Accelerating the Enterprise: USG Boral SAP S/4 HANA Migration Case Study

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1. Modernizing the Enterprise To Improve Visibility and Eliminate Risk

USG Boral is a joint venture formed in 2014 between Boral Australia and U.S. Gypsum. It manufactures and supplies gypsum-based wall and ceiling lining systems, mineral fiber, acoustical ceiling systems, metal framing, joint compounds, and accessories across thirteen countries in Asia, Australasia and the Middle East.

In early 2018, the company decided to modernize its ERP systems. Having grown through acquisition, the company possessed inconsistent legacy ERP systems across its markets, primarily older and requiring significant manual input. The company felt a modernization and standardization of ERP systems would reduce business risk associated with the potential failure of legacy systems while also enabling several business transformation aspirations, including:

- Reducing manual tasks across functional areas

- Enhancing operational excellence

- Introducing digital capabilities

- Building a foundation for expanding e-commerce offerings.

Infosys, being the strategic partner at USG Boral, approached USG Boral to suggest an assessment of business processes for potential transformation. As a result, Infosys was engaged to support a product assessment when it was agreed to implement a new ERP system and use it as the foundation for the new business processes.

Infosys led the evaluation of several ERP products and, in parallel, developed a business case to gain stakeholder buy-in. The business case was ultimately based on migrating the entire USG Boral group to a new ERP. However, the company's board felt a group-wide migration effort would be too disruptive and that USG Boral didn't possess adequate skills to drive such a program. Instead, USG Boral Australia and New Zealand (ANZ) business units were chosen as a pilot to kick start the transformation journey for the group as it is a large market for USG Boral and possesses a broader more complicated business environment, given a broader set of SKUs and distribution points than other markets. USG Boral felt if a solution could be a success in ANZ it would be a success elsewhere.

USG Boral ANZ also had a burning platform for change. Its legacy ERP system was a ~17-year old ERP system called MK8 which posed a business continuity risk. The supplier was no longer able to guarantee a restore in the event of a crash and USG Boral felt that the system inhibited its ability to provide competitive customer services.

As part of the product selection phase, SAP was brought in to present its S/4HANA platform hosted in both on-premise and cloud environments as were two other software products. A small team of USG Boral employees were selected to act as champions for each impacted business function and given the opportunity to interact with the systems to gauge how they meet company requirements.

Ultimately the implementation of SAP S/4HANA Enterprise Management 1709 hosted in a private cloud was selected for implementation along with SAP IBP (Integrated Business Planning).

At the onset of the engagement, USG Boral and Infosys developed a series of guiding principles that they used to define their approach to maximize the probability of success:

- Adopt SAP standards as much as possible to align to proven, best practice processes

- Simplify the processes to flatten the learning curve for employees, customers, and partners

- Ensure stakeholders are involved and dedicated so that ideas are contributed, and people are bought-in to the change

- Embrace the changes and take the opportunity to reinvent the future

- Place the customer at the center of all that is done with decisions framed relative to their impact and value to the customer

- Act as one united team working toward a common goal but respecting a diversity of perspectives.

2. Defined Solution Delivers Broad Capabilities to Address Enterprise Pain Points

USG Boral sought to use S/4HANA to address specific pain points across its enterprise. These included:

- Lack of visibility across the enterprise

- Slow and inconsistent planning in logistics and supply chain

- Slow month-end closure process

- Time to service the customers at the trade stores

- Field force's limited access to real-time information which drove significant manual, paper-based processing

To address these challenges, Infosys and USG Boral defined a technical solution that incorporated S/4HANA Enterprise Management 1709 and Integrated Business Planning and SAP Cloud Platform – CPI.

These solutions are applied to business functions, including:

- Sales and logistics: lacked stock visibility across supply chain, had disparate pricing, inability to cross-sell / up-sell, high transport costs due to inefficient load planning and multiple manual touch-points across the process

- Procurement: duplicate material codes and disparate vendor pricing resulted in slow invoice processing and inaccurate payments

- Finance: inefficient data consolidation and lack of powerful reporting tools led to period-end processes taking ~6 days

- Contracting business (Project systems): The business required a stand-alone system to track WBS elements within the broader build effort but had no system to manage it or coordinate and report the contracting project.

- Production planning: completed primarily using Excel and in face to face discussions which resulted in rapid and constant changes in production execution

Specific assets brought by Infosys included its manufacturing industry experience, its Infosys CATALYST pre-configured S/4HANA solution, Business Process Master List and the Infosys Test Plan Accelerator (ITPA), all part of Infosys Cobalt. Infosys Cobalt is a set of services, solutions and platforms to enable enterprise cloud journeys. It offers ~14k cloud assets and ~200 industry cloud solution blueprints. USG Boral applied its defined requirements across the localization, data readiness, integration, and the business.

Combined, these were able to define the S/4HANA 1709 solution incorporating required WRICEF objects, a data migration plan, and business processes based on manufacturing best practices localized to ANZ.

3.   Infosys Delivers in an Agile 12-Month Program

Infosys defined a 12-month implementation program consisting of three agile implementation sprints to enable iterating on the level of details. The program kicked off in May 2018. Overall there were four phases in the project plan:

- Prepare: 2 weeks. Define program parameters and measurable program success factors. This was conducted at USG Boral offices in Sydney

- Explore: 3 months. Design and blueprinting in a highly interactive phase. Infosys conducted blueprinting workshops by demonstrating S/4HANA functionalities through Infosys Catalyst solution, part of Infosys Cobalt, to the business users in a show and tell approach. This allowed business users to visualize business processes upfront in the design phase and allowed for quicker design decisions. Infosys estimated that 50-60% of functional consultants were onsite with the remainder offshore working on documentation, preparing questions and capturing information

- Realize: 6.5 months. The build phase comprised of three sprints, implementing defined solution through a show and tell approach, delivered through a heavy offshoring model, connected with business users. Three progressive mock data migration campaigns and one full-dress rehearsal was conducted during this period.

- Deploy: 2.5 months. This included hyper care of 5 weeks.

To deliver the program, Infosys adopted an approach to accelerate delivery while de-risking the program. This approach included a tailored methodology, IDEA-Activate, which incorporated Infosys proprietary tools and accelerators along with SAP assets.

A key objective of USG Boral was to leverage standard SAP functionality wherever possible and focus on standardizing disparate business processes across individual regions in ANZ on to a single common SAP-defined process. This allowed a narrowed focus on the specific standard processes which wouldn't work in USG Boral and adapt only those.

Methodology

The Infosys team used a customized hybrid IDEA and ACTIVATE methodology to deliver the program. IDEA is Infosys' SAP implementation methodology, part of Infosys Cobalt, and ACTIVATE is SAP's defined agile implementation model. This approach enabled the program to deliver on-time and on-cost while also allowing the business to start realizing benefits quickly to meet business case objectives. This incremental

business case value realized throughout the program, then allowed the business to deploy contingent budget to continue the refinement of process improvements after the initial go-live.

Infosys and USG Boral collaborated to analyze a pre-configured S/4HANA solution combined with pre-defined best practices to Australia in comparison to USG Boral business process, data, and non-functional requirements to develop the end-state solution.

Assets

Infosys was able to apply a number of assets to implement the solution.

Infosys Catalyst

Infosys Catalyst, part of Infosys Cobalt, is a pre-configured, industry-tailored S/4HANA solution that Infosys uses to implement a baseline, greenfield S/4HANA instance. Infosys estimates that 70% of its Infosys Catalyst offerings are re-usable across an industry sector. This includes an estimated 70-80% of required WRICEF objects that are delivered as part of a standard Catalyst solution.

Infosys Catalyst includes:

- Pre-configured sector-specific business scenarios based on best practices

- Pre-defined integrations

- Country-specific legal requirements documented and incorporated

- Tailored Fiori dashboards ready to be deployed

- Security designs for S/4HANA templates, including role-based matrix methodology

- Documents which capture traceability covering BPML, BPD, BPF, FS, configuration documents, and TS.

Catalyst has been developed to accelerate delivery and reduce effort across the entire implementation lifecycle. Infosys estimates that USG Boral realized the following benefits from using Catalyst versus a standard S/4HANA greenfield implementation approach:

- Scope Definition effort reduced 50-60% through the use of business process master list (BPML)

- Solution Validation effort reduced 40-50% by using the Catalyst system demo to validate system meeting requirements

- Fit-Gap closure effort reduced 20-30% through the use of pre-defined business scenarios and BPF

- Testing effort reduced 20-30% for selected scenarios by re-use of life cycle documents, business process design (BPD) and business process flow (BPF) test scripts

- Deployment cutover effort reduced by aligning to business needs and leveraging a role-based authorization matrix.

S/4HANA Migration Cockpit (LTMC)

One of the key challenges in moving from a legacy mainframe to a standardized S/4HANA instance was data migration. The cleansing and transformation of legacy USG Boral data required a dedicated data migration strategy with multiple mock migrations. To support this, Infosys utilized SAP's LTMC as well as templates for specific interfaces to other applications in the USG Boral ecosystem. Leveraging these standard data migration templates reduced the effort for prepping data for migration and for the USG Boral business

team to validate data post-migration. These templates also shortened each mock migration to allow for more mocks to be completed, de-risking the formal data migration effort.

Managing Non-Technical Change

In addition to the plan to transform USG Boral's technological platform, Infosys also worked with USG Boral to develop a holistic change management program to ensure buy-in to the transformation by stakeholders.

This focus on change management was in part achieved by bringing on senior business users as active project members to instill buy-in among their teams. This wasn't isolated to USG Boral headquarters near Sydney but also across multiple states in Australia and in New Zealand. Team members also represented each of the individual impacted business functions to ensure all stakeholders were represented.

Bringing senior stakeholders together as part of the project team, allowed Infosys to:

- Facilitate alignment on harmonization across the organization

- Walk project members through best practices defined in the Catalyst solution

- Explain how Infosys accelerators are used to simplify and accelerate migration.

These dedicated team members then acted as champions in their respective units. They provided detailed understanding of the system and could act as first point of contact for any questions or concerns that arose.

In addition to the dedicated team members, Infosys developed a training and communication effort for the broader organization. It included communicating white papers that explain what business problems are addressed, how the solution addresses specifically defined requirements and the business case for making the change. The training program was defined as a multi-phase training plan based on specific needs of given roles. The most basic level was a process overview, followed by a demonstration, hands-on practice, and then leave-behind reference materials.

A. Expanding the Value Realized Through Innovation

As part of the implementation, Infosys was able to deliver a number of innovations to USG Boral. These came from two areas: core S/4HANA and SAP capabilities and incremental capabilities Infosys delivered outside of S/4HANA itself.

Core SAP and S/4HANA innovations include:

- Embedded analytics to enable reporting of real-time operational information leveraging reporting in Fiori

- Improved transactional posting and cleaner reporting using the ledge-based, fully integrated Parallel Valuation for Materials, Assets, General Ledger and Profitability

- Improved efficiency of sales processes through a Fiori/UI5 based solution. This capability reduced order processing time from ~10 minutes to 1-2 minutes

- Improved financial and operating reporting for management leveraging ACDOCA including reporting net profit segmented by business unit, product line, and geography

- Settlement management processes transformed to be integrated into order to cash scenarios

- Implemented IBP to automate forecast and demand planning and integrate with S/4HANA to enable translation into a monthly production plan and supply chain plan

- Improved inventory management to provide real-time inventory posting and visibility of inventory values and enable a move from batch processing to real-time processing

- Accelerated material requirement planning to ensure optimum stock availability to meet customer demand

- Implemented fast product availability check and use-case driven product allocation as well as intelligent and fully automated selection to enable improved on-time order fulfillment and automated backorder processing to reduce inventory carrying costs.

Infosys was also able to implement a number of incremental capabilities that apply innovations to transform how other business functions. These innovations include:

- BRF+ based PO-approval process which automates the PO-approval processes

- Automation of stock replenishment process including integration with auto-picker robot

- Pricing simulation tool determines how to arrive at a price from product and customer parameters based on a national price list

- End to end automation of contracting business with standard SAP PS

- Simplified Trade Store solution: including sales order creation and completion, done in minutes

- Smart Planning with IBP (cloud-based and integrated with S/4HANA) aggregating customer demand, and marketing campaigns to normalize demand and create high-level production guidelines – daily fluctuations dynamic

- Real-time analysis built-in Fiori apps tailored to specific user requirements

- Product costing and COPA-based net profit analysis.

4. Business Value is Being Realized, and Expansion is On-Deck

The initial solution go-live was completed at the end of April 2019. In the year following, USG Boral has begun to realize several of the key business objectives, including:

- In three days post go-live, the system was able to return to the pre-implementation rate of processing the invoices

- Financial period close reporting time has been reduced from ~6 days per quarter to ~ 1 day

- Operational reporting is quicker and more efficient to accelerate decision making

- Business processes have been standardized across Australia and New Zealand

- Field force capabilities, in particular in support of Project functionality, were expanded to enable real-time information capture in tablets while remote rather than needing to be documented upon return to the office. This is estimated to enable a 30-40% productivity improvement for these employees.

With the initial implementation completed and users from the C-suite down bought in, the biggest challenge for the USG Boral ANZ and Infosys teams is managing the demand for new enhancements. With stakeholders having seen a glimpse of the capabilities and visibility that is available, even more is now desired. The team must now prioritize and roadmap the various requests for new features.

Infosys and USG Boral are also looking at further geographic expansion, rolling out to multiple countries across southeast Asia, and evaluating each location's requirements to re-validate how the solution developed for Australia and New Zealand could be applied to address their specific local requirements.

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