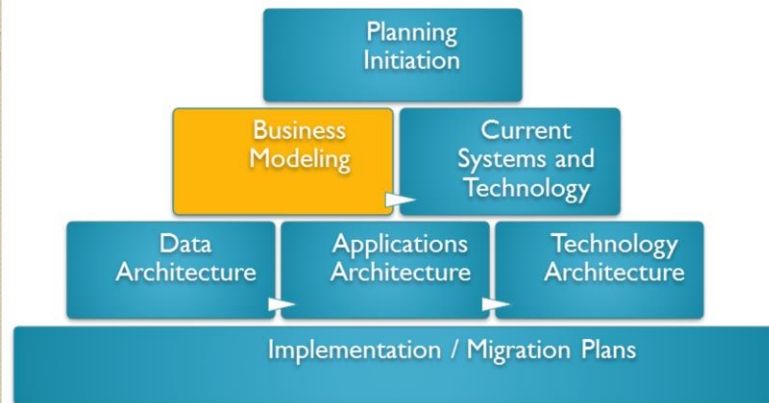61010 – Enterprise Architecture

BUSINESS MODEL

Once the Enterprise Architecture team has identified the vision and principles, and has gathered support to begin, the next activity is the Business Model.

Where We Are Today

Planning Initiation

Business Modeling

Current Systems and Technology

Data Architecture

Applications Architecture

Technology Architecture

Implementation / Migration Plans

Steven H. Spewak, Enterprise Architecture Planning: Developing a Blueprint for Data, Applications and Technology. John Wiley & Sons, New York, 1992, pg 13.

In the "where we are today" stage, the first activity is performed by the business architect, and it is the foundational architecture that defines the business. In order to make sure our IT capabilities are "business driven", the business must be accurately identified. The business model is the most time consuming element of the enterprise architecture, requiring 30% of the total effort. Develop this component well, since all the subsequent elements of the process will be built upon it.

Business Model

- Defines the business functions
- Quality foundation for architectures

The business model is essential to the enterprise architecture, and it defines the business by identifying its critical functions. Sufficient time should be spent developing a quality business model, since the quality of the architectures is dependent on it.

In the field of enterprise architecture, the definition of the business is called either the Business Model or the Business Architecture. Either term is acceptable, and I will use the term Business Architecture to represent all the artifacts that are used to define the business, and the term Business Model to represent one artifact that defines the functions of the business.

Business Functions

- "A function is any set of actions performed in the course of conducting business."
  - Spewak, Steven H. Enterprise Architecture Planning: Developing a Blueprint for Data, Applications and Technology. John Wiley & Sons, New York, 1992.

- Function = Process = Task = Activity

The Business Model describes the functions of the business, and according to Spewak, "A function is any set of actions performed in the course of conducting business." The functions of a business can be described as processes, tasks, or activities – any of these terms will work, according to the preference of the organization. I'll refer to them as functions.

Define Business Functions

- Name
- Brief Description OR Subfunctions
- Performed By Organizational Unit

Business functions are defined in the Business Model by identifying the name of the function, a brief description, and the organizational unit that performs the function. If a function is composed of subfunctions, then the subfunctions are identified by name, brief description, and organizational unit performing the subfunction – and the function is described only by the subfunctions. The brief description and organizational unit should be removed from functions that are described by subfunctions.

The activity of identifying the business functions and the organizational unit that performs each function results in the definition of the People aspect of the Enterprise Architecture – which is found in the fourth column of Zachman's Framework.

Business Function Definition Example

- [Function Name] is concerned with [the description of the value contribution to the organization].

- Retain Students is concerned with providing support services to assist students in completing their degree requirements for graduation.

A quality definition of a function should include a descriptive name, in the format verb-noun, and a description of the value contribution to the organization. Since all of you are familiar with the functions of a university as it serves students, I will use Kent State to illustrate a proper function description. In this example, a business function for Kent State is named "Retain Students", with the brief description "**Retain Students** is concerned with **providing support services to assist students in completing their degree requirements for graduation"**.

This business function is a good example of one that needs to be broken down into subfunctions. As we consider the description of this business function, we realize that "support services" are provided by multiple business functions, and so we should identify each subfunction and develop a brief description for each one. The function "Retain Students" would then not need a brief description, but would be described by the subfunctions.

Subfunctions

Business Function	Brief Description
Retain Students	
Engage Students in Learning Communities	**Engage Students in Learning Communities** is concerned with **providing opportunities for students to connect with other students that are pursuing the same major or program.**
Tutor Students	**Tutor Students** is concerned with **providing learning opportunities with a mentor or instructor so students can improve their understanding of course material, and thus achieve a higher grade.**

"Retain Students" is a business function that is accomplished by several subfunctions, two of which are "Engage Students in Learning Communities" and "Tutor Students". Each of these subfunctions is identified by a brief description. The brief description of the subfunction follows the same format that was introduced on the prior slide for functions. In addition to the brief description of these subfunctions, our business model will also include the organizational unit that performs the function, which adds to the understanding of the value contribution. These subfunctions illustrate the process of breaking down a complex function into its parts.

Notice that the high level function, "Retain Students", does not have a brief description, since it is now defined by its subfunctions. The subfunctions have been defined as follows: **Engage Students in Learning Communities** is concerned with **providing opportunities for students to connect with other students that are pursuing the same major or program. Tutor Students** is concerned with **providing learning opportunities with a mentor or instructor so students can improve their understanding of course material, and thus achieve a higher grade.**
It is beneficial to use a consistent format for the brief description, and with practice you will quickly develop the ability to describe the business function with a clear and concise definition.

Quality Business Function Definition

- **Retain Students**

- NOT GOOD
  - **Retain Students** is concerned with **providing support services to retain students until they graduate**.

- GOOD
  - **Retain Students** is concerned with **providing support services to assist students in completing their degree requirements for graduation**.
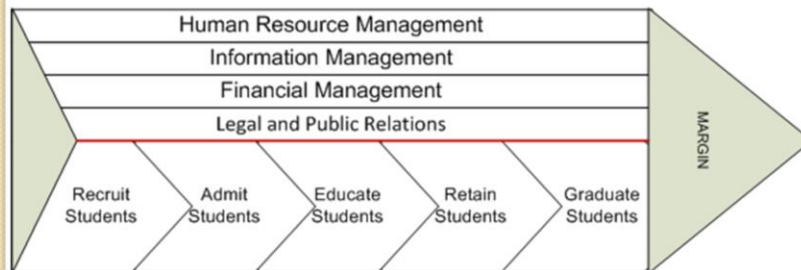
Creating a meaningful description is harder than it looks, and it takes some practice to master. Try not to use the same verb that is used in the function name as part of the brief description.

The first example shows a brief description that is not good. When we say "**Retain Students** is concerned with **providing support services to retain students until they graduate**", we are being repetitive with the verb "retain", and are not really being clear about the purpose of this business function.

The second example shows a well constructed brief description. With the description "**Retain Students** is concerned with **providing support services to assist students in completing their degree requirements for graduation**", we are being clear that the purpose of this business function is keeping students enrolled in classes so they can graduate.

Porter's Value-added Chain

Now that we know how to define a business function, we are ready to start identifying business functions. Michael Porter's value-added chain gives us a model for defining support functions (above the center line) and value-added functions (below the center line). Value-added functions are those which substantially contribute to the value of the organization. As we discuss different methods of defining critical business functions, we will encounter terms such as value-added, core, operational, or primary functions. Using an example of Kent State's business functions in Porter's value-added chain, we identify Human Resource Management, Information Management, Financial Management, and Legal and Public Relations as our support functions. The value added functions are identified as "Recruit Students", "Admit Students", "Educate Students", "Retain Students", and "Graduate Students". The value-added functions are the starting point for the Business Model, and now we must identify the subfunctions that make up each of these high level value-added functions.

Business Model Development Process

- Define
- Decompose
- Ideas (Plan, Perform, Monitor, Control)
- Identify the Enterprise Business

- Descriptive Name
- Brief (Clear) Description
- Organizational Unit

Decomposition of the major business functions is necessary to fully develop a detailed business model. Think about activities such as planning, executing, monitoring, and controlling to drive ideas and fully identify the subfunctions. Continue to break down the subfunctions until a single activity is described. For every low level function, that is a function with no other functions below it, remember to define it with a descriptive name, a brief but clear description, and the organizational unit that performs the function.

A full business model will contain hundreds, or perhaps thousands, of functions. The completeness of the business model will enable quality architectures.

Business Function Definition Summary

- Excel Format

Function Name	Definition	Organization Unit
Recruit New Students		
Receive Prospects		
Receive Prospects from Test Scores	**Receive Prospects from Test Scores** is concerned with **receiving quality candidates from ACT/SAT testing organizations.**	Admissions Office
Receive Prospects from Inquiries	**Receive Prospects from Inquiries** is concerned with **receiving inquiries from candidates interested in attending Kent State University.**	Admissions Office

If you are planning to pursue a career in which you will be documenting business models in order to create quality architectures, you will want to invest in a couple basic tools. Refer to the Business Model Tools lecture this week for a review of the capabilities of Excel and Visio to create the function definition summary and a business function diagram.

On this slide, I have not documented the definition or the organizational unit performing the critical value-added function "Recruit New Students", because this function is decomposed into more detailed subfunctions. Remember, only the lowest level functions need to be defined. Higher level functions are defined by their subfunctions.

"Receive Prospects" is a subfunction of "Recruit New Students" and it is also defined by its subfunctions. The subfunctions are defined as:
- **Receive Prospects from Test Scores** is concerned with **obtaining quality candidates from ACT/SAT testing organizations.**
- **Receive Prospects from Inquiries** is concerned with **collecting inquiries from candidates interested in attending Kent State University.**

These are not the only business functions that receive prospects, and additional functions would be identified until the list is complete. This example demonstrates the hierarchy that exists, and the requirement to only include a brief description and organizational unit for the lowest level functions.

Business Function Hierarchy Diagram
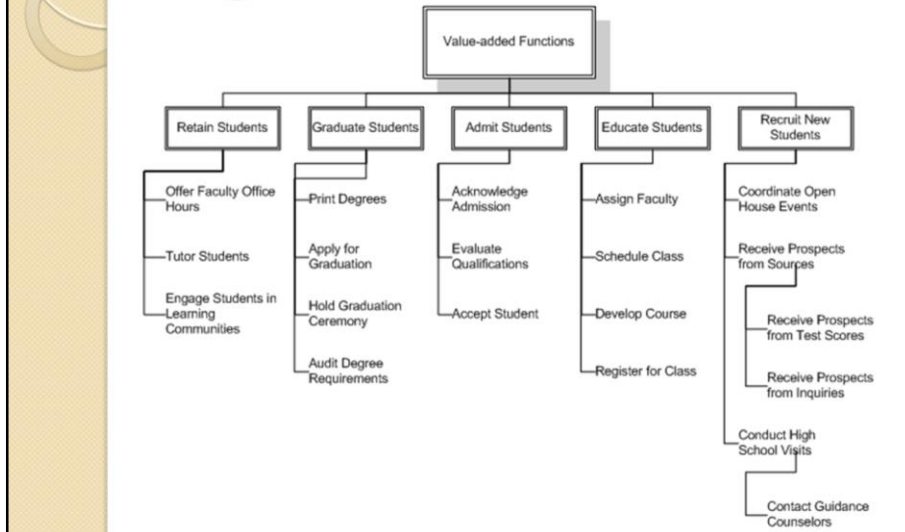
The business function hierarchy diagram provides an easy to read hierarchy of the critical value-added functions, as well as the detailed subfunctions that are necessary to completely provide the function. The order of the business functions from left to right and top to bottom does not indicate any priority of importance or sequence of events. However, it is very important that the subfunctions are related under the correct critical value-added function, and that the identification of subfunctions is complete.

Quality Business Model

- Easy to Understand
- Complete
- Unchanging
  - Do NOT include:
    - Who, How, Technology, Flows

A quality business model is written with clear terminology that makes sense to the organization, it includes all the important functions, and it is stable. In order to ensure that the business model doesn't need to be constantly updated, do NOT include things that are dynamic and frequently changing, such as:
- The name of the person who performs the business function,
- How the business function is performed,
- The technology or resources used by a business function, or
- The process flow of business function inputs, outputs, or resources.

A good business model will capture the essence of the business functions, and will not be affected by improvements to processes or capabilities, or by changes to facilities, technology, or other resources.

Business Model Development Details

- Function Detail
  - Where, When, Importance,
- Strengths and Weaknesses
- Function to Organization Matrix

When a full business model is developed in the real world, more detail will be added to the business function definitions, including inputs and outputs, and when, where, and how often the function is performed. These details may include:
- The building or location where a business function is performed,
- When a business function is performed, such as weekly or monthly,
- The importance or priority of a business function,

Interviews will also be conducted with the organizational units that perform the business function to identify strengths and weaknesses with the current functions.

Discussion

- For your organization, fully define two business functions using the proper format presented in this lecture.

For your organization, fully define two business functions using the proper format presented in this lecture.