

An Insurance Industry Perspective: Making the Web of Services Real

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Summary

There are many business pressures in the insurance industry that carriers need to respond to. The Hartford has a mix of old and new systems which need to be rationalized and repositioned as an agile platform that will provide competitive advantage. The issue is not the lack of technology and architecture approaches. The challenge is to take such best practice approaches and institutionalize them at the enterprise level. This is a planning challenge rather than a technical one, as Enterprise Architecture evolves to take a stronger focus on business/IT alignment. The enterprise needs decision support tools that enable the prioritization and sequencing of efforts directed at evolving the IT platform. The semantic web could help unify the diverse planning processes, tools and artifacts in the enterprise.

From a technical standpoint, there are two other use cases that the insurance industry can offer:

- Context-driven risk qualification enabled by dynamic UI's
- Broader standardization and guidance in the Rules space

Current State of IT

The Hartford Property & Casualty (P&C) business is almost 200 years old and has gone through a series of evolutions in organization, processes and market positioning. IT has tracked these changes over time, resulting in a current state which includes a variety of IT systems that range from very old architectures and platforms to leading-edge SOA implementations, BPM and Rule-based approaches. Since a rip-and-replace approach is often economically unjustifiable, there is a fair amount of system redundancy and point-to-point connections that coexist with more advanced enterprise-oriented platforms, architectures and standards. Also, the P&C industry has adopted XML standards developed through an industry consortium called ACORD. This has enabled a common format for exchanging information among agents and insurance carriers like The Hartford.

Business Imperatives

Business pressures are many. There are newer carriers with origins during the Internet era that have built their businesses from scratch using a web-based model. Such carriers do not have the legacy environments, processes or market structures that older companies like The Hartford do. However, strong underwriting competencies honed through decades of execution provide an edge for the older companies, and allow better qualification of risks. The ability to mitigate risk through better knowledge is becoming even more important, driven by the Internet's facilitation of better information capture and flow. While gaining knowledge of specific situations and individuals is important, the issue of privacy may be a gating factor in how much and what kind of information can be gathered. Competitive advantage will accrue to those carriers with policies, processes and systems that balance privacy and the need

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for knowledge. Newer technologies exacerbate this knowledge/privacy issue, and the need to effectively exploit these advances.

Ease of doing business is another important differentiator, as open standards, such as those promulgated through ACORD, make it easier for agents to switch carriers.

Carriers need to design usable interfaces and more responsive back-office systems to make it easy for agents to do their jobs and interact with the carrier.

In recent years, the insurance industry has faced another challenge: major catastrophes like Katrina and large-scale terrorist threats. GIS (Geographic Information Systems) and other technologies allow better characterization and qualification of geography-based risk.

Use Case 1

A central problem in achieving a shared services IT model

There is no lack of capability-enhancing technologies or good architectural approaches to enable organizations to build systems based on a web-of-services model. The Hartford has many of these in its IT toolkit, and, in fact, has an SOA implementation well recognized in the industry. Nor is there a lack of opportunities to rationalize redundant IT platforms and applications, or to develop shared enterprise services. The challenge lies in prioritizing and sequencing these opportunities as part of a planned, concerted migration over time toward a more agile, cost effective IT platform. The difficulty in this challenge arises from the complexity and interdisciplinary nature of the planning effort that involves business strategy, business processes, finance and IT. This problem of IT/business alignment is not unique to the insurance business, but it is central to our ability to leverage our IT capabilities at an enterprise-wide level, and evolve to the agile platform that is needed to compete effectively.

Business/IT Alignment: Can the Semantic Web help?

If technology availability and adaptability are not the problems, what can we do to improve our ability to exploit such technology at an enterprise-wide level?

Project plans, future state architecture plans, system characteristics, service implementations, technology platform roadmaps, usage profiles, business plans, business process metrics, cost information and other data are readily available. But multiple terminologies and artifacts impede the organization's ability to see the big picture. A decision support system that can collate these different types of information can break down the walls, and enable the analysis needed for appropriate prioritization and sequencing of efforts.

Can the Semantic Web provide a way to bridge the gap between the different types of planning and analyses in the organization? One way to approach this is by having multiple enterprises collaborate in addressing this planning problem by identifying the key data elements and decision processes, and determining the mapping that is needed. It may be easier for corporations with similar businesses to collaborate in this

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effort, since their underlying business processes would be similar. In particular, the insurance industry has a business process model embodied in IAA (Insurance Application Architecture) that can serve as a basis for this mapping.

Use Case 2

Standards, architecture and guidelines for rules and their interchange

The Hartford uses rules in different parts of the enterprise and in a variety of applications, products and platforms. Rating engines, Rules platforms, underwriting applications, BPEL implementations, Portal, Schema/Edit Management, Content Management systems and BPM products are some of the places where rules are used. Rules also span a variety of purposes - from specifying screen flows and edits to process/workflow and business rules that enable Straight-through Processing (STP). It would be helpful to agree on a rules taxonomy, and use that as a basis for determining appropriate usage, products and architectures. The insurance industry has some specific needs, for example the ability to produce and consume rules on systems that are developed independently across the value chain. There are several Rules vendors and some standardization efforts for interchange already under way. However, an examination of rules from an insurance industry perspective could be valuable. One specific area where some standardization may help is in documenting rule requirements, and making those independent of the platform on which they are actually implemented.

Use Case 3

Context-driven risk qualification

Insurance carriers need to ask the right questions to elicit the information needed to qualify a risk, and underwrite it. Traditionally, because of static UI's that needed to be defined beforehand, this process has involved a difficult trade-off between collecting too much information, and ease of use. XML-based approaches including XForms and XPath enable the ability to narrow down the scope of questions as they are answered, somewhat akin to "20 questions". Dynamic data capture, and UI generation are techniques that can enable us reduce development effort, increase ease of use and improve the quality of our underwriting decisions. There may be an opportunity for the W3C to help set some directions and standards in this space, to foster innovation and product development. Also, a way to tie multiple standards like JAXP, JSR-94 and JSR-168 together in a portal-compatible way would be of value, since portals are an important part of the architecture.