DXC TECHNOLOGY

Let's talk ERP in homebuilding

The immediate benefits of utilising ERP in homebuilding

10 – 15 min. read for homebuilding executives

An interview

Nav Singh, Global Marketing Manager, with Jason Law, Advisor, System Architect (Microsoft Dynamics)

The current obstacles in homebuilding data management are clear: Today's IT infrastructure and systems across the full homebuilding ecosystem tend to be rigid, difficult to change, and expensive to update. Different methods may not be able to exchange information quickly. Without information sharing, it is difficult to pool data and nearly impossible to harness the latest innovations in predictive analytics to guide homebuilding project and operational decisions.

Nav Singh (NS), global marketing manager, DXC Technology, recently spoke with DXC subject matter expert Jason Law (JL) about the benefits of utilising an Enterprise Resource Planning (ERP) platform or solution for the homebuilding industry, and Jason's views on how homebuilders can get started.

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NS: *Jason, thank you for taking time out of your busy schedule to lend your insights and speak with us about the benefits of ERP for the homebuilding industry.*

To get started, let's talk about how homebuilders and construction companies can fully understand the benefits associated with an ERP platform, system or solution. What would you say the immediate benefits to homebuilders are today?

JL: Nav, you're welcome, and thanks for speaking with me. Quite simply, when implemented and adopted correctly, ERP systems drive efficiency, lower operating costs, and improve profitability by streamlining and standardising key day-to-day business processes. Data need not be inputted more than once and flows through the life cycle of the business. This means there is no need to duplicate any data records.

In the homebuilding industry, for instance, the traditional siloed approach to operations and a multitude of spreadsheet systems can be eradicated, and full benefits can be realised through the collaborative and transparent thinking across different departments, including construction, commercial, sales and others. There is often a hierarchical regional or divisional structure, and configuring the ERP right allows an effective business "blueprint" to be deployed in the confidence that it is achieving optimum results.

Opportunities also exist for ERP collaboration with the supply chain, and so this is beneficial for all supply chain partners. Implementing effective cross-business boundary processes broadens the scope for achieving efficiency across the end-to-end homebuilding process. This ultimately has a positive impact upon the customer journey and margins.

NS: *Is scalability and being able to quickly adapt to changing market needs a benefit for homebuilders? If so, then why?*

JL: Absolutely. The post-COVID-19 pandemic drivers demand the option of flexible working to ensure homebuilders can operate as close to normal as possible during any future unforeseen events. We have all recently experienced lockdowns, and flexible working proved to be a challenge for some. A modern cloud-based ERP solution instantly provides that flexibility, allowing businesses to capitalise on their investment.

"The construction industry continues to evolve ... Having the ability to service these [different] needs and align with and create value from complementary technology quickly is starting to be a key ERP differentiator."

In addition, homebuilders' requirements can change for a variety of reasons. One of these could be through growth, be it organic, mergers or acquisitions, which can all result company structure changes.

A modern ERP needs to demonstrate that these changes can be incorporated at pace when they occur. Without an effective ERP, it becomes more and more difficult to keep up with change and to subsequently capture and process relevant data consistently and transform that data into meaningful enterprise-wide intelligence and analytics.

Due to the nature of the homebuilding industry, adapting to changing market needs quickly is also a key consideration. The flexibility of the ERP, from a configuration perspective, and the agility where required, from a development perspective, all need serious consideration.

At a micro level, customer expectations continue to evolve and are already tech focussed: It's the norm now for a customer journey to be digital and interactive, including communication, e.g., being able to instantly see the stage of build and the status of customer service requests; or from an eCommerce perspective, upgrading and selecting choices online, on mobile.

Also, it is worth noting that supply chain is fundamental to a homebuilding company's success; therefore, addressing admin needs of subcontractors and suppliers of various sizes and technology capabilities should be taken into consideration.

A modern ERP should be able to service such needs without any re-keying at either business, e.g., the data on a purchase order from a homebuilder is the same data on a sales order and an invoice for a supplier — simple integration can make this end-to-end process seamless and data centric, document and re-key free.

The construction industry continues to evolve, whether that be through the implementation of different methods of construction (e.g., offsite modular build), regulation changes, or digital disruption of physical and functional characteristics through the Building Information Modelling (BIM) process. Having the ability to service these needs and align with and create value from complementary technology quickly is starting to be a key ERP differentiator.

"By adopting an ERP solution, a homebuilder can ensure processes are being optimised, data is only being input once at a maximum, and there is a single source of truth."

NS: *Scalability sounds valuable, especially when it comes to how quickly a homebuilder can ingest and act on data. However, moreso, why is having an ERP so important for the success of homebuilding companies?*

JL: I think businesses in the construction industry have to seriously contemplate how they can continue to grow and be competitive, now and especially in the future without a modern ERP. By adopting an ERP solution, a homebuilder can ensure processes are being optimised, data is only being input once at a maximum, and there is a single source of truth. For example, plot records are used throughout the life cycle of a site. From land appraisal and technical design, through to commercial budgets, construction programming and build, and the sales process; customer care departments also use this plot information. Finally, where required, full plot costing is used in finance.

Without an ERP you can quickly see how easy it will be for multiple records for an individual plot to be created and maintained in different systems, often with conflicting data — the larger the business, the more inefficient it becomes. By having an ERP, employees and customers can collaborate on the same data and actively benefit. For example, using the plot example again, sales teams shouldn't be able to sell the customer extra solutions or services once the relevant construction stage is complete.

NS: *Selecting and implementing the correct solution can be difficult. Why is this so?*

JL: As we have discussed, ERP makes total sense when the solution is fully adopted — particularly when the ROI is so high. Selecting the right ERP solution with the best quality is a key business decision, as it will affect operations for years to come. There are a broad range of providers and solutions, some which are industry verticals, some are broader tier 1 solutions used in multiple industries, and some have the advantage of combining both the industry expertise and best practice from a variety of industries, both locally and internationally.

I don't think the selection, and for that matter the implementation, needs to be difficult if a methodical process is followed. Some of the key considerations include assessing business readiness for change and being clear on the key objectives. It's sometimes easy to fall into a trap of trying to replicate what happens today but just on a new platform, and it's also good to understand what the key business outcomes need to be and some requirements in the form of user stories.

The key benefits are usually realised by being open to changing processes, and to align with tried and tested ERP processes. A great amount of synergy can be achieved by combining a dedicated homebuilding ERP solution and technology with industry process requirements, which ultimately brings benefits for the business, customers and supply chain.

One of the key success factors to achieving any major benefits is often missed by decision makers — which is fully implementing the ERP solution end-to-end and consistently, as opposed to implementing limited modules and/or allowing parts of the business to be selective on how they use the system.

"[With] a modern, integrated, feature-rich solution such as DXC Homebuilder One, they could transform their businesses, and deliver real and sustained improvements. These can include improved cost management, increased employee productivity, better reporting and much more."

One real challenge is that as a homebuilding company, you can't put the business on hold whilst you go through the implementation; business operations must continue, too. For a business project to be successful, there needs to be full support and backing at the board level for the transformation, with other dedicated resources from across the business to shape the solution.

NS: *It sounds like an ERP is an easy choice for homebuilders, so why do you think this solution has not been widely applied across the homebuilding industry?*

JL: The construction industry has its own unique processes and challenges, yet there's a real scarcity of end-to-end IT solutions capable of addressing them all effectively. As a result, even today, this can result in homebuilders having a systems landscape with duplicate records in multiple systems and a minefield of standalone Excel spreadsheets resulting in poor data quality, lack of ownership, and no single source of the truth. If homebuilding companies combine this with limited or complex integrations to maintain, overheads are high compared with other industries and this starts to reduce the real value which technology can, and should, deliver.

Companies also have other priorities: Implementing an ERP solution and replacing legacy infrastructure requires the business to spend a lot of time, energy and money. That said, the ROI can be very attractive, and this normally comes down to timing, so once businesses have confidence the right solution is available, they will do it. It's just a matter of how and when.

NS: *One of the key advantages of an ERP solution is that it is an enterprise-wide, smarter approach to working through proven efficient processes — people have time back to do what matters most to them and their business. What does this mean?*

JL: When you talk to industry insiders, many times over you'll hear the same message: Many of the industry's challenges stem from ageing systems which provide little timely insight into the true costs and budgets, poor workflow and process management, low levels of integration, and limited reporting capabilities. Throw in a poor user experience, too much paper-based reporting and time spent reconciling different systems, and a need for extensive re-keying of data — then it's no surprise that many homebuilders are looking for an alternative solution.

They recognise that with a modern, integrated, feature-rich solution such as DXC Homebuilder One, they could transform their businesses, and deliver real and sustained improvements. These can include improved cost management, increased employee productivity, better reporting, and much more.

The DXC Homebuilder One solution works for the business because its high perceived ease of use means it's a solution people want to adopt, as it helps them to reduce admin work. So, rather than people being tied to a keyboard and having to reconcile multiple systems, they can focus on why they are really employed — for their expertise.

"[This] is the most comprehensive modern ERP solution in the homebuilding marketplace, and a transformational step forward from the traditional legacy systems that currently hold back the construction industry. It's developed with Microsoft Dynamics 365, is cloud hosted, and comes with some really forward-thinking functionality designed by industry experts. No wonder it's taking off globally."

Here are a few examples of using DXC Homebuilder One:

- The build programme and work orders are fully integrated and operate in real-time; therefore, subcontractors know which plots they need to be in and when. Also, material call offs are managed on-system; therefore, site teams can spend more time on-site managing safety, production and quality
- Supply chain tendering is managed end-to-end on the system, from packaging work items through to adjudication and automated population of the Bill of Materials (BoM), and payments can be automated through self-billing
- Pre-start milestones are tracked and can determine any impact on start-on-site and enterprise-wide, and forecasts can be automated. Therefore, construction leads can confidently forecast resourcing, and business leaders can have real-time future years plot security analytics.
- Automated customer journey process-driven events mean sales and customer care teams can focus on customer engagement and managing relationships
- By using powerful insights, buyers can focus on negotiating new deals to lower costs

NS: *Interesting you mentioned the DXC Homebuilder One solution. There are a few different providers out there, but how does the DXC Homebuilder One solution differ and benefit a construction company?*

JL: DXC Homebuilder One is the most comprehensive modern ERP solution in the homebuilding marketplace, and a transformational step forward from the traditional legacy systems that currently hold back the construction industry. It's developed with Microsoft Dynamics 365, is cloud hosted, and comes with some really forward-thinking functionality designed by industry experts. No wonder it's taking off globally. The U.S. homebuilding company of the year, Stanley Martin, has recently implemented DXC Homebuilder One. While doing so, CEO Steve Alloy noted that almost all the other software in the home building space was developed before the iPhone was invented. "It's a huge lift to change. It's enormous. But we went through that and changed it, and it's great. We think it's a big advantage for us," said Mr. Alloy.

At the core of DXC Homebuilder One is the business hierarchy — this can accommodate any number of levels and combinations including corporate, divisions, regions, sites, phases and plots. Not only can reporting be run at these different levels, it also encourages the management of less data by focussing on exceptions. For example, build programmes can be configured in the Dynamic work breakdown structure for house types and released at any level in the hierarchy — any region or site-specific changes to, say, elevations can then be managed by exception. Another example is the Dynamic bill of materials; again, these can be released for a house type, apartment block or infrastructure works at corporate level, and any exceptions can then be managed at lower levels in the hierarchy where required.

"DXC Homebuilder One is an end-to-end solution for homebuilders — from development conception through to supply chain bid management, sales, and Customer Engagement (CE) and much more. It's a single integrated platform, providing complete operation visibility, a central repository of plans and data, exception management, and a rich built-in planning and scheduling system …"

Some other key features include supply chain collaboration where at no licence cost, key homebuilder partners can be provided with access. This ensures everyone in the site life cycle is accessing, updating once and utilising that single source of truth. This includes tendering for materials and subcontract — again, at any level within the hierarchy one gets work order visibility with real-time changes to build programmes, payment details and customer service ticket allocations.

DXC Homebuilder One is an end-to-end solution for homebuilders — from development conception through to supply chain bid management, sales, and Customer Engagement (CE) and much more. It's a single integrated platform, providing complete operation visibility, a central repository of plans and data, exception management, and a rich built-in planning and scheduling system, complete with calendaring and industry-standard Gantt tools.

Implementing DXC Homebuilder One processes enables more homes to be built at greater efficiency, with consistent repeatability, and at a higher level of quality. This in turn helps to reduce maintenance and unbudgeted cost, remove technical discrepancies, reduce material wastage and skip usage.

With its flexible architecture and industry-specific capabilities, DXC Homebuilder One is a core business enabler to help construction companies sustain continued growth while developing a competitive edge. DXC Homebuilder One allows homebuilders to reduce complexity and simplify their IT environment — and is the only scalable homebuilder solution built on a standard Microsoft platform, while leveraging native Microsoft tools such as the Power Platform, Power Apps, Power BI, Office 365, Azure, and others.

Through DXC Homebuilder One, homebuilders can enable digital transformation, scale for growth, increase efficiencies and enable employees and suppliers to work with one single data source, providing a basis for reliable analytics and reporting to make accurate business decisions.

In addition, DXC Homebuilder One is mobile responsive and can be accessed on any mobile device.

NS: *You mention perceived ease of use; how do you feel the DXC Homebuilder One solution fares when it comes to adoption, not only as part of the project but for new starters once the system is being used?*

To complement the provision of a full training programme as part of adoption and change management for the implementation of DXC Homebuilder One, there are also some key Microsoft Dynamics features which support all our user base.

Firstly, there is a task recorder function which is powerful and easy to use. This allows for the recording of a business process which can be played back step-by-step within the system itself — this guides users through the system until they are comfortable with the process. Documentation of process can also be automatically published with screen shots in Microsoft Word. Another key use case for the task recorder is for regression tests for business process, when it comes to the ongoing evolution with future system improvements.

"As DXC Homebuilder One is developed within Microsoft Dynamics, there are complementary cutting-edge technologies readily available to use as part of the unified offering. … [It] is hosted on Azure … [and] complementary services include Power Platform and Azure Internet of Things (IoT)."

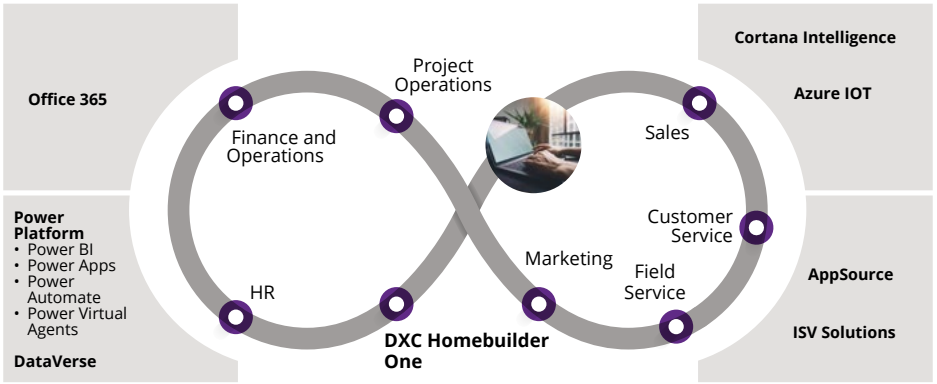
Secondly, DXC Homebuilder One utilises the standard Dynamics-focused user workspaces. These are predominantly role specific and allow for the management of records throughout a business process workflow — when there is something a user needs to do, they are notified, and it appears in their workspace. It really enables adoption quickly and easily.

As an example, if a customer logs a new ticket, this appears in the Customer Service Requests workspaces highlighted in the unassigned queue. If a quantity surveyor submits a budget for approval, this sits in the reviewer's workspace. If a site manager amends a build programme, an action appears in the contract manager's workspace to approve (or reject).

NS: *I see how the DXC Homebuilder One solution can be cost-effective for a company that needs out of its antiquated hardware and more efficient reporting and can help them scale up as well. But how does it play a role in a company's ability to run advanced analytics or machine learning (ML) or artificial intelligence (AI) technologies?*

JL: As DXC Homebuilder One is developed within Microsoft Dynamics, there are complementary cutting-edge technologies readily available to use as part of a unified offering. Be assured, first and foremost from a security perspective, DXC Homebuilder One is hosted on Azure, which provides strong authenticated user access. It also provides data protection where data is hosted, offering a wide range of encryption options for at-rest and in-transit data protection, together with the options of in-country storage for compliance reasons and out-of-country storage for disaster recovery.

Additional complementary services include Power Platform and Azure Internet of Things (IoT).



The Power Platform is a single integrated low-code platform that empowers business users to become power users — this is truly unique in the market and has revolutionised personal productivity. The platform spans Office, Dynamics, Azure, and can incorporate standalone applications. The Power Platform has truly revolutionised how business experts can engage with digital transformation programmes and become citizen developers.

The platform enables the three A's:

Analyse
Make sense of your data through interactive, real-time dashboards, and unlock the insights needed to drive your business forward

Act
Builds apps in hours — not months — that easily connect, use Excel-like expressions to add logic, and run on the web, iOS and Android devices

Automate
Include powerful workflow automation directly in your apps, with a no-code approach that connects to hundreds of popular apps and services

An easy win is Power BI which is the business analytics service that delivers insights by analysing data. It can share those insights relating to all DXC Homebuilder One records through data visualisations which make up reports and dashboards to enable fast, informed decisions. Power BI scales across an organisation and is normally based on specific business requirements which can contribute towards competitive advantage, and it has built-in governance and security, allowing businesses to focus on using data more than managing it.

Microsoft Power Automate technology could be considered, which allows users to create automated workflows, between applications and services. DXC can be commissioned to configure either of these, or alternately, businesses are encouraged to become self-sufficient with this technology.

Beyond personal productivity, Power Platform can also be used for external interactions such as building customer support/engagement chatbots (Power Virtual Agent) and customer portals (Power Apps).

Azure machine learning can also build train, and deploy machine models; this can combine data from DXC Homebuilder One with external data where available. It's just my initial thoughts, but it would be great to work with a homebuilder to start predicting the likelihood of a prospect reserving based on certain characteristics — this would really start to strengthen sales forecasts based on the active prospect record pool.

NS: *The Microsoft-based solution clearly plays well together with DXC's ERP software. How does the DXC Homebuilder One solution help homebuilding companies to make fast, informed decisions?*

JL: Throughout the industry there is an obsession with running periodic, sometimes monthly, reports. Although these still have their place, some users are asking, "Why would I want to wait for day x of month 2 to know if something is going wrong in week 1, month 1? I want to know there and then, so I can do something about it before an issue escalates into a serious problem". Throughout DXC Homebuilder One, these powerful real-time insights are available. Profitability can be viewed at every stage of the build process; this includes, if required, the allocation of infrastructure costs to plots — this automatic apportionment provides for true plot costing, and when viewed at house-type level, can provide accurate inputs into future land appraisal.

There is a good selection of reports already configured; these have been developed over time with leading industry experts. These include margin analysis and work in progress (WIP). This is combined with some real-time insights through pre-configured Power BI dashboards embedded in user workspaces. We do understand that each business has its personal requirements when it comes to business intelligence and reporting; this is why we recommend the broader adoption of Power BI, where business can configure dashboards and reports as required, either internally or with our help, using all the data captured in DXC Homebuilder One.

NS: *Sounds like we are with a homebuilding business every step of the way. Thank you again for sharing your insights and experiences in this edition of Let's Talk!*

JL: You're welcome!

Learn more at
connect.dxc.technology/dxchomebuilderone

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