

Edited by Kim Haugbølle & Joani Reid

## Exchanging information about pathology at a European level: an utopia? No, a necessity.

Our team would like to welcome you to the fourth newsletter. In this newsletter you will find updates on the three technical work packages: the headlines include the launch of the web directory of quality signs in December (WP 1), the launch of the pathology database by the end of the year (WP 2), and the preliminary analysis of conditions for greater mutual recognition of construction insurance schemes (WP 3).

At the same time, the Elios2 team has set up a Scientific Committee of university professors and highly qualified experts. In September 2013, the Scientific Committee was consulted on two major orientations of the pilot project: the freedom to provide services in the European Union in the field of construction insurance and the Eco-technologies Quality European Observatory (EQEO). The relevance of these two themes was acknowledged by the Scientific Committee. The report of the Scientific Committee will be part of the fourth Progress Report and will also be published on the Elios2 website soon.

Amongst the different orientations currently adopted in the framework of this pilot project, one has certainly to be underlined, the absolute necessity to organize an exchange of information on pathology at a European level. A good knowledge of the pathology record, including the possibility to be informed through a hazard notification procedure, is obviously a key factor in order to correctly assess the risks, be that by consumers, designers, constructors or insurers. It is a means to facilitate the access to insurance

and to promote the quality in the construction sector. If many actors are involved in the observation of pathology for their national markets and if several interesting local databases are available, there is lack of exchange in this respect at the European level. The Eco-Technologies Quality European Observatory - EQEO - addresses this question, focusing firstly on certain eco-technologies. It aims to prefigure a wider database and could be the starting point for the creation of a European network.

Concerning the official records of our project, we would like to invite you to consult the third Progress Report, which is now available on our website. The next Forum meeting is scheduled on 21 January 2014. This Forum will be the perfect opportunity to give an overview of the progress made by the different work packages. Details of the agenda will follow in due course.

We hope you find this newsletter interesting and we as always appreciate any comments you may have.

**Michel Van Droogenbroek**

*On behalf of the elios2 partners  
Technical Director*



## Work Package 1: Directory of quality signs to be launched

### Final adjustments before operating the Directory of Quality Signs

The web directory for quality signs is planned to be in operation in November. The on-line accessible tool will allow the collection of information on quality signs related to certification of construction products, certification of persons and companies' competences, certification of building performances, and technical assessment of construction systems. The specifications of the web-based directory were elaborated according to the information structure previously discussed at Forum meetings, and the technical specifications have been approved by the Commission. Some final adjustments are now being made before launch. A first glimpse of the web interface is shown below.

### Compatibility and complementary issues with the CE marking

The information structure was a first step to create the conditions to address compatibility and complementary issues related to quality signs in construction with the CE marking. This information structure introduced description frameworks that help identifying the scope and limits of quality signs that are planned to be considered by the Elios2 project. The work carried out so far is a preparation for further discussions on the potential value of the information displayed by quality signs for the construction and the (re) insurance sectors.

**By Jean-Luc Salagnac, CSTB**

*Centre Scientifique et Technique du Bâtiment*

*Screen-shot of the Elios2 web directory*



The screenshot shows the Elios2 web directory interface. At the top left is the Elios 2 logo. A navigation menu on the left includes: Home, Organisms (with sub-items: Add Organism, Invitations (Add Invitation, Import Listing), Users (Create New User, Manage Roles, New Registration)), and a LOGOUT button at the top right.

The main content area is titled "LIST OF ORGANISMS" and features a table with the following columns: Country, Acronym, Name, Logo, City, Manager, and Manager's E-Mail. The table contains five entries:

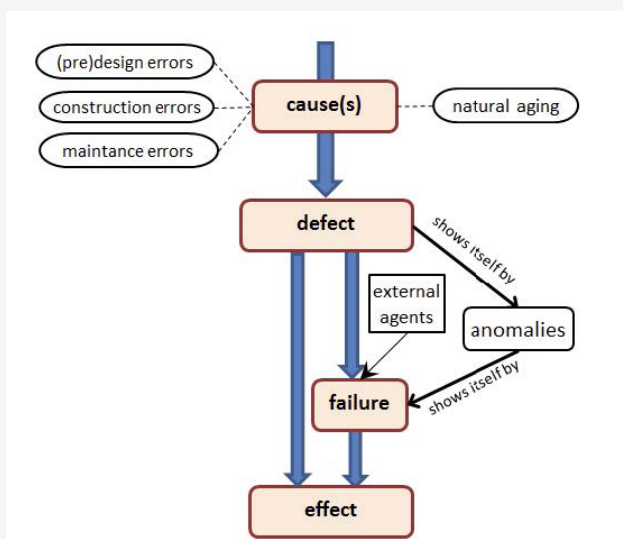
Country	Acronym	Name	Logo	City	Manager	Manager's E-Mail
FR	CSTB	Centre Scientifique et Technique du Bâtiment		Valbonne		
FR	LNE	Laboratoire National de Métrologie et d'Essais		Paris Cedex 15		
NL	NVKL	Luchtbehandeling, koudetechniek en klimaatbeheersing		Zoetermeer		
CZ	TZUS	Technical and Test Institute for Construction Prague		Praha		
BE	UBAtc	UBAtc		Bruxelles		

At the bottom of the table, it says "Beginning 1 | End Showing 1 out of 1".

## Work Package 2: Specifications for pathology database are in place

The specifications for the database with information on pathology records have now been established and validated, which means that the IT-development of the database can start in due course. The pilot database will be operational by the end of this year, after which it can be tested and populated with informative and relevant pathology cases on eco-technologies.

The description of a pathology case in the database is structured according to the following model of a cause-defect-failure/effect chain:



[Source: adapted from a CIB W86 report]

This scheme can be illustrated with an example of a recent case: photovoltaic panels with a fire risk. The description of the pathology is: “The photovoltaic panels are hazardous because a cable in the junction box behind the photovoltaic panel makes a poor contact with the PCB (Printed Circuit Board). This may cause sparks and can make the housing of the terminal box damage, melt and smolder. Then sparks can skip to the roof and cause fire. This risk increases as the sun gets stronger and as the photovoltaic panel age.”

For this case, the defect is: a bad contact between the cable and the PCB, caused by design or production errors and natural ageing. The failure is the melting and smoldering of the terminal box, losing its protective function (it doesn’t perform anymore according to the specifications or a standard). The external agent is the sun. The effect is roof fire.

**By Henk Vermande,**  
 ARCADIS

## Work Package 3: Convergence through transnational communication

Construction insurance schemes are intimately linked to the socio-technical regimes of construction, which in turn are largely anchored nationally. Changes of construction regimes are likely to take place through 1) internal tensions in the largely national construction regime, 2) external pressure from the landscape, or 3) upcoming technological opportunities (see illustration).

In this context of largely national construction regimes, how can international collaboration pave the way for greater mutual recognition of construction insurance schemes?

The political scientist Christoph Knill suggests that we can identify five main European policy convergence mechanisms:

- “Imposition”: which is undesirable since it is implemented against the will of the member states.

- “International harmonisation”: which is not yet practicable, considering that national construction systems are so unique and that international harmonisation needs a minimum of similarities among systems in order to be implemented.
- “Regulatory competition”: which implies a race-to-the-bottom mechanism in contradiction with the goal of consumer protection.
- “Transnational communication”: which includes different, related mechanisms that are purely based on communication among countries like lesson drawing, transnational problem solving, emulation of policies and international policy promotion.
- “Independent problem solving”: that is undesirable because of the unpredictable outcome.

Of these five convergence mechanisms, “transnational communication” is clearly the most suitable for our goal of greater mutual cross-border recognition of construction insurance schemes to stimulate innovation and uptake of eco-technologies. This will be further explored in the study.

**By Thomas Dunand,**  
*Hannover Re*

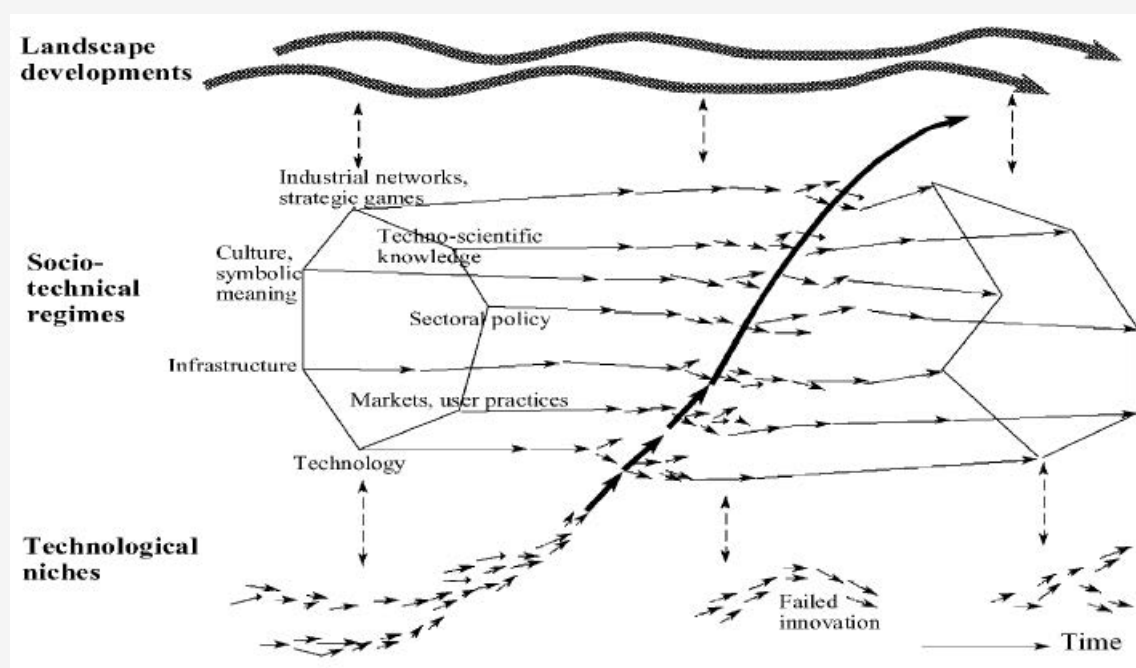


Figure: Transition theory by Geels 2006 – Reconfiguration by innovation.