

# AERO ENGINE SUPPLIER QUALITY GROUP (AESQ) OVERVIEW



**BARBARA NEGROE**  
EXECUTIVE SOURCING QUALITY LEADER  
GE AVIATION

# Aero Engine Industry Burning Platform

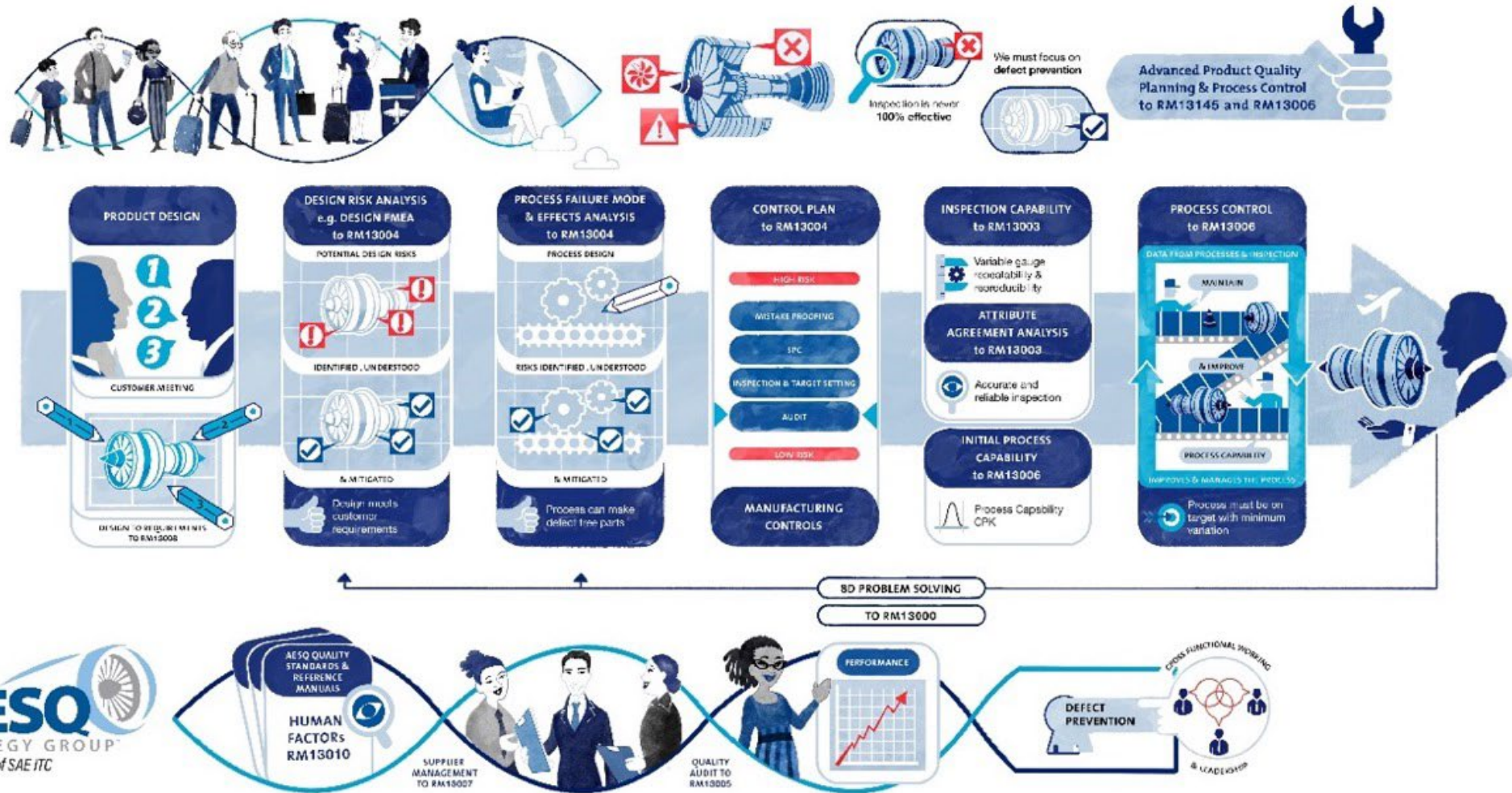
*Aero Engine Manufacturers created a Collaboration working group to address burning platform in 2013 with key Global Suppliers*

*Used the Automotive example of QS-9000 with Ford, GM and Chrysler as the model*

- Airline passengers set to double in size over the next 20 years
- Customers expect Zero Defects
- Increasing level of supplier made engine content
- Global Supplier Footprint
- Large number of common suppliers between engine manufacturers
- Wide range of Aerospace engine supplier businesses, from <\$1M to >\$2B
- Improving Quality, Cost and Delivery remains a key challenge



## Defect Prevention Key Quality Tools for Zero Defects



**Defect Prevention Tools Must Work as a System**



# Aero Engine Supplier Quality Group Principles



- Aero Engine Manufacturers created a Collaboration working group to address burning platform in 2013 with key Global Suppliers
- Used the Automotive example of QS-9000 with Ford, GM and Chrysler as the model
- Purpose is to:
  - Simplify and Standardize Aero Engine supplier requirements through the removal of duplication and waste
  - Create a common language for Quality
  - Build on existing industry standards, where they exist
  - Create Requirements that are simple, prescriptive, and auditable
  - Promote the use of standardized 3rd party training
  - Deliver results with pace
  - Focus on effective deployment and improving the capability of the shared supply chains



# AESQ Strategy Group Members



## AESQ Members

Cincinnati Thermal Spray

Consolidated Precision Products

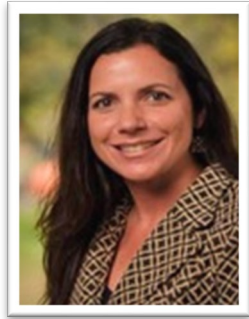
Meggitt PLC

Solar Atmospheres

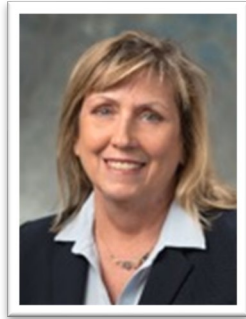
### AESQ – Aerospace Engine Supplier Quality Strategy Group

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# AESQ Strategy Group Members



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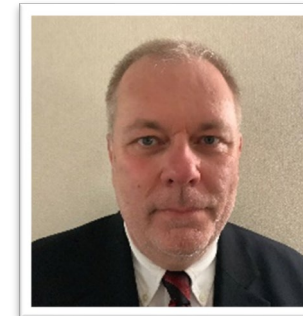
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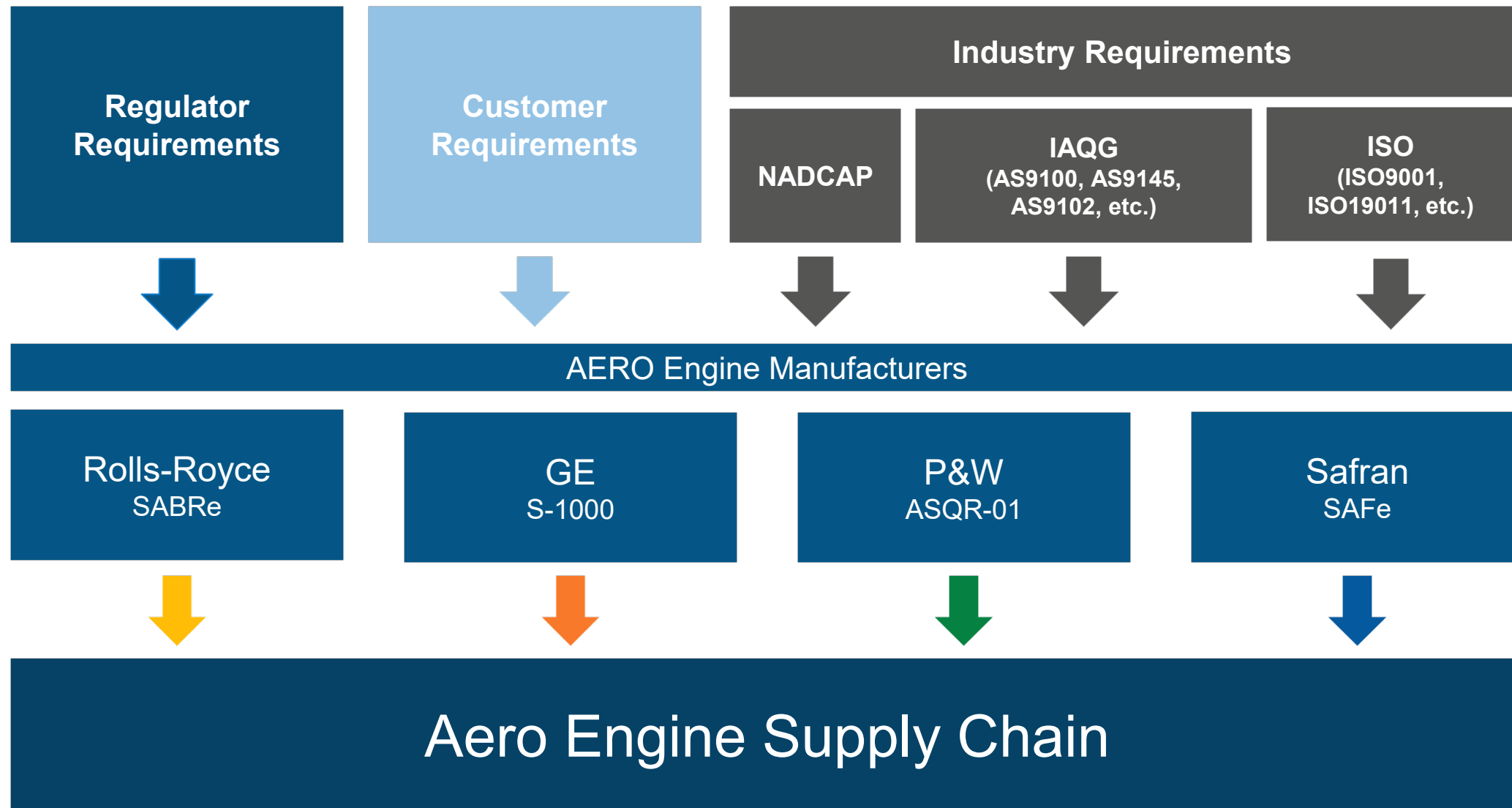
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## AESQ – Aerospace Engine Supplier Quality Strategy Group

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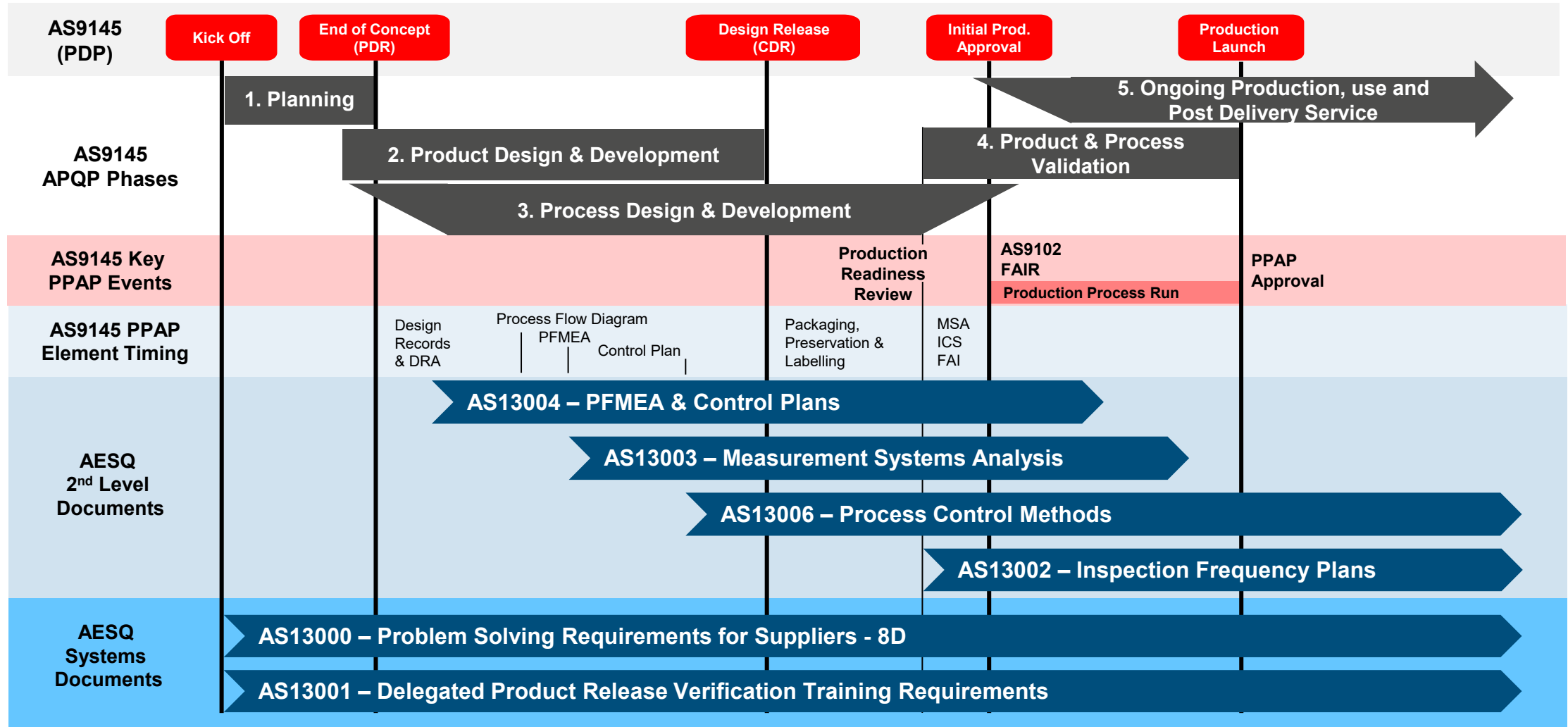
To establish and maintain a common set of  
Quality Requirements that enable the  
**Global Aero Engine Supply Chain**  
to be truly competitive through lean, capable processes  
and a culture of Continuous Improvement.

# Aero Industry Requirements Flowdown 2012





# Product Life Cycle & Current AESQ Document Interaction



# Example Best Practice Stories



## Sam Suzhou make Engine Mounts

16 Part Specific FMEAs using AS13004 created in 3 months  
PFMEA led to the Introduction of error proofing and prevention controls

Defect Free since September 2017

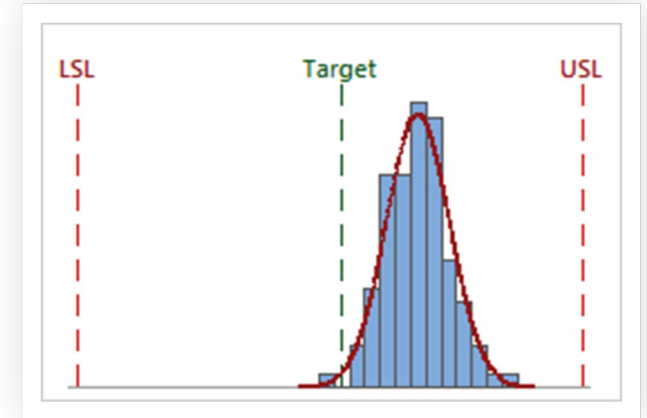


## Fan Case Delivered Defect Free at PPAP after applying AS13004, AS13003 and AS13006

70 consecutive parts now delivered Defect Free

Manufactured by GKN, Newington

PPAP completed in 6 months instead of the usual 18 months



## IPT Turbine Blade machining using AS13006 Real Time SPC

98% of features Cpk >2, the other 2% Cpk >1.67

Zero Defect standard met since production start (5,000 blades)