

Post-doc position
System analysis for recycling pathways of bio-based materials

Post-doc position : 12 months (a first contract is for 12 months, possibility of extension).

At TBI, INSA Toulouse <https://www.toulouse-biotechnology-institute.fr/en/>

Contexte

This post-doc project is integrated in a large research project funded by the French government to enhance the transition towards the circular economy, PEPR RECYCLAGE <https://www.pepr-recyclage.fr/en/home/>
The axis "Household waste" investigates the whole value chains from waste production, collection to treatment and recycling. One of the most important waste stream separated from the household wastes (and similar) is the paper and cardboard flow.

Project description

This post-doc project will investigate the existent and future value chains founded on the waste paper/cardboard in France: from the collection to the end of life of these streams.

- which are these streams and their circulation in France
- which are the valorizations currently implemented on the territory and the future ones
- build a material flow analysis and a system dynamic modeling to represent the paper/cardboard sector in France
- perform environmental assessment with LCA methodology and economic assessment
- analyze the best options for the end of life of these streams by numerical optimization methodology.

Application

We expect candidates with a good experience in system dynamics modeling, and/or LCA, and/or economic assessment.

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Candidatures are received until 31 November 2025 for a start in January 2026.