CLIMBING THE LADDER OF BUSINESS INTELLIGENCE

By James E. Cates, Sam S. Gill, Natalie Zeituny

Enabled Intuition
Understanding
Knowledge
Information
Data
Facts

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“Climbing the Ladder of Business Intelligence”
Book Excerpt

Happy About Creating Excellence through Enabled Intuition

By James E. Cates, Sam S. Gill and Natalie Zeituny

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Chapter 1

Introduction

What is it about some companies? Year in, year out, their performance just seems to get better and better. Occasionally they stumble, but then come back stronger than ever. They’re not hard to find. All you need to do is read the headlines:

“GE predicts double-digit growth for 2007.”
“Apple Tops Business Week list of Innovative Companies.”
“Southwest Carries More Passengers than Any Other U.S. Airline.”

These companies seem to play in a different league than others. It’s like watching the New York Yankees play a minor league baseball team.

In addition to being easy to find, the qualities that make these big league players successful are easy to define. They’re fast-moving, aligned, proactive and innovative. We would also call them “intelligent.” They make effective decisions, they anticipate or create market trends and they optimize all their resources, especially the unique skills of each individual. They use information technology skillfully.
So, we know who these winners are and what qualities they have. The next obvious question is: “How did they get there?” Or, perhaps more to the point: “How can my business get there?” This is what this book is about. It’s about how to create an Intelligent Business, one that is smart, innovative and profitable. What we’re offering is not incremental change, but transformation at the organizational level.

We encourage you to aim high. The concepts in this book are designed to create a business fully capable of operating in any league. A careful look at highly successful companies shows that they won’t settle for anything less than excellence in all their activities. Why should you?

**How**

So, how does one go about creating an intelligent business? For most companies, it’s by a process of trial and error. Highly successful companies have arrived at their own unique methods of reaching the top. These businesses may have succeeded, but the path of trial and error is littered with failures and also-rans. In today’s demanding business environment, this path is no longer a viable option.

What we’re offering here is a guidebook to creating an organization that employs all its resources in an intelligent manner. We have developed a set of guiding principles called the Ladder of Business Intelligence. As an organization adopts and employs these principles, the Ladder becomes a framework around which a business can grow its intelligence.

This is a step-by-step process, as you can see from the diagram of the Ladder. As an organization climbs higher, it employs all its resources more skillfully.

Let’s take a brief look at the various steps on the Ladder.
Level 1
Facts represent the recording of an event or measure in the “real” world. Imagine a bulletin board with a number of post-it notes. Each of these notes contains certain facts, but they are totally unorganized. If you want to find facts in a certain category—say, automobiles for sale—you will have to search across the entire board.

Level 2
Data is composed of organized facts. Imagine that the bulletin board has now been organized into categories: each note has been placed in a labeled section of the board. Your search for a car has now become simpler, but you still have to search through all the postings for autos.

Level 3
Information is data that has been organized to answer a specific question. For example, there are now a number of Web sites where you can fill in the details about the kind of car you want. The site will then present you with a number of choices from sellers. Forget the
Because your search has been automated, it has become much simpler and less time consuming. You now have the information you need to make a good decision on buying a car. Translated to a business environment, it means freedom from searching through scores of spreadsheets for bits of data. Instead, the information technology organizes facts and data according to the questions you need answered. A sales manager, for instance, might have the total sales for the last three months available on her display device. This enables her to view trends and take action accordingly.

Level 4  
Knowledge consists of information and the derived rules on how to use the information. It includes best practices and knowledge about trends and behavior.

Level 5  
Understanding is knowledge that is shared. It refers to the alignment that occurs throughout an organization when company visions, strategies, and rules are shared and understood at all levels.

Level 6  
Enabled Intuition is a higher level of understanding that facilitates decision makers to intuitively choose the right course of action that will benefit the business in any situation. With enabled intuition decision making is refined to an art.

The majority of businesses operate at Levels 1 and 2, with people struggling to gather facts and data and interpret them. Not only do they have to search for the data, they then have to organize it into a form that allows to them make an effective business decision.

At Level 3, the task of sorting through the data and organizing is performed by the information system. The information is then displayed on command to the individual that needs it.
We define Information as something that enables an intelligent decision and subsequent action.

As an example, at Level 2, the sales manager might have a figure for sales to Customer A for the month of August. This is a potentially useful piece of data, but there is no business context in which to place it. At Level 3, the manager is presented with sales to Customer A for the last three months, showing a decline during that period. This automated organization of data—this information—enables the manager to take immediate action.

As an organization becomes more skilled at turning facts and data into useful information, decision making is enhanced at all levels. Each individual is able to act more swiftly and with greater certainty that his or her decisions will move the company in the direction of its objectives. In addition, since information is disseminated among all players in any business process or project, communication and collaboration are also enhanced. This means, for example, that our sales manager will have plenty of informed people ready to help her address the situation with Customer A.

In an intelligent business, the right information is delivered to the right people at the right time.

**Information as Answers**

If we can agree that having key information delivered to your display device is a powerful asset, the next question might be: How does one create that key information? In the Ladder framework, the answer is, by asking the right questions.

Most of us have been trained in school to answer questions. Information is given to us and then we are asked to answer questions about this information. Getting good at asking questions, however, can
be a powerful way of learning. These should be insightful questions—the kind that produce significant answers. Asking insightful questions is one of the key steps to creating an intelligent business.

Later in the book, we’ll devote an entire section to the process of asking the right questions. Right now, let’s summarize that process.

At a certain point in the Ladder framework, each decision maker is asked to clarify his or her business role, with the help of his or her team. What are the specific objectives, activities and processes that this role is accountable for? What processes are involved in reaching his goals? Then, he is asked to formulate five to ten questions that he needs answered in order to perform his job better. What information does he need to appear on his display device every day, every week or every month?

Our sales manager, for example, would probably ask for a total monthly sales figure—a summary of regional sales figures. She would also like to see how this figure compares to previous months, as well as how it compares to projections made at the beginning of the fiscal year. Access to figures like these will give her the information she needs to make intelligent, timely decisions.

After each decision maker has formulated his or her questions, the Information Technology experts choose the right software applications to provide the correct information views for each business role.

Creating Good Information

Good information is created by implementing models that produce useful answers to insightful questions. The value of the resulting information is directly proportional to the business impact of the decision that has been enabled.

Therefore, we must all become very good at asking the right questions. If we ask the right questions, profits will follow. If we ask trivial questions, then the resulting information will have little impact on the business.
Creating a New Organizational Nervous System

The creation and management of information is essentially the nervous system of an organization. A nervous system—whether biological or organizational—has a number of tasks. Among the most important are:

- Reporting key events in the external environment and filtering out nonessential data
- Monitoring the internal environment
- Deciding on responses to external and internal conditions
- Coordinating the organism or organization to act
- Creating a knowledge base for future action

Speed and focus are the keys to successful reporting and coordinated action. Speed, because both the natural world and the business world require rapid responses, and focus because it’s necessary to filter out extraneous data and present only critical information.
When an organization is able to create, retrieve, store and share information effectively, a better organizational nervous system has been created. A successful system enables effective business decisions, seamless communication, proactive management of processes and projects, the creation of a knowledge base and real organizational alignment.

**Nervous Systems**

The creation, retrieval, storage and dissemination of information make up the nervous system of an organization. The Ladder provides a framework for a new organizational nervous system—one that more closely resembles the exquisite systems of humans and animals.

In nature, survival depends on the ability to respond to an opportunity or a threat in a rapid and coordinated manner. This means that the control and feedback between the brain and the body must be almost instantaneous. For example, a rabbit escaping from a fox must speedily coordinate its entire body to evade the predator.

A business needs to imitate these neural feedback loops. It has to have a nervous system that smoothly connects a strategy to daily operations and decisions, just as the biological system coordinates the different organs and limbs of the body. When every business unit is aware of the overall direction and strategy of the company, then each decision they make will be, by definition, intelligent and aligned. These decisions will also be swift.

Luckily, these abilities do not need to evolve over millennia, but can be acquired in a relatively short time. An organizational nervous system is a combination of human and machine intelligence acting in concert. The Ladder provides a framework for this happy collaboration.
People, Process and Technology

When the new nervous system is in operation, a business is able to optimize all its resources, especially the most valuable ones like:

- **People.** An intelligent business employs human intelligence to its fullest capacity. People are skilled at envisioning and figuring out how to make the visions come true. When they are relieved of doing work better done by machines (like searching for and organizing data), people are free to exercise their intelligence and creativity.

- **Process.** An intelligent business has a first-rate infrastructure. Transforming visions into competitive products and services requires seamless, but flexible, business processes.

- **Technology.** Smart businesses make optimal use of business technology. These businesses use the right information to enable effective decision making, communication and collaboration.

People, Process and Technology: Here’s a trio that you will see throughout this book. The Ladder framework enables organizations to streamline these key resources—their People, Processes and Technologies—and optimize the level of automation in the creation and
use of information. This creates a powerful infrastructure able to employ all its resources in bringing ideas to the marketplace smoothly and efficiently.

The key points in the three circles are the areas where they intersect. These are the places where People, Process and Technology are operating in synch. When this happens, two more qualities of an intelligent organization can emerge:

• **Proactive.** An intelligent business is able to observe the progress of its processes and projects. This enables its decisions to be proactive rather than reactive in correcting and enhancing business processes.

• **Innovative.** A business employing all its resources in an intelligent manner is able to stay ahead of its markets and its competitors. It encourages and enables innovation at every level of the organization. It is never complacent, but always looking to the future.

By the end of this book, you should be very familiar with these qualities—and understand why they are key to the success of any business.

In addition, you may discover that you possess new skills:

• **Diagnosis.** You may find yourself able to evaluate the level of intelligence of your business and others. Are your decision-makers skilled at retrieving and employing key information to make smart decisions? Are you able to act quickly on the decisions? Is there general understanding and support of the corporate vision and goals? What about your competitors: what level have they achieved?

• **Next Steps.** Once you have diagnosed the strengths and weaknesses of your company, the next steps are likely to become clear. For example, if your evaluation places your business intelligence system at Levels 1 and 2, you will understand what you need to do to enable it to reach Level 3 where it will generate useful information.
• How to proceed. When you reach the final page of this book, you will have an overview of how to ascend to the top of the Ladder. In other words, you will understand what it takes to create a successful, intelligent business.

Step by Step, Chapter by Chapter
It's important to note that the creation of an intelligent business involves a step-by-step process. The sequential nature of the ascent up the Ladder is what makes it effective. Certain steps simply will not work unless the previous steps have been mastered. This book is laid out so that the sequence is clear.

Each Chapter Answers Key Questions
Chapters 1 and 2 answer the questions: What and why? What is this Ladder? Why should I be interested? What can it do for me? In Chapter 2, we'll take a look at two successful, highly intelligent businesses and discuss how the Ladder can help your business operate in the same league.

Chapters 3,4, 5 and 6 answer: How? How do you go about changing the way a company functions? How do you optimize the key resources of a business: its People, Processes and Technology?

Chapter 7 answers the question: What are the results? What have we attained? What are the differences between organizations at Levels 1 and 2 and those at Levels 3 and up?

Chapter 8 answers: Is all this absolutely necessary? In the 21st century, yes! The demanding economic environment, rigorous competition and regulatory requirements mean that a business must employ all its resources to their fullest extent.

Finally, Chapter 9 answers: What about the future? Will this Ladder framework continue to help us to grow and innovate?
The Intelligent Business

Our goal in this book is to describe the creation of an Intelligent Business. The way this is achieved is by ascending each step of the Ladder of Business Intelligence. This carefully arranged process will enable a business to attain its goals and fulfill its true potential. A business that functions at Levels 3 and up essentially plays in a different league than those companies stuck at Levels 1 and 2.

Let's look at the key qualities of an intelligent business.

The Intelligent Business:

- Employs human intelligence at its fullest capacity
- Employs business intelligence optimally
- Uses quality information to enable effective decision making, communication and robust cross functional collaboration
- Employs the above three capabilities to create seamless business processes and a robust infrastructure
- Encourages innovation at every level of the organization
- Is always proactive, never complacent

This is the Intelligent Business—one in which People, Process and Technology—the most valuable assets in any business—work together to create a world-class enterprise. Why should you be satisfied with anything less?

**NOTE:** “We introduce a fictionalized company in Chapter 3 to illustrate the points of the Ladder throughout the book. Tom is the expert on the Ladder from that company and we summarize the chapters using Tom’s Takeaways.”
Tom’s Takeaways: FAQs about the Ladder of Business Intelligence

Q. Are the Ladder methods difficult to implement?
A. Not when they’re accomplished gradually. People who have done it say that it’s usually much more difficult to continue conducting business in the old ways.

Q. Do I need to take an advanced course in Information Technology to understand the Ladder?
A. No. The beauty of this methodology is that managers can understand the larger picture and the specific cost benefits without understanding the technologies involved. These are left to the IT specialists.

Q. What kind of organization is a good candidate for the Ladder?
A. Any organization—business or non-business—large or small—that feels the need to grow and change. Whether you come from aspiration or desperation, the end results can be the same.

Q. Can the Ladder be employed for a single business unit?
A. Absolutely. We have worked with divisions of large corporations. Implementing the Ladder in one sector allows managers to view its advantages. They can then decide if it’s right for the entire organization.

Q. Is all this going to cost an arm and a leg?
A. Generally, no. While the costs will vary for different organizations, most of the resources, like the people, are already there. And because the necessary software applications are carefully tailored to the needs of each business role, the cost of the technology is minimized. In addition, the increased efficiency and more rapid cycle time to action are soon reflected in the bottom line.
Jim Cates is currently the CIO of Altera, a Silicon Valley high-tech company with over a billion dollars in revenue. He has over 30 years of experience in the Information Technology field. He spent 20 years at IBM in various R&D management positions developing IT tools for thousands of customers. He has also spent 10 plus years in Silicon Valley as the CIO, VP/IT and Corporate Process Officer of four high-tech companies, each creating over $500 million in revenue.
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