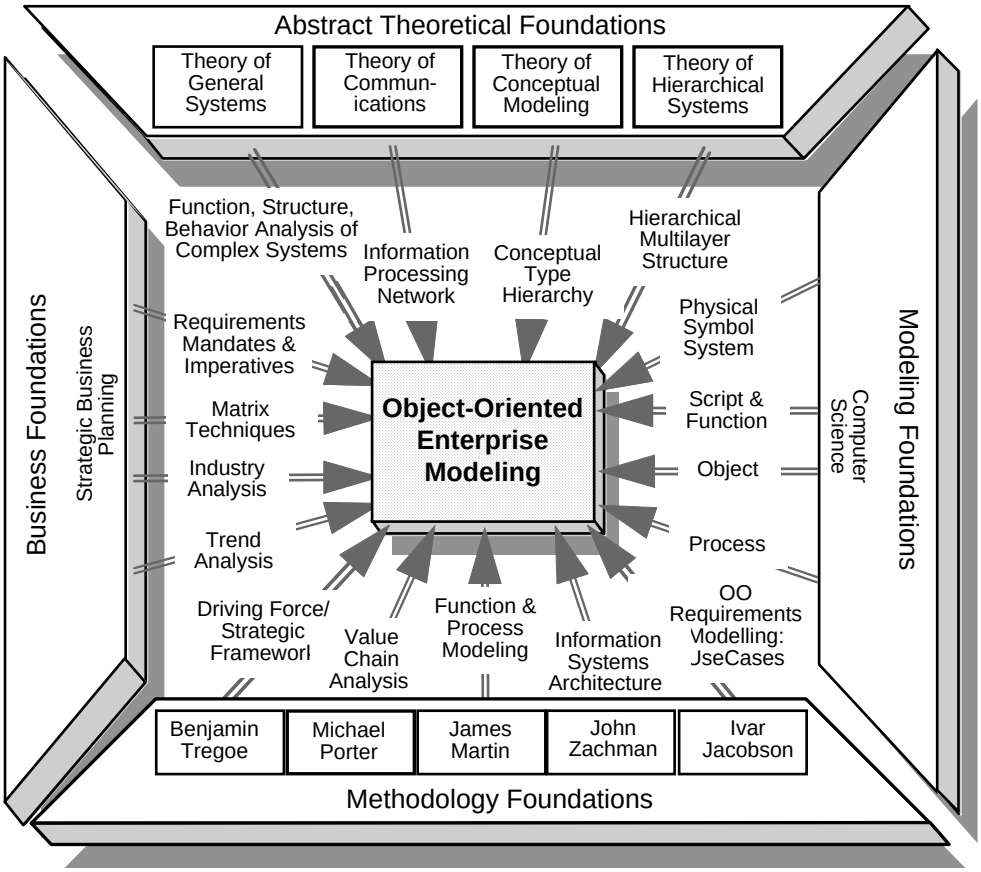
- the definitive elements of the desired business future (business vision)
- the critical competitive success factors (business imperatives)
- the industry and market positioning strategies (external strategy)
- operating strategies (implementation and operating plans).

The Relationships Between Values and Process

While this work speaks frequently from the perspectives of "vision" and "planning," please keep in mind that what we present here is an approach to developing a model of an enterprise. The vision and planning perspectives are used liberally because, to the authors, they are the essence of what a model must reflect and communicate. Our working definition of a "model" is "an artifact that describes or represents an entity or state of affairs that cannot be observed directly or completely." Such an artifact may represent the external relationship of some elements or parts within an entity, but it will always be incomplete — that is it will leave room for speculation — as to the reasons and values behind those inter-relationships. Therefore, the artifact lacks the ability to help definitively in the repair and/or alteration of the relationships. However, by including as many "values" as possible in the model and providing a method that relates values to choices in structure, function, and behavior, the artifact combined with the process can provide significant help in determining such repairs and/or alterations to and/or among elements.

The Object-Oriented Enterprise Modeling method proposed in this book is designed to develop an artifact which is as complete as possible in all respects. The methodology and the resulting model are intended to be tools which are implementable, operable, and changeable. So, while these tools are critical to planning and reflect the approaches and content necessary for effective planning, the tools do not contain or represent all that is necessary in the visioning and planning processes. Please don't confuse Object-Oriented Enterprise Modeling with "planning."

Blending Disparate Disciplines and Experience



Our approach to establishing and communicating a leadership framework is a model; a model that allows abstraction of an entire enterprise; as a whole, in part(s), and at its most basic elements. The process and concepts associated with the modeling methodology developed in this book result from holistic consideration of four disparate intellectual areas. *Object-Oriented Enterprise Modeling* borrows from, integrates, and synergizes existing theoretical work in these diverse areas. The four areas are represented in the following figure and include:

- Business Foundations: competitive business fundamentals
- Theoretical Foundations: abstract theory from formal academic disciplines
- Modeling Foundations: computer science and object-oriented theory
- Methodology Foundations: proven methods and procedures from leading experts

People whose works and ideas have most significantly influenced our work include:

Business Foundations	Industries & Markets	Stanley Davis Michael C. Porter Benjamin Tregoe Lester Thurow
	Strategy & Vision	Kenichi Ohmae Michael C. Porter Peter Senge
	General Management	Joel Barker Peter F. Drucker

Theoretical Foundations	General Systems Theory	Nic Kramer Jacob de Smit John Sutherland
	Theory of Communications	Claude Shannon Warren Weaver
	Conceputal Modleing	John Sowa William Tepfenhart Heather Pfeiffer Robert Hartley Eileen Way Allen Newell Herbert Simon
	Theory of Hierarchical Systems	M. D. Mesarovic D. Macko Y. Takahara Steven Kim

Modeling Foundations	Physical Symbol Systems	Allen Newell Herbert Simon
	Scripts and Functions	Allen Newell Herbert Simon
	Object-Oriented Paradigm	David Taylor Grady Booch Ivar Jacobson
	Processes	B. Curtis M. I. Kellner J. Over F. B. Vernadat P. J. Russel

Methodology Foundations	Value Chain Analysis	Michael Porter
	Function/Process Modeling	James Martin
	Driving Force/Strategic Framework	Benjamin Tregoe
	Information Systems Architecture	John Zachman
	Object-Oriented Requirements	Ivar Jacobson

We don't pretend to represent the thoughts and ideas of these individuals. Rather, we attempt to convey the influence that their combined works has had upon our thinking, upon the logical development of our work, and on the interpretation of our experiences in that work. Any errors in logic or fact regarding their works that the reader might conclude from the reading of this book should be attributed to our misinterpretation or miscommunication of their works. Any serious student of the environment to which *Object-Oriented Enterprise Modeling* is applied should make it a point to study the ideas and concepts from the works of these individuals.

It's Not the Methodology — It's the People . . . !

Finally, while we are saying a great deal about an approach and methodology for developing an enterprise model, we must admit that, in the end, this and all methods are futile without effective people making them work. It is our very real experience that empowering an appropriate collection of individuals is critical to the actual creation of an artifact representing what and/or how an enterprise does or should operate. While a methodology should be of great help to such a group, it is not sufficient in itself to ensure success. The individuals of the established team must be expected to — and be allowed to — make decisions regarding the rational, values, and processes of the enterprise.