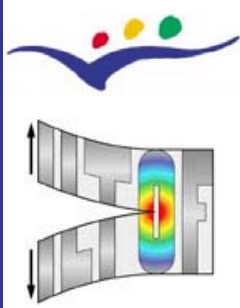


FraMCoS-6 Post-Conference Workshop
Acoustic Emission and Critical Phenomena:
From Structural Mechanics to Geophysics

Catania, Italy, June 22, 2007

Introduction to the ILTOF Project:
Implemented activities and expected results

Alberto Carpinteri
Project Coordinator



Catania,
2007-6-22

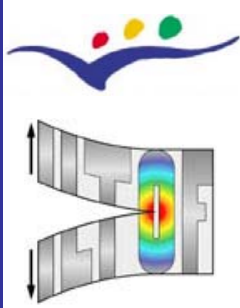
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ILTOF stands for "*Innovative Learning and Training on Fracture*" and is a Leonardo da Vinci Project funded in the framework of the European Community Vocational Training Action Programme 2000-2006.

Targets of the Project:

- Improve the **know-how transfer process**.
- **Develop innovative learning methods** in the field of **fracture mechanics** and **structural integrity**, with particular attention to e-learning technologies



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Partnership

POLITO – Politecnico di Torino – Italy

LAMDUT – Laboratory of Applied Mechanics, Democritus
University of Thrace – Greece

KUT – Kielce University of Technology – Poland

ESIS – European Structural Integrity Society

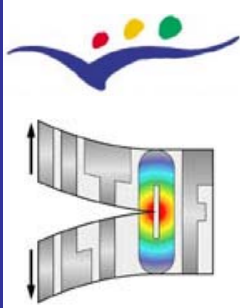
TCN – Numerical Calculation Technologies – Italy

ITWM – Fraunhofer-Institut für Techno- und
Wirtschaftsmathematik – Germany

MESco – Poland

FIGES – Turkey

NAFEMS – UK

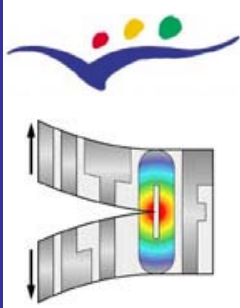


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Background:

- In the European Community there is a strong need to build **new infrastructures** and to **maintain** the existing ones, preventing obsolescence and accidents.
- **New design concepts** and the development and employment of **new high-performance materials** require a deep knowledge of failure mechanisms, fracture mechanics (i.e. **structural integrity assessment**).
- The problems of fracture, fatigue, creep failure, stress corrosion of structural and machine members emerge both in the fields of **civil and industrial engineering**.

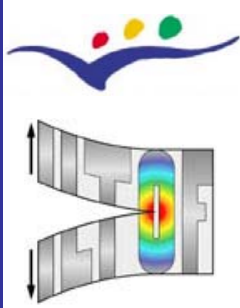


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Background (continued):

- There is a pressing need for **better training** on structural integrity and fracture mechanics, since fracture is **the most important failure mechanism** in both metallic and non-metallic materials.
- Structural integrity has a **high social impact**: the cost of failure due to fracture and fatigue can be estimated in **several billion Euro per year**.
- A better knowledge in the field of fracture, failure mechanisms and structural integrity will permit both the design of **more safe and cheap structures**, and the **protection of society** and natural environment from structural failures and very dangerous accidents.



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The Basic Idea of ILTOF

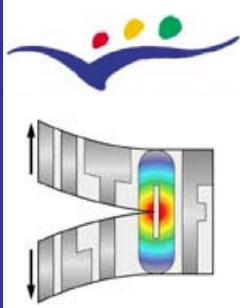
ILTOF (“Innovative Learning and Training On Fracture”) intends to set up an **innovative action** both in terms of **content** and of **methodology**.

Content:

Not only traditional content, but also **exchange of practices, experiences, opinions, advices**, usually not included in any written text.

Methodology:

The traditional teaching system is often **difficult to be accepted** by very busy engineering and management staffs. **Modern e-learning** technologies will be adopted.



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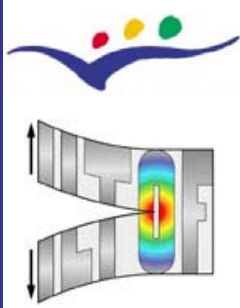
The Basic Idea of ILTOF (continued)

Realisation of Training Courses

- **easily participated** thanks to e-learning technologies by those interested in **developing and widening knowledge**
- **tailored** to the needs of the users.

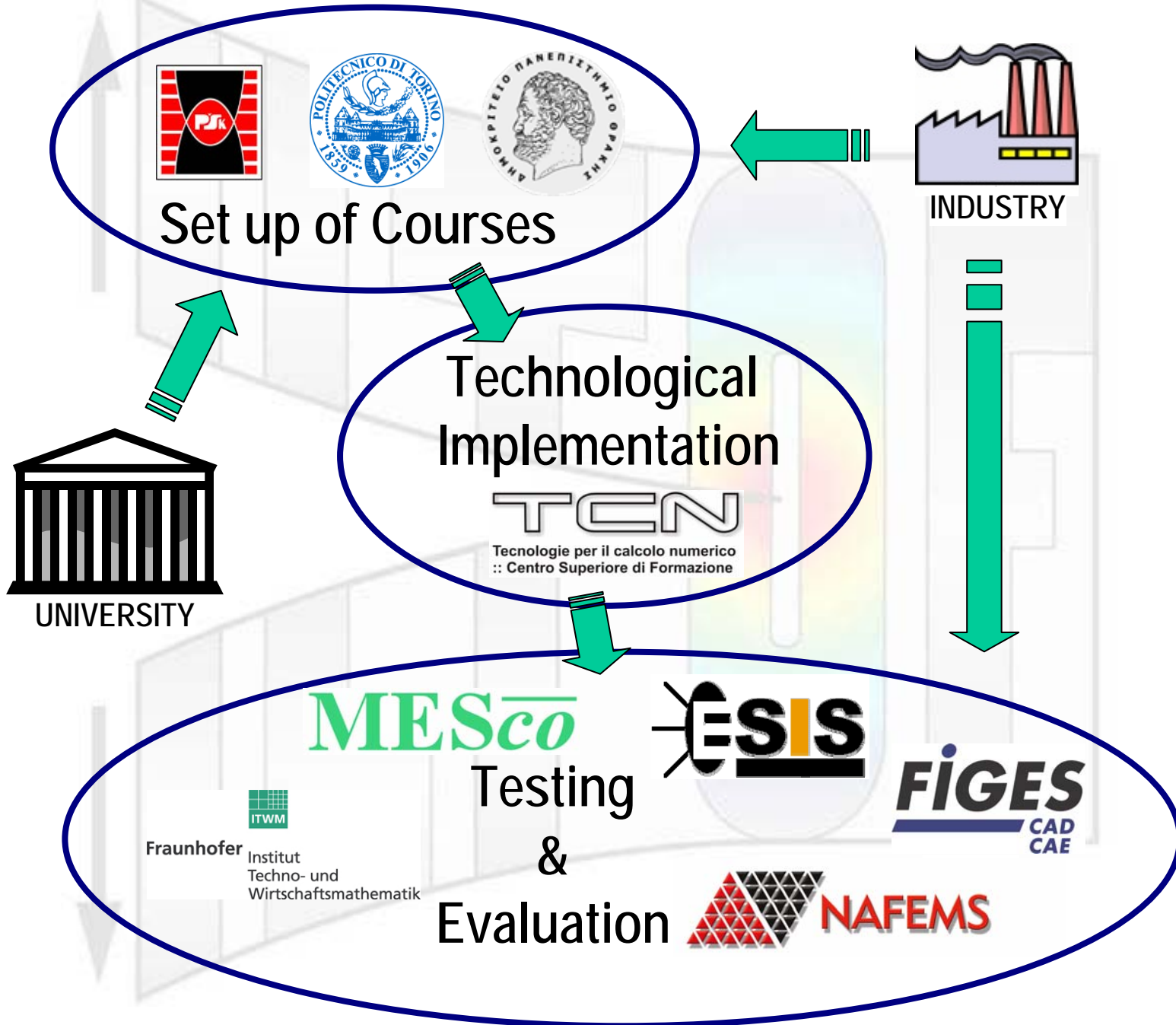
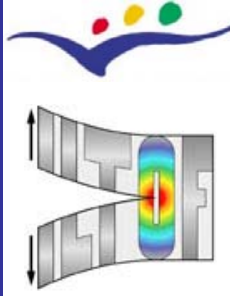
Specific targeted training for the potential users:

- **Students of Technical Universities**
- **Engineers and Researchers in Industry** (design, production/control, maintenance/repairs)
- **Managers** responsible for technical decisions at the business level
- **Engineers and Inspectors** of the Central or Regional control Laboratories and Agencies



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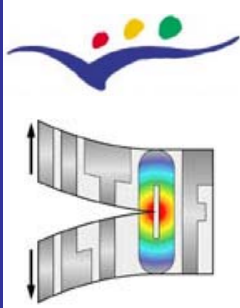
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Expected results from the project:

- E-learning and distance learning courses
- **Active-collaborative material** (thematic forums, hypertexts, dynamic collection of links and bibliography, Frequently Asked Questions' collection):
- Text books/primers
- Handbooks for specific training
- Extensive, edited **collection of the main scientific publications** in the area
- Web-site: www.iltof.org

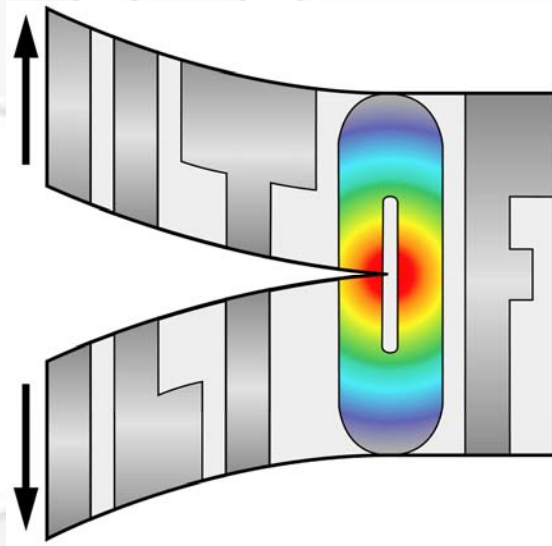


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Acknowledgements

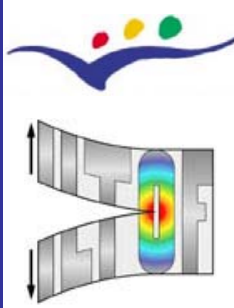
The financial support of the European Union is gratefully acknowledged.



www.iltyf.org

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