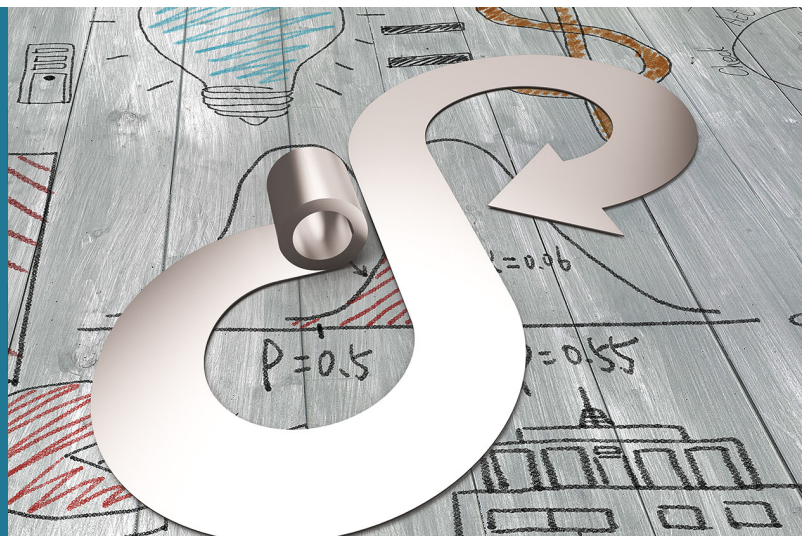


FLOREC

PVC flooring recycling: a sustainability assessment of different circular business models



Inspiration

Incentives for the creation of [a circular economy](#) are more and more promoted by Luxembourg and the European Union. While in theory circular systems can be more environmentally friendly and profitable than linear ones, the consumer and other actors still have to adopt the circular business models to make them actually profitable and environmentally sound, e.g. by sorting and returning the waste. In particular the construction sector is interested in introducing and evaluating such business models. An example is the company [Tarkett](#) that is aiming to achieve circular business models for its flooring solutions.

Innovation

A partnership between LIST and flooring company Tarkett has been set up to study its circular business models for PVC flooring, comprising recycling and different take-back systems. The particular project is called FLOREC and supported by the National Research Fund, Luxembourg. The research hypothesis is that only a circular business model for PVC flooring with the right incentives to convince actors to adopt it, maximizes environmental benefit and economic profit. Specifically, the markets of France & Benelux will be considered.

The research will consist of a scientifically innovative combination of different tools. The FLOREC project team will assess the environmental impact (using life cycle assessment; LCA) and economic cost (using cost-benefit analysis; CBA) over the life cycle per m² PVC flooring following several different business models: circular vs. linear ones such as incineration. Influence of incentives on the consumer behaviour shall be studied and modelled (using agent-based modelling; ABM). This will result in the relative shares of waste PVC that will be sent for recycling and for disposal.

The FLOREC research team will model stock amounts of PVC flooring in houses and related waste flows over time (using material flow analysis; MFA). Combined with the two previous steps, economically and environmentally best incentives for circular business model of Tarkett for the region over time can be pinpointed.

Impact

The project output is of general relevance, as the results and tools developed can be generalized to provide all types of stakeholders with information to support the transit towards a sustainable circular economy. LIST intends to further develop the models into tools that can be of direct use to industry and policy makers.

Specifically for Tarkett, the outcomes will be of great value to the company and will impact the environmental and economic benefit of their business models.

Partners

TARKETT (LU)

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