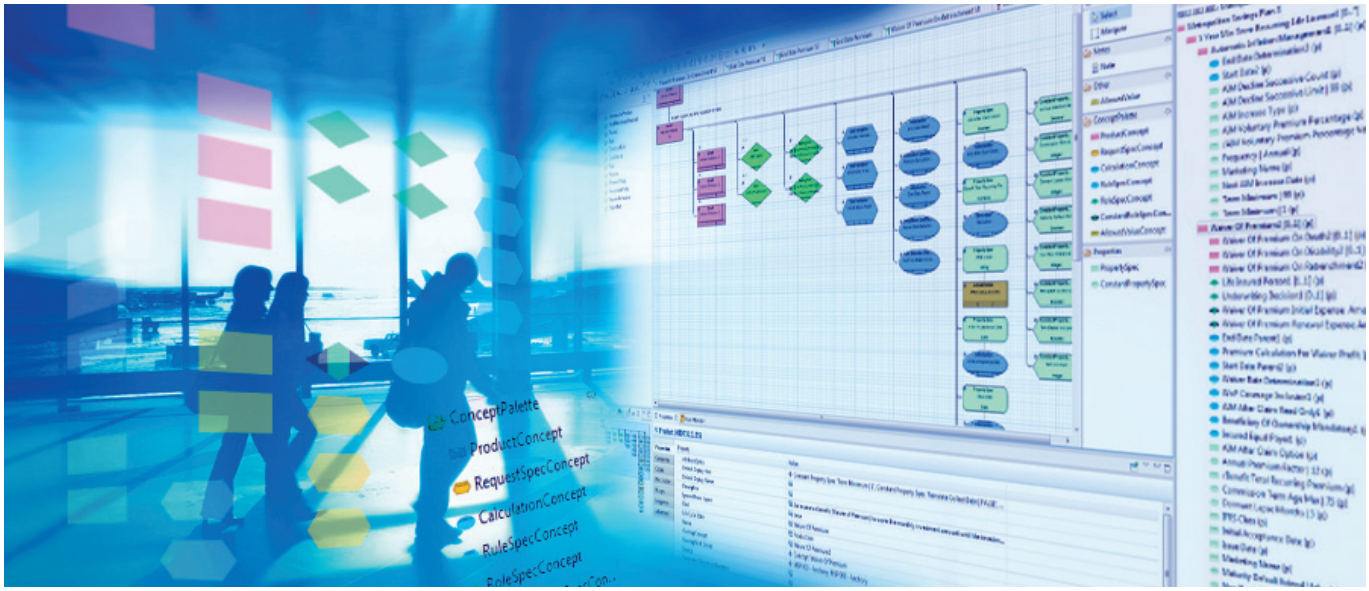
ACORD

Insurance Innovation Challenge



Systemize IT Submission:

Product Modelling Workbench

systemizeit

A working model of your proposed innovation, product or service. A functional 'beta' product is preferred, but well-defined concepts for products or services are also eligible.

PMW is running with a sample, hosted, repository on the Systemize IT server. The sample repository can be accessed with the PMW Client uploaded with this submission.

We have made the assumption, for now, that this is sufficient to address the requirement for a working model. However, in the coming months, we would like to populate an ACORD sample repository in line with the Product Diagramming work.

Separate documents have been uploaded to:

- Detail installing the PMW client in a Windows Environment (PMW Client –Windows Installer.pdf).
- Connecting to the sample repository (PMW Trial Client Access.pdf).

A detailed description of how your proposed innovation, product or service will affect and significantly change the current insurance industry.

Background

I would like to start by drawing the analogy between the Management of Products today with the early days of my IT career where systems were created and documented with word processors and spreadsheets. Each company had its own way to define system requirements and design solutions. Often, 'standards' were departmental and deployed for each system, or line of business, and hence many different standards existed within a single company.

Around the 1980's and 1990's we started to see structured methods and supporting tooling come into the IT and Business Analysis areas. Possibly the biggest success story was the introduction of UML (Unified Modelling Language) that was introduced in mid-1990 with the consolidation of approaches from Grady Booch, Ivar Jacobson and James Rumbaugh at Rational Software.

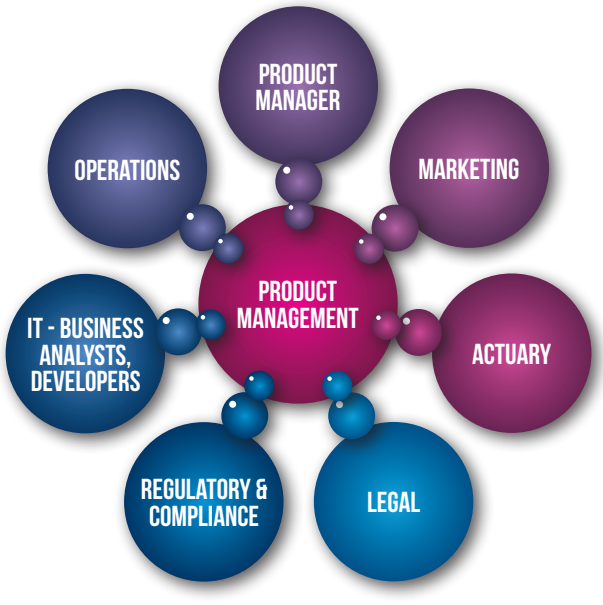
Over the last 20 years we have seen how the models to capture main requirements have been further elaborated to drive solution delivery with code generation or data propagation from model-driven delivery environments. These model-driven tools apply programming transformations to business requirements to deliver implementable solutions (or parts of solutions) thus reducing the delivery time and improve accuracy over hand-crafted artefacts.

Problem Statement

Although it is possible to model any business domain with these modelling tools, the problem comes when we consider the very nature of system delivery versus the need for Insurance Product Management. The typical approach to building systems is to generalise the problem domain in such a way to accommodate all situations that our systems need to cater for. This leads us to consider coverages, benefits, and premium structures etc. that exist across all lines of business and not, for example, the specific benefits that makes up a Worldwide Travel Policy, Life Insurance Policy or State-specific exception.

Whilst systems built with generic solutions in mind offer the Insurance Business the greatest level of flexibility, the current requirement management environments miss the ability to define and describe individual products that would be required to populate these flexible solutions.

The second problem is the ownership of these models; more often than not, these models are the realm of the IT department and translation typically takes place from the requirements expressed by business people into representations managed and consumed by IT.



Product is a fundamental part of any business and all areas of the organisation have an interest in, or input to, the management and evolution of the products being sold. IT is, undoubtedly, an important consumer of the Product Requirements but the ownership should remain within the Business community.

Proposed Solution

Product Specification Diagrams (PSDs - includes the ACORD Diagramming Standard) represent the same visual, consistent, approach to managing a Product's Specification that we saw all those years ago for managing system requirements. The difference with PSDs is that the focus is on the actual instances that collectively describe a single version of an insurance product and the ownership of the diagram lies with the Business.

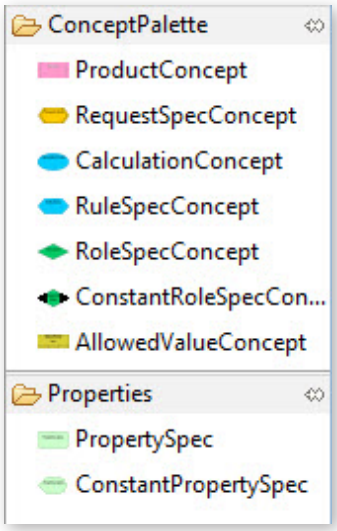
The PSD notation uses a limited number of components to describe a marketable product and experience shows that it is so much easier to educate Insurance professionals on the use of this limited set of product components than it is to educate modellers on the many years of insurance knowledge that exists in the heads of our Claims Handlers, Underwriters and Actuaries etc.

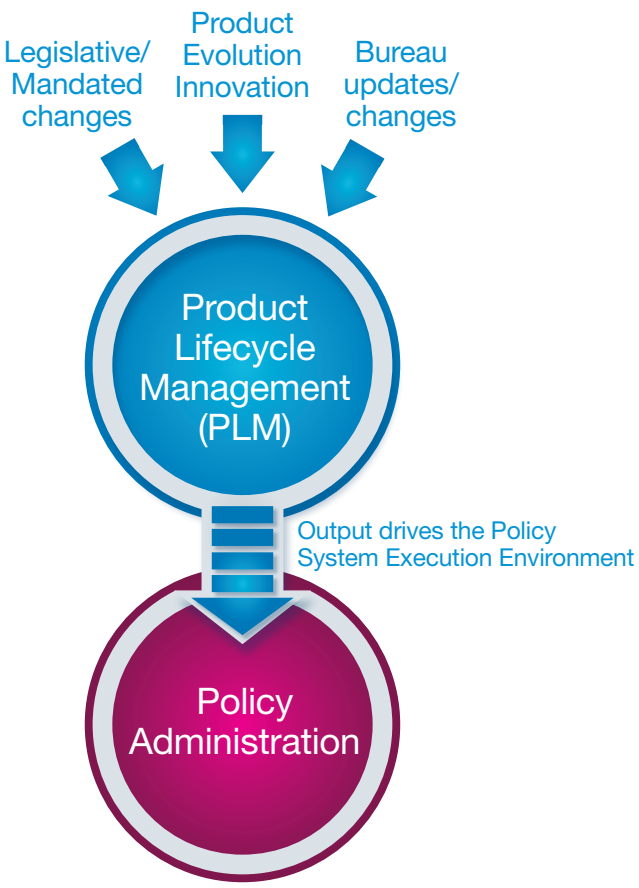
When we take this modelling notation and combine it with the tooling to manage the approach, we have an environment that is targeted at the Business community with the ability to manage changes to the product over time and across geography / jurisdiction and channel (or any other kind of differentiating criteria that the business may identify).

Couple this management of Product Requirements by the business with policy administration solutions that understand the product specifications and we have a powerful, and seamless, transformation directly to the systems that sell and administer the policies in the market place.

The approach improves communication across all stakeholders, cuts time-to-market, reduces manual interpretation of requirements and hence improves accuracy and, with the ability to reuse product content across different product offerings safely, improves delivery speed and quality which, in turn, improves confidence in testing.

PMW (Product Modeling Workbench) is one such environment; PMW provides the capability for an Insurance Business to manage their Product Portfolio with the potential downstream integration to policy administration solutions.





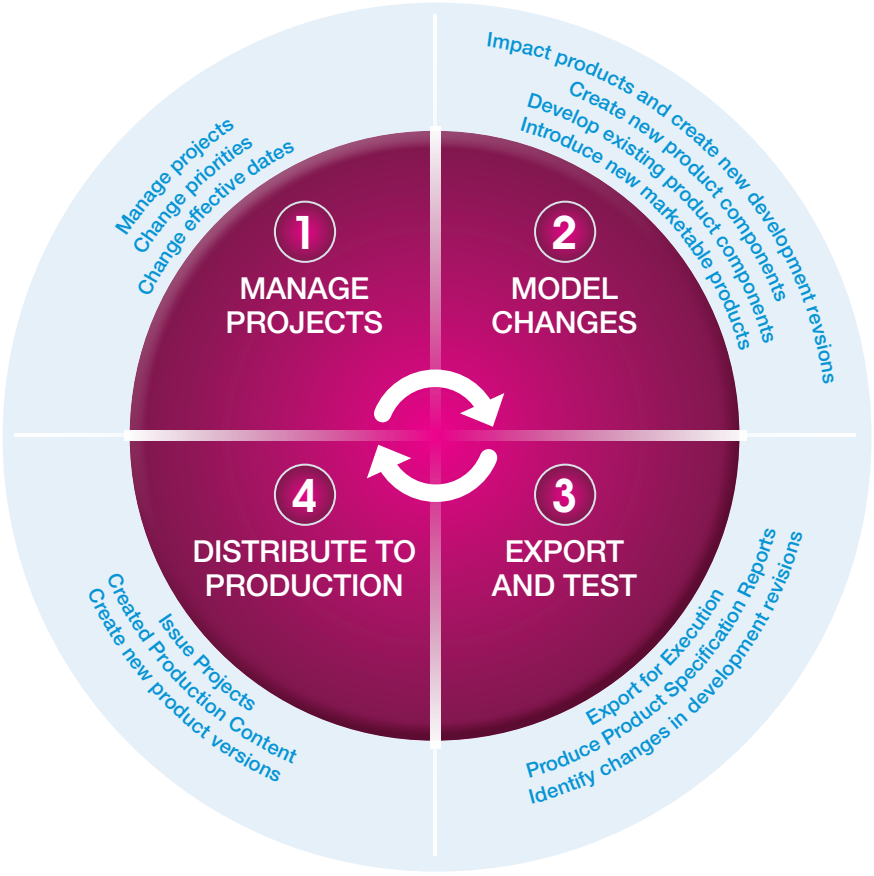
PMW's unique approach to **'usage-based modelling'** provides the versioning and impact analysis necessary for the business community to confidently maximise their reuse of product components.

Unlike other, 'regular', requirement management environments, PMW's is designed from the ground up to specialise on the Product specification and its underlying repository maintains a complete history of a product's evolution over time.

The collaborative nature of PMW means that distributed teams can all access, and contribute to, the product models in an audited environment.

Introducing PMW into the day-to-day Product Lifecycle Management process provides the insurance company with the governance and traceability that is lacking with the current document-based approach.

The ability to compare different revisions of a product clearly communicates the changes among interested parties. Never before has the industry had the ability to visually compare products across States but this can be realised with PMW.



Benefits to the Insurance Industry

Introducing the formalism for describing an Insurance Product positions the Product as the important company asset that it deserves.

We have, for some time, started to see a growing market of policy solutions that are highly configurable with their own approaches to drive their execution environments. Externalising the product specification from the specific implementation solutions means that these descriptions have a life of their own that surpasses the lifetime of the technology used to implement them today.

The benefit of a single product management approach that is not dependent on any single policy solution provides the Insurance organization with a consistent way to manage their product offerings across any number of implementations. Few policy administration solutions offer the ability to manage reuse of product parts with the necessary impact analysis to confidently apply change to existing product specifications.

Including these specifications in the day-to-day Product Lifecycle Management process means that the information is always current and in use within the business.

This, in turn, positions Insurance companies with the confidence that their requirements can be quickly communicated for new systems / technology being introduced in the future.

The ability to build new product offerings from a mix of pre-built components and 'new ideas' will significantly improve a company's ability to innovate and get their products to market quicker or, at the very least, reduce the market leadership of the competition.

1) PRODUCT REQUIREMENTS

Standardising on a way to describe insurance products in itself provides benefits of improved communication, improved documentation and, over time, access to staff that can quickly consume the product specifications.

No longer will product requirements be captured in a non-structured way that minimizes the opportunity to reuse and allows for the introduction of errors and omissions.

For example, in today's world, if we consider a State exception being introduced to an existing product, using word processing and spreadsheets with copy and paste of existing documents will lose the commonality between the States with the other components. Making changes that apply to multiple States that share the same components are either documented as individual change documents in their own right (independent from the products they impact) or are documented through many updates to multiple State-specific product documents. In all such cases, we lose the management and visibility of the Product Specification being an important company asset.

How many companies have key personnel, with years of product knowledge in their heads, leaving in the next few years? That product knowledge should be managed as a company asset; it should be available to the staff within the whole organisation that need it and it should be kept current as part of the day-to-day Product Lifecycle Management process.

2) POLICY ADMINISTRATION

The real power of the approach comes when the requirements management capabilities of the PSD are extended to satisfy specific target systems. In established environments, the approach can accommodate a seamless population of the execution environment with little, or no, development work being necessary; Product specifications managed by Insurance Business Professional can be quickly deployed for new market offerings or simplified Product lifecycle changes in the right execution environment.

PMW is currently working to support three different target execution environments:

- Silvermoon Lunos Components
- TechMahindra managed service offering
- CGI's Ratabase rating solution

In theory, it's possible to add additional transformations to satisfy other policy package offerings, or home-grown policy administration systems. The level of automation is likely to differ depending on the architecture deployed in the target system design and the extent to which the target system is already configurable.

Systems with the following characteristics are likely to maximise on the automation of the product content:

- Highly configurable / parameterised
- Flexible data structures
- Externalised Rules / calculations

3) FUTURE APPLICATIONS – BUSINESS-TO-BUSINESS

There are numerous applications for a common approach to product definition but here's a few of the ones already considered:

a) Bureau Product Management

Many US insurance companies sign-up and consume the product definitions managed by a bureau (e.g. ISO, NCCI or AAIS).

Bureau products often lead to commodity products in the marketplace but Insurance companies differentiate themselves with custom filings for specific coverages.

Any customisation means that it's more difficult to simply accept changes published by the Bureau. However, an environment that allowed the Bureau changes to be understood and differentiated from local custom changes would enable a company to accept, ignore or merge any of the Bureau changes published.

This is achievable within the Systemize PMW Vision.

b) Insurance Portal

Although not a big US phenomena, in the UK, a growing amount of insurance is being sold through insurance portal or comparison websites.

A consistent way to model products is a key capability to compare products from different carriers. A consistent language and set of standards for describing line of business products (for example from ACORD) will simplify the creation and management of these sales channels.

Systemize see the use of PMW and an execution environment capable of executing the rules and calculations as a means to enable these kinds of environments.

c) Compliance Reporting

A consistent way to describe an Insurance Product together with the capability to report on changes to the specification is seen as a way to provide, and improve on the way we report to Compliance organisations.

THE FUTURE OF POLICY ADMINISTRATION REQUIRES THE RECOGNITION, MANAGEMENT, AND CONSUMPTION OF A FORMAL PRODUCT SPECIFICATION

Summary / Conclusion

Product Specification Diagrams, the Product Modelling Workbench and the integration with policy Administration Systems represents a natural progression of Product Management within an Insurance Company. It follows a similar path as other model driven technologies in software development in general.

The challenge is for IT to provide the tools (in the form of modern policy administration systems) for the business to take their Product portfolio in the direction that they want it to go…

LESS OF THIS…

MORE OF THIS…

In short, this not only revolutionizes Product Management within the insurance company but also places demands on the future of policy administration to efficiently consume the content managed by the business and maximize on the effort to maintain it.

ACORD have, for many years, been involved in providing the models to standardize on requirements and act as delivery accelerators. The work on Product Diagramming is just another dimension that, with the tool support of PMW (and products like PMW), will enable the next generation of Policy Solutions to take shape.

ACORD-specific case studies must include the business case that led your organization to use ACORD products, any other options you considered and rejected, as well as the benefits gained from the implementation.

Although there's no ACORD specific case study associated with this submission, a draft standard that was developed by ACORD for generically defining a product is used as the basis for the interchange between PMW and the Lunos Execution components.

Accompanying submission documentation

1) This 'Systemize – ACORD Insurance Innovation Submission.pdf' document

2) The 'Systemize – ACORD Insurance Innovation Challenge.pdf' presentation

3) The 'PMW-Installer64.exe' – 64-bit Installer

4) The 'PMW-Installer32.exe' – 32-bit Installer

5) The 'PMW Client – Windows Installer.pdf' Document

6) The 'PMW Trial Client Access.pdf' Document

7) The PMW Overview Video (MP4 format)

8) The Creating your first Marketable Product in PMW Video (MP4 format)

9) Extending the Marketable Product in PMW Video (MP4 format)