



Case Study

Automotive – Tier 1 Supplier





Company

Air International Thermal Systems (AITS)

Location

Auburn Hills, Michigan (North American Division)

Industry

Automotive

Business Challenges

- Geographically distributed teams struggling to share information
- Keep administrative overhead down
- Paper-based systems limiting bid process and constraining contract manufacturing
- Minimal and inconsistent IT infrastructure increasing costs and risks

Solutions

Arena BOMControl
Arena Projects

Business Benefits

- More efficient processes
- Reduced part costs affords a competitive advantage
- Streamlined change review and implementation processes

ROI Results

- Saved 10% on part cost
- Reduced change, implementation and outsourced manufacturing costs by \$115,000
- Lowered 20% reduction in time to procure supplier quotations

How Air International Saved Hundreds of Thousands of Dollars in Outsource Costs

BUSINESS CHALLENGES

The Air International Thermal Systems group is a tier-1 supplier of heating ventilation and air conditioning (HVAC), seat systems, steering systems, metal pressings, fabrication, modular assemblies, and rail and bus HVAC systems to the world’s automotive industry. With divisions in Australia, North America, China, Thailand, Europe and India, Air International (AI) has more than 1,500 global employees, 20 manufacturing locations, and seven technical centers that currently service more than 25 automotive companies with customers that include General Motors and Volkswagen.



Since 1996, the company has used an outsourced manufacturing strategy instead of maintaining its own manufacturing facilities. With no manufacturing plants in North America, Air International depends on its supply chain to provide a less expensive, high quality product faster than its much larger competitors. This outsourcing strategy provides Air International with a number of key benefits, including lower overhead costs, the ability to find the best technology for the lowest price, and the flexibility to select the right contract manufacturer.

For the first several years, communication between Air International and its outsourced partners was manual. Bids were developed on paper, spreadsheets, and spawned the seemingly never-ending rounds of follow-up questions, faxes and emails. These multiple copies and versions of supporting documents were prone to error and tedious to track. As a result, AI could only obtain a limited number of quotes for any new project—and had difficulty ensuring it was always taking advantage of the best quote available. AI believed this increasingly complex manual communication was forming a barrier that was preventing the company from maximizing the benefits of its contract manufacturing strategy.

“Lacking the ability to afford a six figure product lifecycle management [PLM] system, Air International did the best it could with spreadsheets, emails and, FTP sites. It hand-delivered and overnighted CDs until 2002,” said Michael Repetto, Business Director at Air International.

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— Michael Repetto, Business Director, Air International Thermal Systems

In late 2001, Repetto began investigating commercial product lifecycle management (PLM) solutions to see if any would improve the outsourcing process for AI, noting: “With teams working around the clock and around the globe, we were spending too much time on administrative overhead—and we still couldn’t ensure that everyone in our network always had access to the latest information.”

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Repetto briefly considered client/server PLM systems; however, these systems were expensive to install, required additional IT staff involvement—forever, necessitated costly, disruptive system upgrades, and didn't offer real-time collaboration for external partners or globally dispersed employees. And they required months of downtime to install as opposed to weeks for a cloud-based system.

“We would have had to hire additional IT staff just to set up a client/server PLM system. This would have been a big distraction at a time when our project schedule could not be impacted. We could have given access to some of our partners with additional customization and VPNs, but most of them don't have the IT infrastructure in place to allow that,” Repetto notes. “We needed a solution that could be deployed quickly and would meet all of our functional requirements, while optimizing our current resources. A client/server PLM system would have required significant upfront investment and would have taken much longer to implement. And we couldn't even be sure it would give us a better way to manage our outsourced manufacturing.”

SOLUTIONS

Arena PLM

After ruling out on-premise, client/server PLM systems, Repetto decided to consider web-native services. After a review of available solutions, Repetto recommended Air International choose Arena Solutions for the following advantages:

- BOM management functionality gives the entire design chain a unified view of all product design information. All the time.
- Web-native architecture allows global product teams to collaborate easily and securely.
- Paperless product change management functionality ensures streamlined processes.
- Employees and suppliers alike can access the latest product information.
- Ease of implementation allowed Air International—and its suppliers—to begin using Arena PLM BOMControl instantly.
- A low total cost of ownership due to the absence of IT overhead, the cost-effective subscription model, automatic software upgrades and lack of large upfront investment.



Air International's Arena PLM account was activated in minutes. Then Air International simply imported its data, set up the administrative functions, and configured access for key suppliers and manufacturers. In less than a week, employees were exploring the full Arena PLM feature set and sharing the latest BOMs with their contract manufacturers—at no cost to any of the suppliers. “Going with Arena PLM was essentially a no-risk proposition,” says Repetto. “With no large upfront costs and a subscription model, we could evaluate the full system with our own data and be confident that it would work in our environment before making an ongoing investment. The ability to simultaneously mitigate our risk and rapidly deploy a new system was critical for a company like ours in an increasingly competitive market with contracting margins and shrinking product development cycles.”

As AI's needs to meet demands of ever-shortening product life cycles in the industry have grown, Arena has met these needs with continued solution expansion, even anticipating new supply chain requirements and challenges, all within the cloud-based, easy-to-expand architecture that originally attracted AI to Arena PLM.

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Arena Projects

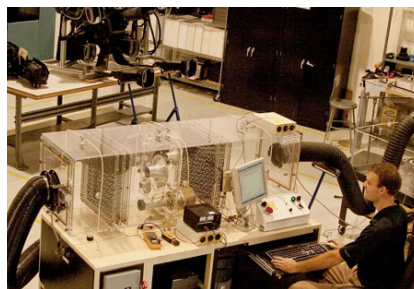
AI also leverages Arena Projects, a cloud-based, high-level project management solution with easy-to-use scheduling and task assignment capability which nests hand in glove with Arena PLM. Before using Arena Projects, AI used the fallback of many tasked with project management, Microsoft Projects. However, as Repetto notes, “One of the things I’ve always felt Microsoft Projects was great for was laying out your initial timing plan, [...] and then that plan becomes the guide to get through the program, but what I’ve never found is that we go back and revise that plan too much.” Now that AI uses Arena Projects, project plans are dynamic and linked to references in Arena PLM, which means team members can easily make adjustments to the initial timing plan so that the stage gate review is “live” and “everyone has the same version of the truth.” As a point of information, Arena Projects also works well with Microsoft Projects in the event an entity elected to keep it.

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— Michael Repetto, Business Director, Air International Thermal Systems

Arena Projects also allows AI team members to save time by taking the guesswork out of where to save and find files for product projects which are part of the product universe, but not directly on BOMs. Additionally, Repetto notes that Arena Projects helps individual team members stay on track by making each person aware of his or her tasks— sending email reminders—and allowing project managers and senior management to have visibility into the process. “Arena Projects will definitely help our ability to meet the timing targets because we can see everything,” said Repetto. “In Microsoft Project, the timing plan—well, there’s only one place it resides, like in a war room—and you don’t know if it’s been updated. In Arena Projects, you always see the latest timing plan. If you’re already using Arena PLM, Arena Projects is an absolute no-brainer.”

BUSINESS RESULTS



Beyond the far lower purchase price and IT support costs associated with Arena PLM as opposed to on-premise alternatives, the logistics of deploying the system across a large supply chain was a big benefit for AI. “With a cloud-based solution, there’s no need to deploy software on-site for suppliers and the cost of adding suppliers is a fraction of the on-premise providers,” says Repetto. “Air International collaborates with more than 300 suppliers through Arena, a feat which would prove far too expensive and unwieldy with traditional PLM software.”

According to Repetto, AI saves 10 percent on its parts cost with Arena PLM because of “greater visibility into a supplier’s costs.” This has allowed AI to cut its own prices by 10 percent to stay competitive with its larger tier-1 competitors.

Find out how Arena can help you achieve success and take your company from chaos to calm. Sign up for a demo at www.arenasolutions.com/plm-demo

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— Michael Repetto, Business Director, Air International Thermal Systems

AI also uses Arena PLM to save significantly on its injection mold tools, Repetto notes. “These tools can cost anywhere from \$200,000 to \$500,000 each, and they have traditionally been manufactured in North America,” he says. “Arena gave Air International the freedom to source globally, which led us to contract with Chinese manufacturers who provide injection mold tools at 33 to 50 percent less than traditional manufacturers. Plus, they delivered them 20 to 33 percent faster. On a complete air conditioning project, this can result in significant savings of at least hundreds of thousands of dollars, which significantly affects our ability to provide competitive quotations.”

Arena PLM has also been put to use by AI to optimize prototyping process. “Making an incorrect prototype assembly can waste more than \$10,000,” says Repetto, “and since the prototypes can take weeks to build, precious time is also wasted, introducing delays that can cascade throughout the schedule.”

Having a “single version of the truth” that all suppliers can follow has eliminated mistakes due to miscommunication or the use of out-of-date documents, says Repetto. “When an engineering change order is made, which can happen frequently during the design process, all relevant suppliers are notified immediately and the documents are readily available.”

During production, AI uses Arena PLM to ensure suppliers are making the right part to the correct revision level. This aspect is critical, Repetto says, “because mistakes made at this stage could require us to go directly to the automotive OEM assembly plant to replace incorrect products and incur substantial sorting costs, expediting costs and penalties.” Using Arena PLM, all suppliers and manufacturing sites have access to current drawings and CAD data, he adds. “In the event an issue arises, they can quickly find and download the relevant data to compare to the product, which results in faster resolution of issues.”

Arena strengthened the bonds of AI’s supply chain for maximum business impact. Beyond prototyping and production issues, the mere fact of managing such a large and global supply chain carries with it its own headaches. After all, established suppliers can go out of business, change focus, or even get dropped due to substandard quality or delivery issues. When AI needs to get quotes from new suppliers, they can add prospective suppliers to Arena PLM, which enables them to share all of their drawings, CAD files,



specifications, and other documents, Repetto says. “All information is completely up to date and everyone has access to the same information, making the quoting process much more efficient. It eliminates the problem of global version control!”

Repetto adds that Arena PLM also makes the process easier for new suppliers. “For instance, if a potential new supplier is interested in selling

to Air International, once we send the supplier an invitation, sales reps can upload a virtual tour of their facility, presentations and data sheets that give us a complete picture of their capabilities,” he says. “And since there’s no need to purchase a site license for quotations, we can source from suppliers all over the world, which enables the company to access much lower pricing through increased competition for their business.”

This streamlined process has enabled AI to reduce the amount of time it takes to procure supplier quotations by 20 percent, according to Repetto. “Arena has helped our company tremendously,” says Repetto.

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