



Understanding the Part 21 Safety Management Element for Production Organisations

Author: Kevin Hopwood, Principal Consultant,
Baines Simmons



A POA with a management system that has been classified as 'effective' may also be subjected to a 48-month oversight programme by the authority.

Background

On 17th December 1903, Orville Wright completed the first powered flight in the aircraft known as the Wright Flyer. The aircraft travelled a distance of 120 feet and reached a top speed approaching 7 miles per hour. Oh, how times have changed since that day. The evolution of aircraft design and manufacture has taken us to where we are today where we can fly for hours and hours inside a tube and at a speed that was barely imaginable in those cold December days of 1903. I wonder what they would be thinking if they could see where we are today.

The evolution of both design and manufacture has taken us to a new place where we can only marvel at the ability of today's (and tomorrow's) aircraft and their capabilities. Collectively though we must ensure that the standards for safety keep pace with the developments we have witnessed.

Over the years, we have been subjected to many changes and it's often said that there are simply too many to keep pace with. However, we are in a transition period, already started under EASA and commencing for UK Production Organisations on 1st July 2024. These significant changes are aimed at alignment with ICAO Annex 19 and Regulation 376/2014.

So, what's new?

The new regulation requires the transition from the old Quality Management System requirements defined in 21.A.139 to a Production Management System. So, what's the change you may ask?

The new regulation will require an organisation to establish a Safety Management Element alongside their existing Quality Management System which together should be integrated and form the Production Management System. The safety element should be seen as an integrated part of the management system and not something in isolation. Additional management system requirements for the management of information security risks have been issued by EASA and no doubt will be issued by the UK CAA which will also need integration into the Organisations Management System.

A key change that is also being introduced is the aim for the Production Organisation Approval (POA) to be able to demonstrate the 'effectiveness' of their management system. This approach replaces the ingrained binary approach where an organisation was simply viewed as being compliant or non-compliant.

A significant benefit for a POA is the changes defined for oversight by the authority. It's been long established that

oversight was managed within a 24-month period, however, an operating POA may now be subjected to oversight on a 36-month basis. A POA with a management system that has been classified as 'effective' may also be subjected to a 48-month oversight programme by the authority.

These changes are aimed at enhancing safety through:

- the establishment of the safety policy, its objectives and measurement
- the identification of hazards, and subsequent risk assessment and control
- effective safety assurance
- safety promotion including training
- a demonstration of safety performance

Safety performance

The transition from compliance to performance is a significant step and understanding the context and the authority approach will be fundamental to appreciating the intent of the innovative approach. It's now been 12 years since the introduction of the Safety Management International

Collaboration Group (SM ICG), the Safety Management System Evaluation Tool which introduced the concepts of Present, Suitable, Operating and Effective. This concept was also introduced by EASA with their Management System Assessment Tool (MSAT) initially aimed at operators but recently being updated to encompass airworthiness regulation references as defined by Part 21 for POAs.

The Safety Management Element content

As with all significant regulatory changes an implementation period must be granted so that compliance can be achieved. EASA transition commenced March 2023, and EU and foreign POA's must be compliant by March 2025. The UK approach commences 1st July 2024, and POA's must ensure compliance by 1st July 2026.

It should be noted that a POA, if it also holds other approvals such as 145, may take an integrated approach so that some elements can be combined and integrated into a single management system.

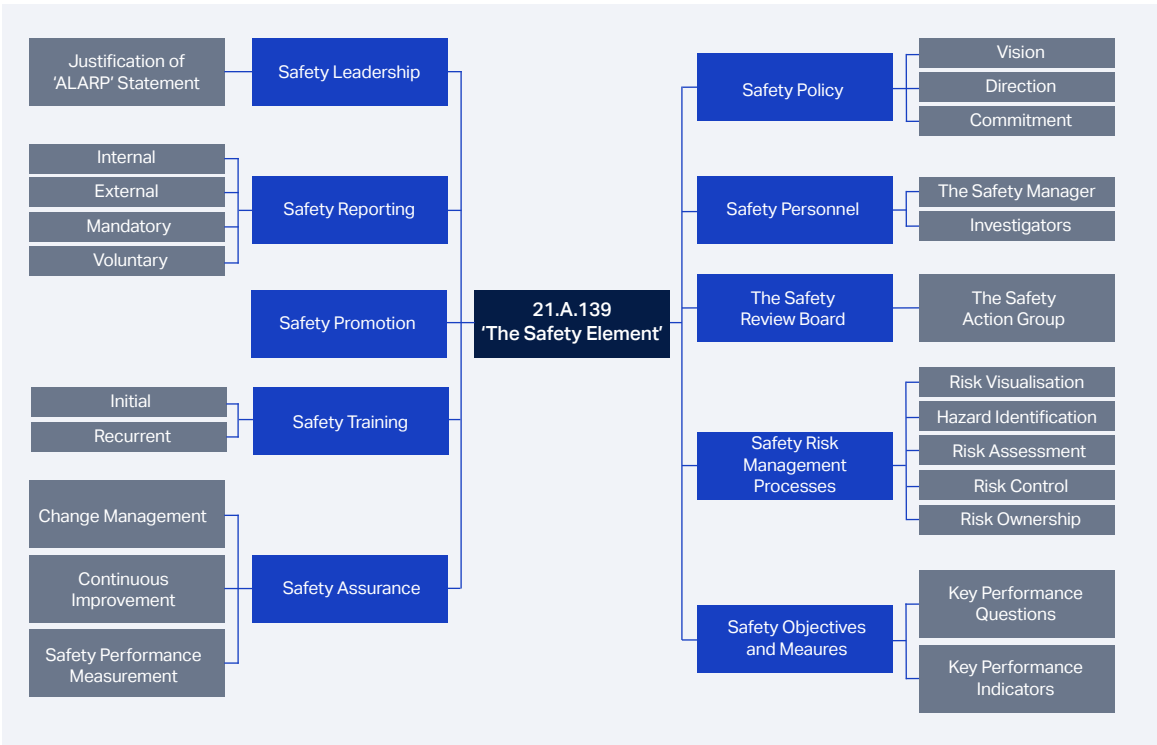


Figure 1 -21.A.139(c) The Safety Element

The 2-year implementation period should allow an organisation to ensure that their system is present and suitable, based against their level of both complexity and risk. POA's will also be encouraged to use the period wisely so that the system may also be generating safety data (a classification of operating), and this data is being actioned. Achieving a classification of 'effective' may take longer.

The above diagram displays the key requirements needed for compliance. The starting point for effective implementation and support must start with the Leadership Team. They will shape the safety direction of the POA through the safety policy, its objectives and measurement. Understanding what events will generate risk and how they can be managed, owned, and mitigated with a POA must be defined.

Whilst there are some similarities with AS9100, and risk management it must be understood, this concept we are focussed on product safety and risk management and control, not health and safety or enterprise risk management. Importantly the management of risk is not an opportunity to risk assess the regulation content as they are law and the POA must always comply.

It should be noted that the regulation alongside its Acceptable Means of Compliance (AMC) and Guidance Material (GM) have introduced other significant changes. There is a now a specific definition for competence which includes skills, knowledge, attitude, training and experience. The audit question then would be 'How have you considered these attributes for your personnel against their job roles?'

The concept of safety training has been introduced and this finally is taking the lessons learned from 145.A.130(e) Human Factors and Human Performance competency requirements via the JAA HFWG and instilling them into the POA.

The previous requirement for a quality assurance function has been amended and now requires a POA to have an Independent Monitoring function. Both the safety and quality elements must be subjected to independent monitoring for both compliance and effectiveness.

So, how can we help the POA?

To assist in the transition, we have designed our TR118 course 'Understanding the Safety Element'. This course focusses on the new requirements and allows the POA to understand what will be required to achieve effective compliance with a view to increasing safety performance. This course is aimed at being delivered to existing POA organisations.

If an organisation is an applicant for a POA then our TR14 course 'Part 21 Subpart G – Production Organisation Approvals (POA)', which is now a 2 day offering, will introduce and examine both the Safety Management Element and the Quality Management Element.

Both of these courses can be delivered in company at the POA location, and our TR14 can be delivered through our academy.

To learn more about the Safety Management Element and how Baines Simmons can support your organisation, contact us at hello@bainessimmons.com

About the Author

Kevin Hopwood,
Principal Consultant, Baines Simmons

Kevin is a highly qualified safety improvement specialist who brings a wealth of knowledge and experience to his clients. He leads a team of highly qualified consultants across civil and defence client organisations. Kevin is one of our leading Maintenance Human Factors and Error Management specialists and manages our highly successful suite of UK MAOS training courses. He applies his deep understanding of aircraft and component maintenance, management of EASA Maintenance, Production and ISO 9001/AS EN 9100 approvals, UK MAOS and Human Factors implementation programmes to deliver safety improvement support.

Career background and experience: Kevin has over 33 years of aviation experience of which 22 years was with the Fleet Air Arm maintaining helicopters and fixed wing aircraft, followed by 8 years with Westland Helicopters as a Senior Quality Assurance Engineer where civil knowledge and experiences supplemented the military knowledge foundation. During this period Kevin was the AgustaWestland QA representative on the SBAC/MoD MAOS working group.

About Baines Simmons

We are specialists in aviation regulations, compliance and safety management and partner with the world's leading civil and defence aviation organisations to improve safety performance.

As trusted advisors to businesses, armed forces, governments and regulators across all sectors of aviation, we help to advance best practice, shape safety thinking and drive continuous improvement to safety performance through our consulting, training and outsourced services.

Further information about our full range of services, as well as our library of Thought Leadership Papers, can be found on our **website: www.bainessimmons.com**

Baines Simmons Limited, 1 The Western Centre, Western Road, Bracknell,
Berkshire RG12 1RW, United Kingdom
Tel: +44 (0)1276 535 725