

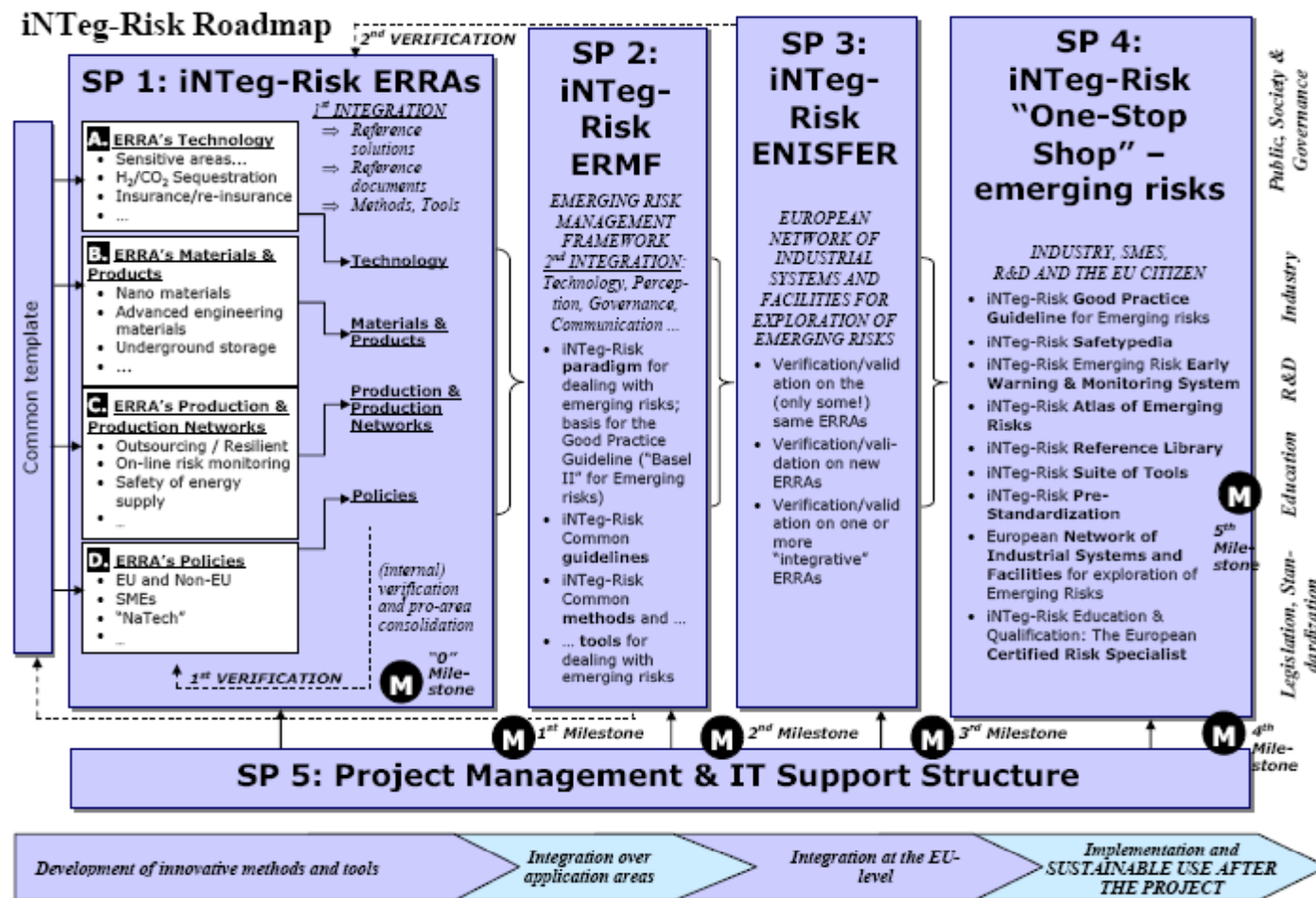
iNTeg-Risk: Early Recognition, Monitoring and Integrated Management of Emerging, New Technology Related Risks

SP1 Basics

Establishing the Basis for the European Integrated Approach to Emerging Risks – ERRAs

**Kick-off, Brussels CEN
Bruno Debray, INERIS
Murès Zaréa, GDF Suez**

Position of SP1 in the project



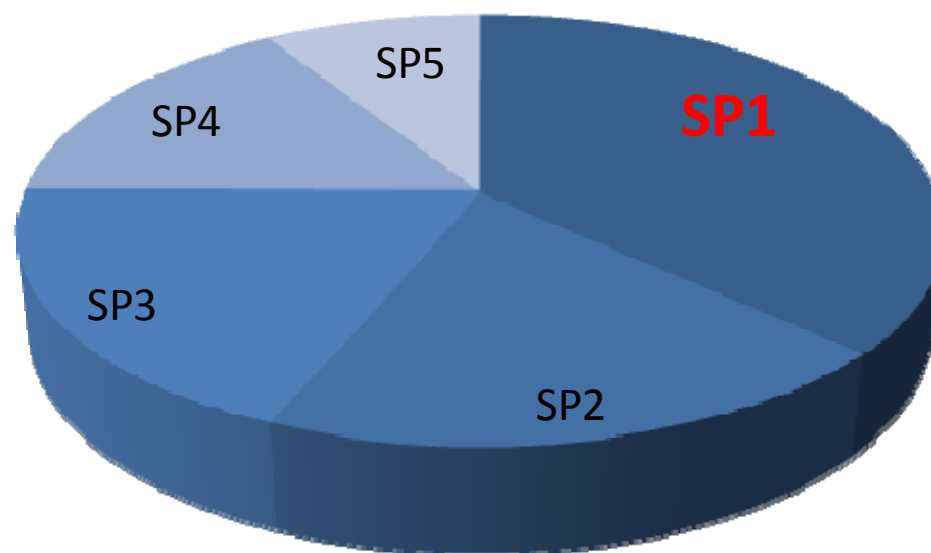
SP1 – Start with REAL Technology Problems : Objectives

- ERRAs = Emerging Risks Representative Applications
 - SP1 provides the **17 practical cases** on which the methodology will be build upon
 - Each ERRAs: Characterises an emerging risk and therefore clarifies the criteria to qualify it as such
 - Structure the questions raised by an **integrated approach** applied to emerging risks in each ERRAs
 - Identify **methodological gaps** to be filled
 - Identify **available tools** to be used
 - Develop **specific solutions** to the problems
- SP1 is the key input to other SP's, especially SP2 !

Main figures

Duration : 27 months

Total SP1 effort : 606 MM



Partners involved : 55

SP1 : Organisation – Overall view

➤ Main WPS

- WP: 1.1 Common basis of the collaborative work in iNTeg-Risk project
- WP: 1.2 ERRAs on Topic A : EMERGING RISKS – NEW TECHNOLOGIES
- WP: 1.3 ERRAs on Topic B : EMERGING RISKS – NEW MATERIALS AND PRODUCTS
- WP: 1.4 ERRAs on Topic C : NEW PRODUCTION – TECHNOLOGIES & PRODUCTION NETWORKS
- WP: 1.5 ERRAs on Topic D : EMERGING RISKS – RELATED POLICIES
- WP: 1.6 Integration on the level of ERRAs
- WP: 1.7 "1st iNTeg-Risk verification"

SP1 : Organisation : details

- WP: 1.1 Common basis of the collaborative work in iNTeg-Risk project
 - T: 1.1.1 Common template for performing ERRAs and reporting about their results
 - T: 1.1.2 Common IT template "ERRA Database" for storing intermediate and final results
- Make the results **useful and exploitable by the rest of the consortium and the other SPs**

SP1 : Organisation : details

- WP: 1.2 ERRAs on Topic A : emerging risks – new technologies
 - T: 1.2.1 A1: CO2 capture and sequestration, both technical risks and governance risk (EL: HSE)
 - T: 1.2.2 A2: Insurance and re-insurance aspects of emerging risks including the security-related (HSSE) emerging risks of new technologies (EL: SWISS Re)
 - T: 1.2.3 A3: Control of risk related to gas and oil high pressure transmission pipeline safety by unmanned flying drone... (EL: GDF Suez)
 - T: 1.2.4 A4: Liquid Natural Gas (LNG) regasification in sensitive areas on-shore and offshore (EL: D'Appolonia)
 - T: 1.2.5 A5: Safety and security of underground hubs with interconnected transportation services and shopping centers (EL: VSH)

SP1 : Organisation : details

- WP: 1.3 ERRAs on Topic B : emerging risks – new materials and products
 - T: 1.3.1 B1: Public health and medical issues related to monitoring of emerging risks in production, storage and transport of nano-materials on industrial scale in small and medium enterprises (SMEs) (EL: Novineon)
 - T: 1.3.2 B2: Emerging risks related to advanced storage technologies for hazardous materials (including H2) (EL: BAM)
 - T: 1.3.3 B3: Emerging risks related to development and use of advanced engineering materials, composite materials (EL: KMM-VIN)

SP1 : Organisation : details

- WP: 1.4 ERRAs on Topic C : new production – technologies & production networks
 - T: 1.4.1 C1: Challenges to safety posed by outsourcing of critical tasks – in oil, gas, petrochemical and construction industries (EL: DTU)
 - T: 1.4.2 C2: Remote operation in environmentally sensitive areas (EL: SINTEF)
 - T: 1.4.3 C3: On-line risk-monitoring and assessment of emerging risks in conventional industrial plants – monitoring of risks beyond the design/regulatory basis (EL: BZF)
 - T: 1.4.4 C4: Atypical, one-of-the-kind major hazards/scenarios (post-Buncefield implications) and their inclusion in the normal HSSE practice (EL: HSE)
 - T: 1.4.5 C5: Security of energy supply and related emerging risks (EL: JRC)

SP1 : Organisation : details

- WP: 1.5 ERRAs on Topic D : emerging risks – related policies
 - T: 1.5.1 D1: Definition of KPIs emerging risks for selected industry case studies, including CSR aspects of emerging risks (EL: DNV)
 - T: 1.5.2 D2: Integrated approach on emerging risks related to the implementation of European safety legislation on SME ´s and its application on companies working in Distributed Energy Resources (DER) (EL: LEIA)
 - T: 1.5.3 D3: Emerging risks related to interaction between natural hazards and new technologies at a community level (EL: INERIS)
 - T: 1.5.4 D4: Emerging risks related to hazardous substances, impact on public health and relations with REACH and GHS (EL: RIVM)

ERRAs summary

- Great variety of:
 - Industrial systems and technologies
 - Emerging risk situations
 - Stakeholders
 - Scientific disciplines and competencies involved

- A big Challenge !
 - INTEGRATION

i.e. out of variety produce a coherent and applicable methodology for « any » emerging technological risk

SP1 : Conditions of SP1 success

- Having common goals and a common language
 - Important to clearly define expected outputs from each ERRAs “experience”, stored in the ERRAs Database
 - A draft form, even loose, of the Integrated Framework is needed to provide a common structure to disparate efforts, resulting from **interaction between SP1 and SP2**
- Sharing the experiences gained in SP1 for future use
 - Integration step of all ERRAs results is very critical – wide participation is needed – via integration / IT tools, and during a specific SP1 **workshop**
 - First verification is the founding feed-back loop, to be carefully organised
 - All aspects raised by PS1 have to be clearly **“handed over” to the other SPs** – conclusions of an IntegRisk workshop
- Make innovation visible !

SP1 : Conditions of SP1 success

- Well defined deliverables
- Well planned action... with intermediate milestones and results
- Real involvement of all and especially of WP leaders and Task (ERRA) leaders
- Communication ...
- Use of the IT tools
- Always have SP2, SP3 and SP4 in mind !

SP1 : Planned Agenda

- **“physical” Kick-Off meeting of SP1 : 29th of January**
 - Telephone calls to be organised before this date for preparatory work
- **Setting the framework – WP1.1 months 1-8**
 - **Milestone 0 – month 12**
- **Building the ERRAs – WP 1.2, 1.3, 1.4, 1.5 months 4-24**
- **Integrating ERRAs inputs / outputs – WP 1.6 months 1-27**
- **Verification of common framework – WP 1.7 months 1-27**
 - **Milestone 1 – month 27**
- **Coordination with other SPs – over whole period**
- **Some ERRAs extend over to longer duration – Check of the ERMF framework maturity & technology development**
- **June 2009 Integ-Risk Conference : First “results” of ERRAs to be shown**

SP1 : Who's Who

➤ Stakeholders in SP1:

- SP1 coordinators – GDF Suez and INERIS
- WP 1.j coordinators
 - WP 1.1 Eu-Vri
 - WP 1.2 UNIBO
 - WP 1.3 Eu-Vri
 - WP 1.4 SINTEF
 - WP 1.5 R-Tech
 - WP 1.6 Eu-Vri
 - WP 1.7 INERIS
- ERRA coordinators (see previous slides)
- Interfaces with SP2, SP3, SP4, SP5 : TBD
- Sub-project committee ?
- And, of course, contributors

SP1 : Common methodological framework

- *Conditions of emergence – **new** and / or **increasing** risks*
 - Genuinely **New**: materials, technologies, processes, etc.
 - **Reconsideration** of existing issue due to public perception
 - **New knowledge** allows identification of issue as a new risk
 - **Increasing** = either occurrence frequency or consequences
- *Matrix reflecting emerging risk issues to be dealt with*
 - ERMF = Technology, Governance, Human, Regulation
 - IRGC = Pre-assessment, Risk Appraisal, Tolerability, Risk Management
- *KPIs – define most adequate ones, learn the current crisis' lessons: local effects gather into global ones, yet to be worked out*

SP1 : Common methodological framework

- For each ERRA
 - Clearly identify the gaps
 - Clearly position the emerging risks
 - Solve these gaps with specific solutions
 - Provide elements for making them generic (-> SP2)

1. OVERVIEW MATRIX					
Title of the ERRA:					
Particular Emerging Risks Issues (ERIs) within this ERRA	ERMF	IRGC			
		Pre-Assessment	Risk Appraisal	Tolerability; Acceptability Judgment	Risk management
ERI#1:.....	[T] Technology, technical:	e.g. LEVEL 2	e.g. LEVEL 1	e.g. LEVEL 2	e.g. LEVEL 1
ERI#2:.....	[C] Governance, communication:	e.g. LEVEL 1	e.g. LEVEL 3	e.g. LEVEL 3	e.g. LEVEL 3
ERI#3:.....	[H] Human, Management:	e.g. LEVEL 3	e.g. LEVEL 1	e.g. LEVEL 3	e.g. LEVEL 2
ERI#n:.....	[R] Policies, regulation, standardization:	e.g. LEVEL 1	e.g. LEVEL 2	e.g. LEVEL 3	e.g. LEVEL 1

Conclusion

- Success of SP1 is critical
- ERRAs can be viewed as autonomous subprojects
 - Yet ! The keys to success are integration and building a common view
 - First step : common SP1-SP2 Kick-Off at EDF premises 29th and 30th of January