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### THE MODERNIZATION CHALLENGE

Insurance companies of all sizes are grappling with aging, complex systems that are costly to maintain and too inflexible to support new business initiatives.

In the current economy, with IT budgets likely to stay flat or grow only modestly, this problem is getting worse — with organizations forced to use an ever-increasing share of their budgets just to maintain existing legacy systems.

Most insurers are ready to modernize but, not surprisingly, the solution put forth by most software vendors is new software.

Contrary to what most software vendors tell their clients, there's no off-the-shelf solution for application portfolio modernization. Unfortunately, all too often, vendors are part of the problem by selling insurers on a new system while lacking the expertise or support needed to convert huge blocks of policies.

What most organizations end up with is another system to maintain — one that only supports new business and is essentially walled off from the company's legacy systems. And what most vendors won't tell their clients is that system replacement is just one of many options available to them.

It's time to get the options out in the open for all to understand. This paper discusses the critical systems that insurers must address, outlines the transformation process and explores best-practice approaches that IT organizations can use individually or in combination to achieve their modernization goals.



### **FOCUSING ON POLICY ADMINISTRATION**

It's impossible for an insurance company to have a serious discussion about modernization without addressing the size of its policy administration system portfolio.

Insurance companies of all sizes manage multiple policy administration systems.

#### POLICY ADMINISTRATION PORTFOLIO SIZE

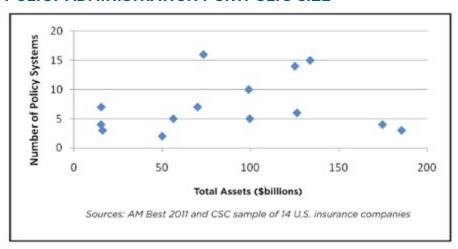


Figure 1: Insurance companies of all sizes maintain multiple policy administration systems.

According to benchmark data collected by CSC (Figure 1), a typical mid-to-large U.S. insurer maintains four or more policy admin systems, and many have portfolios of 10 or more systems. Multinational insurers are facing similar challenges. Many multinationals have redundant policy administration platforms across countries or regions, owing to earlier growth through acquisition strategies and subsequent governance of each region as a standalone profit center.

Over time, insurance companies increase the size of their policy administration portfolios as they adopt new technologies, acquire other companies, and launch new products and lines of business. In most cases, insurance companies engage software vendors on projects that address immediate business needs, such as speed to market, product innovation, and customer and agent services. Most vendors tend to focus on implementing a new policy administration system or component, rather than exploring all of the modernization options available to address the entire administration system portfolio.

### 10 THINGS MOST VENDORS WON'T TELL YOU ABOUT MODERNIZATION

It's important for insurance companies to understand and assess all of the options before making major decisions about upgrading, replacing or integrating systems. There are many different approaches to modernizing an application portfolio as shown in Figure 2.

#### TEN APPROACHES TO MODERNIZATION

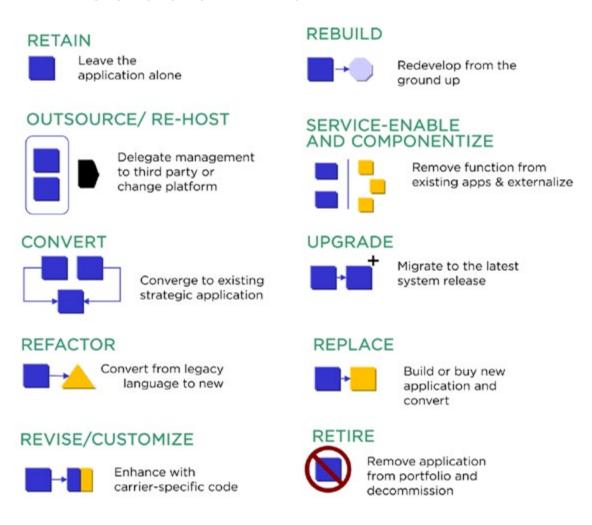


Figure 2: Strategies for modernization.



Unfortunately, most third-party vendors and consultants don't have a full grasp of the challenges facing insurers across the portfolio, they lack practical experience in business transformation, or they don't have the capacity to help implement new systems and processes enterprise-wide. Whatever the reason, many vendors aren't giving insurance companies the whole story. Here's a look at what most vendors won't tell you about modernization:

### NO. 1: SOMETIMES IT'S OK TO DO NOTHING.

Depending on the application and its function in the organization, sometimes the best strategy is to leave the application in place and focus on reducing maintenance costs. Small blocks of business in runoff or even larger closed blocks that could be packaged and sold off are potential candidates for retention. Remember, though, any systems that are retained contribute to ongoing costs, requiring specialized teams to maintain and use these antiquated systems.

At a time when most insurers have moved or are starting to move to shared services organizations, these pockets of specialization could prevent both IT and back-office managers from achieving full value from these internal consolidation efforts.

#### NO. 2: IT MAY BE TIME TO OUTSOURCE SYSTEMS AND PROCESSES.

A growing number of companies are looking into re-hosting legacy systems — moving applications from one technical environment to another with no or very little change to code. This "lift and shift" approach is typically provided by an outsourcing vendor to manage the application for a predictable cost on a long-term basis.

Outsourcing enables organizations to refocus resources on activities that support the core business, while leveraging third-party expertise and efficiency. Historically, this strategy came with a limited set of options. More recently, however, as systems have become more component-based — and Web-based interface points have become more prevalent — outsourcing can be effectively applied to much smaller pieces of the business.

For instance, outsourcing can be used to support application development, maintenance and infrastructure — as well as individual business processes, such as customer billing, printing and mailing. Consequently, interest is high in outsourcing legacy blocks, through business process outsourcing (BPO), staff augmentation and application management. At the same time, interest in business process services is also growing as insurers seek ways to add world-class capabilities.

Application outsourcing can provide significant benefits, especially for legacy policy systems that are difficult to support in-house. The policy administration system vendor often maintains a "center of excellence" using offshore labor and provides economies of scale that a single carrier cannot match. This allows the life of the system to be extended

without the associated IT risk of losing the experienced staff to retirement or attrition. BPO can provide a customized, turnkey solution to administering older legacy policy blocks at attractive prices.

Outsourcing can potentially introduce new challenges, however, particularly when the goals of the outsourcer and the insurer are not aligned. An outsourcer, for example, may not be able to fully support new product launches or customer service strategies that were not considered when the contract was signed.

### NO. 3: CONSIDER CONVERTING YOUR POLICIES TO A STRATEGIC IN-HOUSE PLATFORM.

One of the best responses to rationalizing additional platforms and custom solutions that come into the enterprise through mergers and acquisitions is converting the business onto a single in-house platform. The ideal scenario is to consolidate to an existing strategic system that can carry the merged business into the future. This approach preserves the investment in company-specific system functions on the target platform, but will increase the in-force policy volumes on the strategic platform. So, choosing a target platform with proven scalability is critical.

Conversions can often have significant up-front cost, but their long-term benefits can be equally substantial. Articulation of a good benefit case is a critical success factor. Figure 3 provides a quick overview of both the tangible and intangible benefits that carriers typically see.

#### POLICY ADMINISTRATION SYSTEM CONVERSION

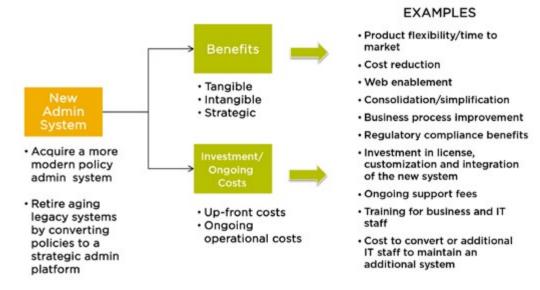


Figure 3: Organizations can reap numerous benefits from system conversion.



### NO. 4: YOU MAY BE ABLE TO BREATHE NEW LIFE INTO CERTAIN OLDER APPLICATIONS.

In some cases, organizations can modernize an application's internal design, while retaining its functional equivalency. This code refactoring of an application from COBOL to Java gives the insurer multiple options for server-based deployment. Refactoring allows an application to be modified so that it can interface more effectively with other systems based on modern technologies. This approach may only be practical for standalone applications that are a true differentiator for the business, such as a specialized application that embodies proprietary underwriting formulas or corporate knowledge. Today, however, a wide variety of commercial off-the-shelf applications exist for virtually every business domain, and these specialized applications can be duplicated in a newer, more configurable system. For most carriers, refactoring a home grown policy administration system won't make sense when those same capabilities can be licensed off-the-shelf.

One example of when this approach was beneficial was in CSC's rebuilding of one of its global policy admin platforms for life, property and casualty, and health insurers. The AS/400-based system was the leading platform in Asia, used by dozens of companies in a variety of countries, so the costs of rebuilding it were spread across the entire client community. As a result, these carriers get access to continually updated software that can run in multiple server-based environments.

#### NO. 5: DON'T REVISE AND CUSTOMIZE ANY MORE THAN YOU HAVE TO.

Most vendors don't mind if you want to revise or customize their software if it means more services revenue and possibly more retrofitting work down the road. In most cases, carriers purchase an administration platform and customize the source code to their specific requirements, or they simply patch an older version of the system to meet new business needs, such as new regulatory requirements. Revision can be a way to add new functions and fix problems faster than keeping the system updated to the most current release.

It is not uncommon for some carriers to have modified as much as half of the original source code to meet their custom requirements. But what saves in the short term almost always costs more over time, and when carriers must update that old release, they have to deal with the plethora of custom in-house modifications, which can be expensive. So, be wary of this strategy.

### NO. 6: REBUILDING IS NOT REALLY AN OPTION.

Similar to code refactoring, the process of rediscovering an application's business requirements and redeveloping it from the ground up may only be practical for

specialized, proprietary applications. From a practical standpoint, however, it probably makes more sense to look for a software package that can be configured to perform the needed functions.

Unfortunately, many insurers over the years have tried to rebuild their core applications and failed. In today's environment, with technologies and standards changing every 18 months, the prospect of a multi-year development project, with multiple iterations of testing and performance tuning, is too overwhelming for most IT departments to even consider. While the build-it-in-house option used to be foremost on IT department agendas, few if any companies today would seriously consider rebuilding a legacy policy admin system.

#### NO. 7: SOA SYSTEM INTEGRATION IS NO SILVER BULLET.

To support complex systems environments, most insurance companies have attempted to service-enable their policy administration systems and add components. Vendors are quick to recommend externalized systems such as rating, billing and claims that can be interfaced with legacy systems through a service-oriented architecture (SOA). For this strategy, monolithic applications are partitioned allowing portions of the functionality to be externalized (see Figure 4).

A fully component-based system would, in theory, allow carriers to mix-and-match components as needed to meet their needs. This flexibility comes at a price, though, as the number of interface points increases. Therefore, it's imperative that the component boundaries are clean. As a matter of practice, the carrier often turns off or bypasses functionality in the old system in favor of a new dedicated application component for handling functions, such as new business or distribution management.

Wrapping is a common strategy with predictable costs and well-tested patterns. One frequent use is to wrap systems with a common user-interface, which masks the idiosyncrasies of each system from the user. More recently the focus has been on wrapping systems with service layers that let them plug into service buses; this architecture promotes reuse and high-level process assembly. This strategy makes sense for companies seeking short-term improvements to specific processes affected by several legacy applications.

Customer service and claims are prime areas of the enterprise that can benefit from this approach, which can enable the IT staff to be more responsive to the business. However, if legacy systems have fundamental technology issues or they can be converted and decommissioned in a relatively short period, wrapping may not be practical. While many organizations view SOA as a silver bullet for integration woes, it doesn't eliminate the underlying legacy system complexity and drag on costs.



#### SURROUNDING THE SYSTEMS



- Surround application overlays multiple administration or other platforms enabling one common view across multiple platforms
- Enables one common process for service or other functions (new business, claims, etc.)
- Can allow conversion/ consolidation of platforms without impact to the business
- Typical systems include customer service, new business and claims

Figure 4: One strategy for masking legacy complexity is service-enabling core systems and adding components.

#### NO. 8: IT MAY BE POSSIBLE TO UPGRADE INSTEAD OF RIP AND REPLACE.

For companies with vendor-supported applications, upgrading to the latest version is a common strategy for modernization. Unfortunately, many insurance companies wait too long to take advantage of the vendor's modernization program. Many vendor applications have come and gone over the decades, leaving insurers with unsupported applications and no migration path to a new system. Instead of a series of routine upgrades, organizations often face a major licensing decision and complete system replacement.

The major obstacle insurers face is often their own penchant for revising and customizing the vendor's code. Too much customization makes it difficult for companies to port these changes to the latest version of the software. Once two or three opportunities to upgrade are missed, the vendor system essentially becomes another legacy system maintained by the company's IT department. As with the other approaches, insurers must weigh the costs and benefits of a continuous upgrade program to those associated with a big-bang upgrade or complete system replacement.

#### NO. 9: SYSTEM REPLACEMENT MAY ONLY SOLVE PART OF YOUR PROBLEM.

System replacement is by far the most common step recommended by outside vendors, but insurers seldom hear all of the facts about the potential costs and impact on the current environment. For policy administration systems, for example, a replacement system may be implemented for new products only, and the older systems retained or outsourced. Another common strategy is to replace and convert the older in-force blocks to the new system.

As shown in Figure 5, the benefits of system replacement can be significant — the ability to deploy new products or functional capabilities; the ability to provide Webenabled producer/customer self service, and the ability to reduce the complexity of existing business processes, to name a few. However, it's important to remember that the introduction of a new policy administration system actually makes the system environment more complex, as it is a new application that must be maintained. Longterm plans for managing or retiring existing systems, including the costs of conversion and infrastructure, must be included in the business case for the new system.

System replacement and consolidation simply may not be practical if there is no credible vendor package available; if the functional gap between systems is too great; if there is no real business mandate to support a large scale change or willingness to compromise on requirements; or if the cost of replacement is too high for the size of company.

#### COSTS AND BENEFITS OF NEW SYSTEM ACQUISITION

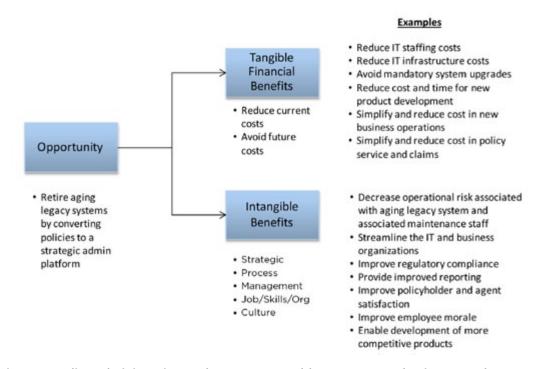


Figure 5: Policy administration replacement can address numerous business needs.



### NO. 10: ADOPT A PLAN TO RETIRE YOUR LEGACY SYSTEMS — AND STICK TO IT!

Most vendors are more concerned with selling new systems than helping to retire the old ones. It takes a lot of effort to move policies off the old system, archive the application's data and decommission the supporting infrastructure. It can be a challenging project because of lack of documentation or data — or both — but the more legacy applications retired, the greater the cost savings in ongoing maintenance. This helps insurers meaningfully shift their IT spending to more business-focused initiatives. Further, companies can manage operations more effectively with common technologies and processes.

For policy admin systems, the system can only be retired once all of the in-force blocks have been converted to another system. When you do this you will no longer face the same challenges of cross-training employees on multiple applications, and, as baby boomers retire, IT programs won't have to depend on finding new personnel with skills in older technologies.

### TRANSFORMATION AS A CORE AGENDA

With so many options available, choosing the best path to modernization requires methodical planning, a transformational approach and an efficient program for managing the modernized portfolio.

At the outset of any modernization initiative, insurers should adopt a methodical, though flexible, framework that includes analyzing, aligning, modernizing, managing and continuously improving application portfolios — one that can be applied to a single application, platform assessment or transformation project, or an entire global enterprise portfolio.

Out of that framework, the real work begins as insurers Shape, Transform and Manage their portfolios. These three distinct phases, outlined in Figure 6, build upon each other but enable modernization projects to proceed concurrently.

### ONGOING PORTFOLIO ROADMAP OF GOVERNANCE MANAGEMENT

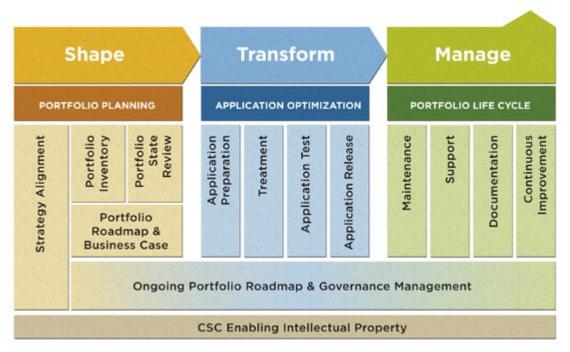


Figure 6: The management of application portfolios requires planning, optimization and ongoing support.

**SHAPE** - Assessment and planning is the first step. Here insurance companies can thoroughly assess the current state of the application portfolio and its alignment with business strategy, conduct "deep dives" in high-priority areas and quantify the business value of optimizing the portfolio. This step also includes the development of a modernization architecture and roadmap to be used in the Transform phase.

**TRANSFORM** - In the Transform phase, the carrier prepares, treats, tests and releases newly optimized applications into production. This step includes the conversion of data, the introduction of new infrastructure and integration with other systems.

**MANAGE** - In the Manage phase, the carrier introduces new streamlined processes for internal operations and external vendors and partners. This step focuses on cost management as well as increased speed, improved services and other operational goals.



Shape, Transform and Manage is a modular strategy that considers the entire life cycle of the portfolio. This framework helps organizations know when to replace and when to look for other opportunities for modernization.

Many carriers are at the beginning of their modernization journey, and it makes sense to start with portfolio planning. Other companies are already well underway but need to evaluate emerging options, such as cloud-based deployment. Regardless of the circumstances, it is important to remember that modernization is a continuing program and not a one-time project or initiative.

### **BUSINESS-FOCUSED APPROACH**

One fundamental error many carriers make is that they focus too narrowly on technology needs rather than on broader business needs. By taking an IT-centric approach, they miss the opportunity to remake their systems so they are tightly aligned with their company's current and future business needs.

Before carriers move forward with policy administration transformation, they must first identify the business needs, challenges and drivers that are essential to business agility and growth.

Planning, then, starts with the coordination of business and IT strategy and interests. Almost universally, C-level carrier executives talk about alignment of IT with the business. Alignment isn't enough! Alignment does not take into account possible new technologies that business professionals aren't fully aware of, such as mobile insurance, configuration engines and other technology enablers, as shown in Figure 7.

#### ALIGNMENT VS. INTEGRATION

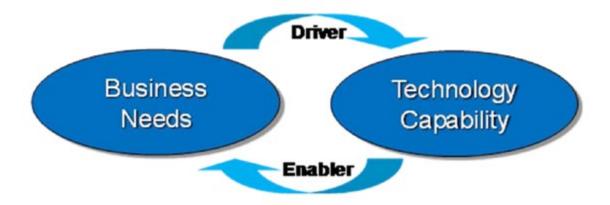


Figure 7: Business objectives continually put pressure on organizations to respond with new technologies.

Another essential point is that most organizations do their planning based on their current state — where they are — and not on what they see as their future business environment. In the case of policy admin system modernization, organizations must focus on future markets, product and service strategies. At a minimum, organizations must understand the business strategy for the upcoming three or four years and the insurance product strategy for the next 18 months. The IT organization must gauge

The key to modernization is complete business buy-in, continuous risk assessment, and a strong governance program.

Don Desiderato, Principal, Insurance Practice, Novarica the impact of those plans on the entire application portfolio, determine whether new technologies will be needed and ensure that any changes will comply with the company's reference architecture.

Some carriers still view system modernization efforts as primarily an IT initiative. However, numerous failed projects over the years show that without full business support, modernization efforts most likely will lose momentum and stall. Without a clear business case and senior business buy-in, modernization efforts have a very limited potential for success. All too often, people in various parts of the organization have differing definitions of "success."

A key objective of the shaping process is to define that future point of arrival. Can we introduce products faster? Are our retention levels better than industry averages? Did we lower our costs?

Unfortunately, from the perspective of application portfolio management, most of the evaluation centers on the technical condition of applications in the portfolio — not the business value each application provides. That's why the most successful modernization initiatives in the industry today focus on transformational results. With each new success, business transformation becomes more deeply embedded in an organization's core agenda.



### **ILLUSTRATIVE MODERNIZATION PATH**

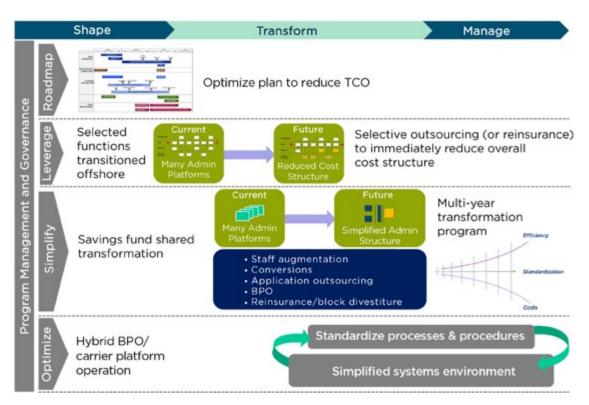


Figure 8: Insurance companies must take a methodical approach to modernization.

### **MODERNIZATION IN PRACTICE - CASE STUDIES**

Nearly every insurance organization has a unique application portfolio and a unique set of challenges, but relatively few companies have taken steps to reduce complexity by reducing the overall size of the portfolio.

Most insurers attempting these large, enterprise-wide modernization programs employ several different modernization approaches, both simultaneously and during different phases, as illustrated in Figure 8.

For instance, one top-tier life and annuity company, which had just merged with another major insurer, consolidated multiple systems to one single platform. However, it proved to be more cost-effective to retain some of the legacy systems and wrap them using a surround application as a common user interface. The company immediately lowered its IT maintenance costs and adopted a long-term roadmap for continued modernization.

In the property and casualty market, a leading insurance carrier took a completely different upgrade approach. The company used business process outsourcing to quickly introduce Web services to its commercial lines agents and decided to take a stepwise approach to replacing its core personal lines systems, which stretch across multiple business units. The carrier started with a few business services and is now moving to a service-oriented architecture across the enterprise.

Both companies chose to follow a methodical, though flexible, modernization framework and are achieving transformational change throughout their organizations. In addition to modernizing and simplifying their portfolios, they are increasing agility and reducing maintenance costs, which in turn is freeing up IT funding to support new business initiatives.

That's the best path to modernization — even though most vendors won't tell you.

### **ABOUT THE AUTHOR**

Bob McDonald, an executive advisor with CSC, has spent more than 20 years helping insurance companies transform business processes and implement new technologies. In creating this article, Bob drew heavily on his own experience with on-the-ground analysis of multiple insurers, as well as the experience and materials of CSC's FuturEdge application portfolio modernization professionals. He can be reached at rmcdona4@csc.com.

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