

**TITLE: "ENTERPRISE DECOMPOSITION"**

by Tim Bryce  
Managing Director  
M. Bryce & Associates (MBA)  
P.O. Box 1637  
Palm Harbor, FL 34682-1637  
United States  
Tel: 727/786-4567  
E-Mail: [timb001@phmainstreet.com](mailto:timb001@phmainstreet.com)  
WWW: <http://www.phmainstreet.com/mba/>  
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*"Enterprises with identical missions will also be identical in terms of logical structure."  
- Bryce's Law*

**INTRODUCTION**

There has been a lot published recently about "Enterprise Architecture" and "Information Architecture." I can't say I buy into these theories completely, but it is encouraging to see people trying to get a more global perspective on their company's business and information needs. Where I think they are weak is in the area of truly understanding the nature of information and how it serves the business. We've discussed the properties of information in past bulletins and I think we will need to revisit it again in the near future; in the meantime, be sure to see:

No. 4 - "Defining Information Requirements"- Dec 27, 2004  
<http://www.phmainstreet.com/mba/ss041227.pdf>

No. 29 - "Using Information Strategically" - June 20, 2005  
<http://www.phmainstreet.com/mba/ss050620.pdf>

To summarize, we use a simple concept (which is explained in the above bulletins):

**INFORMATION = DATA + PROCESSING**

This concept makes a distinction between information and data which a lot of people erroneously treat as synonymous. Under the "PRIDE" approach, information is "produced" (it is not stored) and "consumed" by the enterprise (as represented by end-users). On the other hand, data is stored and reused as required. This is a subtle but important delineation. If we buy into this argument that information is a consumable commodity, it is important to understand the consumer. In other words, we must understand the inherent nature of the business in order to properly serve it. This is one reason why, in 1988, we introduced the "PRIDE"-Enterprise Engineering Methodology (EEM) and invented a universally ap-

plicable technique called "Enterprise Decomposition" which provides a convenient way to logically model an enterprise.

**THE LOGICAL ENTERPRISE**

As I've mentioned in the past, there are logical and physical dimensions to information resources; see:

No. 73 - "Logical vs. Physical Design: Do You Know the Difference?" - May 1, 2006  
<http://www.phmainstreet.com/mba/ss060501.pdf>

And as mentioned in the bulletin, people tend to understand the physical aspects better than the logical probably because it is more tangible. For example, people understand the physical structure of an enterprise better than the logical. The physical structure can be exemplified by an organization chart depicting reporting relationships. This is fine for describing administrative relationships, but paints a muddy picture in terms of the fundamental duties and responsibilities of the enterprise. The purpose of a logical model, therefore, is to provide a clear and concise description of the enterprise.

Let's begin by understanding the basic characteristics of an enterprise:

**An enterprise is a self-contained unit -**

An enterprise is able to produce or receive income, administer resources, and produce a product or service. All enterprises produce some form of product or service. Although a product is a tangible commodity that is easily understood, a service is highly intangible and may consist of such things as accounting, legal advice, banking, social work, government regulation, labor, etc. Like a product, a service is a billable or measurable commodity. The sale of products and services implies that an enterprise has clients it serves, whether they are a typical customer, the citizens within a government area, or the membership of a social organization. Some enterprises, such as insurance companies and banks, offer both services and products.

This leads to the idea that there is a simple and universal model for all enterprises:

**UNIVERSAL ENTERPRISE MODEL**



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One area of the enterprise is concerned with producing income, which is typically the goal of a marketing function. Without financial income, all other work will quickly cease.

Another area of an enterprise administers resources, including human, financial, material, equipment and information resources. This includes the areas of accounting, finance, personnel, materials, and information resource management.

The last area of the company is concerned with producing a product and/or service. This represents the outcome of the enterprise and includes such things as manufacturing, consulting, training, or some other form of service, such as legal advice and accounting.

The boundaries of an enterprise can be typically defined by the set of "books" used for accounting purposes. These books, supported by a chart of accounts, describes how money is received and allocated through debits and credits. Ultimately, it defines the scope of the enterprise.

Perhaps the ultimate test for an enterprise is whether it can be spun off and made a separate operating unit. For example, a division within an automotive conglomerate could be considered an enterprise.

**An enterprise has a structure, both logically and physically -**

Each enterprise has a physical structure that reflects the organization in terms of human and machine resources. It also has a logical structure which reflects the organization of the underlying business functions. Functions are used to define the fundamental duties and responsibilities of the enterprise. Positions are used to define the physical positions or jobs implementing the functions. Resources, both human and machine, are used to implement positions. These resources have specific skills and proficiencies which qualify them for the work to be performed.

**Understanding Functions**

In order to fulfill the mission of the enterprise, certain functions must be performed. These functions define WHAT work must be performed and WHY. When organized into a hierarchy, functions represent the logical structure of the enterprise. A function, therefore, is defined as a logical grouping of one or more responsibilities for carrying out a specific portion of the mission of the enterprise.

Functions represent bodies of actions and decisions required to perform the duties and responsibilities of such things as marketing, accounting, manufacturing, sales, customer service, shipping, receiving, inventory, finance, product development, etc. Since they are logical constructs, functions are relatively static. They will only change if the mission or nature of the enterprise changes, such as venturing into new business endeavors. Enterprises with common missions will have similar logical structures. For example, all life insurance companies are logically the same, all electric utilities are the same, automotive manufacturing, banking, etc. They will only differ if the products and/or services differ.

Functions exhibit the following characteristics:

**A. Functions rely on other functions to form a whole-**

An enterprise will consist of several functions which delineate specific areas of responsibility. Each function will rely on the other functions in order for the enterprise to operate effectively. For example, without an income producing function, such as sales, most companies will quickly go out of business regardless of how well the other functions are performing.

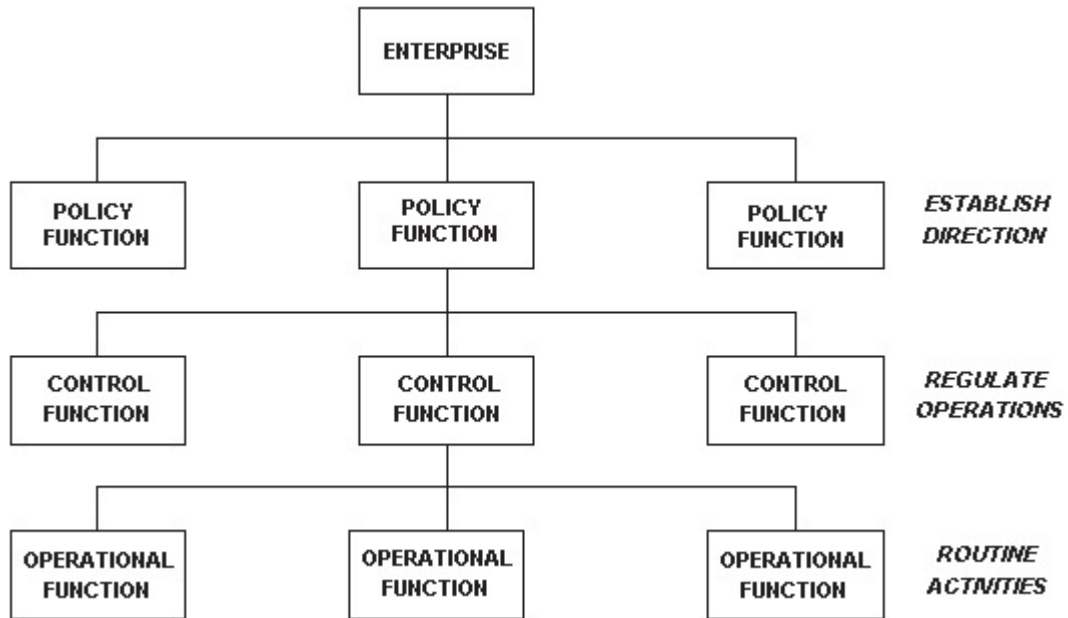
**B. Functions denote the three basic levels of activity in an enterprise (policy, control and operations) -**

Functions are organized into a hierarchy which denotes the types of actions and/or decisions involved. Policy functions refer to executive decisions where policy is made and objectives are formulated. Control functions relate to middle management actions and decisions to monitor day-to-day affairs and assure that executive decisions are met. Operational functions involve the routine activities or work of the enterprise. These three levels can be charted as a hierarchy showing superior/subordinate/lateral functional relationships.

Information corresponds to the three levels. Policy information is used to establish the direction or policy for the enterprise. It includes such things as trend analysis, forecasts, profit and loss, etc. Control information is used to control operational activities and assure that policy decisions are implemented. Typical applications include production control, inventory control, accounts receivables, accounts payable, customer complaint analysis, error notification, progress/status reporting, etc. Operational information is used to perform the normal day-to-day operations of the enterprise, such as shipping, manufacturing, receiving, billing, payroll, processing customer orders/requests, etc.

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**THE LOGICAL ENTERPRISE**  
*Defines the business of the Enterprise*



*THE LOGICAL STRUCTURE REPRESENTS A STATIC VIEW OF THE ENTERPRISE;  
IT WILL ONLY CHANGE IF THE BUSINESS MISSION CHANGES  
ENTERPRISES WITH COMMON BUSINESS MISSIONS WILL HAVE SIMILAR LOGICAL STRUCTURES*

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There is not necessarily a one-for-one relationship between business functions and information requirements. One business function may have multiple information requirements, and one information requirement may affect many business functions.

The benefits from structuring the enterprise using logical functions are that it provides a guideline for establishing a chart of accounts for accounting purposes and can also provide the means to establish "profit centers" in the enterprise.

**C. Functions deal with objects and require information -**

Each function has at least one "object" it must deal with or manage. Objects represent facts and events required to operate and manage an enterprise. They may be as tangible as a product, employee or part, or as intangible as a transaction, an order, a shipment, a debit or credit. In order to effectively manage these objects, functions require specific information about these objects in order to fulfill their mission. No single function has a monopoly on an object; they may be shared by many functions.

**D. Functions communicate through information systems -**

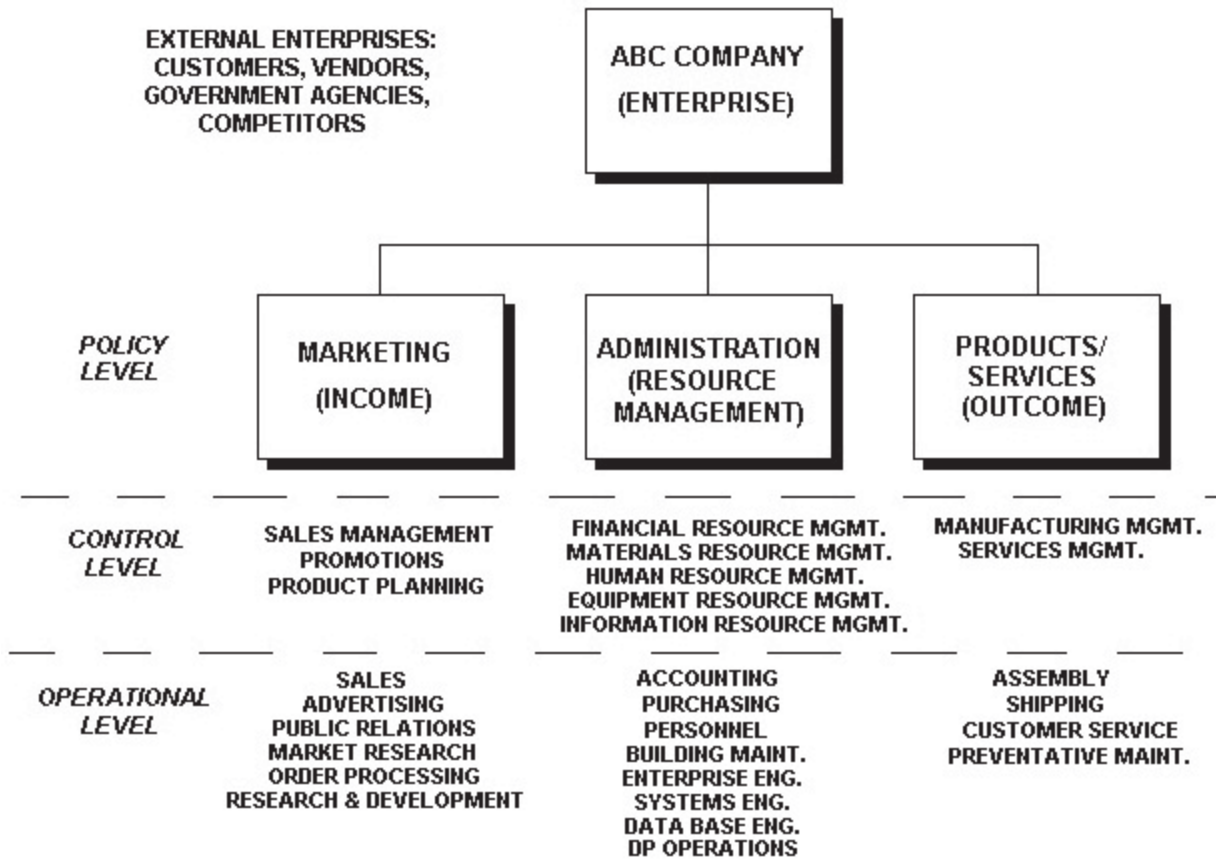
Information flows between functions and is the cement holding the enterprise together. Systems, with their inputs, outputs, files and processes represent the means by which functions interact with each other. They represent the vehicle by which duties and responsibilities are discharged.

**CONCLUSION**

It has been our experience over the years that all enterprises conform to this logical model as defined by Enterprise Decomposition. Such a model raises the consciousness of the enterprise in terms of its true nature. To illustrate, years ago we were contracted to study a jewelry manufacturer in the U.S. Midwest. By studying their company in this manner, we discovered their true business was more in the purchasing and sale of gold as opposed to jewelry manufacturing. This revelation was an eye-opener for all involved.

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**SAMPLE ENTERPRISE MODEL**



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The logical model is useful for determining the tactical needs of information internally within an enterprise, but to determine the strategic needs for information, it is necessary to develop similar models for customers, vendors, or any other external enterprise affecting our business. The more we know about these external entities, the better we can devise strategic systems to serve them.

I have heard pundits in the industry say they want to "model information." Interestingly, I cannot seem to get them to clearly articulate this concept, nor do I believe is it feasible to do so. Model a business? Yes. Model systems? Certainly. Model data bases? Of course. But model information? Hardly. Again, information is a consumable commodity. We can identify the need for it by studying the business model; We can demonstrate how it is implemented via outputs and the systems and data base models; but I fail to see how we "model" information. To me, this is all reminiscent of the arguments back in the 1980's over "Information Engineering," a subject where the authors didn't grasp the nature of information or engineering, but it sold a heck of a lot of books.

For more information on "PRIDE"-EEM, see:  
<http://www.phmainstreet.com/mba/pride/ee.htm>

**END**

*About the Author*

*Tim Bryce is the Managing Director of M. Bryce & Associates (MBA) of Palm Harbor, Florida and has 30 years of experience in the field of Information Resource Management (IRM). He is available for training and consulting on an international basis.*

*"PRIDE" Special Subject Bulletins can be found at:*

<http://www.phmainstreet.com/mba/mbass.htm>

*They are also available through the "PRIDE Methodologies for IRM Discussion Group" at:*

<http://groups.yahoo.com/group/mbapride/>

*You are welcome to join this group if you are so inclined.*

The "Management Visions" Internet audio broadcast is available at:

<http://www.phmainstreet.com/mba/mv.htm>

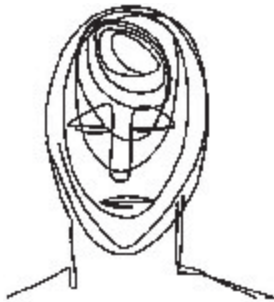
Also, be sure to read Tim's Blog at:

<http://blogs.ittoolbox.com/pm/irm/>

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