



Preparing safety-critical operations for the future

Take the next step in your growth journey by optimising costs, reducing complexity and increasing productivity.

Why fresh thinking is needed in safety-critical control rooms

Civil aviation, defence, public safety, maritime, public transport and other safety-critical industries are at a crossroads in the evolution of their control rooms. Systems, processes and working practices developed over years or decades can no longer evolve as fast as changing requirements demand and as disruptive new technologies allow.

Organisations must integrate new ways of working with suitable enabling technologies. They must also increase their capacity while improving safety levels. However, legacy systems and processes make these objectives increasingly difficult and costly to achieve. Organisations have reached the natural limits of growth within their existing fragmented and siloed systems, limiting the effectiveness of their operations.

Further upgrades of these complex environments are now unsustainably expensive. Organisations also face a shortage of skilled staff, long training periods and difficulty in retaining talent. Facing growing challenges across four key dimensions – cost, resources, complexity and capacity – organisations in safety-critical industries need a new approach to control room operations.

Operational challenges in safety-critical industries

Enable growth

The inflexibility of existing processes, practices and systems makes it difficult to meet growing demands from stakeholders and service users.

Introduce new technologies

Multimedia, 5G, AI and other disruptive technologies promise to boost efficiency and effectiveness, but must first be integrated seamlessly with existing processes, practices and systems.

Manage complexity

Organisations face increasing cost and effort to maintain and integrate legacy infrastructure and processes built up over years or decades.

Balance resources

As demands grow, organisations must retain sufficient technical resources and experienced, well-trained staff to ensure timely and effective service delivery.

Foster value-driven investments

Budgets are always limited; therefore, a clear value-driven investment roadmap is the key to driving innovation.

Optimise use of core operational data

Analytics and AI can add significant value, if organisations can bring operational data from safety-critical systems into data lakes.

Frequentis advisory services

Frequentis draws on decades of experience in safety-critical industries to help organisations build the right capabilities for the future. Our experience spans technology, operations and business issues, enabling a holistic approach to transformation and innovation.

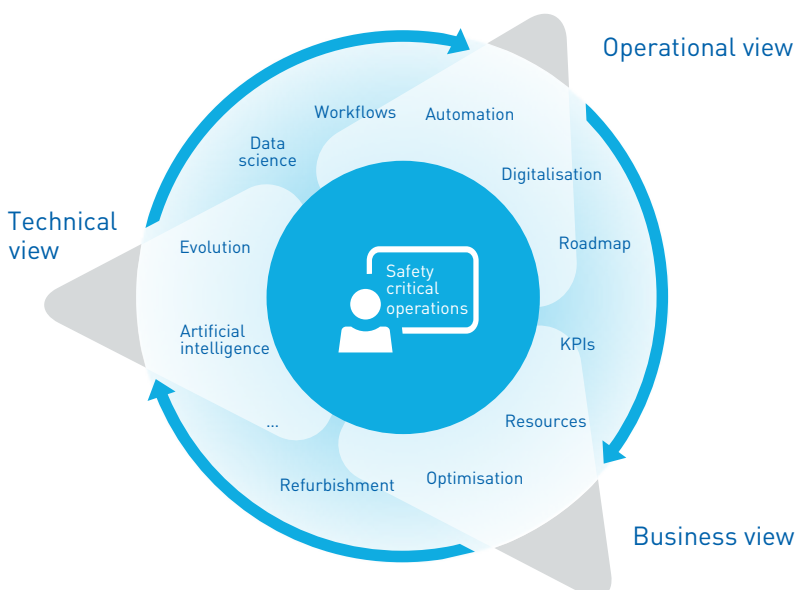
What was once a relatively static environment – in which organisations might build a system up over 20 years – is now far more dynamic. As a result, organisations should adopt a value-chain-based approach, using real-time metrics to steer continuous improvement of a more flexible set of processes, practices and systems. A key issue is that organisations are carrying the accumulated legacy of decades of workarounds. Essentially, they are investing in maintaining solutions to problems that no longer exist. Frequentis Control

Room Consulting believes that a new way of thinking – one that removes the barriers between operational technology and information technology – can transform capabilities and enable innovation. Working with global customers has given us the required experience and domain-centric knowledge to unlock the value of safety-critical data. Our background in safety-critical systems gives us the unique ability to ingest core operational data into data lakes for analysis and use by AI – safely and securely.

Organisations in safety-critical industries have engaged Frequentis Control Room Consulting to help them:

- Bring operations to the next level
- Introduce data analytics and automation
- Optimise user experience by uniting fragmented processes and systems
- Plan and deliver change management to unlock the value of new technologies.

Our successful track record of delivering projects for customers worldwide has made Frequentis the trusted advisor for leading organisations in safety-critical industries.



Frequentis CRC provides holistic, long-term advice across technical, operational and business dimensions

How organisations benefit from Frequentis' advice

Integrating new technologies to increase capabilities and working efficiency

- Eliminate complexity and legacy workarounds in infrastructure and processes.
- Maximise efficiency of technology and personnel resources.
- Improve productivity and enhance user experience in the control room.

Optimising working practices to enable greater effectiveness

- Maximise capacity to enable timely and effective service delivery as demands grow.
- Bring flexibility to processes, working practices and systems, adapting them to a more dynamic world.
- Design new metrics and KPIs to bring operations to the next level and keep them there.

Unleashing the power of continuous improvement to tackle tomorrow's challenges

- Introduce a strategic value-chain view of control room operations to give decision-makers the right information in a timely fashion.
- Enable safe and secure analysis of core operational data, together with automation and AI-powered workflows.
- Manage the organizational transformation to realize the identified opportunities.

Expertise from industry insiders

Building on over 75 years of customer service in safety-critical environments, Frequentis offers advisory services adapted to the specific needs of the industry. More than 500 customers in 150 countries rely on our expertise and ongoing research into operational concepts to guide and support their safety-critical operations. In the Frequentis Control Room Consulting practice, we bring experience and ingenuity to bear in solving our customers' challenges with end-to-end solutions across business, operational and technological dimensions. Our value-chain view of safety-critical operations guides our thinking, helping

us ensure that our advice delivers ongoing benefits for our customers as they tackle the challenges of cost, resource, complexity and capacity.

Unlike non-specialist IT firms, we are completely at home in safety-critical data, enabling us to unleash the full potential of data science, automation and AI in core safety-critical workflows.

To tap into a fresh way of thinking about your control operations contact us at consulting@frequentis.com for an initial analysis.

Frequentis Control Room Consulting combines expert advice with complete solutions

- Expert advice and solutions built on more than 75 years of experience in safety-critical industries.
- End-to-end cost-optimised solutions across business, operations and technology.
- Ongoing gains through lean and safe operations at the highest levels of productivity.



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