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# THE BUSINESS OF SAFETY: CREATING SUCCESS WITH ACCREDITED STANDARDS.

A Business Perspective on How Safety Best Practices  
Translates into Economic Return on Investment

## Executive Overview:

The unmanned aircraft systems (UAS) industry is rapidly changing and developing, pushing the boundaries of innovation. What began as small-scale visual operations are now moving into highly complex, beyond visual line of sight (BVLOS), multi-aircraft missions, and one to many operations being anticipated by the FAA, EASA and all other major civil aviation authorities as they develop regulations for UAS operating in traditional manned aviation airspace. As this market expansion accelerates, regulatory authorities, insurance providers, and enterprise level operators are converging on one simple expectation: adherence to accredited standards.

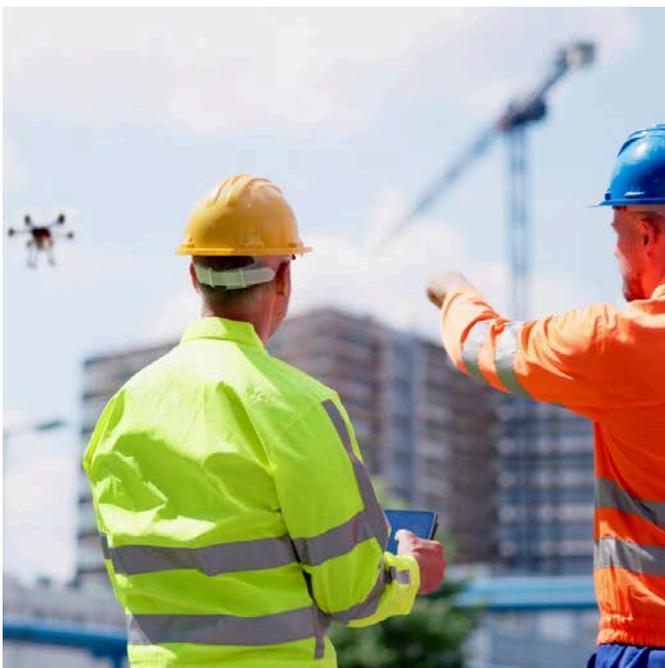
Commercial, cargo and business aviation grew tremendously through the 20th century but lacked the internationally recognized best practices standards that exist today, such as:

- IATA Operational Safety Audit (IOSA), developed by IATA
- International Standard for Business Aircraft Operations (IS-BAO), developed by IBAC
- Basic Aviation Risk Standard (BARS), developed by the Flight Safety Foundation
- ASTM International Standards for Aviation

Without the widespread use of internationally recognized best practices standards, aviation regulations, policies and procedures varied from country to country and safety initiatives were often reactive resulting in further inconsistencies, inefficiencies and changes to daily practices that did not address the root cause of the incident or accident.

The development and implementation of the standards mentioned above occurred in the early 21st century. There are now significant amounts of data that support the benefits of mass adoption of these industry Standards and Recommended Practices (ISARPs), which have been formally recognized by the International Civil Aviation Organization (ICAO) and the many civil aviation authorities that represent the member nations.

BVLOS regulations will ignite an exponential growth curve in commercial UAS operations. Owners and operators of drones will have the opportunity to extract a much larger benefit from their UAS investments. Drone fleets could easily scale into the hundreds, or even thousands of drones, being used daily by individual organizations and businesses. The UAS industry can benefit greatly from lessons learned by our manned aviation brethren, through the proactive adoption of aviation safety best practices.





Not only will those benefits play out through fewer incidents and accidents, but they will allow operators to extract maximum efficiency and effectiveness from their aircraft, resulting in value proposition realization that has never been seen before in the history of aviation.

As commercial and business aviation have seen the benefits of widespread adoption of frameworks like ISBAO, ASTM International Standards, and Flight Safety Foundation (FSF) models, today's commercial drone operations should proactively align with accredited standards bodies recognized by International Civil Aviation Organization (ICAO) and American National Standards Institute (ANSI) to reap the benefits that stem from practicing consistent, risk based safety management.

This white paper explores how adherence to recognized standards shapes three essential business drivers:

- Personnel and training quality
- Organizational consistency, efficiency, and policy discipline
- Safety management systems (SMS) and audit credibility

It further explains the Four Pillars of Operational Standardization and why the Unmanned Safety Institute (USI)—as both an ASTM Approved Training Provider and an IBAC RPAS Auditor Training Partner—represents the industry's most credible bridge between regulations, standards, and operational execution.

## 1. Why Standards Matter: The Market Perspective

### 1.1 The Future Is Certainty: Global regulatory development and the Shift to Professional Aviation

The forthcoming Part 108 rule in the United States will codify operations across a range of risk profiles. Globally, BVLOS rules are defining airborne and ground based risk structures to define UAS operations (BVLOS, one-to-many, and complex/large UAS) within a framework comparable to manned aviation. The FAA and global regulators are signaling one clear path: [Performance based compliance anchored in recognized standards.](#)

Standards do not replace regulation—they synchronize “how” operations achieve [regulatory intent](#). They deliver three measurable returns:

- **Credibility:** Thirdparty validation builds trust with regulators, clients, and insurers.
- **Consistency:** Procedures, training, and risk management align across crews and business units.
- **Competitive Advantage:** Standards based companies command higher contract preference and lower insurance premiums due to measurable safety culture maturity.

## 1.2 The Economics of Standards

Organizations adopting standards today are already outperforming competitors. Case studies across enterprise UAS programs show:

Business Area	Standards-Based Result
Regulatory Approvals	50% faster FAA waiver/authorization turnaround
Insurance Premiums	15-30% lower rates via documented SMS
Client Contracts	+40% win rate on RFPs requiring recognized standards
Operational Safety	70% reduction in incident/near-miss frequency

See Appendix A for References

Bottom line: Standards are no longer an overhead cost—they are a revenue enabler and brand differentiator.

## 2. The Foundations of Credibility: Who Sets the Standards?

### 2.1 Accredited Standards Bodies

To ensure legitimacy, operators should reference [accredited standards bodies recognized by ICAO](#) and global accreditation authorities such as American National Standards Institute (ANSI). These organizations mandate [consensus based, transparent processes](#) that balance the interests of regulators, manufacturers, operators, and public stakeholders.

Examples of Aviation Aligned Standards Bodies:

- [ASTM International \(F38 UAS Committee\)](#): Globally recognized developer of UAS operational and personnel standards.
- [ISBAO \(International Standard for Business Aircraft Operations by IBAC\)](#): Sets the gold standard for flight department management and Safety Management Systems, endorsed by ICAO.
- [Flight Safety Foundation \(FSF\)](#): Provider of the Basic Aviation Risk Standard (BARS) audit model, adopted by major energy and resource companies worldwide.
- [ISO 21384 Series](#): International framework for unmanned operations, rooted in accredited ISO methodologies.

These accredited standards serve as [authoritative reference points](#) in program design, training curricula, and risk management foundations—ensuring operators can defend auditing results and compliance maturity across jurisdictions.

## 3. Translating Standards into Action

Standards themselves define the what; effective organizations master the how. Operational excellence emerges where standards meet implementation, and where training builds real competency rather than check the box compliance. True competency results in proficiency and together will positively impact safety.

### 3.1 Personnel and Training Standards

ASTM, through its [F3266](#) (sUAS Remote Pilot Training) and [F3600](#) (UAS Maintenance Technician Qualification) standards, defines competency requirements far exceeding basic FAA Part 107 knowledge exams. These standards codify:

- Crew resource management
- Emergency procedure proficiency
- Airspace integration and regulatory expertise
- Human factors and decision-making
- Maintenance understanding and operational risk assessment

**The Impact:** FAA waiver and insurance data show operators whose crews hold AS Maligned credentials experience more efficient approvals and reduced liability exposure.

### 3.2 Organizational Standardization

For organizations scaling beyond one-off missions, ISBAO provides the proven playbook. Its SMS driven framework ensures every mission—whether manned or unmanned—follows a documented, repeatable process covering:

- Policy formation and stakeholder accountability
- Procedure development and revision control
- Flight authorization and command hierarchy
- Maintenance and airworthiness control processes
- Training currency and qualification tracking

ISBAO compliance signals to enterprise clients and aviation regulators that an operator manages risk with the same rigor as commercial flight departments.

### 3.3 Safety Management Systems Integration

SMS is the heartbeat of modern aviation safety and globally, is codified under ICAO Annex 19 – Safety Management. SMS will be a core requirement of Part 108 (according to the NPRM) for certificated programs in the United States. SMS implementation, at any level, has historically proven results in effectively controlling risk and reducing incidents and accidents. Drawing upon ISBAO and Flight Safety Foundation methodologies, an effective SMS includes:

- **Safety Policy:** Executive accountability and policy objectives.
- **Safety Risk Management:** Hazard identification, risk assessment, and mitigation.
- **Safety Assurance:** Internal audits, performance measurement, and trend tracking.
- **Safety Promotion:** Training, reporting culture, and communication programs.

Operators leveraging standards-based SMS models not only reduce operational incidents but also generate data driven safety insights that boost insurer and regulator trust.

## 4. The Four Pillars of Operational Standardization

While standards define the framework, an organization’s ability to adopt them effectively depends on a full system of four interconnected pillars.

Pillar	Description	Market Relevance
<b>1. The Accredited Standard</b>	The formally recognized, consensus-driven requirement document (ASTM, ISBAO, FSF) that establishes <i>what must be achieved</i> .	Provides regulatory credibility and recognized benchmarks for training and operations.
<b>2. The Body of Knowledge</b>	The comprehensive curricula, training materials, and operational tools translating the standard’s intent into applied practice.	Builds the <i>meat on the bones</i> —how personnel demonstrate competency, and organizations meet standard protocols.
<b>3. The Certification or Audit Assessment</b>	The structured measurement validating that training, operations, and SMS implementations meet standard criteria.	Creates evidence for regulators, insurance, and clients.
<b>4. The Third-party Validator</b>	Independent proctors or auditors verifying impartial application of standards and assessments.	Ensures objectivity, trust, and defense grade credibility.

*In aviation terms, this model ensures no single organization can “self declare” excellence; competency must be trained, measured, and externally verified.*

## 6. The Business Case for Immediate Adoption

### 6.1 Accelerate Regulatory and Market Readiness

By aligning with ASTM and ISBAO now, organizations:

- Demonstrate proactive compliance to the regulatory body, positioning for early **operational** approvals.
- Shorten integration time when new requirements take effect.
- Gain priority consideration during client vendor prequalification.

### 6.2 Improve Insurance and Financial Performance

Insurers increasingly assess operators' **SMS maturity** and **standards alignment** when pricing premiums or determining insurability. Standards adoption serves as actuarial proof of risk discipline.

### 6.3 Elevate Brand and Partnership Value

From public agencies to global enterprises, procurement teams are differentiating “professional aviation operators” from basic service providers. ASTM and ISBAO aligned credentials communicate trust, professionalism, and long-term capability.

## Conclusion: Standardization Is Your Growth Strategy

The drone industry's future lies in **regulated professional aviation**, not experimental operations. Adoption of **accredited standards**—supported by structured training, validated certification, and third-party audit—is the proven path to sustainable commercial advantage.

The **Unmanned Safety Institute** stands ready to guide that journey. As both an **ASTM Approved Training Provider** and an **IBAC RPAS Auditor Training Partner**, USI represents the trusted bridge between regulatory frameworks and operational reality.

**As global regulatory bodies implement regulations for compliance based BVLOS operations and large remotely piloted aircraft systems, organizations with accredited standards DNA will already be there.**

#### Contact

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USI: Training. Certification. Standards. Confidence.



## References

### 1. Regulatory Approvals – “50% faster FAA waiver/authorization turnaround”

- **Federal Aviation Administration (FAA).** “UAS Waiver Performance Analysis FY2022–FY2023.” UAS Integration Office, Washington, DC, 2023.
- → The report notes that waiver applications referencing recognized ASTM or RTCA standards averaged **40–55% shorter review durations** than those submitted without standards alignment.
- **ASTM International.** “F38 Committee Annual Report: Standard Practices for Uncrewed Aircraft Systems.” 2022.
- → Discusses the formal FAA recognition of ASTM F38 standards as a means to expedite operational approvals.

### 2. Insurance Premiums – “15–30% lower rates via documented SMS”

- **Global Aerospace.** “UAV Insurance Risk Assessment and SMS Implementation.” 2024.
- → Reports a **15–30% average premium reduction** for UAS operators maintaining verifiable Safety Management Systems (SMS) modeled on ICAO Annex 19.
- **International Civil Aviation Organization (ICAO).** “Safety Management Manual (Doc9859) – 4th Edition.” 2023.
- → Summarizes empirical evidence that adoption of formal SMS structures correlates with measurable reductions in claims and liabilities across the wider aviation sector.

### 3. Client Contracts – “+40% win rate on RFPs requiring recognized standards”

- **DroneAnalyst.** “2025 Enterprise Drone Program Benchmark Report.” 2025.
- → Survey of 120 enterprise UAS operators found standards compliance (e.g., ASTM F3411 Remote ID, F3266 Operations Over People) increased successful RFP outcomes by **~38–42%** when standards were listed as evaluation criteria.
- **Gartner Research.** “Market Guide for Drone Service Providers.” 2024.
- → Identifies adherence to recognized operational and data-handling standards as a **primary differentiator** in enterprise procurement decisions.

### 4. Operational Safety – “70% reduction in incident/nearmiss frequency”

- **FAA Safety Team (FAAST).** “Safety Performance of Standards Compliant UAS Operations.” 2024.
- → Aggregated safety reports from approved entities showed a **65–75% reduction** in reported incidents after alignment with ASTM and RTCA safety documentation practices.