



Integrating safety and reliability analysis into MBSE toolkit

Andrius Armonas, MagicDraw Product Manager



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MagicDraw Product Manager

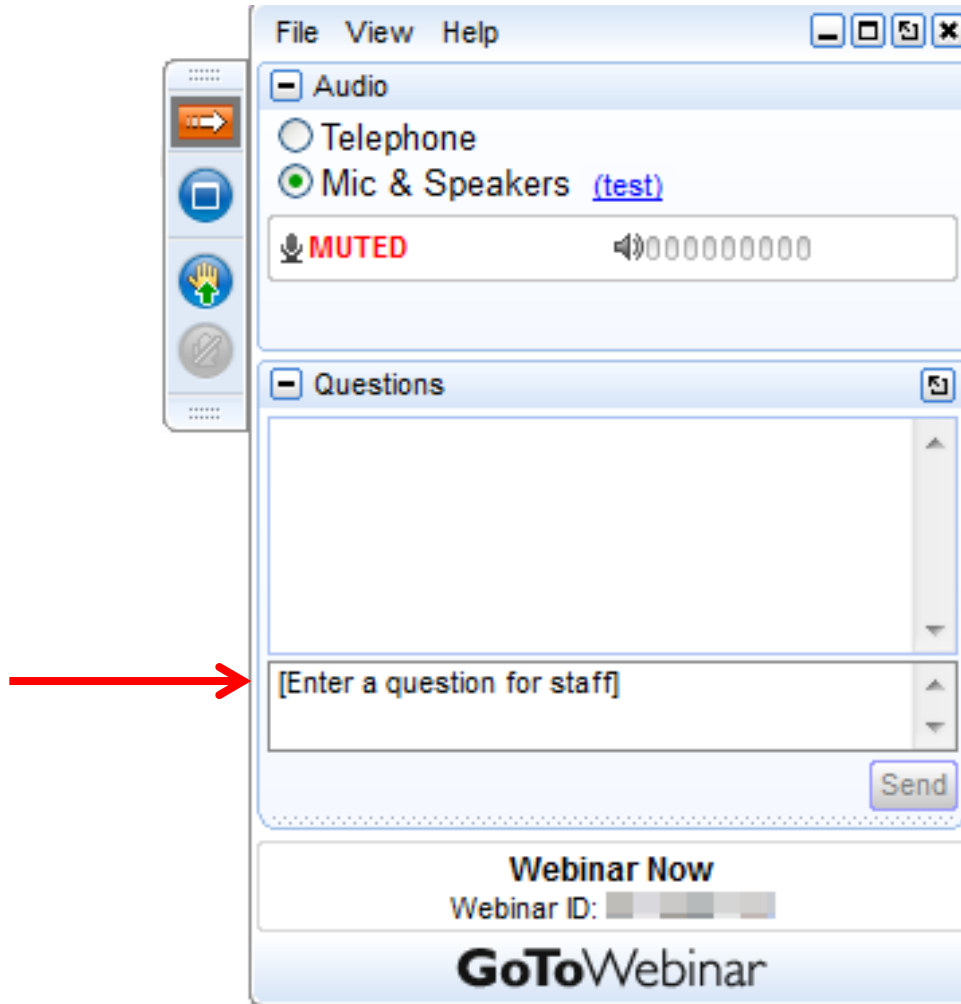
Cameo Collaborator Product Manager

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- ❑ **Expertise area: model-based systems engineering, requirements engineering, safety and reliability engineering**

- ❑ **Responsibilities:**
 - ❑ setting directions for the products, forming their vision and roadmaps, selecting capabilities for each new version of MagicDraw and Cameo Collaborator
 - ❑ work with major customers and ensure that the internal development team knows and understands the strategic directions and customer demands
 - ❑ understand the market and the competitive environment

Q&A: Type your questions here



Agenda



- **Scope of this webinar**
- **Overview of model-based safety and reliability analysis effort within No Magic**
- **Demo:**
 - Model-based FMECA
 - Model-based safety analysis

Scope of this webinar



- **Reliability: ability of a functional unit to perform a required function under given conditions for a given time interval**
 - ISO/IEC 2382:2015 Information Technology
- **Safety: freedom from unacceptable risk**
 - IEC 61508:2010 EEPE safety-related systems

Overview of safety and reliability-related activities within No Magic



Main activities:

- Work with customers, analyze their implementations and merge them
- Analyze standards
- Analyze scientific and industrial papers
- Research tools

Cooperation:

- OMG SafeML working group



Methods:

- FMEA/FMECA (in progress)
- FTA (near future)
- Functional safety, risk/hazard analysis (in progress)

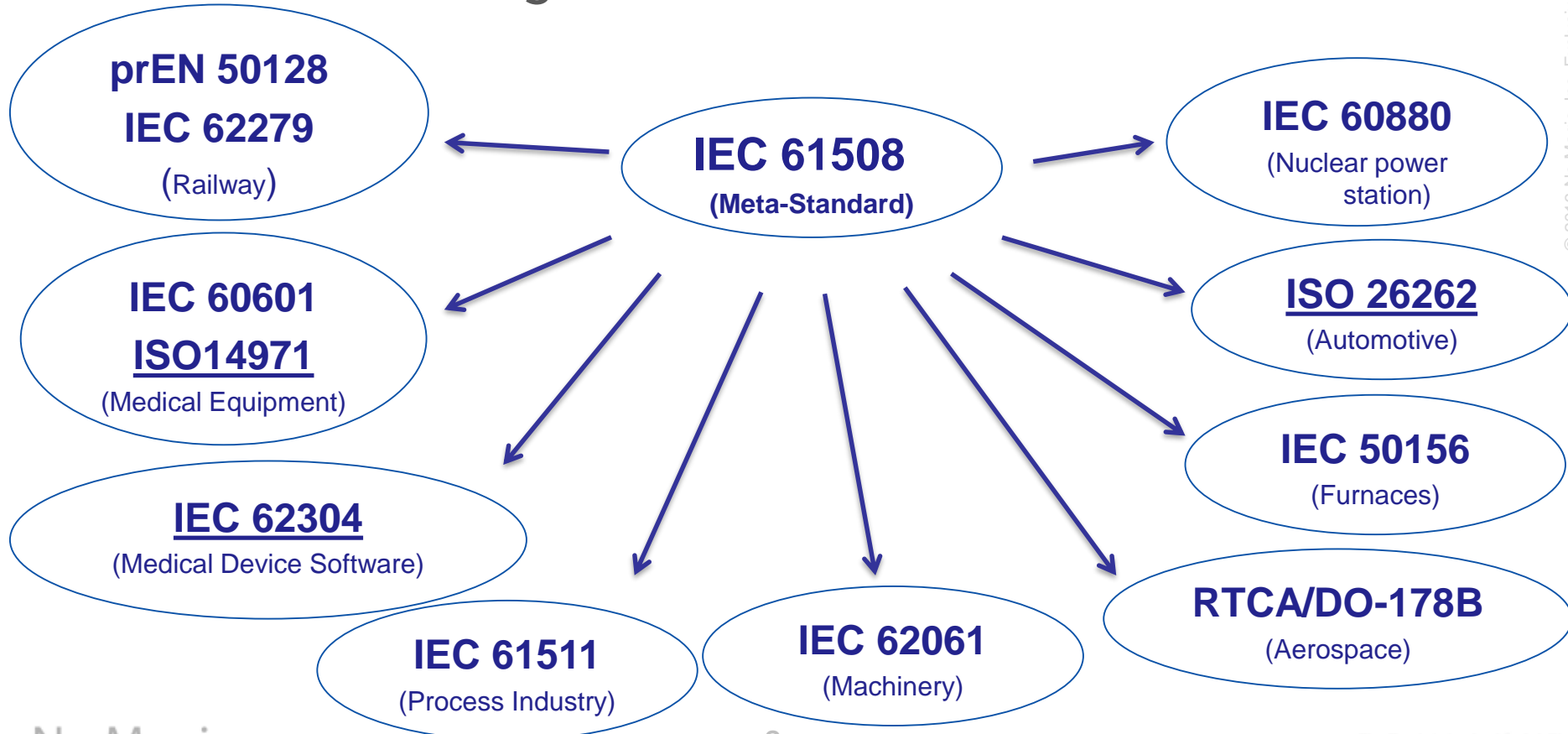
Verticals:

- Medical (in progress)
- Automotive (initial steps)
- Rail (future)
- Aerospace (future)

Safety Standards



Each industry has developed domain specific ISO standards, derived from IEC 61508 that reflect more accurately the needs and challenges within their domain.

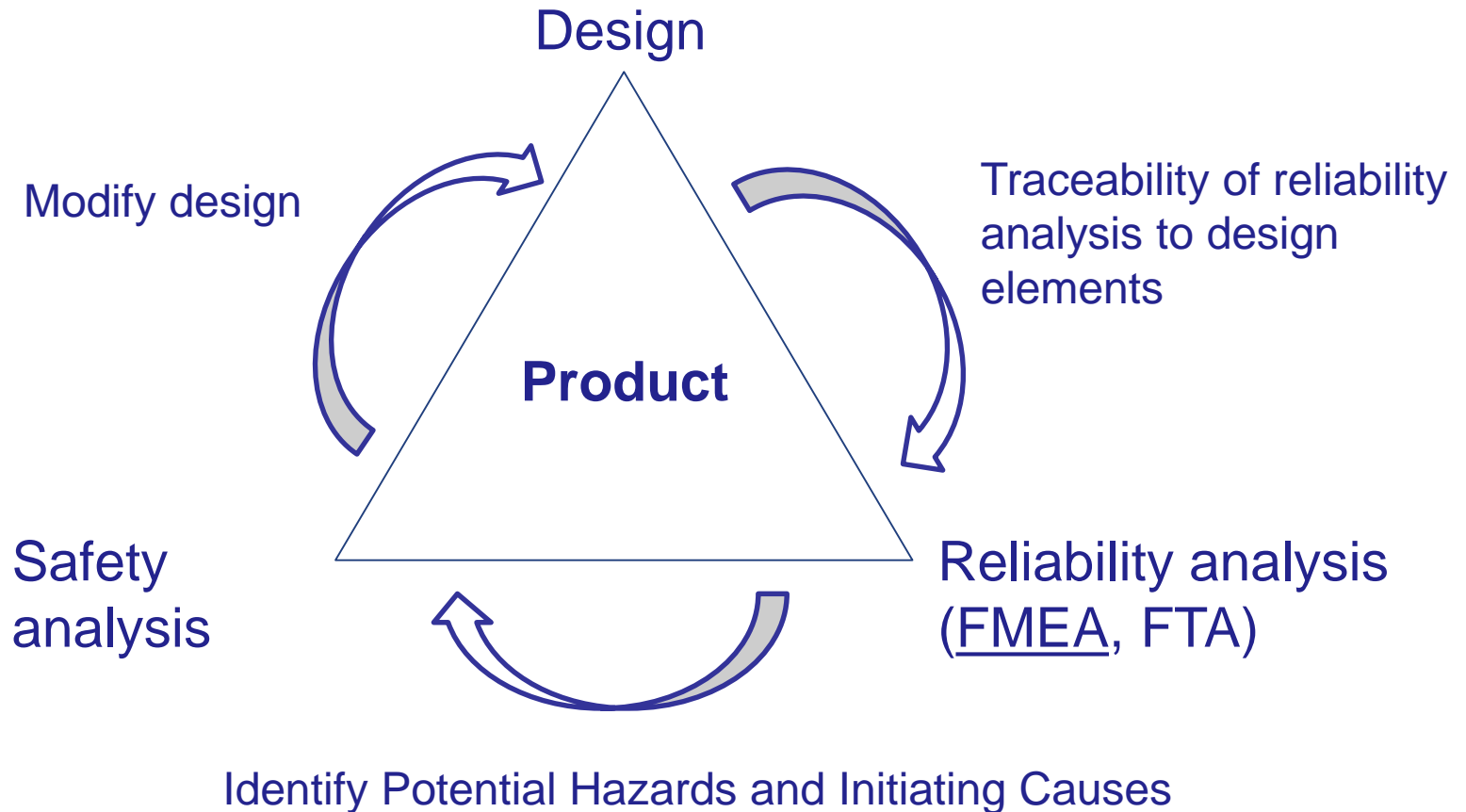




MAGICDRAW SAFETY & RELIABILITY ANALYSIS SOLUTION

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Tying design, safety and reliability analysis



Model-based safety and reliability analysis: benefits



- Reduced time to prepare consistent documentation to the regulatory bodies
- Automated analysis of the design
- Increased agility
- Ensured two-way traceability between safety and reliability analyses



Questions?



Let's keep in
touch:

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