AILEEN

Regulatory Landscape in Defence

Bethan Smith

MTC

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them. PROJECT REFERENCE NO. 101103507

Co-funded by the European Union

Contents

- Defence manufacturing in a changing regulatory environment
- Defence standards ecosystem
- Emerging challenges for advanced manufacturing
- MTC example
- European perspective and the AILEEN context
- Key Takeaways

This presentation includes content generated with the assistance of Microsoft Copilot (AI). The author is responsible for the final content, interpretation, and accuracy of all information presented.

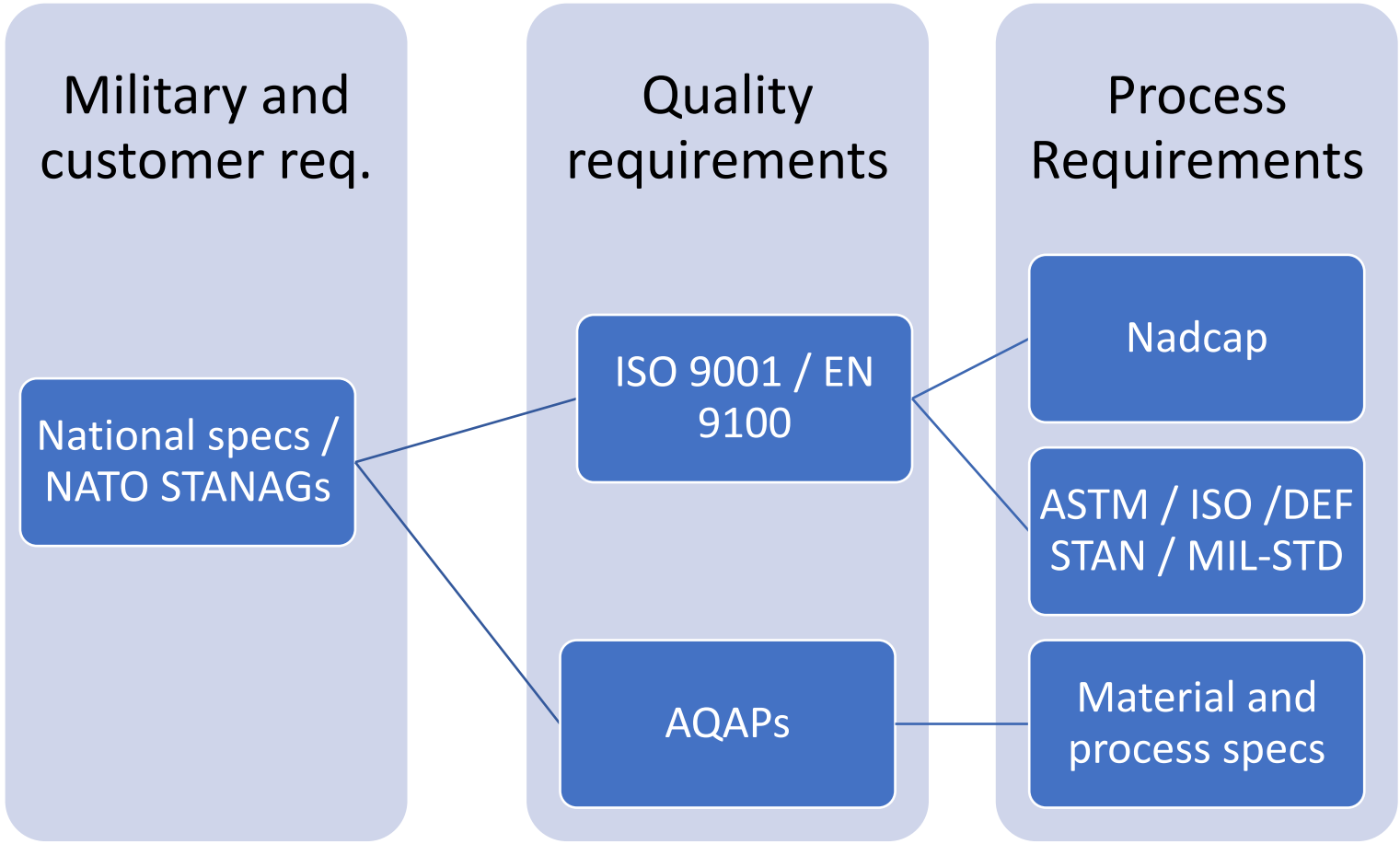
Defence Manufacturing in a Changing Regulatory Environment

Defence organisations need faster capability delivery while maintaining assurance, quality and security.

- Increased European defence investment
- Supply chain resilience and sovereignty
- Adoption of advanced manufacturing technologies
- Pressure to accelerate qualification and certification
- Ability to quickly flex to new technologies (e.g drones)

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Defence Standards Ecosystem



The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Key Challenges for Advanced Manufacturing

Challenges

- Qualification of AM and advanced laser processes
- Material variability and repeatability
- Digital thread and traceability requirements
- Cybersecurity and data integrity
- Qualification of repair and low-volume production routes

The challenge is often not making the part, but proving confidence in the process.

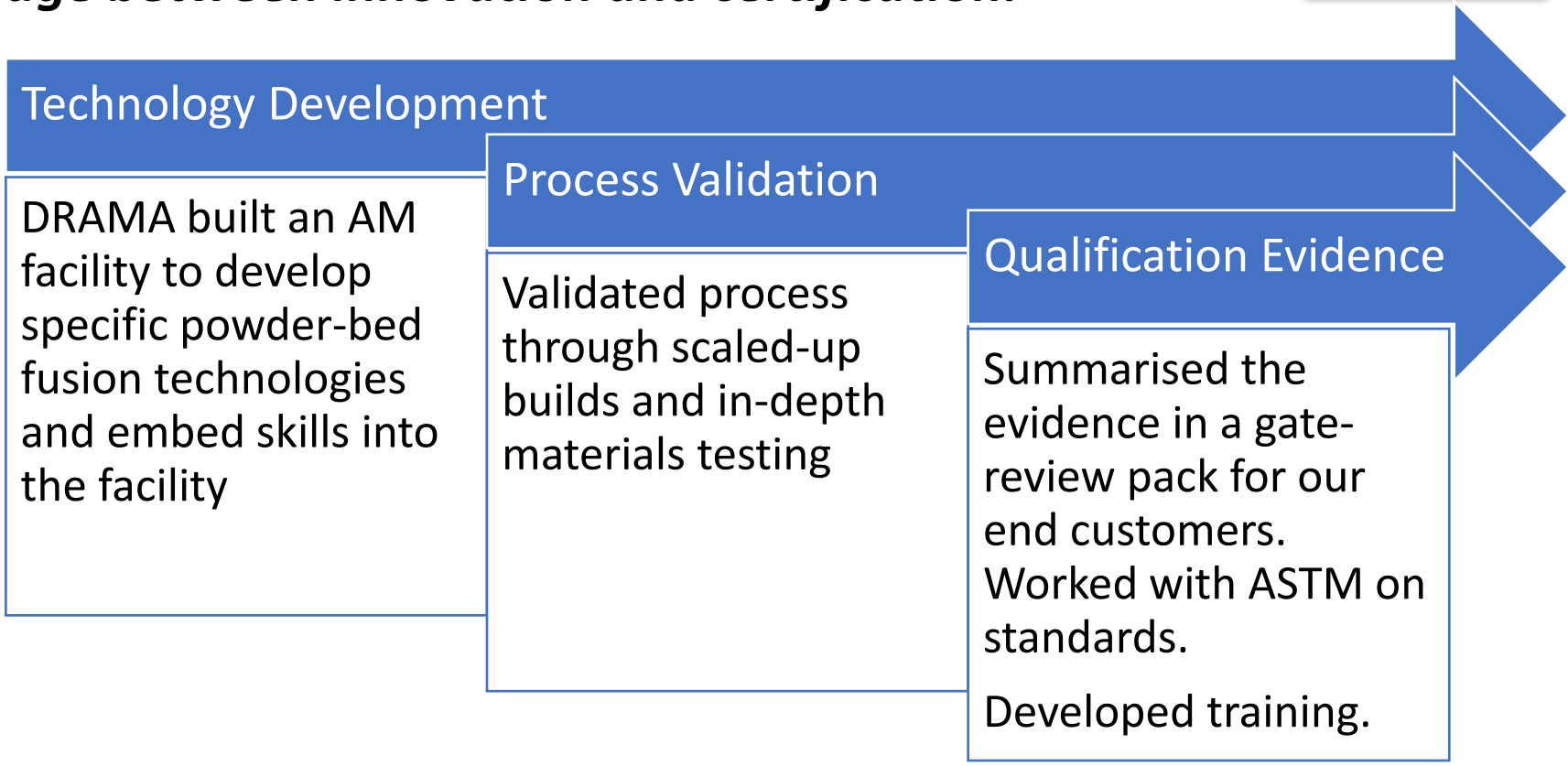
The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

MTC Example – Building Qualification Evidence

Robust data is the bridge between innovation and certification.

MTC has worked with aerospace and defence companies to:

- Characterise advanced manufacturing processes
- Demonstrate repeatability and reproducibility
- Generate qualification evidence
- Support engagement with end users and certification stakeholders
- Working with ASTM to in parallel support certification of these processes



Digital Reconfigurable AM Facilities for Aerospace at MTC

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

European Perspective & AILEEN Relevance

- Different national approaches still exist
- Need for interoperability across European supply chains
- Shared qualification methodologies can accelerate adoption
- Skills and certification remain barriers to scaling advanced manufacturing

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Key takeaways

- ✅ Defence regulation is evolving alongside manufacturing innovation.
- ✅ Qualification evidence is becoming as important as process capability.
- ✅ Early engagement with standards, accreditation and certification bodies reduces adoption risk.

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Bethan Smith

Manufacturing Technology Centre

Bethan.Smith@the-mtc.org



AILEEN