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As architects, we are all familiar with the famous six interrogatives. They are the fundamental six questions that we learned in high school writing class, or should have if we had been paying attention. Remember: Who, what, when, where, why, and how? These are also (and not accidentally) the same six interrogatives that correspond to the columns of the Zachman Framework™, which provide a complete ontology of the parts that make up the enterprise. But, there is one important question that also needs to be asked, and that is "how well" is the enterprise as a whole, and how are each of these parts working?

A fundamental principle of quality and continuous improvement is understanding how well something is performing. That might be understanding how well the enterprise is performing in terms of a high level business objective, such as customer retention, or it might be at a much more granular level, such as understanding how well an individual business process or service is performing.

But these questions are now more important than ever. With the growth of big data, and particularly analytics, the cost of the technology available to analyze and report on business performance has been dramatically reduced at the same time that the power of the tools have dramatically increased. What is lacking is an increase in our ability to understand what questions to ask, and then to make sure that the raw information is available to answer those questions.
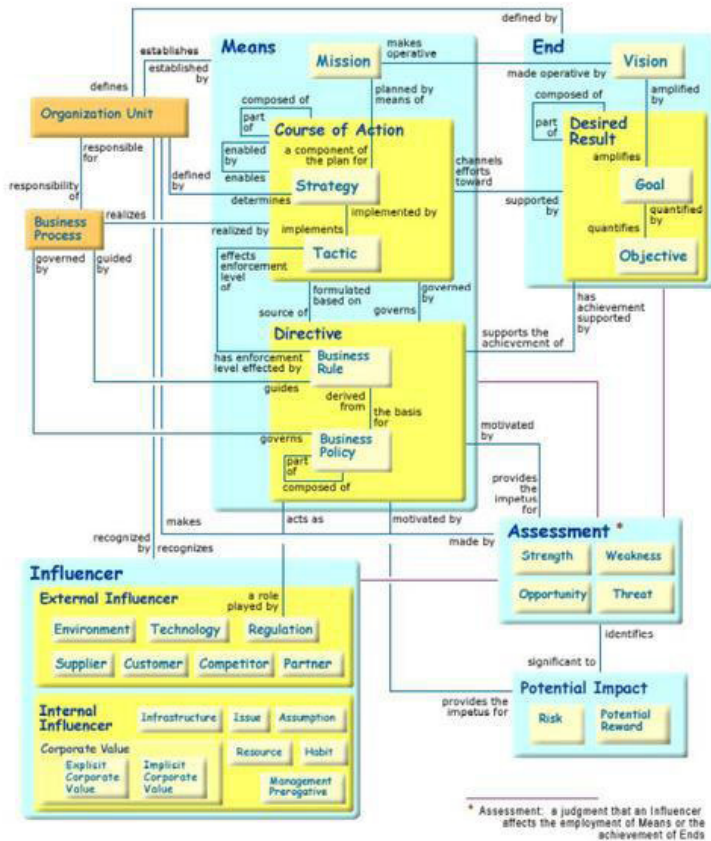
Figure 1 – OMG Business Motivation Model

Let's take a step back and review some architectural principles. Architects create models to ask and answer questions. Models are a collection of important concepts, and their relationships, within a given context. Architectural viewpoints project those concepts and contexts to address the concerns of particular stakeholders. Meta-models formally define those concepts, relationships, and contexts. So, if we look at the question of "how well", as an architect, how would we go about answering that question? With a model, of course. And the model I like to use for this is the Business Motivation Model.

Business Motivation Model

The Business Motivation Model (BMM), published by the Object Management Group (OMG, the same organization that manages the BPMN and UML specifications), provides the underlying architectural meta-model for describing important concepts about why a business is undertaking certain actions and how it is performing. See www.omg.org/spec/BMM for a much more detailed description of the model and the specific definitions of each of the concepts.

There are two major areas of the BMM:

- **The Ends and Means of business plans:** Among the Ends are things that the enterprise wishes to achieve—for example, Goals and Objectives. Among the Means are things the enterprise will use to achieve those Ends—for example, Strategies and Tactics.
- **The Influencers:** These are the things that shape the elements of the business plans, and the Directives and Assessments made about the impacts of Influencers on the Ends and Means.

Together, the Ends, Means, and Influencers answer the following fundamental business questions:

- What is necessary to achieve what the enterprise wishes to achieve? This is answered by describing the Means needed to achieve the desired Ends.
- Why does each aspect of the business plan exist? This is answered by identifying the Ends that each of the Means serves. This is what is meant by business motivation. (Notice that the Ends, Means, Directives, and Assessments correspond to the interrogatives of who? what? how? and why?)

A key to addressing business motivation is understanding the enterprise's aspirations—its Vision—and its plans for achieving that vision—its Mission. Refining these concepts to the next level of detail yields additional important concepts. Vision is amplified by Goals and quantified by Objectives. Mission is defined by Strategies (for approaching Goals) and carried out by Tactics (for achieving Objectives). The BMM uses the general term Ends to refer to the aspiration concepts (Vision, Goal, Objective) and the term Means to refer to the action plan concepts (Mission, Strategy, Tactic). Notice that performance against objectives will answer the question of 'how well'. Figure 1 shows the main concepts and relationships of the BMM.

GuSTO, or Keep It Simple

As you can see, the BMM covers a rich set of business concepts and can be used to answer a whole host of questions. But typically I find the full model to be much more than I need. Instead, I boil it down to a core set of concepts shown in Figure 2. Then, I use this model to think about two important questions.

1. Why am I doing something?

2. How will I know if it's working?

I ask these questions across a wide range of scope from enterprise level goals and strategies, such as supply chain optimizations all the way down to specific business process or SOA service implementations such as an insurance quoting process or a SOA information service.

For each of these initiatives or projects, I ask the following questions:

G Why am I doing this? What is the goal?

S How am I going to achieve the goals?
What are my broad strategies?

T How will I implement the strategies? What are the tactics?

O How will I know if it worked? How will it be measured?
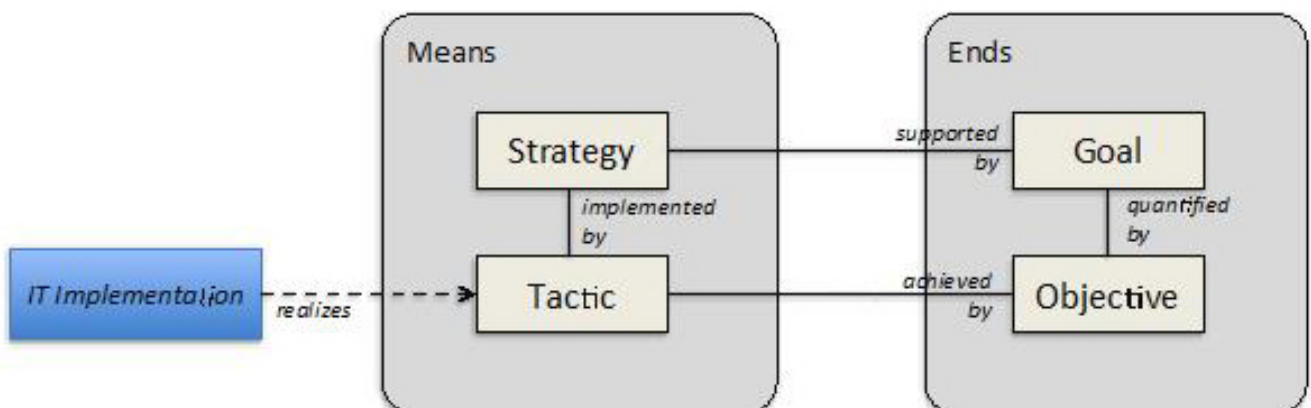What are the objectives?

Figure 2 - BMM Subset

I call this GuSTO. Again, I might ask these questions about an enterprise level business issue such as customer retention, or about an architecture program (what are the goals of the program, why are we doing it, how will it be measured, etc.), or about an IT implementation. Let's take the implementation as an example. Imagine that you are responsible for implementing a SOA service for managing product information across multiple lines of business.

- **Goal** – To provide consistent product information across all product lines
- **Strategy** – Provide a single point of access for all product information
- **Tactic** – Implement a standard interface for all product information requests
- **Objective** – New interface supports 100% of new activities

In other words, to support consistent product information, you will have to provide a single point of access for all information. In order to do this, a standard interface will need to be developed that acts as a façade across the multiple different sources. One measure of success will be that all new applications and processes that need access to product information can use the new interface. Of course there will have to be other tactics employed to implement the strategy, such as aggregating, rationalizing, and caching the different sources into new canonical values. And there may be other objectives, such as the new interface returning aggregate data within 100ms. Figure 3 shows a sample BMM model extract for this example.
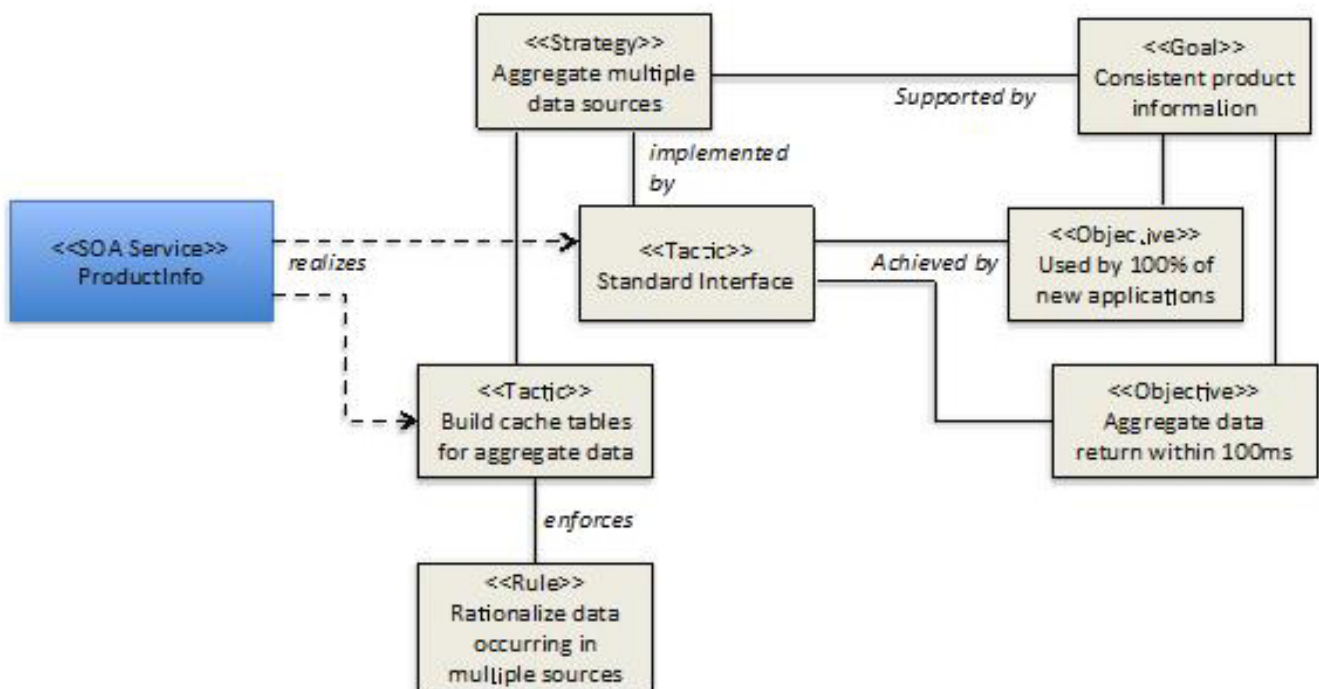

Figure 3 - Sample BMM

Note that in general these are many-to-one relationships. Typically, there are several strategies designed to support a goal. Each strategy typically has several tactics. And each tactic may have more than one measurable objective.

I find that it only takes 10-15 minutes to go through this exercise, and afterwards, my team is much clearer on the approach we're taking. Specifically, we know why we're doing it, what is expected, how we intend to achieve that outcome, and how we'll measure the success of it. Together, this enables us to answer the question "how well" is it working

Typically in my simplified model, I avoid Vision and Mission. I find that these are just too high level and fuzzy to be of value in the modeling exercise. However, sometimes I do use the concepts of policy and rule to elaborate on how a tactic will be implemented. The point is to be complete enough to identify the important measures, but keep the model as simple as possible.

Alignment and Traceability

One of the key expectations of architecture is that it will help to align IT with the business. We've all heard this statement so much that it is often treated as little more than a cliché. But, it need not be. The BMM provides a formal way to trace tactics back to goals and objectives. Now, we can take it one step further and tie IT implementations to the tactics that it implements. For example, business services (SOA) and business processes are constructs used to implement tactics. So, we can create formal traceability between the services and processes (IT) and the business requirements by modeling a realize relationship between a service and the tactic it is intended to implement.

Carrying the example through this next step, assume that we implement a ProductInfo SOA service to provide the single point of access to product information. Now, we can explicitly say that this specific SOA service is tied to achieving the specific business goal of consistent product information, and that it will be measured by how well it supports new requirements for that information. You can't do much better than that in terms of Business / IT alignment.

But there is one more important side effect of using the BMM. Because it forces us to identify specific, measurable objectives, we also know what information we need to be able to collect to understand our performance against those objectives. Or, to put it another way, the objectives identified in the BMM tell us how our processes and services need to be instrumented and what measures they need to collect and report.

Conclusion

Before we begin any undertaking, it's a good idea to understand why we are doing it and what is expected. In addition, with the explosion of data and analytics, the ability to provide insight into how well our business, or the pieces that make it up, are performing has increased dramatically. As architects, we need to take a multi-faceted approach to this. First, by providing the business in a more formal and deterministic way to understand how well the business is performing. And secondly, to make sure that we identify measures for these objectives and instrument our system, processes, and services to provide that information. The Business Motivation Model is an excellent and quick way of addressing these issues. I hope you find it as useful as I do.

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