Transform Legacy Systems for Improved Customer Experience

Property and Casualty (P&C) Insurers around the world are at a crossroads today, in search of a response to the traditional challenge of keeping pace with the ever-evolving business environment and technology landscape. They haven’t paid enough attention to the matter in the past, because business agility, customer experience and competition have not challenged their business process to the extent that they are doing today. Hence, it has not been one of the top priorities of Insurance CIOs until recently. Now IT departments are constantly being asked to deliver more with less, in order to meet rising business demand in an increasingly volatile and competitive market. The majority of IT decision makers among these P&C insurers have indicated that the modernization and transformation of existing legacy systems is IT’s response to meet business goals.

This paper discusses the big picture of modernization – business drivers, typical challenges and mitigation, current trends and best practices in the industry. It demonstrates how Tata Consultancy Services (TCS) has understood the problem and addressed it. We will discuss different approaches for modernization and key competencies. The paper will conclude with a focus on TCS’ successful partnership with P&C Insurers to seamlessly take them to the next level and give them the experience of certainty.
About the Authors

Anupam Karar
Anupam is a Business Solutions Consultant in the Insurance vertical of TCS. He has held various roles in IT delivery and management for key insurance and financial services clients of TCS. He is now part of the Business Solutions Group and works actively with leading P&C and Life Insurers on strategic initiatives, including, Legacy Modernization, Business and IT Transformation, and Business Rules Externalization.

Ramesh Kumar
Ramesh heads Insurance Business Solutions for TCS - UK and Europe. His many roles have included that of a consultant at a client CTO organization, lead large (up to $200mn) strategic transformation and migration programs for clients in Europe, UK and APAC regions. He has been instrumental in designing the strategy and factory based migration approach for these programs.
The Need for Modernization

P&C Insurers today need to review their business process. With more agility, enhanced customer experience, high degree of compliance to the regulatory needs, innovative products, and commensurate TTM and GTM strategies, there’s an urgent need to adapt. From the IT standpoint, with operations spanning over decades, insurers today find themselves strangled with outdated technologies, unsupported software products, old and incompetent architecture and lack of human resources with the appropriate legacy skill set. The result is the huge cost of maintenance for their application portfolios.

Recent economic slowdown has promoted the creation of numerous mergers and acquisitions. This changing landscape has aggravated the situation, furthering the need for a change, not only to respond to current challenges, but also to create version 2.0 of these companies. Thus, modernization is vital for the consolidation and transformation of legacy systems.

Business Drivers for Legacy Modernization

TCS’ Insurance Industry Solutions Unit has been executing full-scale Modernization of Legacy Systems for insurers globally for more than a decade. From our extensive experience, we understand that the key drivers for legacy modernization are as follows:

- Reduce Time-to-Market (TTM) by improving the ability to respond to changing market conditions, accelerating rate changes, and delivering new products through flexible solutions
- Improve Operational Efficiency - Minimize human effort and intervention through Business Process Automation – a goal of Straight Through Processing (STP)
- Reduce Total Cost of Ownership (TCO) by increasing operational efficiency by simplifying business rules and workflows
- Customer delight - Provide a Seamless Customer Experience across all channels
- Drive growth in Revenue and Profitability
- Consumerization - Product Rationalization for segmented customers – enhance Go-to-Market (GTM) strategy by retaining existing customers and attracting new ones with the right products

Trends and Forecast

According to Gartner, insurers’ premium growth and profitability will be challenged by economic uncertainty such as Euro crisis, regulatory uncertainty such as Solvency II, consumerization and internationalization.

A survey of top insurers found that more than 75% of participants stated a goal to modernize one or more of their legacy applications and 50% said they have a set time frame to do so. Following is a list of the most frequently used areas in which P&C Insurers have recently taken up projects:

- Adopt emerging technologies in the area of Cloud Computing, Big Data, Social Media and Mobility
- Re-architecting or SOA enabling
Product or Portfolio rationalization – customize existing products and create new products

Platform migration or re-hosting current applications onto a new platform

Web enabling current legacy systems

Language migration (e.g. re-writing Assembler code in Java)

Database migration (e.g. IMS/IDMS, Sybase to DB2/Oracle)

Business Rules Extraction

**Major Challenges: Why Some Modernization Initiatives Fail**

P&C insurers often face significant risks of failure in their legacy modernization projects. TCS, after rigorous research and through its own journey, has identified the causes that have spurred large modernization efforts. Some of the most prominent contributors to failure are featured below:

- **Value articulation** - Creating the business case for legacy system modernization is a challenging task for many insurers. Failure to quantify the business value of new core insurance systems or to assess the overall legacy modernization costs and risks has contributed to overall collapse of modernization effort.

- **System Integration** – Insurers have a proliferated landscape due to mergers and acquisitions with a large number of applications, product set, and admin/claim platform including surround systems. Integrating new technologies with legacy applications is often a very complex task.

- **Governance** – These programs typically fall into multi-year-multi-million-$ league – therefore, sponsorship is required from the existing senior management. Failure to establish ruling Key Performance Indicators, right methodologies and roll-out strategy, and measure post-modernization organizational value, has always challenged success.

- **Customer fitment** – In case of product rationalization, fitting the existing policy holder in the new converged product landscape is a daunting task because of its sheer complexity

- **Process rigor** - Defining the sequential steps and the scope of legacy modernization projects requires careful analysis. P&C insurers must consider many aspects, such as, the development of meaningful business metrics, vendor risk analysis, migration scenarios for existing IT systems, readying data for regulatory requirement, data quality to recreate the policy in future system, and more..

- **Technology selection** – Insurers are increasingly looking for packages to replace core legacy systems. Gap between expectation and capability of these packages led by functional insufficiency, technology and architecture incompatibility have often lead to disappointment.

- **Knowledge Absence** - Lack of documentation and non-availability of Small and Medium Enterprises (SME) especially in case of reengineering.
Solution Dimensions for Modernization

We have identified the key dimensions for modernization through TCS’ Convergence Framework, and segregate the transition to Target Operating Model (TOM) into bad-to-good and good-to-great phases by taking account of these dimensions. They play a key role in:

- Creating Modernization Roadmap
- Formulating Transformation Strategy
- Building Components
- Deployment and Support
- Benefit Realization
Different Approaches to Legacy Modernization

P&C Insurers have adopted different approaches for modernization which we have broadly classified into six categories.

- **Business Rules Externalization**: Rules are scattered all over the legacy applications. Hence, it is essential to externalize them in order to modernize legacy applications into functionally rich systems. Business knowledge in the form of IT vocabulary is extracted, translated into language that business can speak, classified into schemas and then rationalized by business analysts to form rules before they can be ported to a rule engine.

- **Product Rationalization**: Consumerization drives consolidation of the product portfolio to retain existing customers and attract the new. Insurers need to apply sophisticated analytics on marketing and social media to penetrate customer mindshare and subsequently build new products. This often needs a new platform wherein existing products can be customized and configured on renewal and new products can be created.

- **Reengineering**: Insurers reengineer their legacy systems to augment functional and technical capacity. This needs understanding of current functionalities, transactional view, and business value of data, following which new requirements need to be documented. The entire process involves reverse engineering the legacy applications to document the current business and then forwarding the engineer the system with additional business requirements.
Restructuring: This is a simplistic approach compared to its predecessors. Certain activities such as web enabling of UI applications, SOA enabling of business services, and business rules extraction are undertaken by insurers, in isolation or in combination, purely based on the need and mostly depending on the budget available.

Package Implementation: There is an upward trend among insurers to opt for a packaged application offering end-to-end services of insurance functions such as Policy Administration, Claims, and Reinsurance. While the expectation is one-size-fits-all, the delivery often needs a fair amount of customization. This buy rather than build approach involves Commercial Off-the-Shelf (COTS) product selection based on business direction, gap analysis, and package customization.

Migration: This includes the upgrade of database products and programming languages, re-hosting applications on different platforms, or simply data migration. Any migration needs detailed understanding of the legacy and target data models which are often in different formats. We recommend data-driven activities such as Profiling, Cleansing and Masking and customer/renewal based migration to incrementally reduce Total Cost of Ownership (TCO). Convergence with retention/archival/retrieval of data for regulatory needs is in an integral part of TCS Insurance Data Migration.

The modernization approach for an organization depends on its current state of business alignment, technology currency and architecture fitment. Thus, the first step involves the evaluation of modernization requirements of the insurers, followed by a recommendation of the right approach, (such as Factory based business led approach for product rationalization, rules extraction and migration). Finally, a partnership is formed for implementation. Insurers must consider the fact that often it is not a single approach, but a blend of approaches that meets their need.
How TCS has helped Insurers Modernize their Systems

TCS has been enabling enterprises to transform their legacy applications to functionally rich and agile systems that help them meet existing and future business demands. This has been a high-uncertain and expensive undertaking because of the lack of reliable and highly automated transformation processes. Hence, TCS focuses on making a seamless transition of the enterprise to the future state with minimum risk. Our on-the-ground experience in large-scale modernizations has been orchestrated by a matured blend of consulting services, assets, accelerators and Centers of Excellence.

Consulting: Global Consulting Practice (GCP) has provided advisory services for sophisticated and transformational solutions to insurers. Services include assessment, roadmap creation, risk & program management, and assurance services.

Assets: The Tools group has been constantly researching in collaboration with our customers and has created tools to automate manual processes, improve productivity, influence performance, automate and mature testing methodologies and gain control over technology consumption. Some of these tools are REFORM, Migration Platform, Masketeer, SmartTest Manager, and MapAgile, Velocit.

Accelerators: Modernization Workbench, Simplify and Convergence Framework, Factory based agile approach in assurance services, strong domain flavored Process Maps & Models have supplied momentum to the lengthy and complex transformational initiatives, often running for years.

Center of Excellence: TCS has set up dedicated focus groups both on domain and delivery capabilities. Insurers have been leveraging domain centric niche services from PAS and Claims CoE’s; transformational functions from Business Rules and Migration COE’s. All modernization engagements have leveraged the rich knowledge and experience of our Technology, Process and Delivery Excellence Groups.
**Best Practices**

TCS provides guidance and best practices to help P&C insurers adapt to legacy modernization and Business-IT transformation. We continue to receive queries from insurers on the industry best practices which are narrated here briefly:

- Insurers must consider Modernization as a **Branded Initiative** to achieve Organization level buy-in.
- **Separation of business requirements** from iso-functional transformation – Workflow automation, Channel enabling, Webification; participation from Business accelerates acceptance.
- **Understanding Business value of data** – Understand the transactional view of data from domain perspectives through experience of maintaining Insurers’ legacy application portfolios and deploy the knowledge to address the complexity when it comes to transformation.
- **TCO focused solutions** – Alignment of the transformation initiatives to the larger roadmap from TCO perspective and minimizing or having no impact on business continuity.
- **Solution orientation with Enterprise Technology Roadmap** – Focus on optimizing technology consumption through alignment with technology map and established industry standards such as ACCORD, IIA.
- **Preparation phase** to set baseline for modernization- Hardware and software upgrades to launch modernization, identification and decommissioning of redundant applications, appropriate testing strategy.
- **People reengineering** – Groom Champions and involve them in every step through ‘Train-the-Trainer’ programs
- **Traceability** at all levels and reporting the same regularly as most transformation programs are multi-year
- **Acceptance criteria for non-functional requirements** defined upfront and tracked

**Conclusion**

Though it can prove to be a daunting task for an enterprise, a successful transformation can help to mitigate risks, optimize costs, ensure continuity, and align information systems to the business needs. Insurers are adopting either top down or bottom up approaches based on their current business priorities of either customer experience or operational excellence. Based on our experience, we see that these large and complex, often multi-year, multi-million, programs should be a branded, business led initiative with clear strategy for TOM, migration, and retention. Thus, they should run in a factory approach. A clear vision with an incremental self-funded program yielding incremental but tangible benefit should be created with convergence before consolidation to demonstrate business benefits.

**References**

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For more information about TCS’ consulting services, contact global.insurance@tcs.com

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