

Annexe 1 – objectif du projet BRIC comme décrit dans le plan de travail du projet BAMB:

Action 5: Building Reversible In Conception (B.R.I.C.)

In Brussels, Belgium, a sustainable and reversible teaching unit will be built as part of an education centre – Espace Formation PME (EFP). Construction is one of the important pillars of the EFP's course offerings, providing training relevant to 12 professions of the sector. The education centre trains 6500 persons a year, of which 1/3 within the construction sector. The reversible construction education unit will allow course offerings to be further enhanced through hands-on experience opportunities.

This pedagogical unit will be used as an information and teaching tool through its design, construction, use and deconstruction, integrating the sustainable management of resources and different aspects of circular economy and circular building in the training of future contractors.

The unit, consisting of a wood frame structure, will be redesigned, constructed, transformed and deconstructed yearly. A variety of students (carpenters, masonry contractors, painters, interior designers, electricians, installers of sanitary and heating units, ...) will be involved in the construction and deconstruction of the unit, learning how to implement sustainable materials; dismantle and transform constructions; and better manage resources, materials and products in a circular economy vision. Furthermore, the unit will enable teachers, students and construction product producers to investigate together how different products can be implemented. The yearly redesign, construction and deconstruction will also enable the integration of the latest evolving techniques and products in the education unit.

Therefore the project will be focussing on:

- Reversible design
- The use of new circular building materials and reclaimed/reused materials - Short circuits and continuous loops
- Circular design focussing on high energy performance and the sustainable use of water

During the summer holiday, the unit will be used as a reception desk and information centre to show the used techniques. It will raise awareness and foster circular thinking within the future generation of local construction stakeholders. This will foster the implementation of the circular economy and the objectives of the BAMB project within the Brussels region.

For this pilot project, the objectives are first, *to investigate and demonstrate the effectiveness and possibility of circular and dynamic building design*; second, *to involve local actors and stimulate the circular industry*; and third, *to educate, raise awareness and train the next generation of construction professionals*. Within the BAMB project, the feasibility study will be done. This will be the basis for the first construction, use, transformation and deconstruction of the unit during the 2017 – 2018 school year and will show the opportunities and barriers related to the implementation of Reversible Building Design and Materials Passports in actual building practice.

- **Objectives:** This pilot has different goals:
 - Investigate and demonstrate the effectiveness and possibility of circular and dynamic building design
 - Through the construction of a sustainable and reversible module, the pilot wants to investigate and demonstrate reversible design approaches and techniques. Possible transformations, (dis)assembly and flexible parts of the construction will enable testing the possibilities of circular & dynamic building design.
 - Improve the recovery value of materials as well as improving maintenance savings by designing for assembly and disassembly. Practical solutions will be designed and implemented with building companies working on the project.
 - Involving local actors and stimulate the circular industry: local architects, contractors, producers, suppliers will be involved in the development and implementation of the project.
 - Education, awareness and training of the future generation of the construction industry.
- **Assessment of the objectives:**
 - **Extent of Waste reduction**

Comparison will be made between the waste production and materials reduction related to the construction of a conventional building, in which different techniques are showcased and which would be demolished after 4

years, and the waste production and the reduction of the use of virgin materials as a result of construction of this dynamic and reversible pilot project.

- **Testing evaluation tools for reversible design**

- The feedback provided to the WP3 partners will demonstrate whether we have adequately tested the provided evaluation tools.
- Our testing acts as a control on the development of the WP3 tools, mapping practical limitations and opportunities for improvement.