Original Article

Comparative Analysis of Guidewire Cloud Advanced Product Designer versus Conventional Product Designer

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Abstract - *Guidewire software builds insurance products that help Property and Casualty (P&C) insurers modernize their legacy core systems and transform their business operations. Guidewire provides core systems and data management/business intelligence tools used by insurers as operational systems of record. In the area of Core Operations Support, Guidewire InsuranceSuite provides a complete set of applications to support a carrier's core operations—underwriting, policy administration, billing, and claim management. Advanced Product Designer and Product Designer is part of the PolicyCenter core system, which helps insurers build their products. However, in a time of rapid change in consumer demands, insurers are faced with a need to create and launch more new products in less time. This analysis compares the respective advantages, pain points and relative merits of two leading Guidewire designers, Advanced Product Designer and Product Designer. It helps insurers choose which product designer is most efficient to utilize and quickly launch their insurance products in a short span of time.*

Keywords - Guidewire PolicyCenter, Guidewire Advanced Product Designer, Guidewire Cloud Platform, Guidewire Policy Administration System (PAS), Guidewire GO Products.

1. Introduction

There are several insurance core applications available in the market, but Guidewire InsuranceSuite is one of the top leading insurance core applications that offer insurer to launch their products quickly. However, the rapidly changing consumer demand is placing increasing pressure on insurers to adapt their product development processes in a way that ensures speedier delivery and greater scalability. To design and launch insurance products, insurer and developers have a lot of challenges in dealing with the design and development of insurance products. This research identifies a key research gap in the comparative analysis of Guidewire's traditional Product Designer and its advanced version, the Advanced Product Designer (APD). Although the conventional Product Designer does provide the functionalities, it falls short of meeting the speed, automation, and scalability required to succeed in today's competitive insurance market. On the other hand, APD brings advanced features that are meant to mitigate these challenges by enabling faster product launches, enhanced collaboration, and seamless integration within the Guidewire Cloud ecosystem. This paper analyzes in detail the efficiency, scalability, and cost-effectiveness of these tools to guide insurers on how best to choose the most suitable product designer for their insurance product launch to be optimized in view of meeting the demands in the modern insurance market.

1.1. Overview of Advanced Product Designer

Advanced Product Designer (APD) is a business tool that helps you design, simulate and deploy an insurance product; around 95% of the finished product is ready with partial Rating and Forms.

APD lessens the work involved in creating a customized product. With Advanced Product Designer, a Business System Analyst can- Define an insurance product, including coverages, exclusions, conditions, risk details, and other attributes and View the product in PolicyCenter and create a policy submission.

A Business System Analyst can prototype insurance products in mind maps created in Xmind, Import the mind map into PolicyCenter and create a visualized product. In the visualized product, the Business System Analyst can create policy submissions and other policy transactions and navigate through the product screens.

1.2. Overview of Xmind

Xmind is a very popular tool for mind mapping and brainstorming. It helps Business Systems Analysts and businesses visualize ideas, structure information, and increase productivity. It is widely utilized to create visual diagrams that illustrate concepts, ideas, or workflows [3].
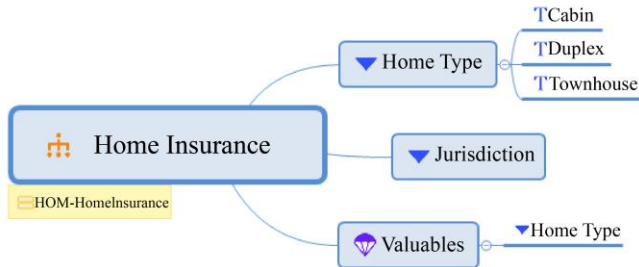
Fig. 1 Sample mind mapping for home insurance

1.3. Xmind intent and extent of the comparative analysis

The purpose of this comparative analysis is to explore creating insurance products, Continuing product designs, Advanced product designer development approach, Pain points of using a conventional product designer, and best practices of working with Advanced Product Designer. The objective is to present an in-depth assessment and development methodology that aids insurance carriers in choosing cloud-based Advanced Product Designers over traditional ones.

1.4. Benefits and Limitations of Xmind

XMind offers a lot of advantages to an individual or a team seeking an intuitive and flexible mind-mapping tool. Its user-friendly interface and drag-and-drop functionality make creating, brainstorming, and organizing a mind map so much easier. It features a wide variety of customizable templates, styles, and themes for users to apply depending on the purpose of the maps. XMind is cross-platform compatible, running on Windows macOS with cloud synchronization to ensure that access from any device is seamless. It supports a wide range of use cases, from project management and taking notes to education and personal goal setting. Advanced features like Gantt charts, timelines, and even a built-in presentation mode enhance its utility; affordable pricing makes it a competitive choice in the market. However, XMind has some limitations. It lacks real-time multiuser collaboration and has limited features in its free version, such as watermarked exports and very few templates. While advanced features in the software include Gantt charts, this might be overwhelming for a first-time user. Besides, XMind offers very few integrations with popular task management systems like Trello or Asana and is based on a proprietary file format that is inconvenient for users needing interoperability. Resource usage can also become an issue with complex maps, slowing down performance. The mobile app, while handy, does not have the features of the desktop app. These drawbacks notwithstanding, XMind is a great option for personal or medium-sized teams, whether working on personal projects or professional productivity projects; however, with large teams requiring much real-time collaboration,

XMind may just not be strong enough to provide all that such teams need in this regard.

2. Methodology
2.1. Creating Insurance Products with APD

The steps for creating a product using Advanced Product Designer are Conceptualize, Share and review, Import, Visualize, and Finalize [1, 2].
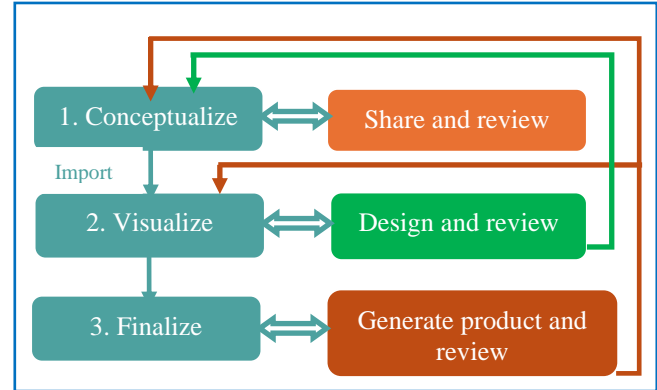

Fig. 2 Conceptualize, Visualize, and Finalize.

2.1.1. Xmind Conceptualize

Business System Analysts, Business Analysts, and Product Managers are involved in conceptualization. Users of the product, such as underwriters and actuaries, may provide input. Conceptualizing the product in XMind will be done by creating a mind map that captures the product requirements. The product structure is mapped into a tree-like hierarchy, with the product as the root of the tree. The nodes of the tree model the different parts of the product, such as risk objects, coverages, exclusions, and conditions. The team works iteratively on the mind map, defining the product requirements until achieving a level of stability. During conceptualization, you share and review the product mind map with team members and incorporate their feedback. After incorporating feedback, you are ready to import the mind map into the Guidewire PolicyCenter application.

2.1.2. Visualize Mind Map in PolicyCenter

Business System Analysts are involved in visualization. It is involved when the product nears finalization. Business Systems Analysts may consult with Product Managers and Business Analysts. Users of the product, such as underwriters and actuaries, may provide input. When the mind map is imported into PolicyCenter, it becomes a visualized product. If you created the product directly in the Advanced Product Designer screens in PolicyCenter, then you already have your visualized product. In a visualized product, you can navigate through a submission or other policy transaction just like you do with products installed in PolicyCenter.

Visualization enables you to work with your new product in PolicyCenter without needing to develop a prototype. In a policy transaction, you can navigate through the screens, add risk objects, select coverages, and enter policy data. In the visualized product, you can continue to add product details

on Advanced Product Designer screens in PolicyCenter. You can also make changes to the mind map and reimport those changes.

2.1.3. Finalize Product in PolicyCenter

IT and Business System Analysts are involved in finalization. Product Managers may be consulted. When you have refined and completed entering product details in the visualized product, you are ready to finalize the product. In finalization, Advanced Product Designer generates the product from the visualized product, creating the artifacts needed for PolicyCenter, including entities, product models, and user interface elements.
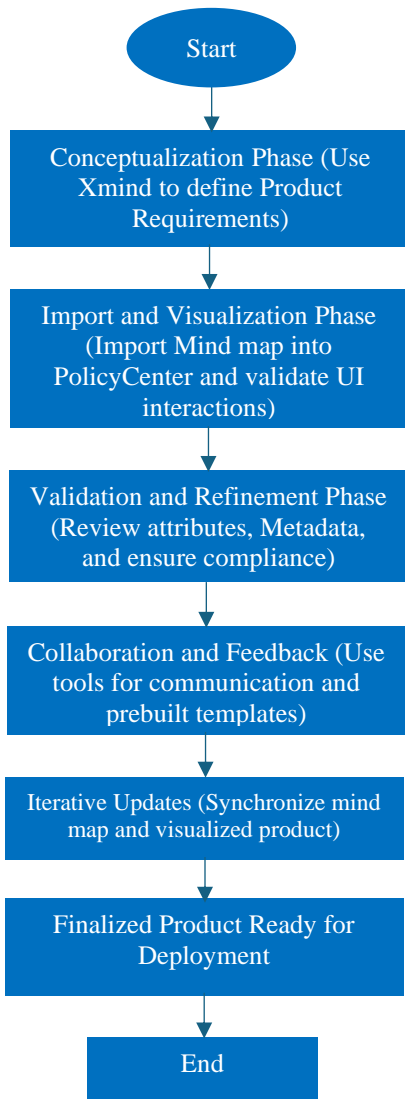
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         ┌─────────────┐
         │    Start    │
         └──────┬──────┘
                │
   ┌────────────▼────────────┐
   │ Conceptualization Phase │
   │ (Use Xmind to define    │
   │ Product Requirements)   │
   └────────────┬────────────┘
                │
   ┌────────────▼────────────┐
   │ Import and Visualization│
   │ Phase (Import Mind map  │
   │ into PolicyCenter and   │
   │ validate UI interactions)│
   └────────────┬────────────┘
                │
   ┌────────────▼────────────┐
   │ Validation and          │
   │ Refinement Phase (Review│
   │ attributes, Metadata,   │
   │ and ensure compliance)  │
   └────────────┬────────────┘
                │
   ┌────────────▼────────────┐
   │ Collaboration and       │
   │ Feedback (Use tools for │
   │ communication and       │
   │ prebuilt templates)     │
   └────────────┬────────────┘
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   ┌────────────▼────────────┐
   │ Iterative Updates       │
   │ (Synchronize mind map   │
   │ and visualized product) │
   └────────────┬────────────┘
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   │ Finalized Product Ready │
   │ for Deployment          │
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         │    End      │
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Fig. 3 APD Data Collection and Product Creation Process

2.2. Data Collection Method

Data gathering in Guidewire Advanced Product Designer (APD) is a structured, iterative activity that uses tools and the collaboration of stakeholders. Starting with the business system analysts and stakeholders creating a mind map with XMind, representing coverages, exclusions, and conditions requirements for the product, followed by refinement based on review comments from other team members like underwriters and actuaries. The mind map is then imported into Guidewire PolicyCenter to create a visualized product in which Business Analysts and IT professionals validate navigation, transaction flows, and UI interactions. Specific fields, such as attributes, clauses, and risk objects, are validated to ensure accuracy; metadata is validated against the project protocols. In Designer Mode, stakeholders contribute; in Developer Mode, developers ensure technical consistency. It supports collaboration and feedback with enhanced tools, while prebuilt templates from Guidewire GO Products reduce manual effort and accelerate the process. This would ensure that the iterative update phase is synchronized between the mind map and the visualized product, with continuous feedback. This refinement will continue until the final product is ready for generation and deployment.

3. Continuing Product Design

As we continue to define and design the product, we continue to make changes to the mind map, visualized product, and generated product. In the mind map, we can make changes, such as corrections or additions, and update the visualized product. If we change the name of a topic, this becomes an addition when we update the visualized product. If we delete a topic from the mind map, it is not deleted when we update the visualized product. We must delete them manually from the visualized product.

Alternatively, we can make changes directly in the visualized product in PolicyCenter. If we wish to keep the mind map updated, we can manually update the mind map to reflect these changes. We can also generate a mind map from a product in PolicyCenter. Some product details must be entered directly into the visualized product. The details include parts of pricing, minimum and maximum values, usage properties, and default values. We can enter these details in the mind map. However, these are not brought into the visualized product when you import the mind map. In the generated product, we can enhance the product using the development tools provided by PolicyCenter, such as Guidewire Studio. You can create underwriting rules, ratings, and forms management. We can integrate with other applications and make other changes to meet your needs. We incorporate changes made to the visualized product by regenerating it and merging changes. Continue this iterative process until you have captured the product requirements.

4. Finalizing and Generating the Product

When you have refined and extended the visualized product, you are ready to finalize the product. Finalization is the phase where the visualized product is used to generate the

artifacts needed for PolicyCenter, including user interface elements, product models, and entities. The result is a generated product that has a check in the Installed column on the APD Managed tab of the New Submissions screen in PolicyCenter.
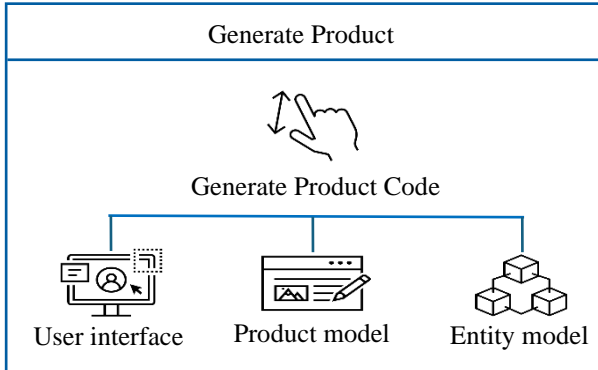

Fig. 4 Product code Generation

4.1. Procedure to Generate the Product Code

4.1.1. Metadata

Review all metadata codes and descriptions to ensure that they follow Guidewire suggested protocols or protocols agreed upon by the project. You must add metadata for all elements in the product model tree in fields labelled (*PD). These fields are not required to visualize the product but are required for product generation. The metadata includes business descriptions and codes, such as General product details, Line details and risk objects, Fields, Coverages, conditions, and exclusions, and Dropdown lists associated with fields, coverages, conditions, and exclusions [11].

4.1.2. Review Product Content

Before generating the product, review all product content, all screens and fields for the product, and make sure that the information is correct and descriptive.

4.1.3. Validate Fields

The following fields are validated during product generation as Attributes, Dropdown list entries, Clauses, Clause categories, Risk objects, Exposures, and Short names.

4.1.5. Set Product in Designer Mode

A business user working in Designer mode can validate the product prior to having the product generated by a user with Developer mode.

4.1.6. Validate Product in Developer Mode

In Developer mode, the developer can validate the product and fix all validation errors.

4.1.7. Generate Product Code

Steps to generate the product code,
- In PolicyCenter, select Generate Product Code and select All.

- Click Complete Generation- The generated product files are saved into the PolicyCenter directory on the computer where PolicyCenter is running.
- After the product code is generated, stop the PolicyCenter application.
- Check your changes in version control.
- In Studio, recompile PolicyCenter.
- Restart the Guidewire PolicyCenter application server.

5. APD Best Practices

- For APD dropdown fields: Always set the definition to "Option." If the definitions of dropdowns are modified, Guidewire will not automatically regenerate the related XML lookup files; you have to remove the XML and regenerate.
- For APD monetary values: Always set them to be the same as the label in numeric format (e.g., 50000). As Min and Max are not supported for Clause Schedule Terms, custom validations are to be implemented.
- APD Schedule Terms: Generate Schedule Terms with "Generate as Clause Terms" to avoid ordering issues in the UI.
- APD Clause Schedule Terms - Short Name (*PD) should be within 64 characters else APD fails to import.
- APD Entity Fields: APD generates fields that are accessible in APD Rules. It is a best practice to create entity fields using the Mind Map or Template.

APD Schedule Terms - The availability rule condition is not feasible for schedule items, which we need to accomplish through custom PCF only.

6. Overview of Guidewire Product Designer

Product Designer is a web-based tool for examining and editing the PolicyCenter product model. We can use Product Designer from your web browser to edit PolicyCenter configuration files belonging to a development instance of PolicyCenter. It enables you to edit those parts of the product model that do not require creating complex data objects or complex programming. The backing data model, code, and PCF pages required to support a line of business must be created by a developer using Guidewire Studio. Using Product Designer, we can,
- Add new products based on product types that have been defined in Studio.
- Add new policy line patterns based on policy line types that have been defined in Studio.
- Define new coverage categories and coverages, exclusions, and conditions within a policy line, including coverage terms, reinsurance coverage groups, and availability.
- Configure modifiers, including rate factors, state minimums and maximums, and availability.
- Define question sets and questions to assess risk and gather applicant information.

- Define offerings that include or exclude policy lines, coverages, coverage terms, coverage term packages, conditions, exclusions, modifiers, and question sets.
- Configure audit schedules for policy lines that support pre-configured and customer-configured audit types.

The pre-configured audit types are Checking Audit, Final Audit and Premium Report.
- Examine and edit system tables that support the business logic of your lines of business.

7. Comparative Analysis of Product Designer and Advanced Product Designer

Table 1. Product Designer Vs Advanced Product Designer Feature/Capability Comparison

Feature / Capability	Product Designer	Advanced Product Designer
Primary Focus	On-Prem Guidewire Application	Guidewire Cloud
Target Audience	Business Analysts	Business Analysts and Developers
Collaboration	Collaboration between business and technical teams is time-consuming and expensive	Enhanced collaboration with simulation tools
Features	Basic product configuration	Advanced product configuration automation
Visualization	Basic product structure visualization	Advanced visualization (simulation, testing)
Integration	Works within PolicyCenter only	Integrates across the Guidewire Cloud ecosystem
Prebuilt Content	Not available	Prebuilt templates with Guidewire GO Products
Automation	Limited Supports	Auto-generated product definitions and code
Scalability	Requires manual scaling	Cloud scalability with zero-downtime updates
User Experience	Traditional, technical	Traditional, technical
Deployment Speed	Relatively slower due to on-prem constraints	Faster deployment and updates in the cloud
Proof of Concepts	Takes too long	It does not take too long
Products	No product in the base configuration	Prebuilt products are readily available to us from the Guidewire GO marketplace.
Empowering Business	Business Analyst Need Technical Skills	Non-technical design tools capture product requirements in a structural format.
Feedback	It takes time to get the feedback.	Generate the code automatically and with less effort for developers and Business Analyst.
Simplifying IT Process	It does not generate the code automatically.	Generate the code automatically and with less effort for developers and Business Analyst.
Cost Effective	The project schedule for implementing all insurance products is somewhat lengthy.	Quick product launches are possible with easily accessible products from the marketplace.

8. Challenges with Conventional Product Designer

The following are typical issues that Guidewire's traditional product designers deal with,
- Proof of concept takes too long to develop the insurance products.

- There are no insurance products available in the base configuration that satisfy the requirements.
- Jargon and confusing terminology.
- Lack of clarity around product design best practices.
- The collaboration between the business and technical teams is time-consuming and expensive.

9. Performance Differences: APD vs Conventional Product Designer(PD)

Table 2. Performance Metrics APD vs Product Designer(PD)

Factor	APD	PD
Development Speed	Faster.	Slow.
Error Mitigation	Minimal Errors.	Higher during manual setup and coding.
Rule Execution	Fields ready for use.	Require manual mapping.
UI Performance	Optimized UI.	Depends on manual configuration.
System Integration	Seamless integration with Guidewire boosts system performance.	Manual customization can cause latency and performance issues.
Maintenance Efficiency	Easier to maintain	Downtime impacts performance.
Resource Utilization	Uses fewer resources.	Higher resource use from manual efforts and rework.

10. Case Study

A significant case study was conducted at Zurich Insurance Canada, where Guidewire's Advanced Product Designer (APD) was successfully implemented in a very short time by adopting the GPP product from Zurich-Europe's Casualty and Property lines. The implementation involved reverse engineering the Product Extract APD representation to generate a comprehensive Mind Map using Guidewire tools. The project included calibration of the Casualty Lines (Liability and Umbrella) and the Property Lines, while the Inland Marine Line was created entirely from scratch.

Furthermore, a Commercial Package was developed by integrating the Casualty Lines, Property Lines, and the newly created Inland Marine Line, showcasing a robust and structured product development process facilitated by Guidewire APD.

10.1. Data-Driven Results

Several U.S. insurance carriers have implemented Guidewire's Advanced Product Designer (APD) to enhance their product development processes. Some of them are the USAA, CopperPoint Insurance, Mountain West Farm Bureau Mutual Insurance Company, The Travelers Insurance Company, Encova Insurance, and EMC Insurance [6, 7].

11. Conclusion

Guidewire Advanced Product Designer (APD) is the optimal solution for insurance carriers transitioning to cloud infrastructure, aiming to launch products faster and reduce manual efforts. It provides a collaborative, automated, and future-ready platform tailored for the evolving insurance market, ensuring insurers remain versatile and competitive. APD's key advantages over Guidewire Product Designer include cloud-native implementation, offering scalability, zero downtime, and seamless updates, while prebuilt templates (Guidewire GO) for Lines of Business (LOBs) significantly reduce development time and enable faster time-to-market.

Its sophisticated automation eliminates manual tasks, accelerates deployments, and minimizes errors, leading to increased efficiency. APD also integrates seamlessly across the Guidewire Cloud ecosystem, enhancing connectivity and flexibility. Though transitioning to the cloud requires effort, APD's automation, quicker deployments, and reduced maintenance result in long-term cost savings. By adopting APD, Insurance carriers gain a robust and modern solution that streamlines product development processes, positioning them to meet the demands of the cutting-edge insurance industry keeps insurers versatile and competitive in its market.

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