IT boost to MRO biz

Ramco Systems on the role of technology in maintenance, repair and overhaul.

D. MURALI

IT (information technology) will provide considerable help in bringing the MRO (maintenance, repair and overhaul) business to India, avers Ranganathan Jagannathan, General Manager-Projects-Aviation in Ramco Systems, Chennai (www.ramco.com).

MRO service providers would need to meet the expectations of customers in terms of traceability and regulatory compliances related to parts/employee certifications, work procedures and so on, he elaborates during a recent interaction with eWorld.

IT systems can provide the framework and best practices that can be enforced to bring the level of consistency and transparency demanded by customers, Jagannathan argues.

"Besides, the end-to-end, fully integrated solutions can provide significant competitive advantage such as faster response time, reduced repair cycle time, and lower revenue leakage." Our conversation continues over e-mail.

Excerpts from the interview.

How is IT adding value to the MRO industry?

MRO industry has certain unique IT requirements (as distinct from traditional ERP), such as traceability, regulatory documentation and configuration management, and reliability tracking.

Apart from being highly regulated, aviation assets are very expensive and, unlike as in many other industries, are mobile. Also, the system needs to keep track of not only good parts but broken and repairable items, which are very expensive. All these call for specific solutions catering to requirements of the aviation domain as distinct from traditional ERP.

While there are products that have evolved providing point solutions meeting aviation maintenance and engineering needs of the industry, what MRO requires is an all-encompassing ERP solution.

Good IT system can be of huge value in all areas of business, from SCM (supply chain management) to CRM (customer relationship management) to EAM (enterprise asset management), besides aiding business process improvement.

IT can help cut down on cycle times, cut out costs on component overhaul, heavy maintenance, engine overhaul, etc. A good IT system measures performance against the given set of metrics and provides measures on dashboard that help in taking corrective actions and achieving overall efficiency in operations.

In order to achieve full benefit, the system should be highly integrated and should be able to drive down to the detailed history at the part number-serial number level. IT systems can make it more cost-effective and easier to track/manage.

For example, a 'planning board' functionality can match up material planning with labour planning, besides scheduling available capacity in the most efficient manner. Also, the system can validate if the persons

to be employed on the job are rightly skilled with appropriate certification as mandated by the industry laws and regulations.

Over and above, there are solutions as regards eProcurement, electronic signature, electronic flight bag, document management systems, analytics, bar-coding and RFID tracking that bring in additional business benefits.

Can you tell us how IT provides visibility at all levels of aviation MRO?

IT adoption is made easier if every level in the organisation can see benefits from its implementation.

In the case of the aviation industry, by moving towards full-scale automation, the pilot can update data online while aboard the flight and synchronise with the central system; the mechanic will have work assigned online and can report his tasks online with the touch of a button; the management will have online information in the form of analytics that provide them with data at the aircraft level, at the shop level and the organisation level.

Similarly, the regulators will have reliable information that is fully integrated and online for audit and enforcement of compliance.

More importantly, the emphasis of integrated solutions to capture information by the function that creates and owns the piece of information on a real-time basis (as opposed to a time-lagged data-entry operation by a records function) goes a long way in yielding overall process efficiencies, information timeliness as well as quality of data.

How different and crucial is IT when it comes to aviation and MRO, keeping in mind the safety and related factors?

Safety is of paramount importance in aviation and there are regulatory requirements that are to be strictly adhered to, requiring complete traceability of maintenance information at each part number-serial number level.

The MRO organisation should be able to provide sufficient data to satisfy the compliance requirement and there are heavy penalties/fines imposed by regulatory authorities (such as the FAA in the US and the DGCA in India) that can even involve grounding of flights in case of serious lapses.

Besides, in case of any untoward incident, IT system should help with traceability of root cause. Again, the improved overall quality of data, a system enforced work process/methodology and traceability offered by the integrated IT infrastructure, significantly improves the overall confidence of the customer and regulators on the MRO service provider.

From the Indian perspective what are the major roadblocks to the MRO sector's growth?

One of the key roadblocks for the MRO sector's growth in India is the weak value chain between MRO, precision engineering and other aerospace industries.

The focus on human factor is much lower than in other regions of the world. Hence for MRO sector's growth, the retention of quality technicians and attracting fresh talent will be among the foremost of challenges to overcome.

The import of spares into India is subject to customs duty, and the rendering of service is subject to the levy of service tax. The tax regime should change in order to promote the opportunity available to India for positioning itself as an MRO hub for the world.

Your take on IT's role in relation to the cutting edge developments that are happening in the MRO industry.

IT would continue to have a significant role to play to taking the "paper" out of the MRO operations.

Rendering technical manuals electronically at the point of use (the technician's work place), hand-held devices for managing core repair functions such as sign-offs and discrepancy resolution, and RFID-based component tracking (by storing maintenance data on the tag in a common industry standard data format, so that birth/maintenance data can be read by any other company along the aviation value chain during the parts' lifecycle) are areas that are likely to see increased adoption.

The MRO industry is moving towards the adoption of prognostics and health management information systems such as engine health monitoring.

Expert systems for advanced troubleshooting, reliability analysis feedback to customers, better integration with OEM systems, and fully electronic supply-chain for outbound and inbound logistics are other areas that may move into mainstream.

Other trends include the emergence of bundled BPO (business process outsourcing), SaaS (software as a service), total support service operations, OEM sophistication and rapid globalisation of MRO.

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BHAGYA PRAKASH K

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