



TESTING, INSPECTION & QUALITY ASSURANCE

Supplier Capability Brief

Testing, inspection and quality assurance (TIQA) are essential to ensuring the safety, reliability and mission-readiness of defence platforms across all domains. From materials validation and non-destructive testing (NDT) to environmental stress screening, electronics testing and full-system qualification, defence programmes depend on rigorous verification processes. As Europe accelerates rearmament and industrial scale-up, Primes and OEMs require partners who can deliver trusted, accredited, high-integrity testing and certification services.

Core subcategories

- **Non-destructive testing (NDT):** ultrasonic, radiographic, eddy-current, magnetic particle, dye penetrant
- **Environmental testing:** vibration, shock, thermal cycling, humidity, salt fog, altitude
- **Materials testing:** tensile, fatigue, hardness, impact, chemical and microstructural analysis
- **Electronics testing:** ICT, FCT, burn-in, boundary scan, ESS and HALT/HASS

- **Calibration services:** dimensional, electrical, mechanical and instrumentation
- **Metrology, CMM measurement and precision verification**
- **Qualification and Certification Testing:** For defence/aerospace standards
- **Inspection services:** visual, automated optical inspection, machine vision, QA audits

Market outlook

Testing, inspection and QA demand is rising in parallel with the expansion of defence production, platform modernisation and the introduction of new materials, electronics and autonomous technologies.

As defence systems become more complex and digitally integrated, QA and verification requirements continue to intensify across materials, electronics, structures and complete platforms.

Key market indicators:

- **Defence & aerospace testing and inspection market:**
~\$15B in 2024 : ~\$22B by 2030 (CAGR ~6-7%)
- **Global NDT market:**
~\$10B in 2024 : ~\$17B by 2030 (CAGR ~9%)
- **Environmental testing:**
~\$1.8B in 2024, growing steadily with new platform development
- **Electronics test equipment:**
~\$8B globally, driven by digitalisation and mission-complexity
- **Europe Expanding Accredited Test:**
capability to support sovereign manufacturing and certification

Typical defence applications

- Testing and qualification of components for aircraft, UAVs, vehicles and naval systems
- NDT of critical components such as engine parts, structural elements and armour materials
- Environmental testing for missile, space and high-reliability systems

- Electronics validation for avionics, EW, C4ISR and weapons systems
- Full-system acceptance testing and compliance verification
- Calibration and metrology for precision manufacturing environments
- QA support for prototype, LRIP and full-rate production programmes

Who should exhibit

- NDT specialists and accredited laboratories
- Environmental and reliability testing facilities
- Materials testing laboratories and metallurgical services

- Electronics testing providers (ICT/FCT/ESS)
- Calibration and metrology service providers
- Inspection companies and machine-vision QA specialists
- Certification and compliance testing organisations

What primes & OEMs are looking for

- Accredited testing partners with defence/aerospace certification (ISO/IEC 17025, NADCAP)
- Reliable NDT services for safety-critical and high-stress components
- Environmental and reliability testing for new-platform qualification

- Advanced electronics test capability for increasingly complex systems
- Metrology and precision inspection supporting high-tolerance manufacturing
- Secure test environments with strong data integrity and traceability
- Partners capable of supporting accelerated programme timelines

Showcase your **TESTING, INSPECTION and QA CAPABILITIES** to defence engineering, procurement and programme teams who are **ACTIVELY IDENTIFYING and ONBOARDING** new suppliers across Europe.

