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Insurance Practice

IT modernization in insurance: Three paths to transformation

Insurance companies can reap significant benefits from overhauling their core IT systems. Deciding which approach to choose depends on a range of considerations.

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November 2019

The insurance industry increasingly relies on digital technology to develop products, assess claims, and—most importantly—provide customers with a satisfying experience. In today's world, IT has become an integral production factor, and the booming insurtech wave has given companies a glimpse of what cutting-edge digital technologies can offer.[1] Therefore, IT capabilities will need to fundamentally change as well; for example, costs must be driven down through procurement and vendor management, application development and maintenance optimized, and IT positioned as a strategic partner.[2]

And yet a startling number of application landscapes across the industry continue to rely on decades-old technologies. Furthermore, as industry players have pursued consolidation for years, the IT back end has not followed suit. This inattention has left most large insurers with parallel or redundant systems that drive up the cost of both maintenance and new feature development. In addition, quite a few insurers have decided to focus their IT investments on selective new front-end tools with immediately visible impact.

As digitalization accelerates and encompasses an ever-wider share of the insurance value chain, an improvement on the front end alone is not enough. Achieving the full benefits of digitalization requires real-time data access as well as agile features development in core systems. To enable this vision, most insurers must substantially overhaul their core systems and, in conjunction, transform their overall business model. Three options can help companies achieve this goal: modernizing a legacy IT platform, building a new proprietary platform, or buying a standard software package. While each has pros and cons, choosing the right path based on a cost-benefit analysis is critical for delivering on IT modernization and subsequently reaping the benefits.

The value at stake

Insurance companies can capture three primary areas of value by transforming their business model and modernizing their core IT systems (Exhibit 1).

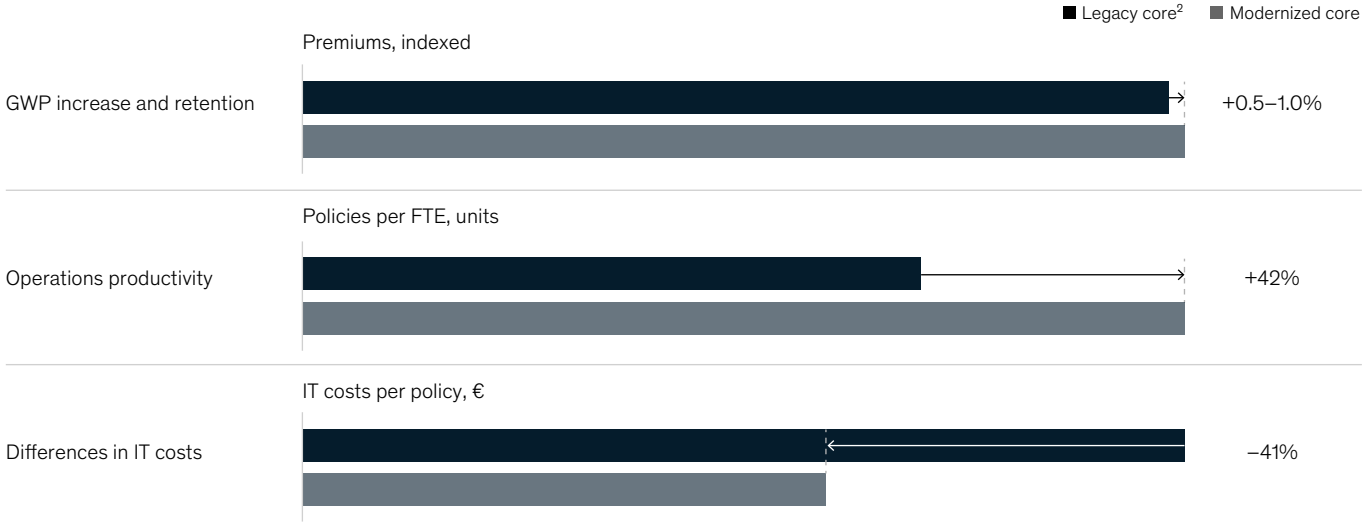
- *Increased gross written premiums and reduced churn.* Flexible, digitized product systems enable insurers to revamp their product innovation process, often resulting in a faster time to market for rate changes and new products.[3] Likewise, digitally enabled integration capabilities can facilitate a more satisfying front-end user experience and increased support for agency and broker sales processes—a key driver of sales. All told, improved and faster processes enhance the customer experience and reduce churn, for which insurers have seen premium increases from 0.5 to 1.0 percent in P&C. Similar effects have also been observed in life insurance.
- *Increased operations productivity.* The productivity benefits stretch beyond IT. Indeed, the disruption of introducing a new core system often motivates insurers to overhaul their operations setups and adapt workflow mechanisms, thereby improving work organization. Our Insurance 360° benchmark shows that players with modernized IT are substantially more productive than their peers with legacy IT systems—for example, the total number of policies per full-time equivalent they achieve is more than 40 percent higher.
- *Reduced IT cost.* Once implemented, modern IT systems can substantially reduce the cost of IT core systems by, for instance, running on commodity hardware versus the mainframe systems used today by many insurers. Our Insurance 360° benchmark shows that IT costs per policy for players with modernized IT can be 41 percent lower than that of players with

[1] For more on insurtechs, see Peter Braad Olesen, Ari Chester, Scott Ham, and Sylvain Johansson, "Commercial lines insurtech: A pathway to digital," October 2018, McKinsey.com.
[2] Krish Krishnakanthan, Jens Lansing, Markus Löffler, and Björn Münstermann, "Modernizing IT for a strategic role," March 2017, McKinsey.com.
[3] For more on opportunities to streamline product innovation, see Melissa Dalrymple, Mei Dong, Kweilin Ellingrud, Daniel Garza, Gary Herzberg, Brad Mendelson, Jörg Mußhoff, and Jason Ralph, "Life insurance product innovation: What insurers can learn from leading tech and consumer companies," January 2019, McKinsey.com.

Exhibit 1

New core systems can reduce overall costs.

Median of select P&C players[1]



[1] McKinsey insurance cost benchmark. Median of select P&C players in Western European peer group, enhanced by insights from client cost benchmarks/expert interviews (2016 year-end analysis).
[2] "Legacy" refers to systems that are old, outdated, and usually running parallel across different areas. Each insurers' system was classified as 1) old but stable and functionally sufficient, 2) legacy IT, 3) currently in modernization/replacement, and 4) recently modernized. Only legacy IT and recently modernized were used for the above analyses.

Source: sanitized case examples; McKinsey Value Assurance research

legacy IT systems. Still, some players struggle to realize these potential savings, partly because of a lack of decommissioning of old systems and partly because of overly complex configurations and challenges in project management.[4]

In addition to these benefits, IT modernization can also lower loss-adjustment expenses through automation and increased accuracy of claims handling—for example, by connecting policy and claims systems to better match policy clauses and covers with claim events. Of course, the extent to which an insurer can take advantage of these benefits depends on its starting position and how well it can realize the full potential of these systems through product rationalization and organizational and process changes. As a result, many insurance companies that have embarked on a journey to modernize IT have experienced growing pains.

Insurers too often treat systems transformations as IT projects rather than acknowledging them for what they are: overall business transformations. This shortsightedness can result in rebuilding old functionalities within the new systems, often leading to budget overruns and—more importantly—wasted opportunities to modernize. Indeed, modernizing core

[4] For more on transitioning to standard software, see Sanjay Kaniyar, Peter Peters, and Ulrike Vogelgesang, "Transitioning to standard software: Lessons from ERP pioneers," May 2015, McKinsey.com.

IT systems could have ripple effects throughout the organization, requiring insurers to consider how they must adapt their operating model in response.

Successful programs follow an integrated transformation approach that combines a radical rethinking of the business model, with transformation from the customer and IT perspective. The key to such an approach is simplicity at the core, and results can include measurable efficiency, effectiveness, customer satisfaction, and sustainable improvements. One drawback, however, is that intensive transformation can place high demands on internal resources and skills. Still, success is more likely than merely following business-side improvements, which do not resolve the root causes of legacy complexity—many of which will only increase over time.

Three approaches to core system modernization

Within the overall complexity of internal capabilities and external trends, the question arises of how to best shape integrated business and IT transformation. Answering that question begins with understanding three modernization options for insurers' core systems: modernizing the legacy platform, building a proprietary platform, or buying a standard software package (Exhibit 2).

Deciding which modernization approach to take depends on a range of considerations, including the state and stability of the legacy system, level of an insurer's ambition, availability of a mature standard solution for the market, effectiveness of IT capabilities, and amount of available resources.

In our experience, insurance companies that have low internal IT capabilities yet hope to benefit from market standards for IT, products, and processes usually benefit most from buying a standard software package. Of course, there are exceptions. Some insurers—such as those with idiosyncratic requirements or strong beliefs in the differentiating nature of a core insurance system—might choose to build a new platform using either prebuilt components or parts of a preexisting landscape. Similarly, insurers with relatively stable, well-maintained, and incrementally modernized

Exhibit 2

Insurers must carefully evaluate which IT modernization approach works with their operating models.

Potential approaches	Results
(1) **Modernizing the legacy platform**	• Ownership of system (at lowest total cost) • Low-risk, mature technology • Functionality can be gradually enhanced
(2) **Building a proprietary platform**	• Can be designed and built (with sufficient internal skills) • Differentiating capabilities (in-house or with sufficient scale) • Long-term implantation possible
(3) **Buying a standard software package**	• Sufficient functional coverage and capabilities • Adequately low total cost of ownership • Manageable integration • Relatively short implementation time

systems that still rely on outdated technologies might choose to modify their existing platform and upgrade other components of the architecture, such as the integration layer, to capture the sought-after business value.

Modernizing the legacy platform

Insurers with legacy IT platforms that are functionally adequate but technologically near the end of their lives have limited options to modernize. Some consider "refactoring," which involves altering a system's internal structure without modifying its functionality. This process allows the insurer to upgrade to modern technology while retaining features tailored to its specific business needs.

For example, one large Northern European P&C insurer had a stable and well-performing claims system, but it was based on outdated technology and architecture incapable of supporting advanced digital technology. To future-proof the architecture and lower IT costs, the company decided on a refactoring approach that consisted of a 1:1 code migration using a combination of automated migration and manual recoding.

Still, refactoring has two drawbacks. First, a 1:1 code migration can result in a missed opportunity for modern system integration and data architecture that supports digital requirements. Second, some insurers have seen costs for this approach grow substantially higher than anticipated. This is partly because the code transversion often cannot be automated as initially planned and partly because the refactored code structurally lacks the architectural advantages of modern programming languages. Furthermore, any future changes will be complex and time-consuming.

To address these challenges, some insurers use a somewhat different approach of "blackboxing" the modernization. In this approach, insurers expose core insurance functionality as services to the outside while carving out functionality from the legacy systems on the inside by either building it from scratch or implementing current technology. Thus, the core back-end systems are slowly modernized. While this approach can be appealing from a risk and cost perspective, it is only a viable longer-term solution if the existing core systems have been well-maintained, documented, stable, and well-performing and if the insurer has ongoing access to the necessary maintenance skills.

Building a proprietary platform

In the early days of computer technology, building a new proprietary platform was the only approach for insurers. This typically involved building a system architecture that perfectly fit the unique requirements of the insurer and then seamlessly integrating it into the remaining landscape.

Some incumbent insurers continue to take this route. For example, a European life insurer developed a new, proprietary web-based platform to serve as the foundation for its digital strategy. This approach allowed the insurer to tailor the platform to its local offerings and gradually implement them, starting with individual life—the result was a 30 percent reduction in administrative costs. As another example, a large North American complex commercial and specialty insurer opted for a custom-built approach to enable new end-to-end underwriting and policy administration capabilities. The decision was based on a lack of relevant external offerings and a lack of access to the latest technologies and architectures. Executives therefore chose to build a data-centric architecture with strong analytical capabilities, which was necessary to handle complex commercial lines underwriting flows.

Numerous insurtechs have also taken this approach because they believed in the differentiating nature of a strong core system and a reliance on technical frameworks as foundations upon which to build their own platforms. However, in contrast to incumbent

insurers, insurtechs do not have a legacy system to address or modernize.

The drawbacks of building a proprietary platform tend to include higher costs, longer timelines, and additional risks compared with modernizing a legacy platform or buying a software package. This approach can lead to an extended functionality freeze during the programming phase, which poses a core challenge. Furthermore, new solutions pose the risk of being insufficiently innovative. This can be because of lacking creative and appropriately skilled internal talent or large-scale IT project delivery capabilities; projects can also get bogged down in delivering must-have but nondifferentiating features.

Buying a standard software package

Standard software packages have become increasingly appealing to many insurers looking to overhaul their core systems. Standard systems are typically much more streamlined and include ready-made functionality for pricing, underwriting, customer self-service and automation, and claims processing. As a result, they can improve efficiency across the enterprise. Broadly speaking, a standard software package promises the following key benefits:

- Faster and less risky implementations compared with modernizing or building a new proprietary platform
- Best-practice functionalities and regular upgrades that include product and process innovations as well as regulatory requirements
- Cost benefits from shared development between multiple insurers
- Access to a pool of skilled resources outside the insurance company

While all these benefits combined can't always be realized, the appeal of standard core insurance software remains strong. In the United States, for example, nine of the top 12 P&C insurers use standard software for claims and policy administration. Standard software is similarly popular in Central and Eastern Europe, the Nordics, and the United Kingdom. Regions where the use of standard software is less consistent include some parts of Western Europe. In Germany, for example, standard software has been gaining ground in life insurance, with a couple of relatively mature systems emerging, while adoption on the P&C side has been slower. Though the market momentum in this region remains moderate, a clear trend of more insurers using standard software each year has emerged.[5]

One European insurance company gained the ability to change ratings and pricing on a weekly basis by implementing a standard software package for several P&C products. This standard software package could also reduce the time to market for new products from months to days and substantially reduce training times for sales agents. These functional improvements went along with an overall lower total cost of ownership.

While standard packages are gaining momentum, challenges remain for insurers that choose to take this approach. The software package must fit the insurer, and its implementation must focus on adopting rather than adapting to the standard software. For many insurance carriers, this implies a significant cultural transformation on the business side, evolving from an "anything goes" attitude to a "simplicity first" mind-set on the IT side—from coding a new solution to configuring an existing solution. Otherwise, the implementation of standard software could prove costly and result in a long timeline and lower-than-expected

[5] For more details on managing the transition to standard software, see Kaniyar, Peters, and Vogelgesang, "Transitioning to standard software."

benefits. Furthermore, the insurer can develop a dependency on an external vendor and its software product road map, which could curtail flexibility and increase costs.

Choosing the right path

Each path to IT modernization has different pros and cons. In addition to choosing between the three fundamental options described above, the timing and extent of existing policies migration need to be considered. While the majority of insurers develop a platform for both their existing and new business, some carriers opt to start with a greenfield implementation specifically for the new business that would provide an option to migrate the existing business later.[6]

Choosing the right path depends on several important factors, including starting point, transformation preferences, capabilities, and business-model objectives. Leaders should ask themselves tough questions when considering the health of current core systems, investment ability and appetite, business and IT capabilities, and the true extent of the organization's digital ambitions.

Insurers must overhaul their core IT systems to achieve the full benefits of a digital transformation. Given the digital advances in insurance—especially in personal lines—transforming the core is the next frontier. Combining core and business transformation, through an appropriate and considered approach, can yield significant IT modernization benefits.

[6] For more on next-generation banking systems, see *Banking & Securities matters*, "Next-generation core banking platforms: A golden ticket?," blog entry by Brian Ledbetter, Xavier Lhuer, Sandhosh Kumar, and Philip Tuddenham, August 12, 2019, McKinsey.com.

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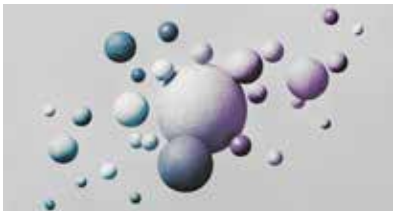

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