Case Study

gslab

A real estate giant achieves 200% RoI through digital transformation

Leveraging cutting edge technologies to transform business functions for higher efficiency, security & customer satisfaction

Executive Summary

The Real Estate sector has been leveraging the power of technology. In the recent past, many have been closely analyzing the business processes. They use digital technologies to enhance the customer experience, make operations efficient, save costs, and even bring newer offerings and business models.

Customer

Our customer is a real estate giant with a substantial presence in more than 20 global cities. Their business portfolio offers consumers a wide range of services like buying, developing, selling, leasing, managing, marketing, and redevelopment of different types of commercial & residential properties. In each city, there are multiple properties under the company's purview. The company also opens investment funds. High-profile investors invest in these funds. Each fund invests in several properties not necessarily of the same type.

The digital transformation journey

The visionary customer leadership had adopted the technology products and platforms in multiple ways. Still, the technology decisions were ad-hoc and in silos, resulting in substandard customer experiences, inefficiencies, delays, and added costs. To stay ahead of the competition, the leadership and IT team embarked on the digital transformation journey with GS Lab. It started slow. During COVID, even though the sector was struggling, it continued to invest in the journey. Considering the returns on earlier smaller investments, it started investing more in digital transformation.
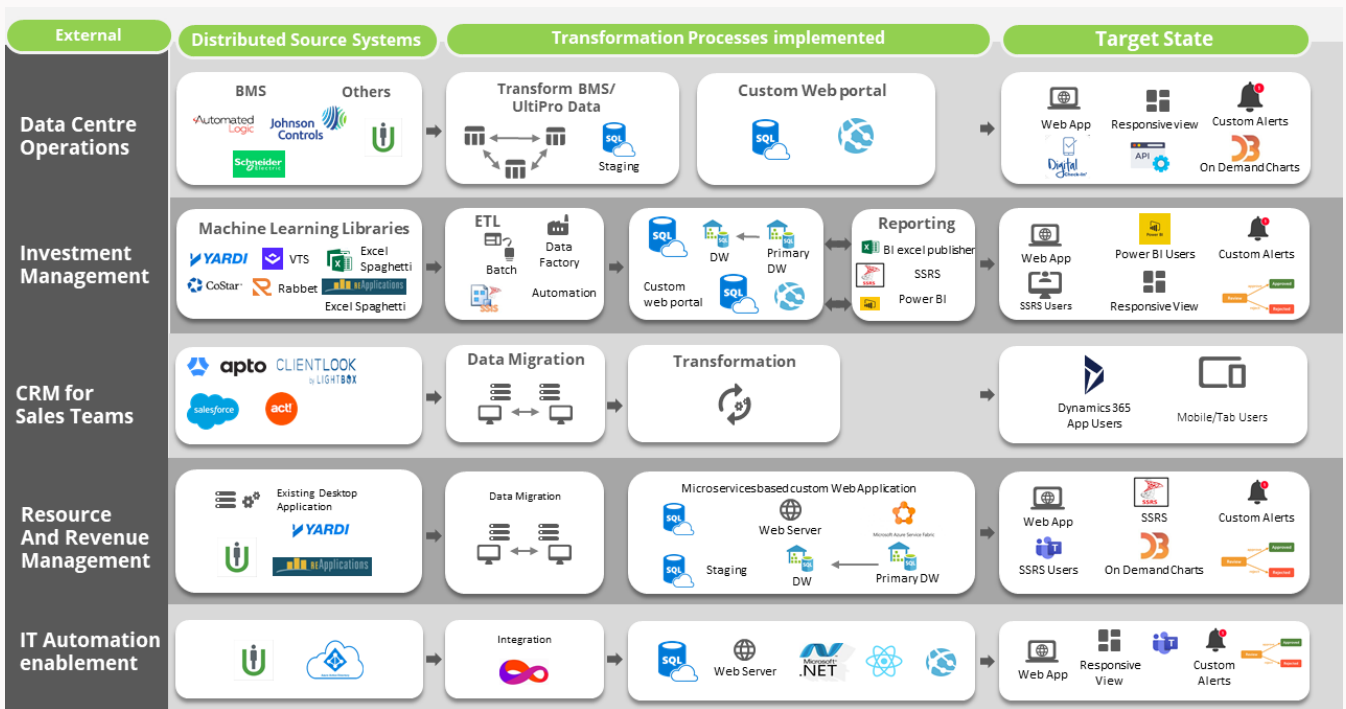
The success mantra: Business-IT collaboration

The primary reason for achieving high RoI was the involvement of the business functions. Business heads, CIO, and the IT team spotted many areas where the processes were inefficient, or customers were dissatisfied due to bad experiences. In the first phase, more straightforward projects were kicked off. After observing the results, teams started more high-impact projects. The business team explained the context to the GS Lab team. It described the existing processes, tools, and challenges. The group stayed involved from the design phase to end-user testing.

Division	Challenge	GS Lab solution	Technologies
Finance	Allocation and expense management • The customer needed a property management solution to track aspects like people assigned to a property/site, their allocation, billing hours, their rates, projection of revenue for current billing cycles for client, client contracts and more. • The customer had multiple systems such as Yardi, Expenses Management systems and HR systems but these systems were not talking to each other or were not integrated to provide a comprehensive view for each property/site.	• This was a complex integration and so we used Azure micro services based architecture on Service Fabric. • We provided an Azure Web Application which was accessible using Role Based access mechanism • The system integrated with multitudes of systems and provided a singular view of resources being utilized from Property Management, Property Accounting and Corporate Accounting perspective. • The web application integrates with HR, Accounting and other systems seamlessly • We also provided a highly configurable dashboard based on role of the logged in user.	• Used Data Factory and Eventgrid ,Service bus ,Logic Apps ,Azure Functions and Embedded Power Bi for Visualizations • Service Fabric cluster services helped in complex micro services based architecture to keep consistency of data across systems. • ASP.Net Core 2.1,React.js was used with Azure Web App, Test automation was done using C# 5, Selenium and Azure CI/CD pipelines were used.

Division	Challenge	GS Lab solution	Technologies
Investment relation	Portfolio analysis • Funds are invested in multiple properties across various markets/regions in US either directly or through a self managed set of Property Funds • Customer needed a singular view of all such property investments to be able to see and track changes on aspects like Performance, Cost of Capital, Contributions and Distributions, Account Receivables and collections, their Loan tracking, performance and Maturity, Ongoing new Deals, Equity invested, Budgeting, Draws from Budgets etc. • Data to be used was lying across multiple 3rd party systems and also Excel sheets. • Need to create a reliable, extensible data model for future expansion and scaling of business further.	• We built an extensive data architecture including ETL processes, data warehouse and reporting infrastructure to cater to all current and future needs of the business. • We built a solution that integrates with all known systems like Yardi, Rabbet and Excel sheets. • The solution was an Azure web application which was highly secured with RBAC. • Various reports were built using Power BI and SSRS to monitor capital investments, distribution & contribution of funds (i.e. fund waterfall) by investors and/or properties, accounts receivables etc.	• Reliable and scalable data management infrastructure created for managing various business needs related to data reporting. • Intuitive visualizations created along with drill-down capabilities for reports. End-to-end MS tech stack was used – SSIS, SSRS and Power BI along with SQL Server as database • ASP.Net Core 2.1,React.js was used with Azure Web App, Test automation was done using C# 5, Selenium and Azure CI/CD pipelines were used.
IT security	Identity and Access Management • The key ask was to integrate HR system (Ultipro) with Azure AD to be able to reflect and dynamically control access to members getting added and or leaving the company.	• We provided a direct integration using Graph API to link their HR system to Azure AD on a real time basis. • This application allowed any changes done on HR systems like user role change, termination, new user onboarding to be reflected on IT systems instantly.	• The IT users were provided a Azure Web application which integrated with Azure AD and HR systems • Scheduled synchronization was done using Azure web jobs. • ASP.Net Core 2.1,React.js was used with Azure Web App, Test automation was done using C# 5, Selenium and Azure CI/CD pipelines were used.

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Infrastructure	Data center management • For Data Centre there was no integration between computerized maintenance management system (CMMS) viz. Managerplus and BMS viz Metasys, Ecostruxure • The customer needed a central portal to track data from multiple BMS systems (Metasys, Ecostruxure) for KPIs like preventive maintenance, schedules corrective maintenance schedules, total recordable incident rates.	• GS Lab built a web application on Azure that integrated CMMS and BMS systems data through ETL and API. • We provided a highly customizable UI with Role based Access based on Azure AD integration and external user secured access. • The solution covered Preventive Maintenance of Equipment, Facility Equipment Performance, Total Recordable Incident Rates, Near Misses from employee Health & Safety, Tenant data management, Notification etc. • The solution integrated with multiple Building Management Systems like Automated Logic, Metasys and Ecostruxure and with CMMS systems like Impak and HR systems like UltiPro.	• Azure Data Factory used along with Azure Functions event grid and message queue for ETL activities. • D3 charts were used for visualizations • A highly secure Azure Web App used for Web Applications and API. • ASP.Net Core 2.1,React.js was used with Azure Web App, Test automation was done using C# 5, Selenium and Azure CI/CD pipelines were used.
Sales	ICRM unification • The customer had 11 different CRMs being used viz. Salesforce, HubSpot, ClientLook, Apto etc. across different US regions and LoBs viz. Industrial, Office, Retail, Pharmaceuticals, Data Centers etc. catering to sales operations like Tenant and Owner Representation for Leasing and Buyer and Seller Representation from buying and selling perspective.	• We suggested Microsoft Dynamics 365 Customer Engagement Edition which matched all the needs of the customer • MS Dynamics 365 CRM was customized for leads, prospect & deal management, to the needs of the sales teams from all LOBs along with role based access control for CRM data and flows across user groups.	• The solution uses Organisation Hierarchies in CRM and customized MS Dynamics CDM • We used Kingsway Soft for migrating data from various CRM systems • Batch De-duplicator tools were used to implement dedup mechanisms across organization, property and contacts.

Division	Challenge	GS Lab solution	Technologies
Sales	• The customer wanted a single CRM system across the entire organisation with data from all of these CRM systems transformed and moved to it. • The customer also wanted a direct integration with sales tools like LinkedIn Sales Generator.	• Data migration strategy was implemented to cover multiple LOBs across US regions along with extensive deduplication mechanisms • The solution also provides customized goal management and tracking system to track the performance of each of the sales team members against custom defined goals.	• Kendo UI was used for Custom UI creation for Contacts, Property etc. • Goal dashboard, property reports etc. were built using Power BI, SSRS and .NET based plugins.
Legal	K1 compliance automation • No single application was available for investors, corporate accounting teams and tax preparers • All returns and investments had to be tracked manually and it was time consuming.	• We provided a single web application and a capability to load and read K1 return PDFs for all investments and arrange them by order (by year, investor name etc.) for respective investors/Tax Preparers and accounting teams. • Role Based access and dynamic invitation tracking for tax accountant was provided by the system.	• PDF2JS library used for extraction of PDF data • ASP.NET Core 2.1,React.js was used with Azure Web App, Test automation was done using C# 5, Selenium and Azure CI/CD pipelines were used.

External	Distributed Source Systems	Transformation Processes implemented		Target State
Data Centre Operations	BMS / Others: Automated Logic, Johnson Controls, Schneider Electric	Transform BMS/UltiPro Data — Staging	Custom Web portal	Web App, Responsive view, Custom Alerts, Digital, API, On Demand Charts
Investment Management	Machine Learning Libraries: YARDI, VTS, Excel Spaghetti, CoStar, Rabbet, reApplications, Excel Spaghetti	ETL — Batch, Data Factory, Automation	SQL, DW, Primary DW, Custom web portal / Reporting: BI excel publisher, SSRS, Power BI	Web App, Power BI Users, Custom Alerts, SSRS Users, Responsive View
CRM for Sales Teams	apto, CLIENTLOOK by LIGHTBOX, salesforce, act!	Data Migration	Transformation	Dynamics 365 App Users, Mobile/Tab Users
Resource And Revenue Management	Existing Desktop Application, YARDI, reApplications	Data Migration	Microservices based custom Web Application — Web Server, Staging, DW, Primary DW	Web App, SSRS, Custom Alerts, SSRS Users, On Demand Charts
IT Automation enablement		Integration	SQL, Web Server, .NET, React	Web App, Responsive View, Custom Alerts

Impact

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200%
Return on Investment

⟳

20%
Average reduction in Turn Around Time

🛡

Improved security posture

👤★

Improved investor experience

Great Software Laboratory (GS Lab) has been the technology partner of choice to 150+ organizations across North America, Europe and Asia-Pacific for over 18 years. Leveraging our expertise in 130+ tools & technologies, we have created 350+ 'first-of-its-kind' solutions to real-world problems. Our 'Beyond code' philosophy ensures that we not only push boundaries of existing technologies but also try out newer problem solving approaches to keep our customers one step ahead of their competitors. Our global team of 1500+ employees is adept at creating 'real value' at each stage of the customer growth journey, right from proof-of-concepts to completely scaled up products. For more information about our solutions & offerings, please visit www.gslab.com

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