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Four Pillars of SMS

**Principles**

- Everything we deliver to a customer is our product - delivered separately or integrated into systems.
- Five principles govern our approach to product safety:
  1. Leadership commitment and accountability
  2. Level of product safety
  3. Maintaining and improving product safety
  4. Conforming product
  5. Safety awareness and competence
- The product safety principles are the foundation of the Company Product Safety Assurance Board.

**Safety Policy and Objectives**

**Safety Risk Management**

**Safety Assurance**

**Safety Promotion and Training**
Principles

- Everything we deliver to a customer is our product - hardware, software, services and documentation, whether delivered separately or integrated into systems.
- Five principles govern our approach to product safety:
  1. Leadership commitment and accountability
  2. Level of product safety
  3. Maintaining and improving product safety
  4. Conforming product
  5. Safety awareness and competence
- The product safety principles are the foundation of our Product Safety Management System which is governed by the Company Product Safety Assurance Board.
Reporting Safety Concerns

• Annual Safety Training and periodic internal communications promote a **Speak Up** culture and a just culture.

• Existing safety reporting routes continue to meet 21.A.3A requirements

• Other reporting routes include prompts to consider Safety including:
  • customer in service concerns
  • production issues.
  • Development findings
  • general internal concerns including Human Factors related issues

• “Speak Up” Line from External Provider provides a confidential alternative to safety reporting if someone feels unable to raise an issue using the standard processes

• Safety Assurance framework enables risk assessment of how we work.
Safety Assurance Framework

Standard “Bow Tie”
Risks defined

Controls defined that mitigate risks

Conduct regular assessments of Effectiveness of Controls

Review at Safety Assurance Boards
Each Control area is a slice of cheese.
By assessing the Control area effectiveness you understand the size of the holes
Improvements to the controls reduce the size of the holes
Multiple controls gives Defence in Depth
Advice for those working towards SMS compliance

Leadership Endorsement
Getting Senior leadership and Head of DOA support for SMS is essential.

Look at what you already have
You don’t always need to invent something new.
Extend existing processes or document current ways of working

Integrate it
Safety should be woven into the rest of the operating system.
If you have multiple approvals have one way of doing things that applies to all

Safety Assurance
Focus on Quality of conversations driving action.
Rolls-Royce chose a structured bow-tie approach, this is scaleable & helps to focus on the right things