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SMS FOR AEROSPACE SMEs

From Compliance Burden to Competitive Advantage

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EXECUTIVE SUMMARY

The aerospace supply chain is entering a structural transition. Safety Management Systems (SMS), once largely confined to operational certificate holders such as airlines, ANSPs, and airports, are now extending upstream into design, manufacturing, and maintenance organizations—including SMEs. This shift reflects a growing recognition that safety risk is not only operational, but often originates in design decisions, production processes, and organizational governance.

The introduction of **SM-0001 Issue C** provides, for the first time, a globally harmonized and industry-endorsed framework to guide this transition. At the same time, regulatory momentum—particularly from Transport Canada—is signaling that SMS will become an expectation, and in certain cases a requirement, across broader segments of the aerospace ecosystem.

For SMEs, this is not simply a compliance development—it is a strategic inflection point. Organizations that approach SMS as an integrated management system, aligned with governance, risk, and operational decision-making, will strengthen their market position, credibility, and resilience. Those that delay or treat SMS as a documentation exercise risk increasing exposure to regulatory pressure and supply chain exclusion.

This creates both:

- **A compliance imperative,** and
- **A strategic opportunity** to differentiate, access new markets, and strengthen resilience

This paper explains:

- What SM-0001 Issue C means in practical terms
- Why SMEs should act now
- Common pitfalls in SMS implementation
- A pragmatic roadmap tailored to SME realities
- How to turn SMS into a business enabler—not just a regulatory obligation

Bottom line:

SMS will become a requirement across the aerospace supply chain.

SMEs that act early will gain access, credibility, and resilience.

Those that delay risk exclusion.

THIS GUIDE IS FOR:

- Aerospace SMEs: design, manufacturing, maintenance, repair & overhaul (MRO)
- Suppliers to OEMs / Tier 1
- Organizations preparing for future regulatory oversight

1. THE SHIFT: SMS ACROSS THE SUPPLY CHAIN

The extension of SMS into the aerospace supply chain is not a regulatory anomaly—it is the logical next step in the evolution of safety oversight.

For decades, safety management requirements were concentrated at the operational level, where risks were most visible and immediate. However, as aviation systems have become more complex and interconnected, it is increasingly clear that safety outcomes are shaped much earlier—during design, manufacturing, and maintenance activities. Decisions made upstream can have far-reaching consequences downstream, often beyond the direct control of operators.

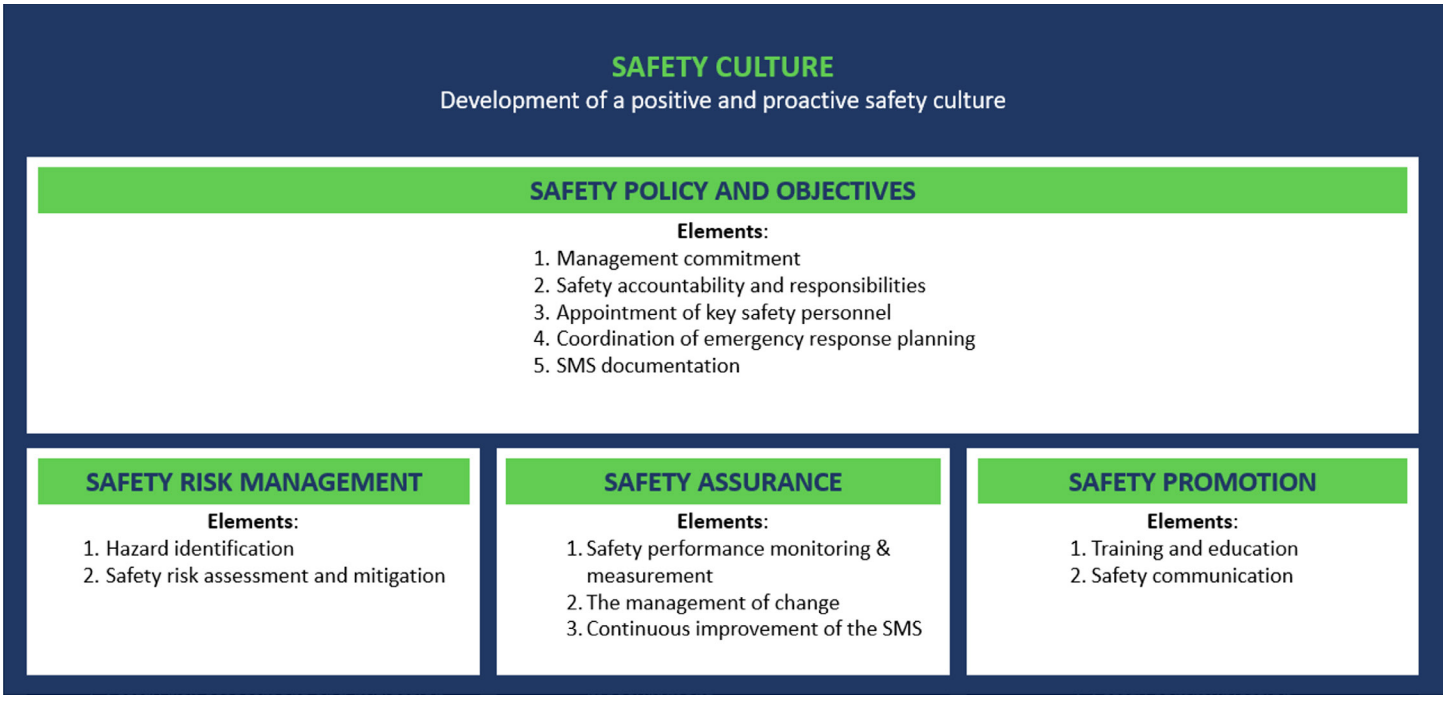
This shift is now reflected in both regulatory thinking and industry practice. Authorities are aligning with the principles of ICAO Annex 19, while OEMs and Tier 1 suppliers are embedding SMS expectations across their supply chains.

In effect, safety management is becoming a shared responsibility across the full lifecycle of aerospace products and services.

In Canada, this direction is particularly evident. Transport Canada has recognized SM-0001 as a framework aligned with ICAO requirements and is advancing regulatory developments that will introduce mandatory SMS obligations for higher-risk design and manufacturing organizations. While these requirements may initially target specific segments, the broader implication is clear: SMS capability will increasingly define eligibility to participate in the aerospace ecosystem.

For SMEs, the question is therefore not whether SMS will become relevant—but how and when to engage with it in a way that is both proportionate and strategically beneficial.

SMS FRAMEWORK



Source: Adopted from ICAO Annex 19, Appendix 2.

2. SM-0001 ISSUE C: WHAT IT MEANS FOR SMEs

SM-0001 Issue C is the **global industry standard** for implementing SMS in:

- Design organizations
- Manufacturing organizations
- Maintenance organizations

It is recognized by:

- **EASA** as an acceptable means of compliance
- **FAA** for voluntary SMS programs
- **Transport Canada** as aligned with ICAO Annex 19

Issue C is the second update of the industry standard and key enhancements include:

- Stronger applicability to **maintenance organizations**
- Increased focus on **safety culture (enablers & disablers)**
- Emphasis on **independence of safety decision-making**
- Alignment with **FAA Part 5 SMS requirements**

For SMEs, SMS is often perceived as "A heavy, resource-intensive compliance exercise designed for large organizations." This perception is both understandable—and increasingly risky.

SMS is no longer a future requirement—it is becoming a condition for participation in the aerospace supply chain. For SMEs, the implications are both strategic and immediate.

Three drivers are shaping this shift:

1

Market Access

- OEMs and Tier 1 suppliers are embedding SMS into supplier qualification
- SMS capability is becoming a **pre-condition for participation**

2

Regulatory Readiness

- Early adopters avoid **costly, rushed compliance later**
- Demonstrates **proactive governance maturity**

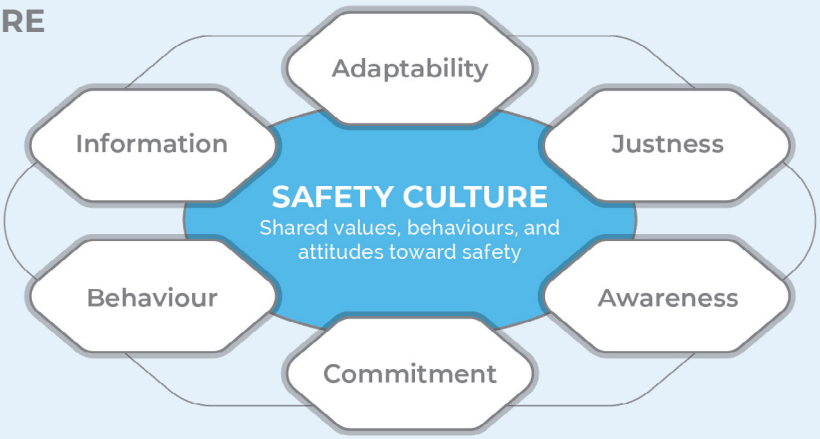
3

Operational Resilience

- SMS improves risk visibility, incident prevention, and decision-making under uncertainty

SIX CHARACTERISTICS OF SAFETY CULTURE

Core Characteristics of a Mature Safety Culture:



3. THE SME REALITY: WHERE IMPLEMENTATIONS FAIL

A common misconception among SMEs is that a Safety Management System (SMS) is primarily a software solution or a standalone tool. In practice, an SMS is not a product—it is a system in the true sense: a structured set of interrelated elements, including policies, processes, roles, and behaviors, that together form a coherent framework for managing safety.

When this distinction is not well understood, SMS implementation efforts often lose focus and fail to deliver meaningful outcomes. Based on practical experience, several recurring issues emerge:

1

"Tool-led" or "Paper-based" approaches

- Over-reliance on software platforms or documentation
- Limited integration with day-to-day operations and decision-making

2

Over-engineering

- Systems modeled on large OEM structures rather than SME realities
- Excessive complexity with limited usability

3

Lack of independence

- Safety decisions influenced by production or commercial pressures
- Insufficient separation between operational delivery and safety oversight

4

Cultural resistance

- SMS perceived as administrative burden rather than management discipline
- Limited leadership engagement and ownership

5

Fragmentation

- Disconnected Quality (QMS), Safety (SMS), and compliance functions
- Lack of alignment between governance, operations, and risk management

At its core, these challenges stem from treating SMS as an add-on rather than as an integrated governance framework. Effective implementation requires embedding safety management into how the organization is structured, how decisions are made, and how risks are understood and managed across the business.

4. WHAT GOOD LOOKS LIKE: A FIT-FOR-PURPOSE SME SMS

An effective SME SMS is not a scaled-down system that a large organization may have implemented—it is:

1 **Proportionate**

- Tailored to size, complexity, and risk profile

2 **Integrated**

- Embedded within quality management, operational workflows, and decision-making processes

3 **Practical**

- Focused on real risks, actionable insights, and usable tools

4 **Functionally independent**

- Clear separation of safety oversight from operational delivery

5 **Culture-driven**

- Leadership-led and organization-wide, fostering a proactive, just culture where safety concerns are openly reported without fear.

5. A PRAGMATIC IMPLEMENTATION ROADMAP FOR SMEs

PHASE 1
Assessment

- Benchmark against:
  - SM-0001 Issue C
- Identify:
  - Structural gaps
  - Cultural gaps
  - Capability gaps

Output: SMS maturity baseline

PHASE 2
Design

- Define:
  - Governance structure
  - Safety policy and objectives
  - Risk management framework
- Align with existing QMS

Output: SMS architecture tailored to SME context

PHASE 3
Implementation

- Develop:
  - Hazard identification processes
  - Risk assessment tools
  - Occurrence reporting mechanisms
- Train key personnel

Output: Operational SMS (not just software and documentation)

PHASE 4
Integration

- Integrate into:
  - Production processes
  - Engineering decision-making
- Establish safety performance indicators

Output: Safety is embedded in day-to-day operations and decision-making

PHASE 5
Assurance & Improvement

- Monitor:
  - Internal audits
  - Management reviews
  - Continuous feedback loops

Output: Sustainable compliance and performance improvement

6. FROM COMPLIANCE TO COMPETITIVE ADVANTAGE

When approached strategically, SMS is not merely a compliance mechanism—it is a governance framework that enhances how an organization understands and manages risk.

At a leadership level, SMS introduces greater transparency into operational and organizational risks, enabling more informed decision-making. It provides a structured approach to identifying, assessing, and mitigating risks before they materialize into incidents, disruptions, or reputational damage—strengthening both performance and organizational resilience.

From a market perspective, SMS increasingly serves as a signal of maturity. OEMs, regulators, and partners are not only assessing technical capability, but also the robustness of governance, safety culture, and risk management practices. SMEs that can demonstrate a credible and operational SMS position themselves as reliable, forward-looking partners within the supply chain.

Crucially, SMS enables alignment—between compliance requirements, operational realities, and commercial objectives. This alignment is often the differentiator between organizations that remain in pilot or development phases and those that successfully scale and sustain their activities.

In this context, SMS should be viewed not as an added layer of complexity, but as an enabling structure—one that supports sustainable growth, strengthens stakeholder confidence, and facilitates access to increasingly demanding markets.

WHEN IMPLEMENTED EFFECTIVELY, SMS ENABLES:

Stronger customer positioning

Demonstrates organizational maturity to OEMs and regulators

Reduced operational risk

Fewer disruptions, incidents, and rework

Better strategic decisions

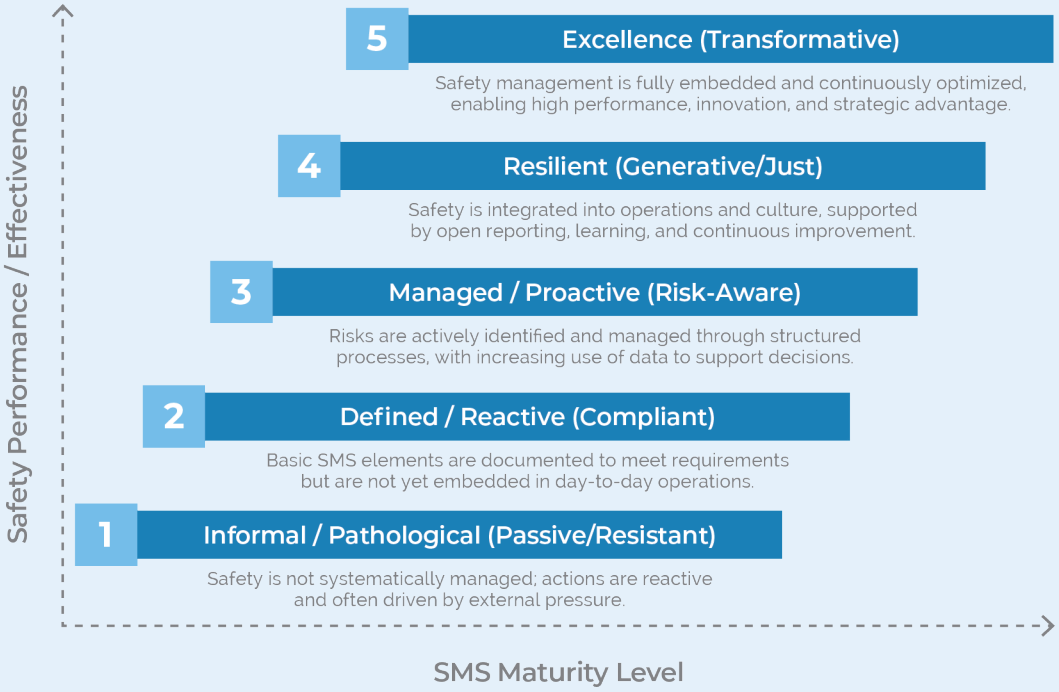
Enables risk-informed planning and investment

Access to new opportunities

Supports growth in emerging markets, including AAM and dual-use applications

SMS MATURITY PATHWAY

Safety performance and effectiveness increase exponentially with SMS maturity—shifting from compliance-driven documentation to fully integrated, data-driven safety management.



7. KEY TAKEAWAYS FOR SME LEADERS

- **SMS is coming — whether through regulation or market pressure**
- SM-0001 Issue C provides a **globally recognized pathway**
- SMEs should avoid:
  - Over-complex systems
  - Purely compliance-driven approaches
- **THE GOAL: A lean, integrated, and operational SMS that supports business performance**

CASE SNAPSHOT

AEROSPACE SME SMS IMPLEMENTATION

PROBLEM: An aerospace SME was required by an OEM to demonstrate SMS capability beyond its ISO 9001-certified QMS.

SOLUTION: Implemented a fit-for-purpose SMS based on ICAO Annex 19, including leadership-approved safety policy, staff training, a living Safety Management Manual, structured safety reporting (SRM/SA), and ongoing safety promotion.

RESULT: The introduction of SMS further strengthened the organization's credibility with clients and partners, reinforcing its positioning within the aerospace supply chain.

PROFILE: Independent Canadian flight test, research, and certification organization.

8. CALL TO ACTION

EH&A supports aerospace SMEs with:

- SMS gap assessments aligned with SM-0001
- Fit-for-purpose implementation strategies
- Integration with existing QMS and governance structures
- Regulatory alignment (Transport Canada, EASA, FAA)
- Practical, operational deployment—not just documentation

NEXT STEP

We offer a complimentary 60-minute SMS readiness discussion to:

- Assess your current position
- Identify key gaps
- Outline a tailored implementation pathway

Contact **EH&A** to start your SMS journey with confidence.

Trusted compliance expertise for today's aviation and tomorrow's air mobility

EH&A INSIGHT:
SMS IS A GOVERNANCE SYSTEM— NOT A COMPLIANCE TOOL.

Organizations that treat SMS as software or documentation limit its effectiveness.

Those that embed it into decision-making strengthen performance and gain strategic advantage.

ABOUT EH&A

EH&A is an advisory firm specializing in strategy, compliance risk, innovation, and business development across the aviation and aerospace sector, with particular focus on regulatory and commercial pathway development.

We operate through a distinctive network-based model, combining senior independent experts with a core team focused on business development and risk advisory.

This approach enables the delivery of tailored, high-impact solutions—bringing together the right expertise to address complex regulatory, operational, and commercial challenges efficiently and effectively.

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