



**Politecnico
di Torino**

Honors Thesis

Master of Science in Sustainable Architecture

Abstract

**Transition to a circular economy at the European level:
policies, processes and good practices.**

Elaboration of a project scenario in the territorial context of the Eco3R ecosystem
in the province of Turin

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At a time when climate change is showing its destructive force, with record temperatures and environmental catastrophes, we need to look for an alternative approach to the current one that allows us to optimize processes rather than products, paying close attention to the management of material flows.

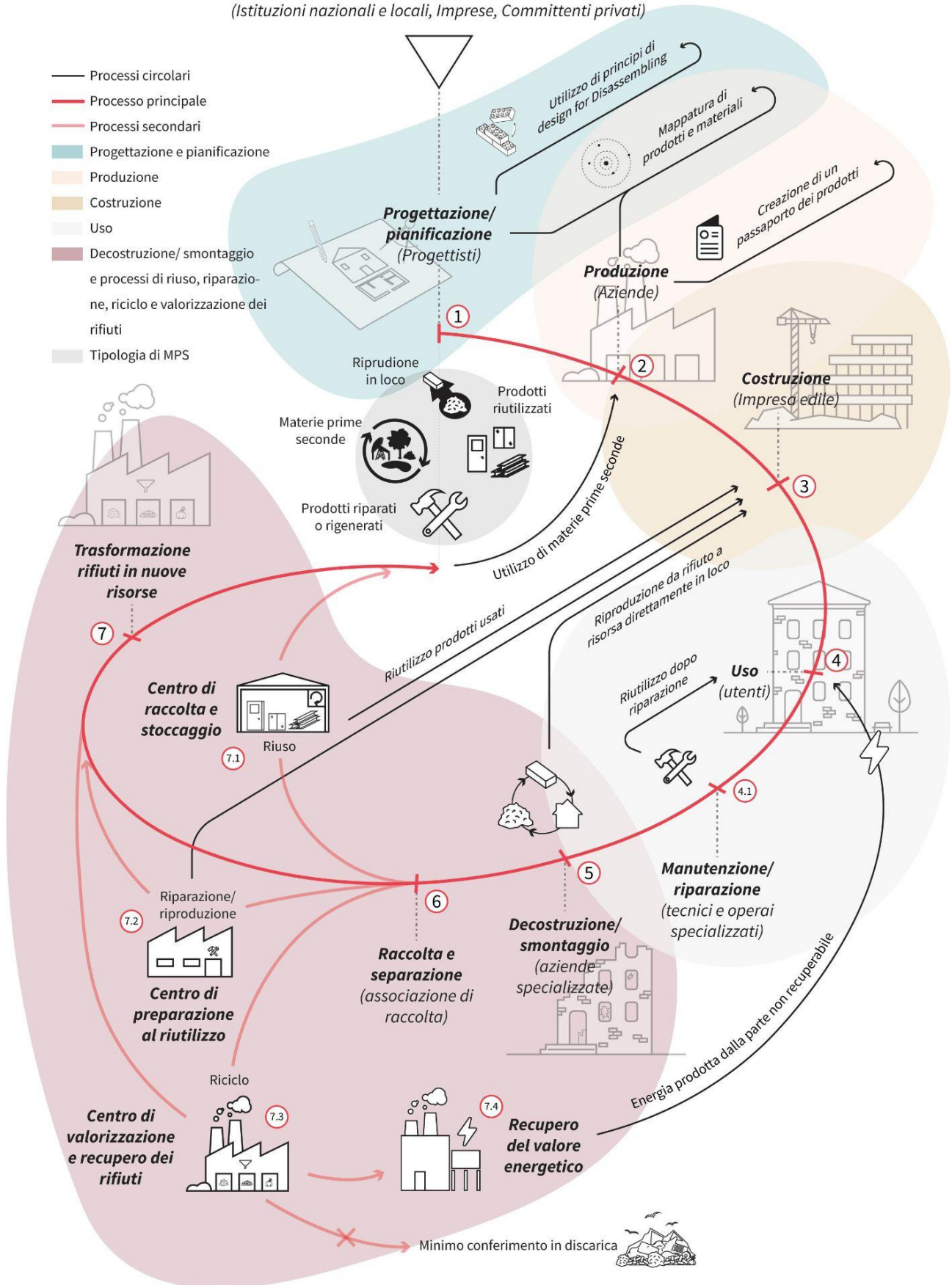
In this case it is important to consider the importance of the biological cycle (biosphere) alongside the technological cycle (technosphere), thinking of both as flows of materials characterized by regenerative processes that must not come into contact to avoid contamination. In this context, institutional initiatives such as those carried out by the European Commission are essential to building a more sustainable future by 2030. Indeed, the increasing importance that Europe attaches to the transition to a circular model implies the great boost that this type of economy could provide to the fight against the current climate crisis.

In this scenario, the construction sector accounts for a large proportion of the total emissions and waste produced at European level. For this reason, the role played by the architectural project becomes increasingly important because it is no longer enough to think of the building as an object but to design a building thinking of its entire life cycle, looking at the territory as an eco-system. The concept of economic system is thus transformed into eco-system, characterized by an urban metabolism that allows you to see the territory as an organism with its needs. Considering this aspect, it favors the creation of a collaboration network between the stakeholders present in the territory, in which an exchange of resources can take place, enhancing the reuse and recycling of waste produced at a territorial level.

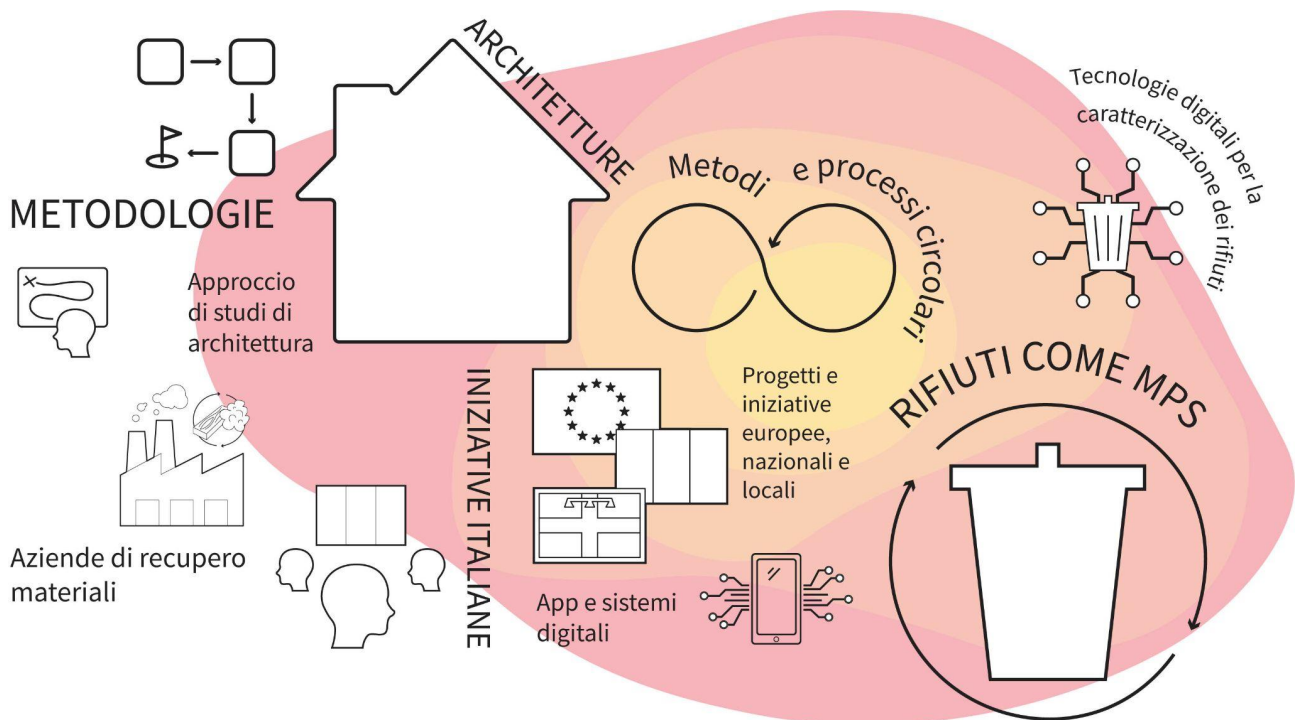
Processo edilizio con l'applicazione di strategie circolari

Finanziamenti, piani di trasformazione, richiesta committente
(Istituzioni nazionali e locali, Imprese, Committenti privati)

- Processi circolari
- Processo principale
- Processi secondari
- Progettazione e pianificazione
- Produzione
- Costruzione
- Uso
- Decostruzione/ smontaggio e processi di riuso, riparazione, riciclo e valorizzazione dei rifiuti
- Tipologia di MPS



The thesis work will analyze this issue starting from the actions implemented in European, national and regional that have led to the need for a transition to a different economic model from the current one. The research approach adopted has made it possible to analyze and identify several case studies, located on European territory, that are aiming at the development of circular processes and the integration of the architectural project with them. In this way it was possible to identify possible strategies to be applied to a territorial project in the province of Turin to facilitate the transition to a circular model. Using interviews and site visits, a direct confrontation with experts has been established allowing the development of a project on the area of a local company starting from the transformation of the production process up to the creation of a territorial system of waste management.



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