

QUALITY IN THE DEFENCE INDUSTRIES

A prospectus for confidence

'The Ministry of Defence is acquiring increasingly complex systems to provide battle-winning capability to the front line. With greater complexity comes greater risk. The quality function in both the Ministry of Defence and industry is seen as playing a pivotal role in minimising this risk'

**Kevin Thomas, Head of Profession, DQA (Policy),
Ministry of Defence**

'What we have seen from the intervention of our quality function is design right first time, which translates more easily into operations with fewer bugs and problems, and that translates into project performance and ultimately financial performance on contracts – we have seen a consistent improvement in time over all of those features'

Steve Mogford, CEO Selex Galileo





Providing you with confidence

Protecting your reputation

Confidence – The belief that one can have faith in or rely on someone or something of trust.

Reputation – The level of respect or admiration someone or something receives, based on past behaviour or character.

This prospectus

Whether you are the CEO or an engineer, a project manager or involved in business development or procurement, this prospectus has been prepared by the Defence Industries Quality Forum and the Chartered Quality Institute's Defence Industry Group to provide a clear description of the value that the quality profession provides to your organisation.

The organisation's conscience

The quality professional is there to give you confidence in how your organisation is operating and what is being produced. Providing you with assurance that your organisation's reputation will be protected and enhanced with all your stakeholders, and that projects will be delivered on time, on quality and on budget.

What the quality professional does

At the strategic level the quality function supports governance in formulating and deploying strategy to meet regulation and business objectives. Quality professionals deploy management systems, support programmes and projects by undertaking independent assurance of how work is

undertaken and what is being produced and by undertaking audit and review. In many organisations, the quality professional is unique in seeing a holistic view of the organisation's operation, compliance and performance.

What the quality professional does not do

In understanding the role of the quality professional in your organisation it is important to note what we do not do. We do not take responsibility for managing how projects perform – either how they undertake their responsibilities or the compliance of their products with respect to customer requirements, nor can we provide 100% guarantees of product and service conformance through the assurance activities of our people. However, we can provide real confidence that the organisation is delivering the right things, right first time and also that the organisation will be made aware of opportunities that will improve the bottom line, customer satisfaction and ultimately the reputation of the organisation and the industry.

The risk of removing the organisation's conscience

There are many examples in all sectors,

from finance to oil and from automotive to the health sector, where organisations have demoted or removed the quality management role, either because it is seen as an unnecessary expense or a constraint, viewing quality as a given both internally and, equally dangerously, in their supply chain. The results have often been famously disastrous

both in terms of financial and reputation impacts. Conversely, those organisations that have embraced the concept of the independent voice of quality reporting to the highest levels of governance have seen their financial performance and reputation increase.

Upgrading to Chartered Member or Chartered Fellow of the CQI should be the aim of any quality professional. The result will be increased status, greater knowledge for your organisation and a deeper understanding of what quality really means.

‘BAE Systems - Submarine Solutions identified a need for a more professional standard for the quality assurance department and I decided to gain recognition by using the experiential route and the Body of Quality Knowledge for progression to Chartered Member of the CQI.

‘Achieving the qualifications necessary has helped me to understand the need to shift my focus to the earliest stages of the project lifecycle. This enables me to support the implementation of quality planning while project opportunities are at development stage.

‘Being a CQI Member has opened avenues with quality professionals and organisations. We have a ready fund of experience and knowledge that is regularly passed to us through quality forums, presentations and World Quality Day activities.

‘BAE Systems - Submarine Solutions values chartered status and has a framework of support. The greatest benefit to the organisation in employing Chartered Quality Professionals is the depth of knowledge we have gained, using and embedding this knowledge to continually improve the quality and develop a right-first-time culture.’

Jimmy Margach, MCQI CQP
Project Manager Processes
BAE Systems - Submarine Solutions



www.thecqi.org/CQP



The role of the quality function

The quality professional provides confidence to the organisation and its stakeholders that:

- Management intent is defined (through an effective system of governance)
- This intent is matched to the needs of the organisation's stakeholders
- The organisation is capable of delivering on this intent

- Implementing the organisation's policies and processes provides the desired outcomes
- The organisation can identify and act on risks and opportunities for improvement.

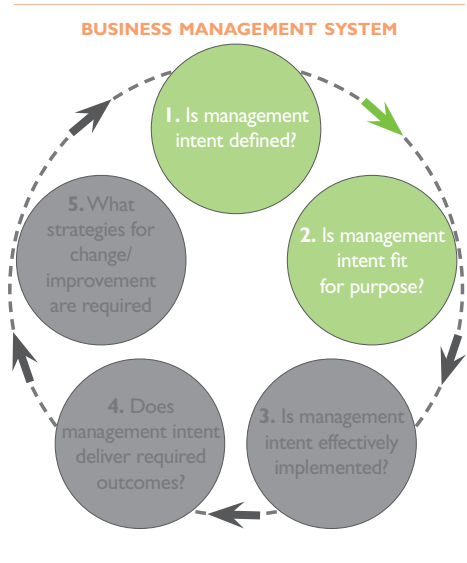
The model below provides five key questions that the quality professional addresses.



Is management intent defined and fit for purpose?

The outcomes delivered by an organisation are the product of management intent. Turning intent into reality does not happen by chance and organisations look to the quality function to review whether management intent is defined through a comprehensive framework of policies and processes, usually captured within a business management system. Within the business management system the quality function will seek to ensure that:

- ✓ All stakeholder requirements are responded to:
 - Customer requirements: contract requirements and industry standards
 - Shareholder requirements: policies and processes which enhance, not diminish, the organisation's value
 - Staff requirements: opportunities, reward and training
 - Supplier requirements: clarity, openness and integrity
 - Societal requirements: those defined in regulation: health and safety, environmental
- ✓ Responsibility for meeting those requirements is allocated to individuals in the management team
- ✓ How management intent is to be



delivered is clearly articulated through defined processes:

- Governance: policy and assurance
- Strategy: business development, sales and research and development
- Contract management: engineering, supply chain management and quality control
- Support: HR, IT, finance and facilities



Without checking that management intent is clearly and comprehensively defined leaves the organisation without an effective system of governance, at risk in terms of legal exposure and compliance with its stakeholders' requirements and unable to identify and implement a preferred way of doing things, with no opportunity to evaluate opportunities to improve baseline approaches.

Is management intent effectively implemented?

The quality professional is one of the few in an organisation who looks across all interdependent business processes and has the authority to check that teams are working together in accordance with management intent while understanding the disparate customer and stakeholder requirements.

This service is provided primarily by a culture of surveillance, assurance and audits (both internally and externally driven) and requires both an understanding of the 'expectation', as recorded in the organisation's governance documentation, and 'implementation' as observed by the activities undertaken by the organisation's people.

It is important to note that the quality professional does not function as an internal policeman, but is there to act in partnership as the conscience of the organisation and to facilitate improvement. In many organisations there is value in the quality function reporting directly to board level such that the board may have confidence that the organisation is fit for purpose in delivery, much in the same way that financial audit does.



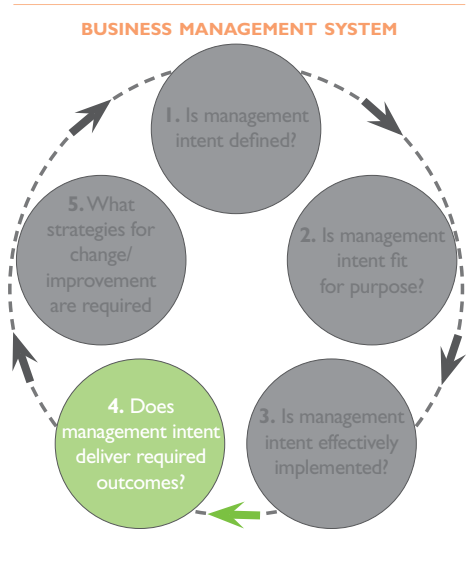
Without a robust internal audit and assessment function the organisation cannot be confident that management intent is matched to external and internal requirements. Nor is it possible to understand if the defined policies and processes are matched by actual practices, with possible consequences and risks in terms of compliance, effectiveness, repeatability and reliability of operations.

Does management intent deliver required outcomes?

The responsibilities of the quality professional apply across the whole of the organisation and, where appropriate, across the whole lifecycle of any project, from planning to closure and, for product deliverables, from concept to disposal, with equal emphasis placed on 'planning for success' as on 'delivering success'.

The quality professional works with project teams to establish the extent to which the organisation is delivering the desired outcomes, with a focus on preventing problems, learning from experience and so facilitating the re-engineering of policies and processes

While planning for success is vital, measuring success and improving performance is equally important. The quality professional facilitates the adoption of quantitative evaluation, so that the organisation can act on measurements and metrics, (rather than hearsay and anecdotal evidence) and so embedding a culture in which managers strive to identify defects, non-conformities, their root causes and opportunities for improvement.



Not assessing if your organisation is delivering products/services matched to the requirements of its customers may result in loss of reputation and potentially increased liabilities and financial penalties

Strategies for change and improvement

While the focus for the quality function is ensuring that the organisation is planning for success and is proactively managing risk and preventing problems from impacting on the organisation, it is essential for the quality professional to use their insight of organisational risk and performance to drive the required improvement and change strategies.

Business improvement projects are often run by quality professionals with expertise in change management and project management. In some instances these improvement programmes might be facilitated by a consideration of externally recognised tools and techniques and/or benchmark standards, such as the capability maturity model integration, six sigma, the business excellence model and lean.



Without a system to identify, prioritise and enact improvement the organisation will not be able to change and improve, resulting in a steadily deteriorating position with respect to its competition. In every case organisations that are unable to change in accordance with the changing needs of their customers or are unable to improve their effectiveness and performance will eventually be no longer viable.



What quality professionals can do for you

All of this comes down to the quality professional providing you with the confidence that your organisation has the capability to deliver its desired outcomes.

From the quality professional's perspective success means providing the following services:

- Management of external certifications
- Development and maintenance of the organisation's policies and processes
- Process assurance (surveillance of how activities are being undertaken) and audit
- Product assurance (evaluation of compliance with respect to the requirements of the customer)
- Escalation of risks and concerns and facilitating an organisation's improvement.

About the Defence Industries Quality Forum

The Defence Industries Quality Forum has been in existence since the late 1980s and is the senior Ministry of Defence industry quality assurance consultation forum. It enables the Defence Quality Assurance Authority to discharge the responsibility to consult with the major defence trade associations when developing MOD quality assurance policy. Its members include:

- ADS: AeroSpace Defence Security
- Society of Motor Manufacturers and Traders
- Shipbuilders and Ship Repairers Association
- Defence Manufacturers Association
- Intellect
- Association of British Certification Bodies
- Independent International Organisation for Certification
- Chartered Quality Institute

www.bit.ly/MODDIQF



About the CQI Defence Industry Group

The CQI's Defence Industry Group (DIG) is an active group of CQI members working in the defence industries. The DIG is committed to developing capacity and competence in quality management and quality assurance, offering networking and professional development events and online discussion and resources.

www.thecqi.org/DIG



About the Chartered Quality Institute

The Chartered Quality Institute is the chartered body for quality professionals. Established in 1919 and formerly the Institute of Quality Assurance, the organisation gained a Royal Charter in 2006, and became the CQI shortly afterwards in January 2007.

The CQI exists to benefit the public by advancing education in, knowledge of and the practice of quality in industry, commerce, the public sector and the voluntary sector. In short, the CQI exists to help make business better.

The CQI promotes the quality management approach, based on planning, measurement and improvement, which delivers the following benefits for organisations:

- Improved customer satisfaction
- Reduced costs and improved profitability
- Improvement and innovation
- Identification and management of risk
- Corporate care and responsibility.

www.thecqi.org

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