

Challenges Faced by Organizations While Modernizing Legacy Application



Organizations frequently spend a large amount of money on bespoke apps that serve critical business processes. Unfortunately, due to the high level of reliance that these applications develop over time, replacing them with newer software is seldom a possibility when they become obsolete. On the other hand, these legacy applications may be changed and reconfigured to operate with new platforms that are more powerful than traditional monolithic frameworks.

Do you know that a well-planned approach to modernizing the legacy banking software system can save up to 70% of the time and money spent on attaining the same outcome with zero data loss? A report from McKinsey supports this argument.

Modernization of legacy applications will enrich and strengthen the whole business model in any sector, not just banking. Legacy technology has, in many cases, become a substantial hindrance to enterprises rather than merely a speed bump. Operational models are being reinvented because businesses want their business-critical systems to be more agile, scalable, and free of operational disruptions.

Understanding Legacy Application Modernization

Maintaining a legacy application requires a substantial amount of investment to keep up with the industry dynamics. More specifically, legacy systems adhere to a tightly connected, monolithic architecture — which is vulnerable to evolving security threats, unchangeable, and provides limited

scalability. In a world where business dynamics are rapidly changing, leaning on a monolithic architecture would certainly mean the ignorance of consumer behavior and efficient models which could bring holistic competence into the organization.

With legacy application modernization companies can get back their competitiveness. The process of replacing an enterprise's ongoing business framework with more modern and agile solutions that are scalable, easily accessible, and reliable is known as [legacy app modernization](#). Application modernization is the process of reengineering current corporate applications to meet the expanding digital demands. Upgrading your aging applications with complete redesign and functionality gives them fresh life, keeps them from becoming redundant, and generates compelling economic value.

Need to Modernize Legacy Systems

By modernizing legacy applications organizations can update their existing systems to stay competitive, adapt to the customer's expectation, and employ innovative technology to bring efficiency. There are two aspects on the basis of which organizations embrace legacy modernization – 1) Business Aspects and 2) Technical Aspects.

Business Aspects

- Competitive Advantage
- Growth Opportunities in a new market
- Proactive investment to fight disruption
- Improved customer satisfaction
- A decline in business performance

Technical Aspects

- Improved application performance
- Retiring SMEs and skill scarcity in the market
- Outdated technologies
- Lack of application security
- The total cost of IT and Operations

Challenges in Legacy Application Modernization

Compatibility Problem of Legacy Apps with Modern Systems

Large enterprises which have been running for a few decades, their IT surely has a myriad of legacy apps that exist even today. With such a huge legacy footprint, application modernization is a tough endeavor. In such scenarios, when the management plans to modernize the entire legacy system, it causes a deep impact on the business. This will eventually be more complex and require undivided attention to manage the whole process.

When the modernization of even a single application starts, we need to understand that the upstream and downstream apps are still running on legacy technologies, with a plethora of legacy protocols, file formats, and so on. It is quite dangerous to transition them to modern platforms all at once.

In such circumstances, a chunking strategy must be used. We need to prioritize the most important ones first, and then move on to the remainder. Firms may also require to prepare certain tools and build the

application to support the legacy methods so that there is no disruption to the present business flow in the meantime.

Compatibility for the legacy platform could be switched off once all applications have been updated.

Scarcity of Skill and Knowledge in the Market

This could be the primary challenge that arises during legacy app modernization. This is because:

The functional and technical documentation is either missing, out of date, or irrelevant.

SMEs/Developers have already exited the organization or retired.

Highly-patched source code.

Support from third-party sources (like applications or libraries) is no longer available.

One alternative solution is to manually go through the code and identify the functionality, which is a massive undertaking, especially considering a lot of code (typically around 30-40 percent of the overall codebase) is redundant or is of no use.

Incurring High Modernization Cost

A budget overrun is every organization's dread and every project manager's nightmare. The concern about overpaying while retiring the existing system in favor of a new platform and incurring different up-front fees that may or may not be justified exists.

However, the challenge of cost could be tackled in legacy modernization as the cloud is the biggest source of money-saving that has happened to IT. All other costs of modernization are offset by increased efficiencies, improved consumer reach, and application compatibility.

Difficulty in Data Migration

Legacy software usually would have had a longer life before modernization. As a result of commercial transactions, they would have a large amount of data. In the majority of cases, gigabytes of data are involved, if not petabytes or terabytes, and are typically arranged among databases and files of various forms (text & binary), etc.

Apart from this huge collection of decade-long data, the legacy applications may use EBCDIC (extended binary-coded decimal interchange code) or other old encoding processes, whereas most modern systems use ASCII (American Standard Code for Information Interchange) based encoding. When the data transfer is not carefully planned, this adds another layer of difficulties.

There are solutions on the market, as well as specific ETL plugins, that assist in moving data effortlessly to account for variances in encoding. If the legacy program is required to deal with files containing data in non-contemporary encodings, we must have the necessary infrastructure in place. In the legacy application, VSAM files might be transferred to SQL or NoSQL libraries.

Conclusion

Traditionally, legacy programs are run on-premise and rely on slow monolithic frameworks. As a result, legacy software systems are unable to meet the agility and performance demands that modern devices

are providing. These are a few of the challenges, businesses face too many of such hardships that legacy application creates.

With decades of experience in development and access to top-notch resources, Aptread can be the perfect helping hand for your [legacy application modernization & migration service](#) requirements.

Reference Link: <https://apptread.com/blog/challenges-faced-by-organizations-while-modernizing-legacy-application/>