International Journal of Computer Trends and Technology
ISSN: 2231 – 2803 / https://doi.org/10.14445/22312803/IJCTT-V68I11P111

Volume 68 Issue 11, 73-78, November 2020

Original Article

Core System Modernization

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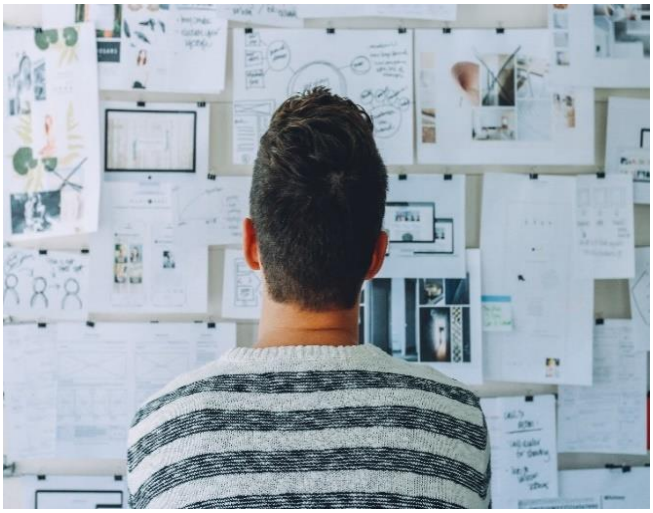
Received Date: 14 October 2020
Revised Date: 22 November 2020
Accepted Date: 24 November 2020

Abstract *- The Core System Modernization process includes implementing software to improve overall insurance operations and customer experience. The process is multi-faceted, extremely complex, and has far-reaching implications for the organization and its customers. The level of change is high and spread across the years making a clear understanding of the process and best practices critical.*

Keywords *– Core System Modernization, Core System Implementation, Core System Transformation*

I. INTRODUCTION



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Core system modernization projects involve defining the business objectives, identifying the associated software that will be implemented to accomplish the ask, rallying the teams, training of the end-users, and continuous improvement and/or maintenance of the developed software. The success rate on these implementations is quite small given the complexity and the number of processes/business units that get impacted through the course of the implementation. These endeavors normally span multiple years and cost millions of dollars to implement. Since this type of engagement is a once in a lifetime initiative, companies need to be equipped with relevant information at the outset that will inform the process. Let's look at some critical aspects that companies should consider when embarking on this initiative.

A. Core System and the importance of modernizing it

Core systems in the insurance industry deal with "heart of the business" systems, namely policy, claims, and billing processing. These systems enable insurance companies to issue new policies and manage them for customers, track reported claims to closure, manage billing to ensure that coverage is in force, and to report to statutory agencies.

Not having a modern technology platform supporting these functions leads to several challenges for insurance companies and their customers such as inefficient processing, higher operating costs, lack of usability, incorrect pricing of risks, lack of innovation, and inability to interact with customers seamlessly.

The Insurance industry has been highly dependent on paper to conduct business making it fall behind and trail other financial service industries such as banking. Modernizing IT operations have been brought to the fore in the recent past but COVID has pushed the discussion front and center for insurance companies' Chief Experience Officer's. Customers want an Amazon-like interaction for all the services they shop for. To address customer expectations, insurance companies have to first modernize their core systems i.e. the foundation of their IT landscape, which is the first step in their Digital journeys to build a better user experience for their customers. An amalgamation of customer needs coupled with operational and pricing inefficiencies is putting a lot of pressure on insurance companies to modernize their core systems. These modernizations are multi-million dollar multi-year engagements and are by no means a simple undertaking.

B. Goals, Objectives, and Success Criteria

Now that we have a better understanding of a core system and the need to modernize it, the next step in the process is to define the organizational goals, objectives, and success criteria for this project. Having this clearly defined helps ensure the organization is working towards one common outcome, which is extremely critical in

programs of this size and scale. A lack of consistency in the program goals and objectives is a key reason why many modernization initiatives fail. These goals and objectives should then be broken down to system capabilities that will be desired in the new system. This step forms the basis to identify whether companies purchase commercially available solutions or build something internally from the ground up. Building a *key focus group of decision-makers* is a best practice to ensure views from different business units are considered in the process. This is an important cross-road in the modernization journey that will set the groundwork for all future work. Leaders should consider not only core system capabilities but also look at the whole eco-system that will be used to support their business functions and how the new core system will provide additive capabilities and future scalability.

C. Software Vendor Selection

Defining system capabilities provides the blueprint for what decision-makers should consider when vetting software products. Recently, the industry has been moving to use commercially available solutions to transfer accountability of keeping up with new advancements in the software to vendors instead of managing that in-house. This practice drives a high degree of consistency in the industry and helps companies keep their IT landscape current without the additional overhead of managing their proprietary systems. It also gives them exposure to industry best practices and standards. However, going down the route of using commercially available software restricts you to stay within the boundaries of what the vendor has defined and does not offer the flexibility and customization that an in-house solution provides. On the other hand, the risk with a custom solution is that you defining a system with just the institutional knowledge you have in-house. So, this is a big decision for companies to make considering all the various aspects.

Based on capabilities identified, companies should either begin interacting with software vendors in the market to understand their solution capabilities or begin working with internal IT teams to build specifications for their custom solutions. If companies decide to go down the path of building a custom solution internally skip to step E. If the decision is to use commercially available solutions, companies will typically submit a Request for Information (RFI) to a few vendors to get a response for each of their expected capabilities. During this time, companies should also consider how the new product/software will interact with their other business-critical systems

D. Implementation Partner Selection

With the vendor selection complete, the next step is to focus on an implementation partner that has experience in similar projects. These programs are extremely large, require specialized knowledge, impact a large cross-section of the business units in the organization, such as; Underwriting, Pricing, Billing, Policy, Claims, Accounting, Sales, Marketing, Treasury, Reporting, Product Management, Tax, and Agency Management and the level of mental and financial fatigue is very high. So, organizations need a partner who will help them stay the course and provide guidance when the project hits roadblocks. There is also a status quo on how processes are conducted at organizations which requires a reboot to ensure these modernization programs are set up for success. Getting an external unbiased partner to come in with a fresh pair of eyes that not only drives the modernization of the application but also supports changing the organizational mindset on how to deliver value is an added benefit. Given the magnitude, companies often prefer to hire an implementation partner that will help them navigate this complex landscape based on the partner's prior implementation experience.

Implementation partners bring lessons learned, assets, accelerators, operating models that can flex and shrink based on need, multiple delivery options to contain cost, and market and product knowledge. Steps C and D could be interchanged, and companies could select an implementation partner ahead of time and have them be part of the software vendor selection. This change in order is only possible if the implementation partner has experience with all the commercially available software options that the company is considering as part of their go-forward strategy.

During the implementation partner selection phase, which normally happens through the issuance of a Request for Proposal (RFP) to multiple firms, the implementation partners are asked to provide their recommendation of the delivery approach and a high-level release plan, along with a slew of other information, considering all the input the company provided in the RFP. These recommendations will serve as a baseline for all future phases based on the implementation partner selected. However, those plans could change based on both internal and external factors at the company as the project progresses.

E. Business/People/IT Readiness

The next step is a big factor in predicting whether the organization will be successful in its modernization effort. As part of this phase, companies should identify business owners, teams, and supporting functions to ensure that this large initiative is set up for success.

These large initiatives can either be done using a staggered delivery approach or a big-bang approach. A staggered delivery approach is like an assembly line, where different lines of business go through the process one at a time or in logical groups. A big-bang approach is

where all lines of business are worked on simultaneously. There are pros and cons to each that should be considered before finalizing the approach. However, most of the industry prefers to follow a staggered approach primarily because the amount of risk and the impact on the company's bottom line is lower in case the implementation runs into issues.

The approach will dictate the number of business and IT resources that will be needed to accomplish this initiative. Discussions should be had with the unit leads to ensure that business/IT owners and teams identified for this initiative are fully dedicated to this project. For companies undergoing this initiative, it's going to be a once-in-a-lifetime experience for many people and leaders should be cognizant about the mental and physical toll these projects have on their people and plan accordingly.

This is also the time that executives should ensure they start propagating a one-team mentality, which will be extremely crucial once the implementation starts and when teams run into challenges throughout this initiative. The implementation partner and their staff should be inculcated into the organization's DNA which will reduce the "us v/s them" conversation when major roadblocks are hit. Having this mentality will ensure that staff on both sides are focused on solving the issue at hand as a team as opposed to trying to pin the blame, which takes the effort away from accomplishing their mutual goal. Implementation partners should be fully vested in their client's success and having them feel like part of the team/family is a crucial step in making that happen.

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The other major task that should be done at this time is the infrastructure setup. Normally companies get to this task once the project implementation begins, which usually leads to delays and starts impacting the release plan. To circumvent these issues later in the cycle, having all this squared off during this phase is strongly recommended. All required infrastructure such as cloud procurement (if it's a cloud implementation), datacenter space procurement, development software procurement, 3rd party integration contracts, and any required hardware refresh should be done. All this will help ensure that the implementation starts smoothly and doesn't run into technology procurement delays.

The implementation methodology, whether the project will be run using waterfall or agile, is another key consideration at this point. Most of the industry is pivoting towards agile since it's incremental, there is immediate earn of developed software that the business can react to, businesses can quickly cater to changing market demands, and businesses can make future processes efficient based on how the system behaves. All these benefits are not realized in a waterfall approach which is the main reason for agile delivery becoming very popular in the core system modernization space. This is also the right time to uncover any training gaps that might be present across the teams. Normally, this includes training related to the methodology; agile or waterfall, the software that will be implemented, the required documentation process, and the reporting structure/decision-making hierarchy.

F. Implementation Setup

By now leaders should have identified the delivery approach; staggered v/s big-bang, with staggered being the most widely used in the core system modernization space. Based on the selection, the detailed release plan should be revisited to ensure it still holds and accounts for any internal/external factors that might have developed since the plan was initially put together. For this article, let's focus on the staggered approach.

A set of key questions should be asked and answered to finalize what the plan will look like. This by no means is an exhaustive list but merely serves as a launchpad to get the conversation started. Some of the questions asked at this stage will be dictated by the organizational goals, objectives, and success criteria that were initially defined.

- Is new growth important or remediating an existing line of business?
- If it's new growth, what product and states should be targeted? Does market research time need to be considered to uncover opportunities?
- Re-purpose products from legacy or greenfield implementation?

- Regulatory approval needed to push products to the market? What is the lead time?
- If it's remediating the business, which products are hurting the most? i.e. incorrect pricing, high loss ratios, losing business, etc.
- Which states within these products need immediate attention? How is the premium spread across states? What will be the impact on agents, customers, and internal staff?
- Regional, National, or Global change?
- Any market conditions that should be considered?

Answers to these questions will help ensure the right set of factors are considered to vet out the release plan. This is not a one-time exercise and in fact, should be revisited throughout the implementation to ensure that the most relevant information is being considered to shape the release plan to extract the most value for the client and its customers.

G. Implementation

Now that the right foundation has been set, it's time for the teams to begin working through the details. This begins by on-boarding the extended set of delivery teams from the client, the implementation partner, and the software vendor. Delivery team structures, reporting hierarchy, change control processes, leadership status reporting, and value delivery models are defined and baselined during the initial stages of this phase.

To keep costs down, implementation vendors usually employ different service delivery models that leverage offshore teams for development work. This helps keep costs manageable but could lead to communication gaps unless clear protocols are instituted earlier on to ensure there is sufficient overlap across teams in different countries/continents. Information should flow through the most minimal number of handoffs to avoid loss in translation. This direct communication channel between the business and the development teams (comprised of developers, business analysts, and testers) helps keep team morale up and focused on the cause since they get direct information from the business teams on their needs.

One other key aspect that is often overlooked or not tracked diligently is the continuous value being delivered by the program. This is the single biggest mechanism to convey clear value delivery to the executive program sponsors. Without it, leaders start losing focus and accountability on the program which is a big challenge since it might lead to reduced funding and eventual runoff of the program. To avoid this, the PMO function on the program should produce end of sprint earn v/s burn analysis that will communicate what the company has achieved for the money they have spent to date on supporting the delivery teams. In addition to objective reports, consistent demos of the built system to the executives and the larger organization is a best practice so people can see tangible work products and put a perspective on the benefits of the intended systems. This step will set the foundation for all future user training sessions that will be conducted before the system is released to production.

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Core system modernization projects that use commercially available software have the framework provided and individual companies can adjust the framework to address their specific business processes and rules. Requirements for the end system are normally provided by internal resources from the company, however, one of the best practices in this area is to involve the end customers during this phase to get firsthand feedback, through focus groups. This avoids perception issues from permeating in the system and ensures that the system being developed accounts for customer needs. Teams should continue to engage with the focus groups throughout the project and get feedback on the actual code once it's developed to ensure it still aligns with their expectations of the end product. This continuous involvement will avoid costly re-work once the system goes live. The added benefit of this approach is that the focus group becomes pseudo-change ambassadors to propagate the benefits of the new system to the larger user base and build anticipation.

These large implementations are constantly plagued with scope creep that can derail the entire program and prevent it from accomplishing the initially stated objectives. To keep a close eye on this issue, a robust change management process should be instilled in the program which should be led by the business owner for the program. Each new requirement should be scrutinized from a value lens which will help teams and product owners differentiate between truly impactful changes and the nice-to-haves. Once the high-value items are identified,

the next step in the change request process should be to identify impact; immediate v/s delayed. Only high-value items that are needed immediately should be prioritized for the release. Delayed items should be considered in future releases or transferred over to the maintenance team. This ruthless focus on value ensures time, money, and effort are only spent on the most critical items. One key concept gaining traction on a number of these implementations is called "Minimum Viable Product", which focuses on delivering only the most critical items with the release, with the rest being layered on as enhancements once the base product is released to the market. This thinking provides companies the ability to tweak their products based on user needs and immediate market feedback. This process fine-tunes the product to customer needs.

H. Training

A technologically advanced system is only one side of the coin with the other being user training. An untrained user base on an advanced system will not be able to reap all the benefits of the intended system. As a result, user training, both internal and external, should be a key focus for the program. To draft training needs leaders should know exactly who needs to get trained so the training can be tailored to those user communities since each community will have a different need and training delivery approach. Based on the user base and types of training needed, a sufficient training budget should be earmarked. Few best practices in the training space are:

- To continuously track training items through the software implementation phase as opposed to building something from scratch when training is set to commence (things might fall through the cracks with this approach)
- To consult the project team in training document preparation since they know the system the best, how it was built, and its intended usage
- To identify clear business owners who will drive and own training so there is leadership accountability
- To engage external training providers, as needed, to deliver training
- To conduct roadshows of the new system before its eventually released to production and run mock "day-in-the-life" sessions so end users can identify how their workday will look like in the new system

I. Go-live, Warranty, and Knowledge Transfer

The teams have built a fully functioning end-to-end core system and now it's ready for the market. Once the software goes to production, the industry best practice is for the implementation partner to provide a break-fix support phase, sometimes called warranty. This phase is essential since it serves as a quick way to address critical issues that might arise in production with the team that built the system. Typically, this phase lasts anywhere from 30-90 days based on the complexity and nature of the software product. The other critical task that should be done during this phase is to have a complete Knowledge Transfer (KT) from the implementation partner to in-house/operational staff. This is critical since the development teams will move onto other critical projects and will not be around to support/maintain the software in production. The KT should be

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run as a small project with a plan, clear owners, and milestones to ensure all key aspects of the new software are explained to the support staff. During the warranty phase, it is highly recommended to have the support staff sit in on root cause analysis (RCA) sessions so they start getting familiar with the new software. This along with the KT will have the support staff set up for success. Having a fully functioning support team is critical to ensuring continuous improvements and maintenance of the new software system.

II. CONCLUSION

Core System modernization projects are tough. If done correctly, they unlock several benefits for organizations which keeps them competitive and helps them innovate to stay relevant. Spend time laying out clear goals and objectives upfront so the organization is aligned. Select the right software and implementation partner to guide you through the process. Enable and empower your teams to make decisions and adjust implementation plans so they cater to changing market demands. Instill robust processes that teams can follow, build clear communication channels across the organization and break down barriers. Be nimble and agile throughout the process to ensure that the software being developed not only addresses your current needs but is also scalable to future demands.

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