The Role of the European Technology Platform on Industrial Safety and the SafeFuture initiative

Strengthening OSH knowledge and innovation as a driver of EU smart growth

7 NOVEMBER 2011, WARSAW, POLAND

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INERIS

Outline

- Overview of ETPIS
- Main achievements, after 5 years
- Perspectives in industrial safety in Europe
- Conclusions

Overview of ETPIS

Scope

Industrial safety applies to installations, production & transport systems, buildings and structural components

- Occupational health & safety of the workers in industry
- Environmental safety
  - ✓ prevention of major accidents with off-site consequences
  - ✓ protection of the environment and the society

ISSUE ORIENTED, MULTISECTORIAL BENEFICES

VISION

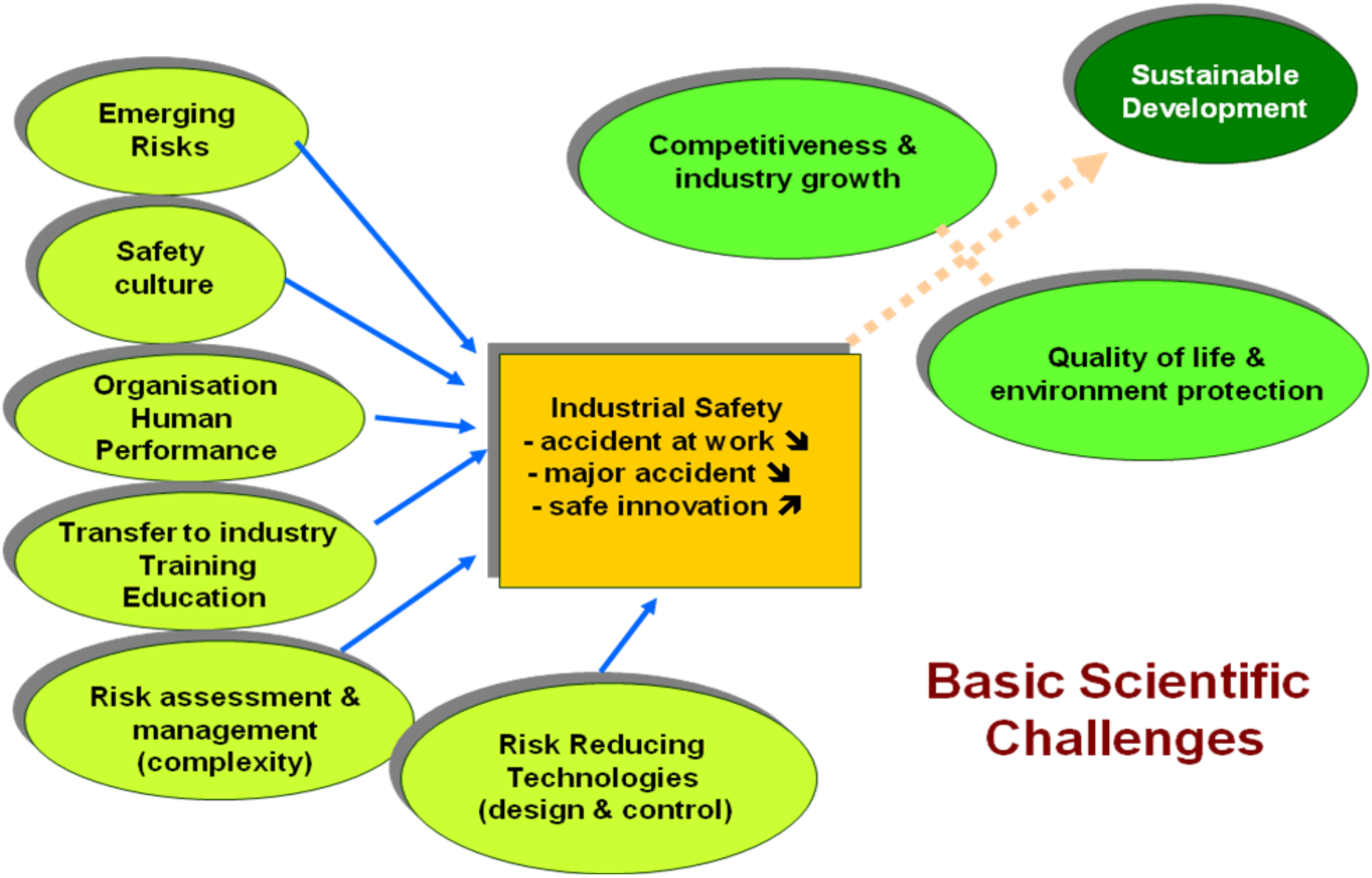
adopted in 2005

- **By 2020, industrial safety performance shall have progressively improved by 25% (baseline year 2006) in terms of reduction of reportable accidents at work and occupational diseases, environmental incidents and accident related production losses. It will have developed an "incident elimination" culture where safety is embedded in design, maintenance, operation and management at all levels in enterprises.**

- **By 2020 there will be structured self regulated programmes in all major industry sectors which have firm, measurable performance targets for accident elimination equating to an annual reduction rate of 5%**

- **Accident free mind set workplaces will become the norm by 2020**

- **This will contribute in a major way to sustainable growth for all industry in Europe and improvement of social welfare.**

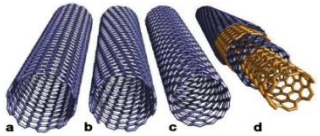


Basic Scientific Challenges

What is ETPIS? It is…

Buncefield, 11 De. 2005 (UK)

- An instrument to pilot and defragment EU research investment in industrial safety (OHS, Process safety and environmental safety)
  - *Vision & Strategic Research Agenda*
  - *9 National TPIS*



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- An open forum with 600+ experts to share ideas, prepare future work & disseminate results
  - *Focus groups, Technical Wokshops & Conferences Education and Training*

- A platform driven by industry
  - *High Level Group with representatives from Chemical, Oil, Car, Energy,Transport, Re-insurance and EU-OSHA*

Main achievements, after 5 years

ETPIS: a tool to defragment R&D

Annual meeting

Identify and collect needs
to improve industrial safety

Prepare and share the Roadmap
for industrial safety

Regular update

Risk assessment and management methods

Advanced risks reduction technologies

Structural safety

Human and organisational factors

Emerging risks

HUB Education, training, transfer to industry

HUB Nanosafety

HUB Transport systems and tunnels

HUB Large scale experiment facilities (NEXIS)

Projects and initiatives

- **2 large projects in FP7 (call 2007-08)**
  - iNTeg-Risk: Early Recognition, Monitoring and Integrated Management of Emerging, New Technology Related Risks
  - IRIS: Integrated European Industrial Risk Reduction System
- **Several projects on Personal Protective Equipments (call 2008-09) and Nano**
  - i-Protect: Intelligent PPE system for personnel in high-risk and complex environments
  - Safe@Sea: Protective clothing for improved safety and performance in the fisheries
  - Nanosafe, SAPHIR, NANODEVICE…
- **Influence on national programmes in Spain, Czech Republic, Finland…**

iNTeg-Risk www.integrisk.eu-vri.eu

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

SEVENTH FRAMEWORK PROGRAMME

Coordinator: Prof. A. Jovanovic, EU-VRi

- Partners: 64 + 15 (Art.10)
- Start date: Dec. 1, 2008
- End date: May 31, 2013
- Duration: 54 months
- Budget: ~ 19.2 million Euro
- EC contribution: ~ 13.7 million Euro

EU-VRi

IRIS

Integrated European Industrial Risk Reduction System

www.vce.at/iris/

Coordinator: Helmut Wenzel, VCE

Start date:	1 October 2008
End date:	31 March 2012
Duration:	42 months
Budget:	13 million Euro
EC contribution:	8.5 million Euro

40 partners

Main achievements - conclusions

- Contribution to the European Research Area in Industrial Safety
  - sharing a vision, ideas and a roadmap
  - sharing results to prepare future initiatives
- A portfolio of projects:
  - EU: IRIS, iNTeg-Risk, PPE projects, Nano related projects...
  - National level: a lot of projects in line with the SRA in several member states
- Initiatives and activities to promote safety thanks to the High Level Group, the Executive Board, FG leaders and national TPIS leaders & Mirror Group members
- Partnerships which create added value for safety

Added value of cooperation

some examples…

ECTP

European Technology Platform for the future of textiles and clothing

MANUFUTURE-EU

SRA

epsc

EU-VRi

prisme² Responsible Care

IMS
INTELLIGENT MANUFACTURING SYSTEMS

Healthy Workplaces

nanoSAFE

new osh era

NANOfutures

European Agency for Safety and Health at Work

enero

Perspectives in industrial safety in Europe

Industrial context required a top-down approach

- Industrial context
  - Economy crisis
  - Globalization
  - Demography
  - Demand on sustainability

- Top down approach is needed:
  - definition of priorities that will guarantee safety
  - … at an affordable cost that keep EU industry competitiveness

TOP 5 from the ETPI High Level Group

Human Factors in Emergency and Crisis Management
Human Centered Design & Human Factors in Organizational and Managerial Safety
Understand the particularities for the pedagogy in the field of safety (based on risk perception), and improve education and training for students, workers and (safety) managers
Risks emerging from introduction of New technologies including methodology of integrated risk management for new technologies
Methods to maintain safety of aged and repaired structures and provide technologies for life extension & Reliability based design and structural health monitoring (SHM) and risk based inspection technologies

EU Grand Challenges

- Lund declaration :

  "European research must focus on the **Grand Challenges** of our time moving beyond current rigid thematic approaches. This calls for a new deal among European institutions and Member States, in which European and national instruments are well aligned and cooperation builds on transparency and trust.

  Identifying and responding to Grand Challenges should involve stakeholders from both public and private sectors in transparent processes taking into account the global dimension.

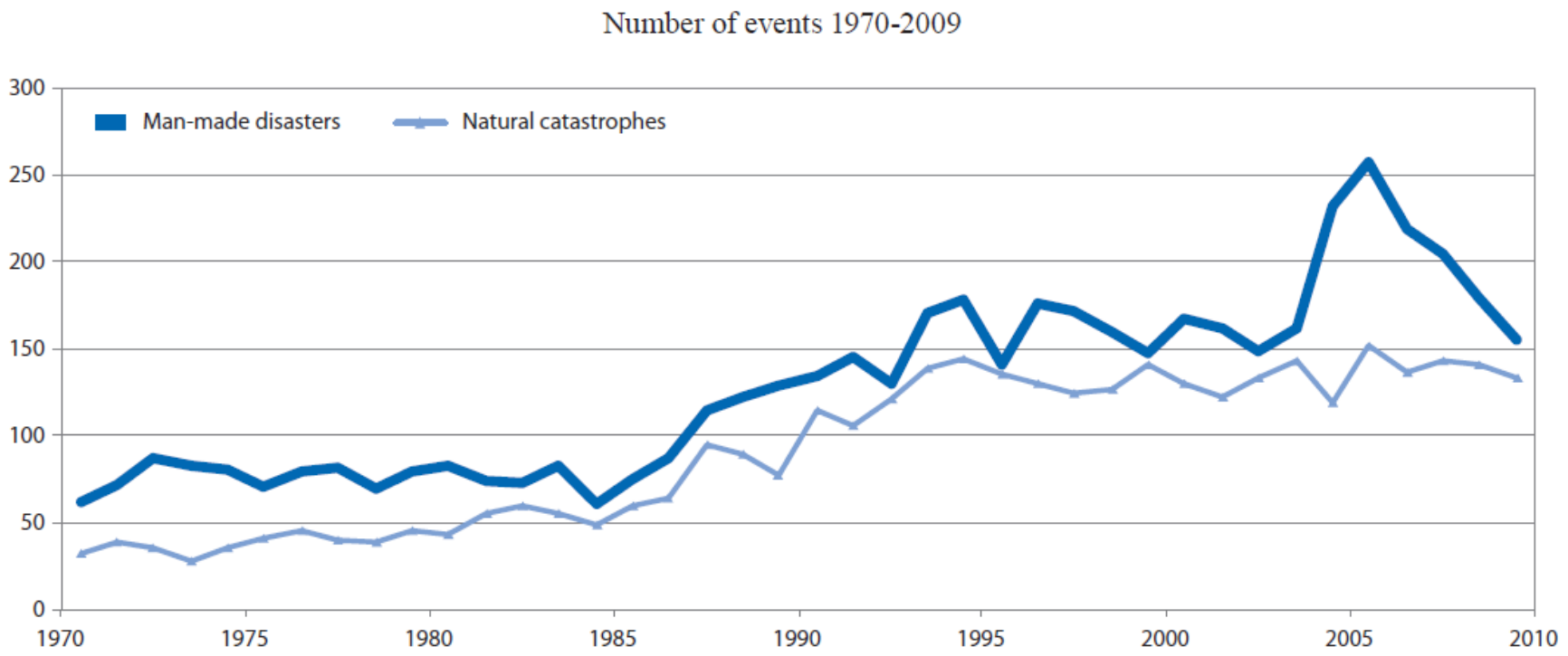
Climate change

Clean energy
Sustainable transport

Sustainable industrial production

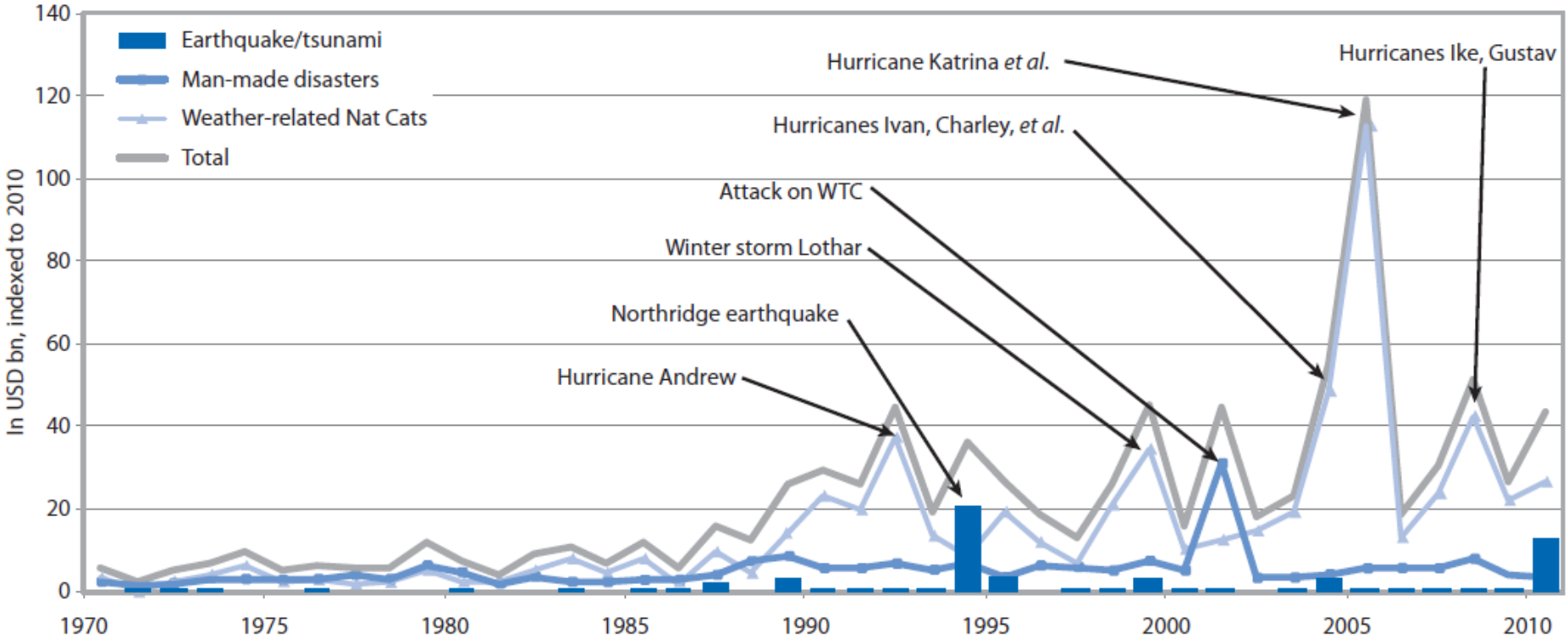
Aging population
…

Rising number of catastrophic events



Source: Swiss Re (2011), "Natural catastrophes and man-made disasters in 2010" sigma No. 1/2011, available at *www.swissre.com/sigma/.*

Insured catastrophe losses 1970-2009



Source: Swiss Re (2011), "Natural catastrophes and man-made disasters in 2010", sigma No. 1/2011, available at *www.swissre.com/sigma/.*

EU2020

Innovation & sustainable growth:

embedded safety and emerging risk management for a competitive Europe addressing the EU Grand Challenges

EU Grand Challenges

+

Embedded safety

Emerging risk management

➡

Safe Innovation

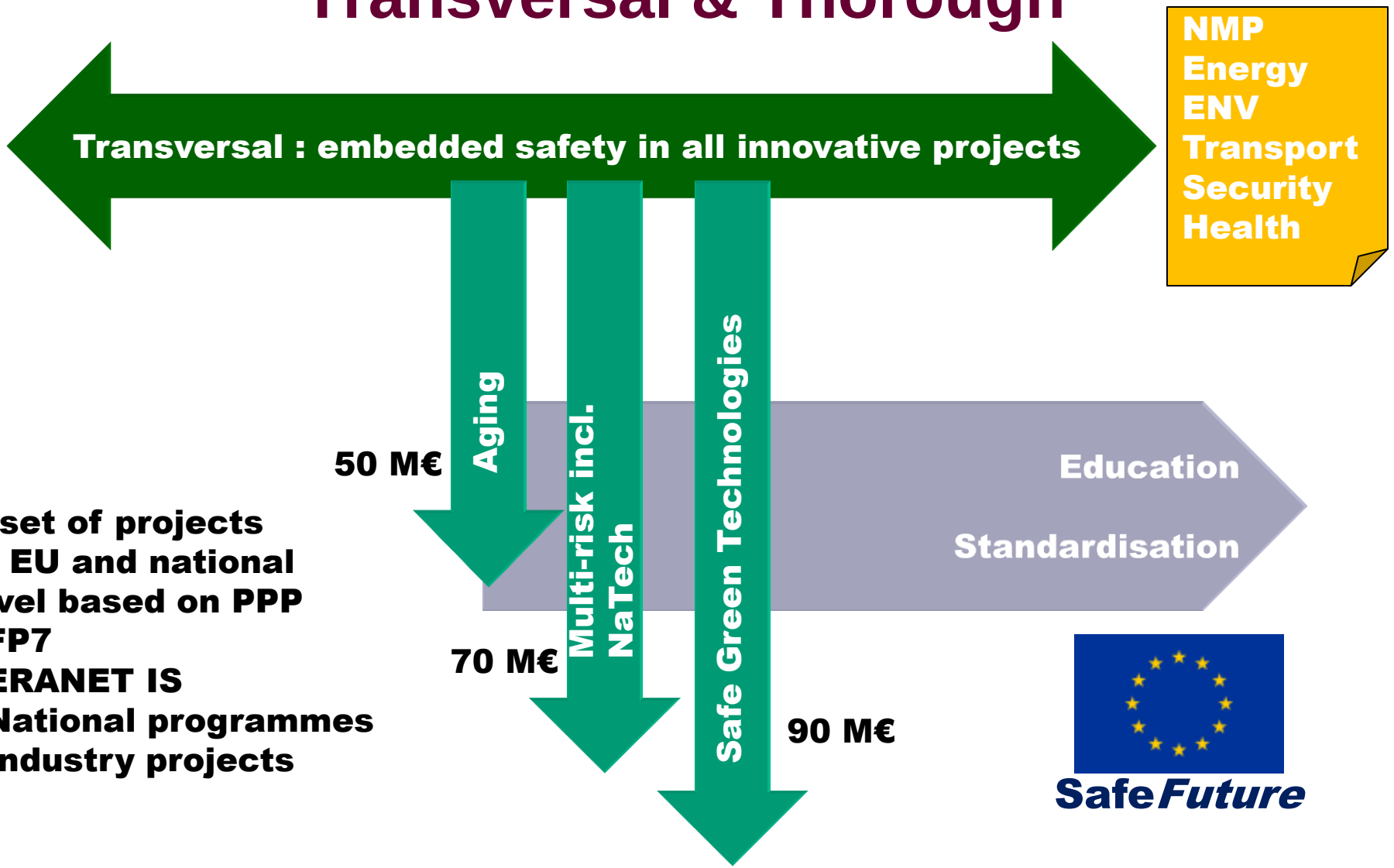
Sustainable growth

Smart growth
Innovation / education

Sustainable growth
climate/energy/ mobility competitiveness

Inclusive
poverty

The T approach
Transversal & Thorough



A set of projects at EU and national level based on PPP
- **FP7**
- **ERANET IS**
- **National programmes**
- **Industry projects**

SafeFuture

SafeFuture

Safety as a trade-mark of the technology "made in EU"
Safe innovation for sustainable future

Way to achieving (by 2020) a new safety paradigm for European industry. Safety as a key factor for successful business and an inherent element of business performance. Industrial safety performance progressively and measurably improved in terms of reduction of reportable accidents at work, occupational diseases, environmental incidents and accident-related production losses. "Incident elimination" and "learning from failures" cultures embedded in design, maintenance, operation at all levels in enterprises. Structured self-regulated safety programs in all major industry sectors in all European countries. Measurable performance targets for accident elimination and accident free mind set workplaces as the norm in Europe.

Safe Infrastructures:

- Life extension of process plants, transport infra-structures, power plants
- Intensification of NatCat (NaTech)
- Design and monitoring for long term operation

Safe Energy:

- New energy carriers for ground vehicles (FEV, fuel cells, CNG, H2…)
- Deployment of sustainable fuels in the aviation sector

Safe Products/Production :

- Green jobs
- Value chain and interdependencies
- Nanosafety
- PPEs in a Smart Working Environment

Example: Multi-Risk / Risk-Risk tradeoffs – safety for sustainable integration, interaction and risk governance:

- "Agreed Approach to Risk-Risk Tradeoff management" (the Multi-Risk initiative); difficulties in putting together different risk mitigation policies and ensuring their compatibility

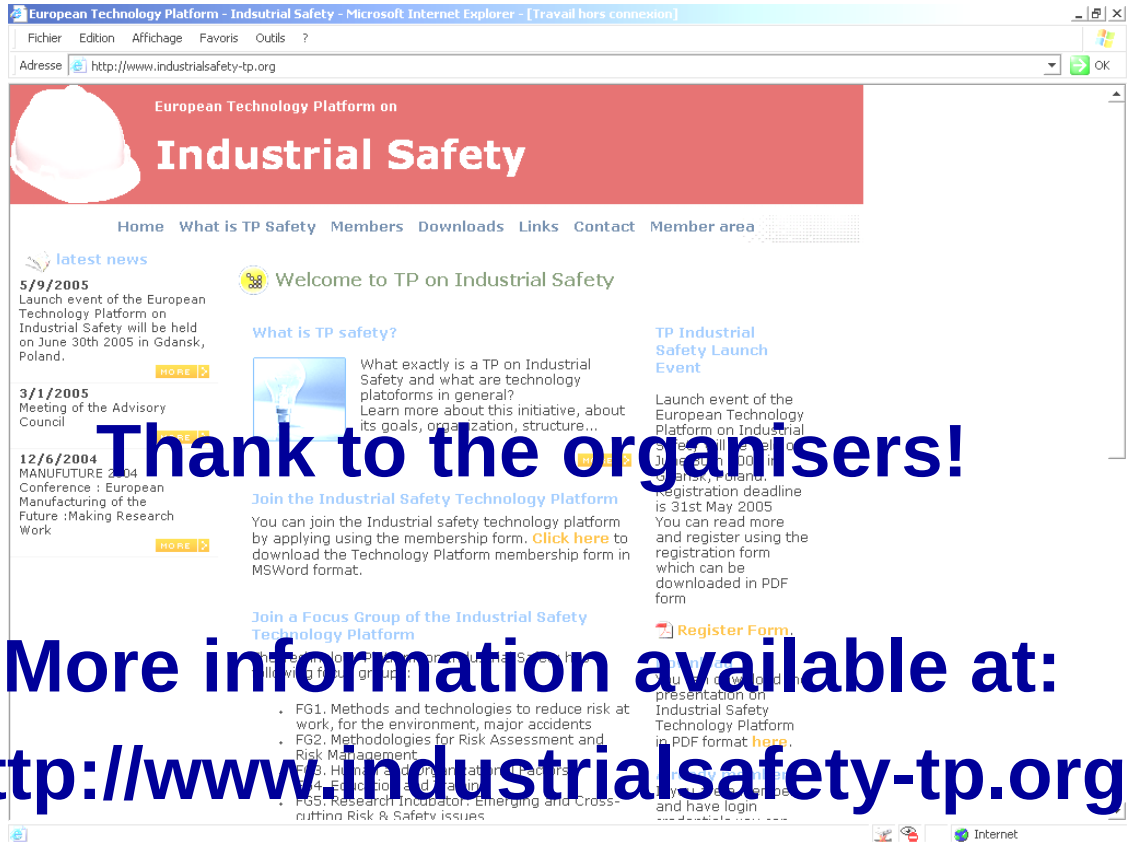
Conclusions

Conclusions

- *ETPIS has become a powerful tool*
  - *to coordinate investment in research*
    - *vision and structuration of the European Research Area in Industrial Safety*
    - *visibility of industrial safety issues*
    - *preparation of Programme (ERANET IS) / Projects*
  - *to share results in a less formal way than conferences (working groups)*
- *A portfolio of projects:*
  - *EU: IRIS, iNTeg-Risk, Nano, PPE...*
  - *National level: a lot of projects in line with the SRA in Spain, Czech Republic...*

Conclusions

- *Lisbon strategy and EU2020 "post-Lisbon strategy: innovation is a must for the economical development*
  - *New drivers have appeared to address the EU "Grand Challenges"; there are new opportunities for projects, especially on risks related to* ***innovation***
  - *But "****traditional risks****" remain and also need to be tackled (Toulouse, Buncefield, Texas city, Gulf of Mexico)*
- *Favorable climate to launch ambitious projects / programmes:*
  - *ISO 31000:2009 Risk management -- Principles and guidelines*
  - *ISO/DIS 26000 Guidance on social responsibility*
- ***All contributions are welcome, especially from the National Platforms***



Thank to the organisers!

More information available at:

http://www.industrialsafety-tp.org

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