



GTOG: from Production to Recycling: A Circular Economy for the European Gypsum Industry with the Demolition and Recycling Industry- LIFE11 ENV/BE/001039

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The kick off meeting of the GTOG project was held on 22 January 2013 in Brussels. The project will last for three years until 31st December 2015.

GTOG is a supply chain life + demonstration project aiming at creating a recycling and dismantling culture by achieving higher recycling targets in the deconstruction, recycling, manufacturing gypsum supply chain with the scientific support of universities.

The consortium is composed of 17 partners: two universities, one laboratory, 5 deconstruction companies (SMEs), 2 recycling companies (SMEs) and 5 manufacturer companies (large companies). The consortium is coordinated by Eurogypsum, the European association of plaster and plasterboard manufacturers (see annex I for partners details).

Gypsum- an abundant mineral rock -from which you make plaster- is commonly found in the earth crust and quarried in many European and non European countries. **Gypsum is indefinitely recyclable** because the chemical composition of the raw material in plasterboards and blocks always remains the same.

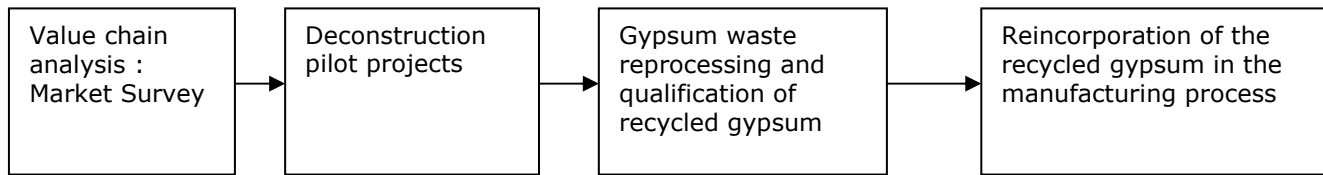
Therefore, the Gypsum industry has the potential to close the loop. We extract the gypsum from the earth. We transform it into plaster and plasterboards. We use it in construction as interior lining. At the end of the building life, gypsum products can be dismantled, recycled and reincorporated in the manufacturing process. By recycling more, we are able to extract less and thus use the natural resource in a more efficient way.

However, close loop recycling for gypsum products will only happen if:

1. Deconstruction techniques are applied systematically for all demolition and renovation projects;
2. Sorting of waste is done at source - thereby avoiding mixed waste;
3. Processing is carried out according to clear standards;
4. Incorporation in the production process is carried out with innovative processes

Therefore, the GTOG project aims to put in place **an integrated approach** to manage gypsum construction and demolition waste, starting from the dismantling of a building via the recycling of the gypsum waste and its re-incorporation in the manufacturing process. This integrated

approach is using gypsum products but could be extended, adapted and applied to any other type of construction material used in light-weight construction.



In order to reach the main goal of the GTOG project, surveys on waste recycling and deconstruction practices and economics will be carried out by the universities covering more specifically UK, France, Germany, Belgium, The Netherlands, Spain, Greece and Poland. Pilot projects implementing the deconstruction techniques, the decontamination, the waste qualification and reprocessing in Gypsum manufacturing plants will be carried out in France, the UK, Germany and Belgium. The outcomes of these pilot projects will be used to reassess the findings of the surveys.

The work to be performed includes in summary:

- diagnosis of buildings prior to deconstruction;
- auditing and the creation of an inventory of recyclable materials;
- decontamination of waste if necessary and separation of different waste streams (sorting and segregation);
- Processing of the gypsum waste received;
- Qualifying Gypsum Waste and, finally;
- reprocessing of the waste in plasterboard manufacturing plants of (cradle to cradle approach).

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Annex I: A working team of 17 Partners

Coordinator

- Eurogypsum, The European association of plaster and plasterboard manufacturers aisbl

Universities

- National Technical University of Athens – Greece
- Universidad Politecnica de Madrid – Spain
- Fundacion General Universidad Politecnica de Madrid –LOEMCO- Spain

Demolition companies

- Occamat-France
- Cantillon Ltd – UK
- Recycling assistance BVBA- Belgium
- Recovering SARL- France
- Pinault & Gapaix – France
- Jaeger AUSBAU GmbH- Germany

Recycling companies

- New West Gypsum Recycling Benelux BVBA- Belgium
- Gips Recycling Danmark A/S- Denmark

Gypsum Manufacturing companies

- Placoplâtre SA (Siant Gobain Group)- France
- Siniat SA – France
- Siniat Ltd – UK
- Knauf Gips KG – Germany
- NV Saint Gobain Construction Products Belgium SA (Gyproc)- Belgium