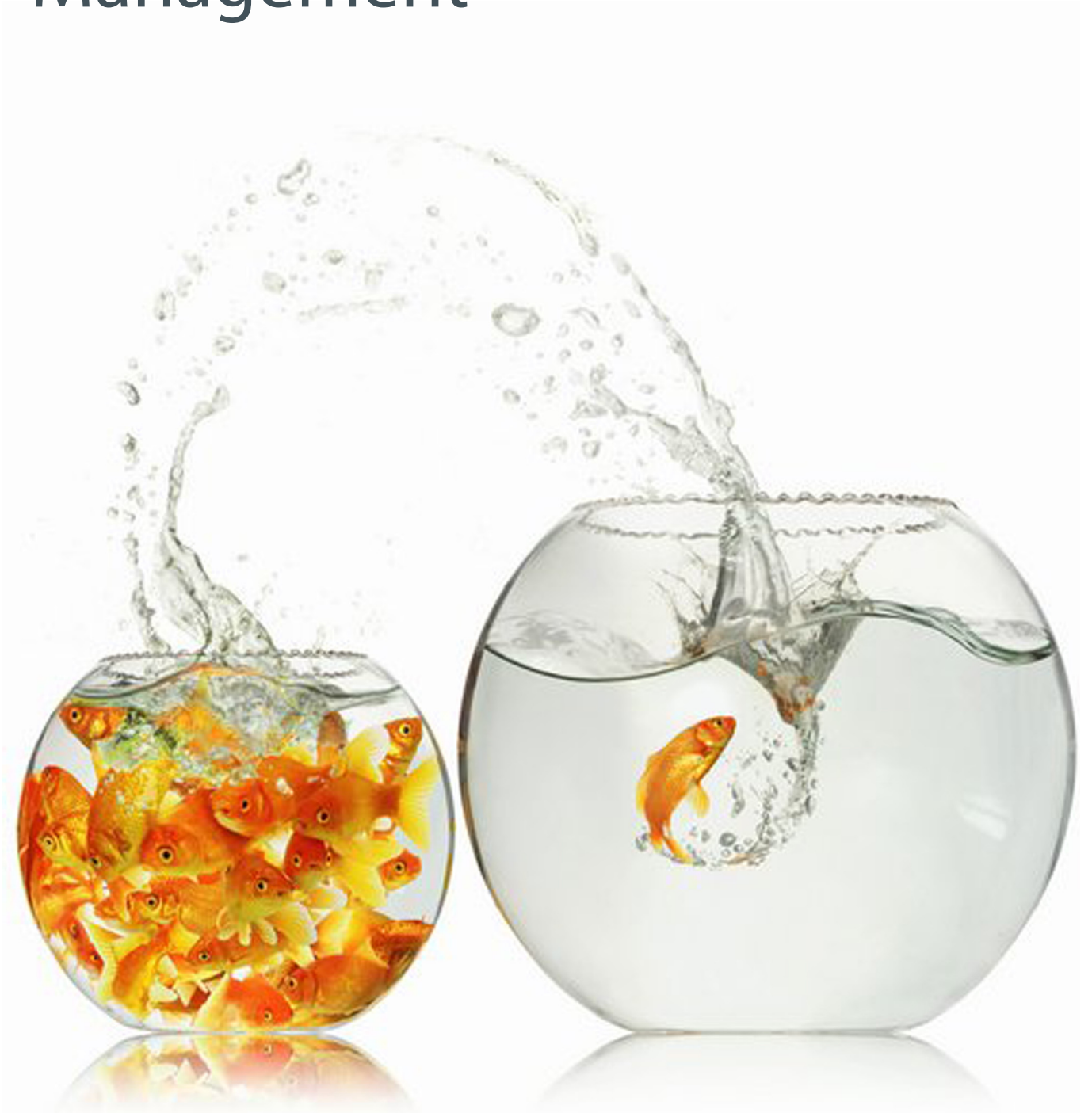


The Journey to Insurance Product Management



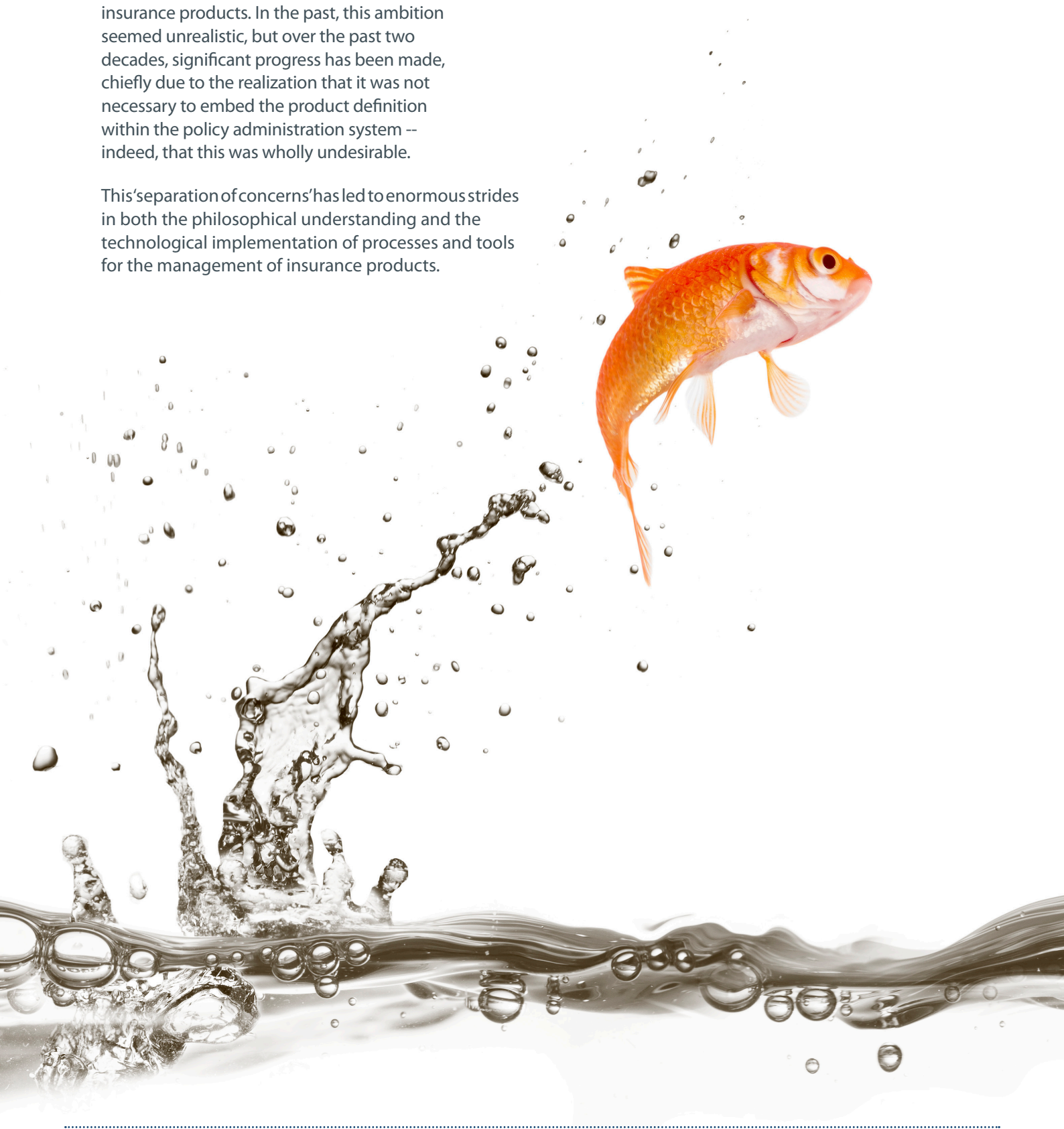
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Introduction

As with any other organizational effort, enterprises seek to bring structure, discipline and management to the processes involved in developing, maintaining and introducing new insurance products. In the past, this ambition seemed unrealistic, but over the past two decades, significant progress has been made, chiefly due to the realization that it was not necessary to embed the product definition within the policy administration system -- indeed, that this was wholly undesirable.

This 'separation of concerns' has led to enormous strides in both the philosophical understanding and the technological implementation of processes and tools for the management of insurance products.



Historical Perspective

We start by painting a picture of the early days of managing products. As with many of the early systems developed, there were limited standards applied to the delivery process and each company was left to develop their own set of 'standards'.

PROBLEMS

- **Incomplete**

The early days saw product ideas being documented informally as high-level concepts that carried the main ideas behind a product but lacked the necessary detail to properly describe the product in isolation of the systems that were subsequently used to implement them.

- **Ambiguous**

The terminology used in products is often confusing and the industry still struggles to uniquely use common terminology consistently and unambiguously. For example, the term 'line of business' has different meanings with many of the organizations today (or many departments within the same organization). Sometimes it's a high-level grouping of product lines, sometimes a specific product family, sometimes an indication of the license under which a product is sold.

- **No common language**

The format and structure used to describe product requirements varied by company, department and system.

- **Not easily understood by all**

Although the lowest level requirements (e.g. Actuarial formulae) may well be understood by other actuaries, the regular insurance professional working in a different line of business or arriving from a different organization was likely to learn a whole new vocabulary.

- **Not reusable**

Requirements were generally expressed in the context of a single product offering and no thought was given to commonality across products let alone the notion of reusing structural components across products.

- **Not maintainable**

An issue shared with many other approaches to requirements capture is that, although requirements are typically documented early on in the delivery of a new solution, we find that once implemented, the requirements are no longer maintained. Subsequent changes are applied as single change statements and hence the notion of an overall product definition (even if it once existed) is lost as a single entity that can be examined and understood later.

- **Does not necessarily reflect what is implemented**

As a result of the lack of ongoing maintenance, even in cases where a great deal of effort was originally expended in detailing the product to the nth degree, the product documentation ceases to be the 'source of record'.

Over time, there's little confidence in returning to the original requirements and hence people need to delve into the codebase to understand what is implemented.

- **No Configuration Management**

When changes are made to a product component, for example, a coverage, those changes may or may not affect other components within the same product, or even other products. This ability to identify the impact of changes across the product ecosystem, is called configuration management.

- **Creates dependence on specialist individuals**

The lack of a standard way to communicate the product to a wider audience undoubtedly leaves an organization with a dependency on individuals that created the documentation in the first place and understand the product.

Often, key resources become the 'place to go' for information on a particular product offering. This may be acceptable if those people are always available but it does create risks in terms of the preservation of intellectual property and organizational knowledge.

- **Individual's skills are not transportable**

Once an organization becomes dependent on a specialist individual, it's very difficult to get that wealth of knowledge transferred to another individual. In many cases, it becomes a case that the basic knowledge is transferred and the recipient begins their own journey of self-enlightenment where the detail has to be discovered from scratch.

One might argue that this is not a huge problem but, in today's world, people tend to pass through areas of a business rather than stay in the same position for a whole career. This staff transition means that the time available to acquire the knowledge is significantly reduced compared with 10-20 years ago.

- **Industry exchange of information impossible**

The lack of standards and a common language ultimately means that it is impossible for organizations to exchange information between each other without first translating to a common, agreed, format.

The introduction of standards bodies (e.g. ACORD) certainly helps with the business-to-business interaction but each bespoke client is left to perform their own mapping to the standard being used.

Product Configuration

Insurance practices have moved on, and so has the business of product design and implementation. Today, organizations take a more systematic approach.

BIG STEP FORWARD

Product configuration is normally associated with vendor specific solutions used to drive particular Policy Administration systems. It represents a huge step forward in the sense that the content used to describe the product becomes part of the solution to deliver the policy administration and hence is maintained as part of the 'system of record'. It's now possible to have a more consumable representation of the implemented product that is always current.

STILL SOME PROBLEMS

However, although this is a huge step forward, we are not addressing all of the issues that were identified with the early approaches to Product Management.

- **No common language**

Although we've made progress, the fact that the definition of the products are specific to the target solution means that there's no common language introduced across the Insurance Industry.

- **Not easily understood by lay people**

Some Product Configurators are more consumable than others but many still tend to be deployed within the realm of the IT department because of their close ties to the policy execution environment.

The very fact that there's no common language also implies that people have to understand multiple languages if different solutions are deployed within the same organization.

- **Less reusable**

Many of the Product Configurators are positioned to manage a single product and the changes are applied to a single product at a time. As a result, the individual components that actually make up the product are not, usually, managed for reuse but 'reuse' is more a case of copy-and-paste of a prior model with changes being applied where necessary.

- **Creates potential for Configuration Management**

Because linkages between reused components are not maintained, we are still not able to assess the impact of a change to one product component across our entire product portfolio.

- **Creates dependence on specialist individuals**

Although the staff dependency is expected to be reduced when compared with the earlier historic product knowledge dependency, the fact that the configurators are specific to target a solution provider still implies that there's a smaller set of people in the organization exposed to the product configuration. In addition, the positioning of product configuration within the IT domain implies that the business cannot maintain their own product definitions.

- **Individual's skills are not transportable outside of technical ecosystem**

The tie to a particular solution provider will ensure that the skills obtained will be restricted to installations that use the same target policy administration system.

- **Industry exchange of information impossible (outside specific Policy Administration System community)**

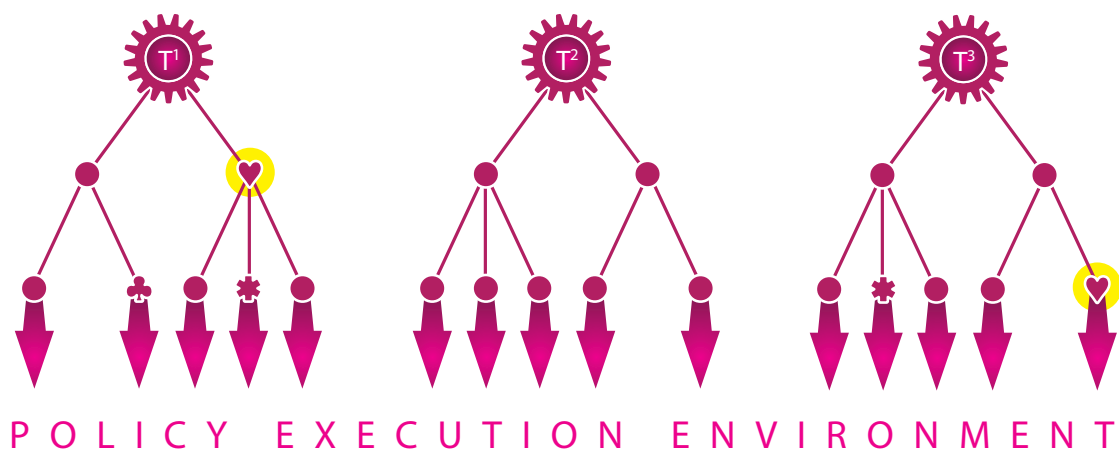
Although we've formalized the product definition, the information itself isn't something that can allow an insurer to migrate to another solution provider.

Likewise, communication with another business entity is only possible if they were using the same policy administration solutions.



The following diagram represents the Product Configuration of today's policy admin solutions. Typically, tools are provided to manage the individual Product trees that are used to drive the policy execution environment.

Incumbent Product Environment



Product Management

THE NEXT STEP

So, having discussed the early approaches to Product Management and recognized the real benefits associated with the raft of Product Configurators entering the market place, what's next?

Simply stated, we need to help organizations reach the next evolutionary level in the Product Management journey:

- **A complete environment**
We present a complete environment, which addresses and supports every aspect of Product Management, from product design to product deployment and maintenance, including Project and Workgroup Management, Quality Assurance, Security and Support, Modeling, Versioning, Reporting and support for external downstream solutions
- **Complete definition of all products**
We look to have a consistent approach that allows us to capture the requirements of all products across all lines-of-business and at a level of detail that is capable of driving the policy solutions in much the same way as the Product Configurators do today.
- **An industry common language to fully describe product unambiguously**
We work to get the language that describes the products managed as an Industry standard such that other solutions in this space can deliver to a consistent language and downstream users can consume the same language.
- **Ability to create and render product definitions graphically, using industry standard notation**
We can now display and manage product structures in interactive graphical representation, using notations adopted by the industry standard bodies (ACORD, for example).
- **Ability to maintain a repository of all product definitions and their reusable components**
Unlike a Product-by-Product approach, we want to be able to model changes to policy content and apply the change to one or more cases where the change applies. We can only effectively do this if we understand where each component is used and reused across different product and/or jurisdiction.
- **Configuration Management across the entire product portfolio.**
With the introduction of the product component repository, we now have the ability to practice Configuration Management across all products in our portfolio, and to assess the impact of any changes even to a single product component.
- **Ability to export product definition into PAS systems for direct execution (requires interface in some cases)**
In taking the next step to managing the reuse of content by the business community, we cannot lose the primary benefit of the Product Configurators. We still need the ability to produce the output that is capable of driving the respective policy administration solutions.

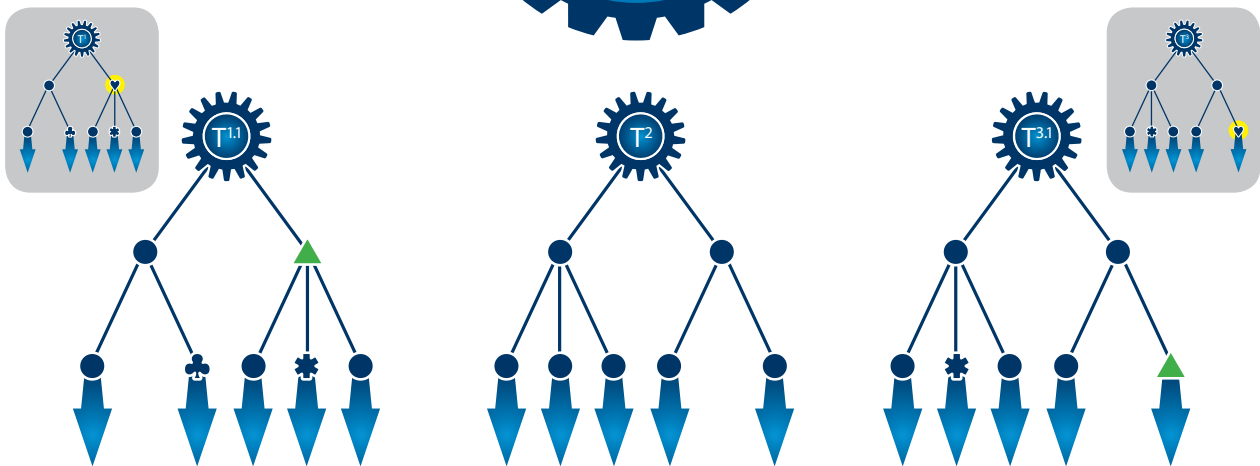
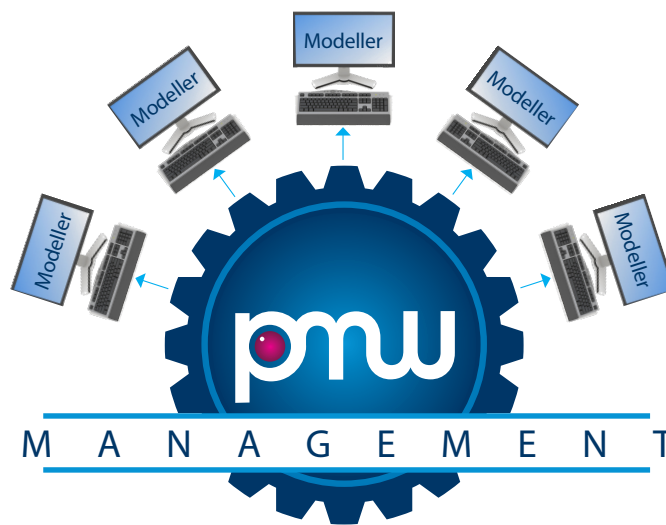
However, instead of the approach to defining the product changing from one target solution to another, we want to deploy a consistent approach for describing the product and we want the environment in which we operate to provide the necessary interchange to vendor-specific solutions.

Product Management offers a holistic approach, giving organizations the capability to define and manage the evolution of products over a period of time. The management occurs in a layer above the individual products themselves with a cross reference of all the parts and their use. The end user is provided with an environment to support product change with an understanding of the impact and the governance around product versioning and product verification.

Product Management Workbench implemented

Example change

For Territory 1 & 3



In the example above, the single model change represented by the move from the 'heart' (♥) to the 'triangle' (▲) has caused new versions of the T1 and T3 products (namely T1.1 and T3.1). The business user is informed of the impact as part of the modelled change and, if accepted, PMW produces the new versions of the product ready for exporting to the policy execution environment. All changes, and their impact, are visible to the business prior to exporting to IT.

This has real long-lasting benefits for organizations, helping to reduce time and costs, while improving consistency and visibility and providing greater integrity.

Benefits

The Product Management approach, supported by the Product Management Workbench (PMW) is designed to deliver multiple business benefits. The most important ones are listed below.

Faster Time to Market

Although general Productivity gains will, in itself, reduce the time to get a product into the market, there are a number of additional innovations that have been specifically implemented to reduce the downstream implementation time.

The most significant contribution to a faster time to market is when the Product definition can be consumed by the policy administration solution. This is ground-breaking from an architectural standpoint, and finally separates the product design from the policy administration system. PMW's unique ability to export the product specification as a structured XML document enables any 'product-aware' policy solution to consume the product definition. The fact that PMW manages the versioning of whole product trees separately from the individual components further ensures that traceability between the policies sold to their respective product version can be managed -- another ground-breaking innovation.

For new systems being introduced, the ability to define flexible mapping structures to capture mappings from source systems to the products modelled as well as mappings to new target systems means that, for the first time, there's a central place to go for all the migration knowledge necessary.

Greater Productivity

The PMW toolset provides the business product modeling community with the support that they need to effectively and efficiently capture quality requirements.

The unique ability to visually collaborate with a distributed team, in real-time, without the need for check-out/check-in of the models significantly contributes to an agile delivery environment. This, together with PMW's ability to identify issues with the model (via the Problem list) means that all interested parties can address any issues at the earliest opportunity, for example, when the modeling is first performed. We know that finding problems early in the development lifecycle reduces cost considerably.

Knowledge Retention

Traditionally, staff have joined insurance companies and many have remained in a specific role, or department, for many years accumulating key knowledge that effectively make them indispensable to some degree.

In many cases, companies are employing a generation nearing the end of their effective working career, and key knowledge will soon no longer be accessible.

As we move forward and attract the younger generation into the industry, there's a tendency for them to gain experience and move on within the same company or across companies. This turnover of staff requires a different kind of environment where the knowledge base for products isn't the responsibility of individuals but is a pool of knowledge consumed by, and contributed to, by many. Lastly, we need a knowledge pool where the format of the information is easy for the average insurance professional to consume and maintain during their transition through the department.

A key PMW benefit for the organization is the ability to consistently record, and maintain, the product knowledge within the organization in a central, accessible repository, making it more freely available to employees joining the team or partner organizations needing access to the information.

Intellectual Property Protected

As with any manufacturer, the product definition is a major factor to differentiate oneself in the marketplace. It is crucial that steps are taken to protect the intellectual property and, although we want to enable information to be shared with trusted parties, we do not want the information being consumed by other, non-trusted, parties. To this aim, PMW is licensed electronically and only licensed repositories on physical machines are enabled to consume the repository data.

The Product Specification report can be customized to limit the content included to any of the product information that is applicable to the intended audience.

Innovation Facilitated

The approach to separation of product from policy execution and the ability to construct new product offerings from proven and standardized components provides an environment to encourage and support insurance companies bringing new and innovative products to market. The notion of a plug-and-play construction environment is something to be aspired.

The flexibility inherent in PMW supports the introduction of new versioning criteria (e.g. new territories / channels / what next?), new types of business data (for example, UBI), and new types of product component being introduced and provides the necessary environment to enable the fast introduction of innovative ideas.

Flexibility is a key design goal for the toolset.

Costs Reduced

Any improvement in 'productivity' or 'reduced time to market' is likely to come with its own cost saving. However, there are side benefits to the next evolution in Product Management that have the potential to bring massive savings to an organization that may not, initially, be understood and measurable.

Improving the ability to retain staff knowledge from key resources within the organization and making it available to new, possibly transient, members of the team will result in significant cost savings – and reduce project risks.

A single source of unambiguous information, held in a consistent form, represented visually and targeted towards the mass-market insurance professional will be a significant reduction in time wasted by people repeatedly delving into policy systems to get an understanding of what has been implemented. The need to restrict training to just one environment across all departments will enable an organization to cross-train individuals for multiple lines of business and further provides for an environment where people can achieve their maximum potential and move within the organization while, at the same time, contributing to, and evolving, the central repository of product knowledge.

Collaboration Enabled

Insurance is never going to be about a single person. It is obvious that all areas of the business have an interest in the company's products, and some contribution to

make. Product management is a team effort, and teams must collaborate effectively and efficiently.

PMW's innovative approach to a single 'source of record' with real-time notification for modeling changes enables the collaboration with all stakeholders that is vital to replace the serial, "waterfall" nature of product delivery with an agile, team-based collaboration that positions an organization for the competitive future of the insurance business.

Governance Improved

As with other areas of the Financial Industry, there's an ever increasing pressure on responsible governance of the enterprise. There are several opportunities for improving governance of the product delivery process. For example, the real-time identification of problem areas will improve the quality of the products that we produce -- early in the delivery process.

The supported roles, and their associated rights, ensure that access to information can be provided without additional risk for product models being changed in error. This, together with the auditing of key transactions provides traceability for the information exported from the workbench.

The unique Impact Analysis provided for all modeling changes ensures that the modeler is kept informed of the consequences of each change to any affected Product.

The ability to compare products visually ensures, for the first time, that the business can clearly understand the jurisdiction variations that we have to comply with and hence report against; something that has never been available at the business level in the past. Understanding the differences is the first step to understanding whether they can be rationalized.

Although other modeling tools support the ability to manage projects, the models are typically specific to the project and merged at a later date. The PMW specific use of workgroups enable teams to work on different changes without impacting each other but, at the same time, keeping respective teams informed of potential conflicting changes that need to be taken into account. The need to make changes to the same production product in parallel is also supported and the business is protected against losing changes when attempting to issue projects out of their original sequence.

Conclusion

The journey towards Product Management continues, but already, practitioners are reporting on the beneficial impact of applying these new disciplines, technologies and processes.

- Users of PMW find that features such as the graphical product design interface, reusable product components, collaboration, a common and unambiguous representation of product structure, and versioning control, facilitate significant improvements in time to market – in some instances, estimated to be orders of magnitude.
 - Being able to integrate all aspects of the product, across the full value chain of Product Architect, Product Modeler, Application Designer and Developer, including the business rules, in a collaborative and seamless ecosystem for collaboration, creates a positive impact, not only on time to market, but also in terms of the overall business success of the insurance company.
 - Facilities for collaboration, automated documentation, communication, reusability, versioning and extensive error detection all add up to valuable specialist employee resources saving time, which users translate directly into substantial cost savings, especially compared to the modest cost of licensing PMW.
 - Companies cite the impact analysis as a major benefit in analyzing the impact of regulatory changes, and being able to roll the changes out in a fraction of the time previously experienced, thereby avoiding potential fines, but more importantly, avoiding costly errors in implementation.
 - The preservation of employee knowledge does not only bring peace of mind – it also results in significant cost savings when new team members have a single source of unambiguous information to inform them about product structure and features, as opposed to perusing out of date documents or, worse, the code of the systems administering the product.
- This benefit is cited by insurance companies as one of the 'unexpected but valued' side benefits experienced in using PMW.

This toolset uses innovative approaches, technologies and design features to provide the business benefits and competitive advantages, while still respecting and advancing the development of standards within this vital segment of running a successful insurance business.



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