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# **INDUSTRIAL SAFETY RESEARCH**

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# Safety is not a Single Property but Safety is an Outstanding Quality Characteristic

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## Safety considerations are essential for the whole life cycle:

- Concept
  - Design
  - Development
  - Manufacturing
  - Testing
  - Use
  - Repair
  - Retrofit
  - Dismanteling
  - Recycling / Disposal
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## Safety research addresses the whole lifecycle of:

- Technical products
- Technical installations
- Technical systems

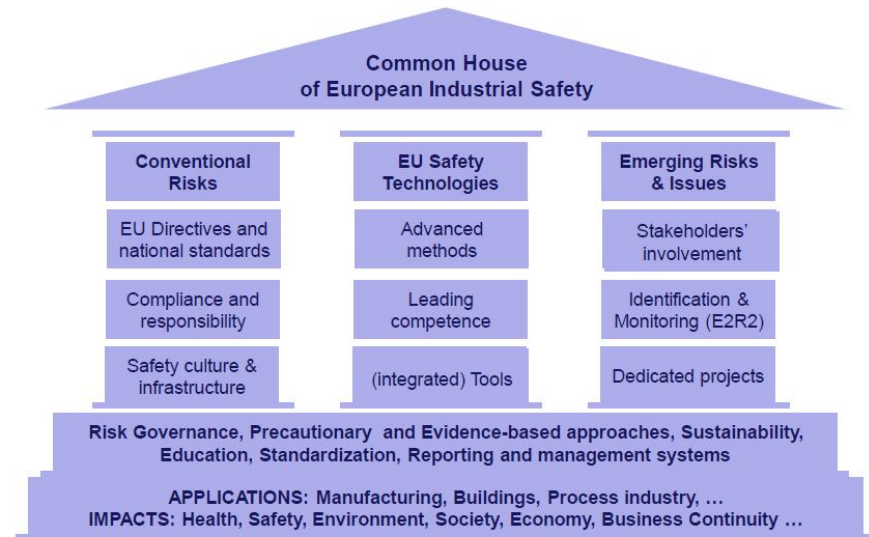
in the context of their environment.

# The Common House of European Industrial Safety

European Technology Platform Industrial Safety (ETPIS) defines the Common House of European Industrial Safety:

- Conventional Risks
- EU Safety Technologies
- Emerging Risks and Issues

## The "Common House" of the European Industrial Safety (EIS)



Source: [ETPIS](#)

# Conventional Risks Essential R&D&I Efforts

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- Provide a sound basis for measuring required properties
  - Develop instruments to achieve compliance and responsibility  
=> training, surveillance
  - Establish a transsectoral common understanding and wording for safety
- Research for standards
  - Research in humanities and social sciences
  - Learn from and combine safety and security perceptions in e.g.
    - Aircraft and space industries
    - Information technology
    - Medical care
    - Occupational safety and health

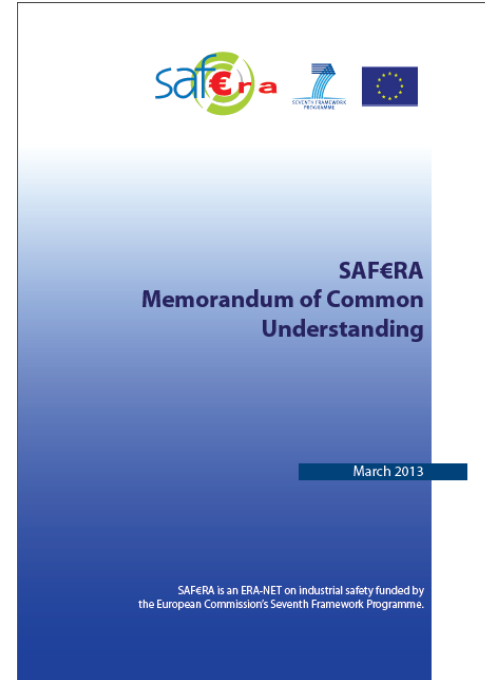
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**SAF€RA** defines

## Priority themes for joint activities

- The value of industrial safety
- Good practices in managing new and emerging risks
- Safe transport system for dangerous goods
- New technologies in improving safety
- Human and organizational factors

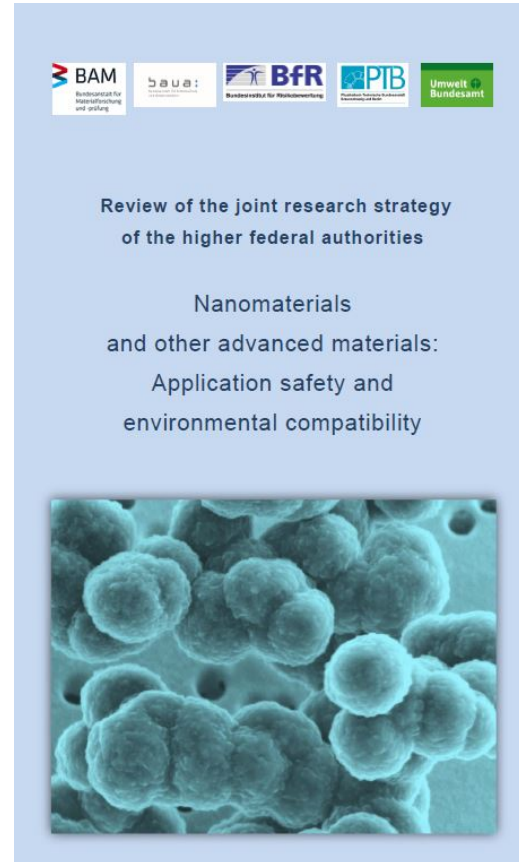
Source: [SAF€RA MoU](#)



# R&D&I in Nanomaterials and other Advanced Materials (2016)

German strategy for application safety and environmental compatibility, focus areas

1. Development and scientific validation of test
2. Application safety and environmental compatibility
3. Science-based revision of legal requirements and recommendations
4. Formulation of recommendations for risk communication



Source: [UBA](#)

# Association of German Engineers (VDI)

## Research needs safety and security

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Directory and Cooperation of Safety  
Institutions in Germany

- Industrial safety
- IT
- Mobility safety
- Occupational safety and health
- Environmental safety incl. natural disaster

National and global perspectives

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**High vulnerability and need for  
resilience in the context of**

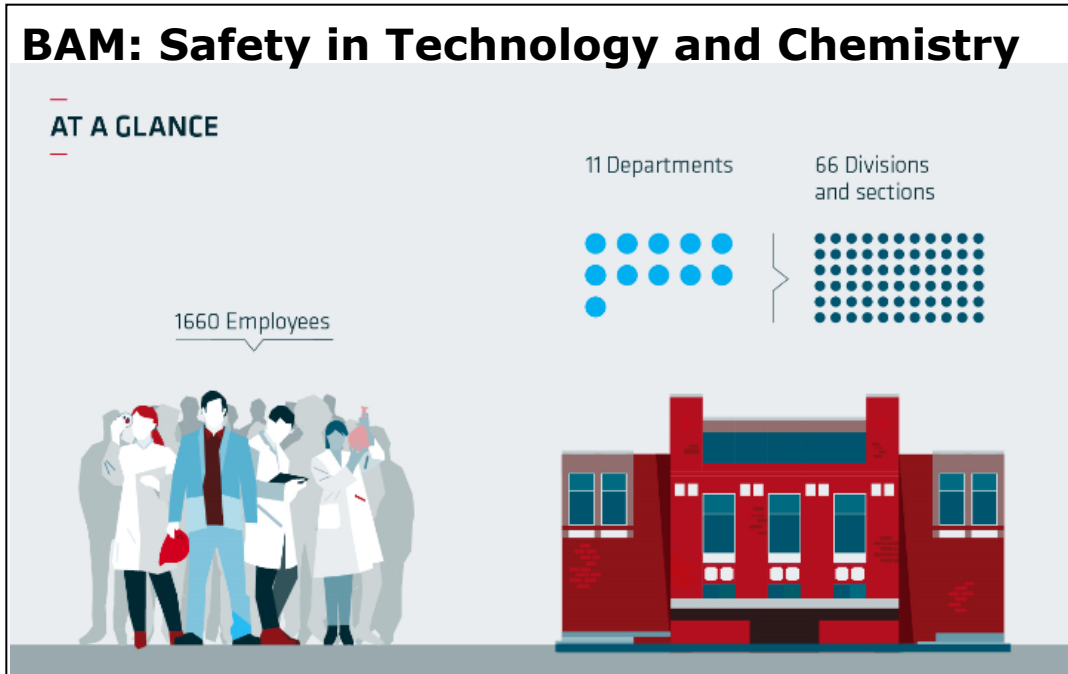
**•Integrated manufacturing**

**•Embedded systems**

**Exercise on ADA as a safe object  
oriented computer language**

ISO/IEC 8652: Information technology—  
Programming languages—Ada

[http://www.ada-auth.org/standards/  
ada12\\_w\\_tc1.html](http://www.ada-auth.org/standards/ada12_w_tc1.html)



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