

# Early Stage Qualification (ESQ®) streamlining the compliance journey





## Your challenge

**Element Materials Technology is a trusted advisor to all manufacturers. We understand the challenges of designing products for a global market with the attributes to meet your specific contractual or regulatory compliance.**

Integrating testing as part of product development can control costs and reduce the risks of failing product qualification and late delivery. Element is able to support your testing and compliance with our Early Stage Qualification (ESQ®) network of engaged experts, a global platform of laboratories and over 60 years of experience. We can also help you develop market share by increasing speed to market, reducing the administrative burden and managing testing costs.

## Our solution

ESQ works closely with design teams at an early stage in product development to help steer it away from the compliance and approvals pitfalls. ESQ will help you achieve first time success when projects reach the testing, approvals and certification phase.

**ESQ – Thinking about compliance at the early stages of a product's development cycle helps to get your products to market faster.**



## Why ESQ?

Large and complex projects can pose a significant challenge to complete and deliver to market. With modules and sub-systems being completed by separate groups and integrated by others, complete sections of a product can move within the supply chain and overall compliance responsibility can be lost. When full systems come together for the first time during final qualification, just ahead of shipment or deployment, the result is rarely good. ESQ engages clients early on in a project to provide strategic guidance, from initial concept and throughout the whole development cycle, focusing on the best approach to bring products to market.

### The financial implications

'Test and Fix' iteration cycles are expensive, but not as expensive as missing a deadline to market. Lost sales opportunities can be a costly consequence of poor compliance management.

### The knowledge transfer

Our engaged experts provide a continuous resource for compliance issues through ESQ. We will help clients through the critical stages ahead of the qualification process before providing expertise that performs the final testing and certification.

**The ESQ methodology has one objective: to make compliance part of a company's process and therefore to deliver products to market quickly and successfully.**

**ESQ offers an innovative model of engagement for Element's clients.**





## The benefit of ESQ

Supporting market access, ESQ underpins a product's route to market and ensures continued compliance. ESQ provides three pillars to support market access.

### Resource and knowledge

Ensuring that the detailed in-depth requirements of compliance are available at the right time throughout the development cycle is key to on-time market access, as is knowing how to design in compliance and mitigate test failure early on.

### Test and certification

In many cases the need to meet a test standard and formally record the results is required. ESQ ensures the right test suite is used, that all relevant testing for the required markets is carried out correctly, and the results are accredited. It is essential that any reports meet the requirements of certification or National Certification Bodies who may be involved in the final acceptance of the product's compliance.

### Production control

ESQ will make sure that build standards, design changes, new technology integration and changes in the standards or rules are all controlled and applied to a product throughout its life cycle.



**ESQ supports market access through resource and knowledge, test and certification and production controls, leading to approval and access to new markets.**

# Compliance activity and ESQ

Throughout a product’s development there are key areas that influence its certification success. Without the benefit of the ESQ route to market, issues that can lead to failure become established at the very early stages of the development cycle. ESQ identifies seven key stages in a product’s development and ensures that the required amount of compliance knowledge and direction is applied at the right time.

## Market research

Contact with regulatory authorities and in-country testing regimes.

## Concept

Compliance requirements, test standards and certification schemes required by the technologies used.

## Product development

Compliance review, supply chain management, test suites and de-risk testing to identify failure mitigation. Review required compliance documentation and labelling.

## Prototype

Carry out qualification testing, freeze the design and build standard, move toward any certification requirements. Carry out in-country testing as required.

## Market testing

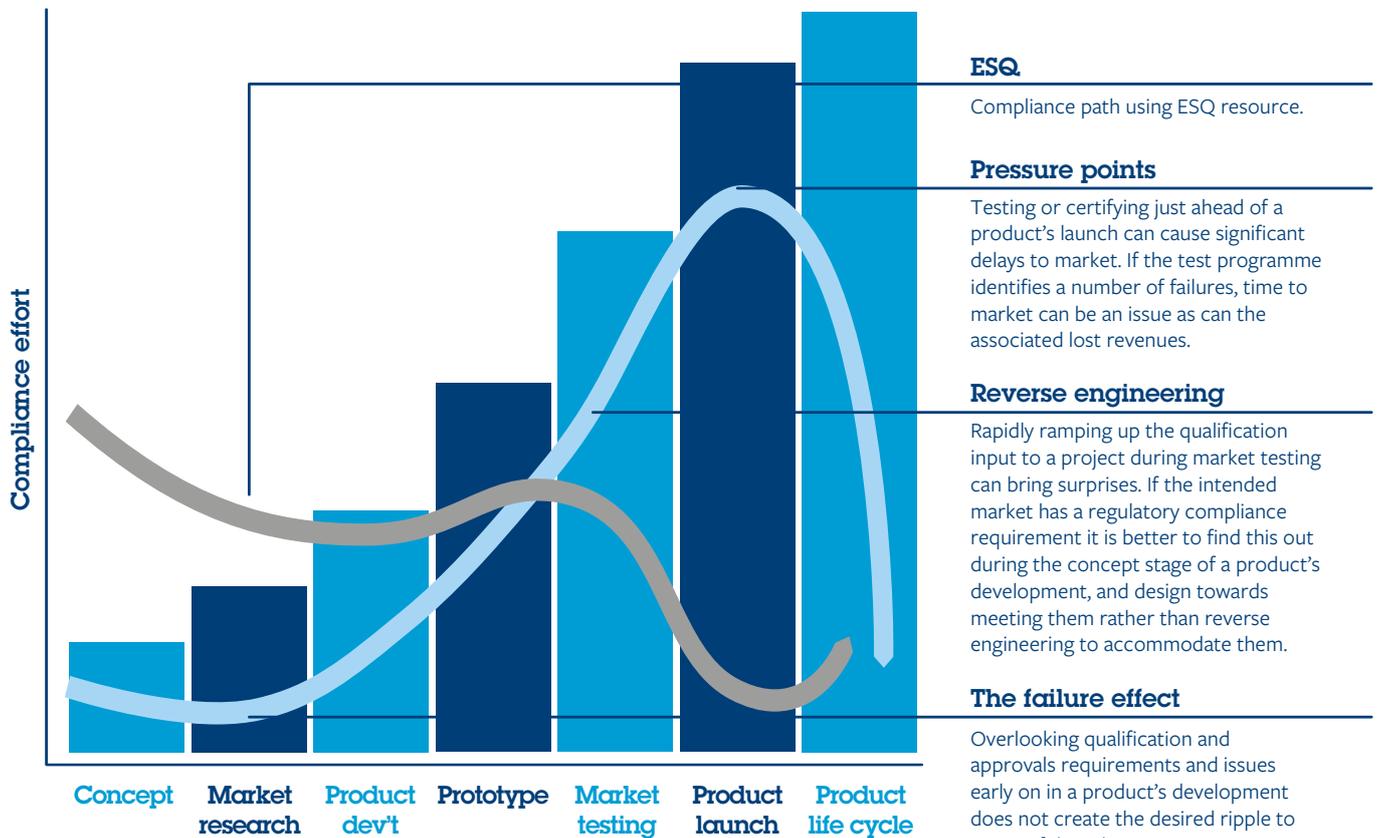
Product is approved for intended markets.

## Product launch

Product is able to access required markets on time and legally.

## Product life cycle

Production control, standards updates, changes to the product, changes to markets, emerging markets and technologies.





## Your development process and ESQ

The ESQ offering is more than knowledge transfer: it is philosophy transfer.

It provides the right environment, and exactly that strand of management, beginning at an early stage in a project and continuing throughout its life cycle, which is needed to guide a design, system or project towards conformance to the standards it must meet before eventually going to market.

ESQ aims to add knowledge in terms of factual inputs based on long experience of approvals regimes as to what will and will not work, on what to do, and what not to do, how best to manage the process and the supply chain, and how to de-risk the hazard of being late to market.

ESQ is ideally placed to offer an “overlay” of compliance management that can follow the product throughout its evolution. At times, detailed intervention might be called for, at others, the “overlay” might need the lightest of touches; ESQ is equally adept at providing both.

But ESQ can provide much more than that; alongside a measure of point-by-point guidance, it will help shape clients’ in-house design approaches and procedures so that not only the design is in hand, but also future projects will stay on track to compliance success.

### The right levels of involvement

Using ESQ throughout the development process shifts the peak compliance and qualification activity to the front end of a product’s development, with less involvement when the product is ready to launch. ESQ activity then picks up during the product’s life cycle, ensuring the approvals remain valid.

### Ongoing product support

An essential part of maintaining compliance and therefore market access is ensuring that changes to a product, system, standard or market are reviewed. ESQ ensures these and more are monitored and appropriate actions taken.



## ESQ...the final stages of regulatory approval and compliance

When a product is ready for final accredited qualification testing, ESQ takes the right route. Regardless of whether the aim is confident self-declaration as required by some CE marking directives, third party contractual review for safety case, qualification trials in the aerospace and defence markets or certification to an accredited scheme, ESQ provides testing, reports and documentation in the format required to meet any regulatory regime worldwide.

Certification schemes like those registered with the IECEE or IECEx will only accept test reports from listed test laboratories; ESQ ensures the right test facilities are chosen.

Where in-country testing is mandated, ESQ will ensure that de-risk testing is aligned with the test requirements and support the product during third party tests.

ESQ not only supports developing a compliance strategy to build a compliant product, but also enables you to prove it.

## ESQ...through life support

In order to get the most from ESQ, it must drive a company's compliance strategy, take ownership and deliver.

ESQ becomes part of a company's business process that is maintained and adapted as the company addresses new

markets and develops new products. ESQ keeps all elements of compliance focused and delivered when needed. ESQ is at the centre of a company's compliance process, so avoiding the need for re-education, knowledge catch-up or start-from-the-beginning compliance awareness.



## Why Element?

**Element Materials Technology helps its customers achieve compliance on the first attempt more often with our Early Stage Qualification (ESQ<sup>®</sup>).**

Working with you from the beginning of the specification and design stages of your product development we can help you avoid common qualification pitfalls. Through our network of engaged experts, global capacity and innovative services we help companies meet these challenges, increasing your market share by increasing speed to market, reducing the administrative burden and managing testing costs.



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