

The Trouble with Legacy Systems

An Insurance Executive's Challenges and Options





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Executive Summary

In search of efficiency, agility and the ability to innovate, insurers are quickly realizing their legacy systems often stand in the way of these goals. While it is clear that something needs to be done, the options available to solve the problem can be overwhelming. This white paper addresses business and technical pains insurers face as a result of aging legacy systems, addresses options for battling the pains and advocates enterprise content management (ECM) as a viable solution. Faster and cheaper than replacing legacy systems and easier to use and deploy than other alternatives, ECM facilitates becoming a process-based organization. Process-based insurance organizations are more flexible, agile and responsive and, therefore, more successful.

The Trouble with Legacy Systems

Based on aging development standards with limited functionality and usability, most insurers' legacy systems have been in place for decades with many in use since as early as the 1960s. Despite their limitations with green-screen interfaces and lacking the conveniences of modern applications—drop-down menus, instant help files, intuitive navigation, etc.—nearly 70 percent of corporate business systems today are legacy applications. In fact, many are still relied on to provide mission-critical business functionality. (1, "Legacy Modernization: Creating an Agile Enterprise")

Conversely, it takes a flexible, nimble organization with a good dose of forethought to compete in today's aggressive insurance landscape. Reliable technology that is scalable and integration-friendly for growth and change will dictate an insurance organization's success in this environment. Because legacy applications were built in a different time, often to serve a single purpose, and rarely meet the criteria necessary to help an organization for the long-term.

Still, some insurance firms—of varying size and location—are operating with legacy applications as their backbone. However, their successes are limited at best and at worst a downright liability. Problems with these legacy systems include:

- Many are band-aided together and guarantee business silos.
- Maintenance and staffing costs are high and growing.
- Compliance and regulatory concerns abound.
- Limited functionality limits innovation and growth.
- Purely data-driven architecture prohibits access to business content.

Many are band-aided together and guarantee business silos

Organizations reap the biggest returns when they are able to reuse data and avoid redoing or completely recreating work that's already been done. Without adequate interfaces linking systems, reusability is greatly limited, if possible at all.

With globalization by means of consolidation on the rise throughout the business world, the insurance industry has not been immune to mergers, acquisitions, takeovers and reorganizations. Once reserved for industry giants, many of today's small and mid-sized insurance firms have also been impacted by these events. Some executives may argue that growth and revenue will be the ultimate result of such a change; however, insurance IT systems are frequently part of the short-term collateral damage that comes from combining two or more organizations and their respective systems. As a result of trying to patch together systems that were never intended to integrate, long-term effects, including wasted time, loss of money and an inability to innovate, can occur indefinitely.

Even without a major organizational change to blame, insurance companies still face systems that have been weakly and loosely threaded together in an effort to achieve reusability. Legacy applications simply were not designed for this. With their unique and hard-coded interfaces written with rigid functionality in mind, legacy systems make integration difficult. This further perpetuates existing silos of business information and prohibits the sharing of information across departments, let alone varying line-of-business (LOB) applications.

Although the insurance industry has become accustomed to doing business in a siloed environment, silos can open insurers up for serious problems. According to Gartner vice president and distinguished analyst Kimberly Harris-Ferrante, "While insurers have talked about customer-centricity for years, they have developed channel-centric silos instead. Insurers without multi-channel integration will face dissatisfied customers, rising distribution costs, customer attrition and brand risk compared to those companies with tight integration." (2, "Legacy and IT Modernization in Insurance")

In an industry as interconnected as insurance (e.g., customer information first recorded on a policy application can be reused later in completing a claim submission and later in a renewal form), reusability of data should be a top priority. However, without major time and dollar investments (not to mention some serious risk) to legacy systems, integration and reusability may be impossible.

Maintenance and staffing costs are high and growing

With demands on IT budgets growing increasingly complex, one of the last places most IT staffs should spend money is on legacy systems. For most insurers, though, legacy systems are responsible for core business transactions and capabilities that represent the livelihood of the organization, so proper care of them is critical. But that care doesn't come cheap.

It's not just overtime costs that drive up the expense of maintaining legacy systems—it's also finding, attracting and simply paying the staff that cares for them. Even maintaining the original code can be a major cost, as the original programmers have long since left the organization and finding others with the right skill sets can be difficult.

Additionally, the IT industry as a whole is facing a staffing shortage, not to mention the workforce crunch the insurance sector is up against. According to a recent article published in the September 2008 Insurance Networking News, fresh technology is an organization's opportunity to attract the best talent, particularly members of the highly coveted Millennial generation. Finding enough of this talent now and in the near term represents the industry's overall future success. Regardless of how the money is specifically being spent, it's clear the maintenance of legacy applications is responsible for eating up a large percentage of IT budgets. In addition to merely being expensive, this diverts funds that could otherwise be used for innovative projects that ultimately attract and retain IT talent as well as policyholders.

Compliance and legal concerns abound

Built before a time enamored with lawsuits and corporate oversight, legacy systems were not designed to live up to today's stringent compliance standards like internal audits, Sarbanes-Oxley (SOX) and Health Insurance Portability and Accountability Act (HIPAA). Nonetheless, that's exactly what many insurance firms expect of them. By making customization after customization to their legacy systems, many insurance IT executives find themselves hoping these changes will push them into compliance—hardly a reliable method.

But even if insurers aren't currently required to meet mandated standards, that doesn't mean compliance issues shouldn't be a concern. Lawsuits and recent public demand for corporate accountability should also be driving factors to shore up potential compliance holes in legacy systems. Recent corporate scandals and the collapse of some of the insurance industry's biggest names have drawn further attention to compliance issues. Public outcry for proof of accountability will only increase in years to come and will impact insurers of all sizes.

With governmental interest in insurance affairs growing and regulations becoming stricter, it seems clear that sooner or later insurance organizations of all sizes will be impacted. Without systems designed for oversight in place, insurers should feel immediate and intense urgency to protect themselves.

Limited functionality prohibits innovation and growth

Today's society demands instant and easy access to as much information as possible. In order to effectively compete, business requires accurate information in real-time and immediate availability from multiple sources. Most insurers legacy systems simply cannot meet such high expectations. Unfortunately, that results in a poor impact on both employees and customers.

For employees—both IT and business alike—legacy systems limit efficiency and productivity and therefore hinder innovation. For IT, programmers spend so much time maintaining and rewriting legacy code in an attempt to keep up

with user demands that they have little if any time to create new or unique functionality to improve business processes. As a result, it is common for these IT staffs to have low morale and high turnover. Given the virtually limitless possibilities of technology that exists today, most programmers would prefer to create new and different applications and solutions, rather than simply fixing what is broken.

On the business side, with their hard-to-learn interfaces and lack of functionality, legacy systems hardly facilitate productivity. The outcome is that business users often spend more time trying to decipher the system or actually avoid using the system at all, opting instead to complete tasks manually. Not only does this cost the insurer time and increase employee frustration (which leads to staffing and morale concerns on the business side as well), but when employees revert to manual processes, information security and access become crucial concerns.

Additionally, it is not that big of a stretch to suppose that legacy systems could actually be preventing insurers from developing new product offerings to customers. The end result, of course, is a negative impact on customers and policyholders, which threatens an organization's entire livelihood. Because legacy systems just can't meet most of the demands of today's information-obsessed world, insurers must do something to ensure not just employee productivity, but creativity as well. Unfortunately for most insurers, legacy systems rarely provide the foundation to do so.

Purely data-driven architecture prohibits access to business content

Built with data-driven programming languages, it is often difficult to extract business content from legacy systems. For example, process bottlenecks are nearly impossible to identify, workloads can't be easily balanced or manipulated and legacy systems provide limited ability to see business trends without poring over pages of reports. But this is exactly the kind of information that today's insurance executive craves to keep up with competition.

Although IT staffs may be more than willing and able to design a solution to monitor business processes, the architecture of legacy systems may not be able to handle a newer, fresher business perspective. The bottom line is that although the information contained in legacy systems may still be valid and relevant, the architecture of these programs isn't designed to facilitate business growth. Legacy systems are great repositories of information, but they can't be counted on to draw conclusions or make predictions based on the information contained in them. Unfortunately, insurance executives who cannot find a way to extract business content from legacy systems are simply turning a blind eye to the true health of their organizations.

Replacing May Not be the Answer

Facing so many negative impacts and challenges because of their legacy systems, insurers may be tempted to go out and quickly purchase a replacement, but that may not be the most prudent choice. Outright replacements can bring the following concerns:

- Too much risk.
- Prohibitive cost.
- User reluctance.
- Limited business agility.
- Speed of delivery.

Too much risk

Of all available “solutions” to legacy systems management, replacement is the most risky. A theme the insurance industry is very familiar with, replacing legacy systems leaves many questions unanswered, rendering insurers instantly vulnerable.

First, the question of reusability is still unanswered: Outright replacements are often siloed in nature and these LOB applications are not intended to solve problems in multiple departments. Instead, replacement systems usually solve one or more business problems within one functional area of an insurance organization, e.g., claims, underwriting, etc.

This LOB system becomes a repository for business knowledge within one group, but that knowledge rarely exists elsewhere in the organization because replacements do not come out-of-the-box ready to interface with multiple other LOB applications. This further perpetuates business silos, limits information and knowledge sharing and prevents reusability of data, all of which lead to a less efficient organization.

Further, according to Gartner analyst Harris-Ferrante, eventually this replacement could one day become a legacy system itself. “Insurers often make short-sighted decisions on new applications which may become legacy applications themselves in a few years. It is imperative that insurers select vendors with modern technology, including open technologies and business process flexibility. Without proper insight into the longevity of the application and how they will fulfill enterprise architecture objectives, we may be buying solutions that only meet current day business requirements and will quickly become outdated” (3, “Legacy Modernization Among Insurers”)

Prohibitive cost

By far the most costly option, complete replacements are very expensive undertakings. Additionally, if you replace a legacy system without replacing the underlying mainframe as well, insurers may still not be agile enough to quickly respond to changes in the marketplace. (4, “Modernize Your Legacy Systems AND Cut Costs?”)

Deploying a replacement system is costly and resource-intensive, and many organizations simply underestimate the time and resources required. For example, before implementing a replacement, organizations must have a true understanding of both internal costs and processes—something many insurers are not used to measuring. Additionally, time required to implement a replacement is most often measured in years and not months. More costly in dollars—and likely in time—than any other alternative to managing a legacy system, replacement should only be considered if these resources are not an issue.

User reluctance

Perhaps more underestimated than any other reason, user reluctance to use a replacement is a bigger issue than most insurers think—particularly IT leaders who are accustomed to technology changes. User reluctance is a factor that is hard to measure or completely predict, but a factor that can still cripple replacement projects.

Because the insurance industry was an early-adopter of computing, it’s not a surprise that most systems are 15-20 years old or more (6, “Turning Financial Mainframe Applications into SOA Building Blocks”). And because these systems generally still perform their original purpose, there is often user skepticism and opposition to replacement. So fearful of making changes to the status quo to stay within the rigid functionality of legacy systems, this stringent mindset can carry over to an organization’s culture. As a result, even if leaders say the organization is creative and forward-thinking, corporate business rules and actions may dictate otherwise.

In fact, insurers have been hesitant to change any systems out of fear of losing both short-term and long-term productivity from their often very experienced workforce—not to mention concerns about their potential inability to train employees in the new systems.

Limited business agility

Consider again the main drivers for addressing problems caused by existing legacy systems: efficiency in processes and agility to innovate and compete in the marketplace. Replacing legacy systems with new LOB applications will ultimately defeat these goals.

First, creating and maintaining efficient processes requires the ability to respond to needs quickly, whether you’re answering a customer question or integrating two applications. Despite providing more flexibility for efficiency than with available legacy systems, replacement LOB applications often have rigid logic that requires expensive and time-intensive custom coding to alter. Although at installation a replacement system’s functions and inherent logic may exactly match your company’s current processes, insurers often find any changes in the short or long term frustrating and expensive.

In addition, an insurance firm's ability to make modifications as business needs and technology change underscores the importance of flexible technology. Further, the agility of an enterprise dictates its overall ability to compete effectively. So if you can't quickly make changes to ensure efficiency now as well as in the future, what benefits do replacement LOB applications bring?

Speed of delivery

Given the vast amount of data stored in legacy systems, replacements are rarely rolled out quickly. Because the legacy application has been in use for even as little as, say, 20 years (and that may be on the low end for many insurers, as many insurance legacy systems have been in place for 30 or sometimes even 40+ years), extracting that data and finding a way to integrate it into the new replacement may not be such an easy task and often requires extensive custom coding. Purely data-driven, legacy systems are great at outputting numbers and reports, but finding a way to use that data so that it makes good business sense often requires great data analysis to integrate multiple legacy systems.

What Are the Other Options

Build a solution yourself

You may consider keeping the problem of how to manage your legacy systems in-house and opt to build a solution (e.g., a wrapper, a new front-end or even a complete replacement) yourself. Here are the benefits and risks to this idea:

Benefits:

Business control:

When you build a solution internally, you have complete control to match your organization's exact processes and expectations.

Data control:

An internally-built solution also guarantees strict control over your data and corporate intelligence as it existed in the past and going forward.

Risks:

Time intensive:

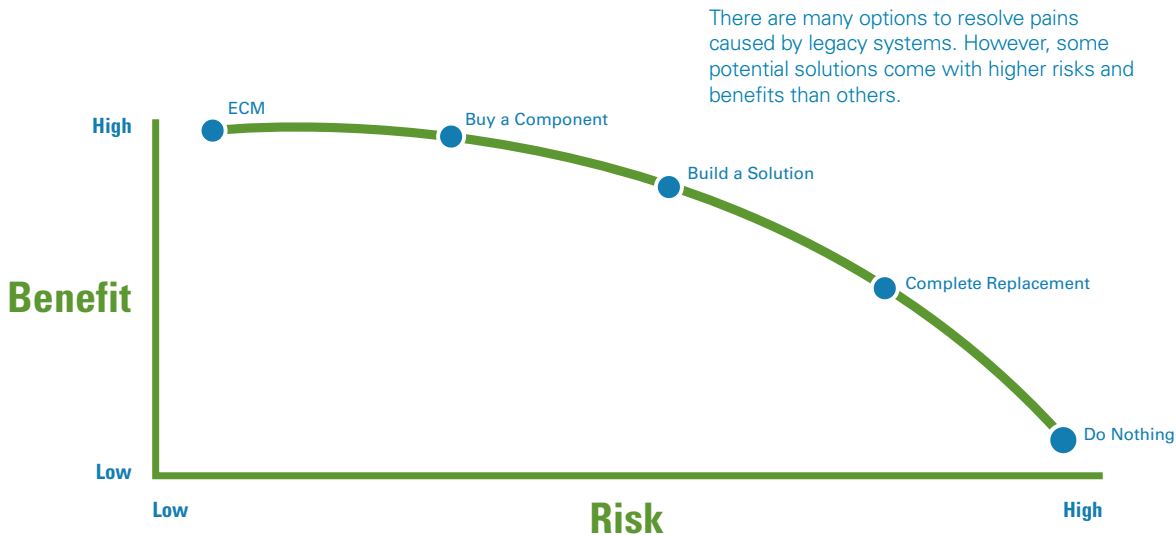
Like any other major IT project, building a solution yourself will take a lot of time, but for this undertaking you will be responsible for every last detail.

Staffing:

Meeting minimum staffing requirements can be a problem for many insurers who opt to build their own solution—after all, if it's difficult to find enough people to maintain existing technology, it may be near impossible to dedicate enough people to building a new solution.

Cost:

Although you have internal control of every element, this can sometimes overcomplicate needs and requirements, which drives up cost.



Buy a component and scale out as needed

With IT budgets shrinking and the global economic picture in question, it may seem to make good fiscal sense to fix only what is absolutely required and push other issues to the back burner. With some clear advantages, this option doesn't come without concerns:

Benefits:

Potentially inexpensive:

Depending on the scope and severity of your most urgent problems, buying a component could be inexpensive in the short-term.

Quick fix:

Also depending on the issue at hand, you may have a solution to a simple problem up and running in weeks instead of months or years.

Risks:

Scalability:

Depending on what product and vendor you select, future growth and integrations may be severely limited if at all possible.

Increased silos:

If every department is permitted to purchase a product to solve their most immediate need(s), an organization may wind up with a bunch of single-point solutions that can neither accommodate growth nor interface with each other.

Potential extensive coding:

Assuming the goal is to not only solve an immediate business need, but to reuse the data from existing legacy systems, the necessary interfaces are often built as one-offs and require extensive custom development and testing.

Performance issues:

If an insurer relies on its ability to weave together a collection of unrelated solutions, performance troubles will likely result. With multiple products and solutions from multiple vendors, it is likely that the ultimate system will more resemble a Frankenstein than a trusted, high-performing enterprise solution.

Do nothing

It might be tempting to simply ignore the problem and hope it goes away or at least doesn't worsen. But refusing to make necessary changes will only make the situation worse in many ways.

Benefit:

Cost avoidance:

The sole benefit to ignoring the problems of your legacy systems is saving money in the very short-term.

Risks:

Lost opportunities:

Doing nothing about the problems caused by aging legacy systems prohibits an organization's ability to compete. This is akin to admitting that response times will be slow and your competitive edge will be lost.

Security and compliance concerns:

Never mind the security of your e-mail system or your agent portals, if your core business systems are unsecure, your entire organization is at risk.

Increased long-term cost:

Doing nothing to improve your legacy system drives up costs in multiple areas, including:

- Recurring license fees.
- Hardware maintenance.
- Facilities costs—housing a mainframe typically costs 10 percent more annually than a server environment.
- Staffing costs—costs for maintenance programming staff is higher because programmers are usually more experienced and finding their unique skillset can be difficult.

Consider ECM

Although there are risks and rewards associated with the above options, an option often overlooked is ECM. A truly enterprise opportunity, ECM affords not just the IT staff and a segment of business users opportunities, but because of its ability to facilitate bi-directional information exchange with insurance core systems as well as other external channels, ECM can positively impact an entire organization.

Reasons not to overlook ECM:

Decreased risk:

By keeping existing data and users in a familiar environment, project and organizational risk is lessened.

Enterprise agility:

ECM emphasizes configuration, not customization, so changes can be made more rapidly in response to everything from a catastrophe to an employee calling in sick.

Consistency:

ECM allows an organization to enforce consistent business practices. By ensuring every step of a process is completed and that the process follows a consistent and logical path, the organization will increase the overall accuracy rate of the process.

Automation:

ECM gives an organization the ability to keep existing business logic they rely on today and modify it as needed to further automation.

Scalability:

ECM allows an organization to start small and grow as needed without concern that future integrations won't work.

User acceptance:

ECM keeps users in the same familiar environment they use today with additional features, so organizations do not incur major training time or cost.

Lower cost:

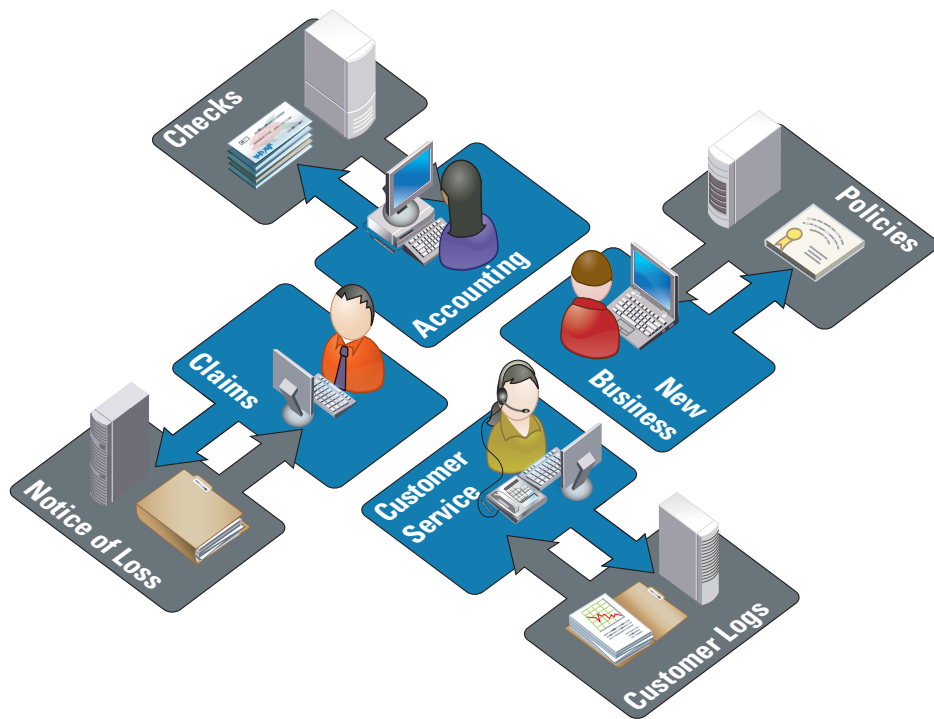
ECM is the most cost effective option for both the short and long term.

Flexibility:

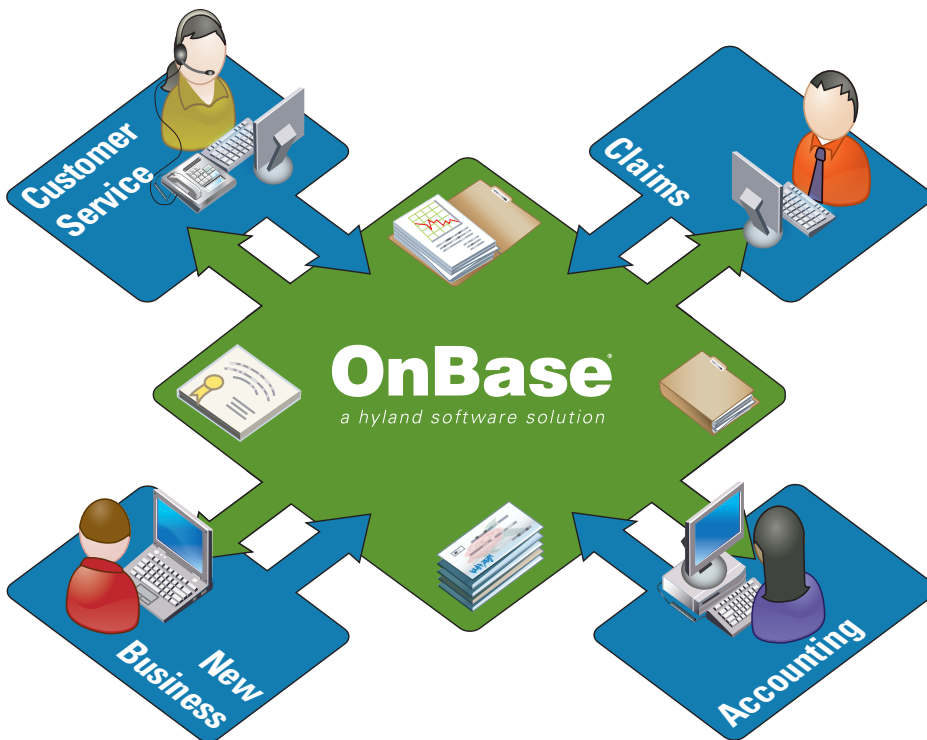
ECM can change in response to technology and business and allows an enterprise to ensure its best position for the future.

Modern technology:

ECM relies on Service Oriented Architecture (SOA), so your infrastructure can be built on applications you use today as well as ones you'll use in the future.



Currently, most insurance organizations day-to-day operations occur in a siloed environment. Each department relies on individual processes and repositories with little or no information sharing across departments.



With an ECM solution, such as OnBase, insurance organizations can share related information across departments. This knowledge sharing promotes collaboration and frees employees to spend time on work that brings value to the organization instead of recreating work that has already been completed or searching for information that exists elsewhere in the company.

Easing Legacy System Pains

Perhaps the greatest advantage of ECM solutions as they relate to legacy systems is that there are multiple interface points. That is, a single ECM solution can facilitate data flow across an organization and its multiple departments and through multiple LOB legacy systems. Regardless of the business department affected or the solution needed, ECM can tie multiple legacy systems together allowing the related data in each application to drive the processes.

For example, an insurer may have separate legacy systems that drive its policy administration, claims and accounting functions. As previously discussed, these behemoths rarely, if ever, allow the sharing of data between systems which results in a siloed business community that drives up costs and drives down productivity. By implementing a single ECM solution, the insurer can harness the common data within each system and allow shared information to facilitate document and process flow across the organization—not just in one department.

As a result of implementing ECM to tie legacy LOB systems together, the entire insurance enterprise experiences the following benefits:

- Increased business user productivity and morale
- Decreased costs and increased visibility for IT
- Modernized technology that goes beyond document imaging to harness business knowledge enterprise-wide
- A lean organization resilient to market conditions

Increased business user productivity and morale

One of the greatest beneficiaries of implementing ECM is business users. Because of the siloed nature of legacy LOB applications, business users are often forced to search outside of them for data that would be at their fingertips in an ECM solution.

For example, a policy services representative may be reviewing an insured's renewal application. In order to accurately assess the application, the representative may need to consult accounting information to determine if the insured has made timely premium payments and claims information to assess risk. In a traditional policy administration legacy application, accounting and claims information would not be available, so the user would have to find other means—most often manually digging through physical file cabinets and folders—to track it down. Or, users may even have to engage co-workers in other departments to obtain the information, which, in turn, pulls them away from their day-to-day responsibilities.

Further, sometimes business users simply can't find the information they need anywhere, inside or outside of their legacy LOB application. As a result, they often recreate work that's already been done and either physically or electronically retain the replicated data. Not only does this result in lost time but also taxes storage capabilities and increases the legal risk from having multiple copies and revisions of a document working through the organization.

ECM saves time and money by allowing business users to focus on the job they were hired for instead of searching for and recreating existing documents and data. By applying granular user rights, business users have all the information they require to do their jobs in front of them, regardless of where the actual data resides. With all necessary information at their fingertips, business users focus on tasks that bring value to the company and provide them professional satisfaction.

Decreased costs and increased visibility for IT

Built to empower business users, ECM reduces the strain on resource-strapped IT departments, freeing them to focus on more innovative projects instead of maintaining mountains of code. Additionally, because ECM can be deployed in chunks, ROI is attained faster and trust in technology grows.

Comparatively cheap to install and maintain, programming languages used to write ECM solutions also appeal to the next generation of IT workers, thus reducing staffing costs and well as technology costs. As a result of decreased costs and an increased emphasis on IT, the insurer is designed for the future and long-term strength and success of the enterprise is ensured.

Modernized technology that goes beyond document imaging to harness business knowledge enterprise-wide

For better or for worse, when most insurance executives hear the phrase “document management” or read about ECM, the thought that immediately comes to mind is document imaging. While imaging is a component of ECM, to assume that is the sole purpose of ECM is a misnomer.

With SOA building blocks in-hand, insurance firms can combine the data from legacy systems with the modern technology of ECM to reap great IT benefits. Because ECM facilitates and manages the flow of information to and from all authorized channels—legacy systems included—IT departments experience shorter development cycles, lower maintenance bills and reduced support calls, and they have the ability to automate repetitive manual processes. More so than any alternative, these results are most quickly and easily achieved by combining legacy systems with ECM.

Insurance organizations also benefit from a business perspective by pairing the modern technology of ECM with legacy systems. Among the rewards are:

- Business agility—by drawing conclusions and making predictions based on existing data
- Ability to extend channels of opportunity—via the Internet to people in their homes, at stores, at banks and beyond
- Increased market share—as a result of process agility, visibility and new channel development
- Improved service—to customers and employees

Conclusion

With both IT and business reaping gains from the legacy system-ECM solution combination, long-term alignment of the groups will also be a benefit. This will allow the groups to work in tandem with mutual expectations, efficiencies and objectives at hand. Further, unlike any other alternative, an ECM solution paired with a legacy system allows organizations to take control of their future and allows room for modifications in response to internal and external change.

A lean organization resilient to market conditions

Even in a soft market, ECM allows insurers to take advantage of modern technology but with less risk and less cost. By generating near-term measurable results, the entire enterprise prospers, regardless of market conditions.

ECM allows insurance firms to automate low-value, repetitive tasks that are traditionally time-intensive. A benefit in all market conditions, the insurer is then free to use resources on projects that bring the most value.

Additionally, because of its configurability, ECM can help insurers respond to changing demographics, globalization, changes in marketing channels and even catastrophes faster. ECM allows insurers to focus on solving problems and improving processes. A process-centric organization is more successful than those mired in low-value administrative tasks. All of this means insurers can strike a balance between managing risk and adding functionality to make an agile, customer-focused organization that is differentiated from its competition.

The industry is embracing change now more than ever before. Insurers are varying their processes and corresponding technology to remain competitive, while minimizing organizational risk. Utilizing ECM in concert with existing legacy systems provides the best opportunity for insurers to harness the knowledge of their history while ensuring success for the future. Insurers should look for an ECM solution with a development interface designed to empower business users to solve problems across LOB applications. If accomplished, the insurer will have found a way to not only automate processes and ease immediate business pains, but guarantee future success.

About Hyland Software

Hyland Software Inc. is the developer of OnBase, a rapidly deployable suite of enterprise content management (ECM) software applications. Implemented as a premises-based solution or via software as a service (SaaS), OnBase provides the capabilities necessary to meet transactional content management needs enterprise-wide. OnBase's core functionality includes document imaging and management, workflow/BPM, integration with LOB applications, COLD/ERM and records management. OnBase allows organizations to manage all digital content, including scanned paper documents, e-mails, faxes, print streams, applications files, e-forms, Web content and multimedia files.

OnBase is used by businesses and government agencies around the world to reduce the time and cost of performing important business functions and address the need for regulatory compliance through the management, control and sharing of digital content with employees, business partners, customers and other constituencies.

For More Information

A Hyland Software account manager or an Authorized OnBase Solution Provider can provide additional information on the benefits of OnBase to the insurance industry. Additional information is also available at www.OnBase.com/insurance.

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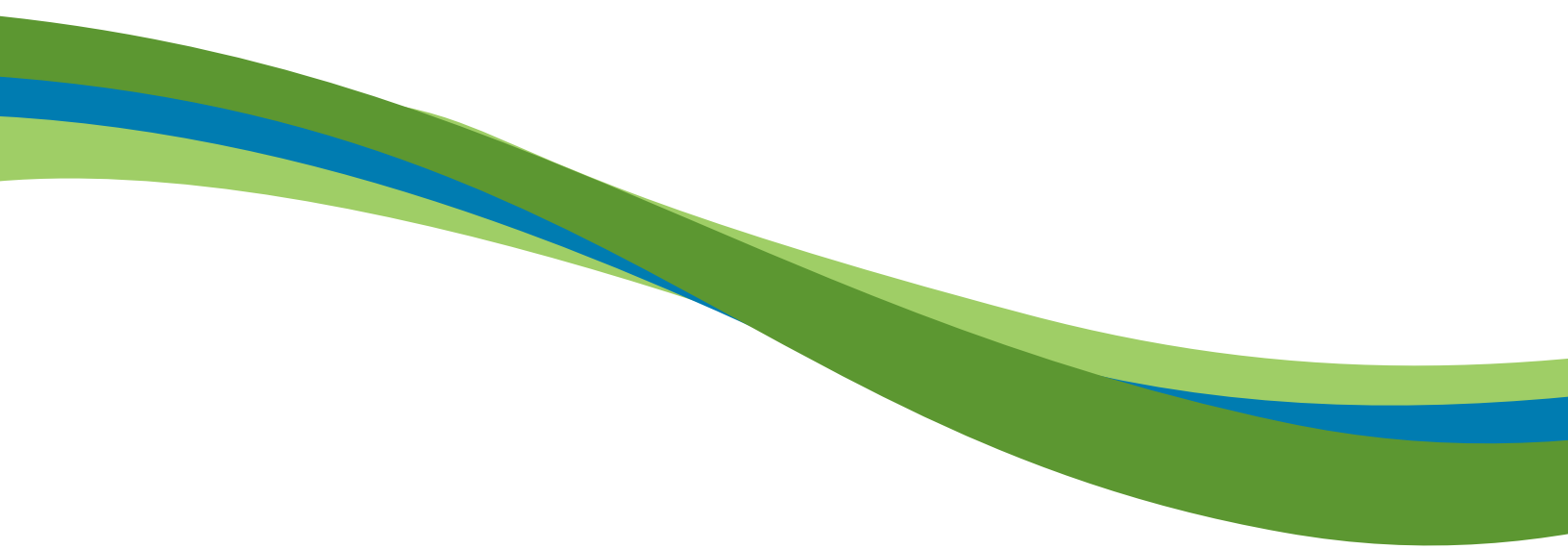
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time to make a difference.

Get more information out of existing business applications. Reduce, even eliminate, wasteful, redundant tasks. Now you can spend your time on the things that really matter. That's effective document and process management.

That's the OnBase difference.

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