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The digital journey at Force Motors and group companies

THE IT TEAM OF Force Motors did detailed analysis of vendors, their products, key differentiators, and evaluated different solutions from leading OEMs on the basis of critical parameters before arriving at the final deployment architecture

One of India's leading Fortune 500 companies, Force Motors has witnessed remarkable success since its inception in 1958. Since the last few years, the group is on an expansion spree with path-breaking new products, JVs, and being the sole supplier for engines and axles for big names like Mercedes and BMW. The expansion outpaced the existing IT infrastructure necessitating significant enhancements. The group realised that a total infrastructure and applications revamp was essential to support its aggressive plans. The company needed an IT infrastructure that could become the foundation for all current and future group applications, thereby allowing the company's business to continue steadily on its development path.

Business growth drives the need for change

Force Motors Limited, the flagship company of the Dr. Abhay Firodia Group, has achieved new milestones reflecting growth in both organic and inorganic mode. These upgrades concurrently demanded reengineering of the business processes, necessitating infrastructure and application scalability to boost the organisation's analytical capabilities that are extremely crucial in today's data-driven economy. To understand how Jaya Hind Industries and Force Motors overcame this scenario, let's take a closer look at its business.

Jaya Hind Industries (part of Dr. Abhay Firodia Group) is among India's largest and most trusted, end-to-end solution provider for critical aluminum castings to the

global OEMs. The company has a wide manufacturing portfolio of critical components ranging from 5 gm upto 30 kg, serving a variety of industries in automotive as well as non-automotive OEMs. Jaya Hind Industries has one of India's largest in-house tool design and manufacturing capability and largest die-casting capacity.

Force Motors is a leading supplier of utilitarian, low cost, mass transport vehicles like vans, trucks and buses for over 60 years. As a part of its ongoing growth plan, Force Motors has also become a leading supplier of powertrains to BMW and Mercedes. The group has also recently acquired Volkswagen's MAN Trucks manufacturing plant in Madhya Pradesh, India, and signed a joint venture agreement with Rolls-Royce Power Systems AG to manufacture high-powered diesel engines. The company has achieved new milestones with several launches of new vehicles, designed and developed indigenously as well as with support of Global Design Houses.

The expansions had stretched the group's IT infrastructure to its limits, hindering its ambitious business initiatives. Multiple SAP landscapes, dispersed Infra, necessity of faster dashboarding and analytics



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Abhijit Bhalerao
Head, IT, Force Motors Group

with drill downs to Nth KPI/Document, administrative complications, technology advancements were some of the complexities and key technical challenges on hand.

Strong business growth at Force Motors made their existing solutions inadequate in coping with the latest technological and business needs. The need for a robust, dependable and agile system thus became imperative for the planned large-scale IT transformations in the group. The program in the first year included an IT infrastructure consolidation and upgrade, S/4 HANA Conversion for 3 SAP ECC Landscapes, revamp of the Dealer Management System and implementation of HR solutions suite, Business Intelligence, etc., for the group.

IT infra solution – key parameters

With a clear vision to upgrade and consolidate the group's IT infrastructure for the applications to support the diverse business portfolio of the group, the IT leadership took charge of the situation and created a project roadmap with well-defined milestones. A SAP sizing report was created and used to study, analyse and deliberate on the requirements. Detailed analysis of on-premise vs cloud infrastructure options and thorough assessment of appliance vs SAP HANA Tailored Datacenter

Integration (TDI) approach for HANA from business context were carried out before settling down on on-premise HANA Certified Appliance models. Every miniscule technical detail was deliberated including CPU architecture (Intel Skylake or Broadwell) and Memory DIMM combinations considering the size of HANA database, as SAP HANA was part of the roadmap.

Key business requirements were considered while putting together a comprehensive RFP document. Scalability was one significant driver - the solution had to be scalable enough to meet the growing business demands of the group. SAP certification was another basic parameter to ensure predictable and reliable performance of the solution. A few other crucial parameters like supported software, OS, middleware, TCO,

support services and leveraging of existing investments were also vital for Force Motors.

Quality is a way of life at Force Motors. It's ingrained in everything – culture, products and people. Technology could not be an exception to this mantra. For several months, the IT team carried out a detailed analysis of vendors and their products and key differentiators respectively. The team evaluated different solutions from leading OEMs on the basis of these critical parameters before arriving at the final deployment architecture. According to Abhijit Bhalerao, who heads the group's IT and is an expert having led many HANA

consulting projects in the past, "Many factors contributed to our decision on final Infra deployment architecture, primarily scalability, SAP certified appliances, futuristic infra, cost, relevant credentials and the fact that it allowed us

maximum reutilisation of our existing investments in products that were still under support."

Evolution towards transformative thinking

A complete revamp of the IT infrastructure and business applications is a long journey, which is best taken in stages. While part deployment of infrastructure has taken place at Force Motors, the rest is in the works and moving as planned. The group has deployed SAP S/4 HANA for both Force Motors and its parent company, Jaya Hind Industries. Earlier, each business was running separate production clients on the same instance of SAP. Now, it was decided to host two different SAP S/4 HANA landscapes in a multi-tenant deployment on SAP Certified appliances. The recent JV in power systems too has a separate green-field S/4 HANA landscape.

System downtime and data loss can be a nightmare for any organisation, which is why Force Motors needed a water-tight high availability solution. For this, the company procured an Automated High Availability Solution to ensure smooth unattended failover from Primary Node to Secondary Node

The company further plans to use SAP Fiori and SAP Core Data Services (CDS) platform to generate insights from HANA's embedded analytics, augmented with SAP's data warehousing with BW on HANA and Business Objects solutions. "Our digital strategy is an evolving journey woven with numerous such threads to achieve process improvements, automations, enhanced customer experience bearing in mind

the technology disruptions, changing product roadmaps, and industry 4.0 expectations. New solutions like S/4 HANA, Business Intelligence, new HR solution suite, upgraded Dealer Management System and several others to be hosted on state-of-the-art infrastructure are an essential part of this digital expedition we have embarked upon," said Bhalerao.

Force Dealer Management System (FDMS), the other major business-critical application would be upgraded on latest technology platforms (hardware + OS + database) to give dealers a superior experience while eliminating performance bottlenecks like complex reports, browser incompatibility, etc. The new dealer management system would be hosted on Composable Infrastructure providing single pane management, templatised provisioning of resources and industry leading SAN Storage supporting True Active-Active Controller Architecture and 3-way DR.

Future roadmap

Force Motors will now have a future-proof IT infrastructure to boast of which is hosted & managed in its in-house datacenter. The new scalable architecture would lay the necessary foundation to ensure that Force Motors can sprint ahead on its ambitious plans especially with large transformations on Industry 4.0, Manufacturing Execution System (MES) & Group-wide Product Lifecycle Management (PLM) already under discussion. IT will no longer be an obstacle to growth but would be an enabler during this journey. longer be an obstacle to growth but would be an enabler during this journey.

