iNTeg-Risk International Conference, 3 June 2009

Convergence towards integrated risk management

From SHAPE-RISK to iNTeg-Risk

by Olivier SALVI *, Christophe BOLVIN
(* European Virtual Institute for Integrated Risk Management)

Why Integrated Risk Management ?

- Complexity of industrial systems & New technologies
- Globalisation and networked production
- Context changes :
  - use of space, increase of population density...
  - lack of some resources
- Increasing concerns in an information/knowledge society

>> generate new difficulties to manage risks

Fragmented vision : Health-Safety-Security-Environment (HSSE)

- Lack of common language
- Not co-ordinated regulations for the different risk aspects HSSE

>> delay efficient decision making process for new risks, generate confusion, create market distortion and have a negative impact on industrial competitiveness in developed countries

Why Integrated Risk Management ?

A new safety paradigm with the following attributes :

- an innovative risk governance and communication strategy
- a recognised and structured risk decision making process supported by consistent regulations
- compatible, harmonised and validated tools and methods for risk assessment

What do we want to integrate ?

- Vision of the stakeholders on HSSE
- 4 dimensions TCHR (**T**echnology & techniques + Governance & **C**ommunication + **H**uman & Management + Policies & **R**egulations & Standards)
- Practices for risk assessment in the various risk aspects
- Approach in the various Member States

SHAPE-RISK: context and objectives

- The Acronym for: SHARING EXPERIENCE ON RISK MANAGEMENT (HEALTH, SAFETY AND ENVIRONMENT) TO DESIGN FUTURE INDUSTRIAL SYSTEMS
- A 3 years Co-ordination action (CA - FP 6), with 19 partners in 12 countries (March 2004 - February 2007)

- **The main objective: optimise the efficiency of integrated risk management**
- This CA considers the following regulations of risk management:
  - Environment (IPPC directive)
  - Major Accident Hazards (SEVESO II directive)
  - Occupational health and safety (ATEX directive, etc.)

Sharing of Experiences between:

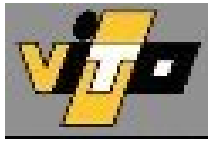
Industry

+

Competent Authorities

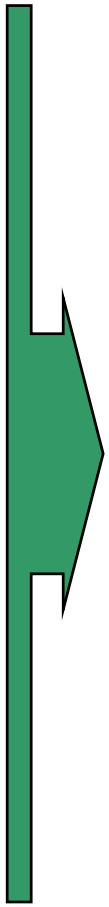
+

Service to Industry



6 issues related to integration…

- **Integration of IPPC and SEVESO directives**
- **Continuity of risk management from work place accident to major accident**
- **Survey and comparison of common tools and service platform**
- **Improving the efficiency of the organisational management**
- **Policies for the management of environmental risks**
- **Public perception and communication on risk**

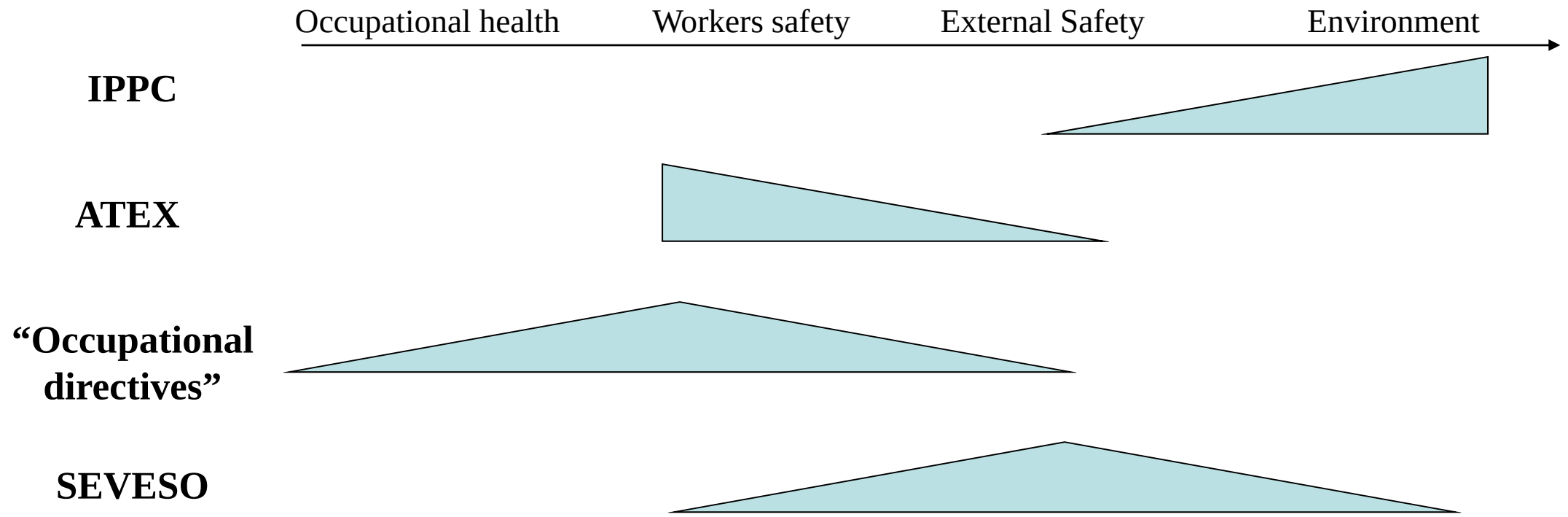


Integration

&

recommendations to design future industrial systems

Risk-related regulations: overlapping scopes of EU Directives



Degree of relevance

Technical aspects

- The need to develop cost-effective monitoring instruments for the environment and for safety, such as early-warning safety indicators

- The need to promote secure mechanisms to collect and share data on failure frequencies.

- Encourage the development of a harmonised risk assessment including major accidents, occupational safety **and** environmental risks

Methodology

  - First step: harmonisation of the terminology
  - Second step: definition of appropriate criteria that can be used in each type of risk assessment
  - Third step: definition of adequate indicators, measurement scales, and thresholds reflecting the social acceptability

Organisational aspects

- The need for a better information exchange of HSE risk management procedures between countries, industries, and organisations, through the collection and sharing of best practices and experiences in HSE management, making also visible benefits of a good HSE management even for SMEs;
  - A “one-stop-shop” platform to find **validated** information (e. g. accident occurrence) or tools (e.g. risk management procedures, indicators)

- The need for Harmonisation and simplification of management tools and procedures
  - Industry considers that HSE management systems are becoming increasingly complex and bureaucratic. There is a strong wish to make systems simple and to avoid unnecessary complexity.

Communication and governance

- Apply the IRGC Risk Governance Framework !

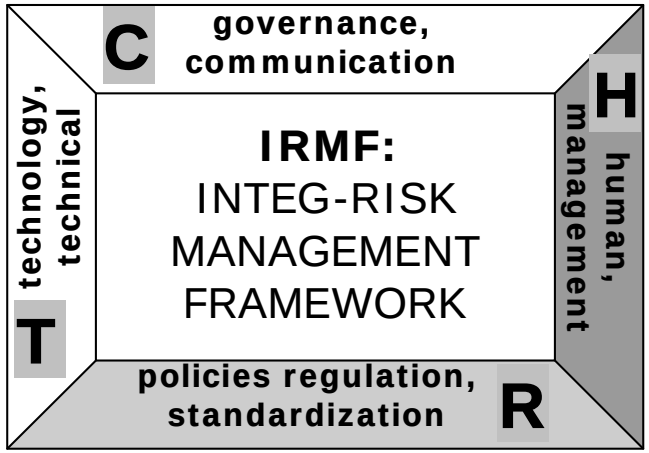
International Risk Governance Council
www.irgc.org

Regulations aspects

- Need to define a policy framework for integrated risk management
  - to describe the links and interdependencies between the directives dealing with chemicals and industry production and put them in one common perspectives on the basis of agreed principles and procedures, and on common definitions;
  - to create a framework for prioritisation and balanced decision making between aspects covered by various directives;
  - to strengthen co-operation at national level between different authorities involved in the control of industrial sectors under the scope of both directives

Conclusions from SHAPE-RISK

- Integrated risk management needs ….
  - Integration of H S S(ecurity) E and convergence between regulations (“Framework policy”)
  - harmonisation of terminology and risks assessments methods and tools
  - supported by a “one stop shop”
  - and of course...motivation of all actors



- Integration of the T C H R components of risk management

- All the SHAPE-RISK reports can be downloaded from : **http://shaperisk.jrc.it**

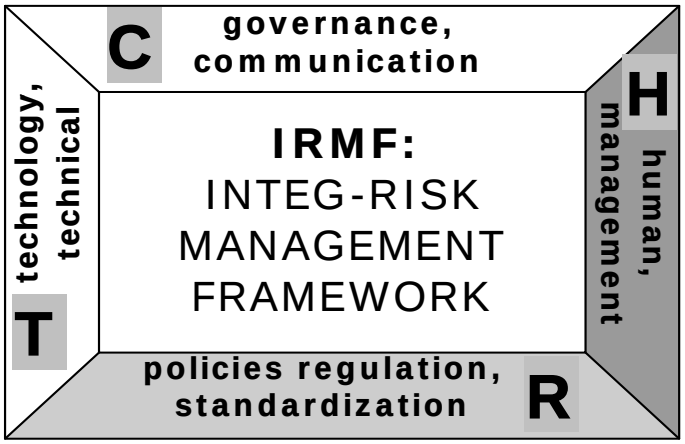
The iNTeg-Risk Project

EU-VRi

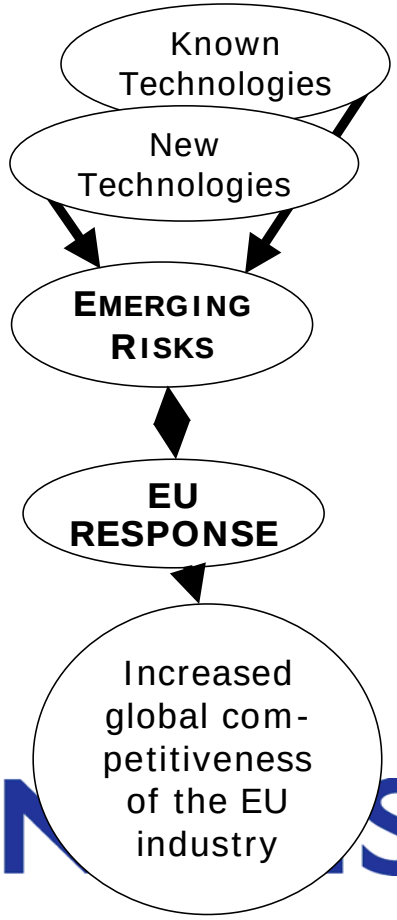
Early Recognition, Monitoring and
Integrated Management of
Emerging, New Technology Related Risks

INERIS

The approach and objectives



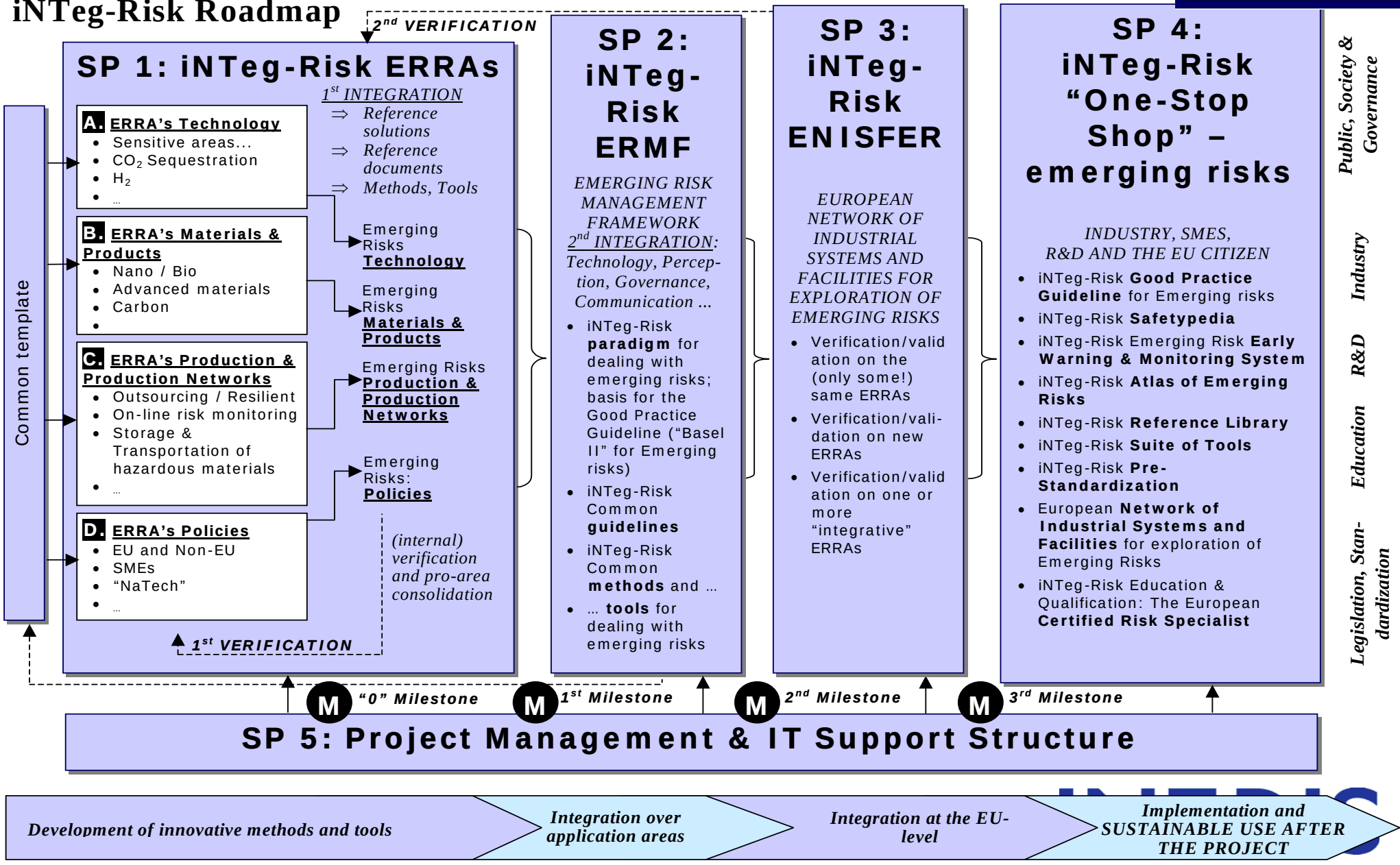
The main objective of iNTeg-Risk is to improve the management of safety related to emerging risks, to increase the competitiveness of the EU industry



A new safety paradigm, based on :

- ***a common framework for integrated risk management***
- ***a common language (UML unified model language) for managemen of industrial safety***
- ***common tools (consistent set of methods, data, models) for management of H S S E***
- ***a knowledge platform with concrete cases***

iNTeg-Risk Roadmap



Conclusions

In a changing society, more risk averse...

*... **emerging risks have to be managed in a integrated manner***

- integration of H S S(ecurity) E and convergence between regulations (“Framework policy”)
- harmonisation of the language and risks assessment methods and tools
- supported by a “one stop shop”
- and of course... motivation of all actors

... solutions have to be developed on concrete industrial cases, supporting efficient decision making

... for the benefice of the industry competitiveness and the public

For more information :

http://shaperisk.jrc.it
and
http://www.eu-vri.eu
and
http://www.integ-risk.eu-vri.eu