

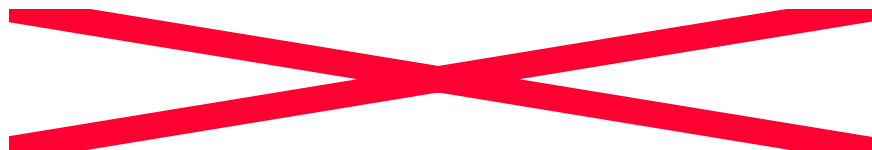


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Boosting Environmental Technologies through Verification:

EUROPEAN PERSPECTIVES AND INITIATIVES



Joint Conference of 3 EU FP6 RTD projects:

PROMOTE, TESTNET, AIRTV &

A Nordic Innovation Centre project NOWATECH

Representation of the State of Baden-Württemberg to the EU

Brussels, 15-16 September 2008

European Commission

Research DG

Directorate Environment

Elena Domínguez



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Towards a sustainable future: Environmental Technology Action Plan

- **A way of channeling efforts:
EU & Member States**
- **A catalyst for change**
- **To stimulate eco-innovation**
- **To encourage the take-up on environmental technologies**
 - To foster greater demand for environmental technologies





The actions (I)

- **Getting from research to markets**
 - ↳ Strengthening research on ET* , supporting demonstration & dissemination
 - ↳ Establishing a common vision through technology platforms
 - ↳ **Improving testing, performance verification and standardisation of ET**
- **Improving market conditions**
- **Acting globally**

**Environmental Technologies*





The actions (II)

- **Getting from research to markets**
- **Improving market conditions**
 - ↳ Performance Targets
 - ↳ Mobilisation of financing (grants & loans)
 - ↳ Market instruments
 - ↳ Green Public Procurement
 - ↳ Awareness Raising and Training
- **Acting globally**

Supporting eco-technologies in developing countries, and promoting foreign investment

**Environmental Technologies*





Report on ETAP 2005-2006 *Key priorities*

INCREASE DEMAND

- Further Green Procurement
- Mobilise greater financial investments
- **Establish Technology Verification** and Performance Targets system
- Build on promising practices of Member States
- Focus on sectors with high gains

SUPPORT MEASURES

- Ensure strategic knowledge resource on eco-innovation
- Promote awareness and active participation
- Harness research



Report on ETAP 2005-2006 *Key figures*

Getting from research to markets:

- **FP6: ~ € 1.4 billion – ET**
- **FP7: ~ 30% of Cooperation budget (€32 billion)**
hydrogen & fuel cells, clean production processes, alternative energy sources, CO₂ sequestration, IT for sustainable growth, water technologies, etc

Overall:

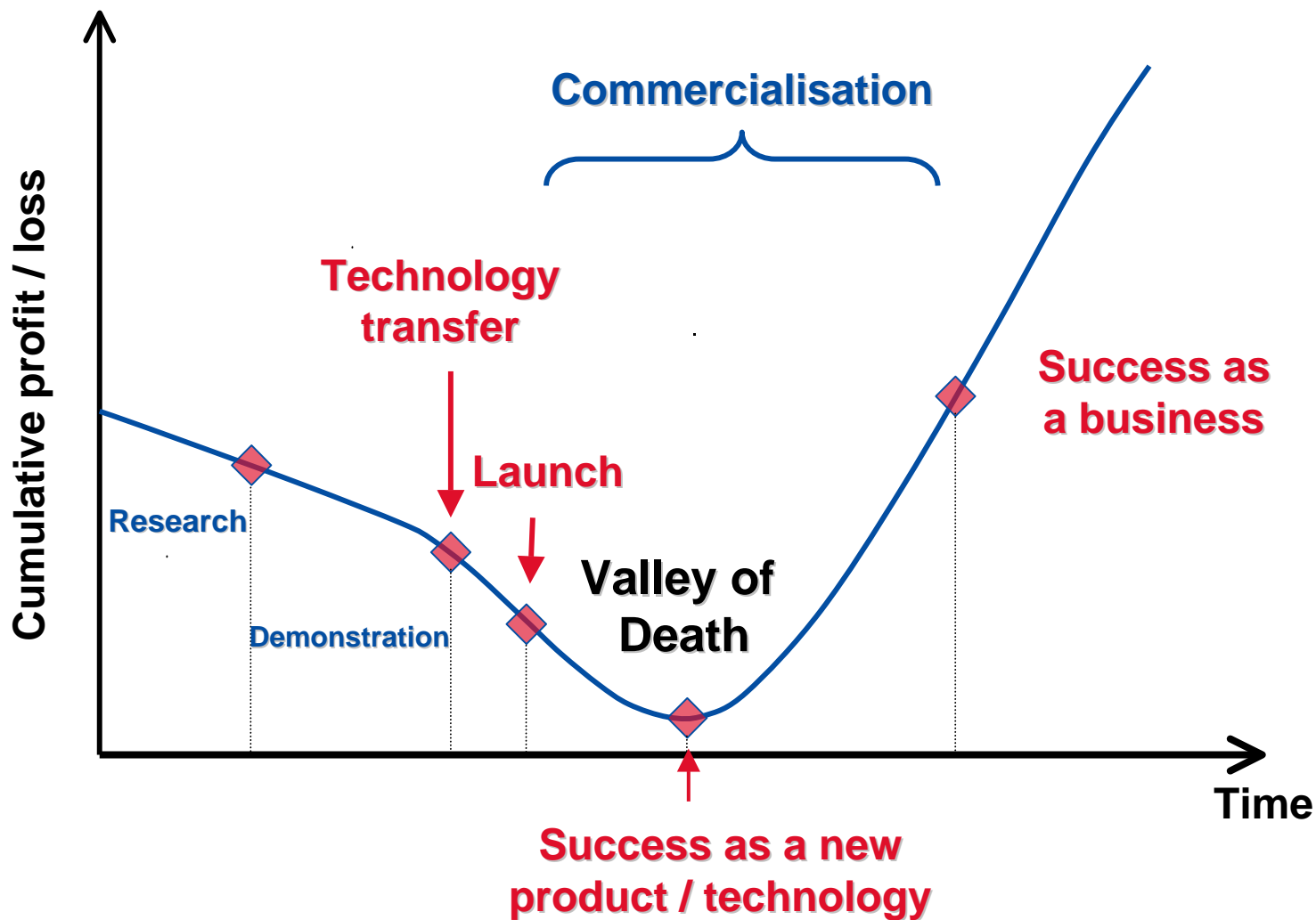
- **By 2013 ~€12 billion towards eco-innovation projects**
RTD FPs: Research & Technological Demonstration
CIP: Competitive and Innovation Programme
EIF: the European Investment Fund



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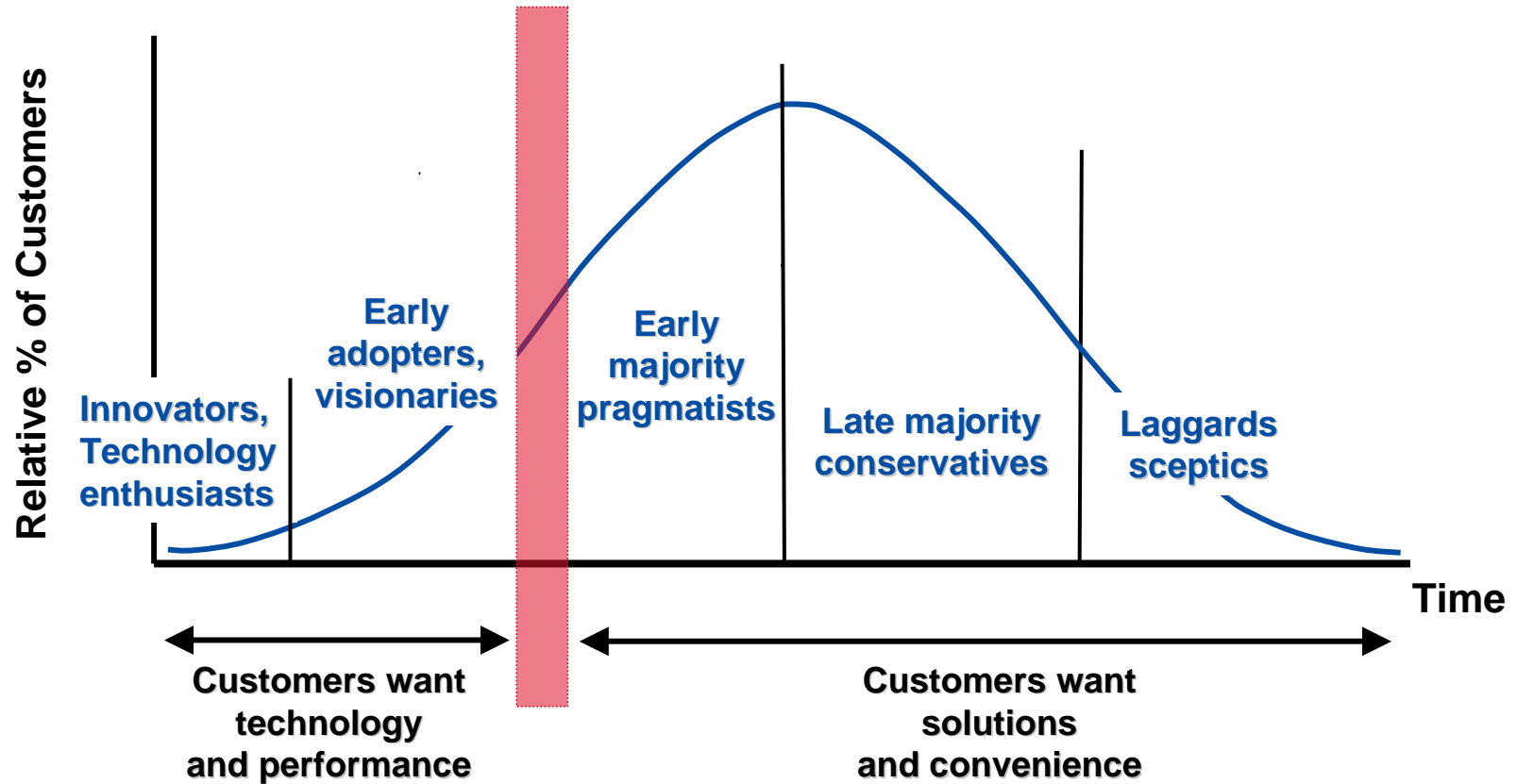
The path to innovation Valley of Death





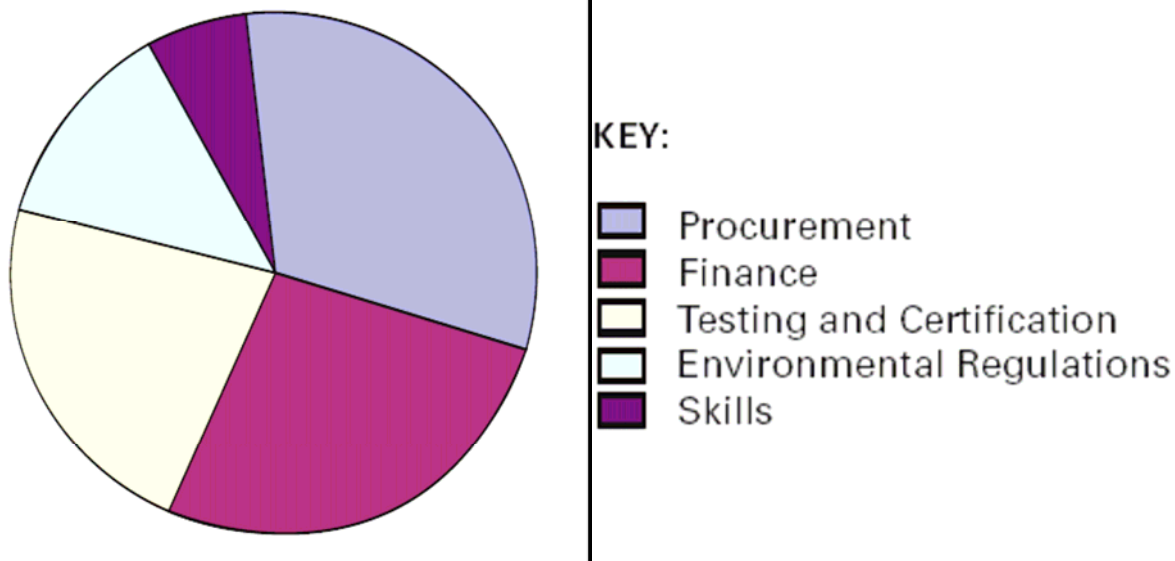
The path to innovation

Customers' attitude





Barriers to environmental innovation



Source: DEFRA & DTI (2006)

Environmental innovation – bridging the gap between environmental necessity and economic opportunity

Over 100 environmental business were asked about their experiences in bringing innovation to the market



EU Environmental Technology Verification scheme

It is:

- **The provision of independent, reliable, scientifically sound information on the technical performance and environmental impacts of environmental technologies**

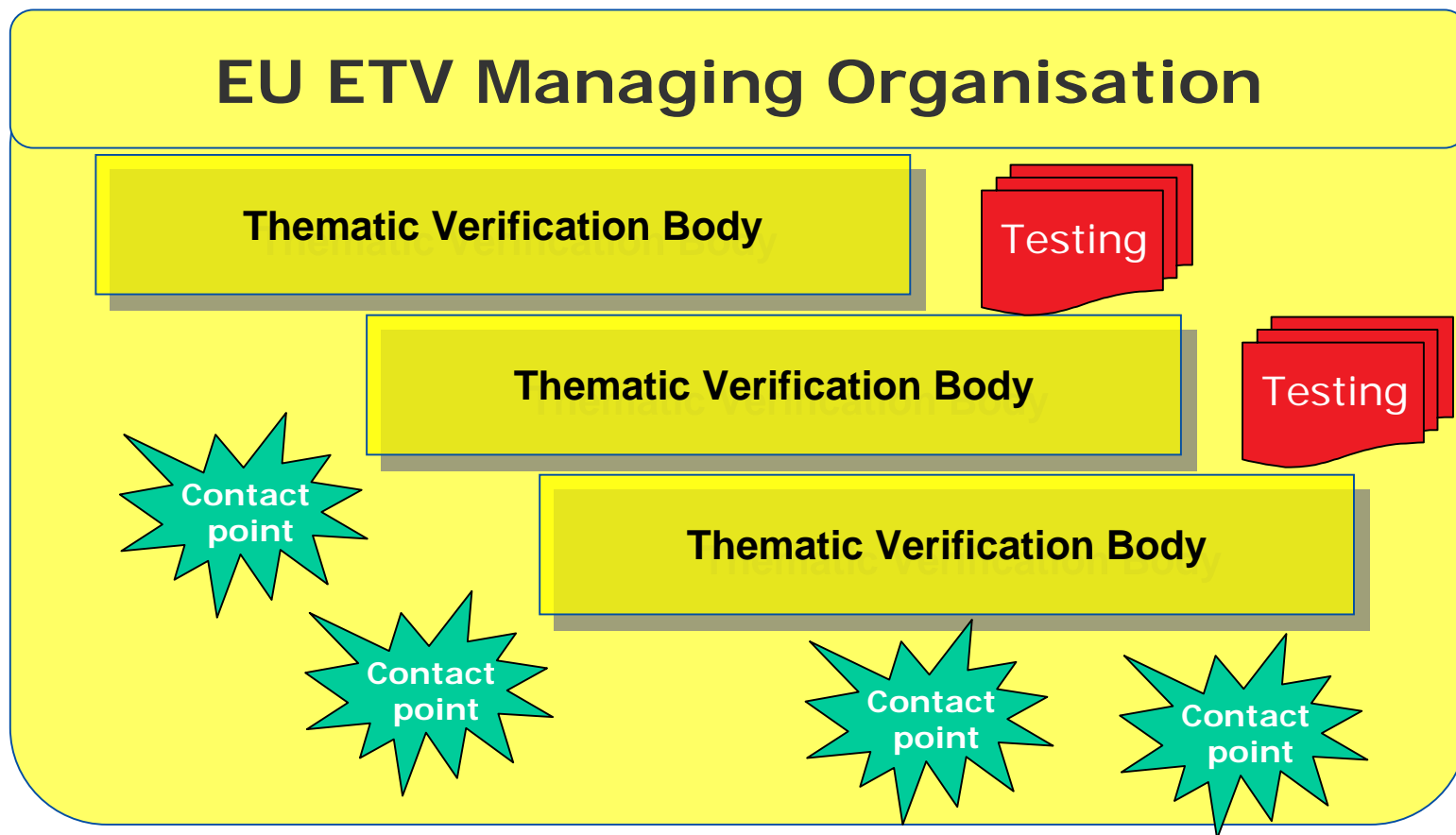
It is not:

- **Certification (unlike ISO, CEN, national systems)**
- **Validation against standards BUT can use them**
- **Supervision of sound manufacturing**



Towards a legislative proposal

A network of VBs and contact points using existing capacities



EU Environmental Technology Verification scheme

Elements of its possible organisation (I):

➤ ETV Secretariat:

- ✓ Coordination of the ETV scheme and representation
- ✓ Definition, adoption & revision of the General Protocol
- ✓ Definition & monitoring of the Quality Management System
- ✓ Definition, adoption & revision of the list of technology groups
- ✓ Selection, supervision, auditing & evaluation of the Verification Bodies
- ✓ Quality control, registration and publication of the statements of verification
- ✓ General information & communication on the ETV scheme



EU Environmental Technology Verification scheme

Elements of its possible organisation (II):

➤ Verification Bodies:

- ✓ Implement the General Protocol and the QMS within the technology groups in their area of competence
- ✓ Screening of environmental impacts (EN14040 & EN 14024)
- ✓ Reception of applications for verification in their technology areas
- ✓ Establishment & implementation of the verification contracts with applicants including the agreement on the performance claims
- ✓ Initial & final assessment of data, agreement on the choice of testing laboratories
- ✓ Drafting and approval of the Statement of Verification



EU Environmental Technology Verification scheme

Elements of its possible organisation (III):

➤ Testing Laboratories:

- ✓ Drafting the testing plans in agreement with the competent VB
- ✓ Implement the tests (QMS)
- ✓ Drafting & approving the test report on the tests performed, for transmission to the applicant and to the VB

➤ Contact points:

- ✓ Provide information to interested organisations
- ✓ Advice on procedures, on competent VB, on the choice of testing laboratories, on the use of the Statement of Verification, on possible financing (SMEs)
- ✓ Facilitate the implementation of the verification procedure establishing good cooperation between applicants and VB



EU ETV scheme in preparation

Where are we?

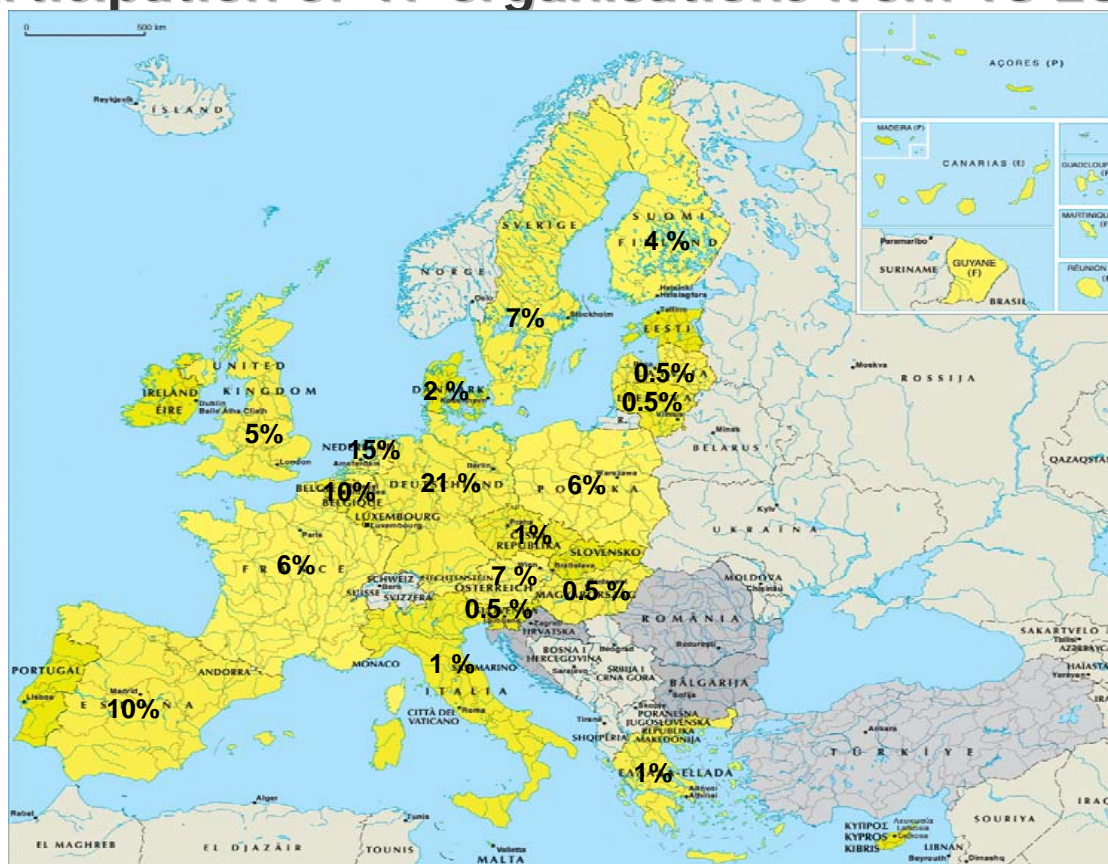
- **4 Research projects on water technologies, soil remediation, air pollution, clean technologies**
- **1 pilot project to test the ETV approach on real cases, preparatory studies and market survey**
- **Public consultation, Commission proposal in 2008, definitive scheme in 2010-2011**



RTD FP6 PROJECTS

<http://www.eu-etv-strategy.eu>

- EURODEMO, PROMOTE, TESTNET & AIRTV
- Total EC contribution €5.5 millio, total cost €8.5 millio
- Participation of 47 organisations from 18 EU countries





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EU ETV Pilot Projects

<http://www.eu-etv-strategy.eu>

EURODEMO (RTD) January 2005-December 2007

Soil & groundwater remediation technologies

PROMOTE (RTD) September 2005-September 2008

**On-site & in-situ monitoring and sampling devices for site characterisation
Remediation technologies** [LINK](#)

TESTNET (RTD) September 2005-September 2008

Clean products, water, environmental monitoring [LINK](#)

AIRTV (RTD) November 2006-October 2009

Air emission pollution abatement

TRITECH (LIFE) January 2007 – December 2009

**10-15 technologies from 3 thematic technology areas:
soil remediation, waste water & energy related**

- Publication of Newsletters (web site)
- EU Presidency initiative & TESTNET Seminar: Testing and verification of environmental technologies, October 2006, Dipoli, Espoo FI
- 1st PROMOTE stakeholder consultation, November 2006, Brussels
- 1st AIRTV stakeholder consultation, June 2007, Brussels
- PROMOTE CEN Workshop Agreement (CWA)
- Seminar Water monitoring technologies - harmonized approaches to performance demonstration, TESTNET, October 2007, Nieuwegein, NL
-
- PROMOTE, TESTNET (NOWATECH) final conference, 15-16 September, Brussels



Other activities relevant to EU ETV scheme

- **1st Discussion paper to ETAP HLWG* members February 2005: general description of US and Canada ETV systems. Position paper. Based on the study of IPTS**
- **2nd Discussion paper to ETAP HLWG, July 2006. Conceptual paper. Based on the study of IPTS**
- **1st International Forum -USA- July 2005**
- **2nd International Forum –Canada- March 2006**
- **3rd International Forum – Paris, France- November 2007**
- **ETAP Forum on ETV – Paris, France – November 2007**

* HLWG High Level Working Group



ETAP Forum on ETV

Paris, November 2007

- **200 participants**

- **Broad consensus on:**
 - ✓ the need for an EU system
 - ✓ the focus on SMEs
 - ✓ voluntary scheme
 - ✓ the need for international recognition (« verify once, accept everywhere »)
 - ✓ using existing structures, organisations and protocols

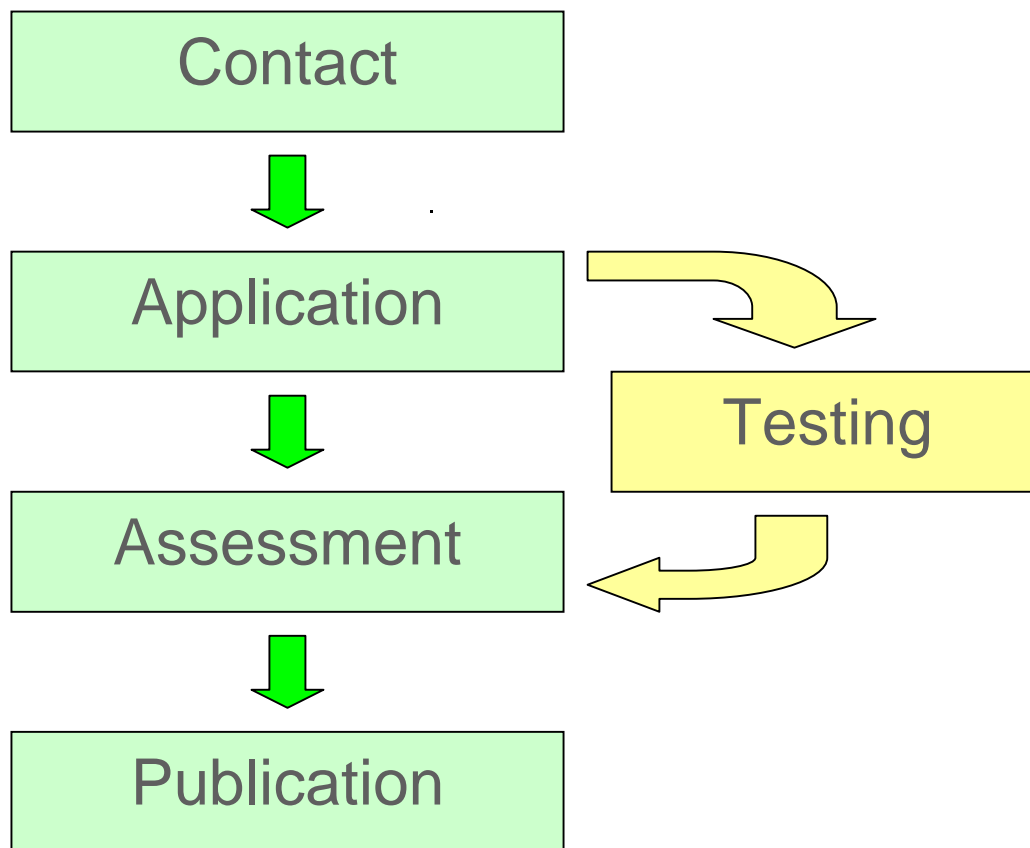
- **Diverging views on:**
 - ✓ the market readiness of technologies
 - ✓ financing mechanisms
 - ✓ life cycle considerations



Towards a legislative proposal

Consultation paper (I)

A simple procedure, based on claims verification





Towards a legislative proposal

Consultation paper (II)

Main requirements on the system:

- ✓ Support to Small and Medium-sized Enterprises
- ✓ Wide recognition, within the EU and internationally
- ✓ Reliability of verification assessments
- ✓ Short verification time, simple and robust procedure
- ✓ Limited cost for applicants, cost-efficient system
- ✓ Attractiveness for technology users, purchasers, investors

EU Public consultation

Main results

- **Internet general consultation: 139 responses**
- **Overall support to the approach and outline of the EU system**
- **Diverging views on:**
 - ✓ market readiness of technologies
 - ✓ core objective: accelerate market penetration / help technology purchasers
 - ✓ costs: non-viable for SMEs / possible if justified by added value
 - ✓ Confidentiality / public availability of results
- **First priorities: 80% credibility and scientific soundness, high recognition**



International activities

Towards mutual recognition of ETV systems

- **Cooperation and exchange of experience with US and Canada aimed at preparing the ground at technical level for mutual recognition**
- **Possible cooperation through OECD**
- **3rd International Forum on ETV in Paris focussed on developing countries**

**Harmonised approaches towards the development of
international technology verification systems
ADVANCE-ETV***

- **Coordination action**
- **To support, integrate and coordinate previous and on-going European RTD efforts with existing and fully operating technology verification systems outside the EU**
- **Developing a framework for international cooperation and mutual recognition**

** Presently under negotiation*



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PROMOTE technologies

On-site and in-situ monitoring and sampling devices for site characterisation:

- A sensor array for volatile organic compounds in the unsaturated zone (in direct push cone)
- A fibre optic photometer for dissolved PAH & BTEX in groundwater (in direct push cone)
- A photometer for dissolved phenols, DOC, and Electron acceptors
- Active and passive multilevel groundwater sampling systems

Remediation technologies:

- Low tech ex situ technology
- In-situ chemical oxidation
- Co-solvent and surfactant flushing
- Permeable reactive barriers [LINK](#)



TESTNET technologies

Monitoring of drinking water / surface water

- Bio monitoring [Toxcontrol]

Monitoring of waste water

- Optical monitoring [Scan spectrolyser]

Water disinfection in food industry

- Disinfection by oxidation process

Recovery system in biomass and waste power station

- Membrane technology for flue gas condensate

Treatment process in metal and waste industries

- Plasma technology

Hydrocarbon recovery in petrochemical industry

- Gas separation using membrane permeation process

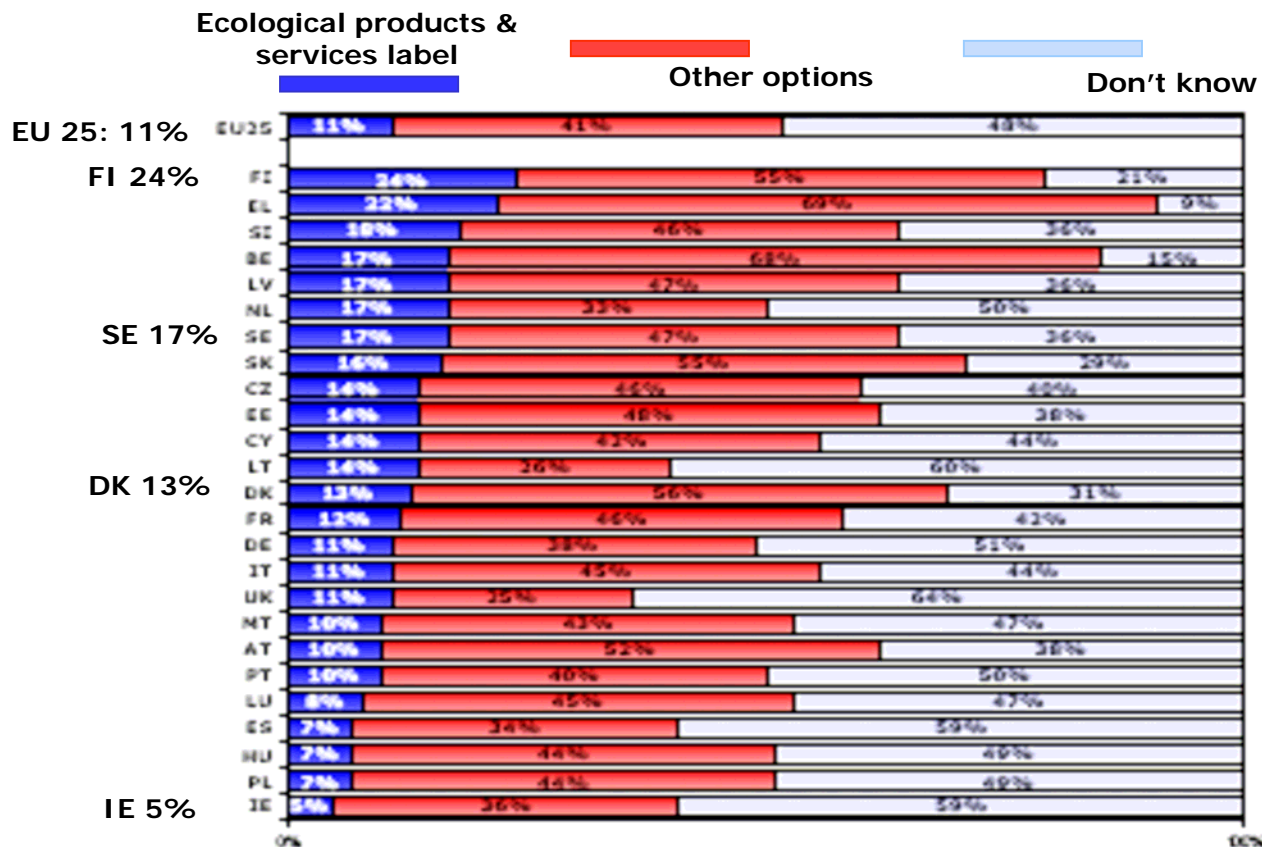
Production line in mining industry

- Clean pipe production [LINK](#)



Meaning of eco-labelling EU25*

Awareness: pre-condition for success



* Special Eurobarometer survey, January 2007