



Developing New Insurance Products – A Modeling Approach

Common wisdom holds that a company that's six months late with a new product stands to lose a third of its market share.

“We spend months carefully analyzing the market and designing our new products. But often, when we make the decision to go ahead, we run into a wall – IT tells us that our existing systems can't be changed to accommodate what we need or, almost as bad, that it will take what seems like forever!”

...Marketing Director in a mid-size insurance company

“It can take us as long as two years to develop comprehensive product manuals.”

...Claims Manager

Bringing new products to market is the lifeblood of any company. But the process of developing products is time-consuming and comprehensive in its organizational scope. A new product may require work process changes in virtually every area of an organization – from home office to distributors. For insurance companies, the need to meet licensing regulations and for actuarial analysis complicates the product development process even further. To invest time and effort into product analysis and development, only to be stymied by systems that won't support the need, is frustrating, to say the least.

We have some suggestions for making product development more successful. The suggestions can be divided into three groups.

- During **product formulation**, you:
 - Document the product's structure, components, and any rules surrounding roles, calculations, and events using a modeling technique that helps everyone see what's important.
 - Illustrate the full life cycle of the product – from strategy through implementation, from underwriting through claims processing. This helps you see what processes will need to be touched and, potentially, changed to accommodate the new product.
 - Use existing business process models (or build new ones) to scope out how your business processes currently take place and identify where they will need to be changed.
 - Identify the systems that support these processes, as well as enhancements that will be needed. Interview IT to identify the scope and feasibility of these enhancements.
 - Taken together, the deliverables from these steps help your product development group make a more informed decision about whether to move forward. They help you see the full impact on the organization and its supporting systems. You can then do a more complete cost-benefit and time-to-market analysis.



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- If a decision is made to go ahead with **product implementation**, you:
 - Use the business process changes and the system enhancements you identified to build business requirements for systems changes.
 - Use the product rules you identified as input into business rule implementations.

- When you are ready for **product rollout**, you:
 - Use the “to-be” business process information to provide the basis for training materials for the workers who will be selling, underwriting, and administering new product policies.
 - Use the product documentation from the product formulation stage to generate product manuals for your agents and underwriters. Because all the rules are already identified and captured, this can be a much shorter process.

One Company’s Story

A mid-size insurance company with expertise in individual products sold through employers, decided to investigate offering a new line of products in the group arena. They felt they had a good understanding of their market and solid expectations that their existing employer groups would be good candidates for the new products. They ran a number of focus groups to evaluate the appeal of the new product. Their next step was to formulate the product structure and rules, and then to develop a strategy for it.

In the past, they had looked at two aspects of the problem. On the one hand, they needed to understand what the product would consist of. On the other, they wanted to know whether their existing systems could support the new product’s needs. They had found, however, that their ability to predict the magnitude of the system changes required was often far off the mark.

What was missing? They realized that without an understanding of all the business processes that a product touches it would be difficult to know what systems might need to be enhanced. Even more critical, they would have no way of knowing how current business processes might need to change. Business process knowledge could help the team see what events would affect the product and would need to be handled, and that would help them make decisions about product structure. So they worked on two streams of information in parallel.

Stream One: Building Product Understanding

Every product has certain characteristics that must be understood. In the past the company had outlined the product rules – for example, age ranges or occupation classes that the product would insure; or premium calculations – and had also considered riders and benefits that could apply.



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But they decided to take a more systematic approach this time with a view to helping in this instance as well in the future. They determined that they needed to know:

- The product's components. In most cases, a product is built from a set of components that can also be used by other products. So the product under study might be made up of other products or of riders. In turn, the new product might one day become a component of a larger product.
- The product's rules. There are typically many rules for a product and it can be useful to put them into compartments, such as underwriting rules or eligibility rules or state exception rules. Because of the component structure, rules can apply at the lower level or at the top level and it is important to ensure that the rules are internally consistent.
- The product's roles. In other words, who can participate in the product – Owners? Insured? Payees?
- The product's events. What happens that might affect the product? Do you need to be able to cancel the plan? Do you need to be able to add a new employer group? Identifying the events that will touch the product can help you focus on what business processes might need to change as well as on what systems should be examined to ensure that they will support the required processing.

The figure below illustrates a very simple Product Model with components, roles, events and rules. There would be additional diagrams for each of the components to show whether they had sub-components, roles, rules, and events that apply to them.

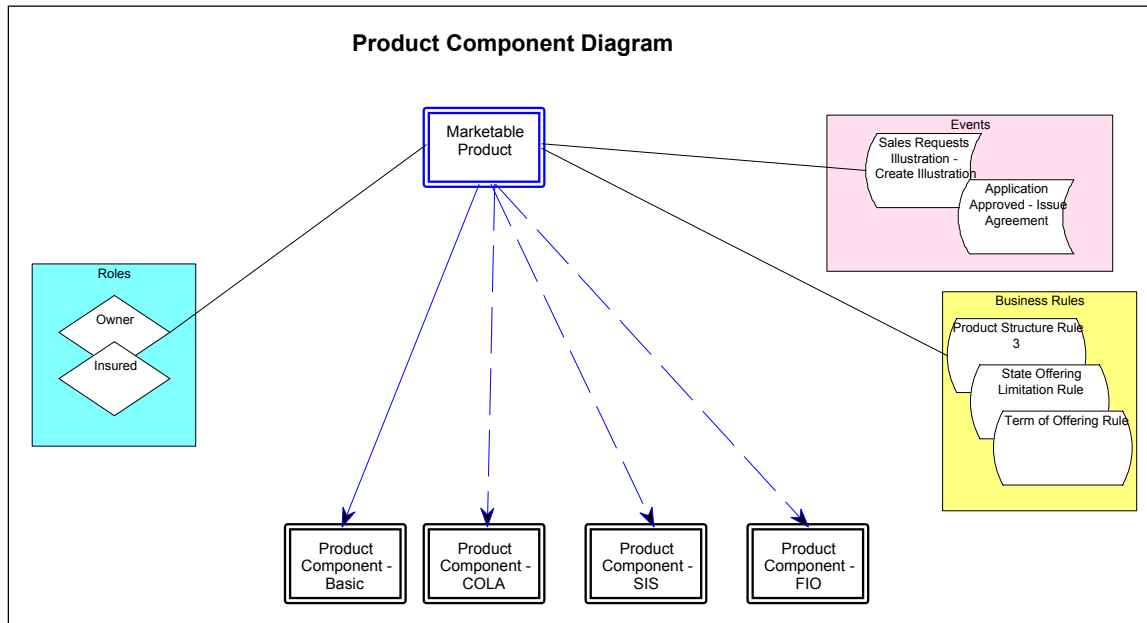


Figure: A Diagram that Illustrates a Product's Components and Structure

Stream Two: Building Process Understanding

Hand-in-hand with building product understanding, the team realized that they needed to understand what processes came into play during the life cycle of a product. So they built a high-level map that showed all the groups involved and what they did. The following groups were identified:

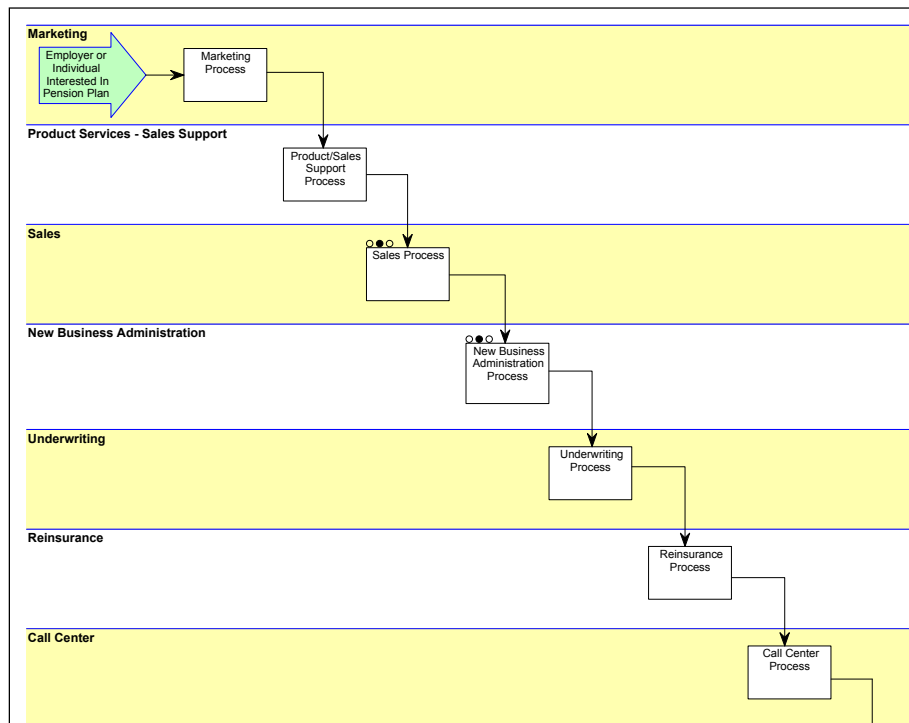
- Product Development – assess market requirements and formulate the product
- Marketing – create collateral and implement a marketing strategy
- Product Services and Sales Support – support the agents and brokers
- Sales – identify prospects and sell product
- New Business Administration – process applications
- Underwriting – underwrite applications
- Reinsurance – set reinsurance limits and pay premiums
- Call Center – provide support to the policy holder (for example, change the address on the policy)
- Claims – process claims
- Financial – handle reserves; handle billing; handle compensation



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The team found it helpful to build a swim lane diagram to show the life cycle of a product as it moves through the different organizational areas. At the bottom of the diagram, they showed the systems that were involved. The next figure is a sample of a much larger diagram.



What were the benefits of using these techniques over how the company had previously attacked product development?

1. Thinking about the product in a systematic way – its rules, its events, its roles, its calculations – made the process more focused. The team used a facilitator both to elicit the required information and then to document it. The facilitator was also responsible for building the product model. Everyone agreed that having the model made the product’s construction visible and, therefore, easier to discuss and change. It also provided a means for communication and collaboration among the team members.
2. The product – its models and the rules it would use – was documented in a repository. If additional riders, benefits or components needed to be added in the future, there would now be a single source for that information. And as more products are added, the repository will grow to be a powerful living asset for the product development team and the company as a whole.
3. Focusing on the product life cycle and building the life cycle map clearly showed what business processes would need to be examined and what supporting systems might need to be enhanced. This set the stage for the next phase of the project.



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Focusing on Business Processes

Why did the team need to understand the business processes that were currently in place? Looking at a business process is an efficient way to see what supporting systems exist and where those systems are used. Equally as crucial is the need to see whether a current process will need to change.

For example, up to this point, all insurance applications had been submitted directly from an Agent to the New Business Administration area in the company. However, with the new product, there would be a need to establish a “Case Level Team” that would be responsible within the company for handling any issues with the group. In addition, since the rules of the product specified that a minimum number of group members be covered, the underwriting process would need to take into account the entire group and not just look at individual applications. Again, the company needed a way to treat these applications as part of a group “Case”. That would change how underwriters were assigned and, to some extent, how they processed the applications.

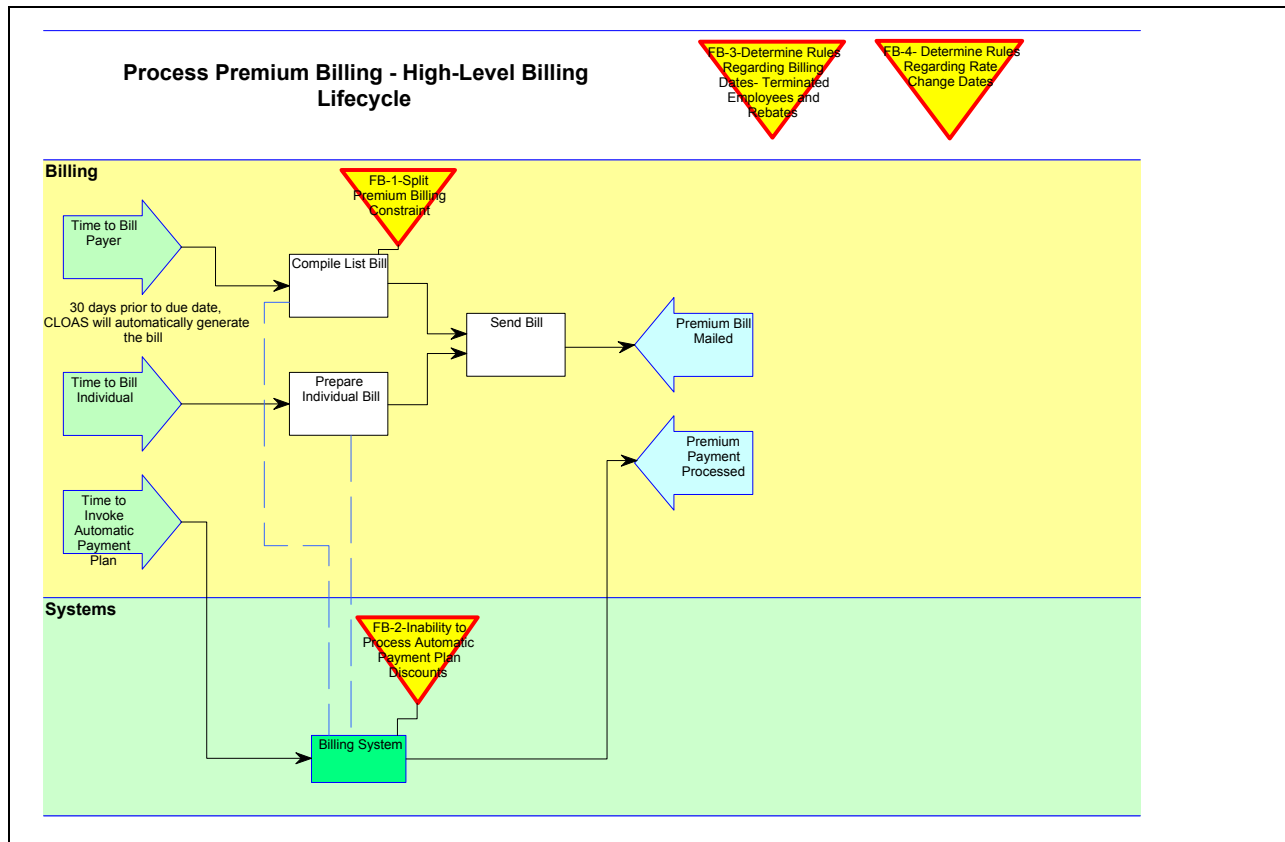
To understand business processes, the team took each business area identified on the high-level map and drilled down the look at how the processes that were performed. They used a process map, but at a greater level of detail. In fact, this custom “People-Process-Technology Map” diagram, part of the *LINK*TM methodology brought to the project team by the consulting firm Doreen Evans Associates, includes not only swim lanes (the people) and process steps (the process), but also a mapping to the systems that support the process steps (the technology). This makes it easy to understand what systems need to be looked at for possible enhancements.

Once they could understand the existing process, the team was ready to look for areas that might have to be changed. The figure below shows an example of one of the People-Process-Technology maps. The “yield” symbols are a special feature that was added to indicate areas that might need to be changed.



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These maps were built with the help of individuals filling the roles that each swim lane represented. Once built, they can be updated to show the new “to-be” process and, just like the product models, become an ongoing company asset.

Identifying Systems

With the People-Process-Technology maps in place, the team was ready to tackle the systems. Here what they needed to know:

1. What were the basic business requirements that would need to be met? Which were critical and which “nice to have?”
2. Were the changes possible?
3. If not, what were the alternatives?
4. If so, could IT give them an estimate of the time, effort and cost involved?



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First, the team documented the business requirements that would have to be met and grouped these requirements against the systems where they believed they would be executed.

The consultants working with the team met with IT experts to go over each system with these questions in mind. The product documentation along with the business process documentation and the business requirements made it relatively straightforward to see what would have to be addressed, changed or added in the supporting systems. Although the time and cost estimates that IT made at this point could not be exact, IT could provide a good faith estimate based on a solid understanding of the business need.

Completion of the Product Formulation Phase

The decision of whether to go ahead with a new product was made by a strategic-level group. Many considerations of course come into play to make such a decision – commission structures, financial risk, and so on. But, in addition, this time the team could answer questions such as:

- What kind of an impact will this product make on our current business processes?
- Will we need to hire internal staff with different skills to support it?
- Can we use the same agents as we currently have?
- What changes will need to be made to our systems? How much time and money will these changes cost us?

Having this information available and trusting the information's accuracy meant that a better decision could be made. This was the most important benefit of the new process.

Product Implementation

Once the decision is made to go forward with the new product, the next phase involves actually developing the product and implementing the support it needs – enhancing systems, creating marketing materials, hiring agents, changing the process, and so forth.

The work that had been done during product formulation positioned the company in the following ways:

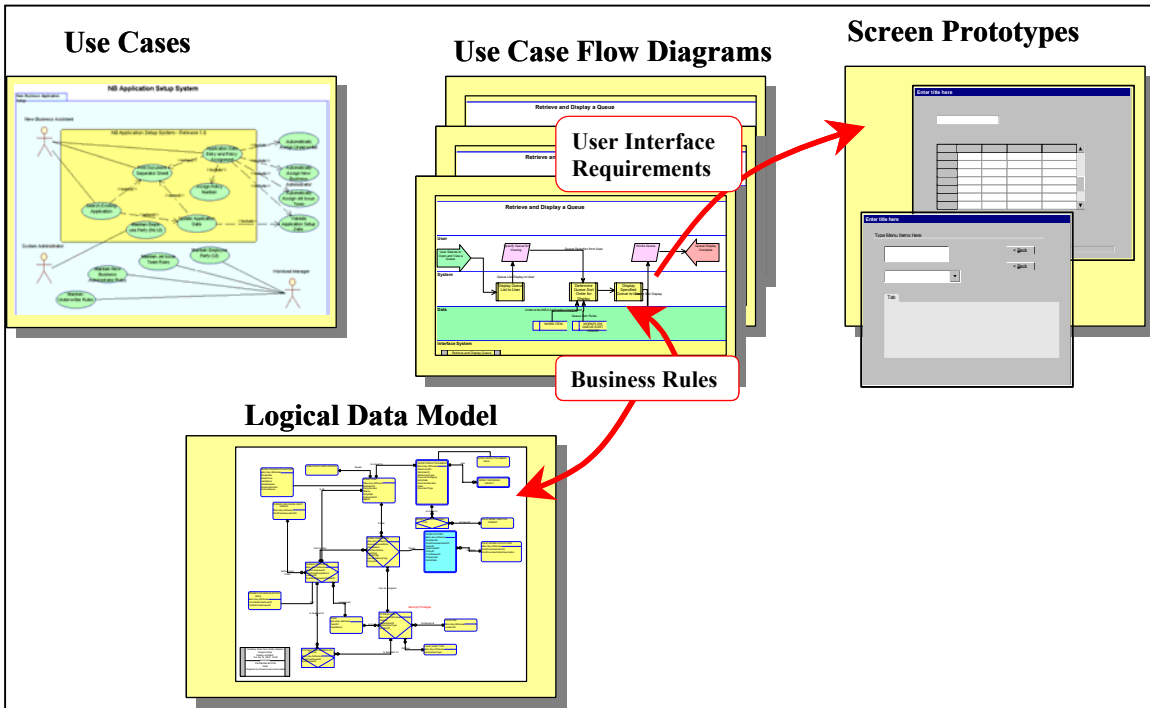
- The People-Process-Technology maps could be re-drawn to show how the “to-be” process would work once all changes had been incorporated.
- The business requirements and system enhancements that were identified provided the foundation for detailed requirements for technology initiatives. These requirements consisted of:



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- System use cases and use case flows
- User interfaces
- Data requirements
- System interfaces
- Business rules



Product Rollout

With detailed requirements in hand, system enhancements and the acquisition of new software to support the product needs could begin. Once the systems were developed, marketing materials were in place, new hires had been made and the processes redesigned, the product could be rolled out.

All the work that had come before could be re-used now. For example, the to-be People-Process-Technology maps provided the basis for training materials and for online “coaches” that would help guide staff in the new processes. And the product models, including all the rules, roles, calculations, and components, were used to generate the skeleton for product manuals. This made the completion of these manuals much quicker and more accurate.



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The Results

Perhaps the most important result of the enhancements to the product development process was the company's ability to make a better go/no-go decision on whether to bring the product to market. In addition to the market research they had always done, they now had information on the kinds of changes they would need to make to support the product and could factor those costs into their decision.

But another benefit – perhaps not quite so easy to identify – was the fact that the assets from the project exist in a repository. That means they are available to be used for the next product development effort. The process models are now a company asset and can jump-start future process improvement undertakings; the product models lay the foundation for a library of product models that will let marketers better understand how products overlap or complement each other.

About Doreen Evans Associates

Doreen Evans Associates (DEA) is a professional services firm that focuses on business process improvement. We can help you change a process, build an enterprise architecture, or define requirements for your systems and technologies. Founded in 1992 as a woman-owned, privately-held small business, our mission is to ensure that business need drives solutions.