

White Paper

The Function Model

The Foundation for All Business Models

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John Owens is a thought leader, consultant, mentor, practitioner, blogger and writer in the worlds of strategic requirements, business function, process and data modeling, data quality, enterprise architecture and master data management.

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In spite of the fact that structured business modeling has been around for more than three decades, most current business modeling projects start in the wrong place and head in the wrong direction.

This is especially true for Process Modeling which, due to many fundamental errors introduced by the practices of large consultancies in the heydays of Business Process Management (BPM), has actually regressed to such an extent that most Process Modeling projects leave the enterprise worse off both operationally and financially, with the costs far outweighing the benefits.

The major cause of the failure of these projects is that the analysts are incorrectly using Process Modeling as a primary modeling technique, which it is not.

All successful business modeling starts with the Function Model. Those that do not will fail! A bold statement but, sadly, very true, as is evidenced by the high failure rate of these projects!

The fact is, that if you do not first produce a Function Model, then all other models that you produce will be essentially flawed, because you are literally plucking their components out of 'thin air'. They have no logical foundation.

Starting with the Process Models, as opposed to the Function Model, causes further problems as it results in producing, on average, three times more models than are necessary, while, at the same time, missing out up to one third of key business activities.

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Processes steps that are not Business Functions have no logical foundation or integrity.

Power of the Function Model

Having read the preceding paragraphs suggests one of two things, a) that I am totally overstating the benefits of the Function Model or that b) it is indeed a very powerful model.

Let's look at the key benefits of the Function Model, then you decide.

These benefits are:

- It is an unambiguous definition of WHAT the business OUGHT to be doing.
- Not everything that is done in an enterprise is a Process. On the other hand, everything that is done is a Business Function. For this reason, the Function Model is the only model that can effectively model all of an enterprise's core activities.
- There is no duplication or redundancy; every Business Function in the hierarchy appears once and once only.
- Because the Function Model represents WHAT the enterprise OUGHT to be doing, it enables future state Business Processes to be built straight off without needing to first produce any 'As Is' models – which are the major cost to, and cause of failure, of so many Process Modeling projects.
- Every step in a Business Process is a Business Function and every Business Function comes from the Function Model, so it supplies the key steps for every Process in the enterprise. Without the Function Model all process steps have to be plucked out of thin air.
- Business Functions define the key Data Entities of the enterprise and the relationships between these.
- It can show the whole of the enterprise in a single model.
- It reduces the number of models that are required to be drawn by a factor of three.
- It does not require leveling, as decomposed process models do.
- It covers all of the business, not just the processes.
- It remains valid through changes in technology and organizational structure.
- It is an essential model for all system development and system procurement projects, as it is the Elementary Business Functions from the Function Model that are implemented by the modules in computer applications.
- It is a powerful planning aid for system development projects.

With so many benefits, it is actually very hard to overstate the importance and power of the Function Model.

The Function Model is the only model that provides all of the above benefits. This means that any enterprise that does not have a Function Model will get none of these benefits. This is not just an academic modeling issue; it will have real consequences in the business. These

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include losses in quality, productivity, customer service, customer retention, profits and market share. It will also result in increased costs in all areas of the business due to duplication, inefficiencies, poor staff retention, bad data quality, etc.

Where to Start?

If we accept that the Function Model is as special as the list of benefits above suggests, and there is no reason why we should not, then where do we start if we want to build it?

If it is as powerful as the benefits suggest, will it not take such a long time that no enterprise can afford to wait for it?

The paradox is that, although the Function Model is the most powerful business model that an enterprise can have, it is also the easiest and fastest to build.

The process for producing this model is actually extremely simple. All that is required is to ask the most senior executives in the business the question, 'WHAT is it that this enterprise OUGHT to be doing?'

The answers to this simple question will enable any good analyst to produce a comprehensive, future state model of the enterprise.

The technique for rapidly producing an effective Function Model is as follows.

The Approach

Good business models start by interviewing the right people. Contrary to popular belief in the business modeling community, this is never the front-line staff. The best, in fact the only, people to start with for strategic projects are the most senior executives in the enterprise. The reason for this is that these are the only people who can define WHAT it is that the enterprise OUGHT to be doing. Any body else in the enterprise might have an opinion, but that is all that it will be, an opinion.

The Technique

Once they have been identified, the analyst then carries out a recorded, structured interview with each key executive. A transcript of that interview is then created, from which it is relatively simple to identify and extract a set of 'Candidate' Functions.

Candidate Functions

In essence, every verb phrase in the transcript is a Candidate Function. So, moving through the transcript and underlining the phrases is a simple means of identifying all 'Candidate' Functions, as shown below.

The following is just two paragraphs extracted from the transcript of an interview with a senior manager.

"Our core business is selling our medical products to authorized customers. They have to be authorized due to legislation. We receive applications from candidates all the time. We need to vet these candidates and, if they pass, we should register them as authorized customers.

When we receive an order we need to ensure that the customer is authorized: if not we should reject the order. If they are authorized we need to make sure that we identify the product they require. If the order is taken by phone we should chase customer for payment of overdue invoices, if there are any. This is an important step in managing our revenue. We should then pass this order to warehousing for processing. ..."

All of the 'Candidate' Functions have been underlined. Just two paragraphs gave us fourteen 'Candidate' Functions.

Real Functions

We now extract these and convert them to proper Business Functions.

Candid Functions	Actual Functions
Selling our medical products to authorized customers.	Sell Medical Products
They have to be authorized	Authorize Customers
Receive applications from candidates	Receive Applications from Candidate Customers
Vet these candidates	Vet Candidate Customers
Register them as authorized customers.	Register Authorized Customers
Receive an order	Receive Orders for Products
Ensure that the customer is authorized	Validate Customer Status
Reject the order	Reject an Order
Identify the product they require.	Identify Product Required
If the order is taken	Take an Order
Chase customer for payment of overdue invoices	Chase Customer for Payment
Managing our revenue	Manage Revenue
Pass this order to warehousing for processing.	Authorize Dispatch of Products

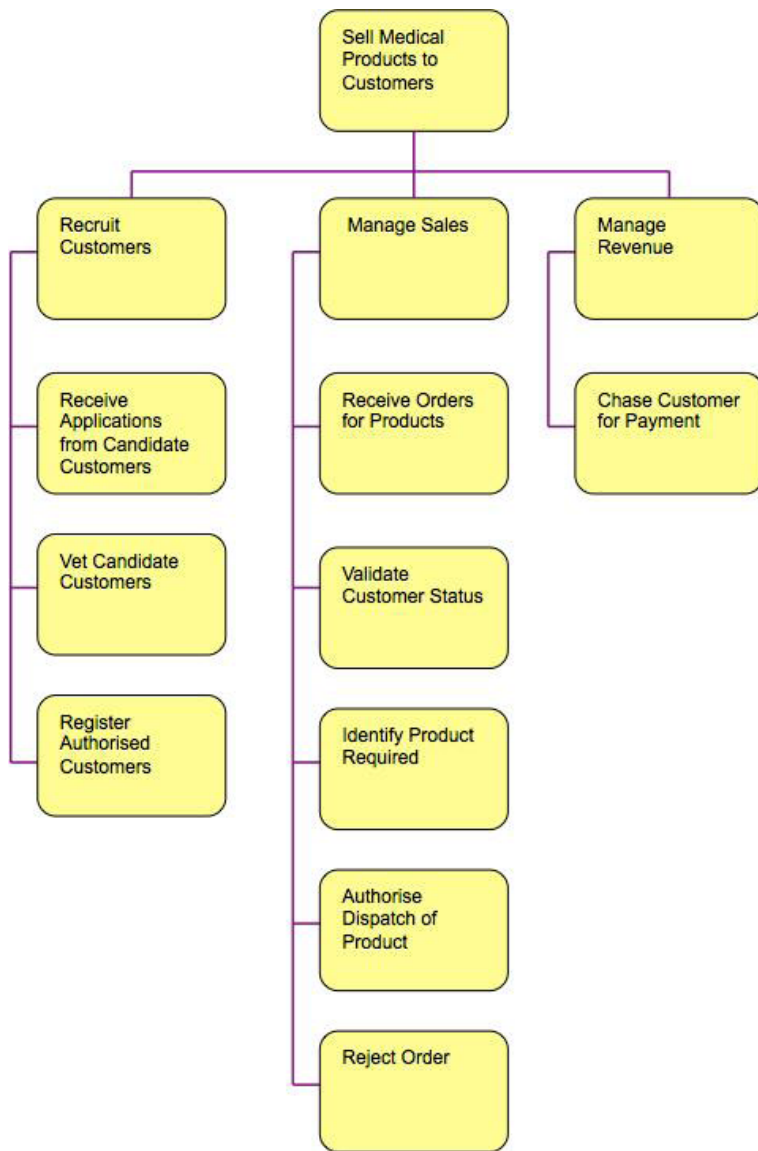


Figure 1

A list of Actual Functions is a good starting point. However, if we get a list of fourteen functions from just two paragraphs, imagine the length of the list we would get from the transcript of a two-hour structured interview!

So, how do we turn our list into a more usable structure?

Function Hierarchy

The answer is to build a functional hierarchy. Taking the functions from our list above, we can turn them into this Function Hierarchy.

Figure 1 is just a simple Function Hierarchy based on the few Business Functions extracted from two paragraphs of an interview transcript.

Using these techniques enables a whole enterprise to be modeled in detail at an accelerated rate. But more than that, it enables the future state model to be built immediately.

This ability to build a future state model of the business with such rapidity totally confounds the practitioners of traditional Process Modeling. The reason for this is that their way of modeling spends an inordinate amount of time on modeling the 'As Is'. This is time that is

completely wasted, as the purpose of modeling the 'As Is' is to change it to something else.

Function Modeling, using the techniques outlined here, totally eliminates the need to waste this valuable time, resource, money and goodwill within the enterprise. It enables the future state model to be built first time, every time. With this model in place, the enterprise can then take itself to where it needs to be.

Fundamental Business Model Hierarchy

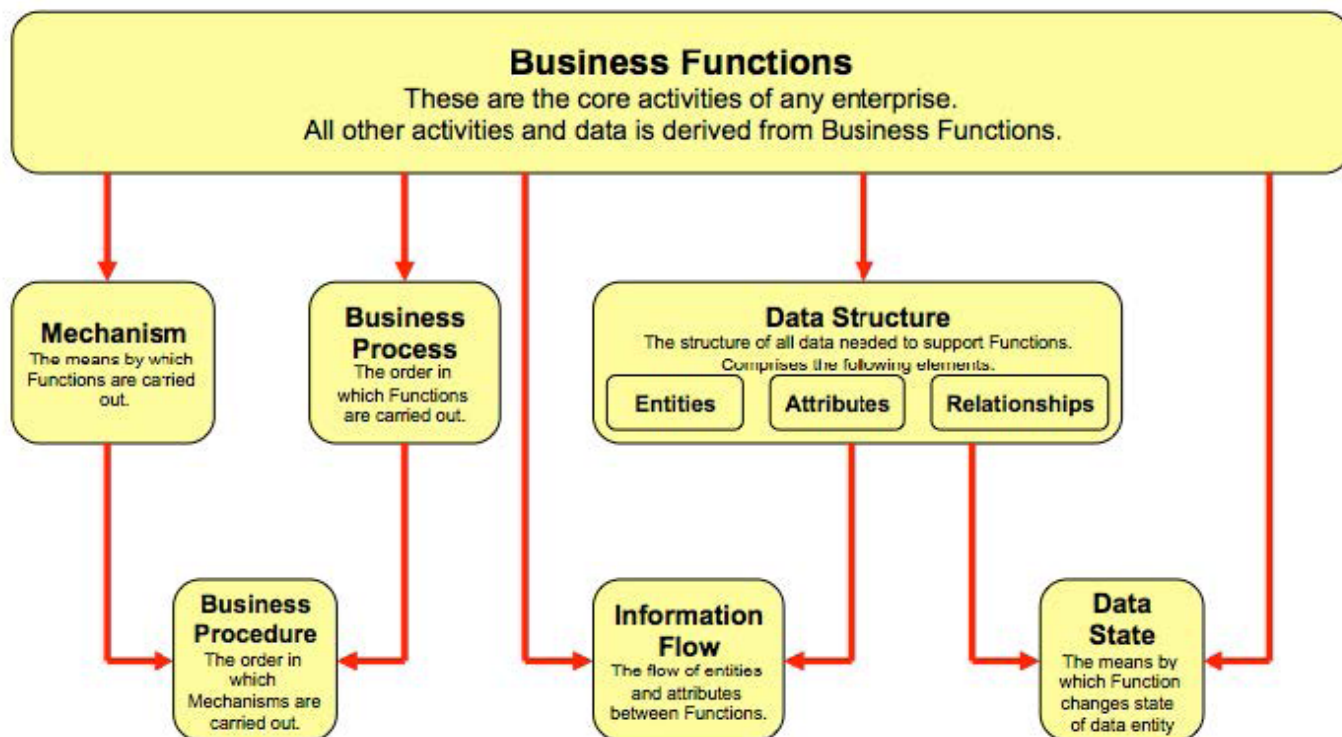


Diagram courtesy of the Integrated Modelling Method (IMM™) - www.integrated-modeling-method.com

Figure 2

Functions are the Foundation

Business Functions are the foundation of everything that occurs in an enterprise. For this reason, it should come as no surprise to find out that the Function Model is the foundation for all other business models in the enterprise and, as such, should lie at the heart all the Enterprise Architecture.

Figure 2 shows, once you have modeled the Business Functions, you are then able to build models for every other facet of the enterprise. The corollary of this is that, until you have modeled the business functions, then you cannot safely or effectively model any other facets of the enterprise.

Conclusion

The Function Model is the core, essential business model for every enterprise that is serious about putting in place an Enterprise Architecture that will enable it to perform and deliver against the expectations of management, employees, the board and shareholders.

Further, the Function Model is the basis for ALL other business models in the enterprise, such as Process Models, Data Models, Procedure Models, etc. For this reason, any enterprise that does not have a comprehensive Function Model, cannot expect to have quality models for any other facets of the business. This is not just an academic modeling issue; it will have a real negative impact on the overall performance of the enterprise.

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