

AI From regulation to implementation

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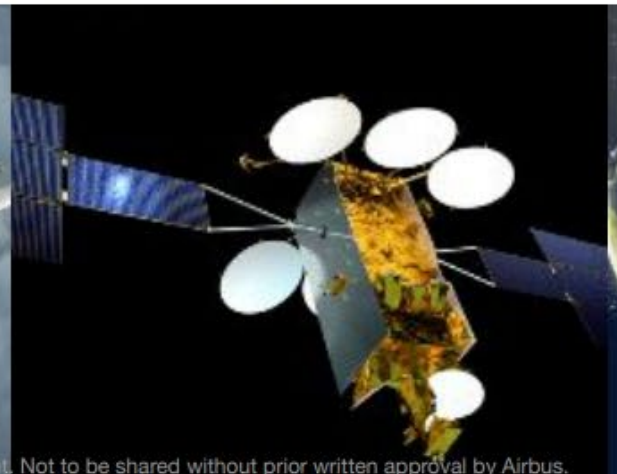
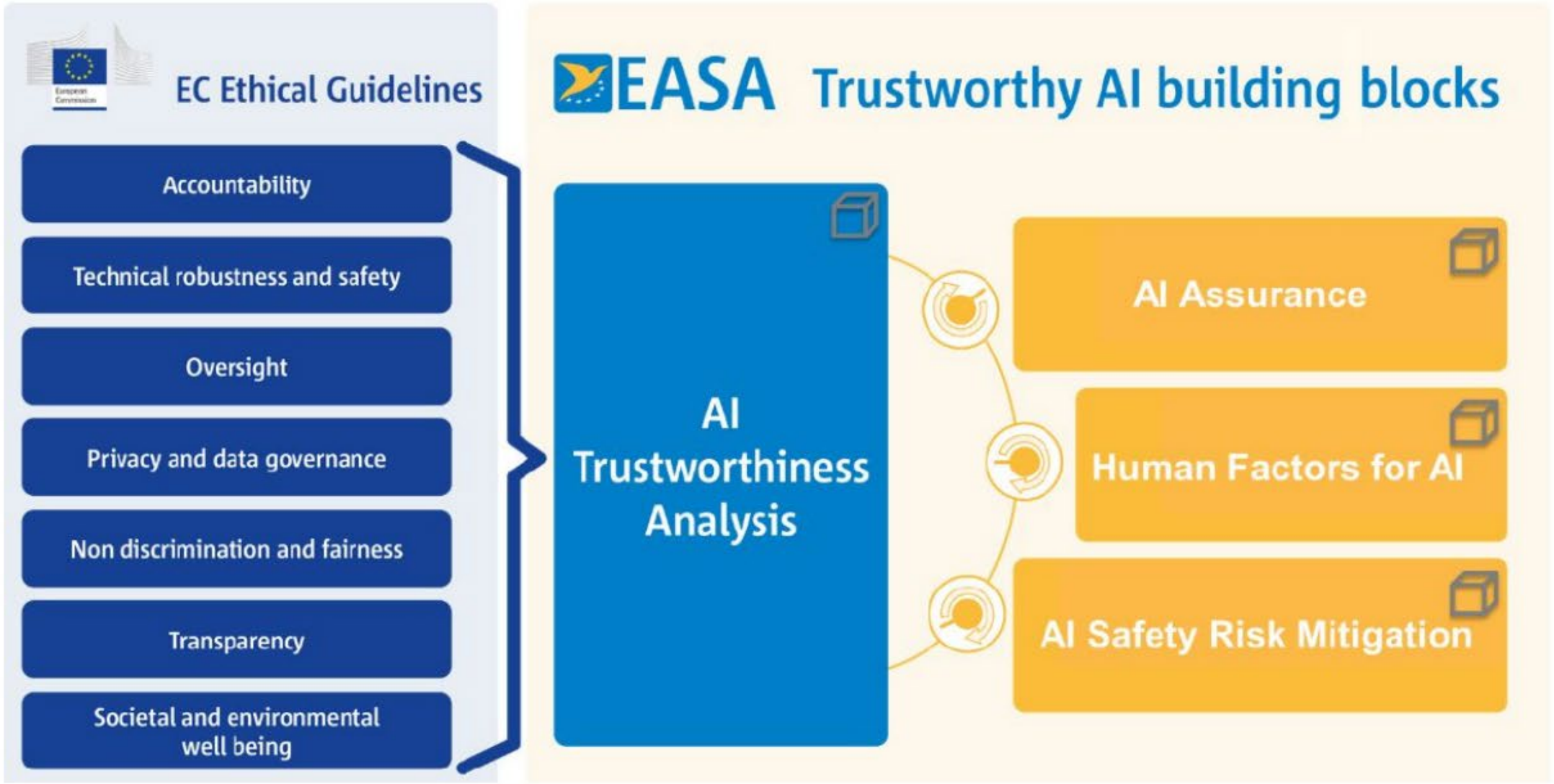
Fast track Leader


EC Ethical Guidelines
Accountability
Technical robustness and safety
Oversight
Privacy and data governance
Non discrimination and fairness
Transparency
Societal and environmental well being
EASA Trustworthy AI building blocks
AI Trustworthiness Analysis
AI Assurance
Human Factors for AI
AI Safety Risk Mitigation

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AIRBUS AI Common challenges

Airbus Amber

Competencies

The right skills and team

Man-Machine teaming

Acceptable AI
Win-win
AI + Human

Trustworthy, safe and secured AI

Explainability, Robustness, fail safe architectures

Embedded AI

Low computing power, stringent energy, radiation, real-time cst.

Frugal AI

Less data, less computing

Scaling AI

AI productization
MLOps

Ethical AI

Avoid discrimination
Responsible usage

AI standards and regulation

AI compliance

Distributed AI

Federated Machine Learning
Privacy preserving AI

Adaptable AI

Towards General Intelligence

Data

Data Foundations

Sovereignty

CLOUD
AI chips
AI frameworks

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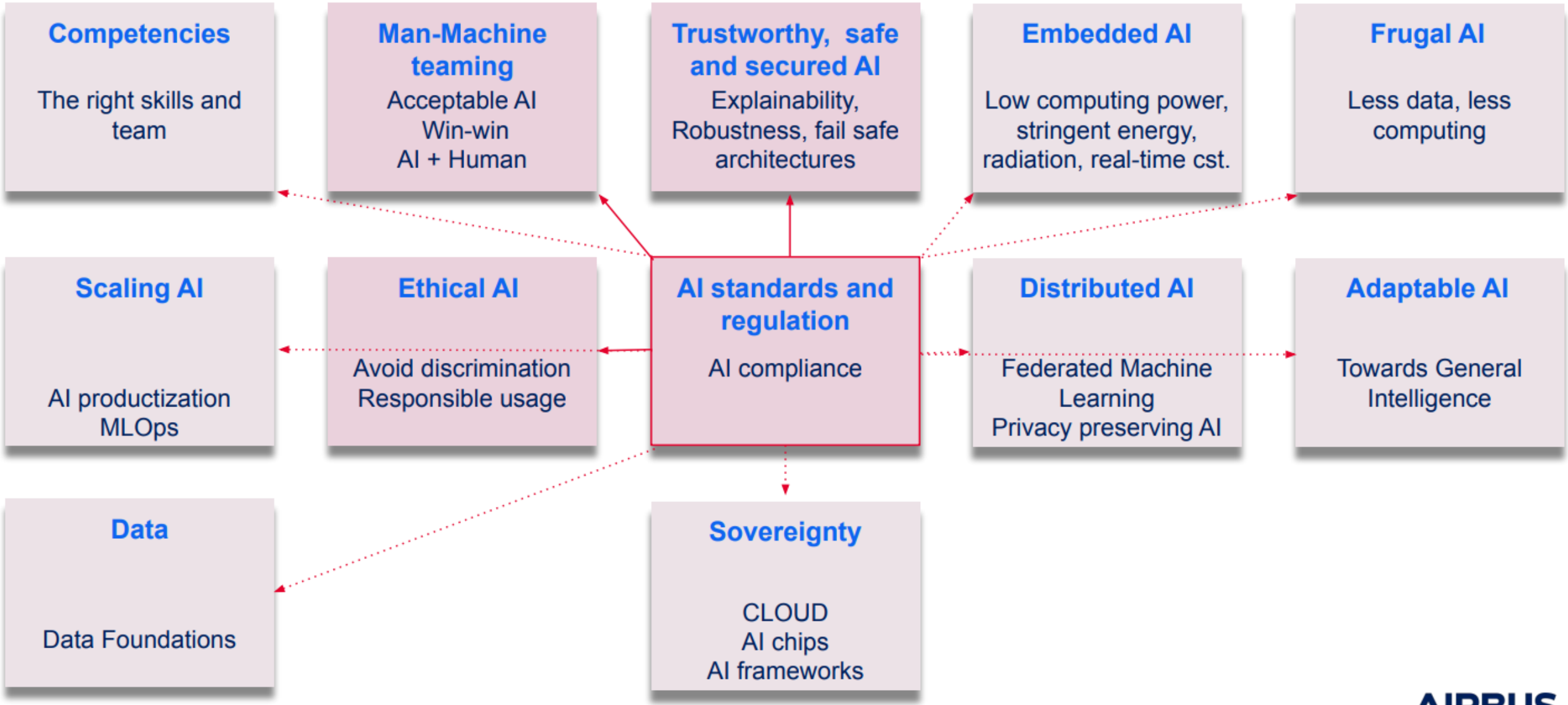
AI Common challenges (Highlight on AI certification)

Airbus Amber



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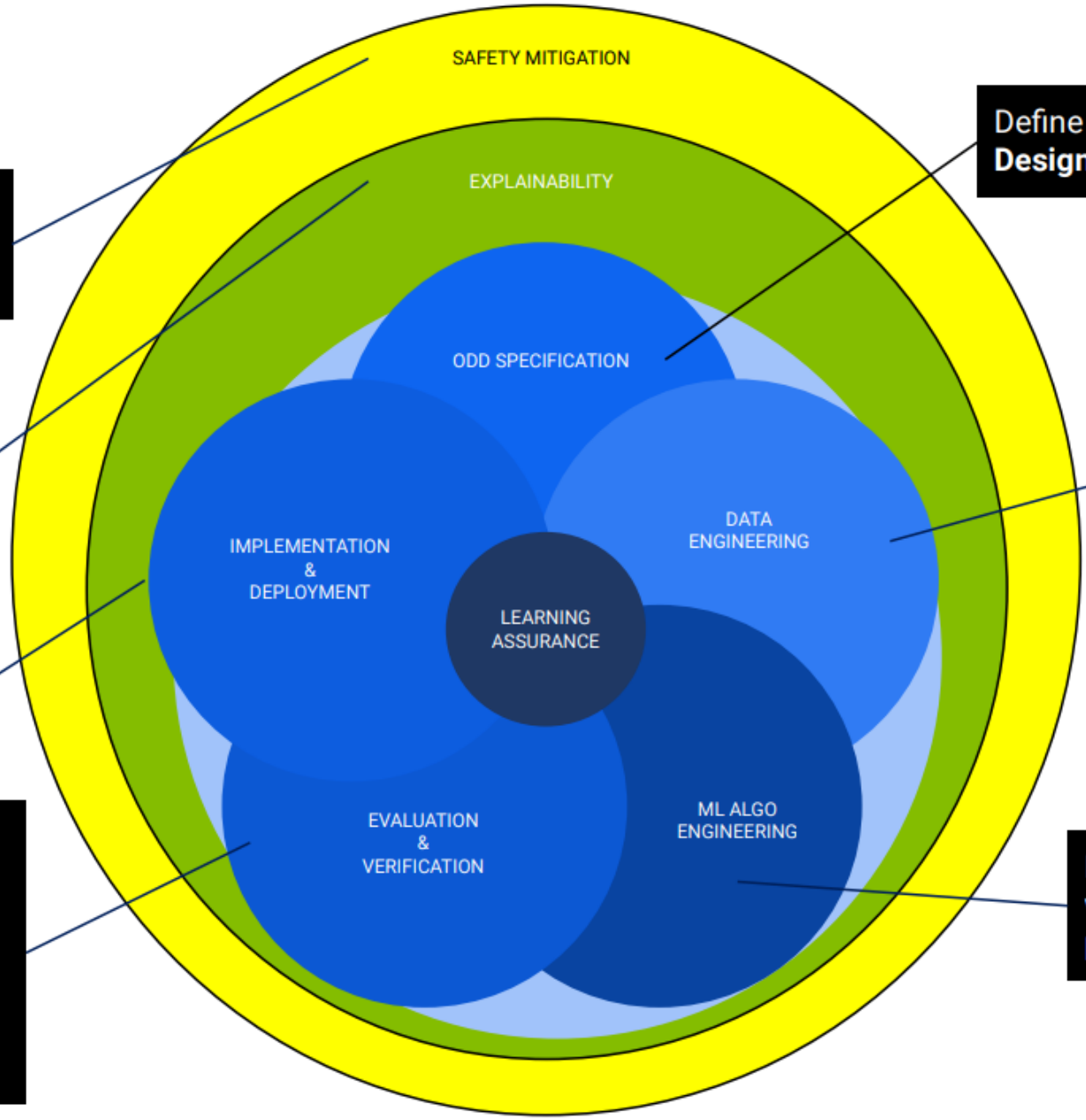
Challenges for certification of Embedded ML (in a Nutshell)



Design efficient **Monitoring function** to switch to **Fallback** safe solution

Ensure **Explainability** targeting Developers, Users, Auditors

Ensure same perfo on embedded HW target
Ensure **Real-time perfo** (WCET)

Characterise perfo on ODD
Robustness (natural perturbation, adversarial attacks,...)
Stability (output not too sensitive to input perturbation)
Level of confidence (uncertainty estimation,...)

Define **Operational Design Domain**

Get the right data (**Representativeness, completeness...**) REAL & SYNTHETIC data

Demonstrate the model **generalise** well and (good prediction on previously unseen data)

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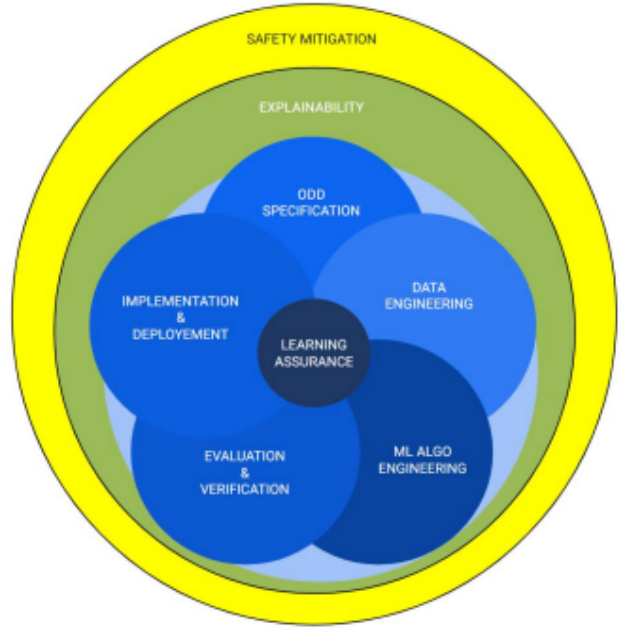
CONCLUSION

ANITI
ARTIFICIAL & NATURAL INTELLIGENCE TOULOUSE INSTITUTE

DEEL
DEpendable & Explainable Learning

Confiance ai



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ARP6983
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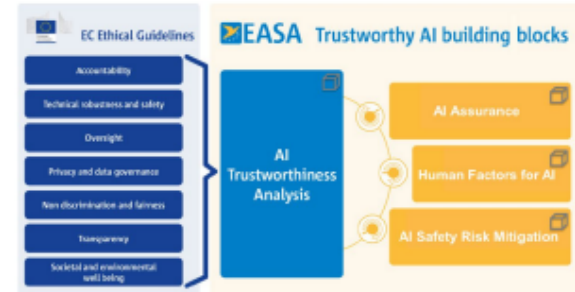
Certification
Approval
of Aeronautical
Safety-Related Products
Implementing AI



MLEAP

Trusted AI methods and tools

Safe and efficient introduction of AI in critical Systems

Standards

Requirement Ensuring Safe and Efficient operations

Academics + Tech companies

Industrials

Regulation authorities



Scale AI to boost competitiveness

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World leader in Safe and Trustworthy AI