

## View Point



### Leading-Edge Product Development Strategies to Improve Speed to Market

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#### Background

Insurance industry is going through a period of major change. Traditional products and markets are no longer providing growth opportunities. Carriers are forced to look outside their traditional products and markets for profitable growth. With the aging of the baby boomer generation and their impending exodus from the workplace, there is a large population that is very concerned about their unfunded life span. This is predicted to be a \$9 trillion market in the US with new needs and expectations. The younger generation presents themselves as a new group of buyers for traditional insurance products. This generation has very high expectations on how they can customize products to their unique needs, access real-time information through multiple channels and obtain the kind of customer experience they are used to from banking and other service providers. There is also a need to combine, distribute and support disability, healthcare, traditional life insurance, and other products across multiple channels. The Pension Protection Act (PPA) of 2006 has also opened the doors for combination product development.

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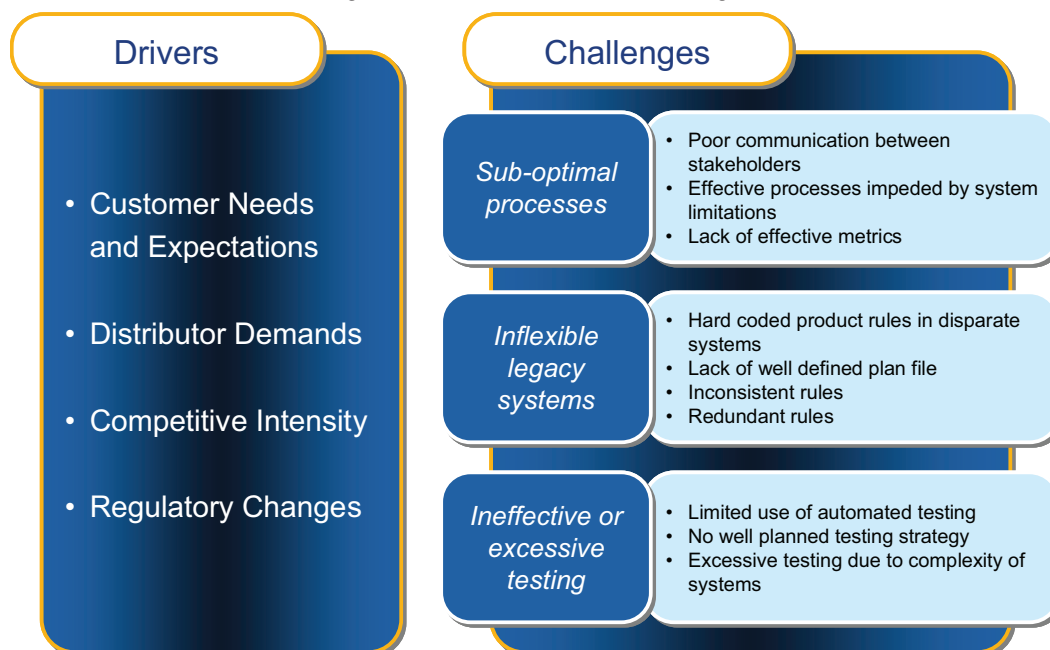
Insurers have responded to these trends and developments by establishing product innovation and speed-to-market as important strategic goals. Getting to the market first ahead of the competition provides first mover advantages including the ability to serve unmet demand and the opportunity to shape or influence the buying behavior of customers. Continuous excellence in the art of product introduction can also enhance the carrier's 'market leader' image and brand recall value among its distributors and customers.

However, the IT systems that once enabled insurance companies to achieve growth and increased efficiencies are now proving to be major inhibitors in this time of rapid change. Gone are the days when companies relied on a single, relatively simple, back office system to develop, manage and administer its products. Today, with multiple and very complex back office systems with their plethora of interfaces and interdependencies, making a change in one system can have multiple and unforeseen consequences across the enterprise. Also, increasingly stringent regulatory compliance requirements are not making product introduction easier. Thus, while most experts agree that the demand for new and creative products is only going to intensify, the ability for insurance companies to cost-effectively respond is diminishing. While legacy systems may pose significant challenges, other areas like poorly managed product introduction process as well as inefficient product testing related activities also contribute to the problem. It is in this context that new and innovative techniques to product introduction have to be explored.

## Product Introduction Challenges

A typical product introduction process is beset by several process inefficiencies and IT related challenges that contribute to increased time and cost of introducing new products (Fig. 1).

Fig. 1: Product Introduction Drivers and Challenges



Impediments to product introduction stem from 'mindset' issues as well. Reasonably good performance of existing products often leads insurers to turn a blind eye to the market's needs. An unwillingness to have a fresh look at the existing products offered, mainly because of an inability to quantify either the costs or the benefits of such an exercise, results in a bland product portfolio.

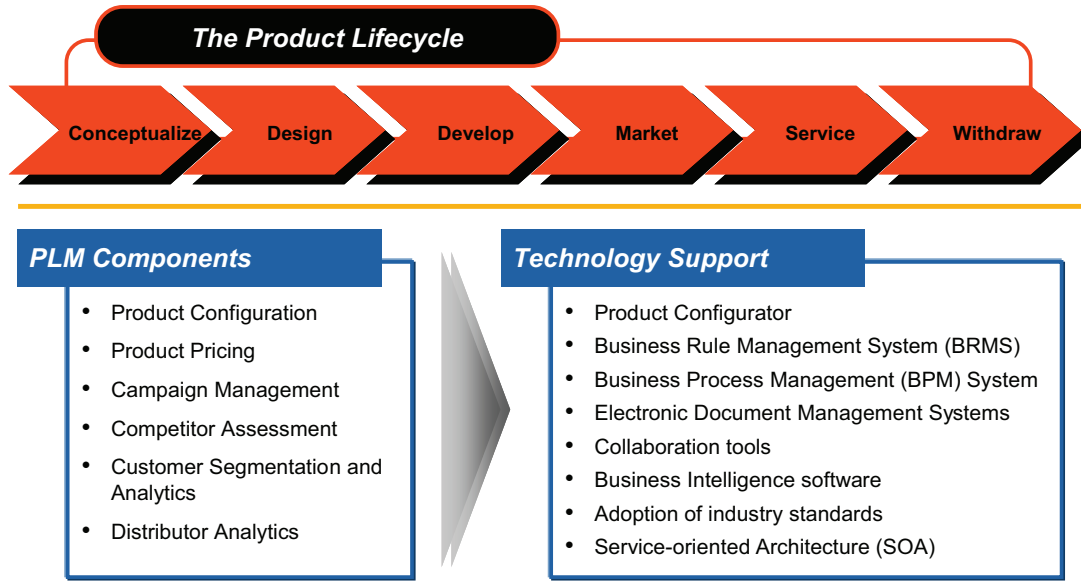
There is also tendency to blame IT for all product introduction challenges. Typically, in the entire product development process, around 25-30% efforts are focused on IT's implementing the product in the system. It is interesting to note that business related functions like pricing, marketing, contract language finalization, internal approvals etc. take up almost 50% of the total efforts. This escapes immediate attention because unlike IT's efforts, these are efforts spread across various operational areas.

From the above it is clear that any efforts to address the speed to market challenge should adopt a holistic approach. While IT may be a contributor to the delay, there are other areas that need focus. Hence a Product Lifecycle Management (PLM) approach to product introduction that is beyond just redesigning the application architecture will provide rich dividends.

## Product Lifecycle Management (PLM)

Product Lifecycle Management (PLM) is a strategic business approach that encompasses a set of proven processes, methodologies and applications that enable the product development process. PLM helps in managing a product from its initial concept stage to final withdrawal from the market. PLM essentially consists of a repository for all information that accurately and completely defines a product, and a communication process that facilitates access to product data and collaboration between the various product stakeholders. Given the long-term nature of insurance contracts and the amount and variety of data managed, PLM is very relevant to the insurance industry. From an insurance perspective, there are distinct PLM components and corresponding technology tools that span the entire product life cycle (Fig. 2)

Fig. 2: Product Lifecycle Management (PLM)



## Product development strategies

As mentioned above, inability to introduce new products fast is not purely a technology issue. We believe that decreasing cycle-time in product introduction requires a comprehensive solution that covers process, application architecture as well as IT delivery. We discuss the following topics as strategies that can enable insurers find success in their speed to market initiatives

### Process

- Managing the overall process
- Promoting collaboration between stakeholders
- Encouraging customer participation in the product creation process

### Technology

- Externalizing product rules and attributes
- Analyzing the impact of product rules externalization
- Integrating the externalized rules environment with legacy applications

## Managing the product introduction process

Any process with active participation from multiple stakeholders needs to have responsibility and accountability clearly identified. This does not happen often in the product introduction process. Typically, business and IT teams manage their part of the overall process independently without fully recognizing and making allowances for the overlaps and dependencies between the two processes. For e.g., product requirements are gathered and refined till very late in the process forcing IT to make on-the-fly adjustments. At times requirements change so much that major re-coding and re-testing efforts are required resulting in delays and quality issues.

Part of this problem can be solved by adopting a configuration approach to product construction and empowering business users to work through the requirements stage so that IT gets a near-final, unit tested version of the product. Addressing some of the inherent collaboration issues will also positively impact the overall product introduction process.

However, there is no denying the importance of a strict project discipline to be exercised throughout the process. A designated project manager should be vested with the overall responsibility for the product development process. She should be assisted by a project team that consists of a core team of resources augmented by a peripheral group of individuals utilized on a need basis. This will ensure consistent quality and will minimize learning curve delays. Responsibility, accountability and deliverables expected should be assigned at an individual level and project management tools that can efficiently track and report progress should be employed.

## Collaboration between stakeholders

Due to the strategic and operational importance on new products, the product development process requires a high level of collaboration amongst various stakeholders such as product designers, programmers, legal, compliance, operations, marketing, training, research etc. This is typically achieved through e-mail communications, hand-written notes, long meetings and numerous telephone calls. This not only increases the time taken to complete the process but also makes it impossible for the insurer to develop, track, measure and improve metrics related to the process.

Insurers should invest in collaboration tools that make interaction between stakeholders easier and faster. Many companies are already using wikis to share information and manage large teams. Collaboration technologies are constantly improving and with increased bandwidth availability cross-functional and geographically dispersed teams can get more things done in shorter time through video conferencing, real time communication etc. without being too dependent on face-to-face meetings.

## Co-creation with customers

The value that an organization provides a customer can undoubtedly be enhanced by optimizing the internal processes with the aid of IT. In this model, the value offered is based on the organization's perception of the customer's need and the customer, playing a passive role, is not central to the design of the offering.

This model has successfully worked for many years. However, today's customers are much more aware of their needs and the options available to them thanks to higher education levels, easier access to information etc. Insurers need to take this factor into consideration while designing products for their customers.

In addition to designing products that suit specific cohorts like baby boomers, Generation X and Generation Y, insurers also need to ensure involvement of their customers – internal as well as external - in the product creation process. This could be through concept testing, focus group meetings or idea polling or any other creative process that will increase a sense of participation in the product creation related activities amongst various internal and external customers.

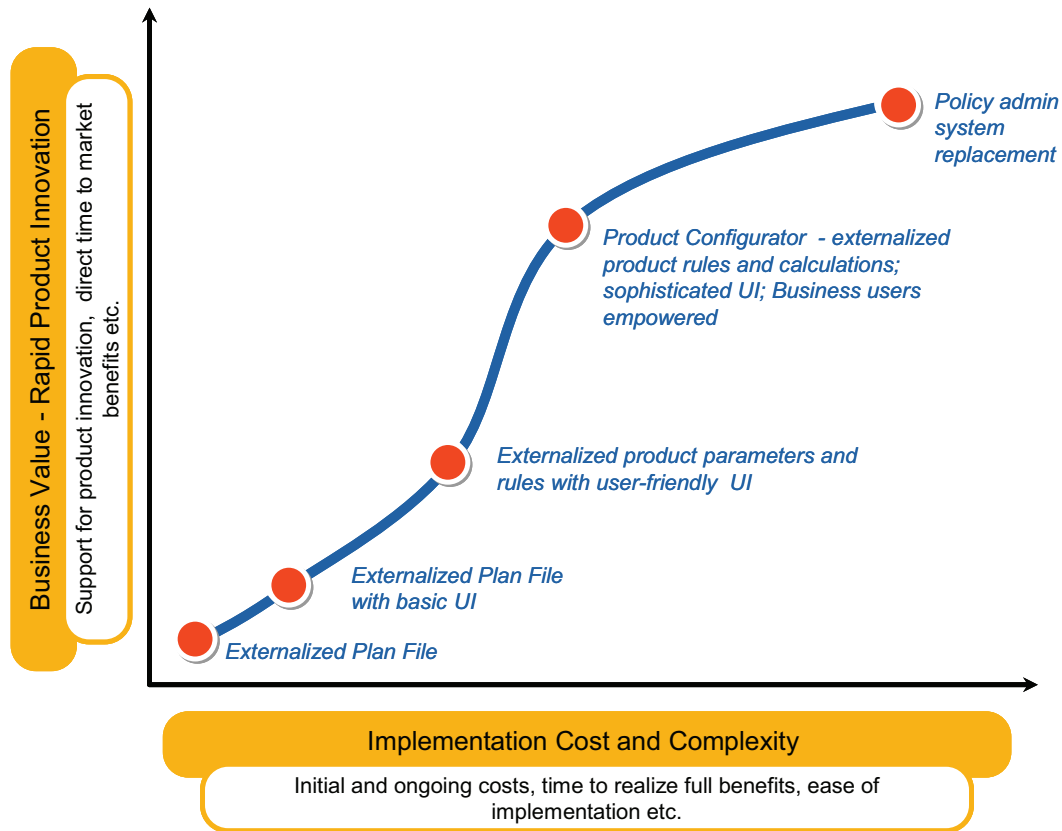
We also see an increasing trend in insurers adopting a building block approach to product construction. This approach not only speeds up new product creation (through the high potential for reusability) but also allows customers the ability to uniquely combine benefits and coverages to create policies that meet their specific needs.

## Externalize - Reduce the clutter

In an increasingly real-time world speed, accuracy and transparency are all equally important traits of a market leader. The ability to configure products, services, and processes is critical to capitalizing a market opportunity. Insurers must be able to make changes to their products – or even create new products - with minimal redesign and re-coding. To accomplish that, product attributes and the business logic that works with those attributes should be visible and independent from other application code that is normally understood only by the IT developers. This set of independent attributes and logic, if externalized from application logic and expressed in an English-like language as business rules, will find a wider audience especially in the business community.

However, product rules externalization is not a binary choice. There are several ways – each with its own advantages and disadvantages - to externalize and maintain product rules separate from application logic (Fig. 3). The path to follow would depend on carrier-specific situations like product complexity, technology landscape, investment appetite and planning horizon.

Fig. 3: Externalized Rules Environment - Technology options



There are insurers who have met with limited success in externalizing product related attributes to a database or an external 'plan file' and providing basic user interface capabilities that facilitate easy management of the attributes. In this case the business logic that controls the attributes is still embedded in the programming logic. This approach may be more suitable for a relatively less complex portfolio with products that do not undergo too frequent changes and are not very difficult to code for. Also, the underlying assumption here is that the legacy code lends itself to be re-engineered with relatively less efforts.

Benefits from externalization are more comprehensive when options like Product configurators are used. Product configurators are software products that help in the creation (configuration) and maintenance of insurance products. Product configurators provide high level of support to domain-specific requirements through inbuilt templates, product structures, clone/inheritance features etc. resulting in relatively quick realization of business benefits. To get away from potential limitations that templates may impose, they also allow users to build products from scratch. Configurators work well with Business Process Management (BPM), Business Rules Management (BRM) and other process enabling tools to help insurers realize significant savings in time to market.

Business Rules Management Systems (BRMS) with their advanced rule management and deployment capabilities also provide a good option when it comes to externalizing product rules. Adopting this technology makes perfect sense especially if the long term vision of the insurer is to use a BRMS for additional policy administration functions that are currently performed by the legacy systems. However, BRMS' are typically domain agnostic and some upfront efforts will be required to incorporate domain specific features, especially if intuitive; user friendly product management features are desired. Also, BRMS' may call for a higher level of investment from the insurer and it may not be cost effective to use these systems only for product development and management activities.

Externalizing product rules and using product configuration tools for defining and maintaining these rules have many payoffs. The most obvious benefit of externalization is the centralization of all product related rules, attributes and calculations in one place resulting in increased sharing of features and calculations across products and reduced duplication of efforts. Secondly, with this approach business users – Actuaries and product specialists – can play a larger role in product configuration. They have better control over product definition and hence can design and test innovative products through the use of reusable templates and components. These tools also allow creation of specific rules around a particular product attribute while making use of other common rules. For example, a majority of rules that govern a product's behavior can be

configured and reused across various States, in which it is sold, with only some State-specific rules configured differently for each State.

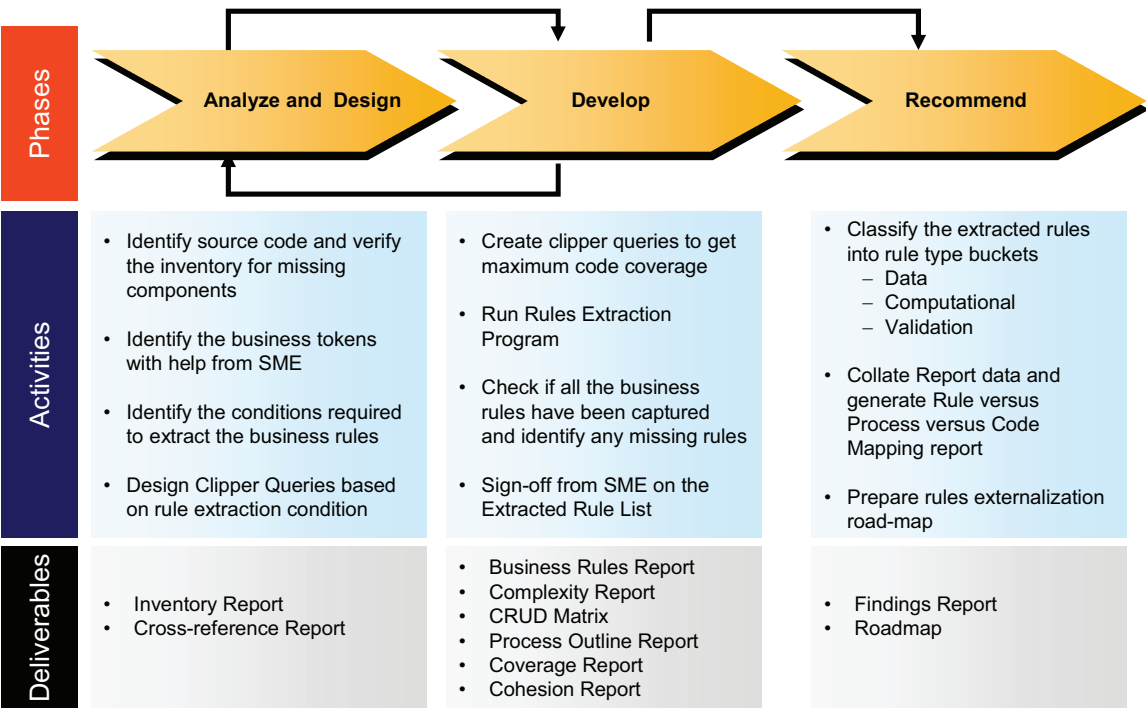
Also, procedural code in legacy systems is not a particularly efficient way to define product features and calculations. Configuring a product (as opposed to coding) reduces involvement of IT in product design. This can lead to optimal utilization of IT resources in other strategic initiatives.

### Impact analysis and product rules extraction

Externalizing product rules would naturally mean re-engineering the legacy code so as to make it work with the externalized rules environment. Analyzing the impact of extracting product attributes and logic from hundreds of thousands of legacy lines of code is a highly resource-intensive activity. Impact analysis and rule mining tools—belonging to the larger family of ‘Application Portfolio Management (APM) Tools’ - are available to reduce the pain in rules extraction.

Forrester Research describes APM as ‘A set of technologies that reads source code artifacts from across the enterprise, records the relationships between them in a knowledge base, and augments the knowledge base with business information to develop management intelligence about applications’<sup>1</sup>.

Fig. 4: Impact Analysis and Product Rules Extraction



These tools typically help build a knowledge base via automated discovery of source code and other application artifacts (Fig. 4). In the context of product related information embedded in legacy code, these tools can investigate the legacy application code to identify and help extract references to product rules and attributes. The reports, charts and views generated by these tools help IT developers and management understand the impact of externalizing product rules from legacy code and also estimate the effort required.

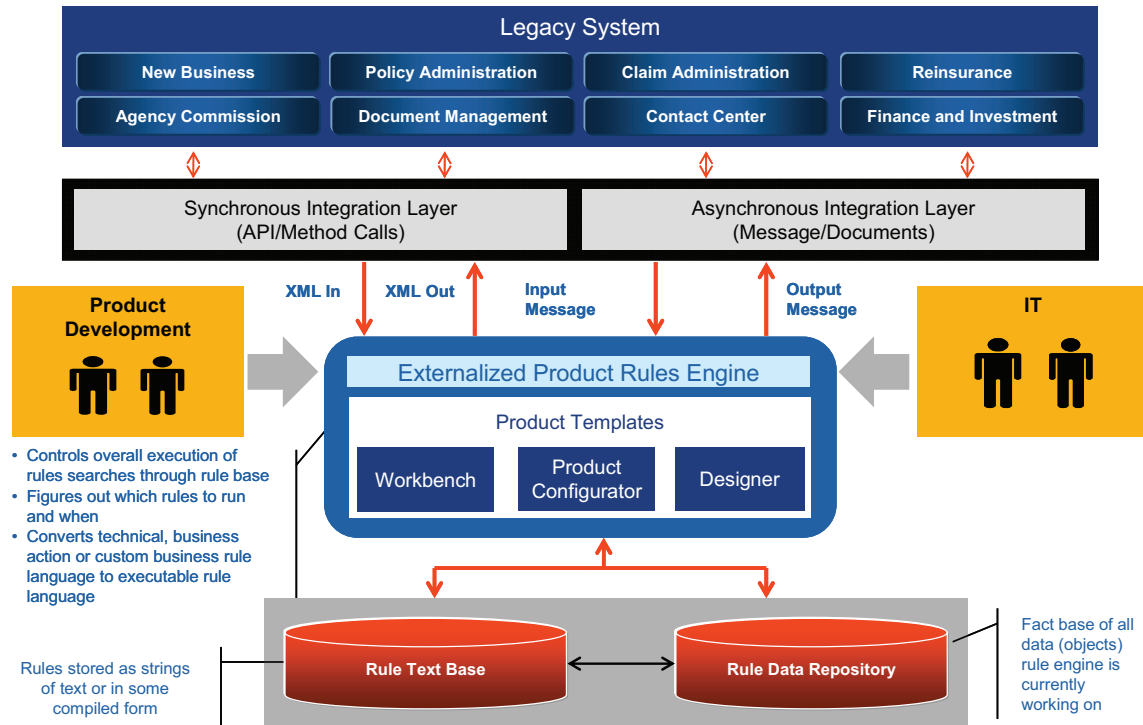
### Integration with legacy systems

A standalone product rules environment can act as the single version of truth as far as product information is concerned. It also helps in the generation of documents and reports that can help in regulatory filing and management reporting. However, various operational and servicing areas

<sup>1</sup> Forrester Research: “Application Portfolio Management Tools”, April 12, 2004

within an insurance company – like policy servicing, new business, call center etc. - require product related information on a real-time basis (Fig. 5). Also, insurers - more so in the life and annuity side - schedule nightly batch runs containing hundreds of thousands of transactions that require product related information for their successful execution. So the true proof of the externalization pudding is in the seamless integration of the product rules environment with internal systems as well as those of channels and partners.

Fig. 5: Externalized Product Rules Environment



Insurers whose long term strategic vision include an open Service-Oriented Architecture (SOA), should adhere to industry standards that enable them to consolidate product information, manage products and leverage existing investments in legacy applications. Product information in the externalized environment can be exposed as Web Services and can be integrated with applications that require product rules and attributes for processing a transaction. ACORD XML, with its use of standard vocabulary of data and transaction types can ease the pain insurers face in integrating disparate systems that have a common need for product related information. The widespread use of XML as a standard vocabulary within the insurance industry should make it significantly easier for insurers to implement Web Services-based offerings.

## Conclusion

Many studies have shown that the ability to rapidly introduce new products is tied directly to insurer growth and profitability. In today's world of acute competition and ever-increasing customer awareness, speed to market may just be that silver bullet that gives insurers the much needed competitive edge. The speed to market challenges need to be tackled both at the process and technology levels.

Insurers should set aside the 'if it isn't broken' attitude and realize process improvements through well-defined and communicated best practices and close monitoring of standard metrics. This will result in predictable development time frames, improved quality and better measurement of results. On the technology front, insurers should try to outgrow their traditional 'eager and willing follower' role as far as adopting new technological advancements for business betterment is concerned.

While the task at hand is overwhelming, a well defined strategy backed by well-developed business case will provide significant competitive advantages to the carriers.

## About the Authors

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Sanjaya is a Principal with Infosys Consulting, aligned with the Insurance, Healthcare and Life Sciences vertical practice. Sanjaya has over 15 years of operations and consulting experience. Sanjaya's passion is to keep abreast of the business and technology trends in the insurance industry and his current focus is on speed to market initiatives for today's insurers.

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