Internal audits

The role of the auditor and 6 stages of an audit

Introductions

- Dylan Parsons
- Introduction
- Background

Agenda & session aims

- Audit introductions & the role of an auditor
- An overview of what makes an effective audit
- Improving the internal audit process
- Six stages of an internal audit lifecycle

Auditing Experience

1. Heard about audits
2. Observed an audit
3. Have been audited
4. Trained as an auditor
5. Performed an audit
6. Led an audit team
7. Taught auditing to others
8. Audited a supplier
9. Audited for a certification body

Key Milestones in AS9120 History

- **1999**: working Group 11 of ISO TC 20 took ISO 9001:1994 & added additional aerospace and aerospace related requirements to it
- **2002**: AS9120 first published
- **2016:** Last revised alongside 9100, 9110, 9120 (AS9120B)
- **2025:** Currently under revision for IA9120….possibly 2026

Key Milestones in ASA-100 History

- **1993:** The Aviation Suppliers Association (ASA) was formed.
- **1996:** The FAA published AC 00-56, outlining the voluntary accreditation programme.
- **1996:** ASA developed ASA-100 as a response to the AC 00-56 framework.
- **2005:** AC 00-56 was revised.
- **2019:** The European Aviation Safety Agency (EASA) recognised ASA-100 as acceptable for supplier evaluation.
- **2020:** ASA-100 Revision 5.0 was released.

What is an audit?

“A systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which agreed criteria are fulfilled.”

ISO 9000

What is an audit?

- Audits are performed by an **independent** party
- A periodic review of the repository to verify that the data is secure, uncorrupted, and under configuration control.
- Systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determining the extent to which **audit criteria** are fulfilled
- Internal audits, sometimes called first-party audits, are conducted by, or on behalf of, the organization itself
- **Audit criteria?**

Audit criteria can include:

- **Customer requirements** (Usually flown down from initial contractual agreements or via Purchase Order)
- **Management system requirements** (Processes, procedures, work instructions and operational controls)
- **Product and technical requirements** (Control of key characteristics, specific design control or technical requirements)
- **Statutory & Regulatory requirements** (FAA, EASA etc)
- **Standards** (ISO9001, AS9100/9110/9120, ASA-100, FAA AC-0056B…..)

Why do we audit?

We have to:

- it's a mandatory requirement of 91XX, ISO9001, ASA-100 etc.
- Customers require it as part of their contractual flow-down.

We want to:

- If undertaken correctly it will drive the continual improvement process and link to preventive action process
- Because it demonstrates an independent review of the achievement of customer requirements and objectives.

Quality System Audits

- An integral part of ISO9001, AS91XX and ASA-100 standards
- A mandatory requirement of AS9100D, AS9110C & AS9120B, clause 9.2:

"organization shall conduct internal audits at planned intervals to determine whether the quality system conforms to … and is effectively implemented and maintained."

Value of Internal Audits

Enables management to:

- Make informed judgment on conformity
- Make informed judgment on effectiveness of the system
- Make effective business decisions
- Allocate necessary resources

Benefits of Auditing

- Validates conformity to requirements
- Increases awareness and understanding
- Provides a quality measurement to management
- Reduces risk of product failure
- Identifies improvement opportunities
- Precipitates the corrective action cycle
- Precipitates the risk management cycle

Types of Audits

1st Party (Internal)	Organisation auditing its own system
2nd Party (External)	Organisation auditing its supplier
3rd Party (External)	Organisation audited by a certification body

Quality System Auditing

- ***Purpose:*** To verify conformity and effectiveness of the QMS based upon objective evidence

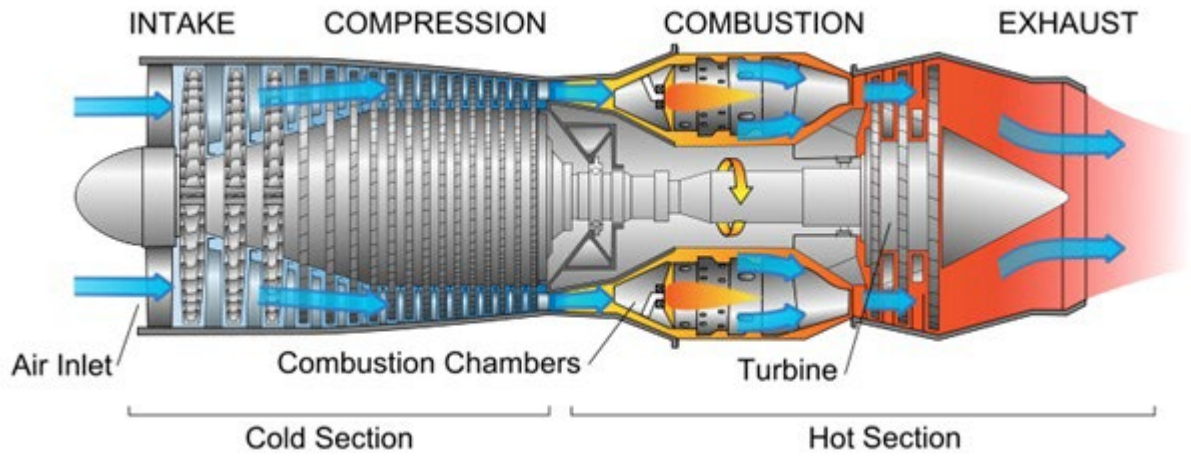
- ***Focus:*** To seek evidence of conformance, NOT to dig for nonconformities

What do customers want from the supply-chain?

- Emphasis on improving the product quality & delivery process – supporting 100% conformance
- Assurance that organisations are continually meeting or exceeding customer's expectations as well as that of regulatory or certifying organisations.
- Demonstrate Boeing conformance to established requirements such as PRO-5807, BPI-1072, 9104 series & FAA Order 8120.12A
- Use Boeing derived data to plan, deliver and execute an effective audit throughout the supply chain.

The Role of the auditor – discussion 1

- What makes a good Internal Auditor?
- What qualities does an auditor need to succeed?



Attributes & Principles.

- Integrity: Auditors exhibit a “professional” approach
- Fair Presentation: Truthful and accurate reporting
- Due Professional Care: Exercising diligence and judgement
- Confidentiality: Security of information
- Independence: A basic impartiality and objectivity of conclusions
- Evidence-based Approach: The evidence is verifiable and based on appropriate sampling
- Freedom from Bias: Ensure no conflict of interest
- Risk-based Approach: an audit approach that considers risks and opportunities

Positive auditor behaviour

Ethical	Open minded	Diplomatic	Observant
Perceptive	Versatile	Tenacious	Decisive
Self-reliant			

Negative auditor behaviour

- Rude
- Aggressive
- Disinterested
- Acting superior
- Unprepared
- Poor time management
- Offensive

Any questions?

The Six Steps of Internal Auditing

Audit scheduling & planning	**Audit objectives**	**Audit scope**	**Audit execution**	**Audit reporting**	**Audit follow up & closure**

Audit scheduling and planning - **priority, importance, risk**
Audit objectives - **clarity of purpose**
Audit scope - **clear boundaries**
Audit execution - **methods, approach, technique etc**
Audit reporting - **summary, detail, findings and conclusions**
Audit follow up & closure - **RCCA, adequacy and effectiveness**

Step 1 – scheduling & planning

Audit scheduling & planning	**Audit objectives**	**Audit scope**	**Audit execution**	**Audit reporting**	**Audit follow up & closure**

Audit scheduling and planning - **priority, importance, risk**
Audit objectives - **clarity of purpose**
Audit scope - **clear boundaries**
Audit execution - **methods, approach, technique etc**
Audit reporting - **summary, detail, findings and conclusions**
Audit follow up & closure - **RCCA, adequacy and effectiveness**

The quality manual

- Scope
- Sequence and interaction of the processes
- Assign process owners at this point
- Documented procedures
- Customer requirements

Priority, importance & risk – discussion

- What does that mean?
- Think of some important factors to consider
- What risks might be applicable when planning an audit
- What is product safety?

Risk – discussion

- Receiving inspection
- Shelf life controls
- Documentation retention
- Counterfeit parts & suspected unapproved parts.

Let’s list and discuss potential risks we may want to consider for our audit planning

Audit Programme

Audit programme is a set of one or more audits:

- Planned for a specific time frame
- Directed towards a specific purpose
- Includes all activities necessary for planning, organising and conducting the audits

Typical audit programmes run across 3-year cycle

Audit Schedule

- An audit schedule is the output of the audit programme
- Audit schedule indicates:
  - What processes?
  - What areas?
  - What clauses?
  - Frequency and when?

Audit Schedule

Processes	J	F	M	A	M	J	J	A	S	O	N	D
Sales/Marketing	P								P			
Design/Proposal Development		P								P		
Procurement			P				A				P	
Planning/ Scheduling				P								P
Receiving					P				A			
Production/ Assembly						P						
Contract Management		A					P					
Shipping/ Delivery								P				

P = Planned A = Additional

Audit Schedule

Audit schedule considerations:

- Process-based, not clause based.
- Status of activity
- Importance of activity/product
- Results of past audits
- New methods/new technology
- Organisational changes
- Corrective action pending

Audit Schedule

Consider duration:

- Complexity of the area
- Extent of the checklist
- Physical size
- Size of audit team, if applicable
- Team planning and reporting time

Step 2 – audit objectives

Audit scheduling & planning	**Audit objectives**	**Audit scope**	**Audit execution**	**Audit reporting**	**Audit follow up & closure**

Audit scheduling and planning - **priority, importance, risk**
Audit objectives - **clarity of purpose**
Audit scope - **clear boundaries**
Audit execution - **methods, approach, technique etc**
Audit reporting - **summary, detail, findings and conclusions**
Audit follow up & closure - **RCCA, adequacy and effectiveness**

Audit objectives

- Conformance with planned arrangements
- Conformance with the standard (AS91XX, ASA-100, AC-0056B)
- To ensure continued compliance with regulatory reqts.
- To ensure meeting customer requirements of OTD and product & service conformity
- Evaluating Effectiveness
- Identifying areas of improvement

Step 3 – audit scope

Audit scheduling & planning	**Audit objectives**	**Audit scope**	**Audit execution**	**Audit reporting**	**Audit follow up & closure**

Audit scheduling and planning - **priority, importance, risk**
Audit objectives - **clarity of purpose**
Audit scope - **clear boundaries**
Audit execution - **methods, approach, technique etc**
Audit reporting - **summary, detail, findings and conclusions**
Audit follow up & closure - **RCCA, adequacy and effectiveness**

Audit scope & boundaries

- What are we going to audit?
- What are we not going to audit?
- What areas and people will we interact with?
- What is the criteria we will work to, i.e. policies, requirements?
- What will be the outcome?

Step 4 – audit execution

Audit scheduling & planning	**Audit objectives**	**Audit scope**	**Audit execution**	**Audit reporting**	**Audit follow up & closure**

Audit scheduling and planning - **priority, importance, risk**
Audit objectives - **clarity of purpose**
Audit scope - **clear boundaries**
Audit execution - **methods, approach, technique etc**
Audit reporting - **summary, detail, findings and conclusions**
Audit follow up & closure - **RCCA, adequacy and effectiveness**

Developing an audit plan

- Detail what you wish to audit (areas, documents, records & activities)
- Who do you want to talk to?
- Where and when (area, sequence, audit trails)
- What methods to use (observation, talking, review of documents and records etc)

Prepare the Audit Plan

The audit plan could identify or include:

- Objectives/scope/criteria
- Personnel responsible for objectives and scope
- Reference documents
- Audit team members
- Language of the audit
- Areas to be audited
- Schedule of meetings
- Expected time and duration of each major audit activity
- Confidentiality requirements
- Audit reporting details
- Logistics
- Resolution of any plan objections
- Audit follow-up actions

Pre-audit considerations

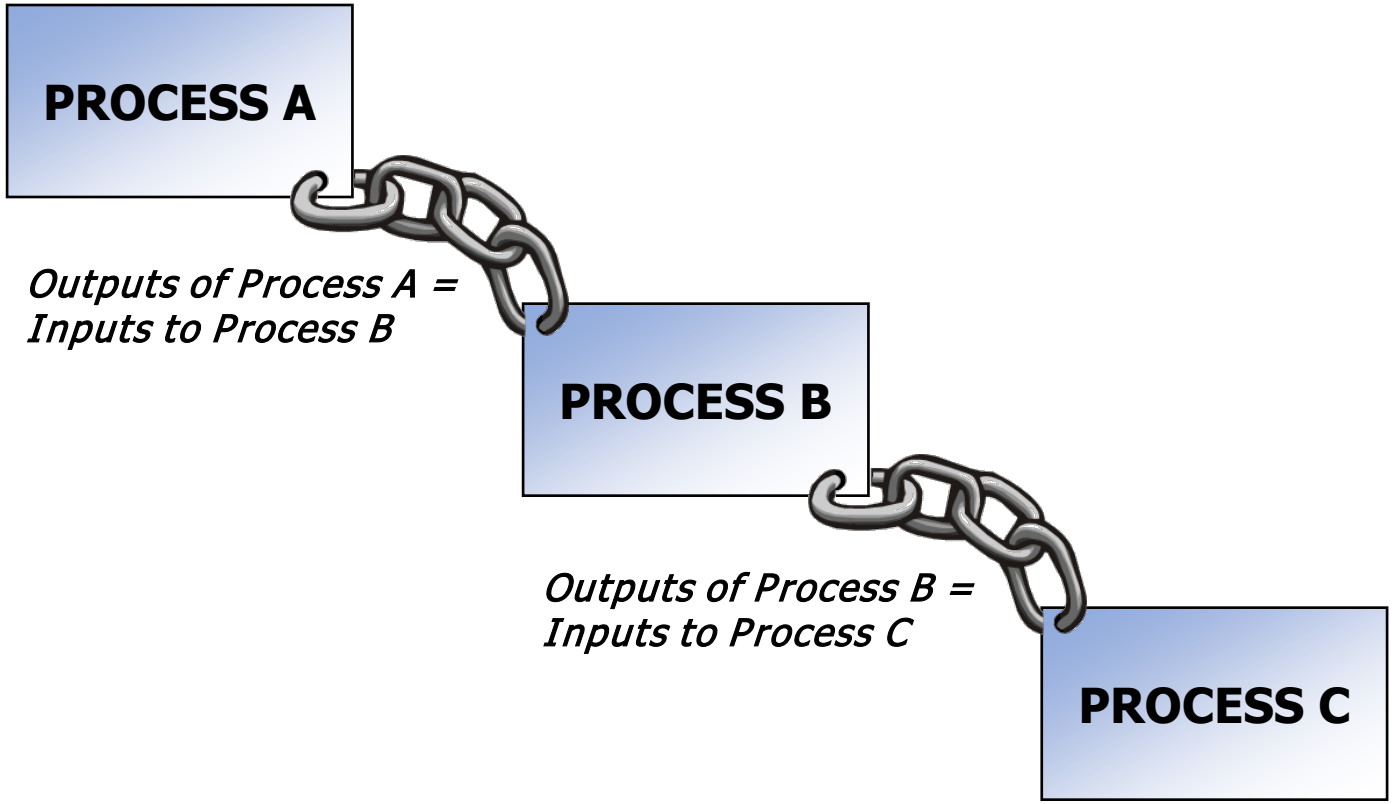
- Agree dates / times and personnel availability
- Agree scope and objectives
- Obtain necessary procedures and associated documents
- Familiarise yourself with the process to be audited
- Prepare / obtain checklists

As a reminder, the process model

- "Any activity which receives inputs and converts them to outputs can be considered as a process."
  - i.e. most product and/or service activities and operations are processes

The Process Approach

A chain of Interrelated Processes:



Process approach discussion

Do you agree or disagree with the following?

- Each department or functional area is a process.
- Each clause of a standard is a process.
- Each input or output is a process.
- Only the processes needed for product realization shall be planned and developed.
- It is not necessary to document processes.

Six questions that support the process approach

1. What are the requirements (input)?
2. What is to be delivered (output)?
3. With what (equipment, installations)?
4. By whom (training, knowledge, skills)?
5. How many/how much (monitor and measurement)?
6. How (instructions, procedures, methods)?

These directly impact the management decisions in a process-based organisation

Workshop

The organisation is Kitty Hawk Aerospace– they have 99 employees, and they design and manufacture components for civil military aircraft industry. Their main operational processes are (in no particular order):

Sales & Business Development	**Process Planning & Mfg Engineering**
Procurement	**Packaging & despatch**
Manufacturing	**Design & Development**
Final Test & Evaluation	**Goods in & Warehouse**

Once you have put the operational processes in order, identify any other support or organisational processes which may be required to support e.g., Internal audits, Management Review, Compliance, etc.

15 minutes please

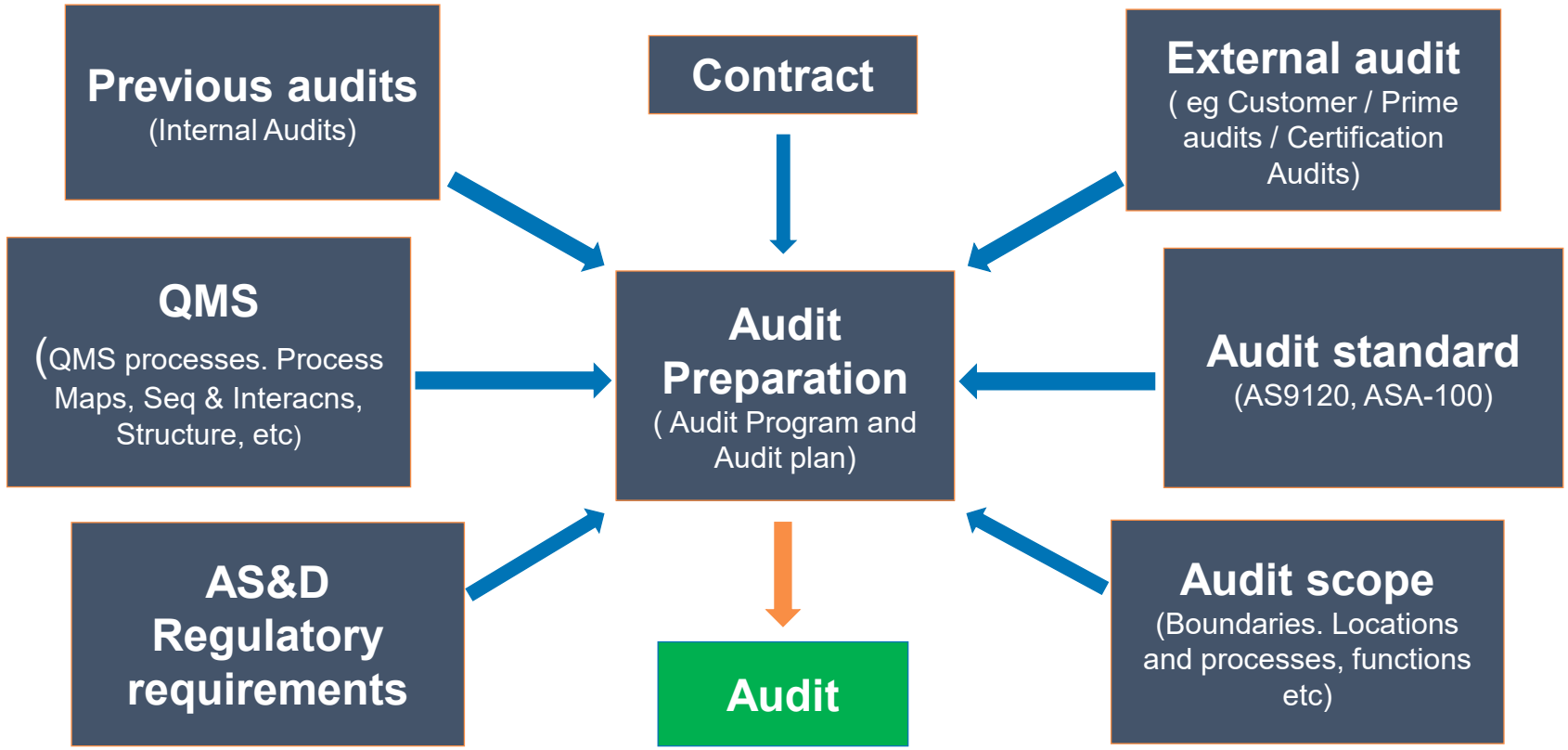
Internal Audits – things to remember

The way we perform internal audits and the impact a good, robust audit can have on an organisation versus a poor audit/box ticking

(use the ratio of findings internal, customer, 3rd party example).

If you are finding a lot less than customers and the CB then something is wrong in your understanding/competency, approach, technique etc – **should you do things differently?**

Audit preparation – inputs



Starting the Audit

- Appoint audit team leader
- Define audit objectives, scope and criteria
- Determine audit feasibility
- Select audit team
- Establish initial contact with the auditee

Establish Initial Contact with Auditee

The internal auditor should contact auditee to:

- Confirm authority to conduct the audit
- Provide information on proposed timing and team composition
- Request access to relevant documents and records
- Determine applicable site safety rules
- Make arrangements for the audit
- Explain role of observers and guides (if applicable)

Conducting a documentation Review

- Are all requirements of AS91XX, ASA-100 etc addressed?
- Does the documentation match the audit scope?
- Have responsibilities been adequately defined?
- Is the lower level documentation referenced?
- Establish familiarity with the area to be audited

Prepare Work Documents

Work documents can include:

- Checklists
- Forms used for recording the audit evidence, findings and conclusions
- Copies of standards
- Copies of procedures, work instructions and forms

Work documents should not restrict audit activities!

Checklists

Benefits of work documents:

- Keeps to objective
- A guide for key points to cover
- Brings continuity
- Assists in note-taking; “aide memoir”
- Time management
- Assists in audit report writing

Checklists

Disadvantages of using audit documents:

- Become a “tick-list”
- Use as a questionnaire
- Become a crutch for the auditor

How to gather evidence

Sampling

Observing

Reviewing

Talking

Step 5 – audit reporting

Audit scheduling & planning	**Audit objectives**	**Audit scope**	**Audit execution**	**Audit reporting**	**Audit follow up & closure**

Audit scheduling and planning - **priority, importance, risk**
Audit objectives - **clarity of purpose**
Audit scope - **clear boundaries**
Audit execution - **methods, approach, technique etc**
Audit reporting - **summary, detail, findings and conclusions**
Audit follow up & closure - **RCCA, adequacy and effectiveness**

Reporting

Perform a closing meeting:

- Discuss and summarise the outcome of the audit.
- Detail conclusions within a report on areas seen.
- Outline where conformance has been demonstrated.
- Summarise overall performance
- Clearly highlight any nonconformances with no ambiguity

Audit Findings

- Audit findings may indicate conformity or nonconformity
- Verify each audit finding:
  - Is there sufficient evidence?
  - Is the requirement clear?
  - Is there a clear lack of required evidence?
  - Is the evidence objective in nature?

Audit Findings

- Communicate findings:
  - Inform the auditee at the time a concern is raised
  - Get auditee corroboration or
  - Listen to auditee challenge
- Never leave the audit area without alerting the auditee of any concerns to that point

Audit Findings

Findings documentation may include:

- A summary table of nonconformities
- Copies of auditor checklists
- Corrective action schedule
- Report distribution list
- Any additional information

Audit Findings

The nonconformity report:

- Written documentation of nonconformity
- Statement of nonconformance
- Describes the deficiency
- Serves as record of findings
- Initiates the corrective action process

Non-conformity definition

‘Non-fulfilment of a requirement’

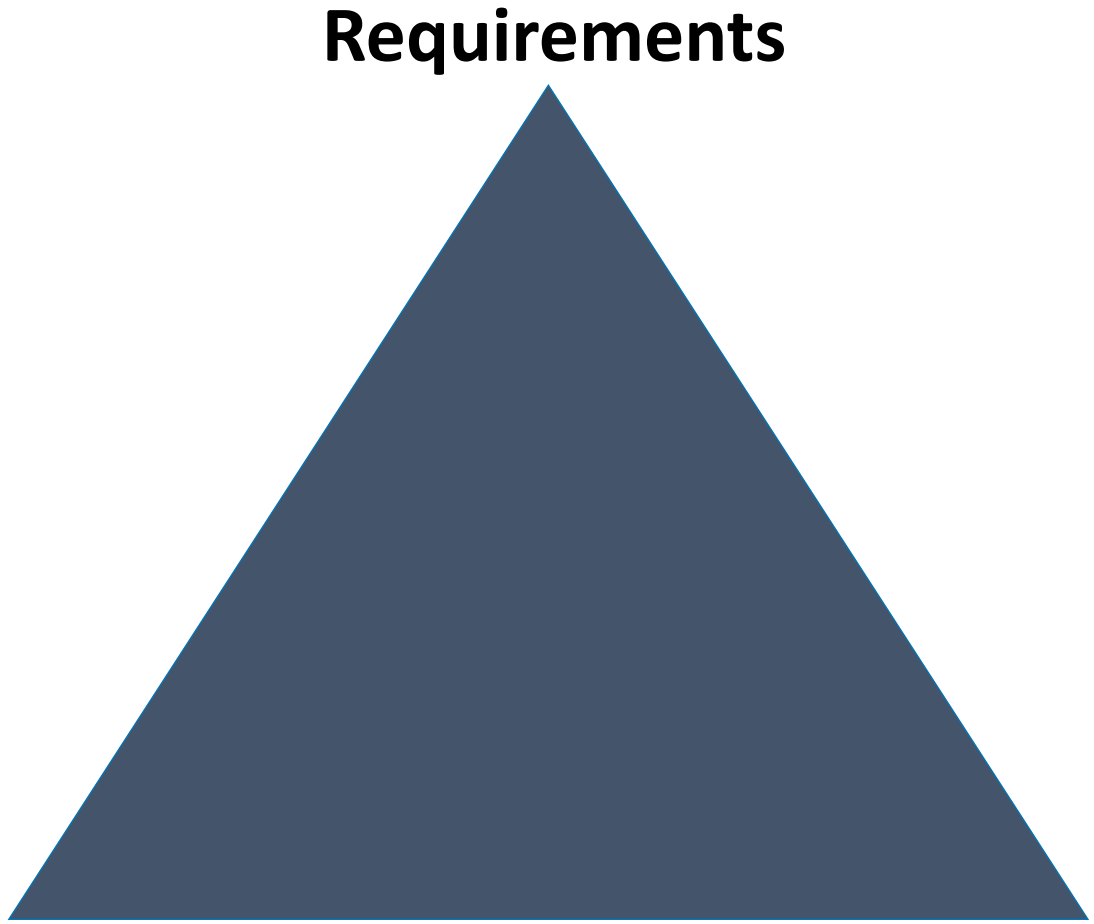
Non-conformity examples

- Procedures = operational issues
- Quality Manual = organizational issues
- Standard = policy issues
- Contract = customer issues
- Legislation = Regulatory issues

Reasons to raise a non-conformity

- Practice does not comply with the documented system
- The system does not reflect actual practice
- Practice/system does not comply with AS91XX, ASA-100 etc
- Practise /system/product or service does not meet contract or customer requirement
- Incomplete or incorrect flow-down of customer or contract requirements into internal documents, procedures and work instructions
- Breach of a legal or regulatory or other requirement of AS&D industry
- Breach in commitment to continual improvement

The non-conformance triangle



Non-conformities should be…

Non-conformities should be:

- Factual
- Objective
- Concise
- Traceable
- Clear
- Helpful

Closing meeting discussion

- Why do we need a closing meeting?

Step 6 – audit follow-up & closure

Audit scheduling & planning	**Audit objectives**	**Audit scope**	**Audit execution**	**Audit reporting**	**Audit follow up & closure**

Audit scheduling and planning - **priority, importance, risk**
Audit objectives - **clarity of purpose**
Audit scope - **clear boundaries**
Audit execution - **methods, approach, technique etc**
Audit reporting - **summary, detail, findings and conclusions**
Audit follow up & closure - **RCCA, adequacy and effectiveness**

Follow-up and closure

- Never close a non-conformity on the basis of planned actions
- Always verify that actions have been implemented and are effective
- Don’t worry about amending the corrective action if its not worked…better it’s found internally and not externally

Any questions?

End of part one