

iNTeg-Risk: Early Recognition, Monitoring and Integrated Management of Emerging, New Technology Related Risks

iNTeg-Risk Kick-Off Meeting

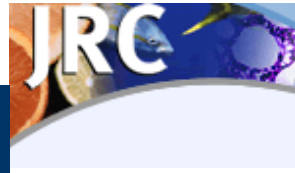
Overview of iNTeg-Risk Project

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Outline of the presentation



- History of the project idea and development
- Main features of the project
- Knowledge production flow
&
Method and key principles
- Expected impact



SHAPE-RISK

*Sharing Experience in Risk
Management (HSE)
to design future industrial
systems*





<http://shaperisk.jrc.it>

- Integrated RA & M approach to avoid risk transfer
- Analysis of the implementation of IPPC, SEVESO, safety at work & ATEX with 19 technical support to authorities

Results : review of the situation and recommendations

- . harmonise regulations and best practices documents
 - . industry implements already integrated approaches, authorities and regulatory bodies should do the same to increase consistency and reduce paper work
 - . make documents consistent, e.g. include safety in BREF
- . need further developments to support integrated risk management
 - adopt common agreed concept and approach
 - share largely documents, tools etc. and provide easy access
 - develop database, tools and knowledge for each sector
 - produce and collect new data
- . refinement of the risk assessment should be proportional to the detail of the decision-making process and the stakes

Other inspiring initiatives



- GOVERIS (2002): Governance in a risk-informed society
- MARISA (2004): Major reduction of accidents in the European process industry through inherent safety
- RISKMAN (2004): European concept for risk-based management of industrial and infrastructural systems
- and other initiatives
ASSURANCE, ARAMIS
STARC and Trustnet-in-Action projects
IRGC work
RAHD (EWGLUP)
- Maturation within ETPIS, with the various FG (RA/RM and Emerging Risks)

iNTeg-Risk project / Main features:



- **Lead partner:**
EU-VRI - The European Virtual Institute for Integrated Risk Management (EEIG)
- **Coordinator:** **A. Jovanovic**
- **Partners:** **65 + 20 (Art.10)**
- **Start date:** **December 2008**
- **End date:** **May 2013**
- **Duration:** **54 months**
- **Budget:** **~ 19.2 million Euro**
- **EC contribution:** **~ 13.7 million Euro**

Emerging risks : towards a definition?



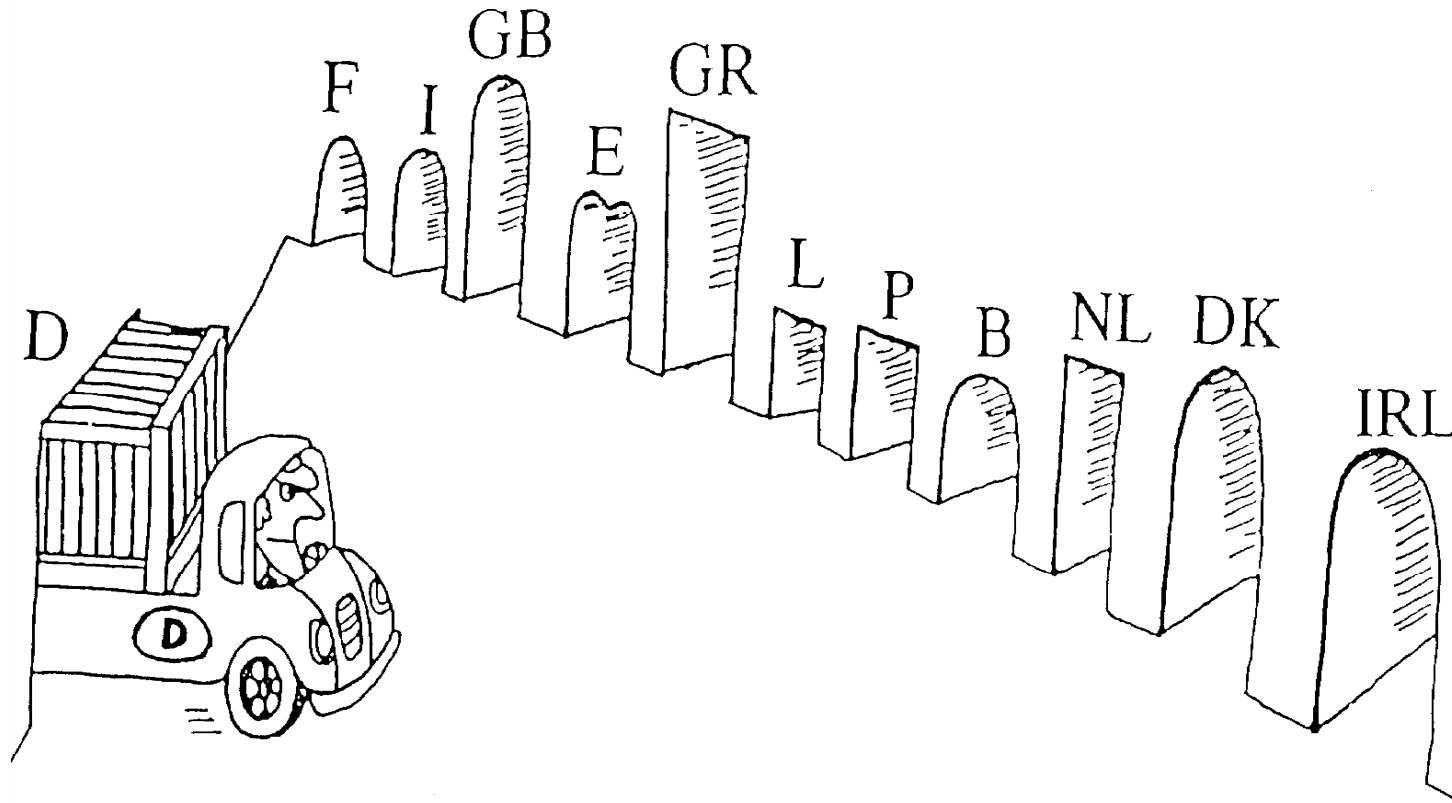
- New risks related to a new technology with unknown impact
- New risks associated with the evolution of a complex systems composed by the following interacting elements:
 - technology
 - society
 - environment
 - economy
 - demography
 - ...
- Risks revealed by an evolution of the perception or of the acceptability by stakeholders

Emerging risks common features (source Swiss Re)



- **A high degree of uncertainty**
 - Little information available
 - Frequency and severity are difficult to assess a priori
- **Difficult to quantify**
 - Transfer of risk is questionable
 - Difficult to communicate
 - Uncertainty can give place to phantasm
- **No clear position of the industry**
 - Nobody wants to be first to recognise the risk
- **Use of regulation is necessary but**
 - It is difficult to make an efficient regulation in a context of uncertainty
 - The use of precautionary principle may be necessary
 - Legislative and regulatory process takes time

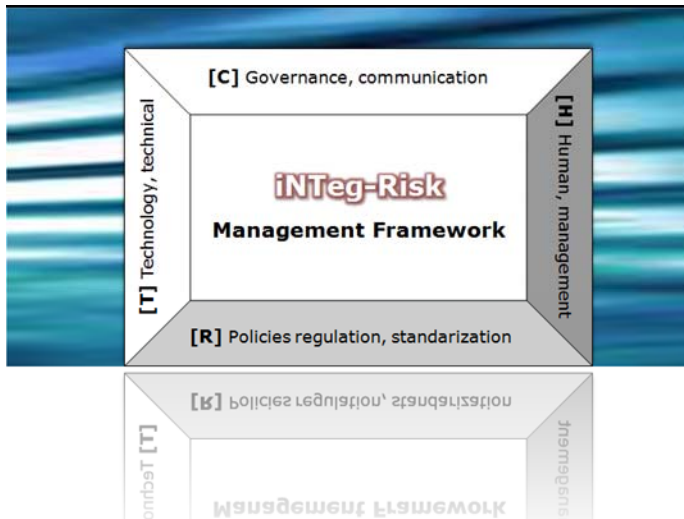
EU and cannot afford...



... treating emerging risks in heterogeneous ways.

**Is it possible to address
all emerging risks with a same
management framework ?**

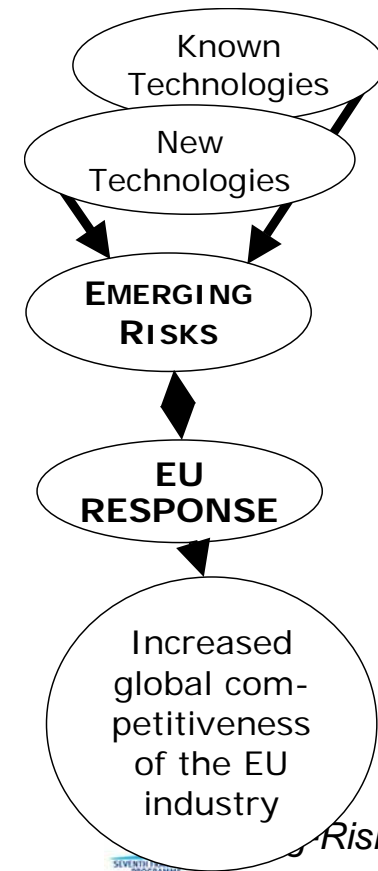
Objective and key principles



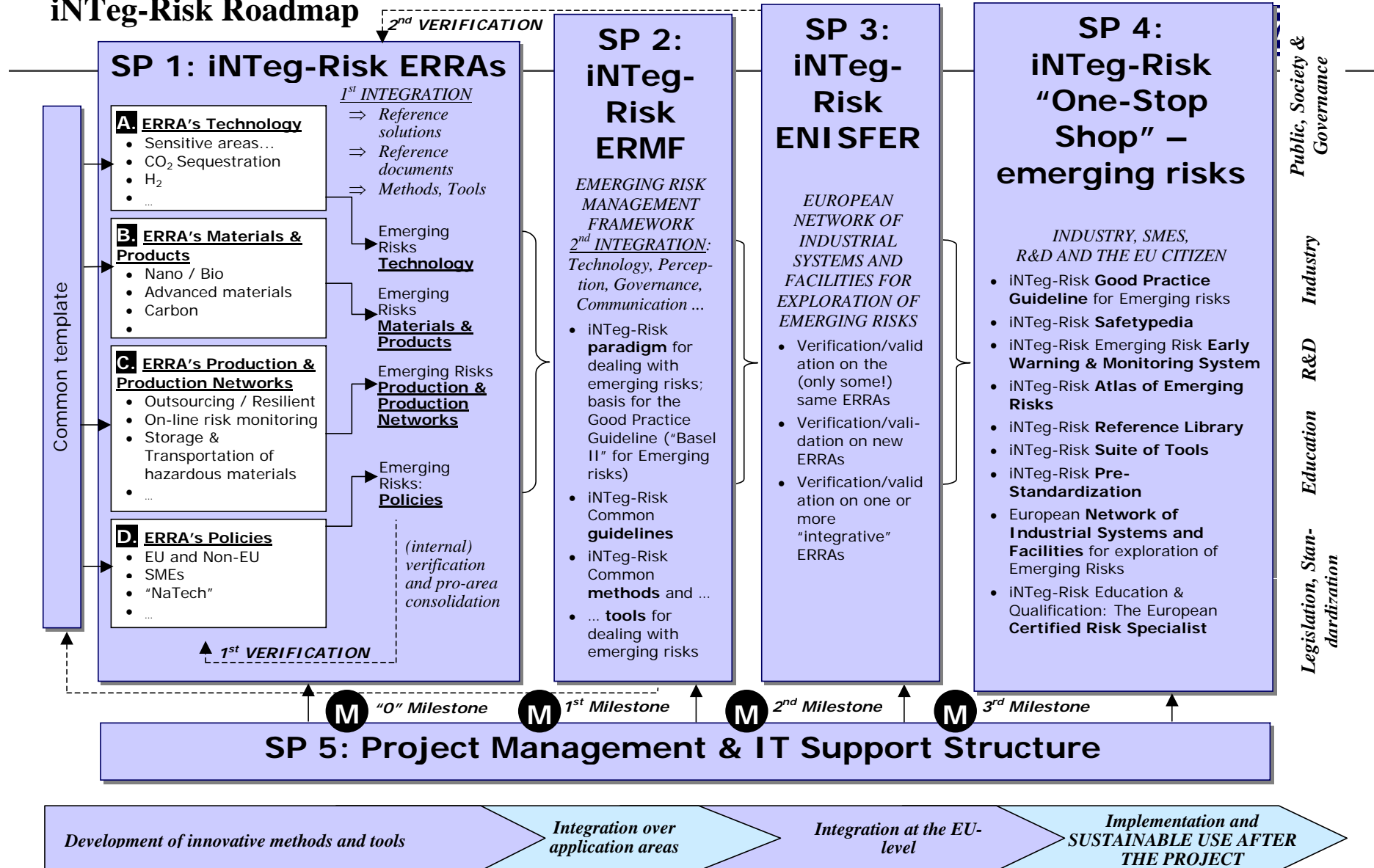
The main objective of iNTeg-Risk is to improve the management of safety related to emerging risks, to increase the competitiveness of the EU industry

A new safety paradigm, based on :

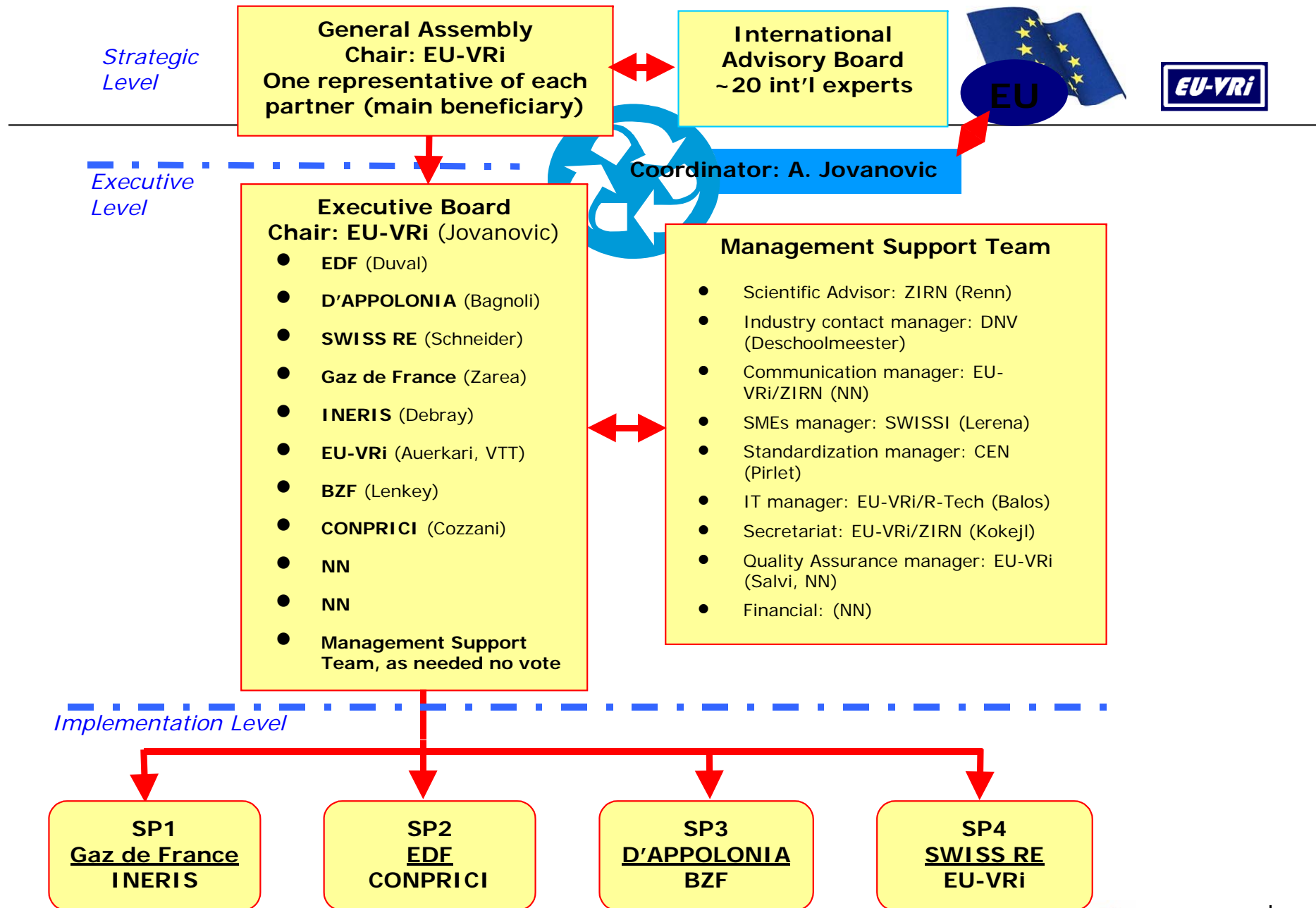
- ***a common framework for integrated risk management***
- ***a common language (UML unified model language) for management of industrial safety***
- ***common tools (consistent set of methods, data, models) for management of H S S E***
- ***a common metrics with KPIs***
- ***a knowledge platform with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



iNTeg-Risk Roadmap



- **SP1 : TECHNOLOGY CASES:**
Identifying specific emerging risks and developing solutions to enter into the unifying framework, concept of ERRAs - Emerging Risk Representative industrial Applications
- **SP2: CREATING AN INTEGRATED SCIENTIFIC & TECHNOLOGY FRAMEWORK (Emerging Risk Management Framework, ERMF):**
iNTeg-Risk New Paradigm, Methods & Tools for dealing with emerging Risks
- **SP3 : APPLICATION, VERIFICATION & VALIDATION:**
European Network of Industrial Systems and Facilities for exploration of Emerging Risks (ENISFER); verifying the SP2 results and validating the whole method
- **SP4: DISSEMINATION ONE-STOP-SHOP:**
iNTeg-Risk integrated EU solutions addressing emerging risks, gathered in a “one-stop-shop”
- **SP5 : MAKING IT HAPPEN & ASSURING SUSTAINABILITY; MANAGING A LARGE COLLABORATIVE PROJECT:**
Managing iNTeg-Risk and creating its IT and post-project infrastructure



Expected Results (1/2)



- The main **global** benefit and impact : reduction of the time to market for the “lead market” EU technologies, while maintaining the high EU standards of safety, as related to emerging risks.

- Other important benefits for the stakeholders are
 - **industrial safety and economy** - significantly reduced number of accidents; reduction of the economic impact of work accidents & diseases
 - **social and public** – new improved safety culture when dealing with emerging risks; improved communication and increased confidence in entrepreneurship and governance; improved response to the needs to include requirements of society (risk aversion);
 - **technology and R&D** – improved boundary conditions for development, acceptance and implementation of new technologies; harmonizing the national and EU political agendas, also in relation to the international developments;

➤ Cont 'd

- **management** - improve possibilities to model, measure and compare emerging risks (e.g. by means of KPIs) and/or the “total impact” of emerging risks
- **environment** – reduced environmental risks and environmental footprint during the entire life-cycle of new technologies; improved response to the need to be both competitive (CBA) and responsible (CSR), strengthening the lead position of the EU in environmental sound technologies.
- **policies** – significant contribution to reaching the objectives of the new OHS Community strategy 2007-2012 and improvement of the basis for further harmonization and harmonized use of the EU regulation, in particular the New Approach based one; improved response to risks related to outsourcing, fragmentation, deregulation and diversification in the EU industry and public sector.