

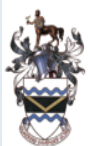


15 -19 June 26

Title:

Collaborative Pathways in NDT Certification: How BINDT and International Partners Shape the Future of Competence and Standards

Author:



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Presentation parts

Part 1: Collaboration, Compliance.

Part 2: Common objectives.



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Common factor:

The Increased global demand for qualified NDT engineers



AEROSPACE



Ultrasonic testing on aircraft structure for safety and reliability



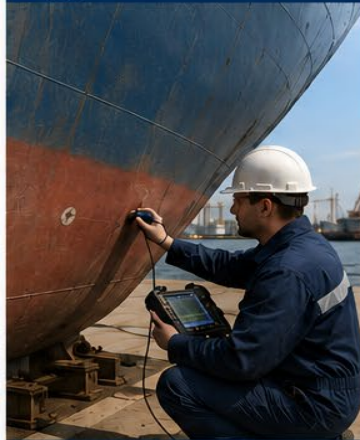
OIL & GAS



Ensuring asset integrity in hazardous and demanding environments



MARINE



Supporting safe operations across the marine and shipbuilding sectors



RAIL



Maintaining safety and performance across rail networks



POWER GENERATION



Protecting critical infrastructure and ensuring operational reliability



ISO 17024 specifies the general requirements for bodies operating certification of persons, ensuring consistency, credibility and international recognition.



ISO 9712

Non-destructive testing – Qualification and certification of NDT personnel

The widely adopted international standard for NDT personnel qualification.



ISO TS 25108

Non-destructive testing – Qualification and certification of NDT personnel

The standard by which training schools must comply with when delivering NDT training.



ISO TS 25107

Non-destructive testing – Syllabus guidelines

The standard by which the NDT syllabus is created.



Certified People. Assured Competence. Safer World.

Recognised worldwide. Respected everywhere.



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Part 1: Collaboration and compliance

- ✓ Demonstrate how international collaboration supports the credibility and consistency of NDT certification.
- ✓ Look at the role of BINDT within the international framework of ISO, BSI, ICNDT, EFNDT, and Global ACI (was IAF).
- ✓ Highlight the importance of impartiality, competence assurance, and ISO/IEC 17024 compliance.



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INTERNATIONAL COLLABORATION

Strengthening the Credibility and Consistency of PERSONAL CERTIFICATION IN NON DESTRUCTIVE TESTING

One Standard. One Benchmark. Trusted Worldwide.



COMMON INTERNATIONAL STANDARDS

Alignment with globally recognized standards (e.g., ISO 9712) ensures a common foundation for certification.



PEER COLLABORATION

Certification bodies, employers and experts work together to share knowledge, experience and good practice.



HARMONIZED PRACTICES

Consistent exam content, qualification requirements and practical assessments drive reliable and equitable outcomes.



GLOBAL RECOGNITION

Certifications are widely recognized across borders and industries, supporting workforce mobility and trust.



CONTINUOUS IMPROVEMENT

Ongoing collaboration drives standard development, training quality and innovation in NDT.



PUBLIC & INDUSTRY CONFIDENCE

Consistent, credible certification enhances safety, quality and confidence in NDT worldwide.



AEROSPACE



ENERGY



MARINE



RAIL



OIL & GAS



INFRASTRUCTURE

Collaboration without borders. Quality without compromise. Certification you can trust.



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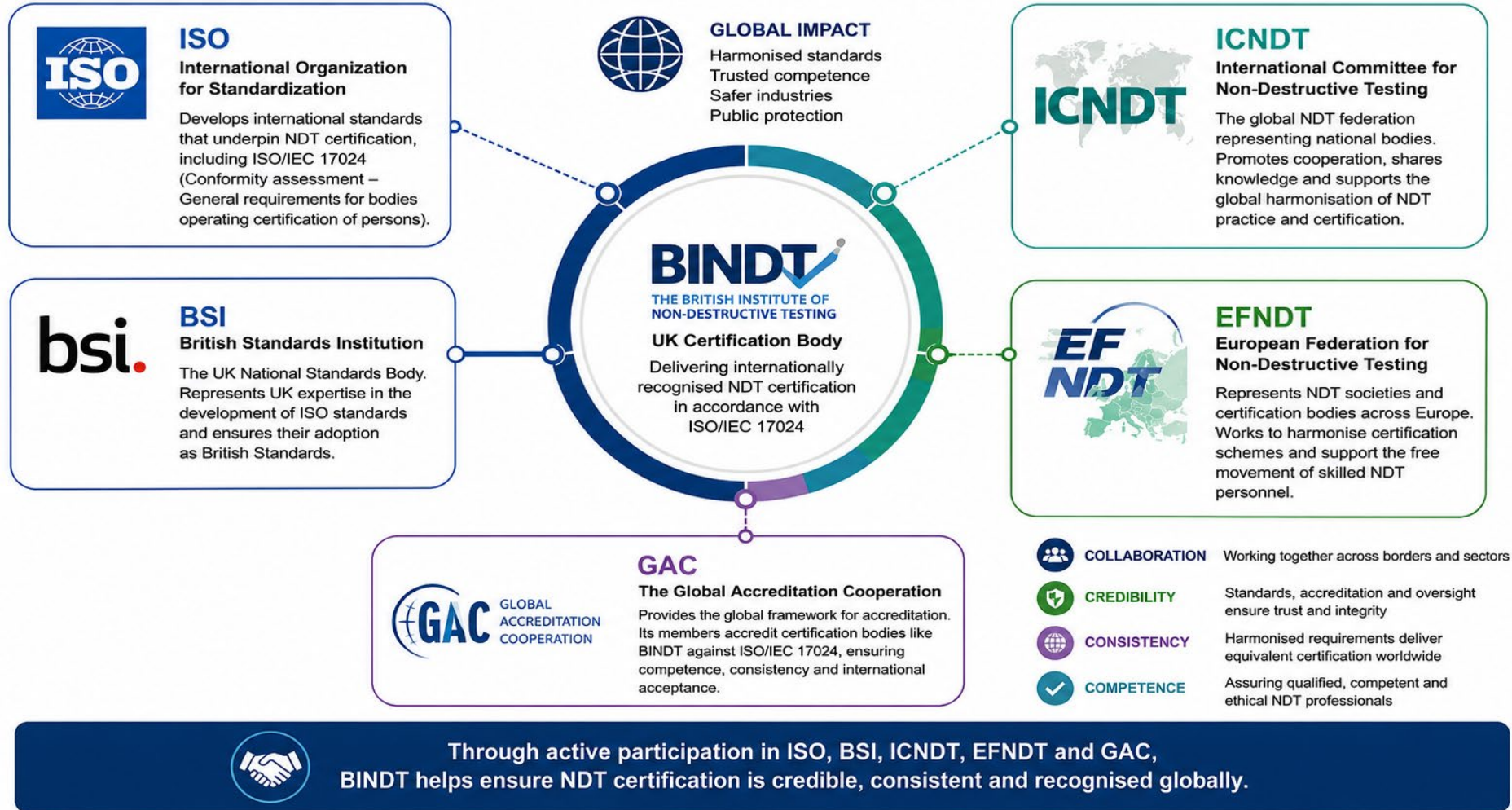


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BINDT: A KEY PARTNER IN THE INTERNATIONAL NDT FRAMEWORK

Collaborating to ensure credible, consistent and globally recognised NDT certification



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REQUIREMENTS FOR CERTIFICATION BODIES

Providing Personal Certification in Non-Destructive Testing (NDT)

ALL CERTIFICATION BODIES MUST COMPLY WITH

ISO/IEC 17024

Conformity Assessment – General Requirements for Bodies
Operating Certification of Persons



IMPARTIALITY

Operate impartially and manage conflicts of interest.



COMPETENCE

Demonstrate competence in certification of persons in NDT.



REQUIREMENTS FOR CERTIFICATION SCHEMES

Use certification schemes that are based on relevant standards and are publicly available.



EXAMINATION

Ensure examinations are valid, reliable, fair and appropriate to the certification scheme.



CERTIFICATION DECISION

Ensure certification decisions are made by competent personnel other than those who conducted the examination.



CERTIFICATION & USE OF CERTIFICATES

Issue certificates only to those who meet the requirements and clearly state the scope and validity.



SURVEILLANCE

Maintain certification through ongoing surveillance and recertification.



COMPLAINTS & APPEALS

Have effective processes for handling complaints and appeals.



CONFIDENTIALITY

Ensure confidentiality of information.



MANAGEMENT SYSTEM

Operate a documented management system to ensure consistent and reliable certification.

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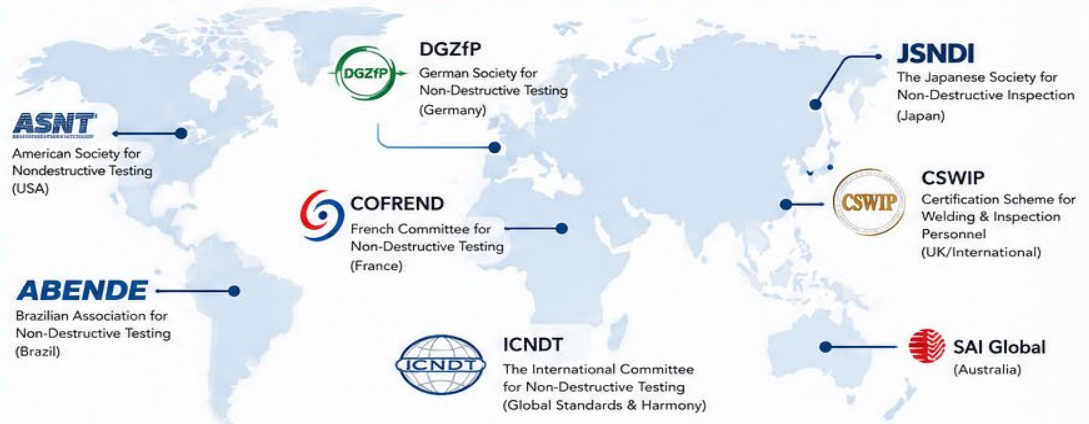
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- ✓ Certifies NDT personnel to internationally recognised standards such as EN ISO 9712.
- ✓ Operates as an ISO/IEC 17024 accredited Certification Body (UKAS accredited).
- ✓ Demonstrates impartiality, competence and integrity in all certification activities.
- ✓ Supports global mobility and confidence in NDT competence.



0030

CERTIFICATION BODIES WORLDWIDE – ALL MEETING ISO/IEC 17024



ISO/IEC 17024 ENSURES GLOBAL CONSISTENCY, CREDIBILITY AND CONFIDENCE
IN THE CERTIFICATION OF NDT PERSONNEL WORLDWIDE



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Part 2: Common objectives

- ✓ Examine why certification bodies must comply with internationally recognised standards.
- ✓ Illustrate the interconnected governance structure linking industry, standards, and certification bodies.
- ✓ Promote awareness of future NDT career pathways through the “Is NDT a Career for Me?” initiative.
- ✓ Encourage discussion on transparency, innovation, and continuous improvement in NDT through simulation & AI



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Why Certification Bodies Must Comply with Internationally Recognised Standards

Building competence. Ensuring integrity. Protecting people and assets.

THE ROLE OF CERTIFICATION BODIES

Certification bodies provide NDT certification schemes for persons who perform Non-Destructive Testing (NDT) on employers' plant, equipment and products.



Ensure Competence

Assess and certify personnel against consistent, rigorous criteria.



Ensure Fairness & Impartiality

Operate transparently and without conflict of interest.



Ensure Consistency

Apply uniform requirements and processes worldwide.



Drive Continual Improvement

Use proven frameworks for ongoing evaluation and improvement.

COMPLIANCE WITH INTERNATIONALLY RECOGNISED STANDARDS



ISO 9712

Non-destructive testing – Qualification and certification of NDT personnel



EN 4179

General requirements for bodies operating certification of personnel



These standards provide the global benchmark for competence, consistency, and reliability in NDT personnel certification.

WHAT THIS DELIVERS



Confident Clients & Employers

Assurance that certified personnel are competent and reliable.



Trusted Certification

Global recognition and acceptance of certifications.



Reduced Risk

Fewer human errors and more reliable NDT outcomes.



Legal & Contractual Compliance

Meets regulatory, industry and contract requirements.



Global Mobility

Certified personnel can work across borders with confidence.

THE ULTIMATE IMPACT: SAFETY FOR ALL



SAFE PLANT & ASSETS



PROTECTS PEOPLE



PROTECTS THE GENERAL PUBLIC



By complying with internationally recognised standards such as ISO 9712 and EN 4179, certification bodies uphold the highest levels of competence, integrity and consistency—ensuring the safety of plant, the protection of people, and the confidence of the public.



...



...



COMPETENT PEOPLE. RELIABLE INSPECTIONS. SAFER PLANT. SAFER PUBLIC.



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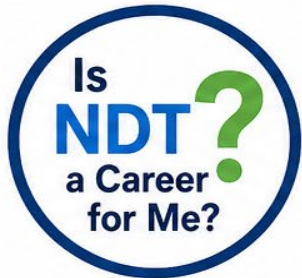
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Promoting Awareness of Future NDT Career Pathways through “Is NDT a Career for Me?” Initiative

Inspiring today. Preparing tomorrow. Building the future of NDT.

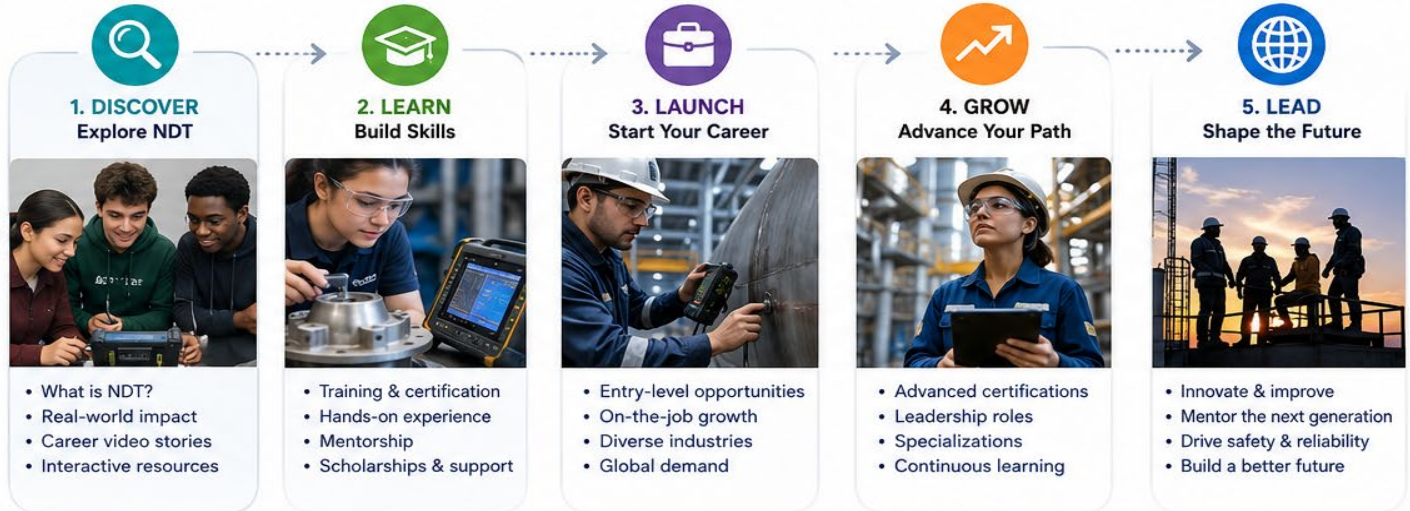
A RANGE OF PATHWAYS. A WORLD OF OPPORTUNITIES.



Raising awareness of the exciting, meaningful and high-impact career opportunities in NDT.



Students • Educators • Parents
Career Changers • Communities



HOW WE PROMOTE AWARENESS



Outreach & Campaigns

Digital, social media, and community engagement



School & Educator Partnerships

Presentations, career fairs, and classroom resources



Real Stories, Real People

Highlight diverse NDT professionals and their journeys



Industry Collaboration

Partnering with companies, associations and training providers



Tools & Resources

Web resources, career quizzes, videos, and guides



STRONG AWARENESS



STRONG FUTURE
FOR NDT



EXPLORE. LEARN. GROW. LEAD.

Your future in NDT starts with a question. We're here to help you find the answer.

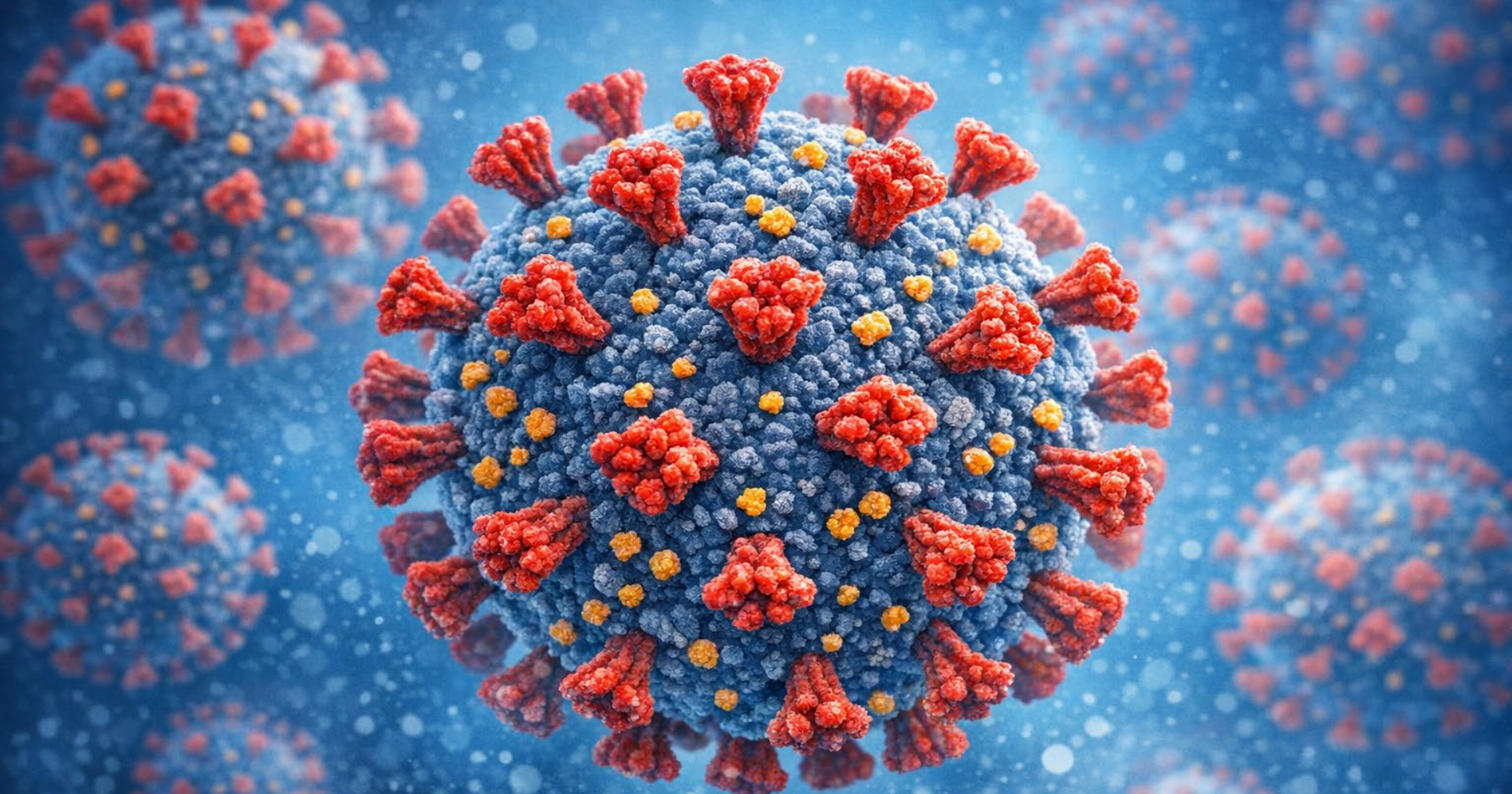


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Covid 19 Pandemic - January 2020



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FROM CLASSROOM TO CLOUD

30 YEARS OF EVOLVING TEACHING. ENDLESS POSSIBILITIES.



THEN

In the Classroom.
Same time. Same place.



NOW

Connected Anywhere.
Learning Without Limits.



ANYWHERE



ANYTIME



ANY DEVICE



ANYONE

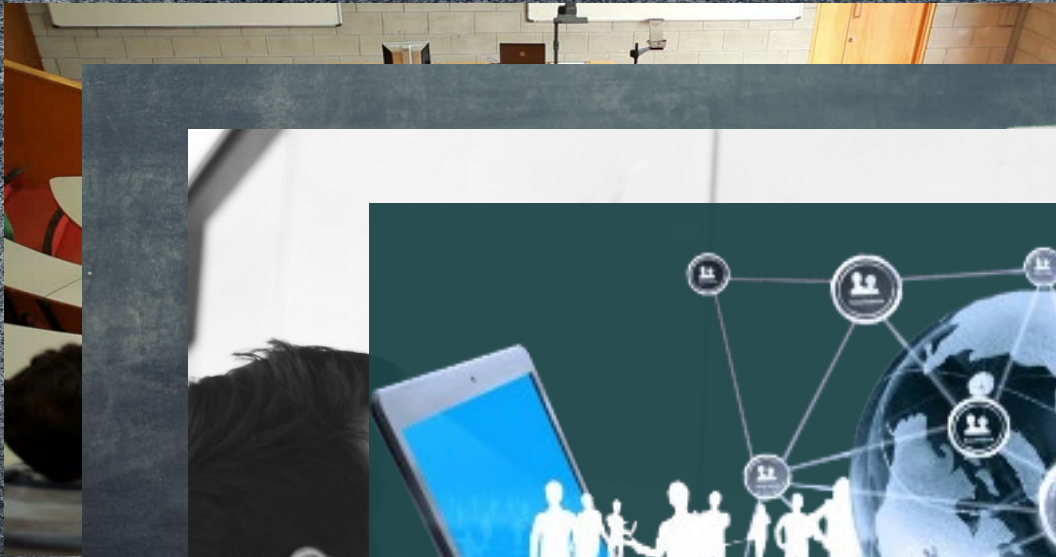


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Delivers Quality. Builds Competence. Ensures Confidence.

WHAT MUST BE CONSIDERED

WHEN USING TS 25108 REQUIREMENTS

FOR THE DELIVERY OF NDT METHOD TRAINING



1. LEARNER ENGAGEMENT

- Interactive and relevant learning experiences
- Clear learning outcomes and expectations
- Encourage collaboration and feedback
- Promote motivation and retention



2. PRACTICAL TRAINING

- Hands-on experience with real or realistic equipment
- Adequate practice opportunities
- Qualified instructors and suitable resources
- Safe and controlled training environment



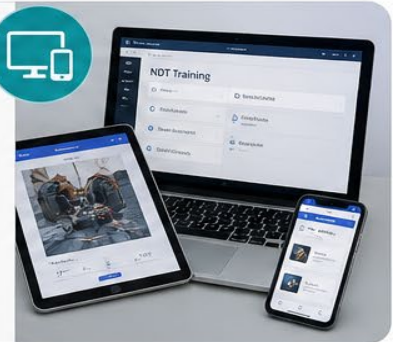
3. ASSESSMENT INTEGRITY OF STUDENTS

- Fair, consistent and impartial assessments
- Assessments aligned with TS 25108 requirements
- Prevent malpractice and ensure authenticity
- Evidence-based decisions and proper records



4. TECHNOLOGICAL ALIGNMENT

- Leverage modern technology to enhance learning
- Use of iPads, laptops, mobile phones and digital tools
- Access to e-learning, simulations and digital content
- Ensure technology supports learning objectives and accessibility



TS 25108

Quality NDT Training
for Competent
Professionals



Adhering to TS 25108 ensures training is structured, consistent and credible—developing competent NDT professionals for a safer and more reliable world.



QUALITY



COMPETENCE



CONFIDENCE



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CAP 1933: *Training Evolution*

CAP 1933

Guidance on Web-Based,
Distance Learning, Simulation & Reality

Published October 2020



Online Learning



Virtual Classrooms



Simulation & VR Training



CAP 1933 / www.caa.co.uk



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Simulation:



Image credit <https://www.stengg.com/en/defence/training-and-simulation/>



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Image credit EXTENDE NDT

Synthetic training devices



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RADIOGRAPHIC TESTING SIMULATORS

Smart Training. Safer Technicians. ALARP in Action.

Advanced simulation technology delivering real-world skills without real-world radiation.

TRADITIONAL TRAINING

Uses real radiation sources



- Real radiation exposure
- Higher operational risk
- Complex logistics and permits
- Limited training opportunities

SIMULATOR TECHNOLOGY

Realistic. Repeatable. Risk-Free.



SIMULATOR-BASED TRAINING

No radiation. Real results.



- Zero radiation exposure
- Safe, controlled environment
- Cost-effective and efficient
- Repeatable, measurable learning
- Builds confidence and competence



ALARP COMPLIANCE

As Low As Reasonably Practicable



Simulator training minimizes radiation exposure and reduces risk to As Low As Reasonably Practicable (ALARP).

PROVEN TRAINING PATH WITH SIMULATORS



1. LEARN
Understand principles and techniques



2. PRACTICE
Use simulators to develop skills in a safe space



3. ASSESS
Evaluate performance and readiness



4. QUALIFY
Confirm competence for real-world tasks



5. PERFORM
Confident, competent and safety-focused radiographers



SIMULATORS PREPARE. COMPETENCE DELIVERS. SAFETY PROTECTS.
Better training outcomes. Lower risk. Full compliance. A safer future for NDT.



**TRAIN SMART.
PROTECT PEOPLE.
RESPECT RADIATION.**



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TRAINING THE FUTURE. INSPECTING WITH CONFIDENCE.

Virtual Reality NDT Training – Real Skills. Realistic Environments. Zero Risk.



IMMERSIVE TRAINING
Realistic 3D environments replicate actual assets and inspection scenarios



SAFE & RISK FREE
Practice complex inspections without exposure to height, radiation or hazardous areas



BUILD COMPETENCE
Repeat scenarios, develop skills and build confidence through hands-on virtual practice



PERFORMANCE TRACKING
Detailed feedback and metrics help track progress and ensure training effectiveness

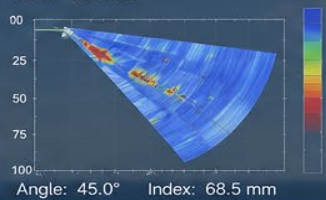
TRAINING OBJECTIVES

- ✓ Equipment setup
- ✓ Probe selection
- ✓ Calibration
- ✓ Data acquisition
- ✓ Flaw detection
- ✓ Reporting



INSPECTION IN PROGRESS

Component: Pipeline (6")
Technique: Phased Array UT
Scan: Sectorial

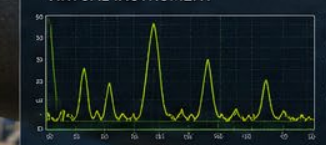


INDICATION DETECTED

Depth: 32.4 mm
Length: 14.7 mm
Amplitude: 68%



VIRTUAL INSTRUMENT



REALISTIC OIL & GAS ENVIRONMENTS



TYPICAL INSPECTION TASKS

- ✓ Weld inspection
- ✓ Corrosion mapping
- ✓ Composite inspection
- ✓ Data interpretation
- ✓ Reporting & documentation



LEARN ANYWHERE. PRACTICE ANYTIME.



VR
IMMERSION



MEASURABLE
RESULTS



SKILLED
PROFESSIONALS



BUILD SKILLS. REDUCE RISK. IMPROVE PERFORMANCE.

Virtual Reality NDT Training – Preparing Technicians for Real-World Challenges.



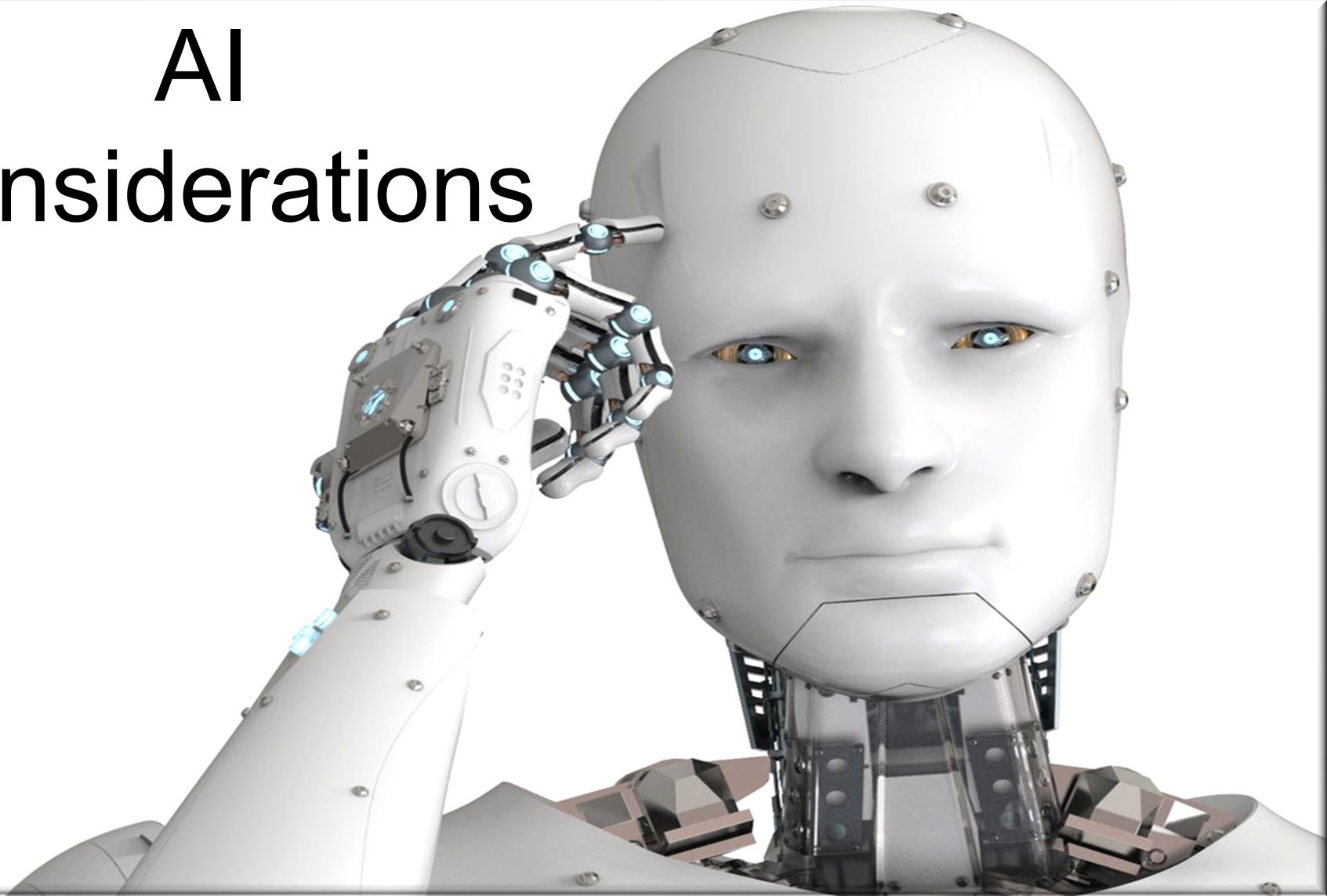
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AI Considerations



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DEVELOPING NDT TRAINING THAT IS RESPONSIBLE, RELEVANT AND RECOGNISED

Moral. Ethical. Legal. Technical Excellence.

Our commitment is to develop training that is ethical, inclusive, safe and compliant – delivering competence and confidence for a safer world.



MORAL CONSIDERATIONS



Duty of care
Protect learners, the public and the environment.



Promote safety and competence
Ensure training builds real capability and does no harm.



Fairness and inclusion
Equal access to quality training for all, regardless of background.



Professional integrity
Foster honesty, respect and a culture of continuous improvement.



ETHICAL CONSIDERATIONS



Transparency
Open about content, methods, limitations and outcomes.



No conflicts of interest
Ensure independence and avoid commercial bias.



Respect for learners and data
Protect privacy and intellectual property.



Responsible use of technology
Use simulation, AI and data ethically to enhance learning.

A COLLABORATIVE APPROACH

Bringing Expertise Together



LEGAL CONSIDERATIONS



Compliance with standards
Align with relevant legislation and standards (e.g. ISO 9712, EN 4179, ASNT, local regulations).



Liability and accountability
Define responsibilities of providers, trainers and learners.



Certification validity
Ensure certifications meet legal requirements and are recognized.



Health, safety and environment
Meet legal duties for safe training environments and wellbeing.

LEVELS OF TRAINING DELIVERY

PCN ISO 9712 COMPLIANT PRACTITIONER CERTIFICATION



- Levels 1, 2 and 3
- In accordance with ISO 9712
- Sector specific practice
- Examination and performance demonstration
- Meets employer and legal requirements
- Supports CPD and re-certification

DEGREE LEVEL EDUCATION ACADEMIC QUALIFICATIONS



- Foundation and Honours Degrees
- MSc / Postgraduate pathways
- Research and critical analysis
- Advanced NDT technologies
- Leadership, management and innovation
- Builds the future of our profession

ENGAGEMENT FROM ALL INDUSTRY SECTORS



MARINE & OFFSHORE
Safety critical assets in harsh environments

AEROSPACE
High reliability, zero compromise

POWER GENERATION
Integrity of high-value, high-risk plant

MARITIME
Global operations, regulatory compliance

RAIL
Safety, availability and performance

PETROCHEMICAL & PROCESS
Continuous, reliable inspection and monitoring



RENEWABLES
Supporting a sustainable energy future



HOW DO WE QUALIFY THE DELIVERY OF SUCH TRAINING?



Competent Instructors
Qualified, experienced and continuously developing



Accredited Content
Aligned to recognised standards and industry best practice



Validated Methods
Effectiveness proven through assessment and feedback



Audit & Review
Regular evaluation and continuous improvement



Recognition & Approval
By relevant bodies (e.g. PCN, professional institutions, regulators)



QUALITY TRAINING. COMPETENT PEOPLE. TRUSTED RESULTS. A SAFER WORLD.

COLLABORATION. INTEGRITY. COMPLIANCE. BUILDING THE FUTURE OF NDT TOGETHER.



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E-Learning & Blended Learning

Procrastination

Let's do it today not tomorrow!



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INTRODUCING

Patrick Boulton

SENIOR TECHNICAL AND
CERTIFICATION ENGINEER

British Institute of
Non destructive Testing



TECHNICAL
EXPERTISE



CERTIFICATION
EXCELLENCE



SUPPORTING INDUSTRY
STANDARDS

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