

# QRA, RAM and Safety Management in DM

*P. C. Cacciabue*

*EC, Joint Research Centre, IPSC  
Human Factors Sector  
21020 Ispra (VA), Italy  
[pietro.cacciabue@jrc.it](mailto:pietro.cacciabue@jrc.it)*

- Goals of JRC : Research in Safety - Risk Assessment - Human Factors



- Goals of EC: Support the political life of the EU by developing regulations/norms/”Directives”

- Directives:
  - Seveso Directive (Chemical environments)
    - Almost 20 years old
    - Consolidated
    - Well applied in EU
  
  - Directive 1994/56, 2003/42 (Aviation)
    - Very recent
    - Not yet implemented
    - Not consolidated

- Commonalities of Directives:
  - Methods for Risk Management
    - SMS
    - Reporting to authorities
  
  - Critical issues
    - Voluntary and confidential Reporting
    - Need to collect data and define consolidated databases

- Other Technological Domains:
  - Automotive Safety
    - Many new systems: ADAS (Advanced Driver Assistance Systems) (Adaptive Cruise Control, Intelligent Speed Adaptation, ....)
    - User Centred Design/Usability principles well accepted
    - Critical issues:
      - **Models and data for driver adaptation**
  - Medical Environment
    - Critical Issues:
      - **Data collection and reporting**
      - **Acceptance of SMS and Risk Assessment approaches for improving safety levels**