

2023

CASE STUDY

ERP & CRM Solution Builders Real Estate

Real estate ERP (Enterprise Resource Planning) is vital for streamlining operations, centralizing data, and optimizing resource allocation in the industry. It enhances efficiency, transparency, and decision-making, enabling companies to manage projects, finances, and customer relations effectively, leading to improved productivity and overall business success.

Call / Mail for Demo:



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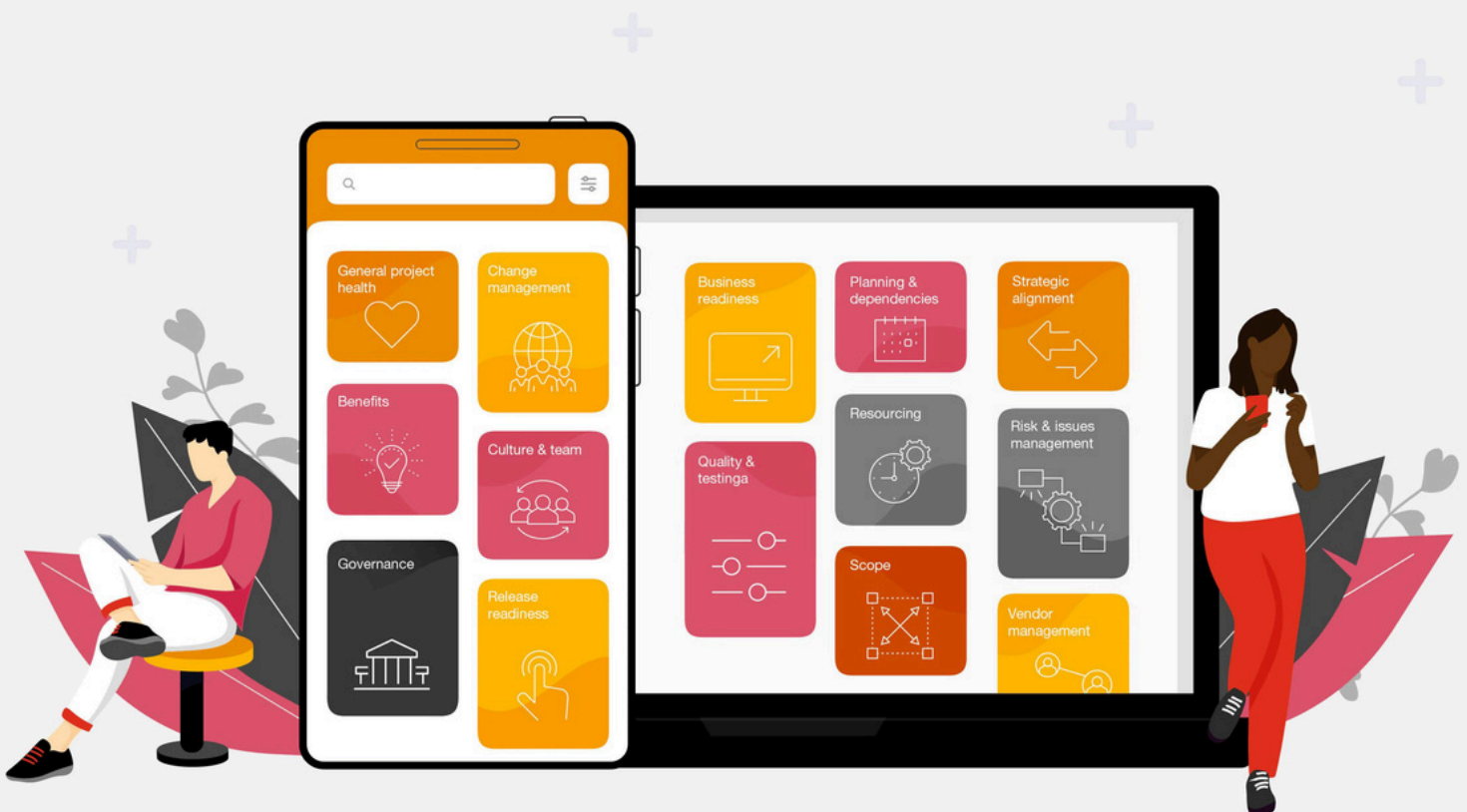
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Techbit Solutions

MISSION

Home building ERP (Enterprise Resource Planning) applications are specialized software solutions designed to manage and streamline all aspects of the home building process. The benefits of using a home building ERP system. They are best effective when it comes to quotations of the home building process along with great help in jumping the sales with ease of keeping the track of user's needs with keeping track of activities in real time.

Client is Canada's leading Software service provider majorly deals in custom Construction ERP Software's. They bring end-to-end property management solutions to several different industries with revolutionizing the property chain and automating services; their software improves customer retention, user satisfaction, compliance with performance standards. Client's is among largest Sage service provider in North America region with years of Sage Accounting experience which assist builders, contractors and construction companies of any size get a handle on their business data.

They operate in Construction service and home builder software services with strength of 1200+ employees elevating the business of home building in the U.S, Canada and Australia. Client and His team were using vintage tools and manual operations for all back-office works to cover each stage of the home building process in the residential & commercial construction.



OBJECTIVE

Client's requirement was to build a comprehensive and integrated solution for managing all aspects of the home construction process an construction management application which will work on a SaaS platform allow users with the help of home construction or builders Streamline their process to keep the track of their customers, quotes for custom home building, sales, contracts, documentation and help generate real-time reports based on the current status of the deal.

Client's Idea behind project was to develop Multitenant Homebuilt Software Solution which will cover all his needs and can be distributed to his custom or semi-custom builder customers for use on subscription. Team had to build ERP and management software from scratch covering all aspects of Residential & Commercial Construction Industry.

Team Decided to building ERP solution which can help users to manage the entire home building project from start to finish. You can track progress, manage timelines, allocate resources, and monitor costs all in one place.

Apart from that, client's objective was to Enhanced collaboration within team and stakeholders for deals with increasing efficiency to automate many of the repetitive tasks involved in home building, such as scheduling, inventory management, and resource allocation.

TECHNOLOGIES



SOLUTION

SOFTWARE DEVELOPMENT IS A DYNAMIC AND COMPLICATED PROCESS SINCE THERE ARE SEVERAL INTERRELATED FACTORS THROUGHOUT THE SOFTWARE DEVELOPMENT PROCESS. IT IS OBSERVED THAT QUALITY SUFFERS WHEN APPROPRIATE AND INDIVIDUAL FOCUS IS NOT GIVEN TO EACH DEVELOPMENT PHASE.

Techbit team built comprehensive solution delivering proactive service, increasing profitability, optimizing operational efficiencies and driving higher customer retention. Integration of Sage, Quickbooks, MYOB and Xero were done for accounting module which store and manage sophisticated information with performing arithmetic / account operations at backend. Organisations after integration can efficiently managing data related to campaign management, contact management, quoting, selections, contracts and inventory.

Biggest challenge were to migration of existing big database with automating all the paper (Documents, Forms & all) works digital. Team did anticipated the challenges prior to development and resolve database migration with 'Server Log shipping' to send transaction log from a primary database on a primary server to separate secondary datacenter containing two databases of about 1TB.

CRM and Sales module were concentrated to manage customer information with measuring customer satisfaction including leads generating, contracts management & selections, email tracking / followup plan, Campaign Management and more.

And Migration of paper documents & forms to digital format was accomplished with integration of Adobe's PDFL SDK XVIII where OCR (Optical Character Recognition) module allowed team to turn the document's batch of scan into digital text and remaining documents were built by team.

Approch team defined;

Defined requirements

Startd by defining the requirements for the home construction ERP system. Involving gathering of input from stakeholders, including project managers, architects, engineers, contractors, and accounting personnel. The requirements covered all the aspects of the construction process, including project planning, scheduling, procurement, inventory management, financial management, and reporting.

Designing system architecture

Once the requirements were defined, system architecture was designed. Including selection of the appropriate technology stack, defining the system components, and designing the database schema. The system architecture was designed to meet the scalability, security, and performance requirements of the construction company.

Development of the Application

After system architecture in place, development of the software components, development of the user interface, and integrating the system with third-party tools and services. Application developed using an agile methodology were initiated to ensure it meets the evolving needs of the construction company.

Application Testing

Once the application was developed, tested was initiated to ensure that it meets the functional and non-functional requirements. Team performed unit testing, integration testing, and system testing. The application testing was done using real-world scenarios to ensure that it works as expected.

Deployment of the Application

After application is tested and validated, it was deployed to the production environment. The application was deployed using a well-defined deployment process to ensure that it is rolled out smoothly and without disruption to the construction company's operations.

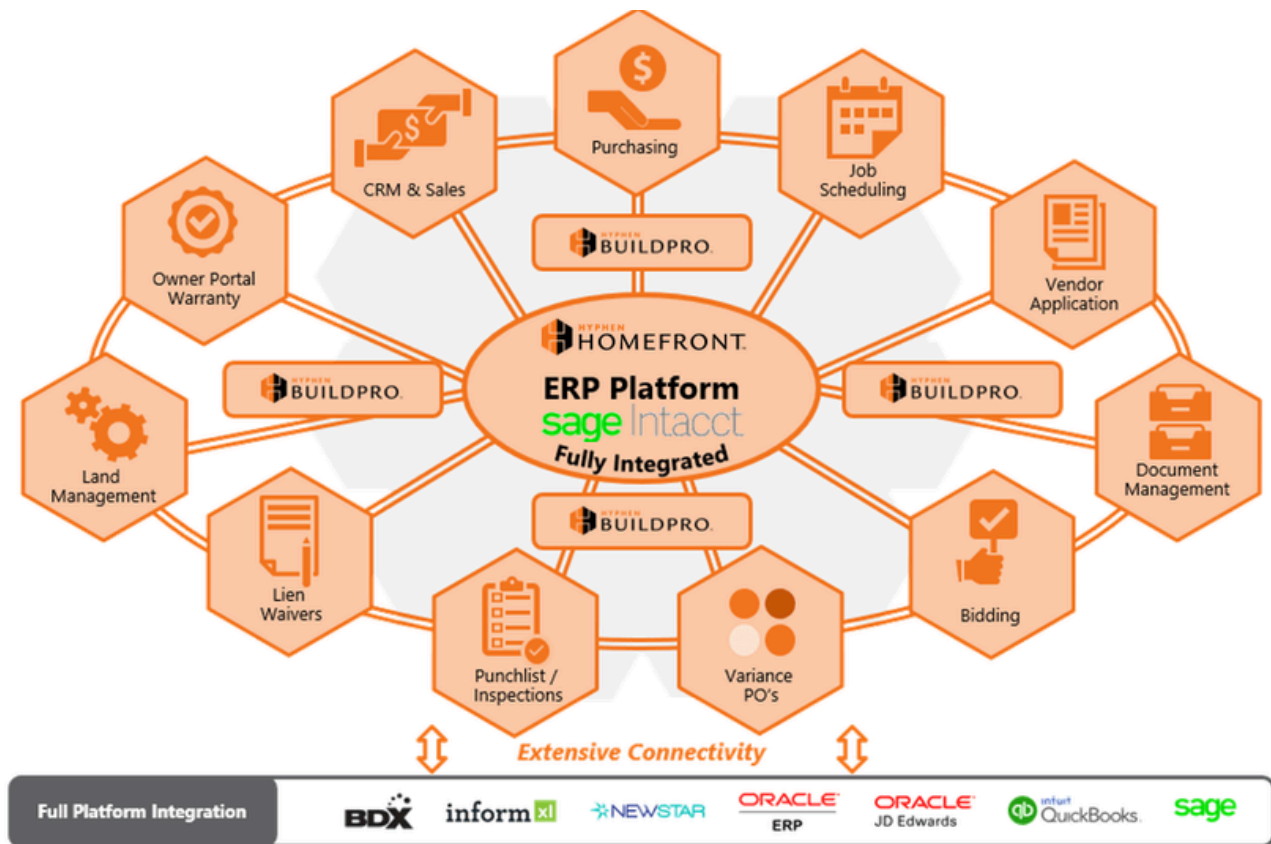
Ongoing Support

Once application was deployed, ongoing support was taken in action to ensure that application continues to meet the needs of the Client. This involves providing user training, resolving issues, and providing updates and maintenance as needed.

HomeFront is much more powerful than a traditional ERPs

- Delivery of dashboard results as insights you can action immediately.
- Quick and easy.
- Provides confidence that your project is on track.
- Gives you intelligent advice about when and how to intervene – no more guesswork, no more costly reviews.

HOMEFRONT PROVIDES A DEEPLY EMBEDDED END-TO-END SOLUTION TO THE HOME BUILDERS



APPROACH

Team intend to build software which would cover whole Back-office work cycle of the construction industry including Sales, Budget/Estimate, Customer Interaction, Accounting, Construction Records, Reporting/Analytics, Work Orders, Document / File Management, Complete Order Processing, Accounting, Job Scheduling, Service & Warranty, and more.

When client hired Techbit, we had to address to the following tasks:

- Bit database migration and information migration.
- Integration of Sage 300/100/50 Canadian Edition, QuickBooks, MYOB & Xero APIs.
- Achieve high stability of CRM / Sales, Estimating, Invoice Management modules.
- Follow Microservices architecture to make Universal application.
- Utilize various protocols to make application lightweight
- Achieve 100% accuracy on the Accounting logics.
- Integrate of third party Accounting APIs.
- Encrypting information and storing it on cloud for security purpose.
- It was really difficult to manage a large database consisting data of online training programs to users.
- OAuth 2.1 integration with custom optimization.
- Free trial system module with different application permissions.
- Auto reports generation with evaluation.

Some of the Challenges team managed to over come;

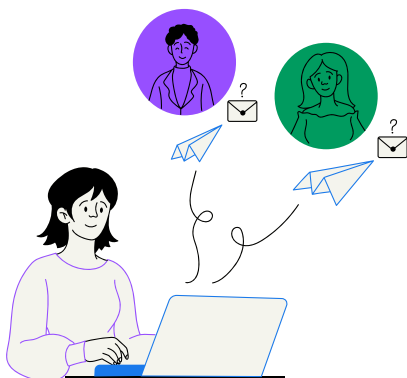


COMPLEXITY OF THE CONSTRUCTION PROCESS

After detailed analysis, team understood that the construction process is complex, involving multiple stakeholders, numerous activities, and a wide range of materials, equipment, and resources. This complexity can make it challenging to design and develop a system that can effectively manage all aspects of the process.

INTEGRATION WITH THIRD-PARTY TOOLS AND SERVICES

Home construction ERP systems team was building needed to be integrated with various third-party tools and services, such as accounting software, project management tools, and supply chain management systems. This was challenging, as different tools and services with different data formats, APIs, and securities were required.



CUSTOMIZATION

ERP system team designed and developed used to customize to meet the specific needs of the companies as users. Such customization feature was time-consuming and expensive, and required significant changes to the system architecture and software code.

DATA MANAGEMENT

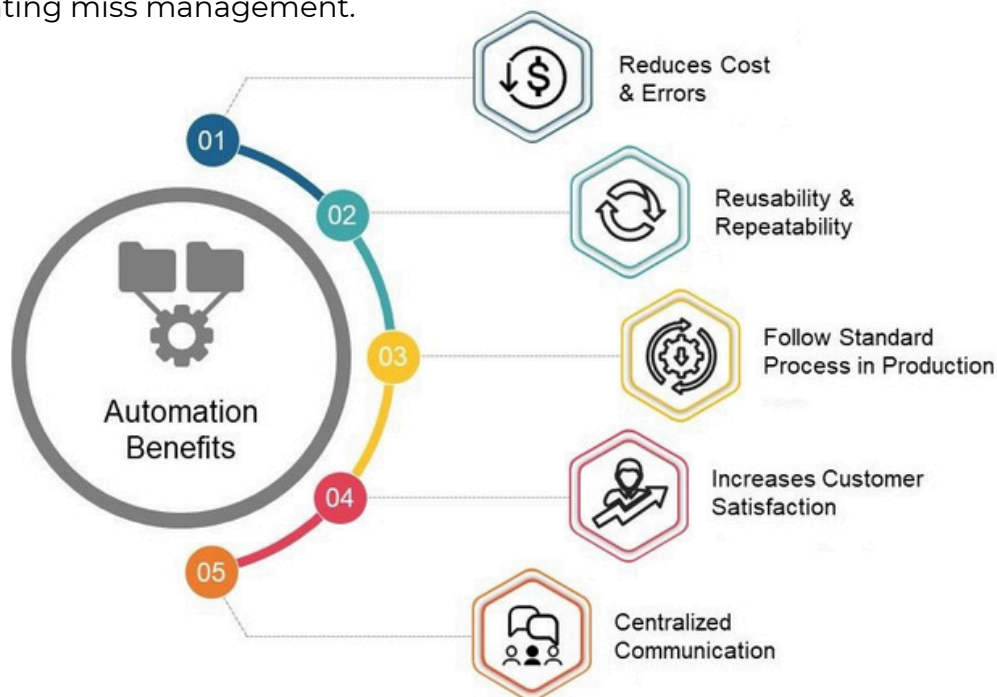
The Home construction ERP system needed to manage large volumes of data, including project plans, schedules, budgets, procurement data, and financial data with Ensuring data accuracy, consistency, and security.



BENEFITS

Home ERP Techbit built is an industry-leading construction management software to home builders, suppliers and manufacturers which utilize best technology practices for builders and suppliers to focus on what they do best: deliver quality, customer satisfaction, safety and continuous process improvements.

The final product was a high performance, easy-to-use, feature-rich benefiting big and small construction companies at high scale which has increased their ROI by 3 Times with managing whole construction cycle in one application from Planning, Development, Budgeting and more. Not only it is appreciated by its customers but also highly recognized by construction industry for making it every easy for them to perform some complex tasks with eliminating miss management.



- Tracking project evolution when it comes to completion, time and costs
- Easy Scheduling and Time Management for Sales.
- Effective Accounting solution to Controls Costs
- Easy calculation for Project budgets, incl. costs of people
- Improved Communication and Collaboration
- Controls Documentation & Files effectively.
- Enhanced the Monitoring of all aspects.
- All Information to be Accessed and Shared Easily

The completed ERP system operates perfectly, and has influenced client positively. The client was left with a robust quality assurance survey application with intelligent capabilities. Techbit's code formulated an end-to-end consumer feedback app capable of cross-industry use.

A home construction application techbit boughth numbers of business benefits to it's customer base, such as;

- Improved customer experience.
- Increased efficiency.
- Better collaboration.
- More accurate budgeting.
- Data-driven insights.
- Scalability and Flexibility
- Increased Productivity and Efficiency
- Streamlined Operations
- Enhanced Collaboration
- Data Visibility and Analysis
- Improved Customer Satisfaction
- Compliance and Security
- Centralized Data and Information
- Seamless Integration with Existing Systems

Initial Overview: <https://www.youtube.com/watch?v=qJKvqy1JNCK>



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Go Digital
Save Trees



Do Innvoative.
ReThink