



Platform Modernization

Best Practices to Tackle an
Evergreen Problem

THE EMERGING TECHNOLOGY SERIES



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Best Practices to Tackle an
Evergreen Problem

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About the Emerging Technologies Executive Task Force

In 2020, LL Global — in support of how our industry was pivoting to meet the time of crisis and the need for vast change — launched an initiative to engage and connect C-suite leaders in new ways. Core to this effort was the formation of several executive task forces focused on particularly pressing issues identified in the current environment — one of which is emerging technologies.

We created the Emerging Technologies Executive Task Force, with McKinsey & Company as a valued consultancy partner, to reflect a cross-section of industry perspectives. The group represents current and former LL Global Board members and is supported by LIMRA subject-matter experts. At a high level, the goal of this team is to gauge the different emerging and available technologies, as well as to assess which might provide the greatest opportunity for efficiency and/or disruption.

To begin, the task force created workstreams to prioritize three key areas:

- **Data and Analytics:**

This group's goal is to take a deeper view of artificial intelligence (AI), focusing on the foundational underpinnings of AI applications. Its work is intended to help surface deep insights on data strategy and data talent, as well as the core precursors needed to move AI projects forward.

- **Accelerated Digitization:**

This work addresses the move away from the traditional industry paradigm (where business is built around mortality, morbidity, and the functions of insurance) to pivot toward the human experience (HX). HX is the sum of customer experience and employee experience — building a digital experience where technology takes center stage in creating new models of success.

- **Platform Modernization:**

This team focuses on ways to tackle a pervasive, ongoing industry challenge. Whether companies decide to replace legacy systems or attempt to modernize them, it is critical to have industry best practices for executing on this monumental task.

For each of these workstreams, a dedicated subcommittee of financial services technology leaders is focusing on efforts that result in valuable insight and deliverables. Their research findings and additional outreach will help the industry benchmark the current landscape, identify and create new solutions, and formulate next steps.

We extend our sincere gratitude to the members of the task force and subcommittees. Without their dedication and commitment, this important work — by and for the industry — would not be possible.

Emerging Technologies Executive Task Force

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Setting the Stage

The financial services industry is mature and established. Across life insurance and annuities, workplace benefits, and retirement, companies and their processes are a reflection of the continued relevance of this sector. It is a fact that is easily overlooked, but some companies in our industry predate electricity, having been established between 150 to 200 years ago. Systems and processes have changed around the core of these businesses, but the businesses themselves have only incrementally evolved. The traditional ways of doing business in an insurance company are just as recognizable today as they would have been 150 years ago.

Organizations have stepped back and re-evaluated their strategies, exploring ways that technology and digitization can support next-generation business models. Yet, while digital transformation initiatives present significant opportunities, they also present challenges:

- Most companies are organized in functional silos, which makes modernization of legacy systems that cross-functional areas difficult.
- Legacy systems impact the quality and accessibility of data for modern business needs, such as automated underwriting, machine learning, and artificial intelligence (AI) programs.
- Legacy systems are often vulnerable in terms of data privacy, classification, and protection.

For an established carrier that has operated for decades, potentially selling multiple lines of business, and acquiring new ones, system modernization cannot be constrained within one particular silo. Numerous upstream and downstream dependencies and impacts across the entire ecosystem can influence those within any one particular functional domain. With the industry's strong focus on customer experience, this vertical approach is inadequate. Organizations would do well to look at digitization through a customer lens, equipping them to break down the silos and digitize journeys versus remaining within departmental verticals. Providing a true customer journey and delivering on the promise of a hyper-personalized customer experience requires carriers to traverse horizontally across these verticals.

Understanding data quality and accessibility is critical. AI models predicated on bad data will surely result in bad results. Similarly, most organizations that seek to be data-driven rely on reports that include a portion of data coming out of these legacy systems. In this case, bad data can lead to skewed reporting. In a data-driven culture, these reports can mean the difference between making decisions based on sound data and potentially making decisions with incomplete or bad data.

Companies must modernize older systems in order to provide an adequate level of security and privacy protection. Some legacy products do not make it easy to protect or encrypt data-at-rest, leaving information security vulnerabilities across an enterprise. Without appropriate data classification, misuse of data can very easily occur. With numerous data privacy regulations on the books, multinational carriers will find it increasingly onerous to comply with Data Privacy Regulations such as GDPR in Europe and U.S. state-based regulations.

A dominant industry challenge is its continued battle with legacy platforms, with companies' platform ecosystems studded with legacy systems. Being aware of their legacy systems, most carriers believe they have a sense of where they are within the industry continuum of system age, health, efficacy, and technological composition. However, they have never had a true understanding of where their particular platforms are in relation to other comparable industry firms' platforms. If leaders realize they are far behind industry peers, this can be a key driving factor for them to make concerted efforts to modernize a specific system. On the other hand, a benchmark of legacy systems can help some carriers realize they are ahead of others. This can focus their attention toward more strategic programs that add customer value, create competitive differentiators, or provide operational efficiencies.

As outlined in this paper, our research and discussions with industry leaders provide insight into the true health of industry legacy systems, as well as potential best practices for a successful modernization effort.

Key Findings and Insights

With this backdrop, our research points to the following main themes that underlie further exploration of the financial services industry's modernization efforts:

- Communicating the disconnect between strategic goals (such as machine learning/artificial intelligence) and legacy system limitations with senior management — and aligning the modernization need with current business strategy — is a critical component of cost justification.
- The business case for legacy modernization must target business value and impact. Legacy system age and the complexity introduced by interdependencies make it both difficult and costly to modernize core systems and implement changes.
- As the modernization effort gets going, stakeholders must be kept informed about both the (a) progress on execution and (b) how it delivers against the business outcomes.
- Business and IT teams need to partner closely, ideally with business leading the effort. Senior business leaders, along with IT, need to make the business case for modernization and be held jointly accountable.
- IT leaders should identify potential challenges associated with end-of-life systems, a shortage of staff skillsets, and complexities associated with brittle, interconnected platforms — but not to the point where initiatives are postponed.
- When purchasing a commercial off-the-shelf (COTS) software solution, the modernization team should also dedicate time to understanding the actual capabilities and limitations to identify potential customization needs and create more accurate budget and time estimates.



The Legacy IT Challenge

Insurance IT departments are facing ever-increasing pressure to “do more with less.” Customers, influenced by their interactions with other industries, are expecting a seamless experience across channels — from purchase to maintenance — with a higher quality of service. In many product lines, carriers are continuously tweaking their products to include the latest “bells and whistles” to attract advisors operating in more affluent markets. Organizations are also starting to design products for lower-income segments that include features such as wellness benefits that appeal to these consumers. Hyper-segmentation of customers has led to a wider variety of products, some of which are increasingly complex. While these trends are exerting pressure to do more, the overwhelming prevalence of legacy technology continues to challenge IT to respond.

Insurance IT is predominantly based on legacy platforms that have grown organically or gradually through acquisitions over the years. Many technologies are older and in need of full platform refreshes to sustain and support the features they currently offer. Legacy platforms often stand in the way of providing a high-quality digital experience, particularly when companies need to deliver new or fundamentally different products and services at high speed. Legacy systems are characterized by:

1. A legacy code base with limited re-use in older-generation languages.
2. Aging infrastructure, much of it far past refresh-by dates for multiple types of servers and application connections.
3. Embedded business logic and rules in code, which makes it difficult for business and IT to apply changes.
4. Tightly linked applications, where changes to one system require changes in many others.
5. Data stored in silos with little to no ability to leverage insights across business units/functions. Data stores often use different data models, which makes it difficult to derive business insights (e.g., policyholder acquisition cost across channels).
6. Redundant applications, typically driven by acquisitions and shifts in strategy and priorities, require many changes to support even simple business functionality.

These characteristics increase implementation costs and make systems integration more difficult. Legacy code also presents a staffing issue. The majority of systems, especially among individual life and annuity systems, employ COBOL. This presents a growing challenge, as there is an ever-shrinking pool of staff familiar with older languages.



While not perfect, “age of the system” is a good indicator for legacy platforms. The median age of an insurance core IT system is under 10 years, although there is a wide range among system types. Front-end systems (e.g., CRM and customer portals) are newer, while back-end systems (e.g., policy administration, billing, and claims) are older, with the majority developed in the prior century. Analytics platforms, which represent a trend developed more recently, tend to be newer as well (Figure 1).

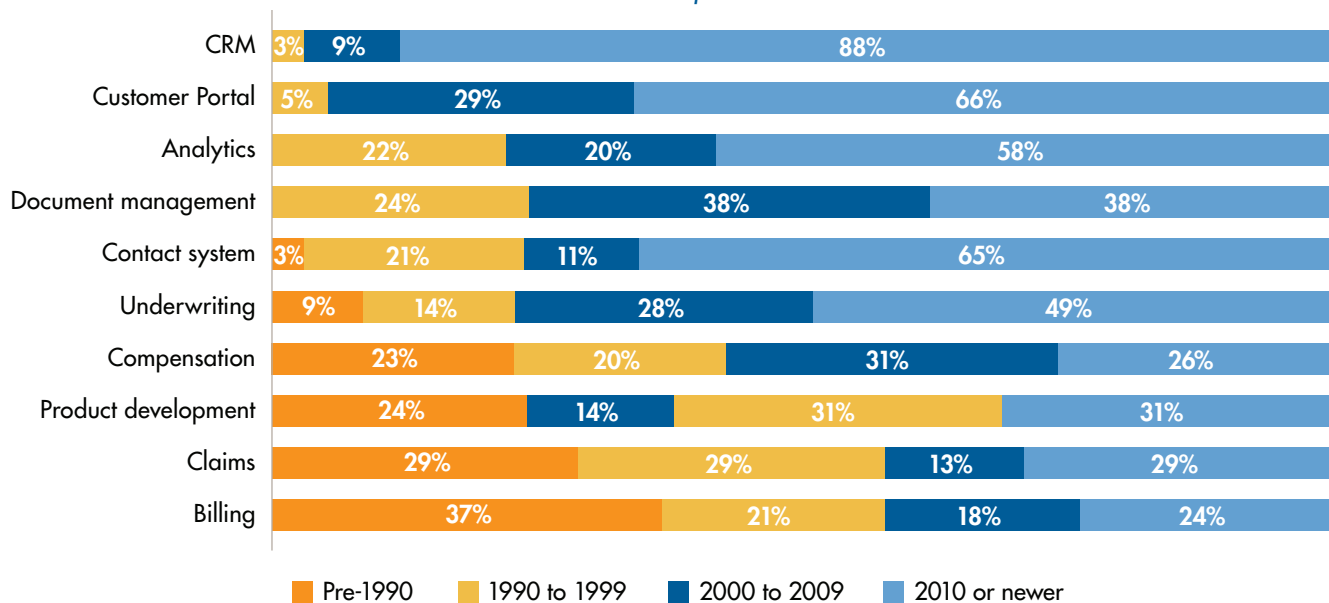
Aging systems create another challenge regarding the potential lack of employee skills to support them. Some legacy platforms that were either built or procured from a vendor have actually outlived the vendor itself. Several vendors that have provided development services, or have developed software that is still in use at carriers, are no longer in business. Therefore, carriers no longer can receive operational and production support from these

vendors, and they need to assume these responsibilities internally. Some firms have invested significant sums in recruiting individuals with the niche skillsets required to maintain these platforms.

Business process knowledge, in addition to programming skillsets to maintain these platforms, is also at a premium due to employee retirements and attrition. For instance, during the pandemic, state and local governmental agencies (which face their own challenges with legacy systems) sought COBOL programmers to maintain or augment their systems for COVID-19 unemployment benefits. This resulted in COBOL programmers being unavailable, and their skills came at a premium cost. Therefore, most carriers that have legacy platforms (such as billing systems built using COBOL) have to bear the brunt of this sudden shortage.

FIGURE 1

Platform Age Percent of Respondents



IMPLICATIONS

- Legacy system age and the complexity introduced by multiple interdependencies make it both difficult and costly to modernize core systems and implement changes. Embedded business logic and code increase the cost to make changes, introduce new features, and apply rate increases. Operational risks also increase due to limited reliability.

Modernization Drivers

Facing the challenges presented by legacy systems, carriers are undertaking efforts to modernize their IT portfolios. While there are several drivers that trigger these efforts, LIMRA research reveals that the top four account for over 80 percent:

1. **Improving customer experience** (e.g., ease of doing business, presenting product information the way customers want to see it, providing a single consolidated bill, self-service, and digital transactions)
2. **Reducing overall operating costs, as well as IT costs** (Legacy systems tend to be inexpensive if you don't touch them, but when/if you need to change one of them, it can be both expensive and risky.)
3. **Increasing revenue** (e.g., effective marketing and sales programs, implementing direct to consumer (D2C) and other online platforms, enabling cross-sell/upsell by agents and advisors)
4. **Reducing product time to market, as legacy systems take too long to make changes** (i.e., requiring more end-to-end testing)

Other drivers that contribute to legacy modernization efforts include stability of operations, security, leveraging services available only on cloud, a lack of staff skillsets needed for legacy technology, and difficulty applying compliance and regulatory changes quickly.

Customer satisfaction and customer experience are primary drivers in the individual life market. Evaluating customer loyalty can help make a business case for the investment. (For instance, "Sales can write more business if we invest in tools and customer experience improvements.") Product differentiation is important in the highly competitive individual annuity market, where companies are continually updating or adding new products to refresh their offerings and gain greater attention from distributors. In the mature workplace benefits life and disability market, cost reduction is the primary concern. Communicating how modernization efforts support these goals is key to making the case for budget allocations.



Making the Business Case

While modernization may be necessary, as mentioned earlier, the cost and complexity associated with modernizing legacy systems makes it challenging to present a business case based solely on ROI. Carriers use a range of strategies to convey the need for modernization (Figure 2):

Strategic goals are often not achievable with current technology.

Legacy systems make it difficult to query data, with great effort required to match this data against data in other systems. It is challenging to get data in — and even more difficult to get data out of — these legacy system databases. Most organizations are investing in automated and accelerated underwriting programs, as well as machine learning and artificial intelligence applications. Artificial intelligence models predicated on bad data will surely be flawed. The challenge that legacy systems pose is not only one of data identification and classification, but also inherently one of poor data quality. Data quality evaluations for legacy systems are typically only surfaced and managed during modernization efforts. Without focused attention on

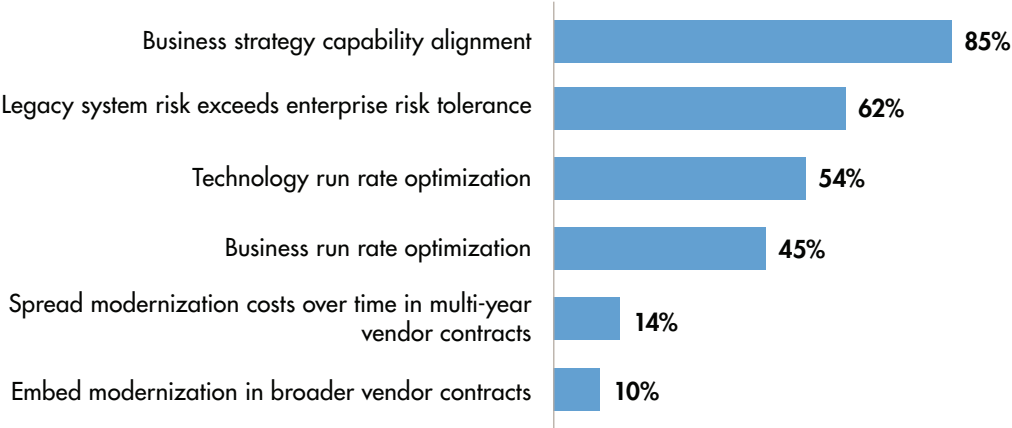
the veracity and quality of data, bad data will foreseeably compromise the efficacy and integrity of machine learning and artificial intelligence models.

Senior IT professionals often cite legacy system security and related risks as justification for the business case.

Prominent among these concerns are cybersecurity and sound digital hygiene practices that exist in modern platforms. From a cybersecurity perspective, systems that have been built 15 to 20 years ago have not been designed with current, sound cybersecurity principles at their cores. Even systems that are just a few years old, without continual augmentation and security patching, are quickly out of compliance. There are instances where mandated security updates to the underlying operating systems have rendered these platforms inoperable. Other security requirements (from remediation from HTTP to HTTPS or compliance with the latest transport layer security protocols, TLS 1.2) have resulted in expensive remediation of these older products. Whether reactive or proactive, modernization provides an opportunity to improve business capabilities and reduce exposure.

FIGURE 2

Business Case Strategies for Project Funding



There are visible and invisible costs to maintaining legacy systems.

Business and IT departments that are called to action to repair and restore legacy system services are doing so regularly at the cost of more strategic initiatives. There is an inherent missed opportunity cost that typically goes unnoticed because it is considered “business as usual” or necessary to “keep the lights on.” Over time, the total costs in terms of resources invested in maintaining and repairing legacy systems could foreseeably be much higher than they would be to replace and modernize the systems entirely. For legacy products that are maintained by external third-party vendors, the maintenance costs they charge to carriers can be quite staggering.

Several companies have also outsourced the “care and feeding” of their legacy systems to business process outsourcing (BPO) organizations, both onshore and offshore. This presents another challenge for firms: They not only have to rely on an outside service provider to keep their legacy systems functional, but they also end up ceding some level of intellectual capital to rely on these vendors. Adding to the invisible costs is the management overhead associated with having a tertiary partner provide maintenance services on legacy systems.

IMPLICATIONS

- Communicating the disconnect between strategic goals (such as machine learning/artificial intelligence) and legacy system limitations to senior management — and aligning the modernization need with current business strategy — is a critical component of cost justification.
- The legacy modernization business case must target business value and impact, rather than focus on the “technology” aspects of the work. Companies need to evaluate all aspects of the business impact, such as customer experience and product offering/experience. As the project scope will be quite large already, business value and outcomes should be the criteria to prioritize.
- As the effort gets going, stakeholders must be kept informed about both the (a) progress on execution and (b) how it delivers against the business outcomes.

Approaches to Modernization

Once the business case has been made and budget acquired, carriers typically take one of three approaches to modernization: digital overlays, replacement by commercial off-the-shelf (COTS) software products, and in-place modernization.

- 1. Digital overlays:** These systems are typically used for “quick returns” and when it is difficult to make the business case work for full-stack modernization. This is a temporary bridge, but not a permanent solution, as they will not improve legacy back-end automation and efficiency. A digital overlay solution is suitable for systems that host products with no planned future investment or products that have been so heavily customized that carriers do not want to or cannot bring them forward. For this to work, understanding the underlying data and logic is critical. For some product lines that are not as fast moving as others (e.g., individual life), overlays might be sufficient. However, they may not be sufficient for all products (e.g., 401(k) plans).
- 2. Replacement by COTS:** Legacy systems were optimized for a different (“batch”) era, which does not work for today’s requirements. In certain product lines (e.g., workplace benefits), the core system needs to support application programming interfaces (APIs), or else it will not be able to connect to necessary ecosystems. For example, small-business customers, such as accountants and lawyers, will need to connect through APIs — that

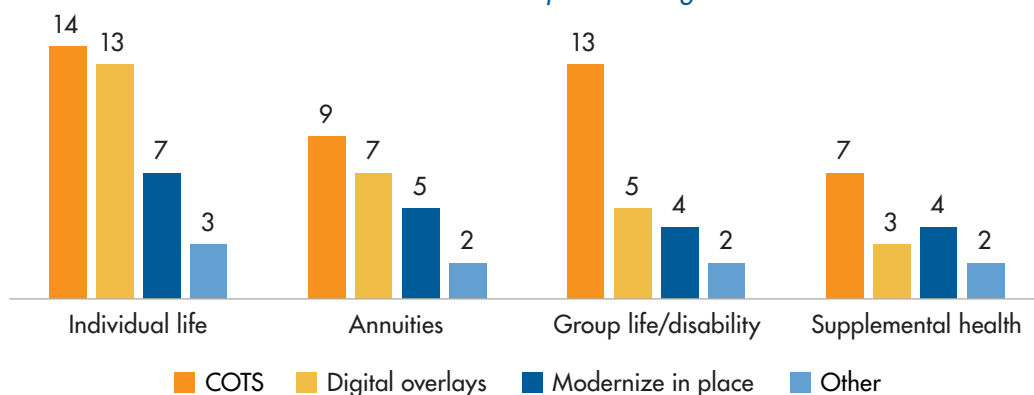
only modern systems provide. COTS systems help increase response times for customer experience or regulatory requirements (e.g., CARES Act) quickly. While digital overlays help with user experience, they do not provide much improvement with speed, agility, or advanced capabilities (e.g., compensation tier structures).

- 3. In-place modernization:** This solution is relevant in instances where a digital overlay is not enough (because the issue is at the core), but moving to a new system is intensive in terms of time, resources, and investment. Also, in-place modernization provides a solution in certain areas where desired target-state solutions are not fully mature (e.g., software as a service (SaaS) solutions and COTS for certain plan types in the recordkeeping business). For example, a carrier used this approach to modernize a mainframe COBOL-based sales compensation system for distribution partners with a large variety of plan types. Pulling out pieces, modularizing the core systems, and changing the interfaces incrementally moved the system toward a modern core.

While COTS is the predominant approach to modernization, with over two thirds of carriers taking this route, there is significant dispersion by product (Figure 3). In individual life insurance, where modernization efforts are predominantly driven by the need to improve customer experience, digital overlays are quite common. For workplace benefits products, where the ability to integrate with other systems is a key requirement, COTS is far more prevalent.

FIGURE 3

Modernization Method Used by Product *Number of Companies Using*



Selecting a core system is a critical decision in the COTS modernization effort. Both business and IT teams need to be involved in making the decision, taking into account both the business and technical considerations. The selection often starts by confirming that the platform is built to solve the main business case/scenarios, and then it considers a number of other criteria. SaaS/cloud-based solutions are gaining acceptance, with 40 percent of carriers saying they will consider only these solutions. Most other carriers (52 percent) are open to cloud or on-premises options. Scale cloud deployment is less important than other system attributes when it comes to decision making.

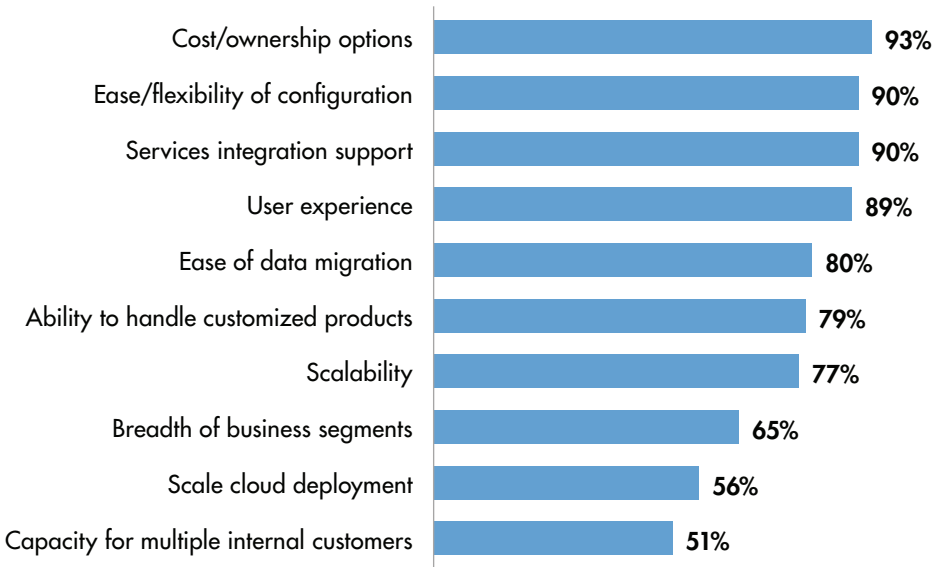
While many attributes are rated important (Figure 4), their relative importance varies by line of business. For example, scalability is the most important criteria for individual annuities, user experience is the most important for individual life, and services integration support is the most critical for workplace and supplemental health benefits.

Ongoing costs represent a critical consideration as well. While upfront investment is given due review and thought, ongoing costs (e.g., license or subscription costs) often are not. When a carrier buys or licenses software, it is entering a long-term commitment/arrangement with the provider, which needs to be part of the decision process. In addition, security, ease of data migration, and the technical delivery model are considerations.

FIGURE 4

Architecture System Attribute Importance

Percent extremely or somewhat important



IMPLICATIONS

- Include business partners in the decision-making process and set expectations regarding what available platforms can accomplish.
- In addition to balancing cost with attribute importance and business requirements, IT leaders should also take future cost, security, and the ease of transition into account.

What Contributes to Success and Failure

It is valuable to consider the number of factors that may determine the ultimate success or failure of modernization initiatives (Figure 5).

For projects that ultimately do not achieve their objectives, several reasons typically contribute to this outcome:

Legacy systems are often heavily intertwined.

Most of these systems are tightly coupled with other legacy systems. In addition, these legacy ecosystems have entire business processes intertwined with them. This makes it difficult to upgrade or modernize one particular system without causing repercussions for the rest of the legacy ecosystem.

This type of coupling between systems also prevents other initiatives from progressing. For example, consider a scenario where a carrier invests in an automated underwriting platform. One of the core requirements is that this automated underwriting platform needs to connect to its billing systems. However, if the billing system is so antiquated that it cannot easily integrate with this new underwriting platform, it can prevent the underwriting platform from moving forward due

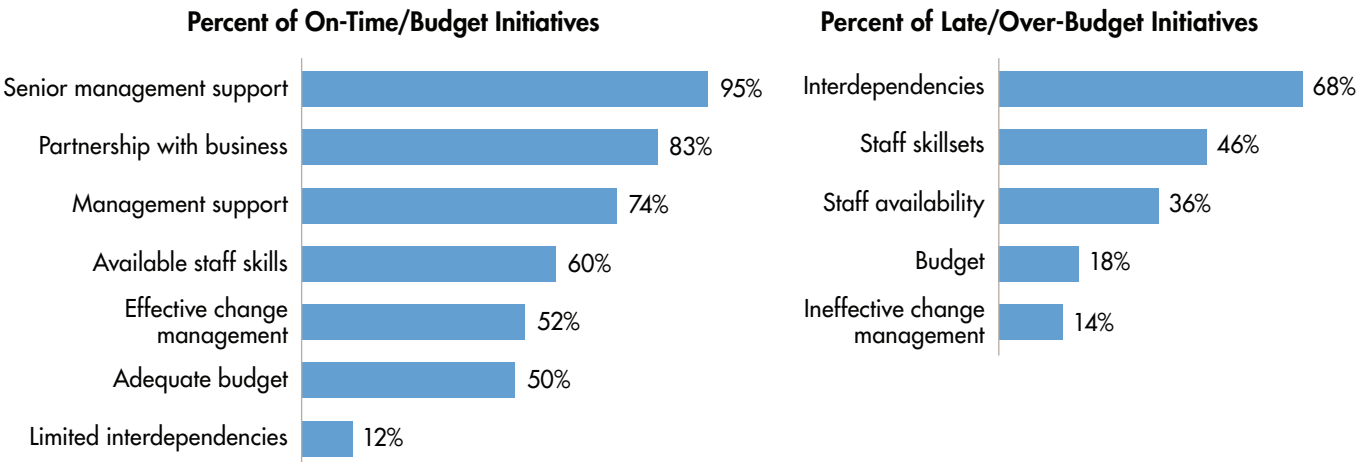
to this dependency. Carriers in this predicament end up needing to construct a tertiary application as an intermediary interface between the two systems. This leads to an expansion in their portfolio of application footprint, and it results in companies needing to build additional systems to support a legacy system — rather than modernizing that legacy platform.

Planning is optimistic, so project timeline and budget overruns routinely occur.

Overall, more than one third of modernization efforts are over time and budget. For those taking the COTS approach (which is of largest scale and complexity), almost half of the efforts are over time and budget. Integrations with other areas/systems are also vastly underestimated. This is one of the top drivers, in addition to the data factor, that lead to modernization initiatives being underestimated in scope, cost, resource, and time. Thus, modernization projects often last longer than planned, whether conducted using waterfall or agile methods. This extended time frame results in missed opportunity costs; at times, it results in entire initiatives being discontinued.

FIGURE 5

Success/Failure Contributors



Change management is harder than expected.

Moving employees, sales professionals, and customers to a new system and adopting its processes is often more difficult than anticipated. Carriers build the business case based on certain expected changes (e.g., customers will use an online billing capability that is more user-friendly), but benefits will not be realized if those changes do not occur. While ineffective change management was not cited as a primary cause of failure, half of survey participants who completed their modernization initiatives on time and within budget felt this was an important contributor.

Benefits do not materialize.

Business cases are built with benefits that are defined at a “high level,” which are not achieved. Conversion is harder, especially for realizing cost goals — leading to retaining the older systems in addition to the new, modern solutions. In certain cases, the opportunity cost of not modernizing is high, but it is hard to quantify.

On the other hand, there are also clear factors that contribute to a successful modernization effort:

- **Support from senior and middle management.** This is necessary to ensure availability of business resources, so the right level of business requirements can be captured. Project sponsors need to have clarity upfront on what business value will be delivered, and they must constantly validate how it is progressing. It is helpful to invest upfront in establishing a vision, as well as to manage it closely.
- **Strong partnerships with business customers.** This promotes clear understanding of business requirements, and it helps set expectations regarding what is possible with available resources and legacy system limitations.
- **Deploying the right skills, resources, and approach.** This may involve utilizing “design thinking” and conducting a “proof of concept” (POC), rather than building the full solution right away. Teams can use agile and iterative development techniques to build a minimal viable product (MVP) that provides a complete solution to a specific problem. Starting with simpler products (e.g., guaranteed-issue products that do not have underwriting requirements) and partnering with a service provider with requisite skills and experience also helps.

IMPLICATIONS

- Potential challenges associated with end-of-life systems, a shortage of staff skillsets, and the complexities associated with brittle, interconnected platforms will emerge. IT leaders can use this as an opportunity to serve to facilitate planning. It should not create the perception of insurmountable obstacles or lead to extensive or permanent delays.
- When purchasing a COTS solution, successful companies’ modernization teams will dedicate time to understanding the solution’s actual capabilities and limitations, in order to identify potential customization needs and provide more accurate budget and time estimates.

Looking Forward

IT modernization continues to be a priority for a majority of carriers. Customer portal and analytics systems, which are among the youngest, continue to be prioritized for modernization (Figure 6). Underwriting and product/policy systems, which are among the oldest, are prioritized for modernization as well. Compensation, claims, and billing, also among the oldest, continue not to be a top priority.

COTS continues to be the predominant approach to modernization, with over two thirds of respondents planning to take this route (Figure 7). Digital overlays seem to have run their course, with most of the non-COTS modernization opting for the in-place approach.

FIGURE 6

Planned Platform Modernizations Percent of Companies

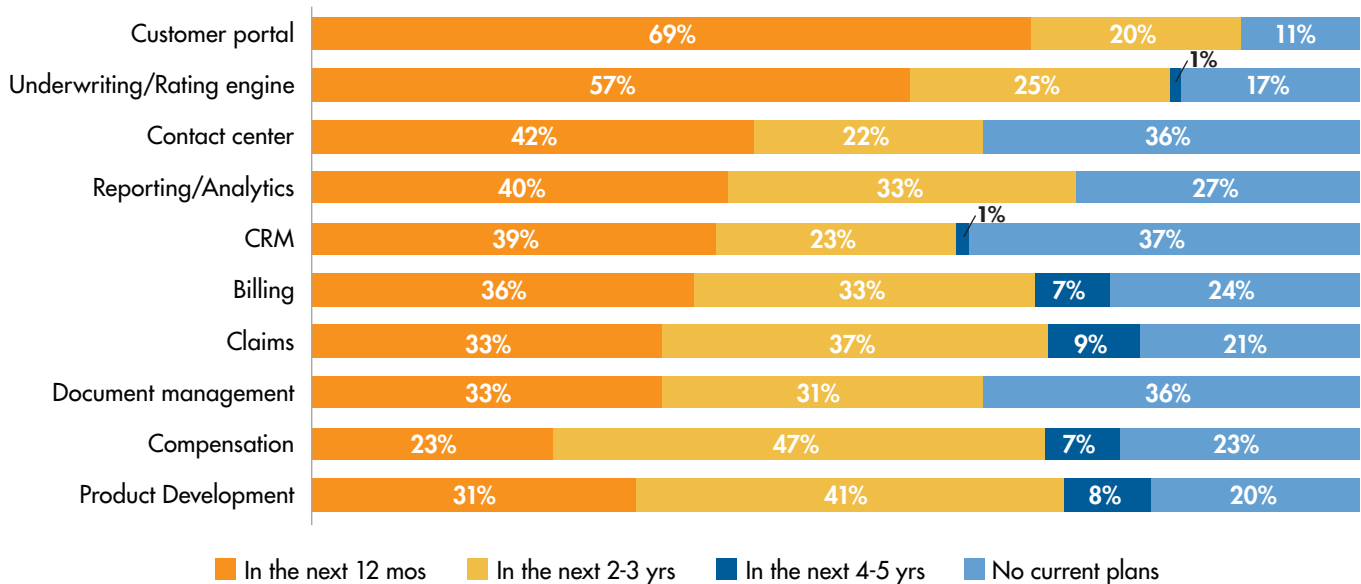
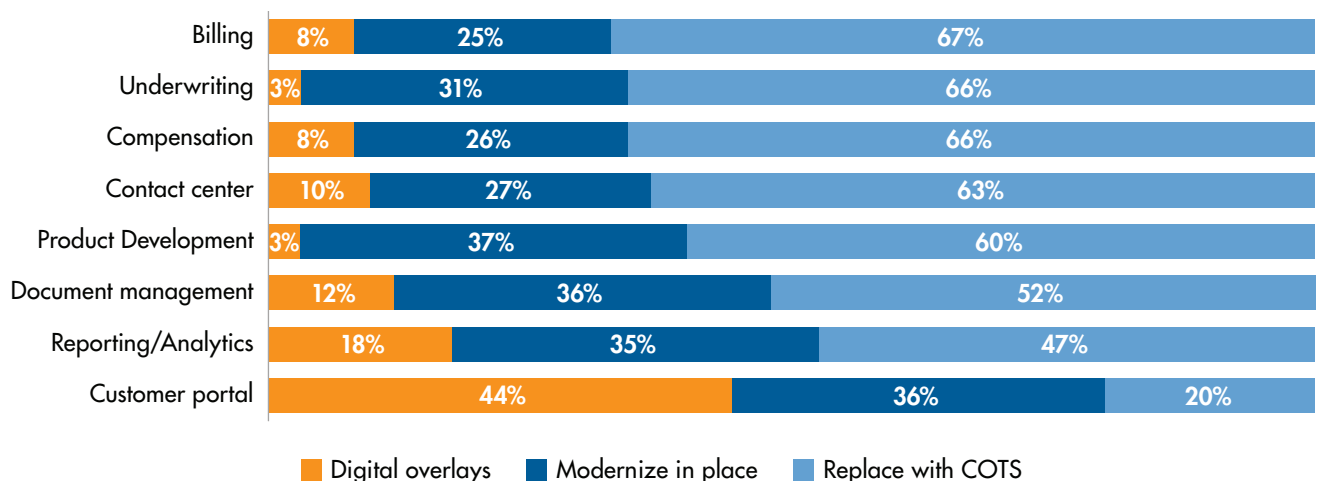


FIGURE 7

Planned Platform Modernization Method Percent of Planned Product Initiatives



Putting it All Together

There is no one best solution when it comes to legacy modernization. Still, IT leaders can follow some best practices in planning, selecting an approach, and vetting a vendor. Important factors to consider when modernizing include the pace necessary to meet the required timeframe, the complexity and interdependencies of the system(s) in question, the level of customization needed, available financial and technical resources, and the availability of robust COTS solutions for the product lines in question.

It is helpful to review some real-life examples to illustrate how all of these variables can impact the decision-making process.

EXAMPLE 1

A life insurance company had legacy platforms, and the impetus to modernize arose both from internal and external factors. The company had a goal to improve customer experience and reduce time to market and ownership costs. Several pain points finally led to the need to replace their core platform:

- Ineffective use of data and the lack of analytics and market insights were hampering new product development.
- Time to market was lengthy; systems were difficult to maintain and relied on manual processing.
- Rules embedded in code hindered rapid implementation of changes.
- Poor data format and lack of easily accessible data from internal and external sources
- Disjointed processes with lack of end-to-end automation
- Limitations in synchronous integrations between platforms
- Limitations in 24/7 availability
- Limited customer self-serve options for service and claims, as well as a lack of visibility into their status/progress throughout the process
- Enterprise capabilities embedded within life insurance processing caused duplication of functionality and challenges with data accuracy.

This company chose a combination of digital overlays and COTS replacement for its initiative. For many carriers, including this one, the interconnectedness, age, and decentralized rule structure made updating current

systems prohibitively expensive. System replacement was the goal, with digital overlays used as necessary in situations to address immediate issues. The following factors influenced the company's platform decision:

- Ability to satisfy key requirements for the aspirational state
- Flexible rules creation and management
- Full quote, application, and illustration capability
- Undo/redo transaction functionality for service
- Full traceability on all transactions
- Fast product creation and configuration
- Real-time calculations and financial transactions
- Highly configurable (modular) solution
- Industry consultants' perspective on ability to execute and maturity of vision

The company learned several key lessons during the process. Prioritization turned out to be the hardest challenge. They found focusing on the "business outcome we are trying to achieve" was most effective.

- Outline the customer experience journey upfront. Develop a clear view on the product offering/experience to guide necessary improvement.
- It is critical for business and technology to be "one team." Without this, it is a constant battle to deliver anything.
- Ensure that progress on execution and business outcome is clear to stakeholders. One method to accomplish this could be a monthly business scorecard.
- Understanding dependencies is critical for speed.

EXAMPLE 2

Another participant approached the decision-making process by evaluating which systems provided competitive differentiation, choosing to modernize existing systems they felt were differentiating, and using vendor solutions for non-differentiating back-office systems. This company has implemented multiple initiatives for different product platforms, with a different solution for each:

- They upgraded back-office systems for one product and, as a result, chose a solely COTS solution.
- For another product where the goal was improved customer experience and responsiveness, but they lacked the tools to modernize in place, the company added digital overlays.
- Competition was a key driver for the product platform being updated through a combination of COTS and in-place modernization. The company cited a need for responsiveness to market needs that available overlays could not provide. While budget and management support were critical for all of this company's initiatives, staff skills were key in this instance.



Beneficial Practices

Beyond the decisions, surrounding method, and platform selection, strategic vision is key. Practices that could help maximize success of these modernization efforts include:

1. Take a holistic, long-term view. Creating and maintaining a modernization strategy and roadmap is vital. A piecemeal business case approach will not help. Cost and complexity make it difficult to justify change on a project basis. If looked at through the lens of annual budgeting and how much discretionary budget remains, modernization efforts are unlikely to take off. Companies need to understand where they want to be competitively, as well as which areas of profit and loss will be at risk if they choose not to modernize. The majority of the industry will move slowly toward modernization, and companies that do not upgrade will be at a competitive disadvantage. This needs to be a strategic discussion at the CEO level, keeping the competitive situation in mind.
2. Raise the need to modernize proactively. “New” becomes “legacy” very quickly, often in a matter of five to 10 years, yet the bar for “under threat/risk” is high — as there are still a lot of legacy systems in use. As a result, IT needs to be proactive and raise the question of modernization and legacy challenges before a specific business requirement arises. Often a combination of multiple requirements drives replacement, rather than just a single requirement. Expense savings commitments, a business struggling with putting new products on the shelf, digital experience expectations, risk management, and additional drivers combined could lead to proactive modernization efforts.
3. Focus on the business outcome over ROI. Tightly linked applications make it difficult and costly to implement any new capabilities, reduce speed to market, and result in changes having unpredictable effects (e.g., causing outages that lower system availability and performance). This makes it difficult for IT to justify major overhauls on an ROI basis alone. IT cost reduction will be material (in most cases), but not big enough to justify the investment. Therefore, reducing operations/business costs is necessary to make the business case work. If set up well, in addition to reducing technical debt, modernization will also help reduce business risk and improve employee retention — that will further decrease costs.
4. Plan for future investments in staffing. The insurance industry landscape will continue to transform, and the professional makeup of most organizations might look very different in the next five to 10 years than it does today. With accelerated and automated underwriting programs now becoming the norm across the industry, as an example, there is a significant opportunity for individuals in the traditional underwriting business to be reskilled. However, even with these automated underwriting programs, without eradicating legacy underwriting systems, the full underwriting workforce could never be reskilled. Finding niche skillsets with knowledge of these legacy platforms is a major and increasing issue. This does not necessarily only involve knowledge of the programming language used to code these legacy systems, but also the business subject matter expertise required to know how to use the system and understand its workarounds. These resources are at a premium as workers retire, and companies’ new employees are reluctant to learn “old” systems. In addition, sometimes the knowledge has not been institutionalized.

Ultimately, digitization has accelerated across the industry due to the new generation of customers and their digital expectations, and it is fueled by lessons learned during the pandemic. In this context, business and technology leaders should be careful not to implement new systems and digital experiences atop a mountain of technical debt. Legacy systems will continue to be a great weight for organizations, and this means that modernization requires focus, precision, and persistence.

About the Research

LIMRA's Emerging Technologies Executive Task Force is publishing white papers in multiple technology-related areas to provide value to our member companies. In addition to legacy modernization, other focus topics include data analytics and accelerated digitization.

For this project, LIMRA and McKinsey & Company conducted interviews and small-group discussions with insurance industry technology executives during summer 2020. These discussions focused on modernization approaches, system selection criteria, business case development, and success/failure factors. Also, in

September and October 2020, LIMRA surveyed member company senior representatives in the United States and Canada to explore the ages of their legacy systems and current/recent modernization initiative experience.

The surveys covered individual life, annuities, individual disability, group life, group disability, long-term care, supplemental health, and institutional retirement products. Major medical products were excluded. For the purposes of this paper, group products include group life and disability.

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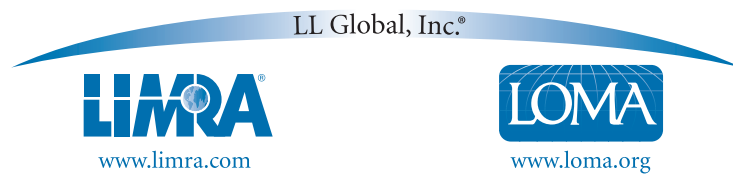
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Participating Companies

Allstate Benefits*	John Hancock Life Insurance Company (U.S.A.)	RiverSource Life Insurance Company
Amica Life Insurance Company	Kansas City Life Insurance Company	Sammons Financial Group
Anthem Life Insurance Company	LaCapitale	Security Benefit
Blue Cross Life Insurance Company of Canada	LifeSecure Insurance Company*	State Farm*
Brighthouse Financial	M Financial	Symetra Financial
Catholic Order of Foresters	MetLife*	The Hartford
CNO Financial Group, Inc.*	Modern Woodmen of America	USAA Life
Co-operators Life Insurance Company	Nationwide*	USABLE Life
Dearborn Group	New York Life	Vantis Life Insurance Company
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