



S Y S T E M S

A Productivity Engineering Company



Case Study

ARAS Solutions for HI TECH Manufacturing



aras
SYSTEM INTEGRATOR
Partner 2014

Domain	Hi-TECH Manufacturing
Engagement	Implementing Quality Management System to comply with AS9100C and ISO/TS 16949 standards
Company Background	<p>AMTECH Electro circuits is a burgeoning enterprise based out of Troy, United States, providing electronic innovation support and electronics manufacturing services to leading companies in automotive, industrial, high technology, medical devices, and aerospace and defense.</p> <p>AMTECH’s commitment to quality, service and efficiency is reflected in every area of the business. The company appreciates the value their customers place on their supply chain, so customer service, communication and responsiveness are paramount. The company demonstrates its dedication to quality with APQP, FMEA and other process optimization initiatives on an ongoing basis. And when it comes to costs – direct and indirect – AMTECH is serious about savings.</p>
Need Statement	<p>Inefficient BOM Management for Customer Products: AMTECH is a high mix, low volume business They have a lot of different part numbers that we are constantly setting up and changing over, and they introduce new products on a daily basis. In order to work with our high-reliability customers, they must be able keep pace, tracking all revisions and managing the individual AMLs as well as the product lifecycle, part and BOM for each product, for each customer. It is a very time consuming and labor intensive process.</p> <p>Non-Optimal Inventory Management: Optimal Inventory Management was major issue, as different customers have different AMLs and can ask for same part number for different work orders. There was no system in place to track this and take advantage of ordering in mass scale for same part and have right inventory.</p> <p>Wastage due to lack of Process Control on Shop floor: Operators on shop floor did not have organized information on their work orders, work instructions. This used to lead to wrong work done with incorrect sequence on parts leading to wastage.</p>

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Solution Proposed

AMTECH was looking for flexible solution that takes care of Product data management, BOM management, Quality Management. Ability to configure/customize the system according to its business process was key requirement.

AMTECH chose ARAS due to its capabilities to support Quality Management Processes, BOM management, Configuration and Change management and flexibility to implement business logic. Its comprehensive workflow capabilities are being optimally used by AMTECH.

BOM Management:

ARAS is managing all Product BOMs, specification drawings and its revisions.

Process Engineering

ARAS is used for Process flow definition. Routings are defined, along with Tooling, NC program and cycle time definitions for setup, production, etc.

Quality Planning and Management

Quality Control plan based on key characteristics are created and managed using ARAS. CAPA analysis for Quality events is managed. Audits are managed using ARAS.

Inventory Optimization

Based on AMLs of various Products, common parts are identified and accordingly mass ordering is done to take advantage of bulk ordering. Inventory levels are optimally managed based on algorithms developed in ARAS.

Digital Manufacturing

Today on the shop floor, all work orders are managed well, the sequence of operations is controlled well. All operators know the work instructions and any changes in process by Process Engineering are implemented on shop floor seamlessly. This has resulted in reduced waste.

Challenges	Adoption of IT solution on shop floor was a challenge. Training program were conducted to educate the users on shop floor and the system was made simpler to be adaptable by non-computer users.
Execution	<ul style="list-style-type: none">● The execution was started with demonstrating key features of ARAS to business stake holders● Once value proposition was well received, key burning issues were identified. Solutions for these issues were implemented and business benefits were realized. This also helped to gain confidence of business stake holders in understanding stability and scalability of the platform before rolling out to larger audience.● Then sequentially important other business processes were implemented, on ARAS, with shop floor implementation done in last phase of the implementation.
Benefits	<ul style="list-style-type: none">● Compliance to ISO 9001, ISO/TS 16949 & AS 9100 standards● Improved Quality Management● Inventory optimization● Reduction of Waste● Organizational Knowledge Managed well● Increased process efficiency due to well-connected process with shared data for all stake holders in the business process.

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