

Federal Contract Management and Vendors' Readiness

Part Three: Meeting Federal Requirements

P.J. Jakovljevic - January 14, 2005

- 1. Meeting Federal Requirements**
- 2. Service Parts Management**
- 3. Challenges**

Meeting Federal Requirements

Companies that are not already offering the capabilities described in [Part Two](#) will likely not be able to tap the recent surge in the federal and defense markets. Conversely, those vendors and their users—government contractors—who can deliver comprehensive solutions that satisfy the exacting, stringent requirements of federal agencies are in the driver's seat to capture that market segment. Many customers require weekly progress reports and may be comfortable with the **Microsoft Project** format, but the product on its own cannot give the visibility and scheduling over a great number of concurrent projects, and that is where the products from niche vendors come into the picture within the mid-market manufacturing segment and even for smaller defense contractors.

Increased federal adoption of ERP systems may imply that these have been increasingly offering a government endemic functionality. As an example, leading ERP vendors provide procurement software that works with pertinent laws and regulations, such as the Code of Federal Regulations (CFR), DoD Contracting Regulations, General Services Administration (GSA), Federal Acquisition Regulations (FAR), Federal Supply Schedules (FSS), etc. Also, they provide *human resource* (HR) systems that align with military or general schedule pay rates, and financial systems that comply with Joint Financial Management Improvement Program (JFMIP) practices for government financial systems. Further, the Tax and Revenue Management module within some ERP suites provides federal, state, and local government agencies tools to automate the tax collection process by enabling constituents to conduct and view financial transactions.

In addition to the above-depicted government-oriented manufacturing and accounting capabilities (i.e., *work breakdown structure* (WBS) with native *earned value measurement* (EVM)), some companies require an ability to track every

product, each of its subassemblies or parts, and its stage in the production cycle, as a prerequisite to production efficiency and profitability, which is especially true for contracting MRO organizations. Additionally, the ability to store and access quality tests history data on an ongoing basis and the ability to thoroughly analyze that data are crucial in keeping costs low and quality high.

Service Parts Management

The need for better service parts management is finally gaining top-level management attention in many A&D companies since excessive carrying costs and obsolescence losses are being recognized as an unexploited opportunity for savings and a better bottom-line performance.

The situation becomes even more complicated with *rotable parts*, such as interchangeable elements of an aircraft that are removed, rebuilt, or reinstalled, almost as a rule always on a different aircraft. In this industry where every nut and bolt is important for safe operation, it takes an immense attention and effort to track interchangeable components and subassemblies for costing, replacement scheduling, and time-to-failure prediction. A&D companies design low-volume, high-cost products for high reliability, but still maintain stocks of complex and expensive spares, since in this industry, the impact of any failure is large and requires adequate stocks of parts at several locations for rapid replacement in case of repair. On one hand, minimizing the number of new parts introduced into the market (and subsequently into inventory) should be a major aim, particularly as parts face obsolescence from new product introductions, but, on the other hand, rotable parts and harvesting repaired components only add to the complexity and efficiency of this process.

Lot and serial tracking capabilities, the so-called *tail effectivity*, permits users to tie every part (within part lists and diagrams) on a plane back to that one entity. Serial number (tail) effectivity for the aircraft and aerospace industry is enabled since within the astute ERP system, a table should carry information on each serial or tail number for each item used, including the original date the serial or tail number was added, received, or stocked, as well as item information, such as the original vendor lot number, inventory quantities, weighted average costs, and the last inventory adjustment date.

The MRO companies also have very stringent requirements they must meet regarding tracking parts and condition codes. This functionality allows for demand by item condition to be matched against inventory by item condition, and it also allows for inventory management and MRP-based supply planning by condition code. While

these functionalities may sound ordinary and appear to be offered by many vendors as 'supported' when responding to *requests for information* (RFI), subsequent product demonstration often reveals the need for some tweaking or even for a major modification in order to satisfy stringent customer requirements. The devil is always in details.

For a detailed discussion see [*MRO and Spare Parts Management Considerations*](#).

Challenges

Incidentally, while the decision of some and not necessarily all large vendors to embrace the Java 2 Enterprise Edition (J2EE) development environment is prudent given a majority of their existing customers on UNIX and **Oracle** platforms, the conundrum for these vendors might be the fact that the vast majority of their new and prospective customers are the companies that have less than \$200 million (USD) in revenues and with a likely preference for **Microsoft**-centric technologies and who might not be too excited about a seemingly more complex J2EE environment. At the same time, the need to technologically modernize the product and concurrently provide smooth migrations to existing customers, while investing lots of *research and development* (R&D) funds in functional enhancements as to be ahead (or at least abreast) of the pack will be a significant challenge for a smaller vendor.

Further, the broader *enterprise asset management* (EAM) and *computerized maintenance management systems* (CMMS) applications continue to grab headlines as a realistic way to reduce expenses and increase revenues. For one, maintaining an adequate level of repair or service parts inventory based on forecasted equipment usage can prevent already limited funds from being over-allocated, just to achieve a false sense of security. Also, an effective preventive maintenance program can improve equipment utilization and availability, enabling production schedules to be achieved, especially when an exorbitantly expensive equipment replacement is not an option during depressed economic times.

Therefore, A&D companies require an ever broader suite of functionality ranging from a strong engineering foundation and customer service front-end to support demand management, all bundled with a set of administrative and reporting capabilities and integration to financial and *human resource* (HR) management software, as to share information that drives operational efficiency, such as inventory control and labor control. Bad news for some relatively smaller incumbent ERP vendors like [**Deltek Systems**](#), **Relevant Business Systems**, **Cincom Systems** or **Encompix** could be the fact that some of their direct and likely competitors like Oracle, **IFS**, **Intentia**, **SAP**, **Glovia**, and **Ramco Systems** offer more integrated

capabilities like automated maintenance scheduling, tracking, and management; remote diagnostics; *reliability centered maintenance* (RCM); fleet or facility management and planning; centralized access to engineering data; parts planning, sourcing, valuation, and category spend management; asset performance reporting, and so on. For more information, see [*EAM Versus CMMS: What's Right for Your Company?*](#)

Competition also comes from the pure-play MRO likes of **Avexus**, **Manugistics** (after its acquisition of **Western Data Systems [WDS]**, see [*Manugistics Indulges In The Open M&A Season*](#)), **Xelux**, **Pentagon 2000**, the **CORRIDOR** product from **CONTINUUM Applied Technologies**, **Mxi Technologies**, **Sinex**, and so on. For a more complete list of vendors that have the aspirations for this field, see [*ERP Vendors Moving to Aerospace and Defense Markets*](#).

User Recommendations

On a more general note, companies who are project manufacturers, ETO, build to order, jobbing shops, or contract manufacturers should think carefully when selecting an ERP system. Given the maturity of the ERP market, its ongoing consolidation, and the fact that competitive advantage is hard enough for manufacturers to find, they should not compromise on their requirements. Especially small and midsize enterprises should ask hard questions about the scope of an ERP system, and how it supports project-based idiosyncrasies. After all, a new system should always be about improving the business and not a mere technology initiative.

The vendor that listens to your needs instead of telling you what “great things” its software can or cannot do, and which speaks your language and uses your terminology and vernacular is a good candidate to be a vendor that understands your business. Still, as a sort of a litmus test, prod each vendor to tell you what percentage of its sales would belong to your industry. Vertical focus indicates that software contains industry-specific features and that ERP vendors have certain industry expertise. Also, in implementing an industry-specific application, it is important to ensure that the application provider’s implementation team includes members with in-depth knowledge and experience in that industry. Vendors geared toward certain industries should have solid integration skills or strong relationships with systems integrators that have industry-related expertise. This should significantly streamline implementation time by eliminating a lengthy vendor or integrator learning curve.

Often, buying a completely integrated solution is not an option when the companies have either an accounting or project-management system in place, which they will not simply rip and replace. Thus, prospects should assess the contesting vendors' flexibility to integrate to legacy and other third-party applications, and to keep up with new versions or upgrades to both solutions. Built in interfaces to commonly used third-party products like Microsoft Project, **Microsoft Office**, **AutoCAD**, **Crystal Reports**, etc., should be questioned, possibly during software demonstrations.

This is Part Three of a three-part tutorial.

Part One defined the entry of small vendors into federal contracts.

Part Two discussed dealing with federal contract requirements.