



# **MAXIMIZING SUPPLIER QUALITY WITH LIMITED RESOURCES**

**Q&A WITH NTS UNITEK**



Ahead of the American Aerospace & Defense Summit 2018, we spoke to NTS Unitek to discuss how to maximize supplier quality with limited resources. In this Q&A eBook we discuss best practices to strengthen a supplier quality management program, how A&D companies can ensure product quality and what strategies A&D companies can employ to streamline their inspections and audits.

## What are the best practices to strengthen a supplier quality management program?

**Stop the bleeding** – Deploy targeted resources to the suppliers that are causing the most disruption. Unitek has helped many customers with this by deploying experienced quality professionals with commodity/technical expertise and local to the supplier. The resultant effect is a faster response time, lower labor costs (not fully burdened), infusion of expertise and cost savings which translate into more presence (FTE's) at the supplier delivering value to the company and programs.

**Shift from Reactive to Proactive** - Plot the progression from reactive services (source inspection) to strategic services ("top to bottom" requirements assessment) and resolution of non-conformances, compliance issues, and engineering differences.

**Look at total costs** – Failure, appraisal, and prevention. Understand where and how you're deploying organizational resources and ensure that it's in sync with value stream priorities.

**Link the Supplier Quality (SQ) organizational goals to company value stream and financials** – Unitek understands how the SQ organization fits within the company and the impact it has on program execution and company financial performance. Unitek takes a macro integrated view (not a functional silo view) and collect inputs from internal customers like PMO's (they define value). The SQ organizational strategy should be a natural extension of this value stream perspective.

**Collect and use data** – Without data, the organization is running blind. Use the data to validate supplier performance as well as plan and prioritize organizational initiatives and to validate actual results met planned expectations.

## How can A&D companies ensure quality at every phase of the product lifecycle?

**Involve Suppliers in Design** – 85% of the total cost of an item (beyond unit price) is baked into the design – so involve suppliers early in the design process; leverage their expertise for a more robust, producible and affordable design.

**Prepare Suppliers for Production** – As customers transition from development to production, they need to ensure supplier readiness; supplier selection, production readiness, quality plans, engineering baselines, etc. Utilize Unitek's services for strategic sourcing, supplier assessments, quality system & key process audits, validate manufacturing capacity/capability, technical data reviews, etc.

**Overcome Design, Quality, Manufacturing, and Delivery Issues Quickly** – Address and resolve issues quickly and fully; "having Unitek on-site support is an accelerator and extremely valuable". Utilize Unitek services for non-conformance resolution, engineering NOC's, and delivery assurance.

**Proactively Sustain Performance** – Once performance is achieved, don't disengage fully but rather go into a 'preventive maintenance' mode that sustains performance levels and identifies any disruptors early on before they realize into product/program impact.

**Use the Existing Tools** – Design for Excellence (DFx) methodologies, Quality Planning, Functional Configuration Audit and Physical configuration audits (FCA/PCA's). Many companies skip these to rush a program through the lifecycle stages to their peril.

**Integration** – Involve suppliers early in the design process; leverage their expertise for a more robust, producible, and affordable design. The temptation is for Engineering the lead this effort and exclude Quality organizations until production contracts are let – involve supplier quality early on at each stage of the lifecycle.

**Transitions** – Ensure swift transitions from one product/program lifecycle phase to the next. Involve the Quality organization. For example, when transitioning from development to production is there a quality plan in place that tackles the highest risks or historical missteps?





## How can A&D companies maximize supplier quality with limited resources?

**First Understand Total Costs** – Failure, appraisal, and prevention (in order of most disruptive and expensive to least).

**Focus Your Workforce and Resources on the Right Priorities** – Plan your Quality programs Make/Buy decision with the use of Unitek's service model and resources to supplement departmental workforce, infuse new technical skills, and sustained on-site presence in the supply base.

**Shift from Reactive to Preventive** - Use savings from failure cost reduction to fund prevention activities (and if you use Unitek your support levels go even further due to significant hourly cost savings). The math is highly compelling. Plot your SQ strategy and utilize the Unitek services portfolio for maximum return on investment.

## How can A&D companies benefit from implementing quality early in the product lifecycle?

**Prevent Issues Down the Road** - Identify producibility issues, communicate expectations with supplier and the quality planning teams to achieve more producible and affordable designs. Additional design and planning performed at the initial design stage significantly saves time and cost when moving to full production mode.

## What are some of the biggest quality and compliance challenges in the Aerospace & Defense industry?

**Legacy Programs** - Are always a challenge, because specs go out of date, material (or tooling) obsolescence, new technologies emerge that make things more cost efficient, but incorporating engineering design changes are a big challenge.

**Post-FAI Rejections/issues** – suppliers pass FAI but yet continue to have nonconformance's thereafter. Utilize Unitek's PPAP / APQP service to lock the product manufacturing process for consistent conformal results.

**New Product Introduction** – As customer performance requirements have increases the design complexity has increased. Even with improvements to manufacturing technology, Suppliers continue to struggle with producability and compliance requirements.

**Counterfeit part detection and mitigation planning**- The introduction of counterfeit parts, whether they are electronic, mechanical or other adversely affects the U.S. supply chain.



## What strategies can A&D companies employ to streamline their inspections and audits?

**Inspections** – Shift from receiving inspection (destination) to end item inspection (source) and ultimately to in process inspections (for low volume, high dollar, long lead time).

**Audits** – Plan ahead, look at process maturity not just compliance (binary approach), and leverage industry tools like OASIS.

**Use Third Party for Timing and Cost Effectiveness** – Utilize Unitek's services for inspection and audits for capacity, technical expertise, and labor & travel savings.

Customers receive secondary benefits of better visibility thru audit findings, process maturity gaps and inspection issues. Suppliers benefit as they learn and adjust for the necessary program requirements which benefits their buy off process, quality ratings, brand and business cycle.



**NTS Unitek** has grown beyond its initial area of source inspection expertise over the course of many decades, and today we are a globally focused solutions provider with a continually growing menu of technical services. NTS Unitek offers an ever expanding range of global supplier quality, supply chain management and technical support services. Clients appreciate the value we bring to their business as all our services are scalable, designed to expand and contract based on the complexity, rate of growth, and volatility of your supply chain.

To find out more visit [www.nts-unitek.com](http://www.nts-unitek.com)

A banner for the American Aerospace & Defense Summit. The background is a dark, high-contrast image of a fighter jet in flight, with a yellow diagonal shape overlaid on the left side. The text is white and positioned on the yellow shape.

**AMERICAN  
AEROSPACE & DEFENSE  
SUMMIT** DECEMBER 11-12, 2019  
GLENDALE, AZ

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