DEFINING THE OBJECTIVES FOR YOUR ARCHITECTURE MODELING

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INTRODUCTION

One of the problems facing enterprise modeling, especially at the beginning, is in showing value.

There are three key questions that any organization embarking on an enterprise modeling initiative needs to ask (and answer):

1 "What answers do we hope to gain from the models we create?"

2 "What viewpoints will support obtaining these answers?"

3 "What are some immediate ways to apply models to provide value?"

This is the first of three e-books that addresses each of these questions in turn.

THE NEED FOR TARGETED MODELING OBJECTIVES

Before undertaking any activity with significant costs, it's important to ask: "Why are we doing this?" This is just as much the case with modeling as with any other activity. Modeling an architecture is hard work – understanding the modeling language, making decisions about how much detail to put into the models, creating the models and then maintaining them… it's all overhead. Apart from anything else, all models are incomplete because there's always more details that could be included ("all models are wrong, some are useful", or if you prefer, "the map is not the territory"). The reality is that models will provide an incomplete picture and involve effort in their creation. So it's a reasonable question to ask – why would we expend all this effort? What benefits do we foresee?
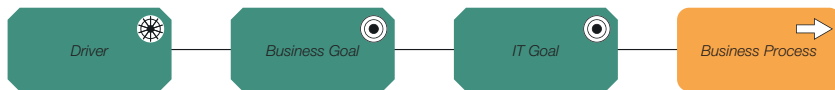
The classic answer would be along the lines of "To gain a better understanding of the organization so that we can make decisions better." Which is true, but it doesn't answer provide much of a basis for a business case. More to the point, it doesn't provide enough direction. When I've come into an organization and found remnants of previous models, it's always been the same story – the models weren't maintained, they fell out of use… and invariably the same original reason for creating the models existed - "To gain a better understanding of the organization so that we can make decisions better."

A better approach is to understand – what aspects of the organization do you need to understand better? What are the organizational challenges that you expect a model to help you with? What are the questions that your models are going to provide answers to, or at least what are the questions that they will help you answer on your own?

It would be nice if it were possible to provide a single set of canned answers to these questions, but the simple fact is that each organizations is different, has different drivers and constraints, so will face different challenges. It's true that there are often similar concerns for organizations in the same sector, but even then the same concerns can have different priorities depending on the precise operating environment. So, different organizations will have different questions that they need their modeling to answer.

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THE GOALS CASCADE

The previous discussion is all well and good, but how can we identify the questions that need answering? Here I'm going to turn to an interesting innovation that was introduced in COBIT 5 – the goals cascade. The idea behind the goals cascade is that they have identified a catalogs of business drivers, business goals, IT goals and IT processes… which they have mapped in a series of matrices. This means that, picking one or two business drivers, it becomes possible to trace through to derive business goals, then to derive IT goals, before identifying key IT processes to focus on.

This has the benefit that it offers clear traceability to show how IT supports the business. I'll happily concede that some of the mappings are arguable – the point is that it provides a clear answer, one that can be debated. In my experience, it is always much easier to get feedback from people in reaction to a proposal rather than simply ask for suggestions in a vacuum.

So, with that in mind, I'm going to effectively co-opt the COBIT goals cascade and use it as a way to define organizational modeling objectives. The suggestion is, simply, to work, not only from IT goals as derived from the goals cascade, to modeling questions – which naturally translates into modeling objectives. Some ample questions for each of the IT goals suggested by COBIT are listed below.

IT GOALS ➡ MODELING QUESTIONS*

BSC Dimension		IT Goal	Sample Modeling Questions
Financial	01	Alignment of IT and business strategy	What organizational objectives are supported by a given project?
	02	IT compliance and support for business compliance with external laws and regulations	What law and regulations apply to each application?
	03	Commitment of executive management for making IT-related decisions	What expressed organizational objectives relate to which applications?
	04	Managed IT-related business risk	What are the risks associated with each application?
	05	Realized benefits from IT-enabled investments and services portfolio	Which projects affect each application? What expected benefits are associated with each application?
	06	Transparency of IT costs, benefits and risk	What costs are associated with each IT asset? What processes are associated with each IT asset and what estimated benefit does each process bring?
	07	Delivery of IT services in line with business requirements	What is the level of satisfaction with each application?
	08	Adequate use of applications, information and technology solutions	What applications are related to which service requests, and which incidents?

BSC Dimension		IT Goal	Sample Modeling Questions
Internal	09	IT agility	What application interfaces exist between applications? What data flows exist between which applications?
	10	Security of information, processing infrastructure and applications	What controls exist on each application? What controls exist on each data entity?
	11	Optimization of IT assets, resources and capabilities	What applications do we have? How many processes use each application and what are the criticality of these processes?
	12	Enablement and support of business processes by integrating applications and technology into business processes	What process steps in core processes use which application?
	13	Delivery of programs delivering benefits, on time, on budget, and meeting requirements and quality standards	Which applications are associated to which projects? What are the characteristic of each project?
	14	Availability of reliable and useful information for decision making	What problems are mapped to which applications?
	15	IT compliance with internal policies	What internal policies map to which applications? What is the level of compliance in each case?
Learning and Growth	16	Competent and motivated business and IT personnel	What skills are needed for which applications? What are the business fit and technical fit scoring for each application?
	17	Knowledge, expertise and initiatives for business innovation	What application interfaces exist between applications? What data flows exist between which applications?

POSSIBLE OBSTACLES TO USING THE GOALS CASCADE

Now, for any proposed solution an important architecture question is – **how can this go wrong?** There are two main obstacles that I've encountered.

The first possible pitfall comes when the business drivers are not clear, or not prioritized. One possible approach in this situation is to express this, in the sense of demanding a set of business priorities as a necessary input into mapping business priorities into IT activities. Here the first approach should be to express the need for such guidance and present the case for

an expressed set of drivers. But, in practice, it can be challenging to nail business leaders down to a specific commitment if they haven't already made one. In such a case the workaround is to define and document some assumed priorities, communicate them, and work from them – at least in this case there is traceability.

The second possible pitfall is where the official defined business objectives are not the objectives of the actual organization. This can exist for external political reasons (a regulatory requirement to define objectives), or because the leadership is either unempowered, or unwilling to expose theirselves in such a manner. Regardless, it does not move us forward. Instead, the approach should be to come to the sponsor, and other stakeholders, and ask them to answer – what keeps them awake at night? What are the issues that they want greater clarity on? From this it become possible to impute some goals and questions that need answering.

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SOME EXAMPLES

To finish this e-book, I'll consider some examples.

Example one

Our first example is a bank in the Arabian Gulf. Here, where the two most important concerns are compliance with the local regime and risk – in particular, risk in one specific area.

The regulatory compliance aspect can be addressed by mapping regulations to processes and applications. There is also value in mapping which applications access data with regulatory impact (i.e. personal information).

The second question is an interesting one, specific to the region. It has been known for countries in the gulf to cut internet access in crisis, for example, during a terrorist attack. So the CIO wants to know: what applications are hosted in which countries, and in particular, what information flows cross national boundaries?

Example two

The second example is a Silicon Valley technology company, where the primary concern is IT agility. This translates into the ability to make changes rapidly, so the immediate questions for modeling to answer are:

- What applications have interfaces to each other?

- What processes depend on which applications?

Example three

Our third example is a UK local authority. Their two chief concerns are managing obsolescence, and compliance with PSN regulations.

In the first case, the issue is that the authority has historically struggled with ensuring that its applications are running on software that is still under vendor support. So an immediate question that the model needs to answer is – what applications rely on what software levels?

The second question is worth describing. The UK government operates a secure network that allows organization to access certain systems (e.g. for managing benefits). Each application that accesses the PSN is required to comply with certain standards for security, patching and so on. So here an initial pair of questions that the model needs to answer are – what applications have PSN impact, and for those applications, what risks and risk mitigations are associated with each application?

CONCLUSION

The above discussion may seem to make enterprise modeling a very reactive discipline, but ultimately modeling is about answering questions. A model answers a question (or questions) – but unless you have a clear picture of what questions the model answers, it risks becoming the stereotypical ivory-tower exercise associated with EA. If you can define the challenges that your organization faces, then this make is possible for you to define how your organization can be served by modeling – and at the same time, it gives an opportunity to show value to your efforts.