

# Strategic Approach to Modernize Your Legacy Systems and Wreck the Business Bottlenecks

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## 1. Executive Summary

This paper explains the constraints in using the legacy systems and the essential of modernizing the legacy systems and strategic alignment of IT with business. We have discussed different approaches towards modernizing the legacy systems and the ways to make your legacy modernization a success. Along the way, we have explained the benefits and possibilities of maximizing ROI and lowering TCOs by effectively modernizing your legacy applications and aligning IT and business practices.

## 2. What is Legacy Modernization?

**Legacy modernization** can be defined in simple terms as the practice of understanding and evolving the existing software to high performing assets with **low TCO** and **less investment**. This is achievable by either one or combination of the following:

- Upgrading legacy system to greater versions
- moving off from the existing legacy hardware to entire new system
- replacing an IT system with advanced package or
- redesigning

The evolution process, thus, can be as simple as upgrading the existing legacy to a convoluted high-end migration. In other words, legacy modernization can be as simple as removing a clog (dependencies or bottleneck) in one end to improve the flow within the entire system.

## 3. Legacy Modernization — Why Now?

Now cry for cost savings and new revenue streams cannot be ignored. This shaky economic milieu may take you for a second thought in investing for improvising your IT systems considering it as additional spending, but in reality refurbishing legacy systems optimizes operational and production efficiency saving a considerable amount of money and time. Do not underestimate the value of Legacy Modernization, as they can simply transform your inert business practices to more vibrant and agile to changing market trend casting robust returns. And if you are looking for implementing stringent economic measures across the organization, then go with renovating and modernizing your IT systems. This will align IT with business practices optimizing your business performance and contributing a greater proportion in giving hands for the effectiveness of the economic measures to be set off.

**“Do not underestimate the value of Legacy Modernization, as they can simply transform your inert business practices to more vibrant and agile to changing market trend casting robust returns.”**

A Gartner survey says that SOA will be used in more than 50% of the New Mission-Critical Operational Applications and Business Processes designed in 2007. This means that a vast inclining is happening towards aligning IT with business to improvise the business standards and optimize the yield performance giving a new dimension for the way the business to happen. So to keep your business at zenith, it is vital to convert monolithic approach into strategic alignment of business and IT, which requires flexible modernized systems to adopt dynamic business models.

Refurbishing your legacy systems will break the complexity of legacy systems chafing to business agility, aligning IT with business and reforming business process to present trends and factually addresses the real time challenges faces by CIOs and make their business as exemplars for reaping good quick returns by efforts of aligning IT with business.

## 4. How Legacy Modernization Wrecks Your Business Bottlenecks?

Modernizing legacy systems help the enterprises to overcome the possible hiccups — **resource shortage, operation and production slacks, non-alignment between business strategies and IT, resistance to agility and new changes in business models** — and brings out IT from the perspective of mere stand-alone application to optimized services boosting your business performance. The following are some of the key pain points faced by the enterprises, which can be resolved by renovating the IT systems:

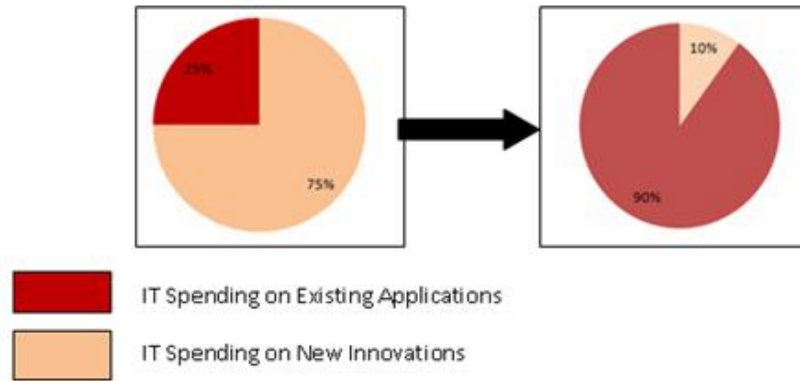
### 4.1 Resource Crunch

The prime most thing to be concerned in using the old legacy system is scarcity for the resources—infrastructure, software, human resource—in the market owing high maintenance costs and making the maintenance process tedious and tougher. A recent survey shows that most organizations spend 75% of IT resources for the existing applications leaving the rest little for new innovations. This maintenance cost can be down-sized to a greater degree by modernizing your legacy systems possible through:

- Drastic reduce in too much of cost spend over scarce resources where-in with legacy modernization, plenty of resources available in the market with knowledge in recent technologies
- Availability of the required software and hardware at affordable or even at discountable price in cases where there exists tough competition among various software and hardware providers

“According to a recent survey, organizations spend 75% of IT resources for the existing applications leaving the rest little for new innovations.”

IT Budget Before Legacy Modernization      IT Budget After Legacy Modernization



## 4.2 Resistance to Agility and Strategic IT Non-alignment

The major challenge in using Legacy systems is its resistance to change, change in business process aligning to the recent trends. Enterprises badly lack process orientation across the organization confining cost, production and performance issues to a larger extent. The various plug-in tools and the components developed using advanced technologies have a quick response and agility to the modernized business process and strategically bring-in-line IT and business. It leverages the business agility to implement new innovations accelerating business concerts and provides you the flexibility of altering or modifying your business process at any strategic point as per the needs.

## 4.3 Non-Regulatory and Non-Compliance

Process uniformity across the organization for business process flows, roles and responsibilities of an employee linked with handling and authorizing a process are all other factors to be considered for smooth functioning of your business, which is notoriously lacking in using legacy systems. The inconsistency or nonconformity in ‘anything’ across the organization may bring in **lack of coordination, chaos, miscommunication, misinterpretation, lack of governance** and lot more to catastrophe the business output. These can be addressed appropriately by governance solution, which is an easy go pack integrated with legacy modernization, for implementing a regulated uniform process across the organization, defining roles and responsibilities based on the hierarchy level for each level of manual and automated process for smooth functioning of the business.

## 4.4 Operation & Production Inefficiency

One of the performance indicators of your business is the volume of business held for a specific period and the amount of resources utilized in pumping the output. Your existing legacy systems may in one or other way hamper the performance efficiency. Modernizing your legacy systems will churn out for more efficiency in handling huge capacity of work and also in tapping efficient production from each resource

involved. It removes the operation and production slacks and efficiently utilize IT services by strategically aligning with enterprise business processes giving out optimized production and operation efficiency.

#### **4.5 Data Management**

The other hectic pressure for enterprises is to handle the huge volume of data and traffic. This can be leveraged by a well-built decentralized architecture which helps to break up the hurdles of working with large data and traffic. The emerging technologies are viable and flexible for excellent data management practices that optimizes the scalability of the application.

### **5. Approach towards Legacy Modernization?**

Overall, there are four different approaches towards legacy modernization and based on the enterprise requirement one or combination of the following four can be chosen:

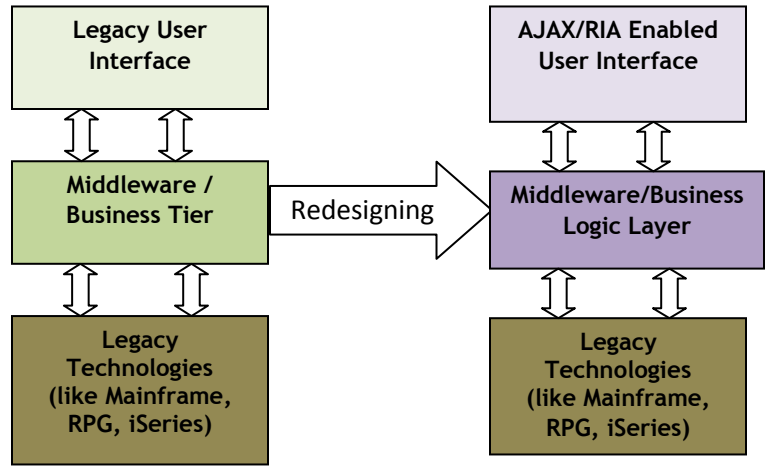
- **Upgrading Legacy Systems**
- **Replacement**
- **Redesign**
- **Migration**

**Upgrade** — The languages and technologies used in the old legacy system can be upgraded to the latest and greatest versions.

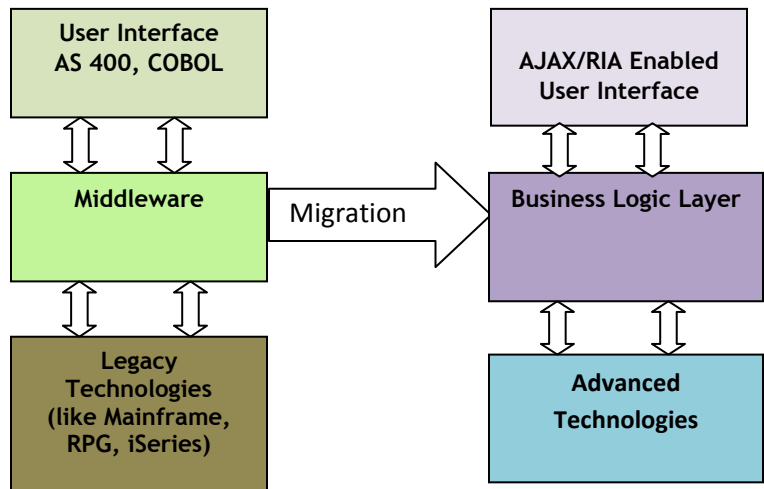
**Replacement** — The core complex rigid technology or software used in the legacy application is identified and replaced with higher version of the same or equivalent technology. The replacement may be as simple as replacing the static user screen in the bottom-line to user friendly interface or replacing the legacy backend or database system with the recent technologies like Oracle or SQL at the top line.

**Redesign** — The core framework is retained with the middleware and the front-end being re-designed and developed using latest and greatest version of a new technology giving a new look and feel for the application and improved performance of the application.

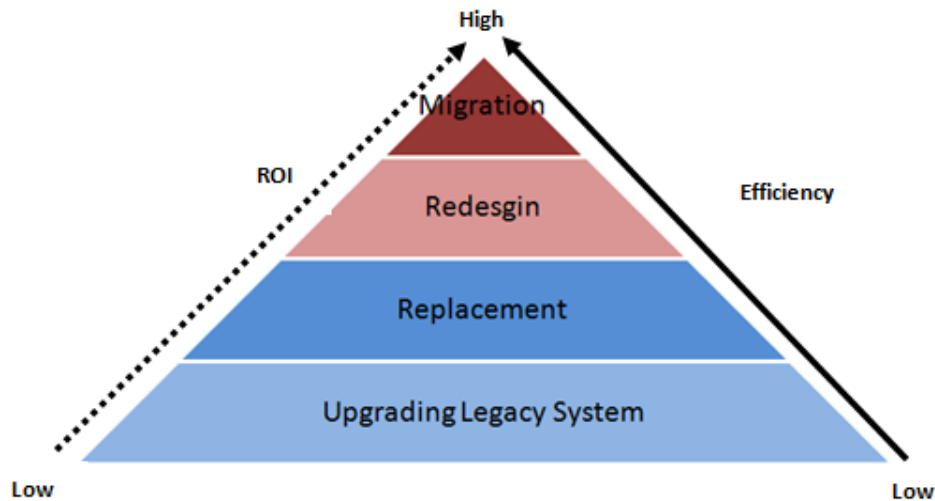
**“You can increase the quantum of business even up to 200% by modernizing existing legacy systems and strategically aligning business with IT.”**



**Migration** — The entire legacy application (including core framework) is migrated to Web 2.0 or SOA enabled application. The approach involves identifying the technology/software suitable for the business process, designing and architecting, developing, testing and implementation.



As shown in the figure below, the returns will shoot up to a higher degree as you incline more refurbishing and converting your legacy systems to high performing assets, feasible by elevated performance and operational efficiency in-hands with strategic IT-business alignment.



You can increase the quantum of business even up to 200% by modernizing existing legacy systems and strategically aligning business with IT.

## 6. How to make your Legacy Modernization a great success?

A proven business-driven IT model, a structural and process oriented approach in concurrence with deep assessment of the business scenario and choosing of right technologies for sure will make your legacy modernization program grandeur accomplishment.

### 6.1 Deep Analysis and Assessment

Perform a deep analysis on the business requirements of your enterprise and assess the environment to sketch out suitable approach, technology and methodology. The analysis should involve consideration for current business volume, expected volume growth, user threshold, strategic business-IT alignment, forecast on future business needs and demands and other external factors focused towards robust business growth.

## ***6.2 Decentralized Service Oriented Architecture***

A well-built multi-tiered decentralized and distributed architecture that leverages flexible business models and addresses the current and future business requirements is a basic and prime most requirement for legacy modernization. The design should embrace prudent business logic layers agile for automating, regulating, governing and integrating business process with IT ensuring smooth business process flows. The application design should be feasible for seamless integration with any type of applications withstanding huge volume of data and user traffic leveraging data exchange between the applications.

## ***6.3 Data Management Practices***

The application design should best data management practices providing the flexibility of pushing and pulling data from one application to the other application in the preferred format based on the business demand. It should comply with integrated business process and provide access for the required data. A strategic approach has to be taken in designing the database to handle and withstand a massive volume of data without any mess-ups.

## ***6.4 Right Choose/Mix of Technology and Products***

The right choose and use of appropriate technology and product is the prime requirement to ladder success in replacing legacy systems with appropriate IT system that would lineate with your business. The basic factors lying behind in choosing right technology and products—business model & requirement, benefit-cost ratio, budget and user accountability—are taken into consideration for choosing products and a mix of technology/products is suggested for economical and strategic application of IT in business. Another critical factor to be considered in choosing the technology is the cost factor, which should be in line with faster returns and business needs.

## ***6.5 Flexible Business-driven IT Models***

The IT models should be business-driven and have value proposition where the focus must be strategic alignment with business. The IT Framework for modernizing legacy systems should take future into consideration leveraging the IT models to be flexible and agile to adopt any required business changes at a faster pace involving minimal or no cost investment.

## ***6.6 Reusable Components***

The number of re-usable components—integral part of advanced technologies—used in modernizing legacy systems should be another bottom-line aspect to be contemplated. These re-usable components will definitely get aligned with your stringent economic concerns of optimizing profit and reducing investment cost. These components will yield you economical saving against the time and money spent

as these component developments involves minimal coding or just simple drag and drop options and its re-usability for any number of times across the applications significantly reduces the development time, money and number of resources involved in executing its functionality.

## ***6.7 Highly Secured and Scalable***

An utmost care should be given in securing your businesses and applications. The newly designed systems should be highly secured and access rights should be defined based on the user profile and hierarchy level. The system should have well-built inherent authentication security mechanisms refraining from any unauthorized entries. The application has to be designed and developed to withstand huge volume of transactions and traffic owing to high performance, reliability and scalability.

## **7. What are your Benefits from Modernizing Legacy Systems**

- **Access to latest technologies:** Your old system is replaced with new advanced systems giving you the joy of enjoying the benefits of using advanced technologies
- **Increased Customer Satisfaction:** Your refined new systems will help to serve the customers in a more efficient manner than before bringing increased customer satisfaction and a rise in customer count
- **Optimized Production and Operational Efficiency:** The regulated and procedural approach and the optimized user interface will increase the volume of business held per day and also taps higher productivity from each employee
- **Faster time to market:** Optimized business process will take your product faster to the market
- **Increased Profit:** Higher volume of business, increased productivity and quick to market obviously brings you an increased profit.
- **Reduced Re-investment Cost and Development Time:** The agility of the re-usable components to be used any number of times across the application and easy development and implementation reduces significantly the re-investment cost and the time required to develop a component and implement its functionality
- **Reduced TCO** due to lesser maintenance and maintenance cost
- **Faster ROI:** This is justified by increased volume of business, quick reach to market, reduced re-investment cost, less maintenance cost and increased productivity from each employee contributing for less number of employees to do a mountainous volume of work
- **Improved business standards:** Aligning IT and business gives you a new dimension for your business and helps you to compete wider with raised business standards.
- **Reduced Manual Errors and Dependency:** The automated business process will reduce the manual intervention thereby giving no or minimal chance for human errors.
- **Integration:** Service enabling your application promotes the interaction of system with any type of applications enabling data exchange easier and faster

- **Faster implementation:** Simple configuration procedures and our expertise skills makes the implementation faster
- **Highly secured and scalable:** Users are provided secured access based on their profile and the scalability of the application is high yielding improved performance, increased speed and increased number of users

## About ZSL

ZSL Inc, is a global technology integrator and solution provider based in Edison, NJ with more than 2000 employees worldwide focused in developing and delivering enterprise IT solutions and services using the emerging technology platforms to keep the TCO low and ROI high. ZSL is a pioneer in business and technology solutions, innovations, has expertise in providing Onshore, Offshore & Near shore technology solutions and services to the enterprises worldwide.

We're happy to announce that ZSL recently awarded position #34 in Everything Channel's CRN Fast Growth 100 list and ranked 238th among North America's Top 500 Technology Integrators in VARBusiness 500 list and also won "Top Technology Practices" Award for Excellence in "Greenware Computing". ZSL has been recognized as one of the 10 Fast Growth VARs to watch. Visit [www.zslinc.com](http://www.zslinc.com) to explore more about ZSL and its offerings.

