



Working for our members



SC21 How to Reach Quality, Delivery and Supply Chain Excellence

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SC21 SUPPLIER PERFORMANCE MEASURES

SC21 participants have agreed to implement consistent quality and delivery measures to meet customer needs in a highly competitive global market.

Ultimately the key goal is, in time, to achieve zero defects and 100% on-time delivery (in both product and service environments) at all stages of the product/service lifecycle.

It is important to note that to achieve a performance standard award:

- Q&D performance shall consist of 12 consecutive rolling performance data points representing the last 12 months
- Each monthly rolling performance figure shall be the average performance for its preceding 12 months
 - Therefore 23 months of data is required to demonstrate 12 months of rolling performance data
- All 12 data points must equal or exceed the standard to qualify for an award

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SC21 SUPPLIER PERFORMANCE CRITERIA

Each SC21 company should use the following performance indicators for quality and delivery:

Award Level	Delivery	Quality	Continuous Sustainable Improvement Plan (CSIP)	ManEx	BusEx	RelEx
gold	99.00% - 100%	99.90% - 100%	Improvements identified, prioritised and implemented, focused on performance improvement activity, regularly reviewed including with customer(s)	> 500	> 500	> 500
silver	95.00% - 98.99%	99.50% - 99.89%		> 400	> 400	> 400
bronze	90.00% - 94.99%	98.00% - 99.49%		Assessment completed with score 0 - 399	Assessment completed with score 0 - 399	Not Mandatory for Award Highly recommended especially Self Assessment

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QUALITY

Customer acceptance or reject rate is a good indicator of quality customer satisfaction in the aerospace industry, these together enable customer satisfaction to be gauged and acted on. Meeting quality targets not only improves customer satisfaction but also reduces your costs by eliminating scrap, rework and unnecessary inspection.

'rejects' = units out of specification and not accepted on concession.

$$\text{quality} = \frac{\text{number of rejects}}{\text{number of deliveries}} \text{ (expressed as a \% or ppm)}$$

The percentage must include 2 significant digits after the dot.

DELIVERY

Delivery schedule achievement is fundamental to a high performing supply chain and poor performance in this area has a detrimental effect on both customer satisfaction and customer performance.

$$\text{delivery} = \frac{\text{number of 'on time' deliveries}}{\text{number of scheduled deliveries}} \text{ (expressed as a \%)}$$

The percentage must include 2 significant digits after the dot.

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CERTIFICATIONS AND ACCREDITATIONS

The Quality Certifications and Accreditations recommended from industries are indicated below:

		ISO 22301		ISO 44001/BS11000		
AS/EN/JISQ 9100		ISO 9001		ISO/IEC 17025		International Standards
AS/EN/JISQ 9110		ISO 14001		ISO 13485		
AS/EN/JISQ 9120		ISO/TS(IATF) 16949		ISO 29001		
OHSAS 18001/ISO 41000		ISO27001:2005		ISO 50001:2011		
ISO 41000		Pt 147		ISO 3834		
FAA 14CFR Pt145		EASA 145		CAAC MOC		Regulatory Certifications
TCCA 145		Pt 21J		Pt 21G		
NADCAP CP		NADCAP CT		NADCAP WLD		Nadcap
NADCAP SEAL		NADCAP MTL		NADCAP HEAT T		
NADCAP COMP		NADCAP NM		NADCAP AQS		
NADCAP SE		NADCAP ETG		NADCAP NDT		
NADCAP EDM		NADCAP HD		NADCAP Others		
UKAS		ITAR Approval		DFAR Approval		Arms Regulations
Boeing D1-4426		ANSI/ESD S20.20		Distr or Ltd Appr.		Others
		Cyber Essentials		Def Stan 05-135		

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ZERO DEFECTS – WHAT DO WE MEAN?

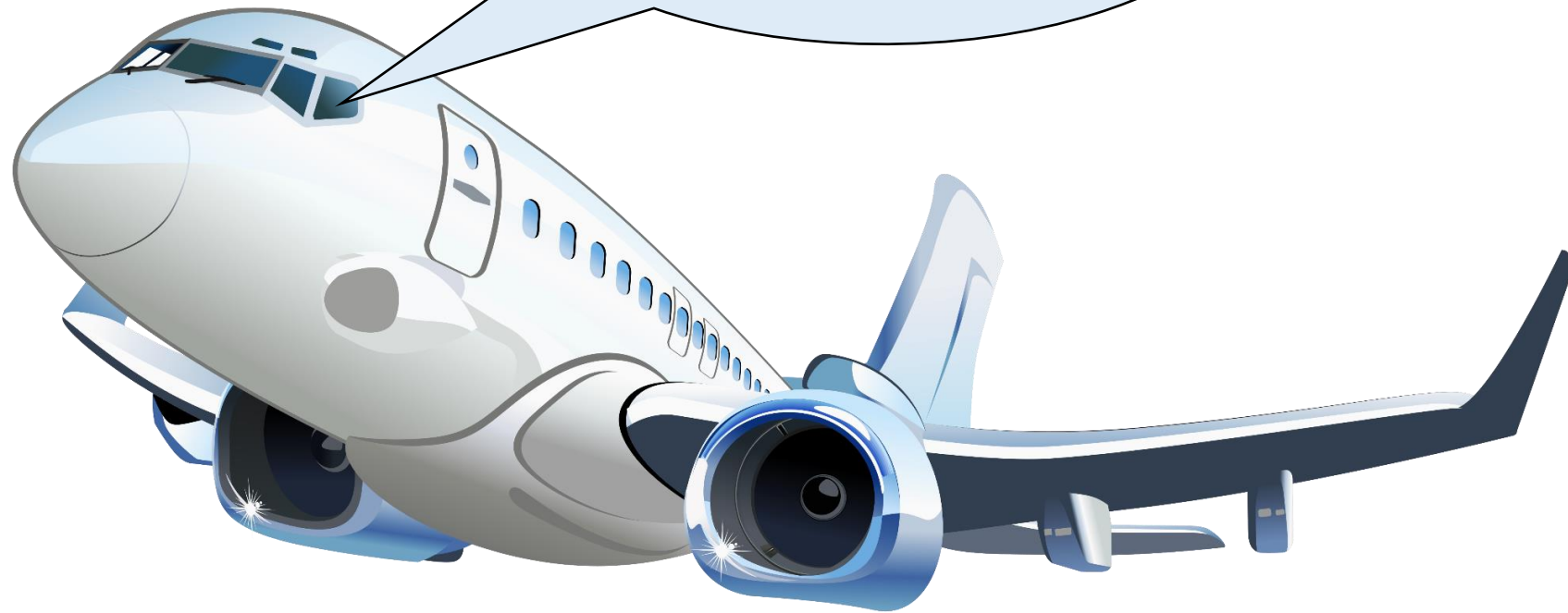
Sigma Level	Defects Per Million Opportunities (DPMO)	Yield (or Produced or Delivered) Correctly (%)
1	691,462	30.85
2	308,538	69.146
3	66,807	93.319
4	6,210	99.379
5	233	99.9767
6	3.4	99.99966

Operational Example	1 Sigma	3 Sigma	6 Sigma
Missed Daily Lunch and Brew Breaks [assuming 1,600 opportunities per year]	1,106	107	0
Machine Maintenance Downtime [assuming 30 day month 24/7 operation = 720 hours]	498 hours	48 hours	9 seconds
Non Conforming Machined Parts [assuming 250,000 parts per year / 1000 per day]	173,000	16,700	1
Unplanned Aircraft Operational Incidents [assuming 8,000 flying hours]	5,530 hours	534 hours	1.6 minutes or 98 seconds

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ZERO DEFECTS – WHAT DO WE MEAN?

This is your captain speaking,
there is a good 99% chance we
will arrive safely.....would you
stay on the flight?



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ZERO DEFECTS – SHIFTING BEHAVIOUR

STOP	START
SHIFTING BEHAVIOURS	
Defect count focus	Defect reduction focus
MRB & CAR focus	Process capability focus
Rewarding hero's	Rewarding defect prevention
Inspecting to catch	Inspecting to verify
Quality problem language	Quality opportunity language
Withholding feedback	Direct & compassionate feedback
Looking backwards	Looking ahead
10-20% Improvement targets	50-80% Improvement targets
Quality are responsible for quality	Formal delegation for quality
Licensed inspectors	Licensed operators
Activity based rewards	Results based rewards
Functional centric lingo	One company lingo (Us)
Looking in the rear view mirror	Looking ahead
Behind closed door decision making	Engaging the team
Tolerating Quality Deviation	Zero defect mind-set & expectations

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ZERO DEFECTS – LEFT SHIFTING QUALITY

❖ INVESTMENT

- ✓ People – Talent Acquisition, Quality Defect Prevention Mindset, and AS9145 Training
- ✓ Technology – Investing in Cutting Edge Technology and Encouraging Innovation

❖ LEADERSHIP

- ✓ Above the Line behaviours, Top Down Buy in, Visible Leadership, and Clear Communication
- ✓ Zero Defect Expectations, Targeting Major Blockers, and Enabling Team to Succeed

❖ OWNERSHIP

- ✓ One Team Working Towards a Common Aim with Accountability, Pace and Accuracy
- ✓ Achieving Zero Defects by Controlling Inputs, Repeatable Processes and Product Verification

❖ RESULTS

- ✓ Stretching Targets, Key Priorities and Raising the Bar for Continuous Improvement
- ✓ Voice of the Customer, Recognising and Rewarding Achievement and Reputational Benefit

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QUESTIONS

