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Welcome to this edition of the CAP'EM newsletter.



Last newsletter CAP'EM project

The Interreg IVB project Cycle Assessment Procedure for Eco-impacts of Materials (CAP'EM) has come to an end with nice results.

In this final newsletter we present a brief summary of the end results. These results were presented in a special programme during the [avniR] conference in Lille, 6th and 7th November 2014 (see further on in this newsletter).

Our international collaboration in the field of LCA's, SME's and expositions will be continued under the name CAPEM in order to give sustainable support to the ecological manufactures and suppliers. In this way we can capitalize the efforts made in the Interreg IVB programme.

We are represented in France (cd2e), Belgium (VIBE), UK (NGS and Renuables) and in the Netherlands (Agrodome). Don't hesitate to contact us, addresses can be found on www.capem.eu → partners.

The CAP'EM team
summer 2014, Lille



5 Questions to cd2e, lead partner of CAP'EM



We have interviewed Audrey Verspieren, Marie Darul and Jodie Bricout, all three were 'involved in the project from the start' and were irreplaceable for the good performance of the project.

• What is cd2e ?

Cd2e is a French environmental cluster which brings together SMEs, laboratories/Universities, local authorities, eco-friendly companies to work together in order to develop new eco-technologies and environmental solutions in many themes such as eco-building, recycling, water management, energy efficiency and sediment management. We are linked with more than 600 eco-enterprises and 60 laboratories working in the environmental field in Northern France. We recently celebrated our 10th year of operation.



• What was the role of cd2e in the CAP'EM project?

Cd2e had a dual responsibility in the CAP'EM project. First, we were lead partner of CAP'EM, our role was to coordinate the project, the different work packages directly with the task leaders, and to maintain contact and a good relationship with JTS, the 50% funder. We were also a technical participant in the project: we worked on the LCA methodology, did LCA's, developed the CAP'EM Compass with all the partners.



Concerning the Exhibition building work package, we designed a permanent exhibition showing how to eco-build or eco-refurbish for building professionals and general public. Currently we are eco-refurbishing an old Mining Engineer's house (listed at UNESCO patrimonial) with eco-materials with a very high, almost passive, energy efficiency.

www.cd2e.com/theatre-ecoconstruction-ecomateriaux/accueil and www.rehafutur.fr

• Why was the European collaboration important in this project?

Working with partners from different countries, it was very important to have an Europeanwide view of the context, issues and policies concerning the development of eco-buildings. The policies, clusters and companies have different approaches in each country and our collaboration allowed us to review, compare and improve our actions.

With the CAP'EM's results, we managed to go further as a consortium and to be selected by the European Commission (EC), Product Environmental Footprinting (PEF), Thermal Insulation Pilot with the EC and different industrial federations.

• How did you manage to keep all the parties on track in an international project with very different organizations and nationalities?

Thanks to the very strong involvement of the 'whole' partnership in all work packages and the great efforts made by each, the project has been very successful in achieving the initial objectives. Many of the goals have been worked out in a different way than we expected, due

to the moving targets of the state of the art of European LCA, but the results met our original objectives very effectively indeed and overwhelmed them with added outputs to meet national differences.

• **Do you like to continue in european projects and do you have a lesson, good tip for next projects.**

A very valuable and challenging transnational cooperation has been set up and we find lots of added value in working transnationally with many partners:

- We consolidated our ideas regarding eco-materials and how to have a better impact on our target group;
- We capitalised on everyone's experience in their countries regarding regulations, standards, tools, demonstration sites;
- Collectively we can reach a wider geographical area and a larger target audience by bringing our contact databases in joint campaigns, increasing our visibility and credibility;
- Together we have a greater experience, knowledge and capacity to influence governance and policy making in the areas of materials and energy efficiency.

CAP'EM Compass

Until now comparing the environmental impact of building products was very difficult.

Due to the differences in the way the environmental impact was modelled, for example:

- including or excluding packaging, transport, installation, possible recycling at the end of 1st life
- with the use of different calculation methods or
- simply the lack of data for several (mostly renewable material) building products.

It proved impossible to compare material's LCA and EPD; today the LCA methods are converging but the EPD outputs diverge in different countries.

To solve this problem the CAP'EM project developed a Life Cycle Assessment (LCA) method that is affordable for Small to Medium Enterprises (SME's) who are very common in the sector of renewable building products. CAP'EM modelled the environmental impact of more than 200 generic materials and building products with this method.

The CAP'EM method is an LCA method, to evaluate environmental impacts of building products. This LCA method for building products is a scientific approach based on common accepted standards including ISO 14040 and 14044 and recent developments including International Reference Life Cycle Data System (ILCD). It aims to be an accessible, repeatable and transparent method, which makes it easy to review harmonized LCA's.

The result is a free online web tool the CAP'EM Compass, which provides non-LCA experts a user friendly way to:

- Discover construction products based on their requirements (application, accreditations), preferences (raw materials used, availability, manufacturing location, etc.)
- Compare cradle-to-gate product environmental impacts, with the option of adding the impact of transportation between the factory and the building site. This feature is anticipated to increase the social awareness about using the local market and the influence of transportation on the environment.
- Also view and compare environmental data of conventional generic materials.

CAP'EM Compass includes products which are manufactured in France, Belgium, Germany, UK and the Netherlands and are available in the EU market.

Check it out on the CAP'EM website! www.capem.eu → compass



CAP'EM EPD

Environmental Product Declarations (EPD's) are a format to communicate the environmental impact of building products.

The information required in the EPD's is different in each country despite several attempts at harmonisation in Europe (for example the request for impacts related to indoor air quality in France, the request for additional impact categories in Belgium from 2017 and the request to use specific end-of-life calculation rules in the Netherlands).

Due to these differences EPD's still cannot be compared and are not accepted in all European countries. This makes it very expensive for manufacturers whose building products are available throughout Europe.

The CAP'EM project has made the first real attempt to reduce the costs for manufacturers particularly important to SMEs.

Due to the strong international partnership in the CAP'EM team, we were able to pinpoint the differences between the national standards, draw some default scenario's for the specific countries to calculate the impacts from "cradle to gate" and "gate to grave".

The core document for the LCA method in construction is European standard EN 15804.

In the 'Rules and Procedures for CAP'EM EPD' document more clarifications and guidelines are provided on the following issues:

- defining the functional unit for several construction products using a functional unit matrix
- overview of demands and databases in different countries on reference service life and theoretical lifespan
- overview of which life cycle stages shall be declared in EPD's in different countries
- overview of available default scenarios for life cycle stages A4 to C4 in different countries
- overview of which impact categories and additional parameters shall be declared in EPD's in different countries

The 'Rules and Procedures for CAP'EM EPD' document provides a straightforward method to make LCA's and EPD's for building products in four North-West European Countries all from one action. This leads to an enormous cost reduction for manufacturers.

Contact a member of the CAP'EM team for more information! On www.capem.eu → [partners](#), you can find contact addresses.



Exhibition centres realised in the CAP'EM project

The CAP'EM project has created a network of exhibition centres across England, France, Belgium, the Netherlands and Germany. The centres are created by each project partner in their respective countries or regions, mostly within the context of a significant new build or renovation project using eco-construction techniques.

The centres includes a “showroom” dedicated to learning, understanding and improving skills. Furthermore they allow end-users and building professionals to learn about the latest ecologically friendly building materials and see them in action

Universal exposition style



Locations in UK



Dover: BSK's Build4 - Sustainable Construction Demo Centre now at the Bay Trust



The Huddersfield Water Tower Project

Location in Germany



Münster: HWK - Exhibition centre haus Kump.

Location in Belgium



Gent: Collaboration between VIBE and KAHO Sint Lieven: exhibition building and classrooms

Locations in France



cd2e - Theatre de construction, Loos-en-Gohelle, near Lille and le projet de rénovation Réhafatur



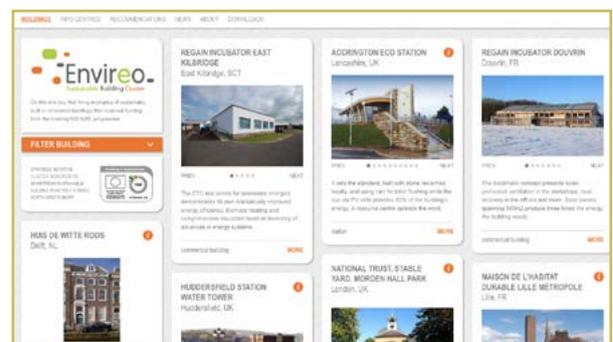
Châteaux-Thierry: Globe 21 - Mobile exposition

Locations in the Netherlands



Agrodome - Demonstration house and Mobile exposition, Wageningen and biobased Pavillion at ICDubo, Rotterdam

Virtual expositions



www.envireo.eu



www.bouwboulevard.com

[avniR] conference with CAP'EM

5 – 6 November 2014, Lille

End conference CAP'EM during [avniR] was successful

On the 6th of November we held the end conference of the CAP'EM project during the [avniR] conference in Lille. There were many good words about our project from Olivier Rohas on behalf of the JTS Interreg IVB NWE. The CAP'EM project was mentioned as an example of fruitful international collaboration between organisations from different European countries, working on results that will have continuity in the coming years. During the meeting in the morning and afternoon we presented an overview of the project, the exhibition centres, CAPEM Compass and a brief glimpse of the coming activities as the new European CAPEM group.



The presentation is available on the website www.capem.eu → results

We are proud as a team that this project has so many good results already, although we can and will improve them in order to give the SME's working on ecological building materials better opportunities for creating a competitive business and improve the environmental impact of the building sector.

