

# INNOBITE

Transforming urban and agricultural residues into high performance biomaterials for green construction

CONSORTIUM: 9 partners

EU GRANT: €3,2M

GA N°: 308465

COORDINATOR: TECHNALIA



## CONCEPT

INNOBITE contributes to the development of sustainable consumption and production patterns through the development of new technological solutions based on the efficient use of natural resources. The INNOBITE project will transform urban and agricultural residues into high performing, resource efficient products for the emerging Green Construction sector. The project is supported by two innovative ideas:

- 1/ Adding value to the inorganic fraction of wheat straw.
- 2/ Obtaining cellulose nanofibres (MFC) out of highly recycled paper.

Once isolated via environmentally friendly processes, these two renewable compounds will be used as high-performance additives providing unique properties to a new series of biocomposites for use in construction applications.

## OBJECTIVES

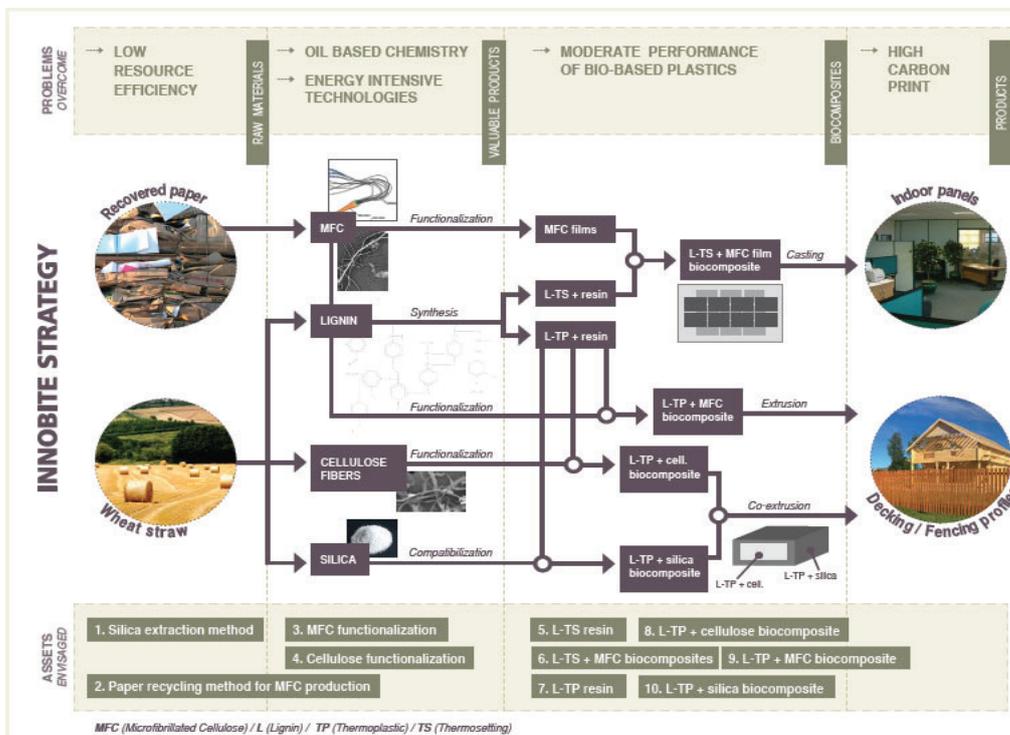
To develop and integrate in an overall biorefinery process an environmentally acceptable method for the extraction of the inorganic fraction of wheat straw.

To develop a method for the production of microfibrillated cellulose (MFC) out of recycled paper that balances the environmental impact of the recycling stage and the energy required for MFC production.

To obtain a nanocomposite made of lignin-based thermosetting resin and MFC.

To obtain a composite made of lignin-based thermoplastic resin (silica, MFC and cellulose fibres).

To reach the market with all the technologies and products developed by the end of the project



## CIMV CONTRIBUTION

CIMV was in charge of supplying raw materials (lignin, cellulose and silica) to all partners in the consortium.

Moreover, CIMV was in charge of developing a new environmentally-friendly process step, in close collaboration with Technalia, on the additional extraction of silica from wheat straw.

Once optimized, this new technology was tested on the CIMV pilot plant.

Contribution to the Bioeconomy



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## 7th FRAMEWORK PROGRAMME

The complete name of FP7 is 7th Framework Programme for Research and Technological Development. It will last for seven years from 2007 until 2013. The programme has a total budget of over € 50 billion. This represents a substantial increase compared with the previous Framework Programme FP6 (41% at 2004 prices, 63% at current prices), a reflection of the high priority of research in Europe.

Indeed, FP7 is a key tool to respond to Europe's needs in terms of jobs and competitiveness, and to maintain leadership in the global knowledge economy.

This money will (for the most part) be spent on grants to research actors all over Europe and beyond, in order to co-finance research, technological development and demonstration projects. Grants are determined on the basis of calls for proposals and a peer review process, which are highly competitive.

In order to complement national research programmes, activities funded from FP7 must have a "European added value". One key aspect of the European added value is the transnationality of many actions: research projects are carried out by consortia which include participants from different European (and other) countries; fellowships in FP7 require mobility over national borders. Indeed, many research challenges (e.g. fusion research, etc), are so complex that they can only be addressed at European level.

But in FP7 there is also a new action for "individual teams" with no obligation for trans-national cooperation. In this case, the "European added value" lies in raising the competition between scientists in fundamental "frontier" research from the national to the European level.

FP7 is the natural successor to the previous programme, FP6. It is the result of years of consultation with the research community from both the public and private sectors, with economic actors, and with political decision makers in Europe. FP7 is both larger and more comprehensive than its predecessors. It is also more flexible, with simplified procedures.

The Framework Programmes for Research have two main strategic objectives:

To strengthen the scientific and technological base of European industry;

To encourage its international competitiveness, while promoting research that supports EU policies.