

ProRail furnishes for re-use



Company: ProRail Facilities

Business model type: Circular procurement of furniture and flooring

Sector: Furniture and flooring

Company size: Large

Service: Pay per use for flooring, buy for furniture

Key facts

- ProRail manages the national railway network infrastructure in the Netherlands.
- When the company decided to develop a new traffic control centre in Utrecht, REBus helped it run two pilots to explore the potential for circular procurement in flooring and furniture.
- The flooring pilot has resulted in a 10-year contract for environmentally friendly carpet tiles that will eventually be re-used.
- ProRail has introduced a new ambition on circularity: that by 2030, at least 10% of dismantled materials must be available for re-use. Furthermore ProRail will be carbon neutral by 2030.

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Introduction

ProRail is a Dutch government task organisation that manages the national railway network infrastructure.

Utrecht Central Station is the busiest station in the Netherlands, making the traffic control centre at Utrecht the most important in the railway network. When the company decided the centre was no longer fit for purpose, it made plans to develop a new building in Utrecht's Cartesiusdriehoek area.

Construction began in October 2013. The new traffic control centre was migrated and became operational overnight from 10 to 11 April 2015. The control centre was officially opened in June 2015.

REBus was involved in two pilots to explore the circular procurement of flooring and furniture. The aim was to gain experience with circular business models, as a first step towards circular business.



Why REBus?

To stimulate circular procurement, the Dutch government is working on test projects within the EU Life+ project REBus (Resource Efficient Business Models). REBus approached ProRail to take part as a pilot location.

ProRail has the objective of consuming 30% less energy and reaching the highest rung of the '[CO2 performance ladder](#)', a 5 level certification recognising emissions reduction in public and private industries.

REBM for circular procurement

The pilot began after approval by ProRail's procurement organisation (AKI) and the 'sanctioning' during the Circular Economy (CE) Boostcamp on 26 May 2013. On the initiative of the Dutch government, a market meeting was held on 11 April 2013. For this pilot project, the market meeting was too early in the process.

ProRail learned that before starting, it is important that the organisation's goal and the vision for circular procurement are clear. Organise a market meeting and remember to invite the small, innovative parties. Prepare the programme thoroughly; the formulated vision and ambition must be part of this.

Purchasers and suppliers were encouraged in the call for tenders to think about a business model based on value retention of the raw materials throughout the entire supply chain. The result was;

- A one-off investment for 'circular, cradle 2 cradle' office furniture for a building of 4500 m²; and
- A 10-year service and maintenance contract for flooring for an area of 514m².

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In the period after the market meeting, ProRail stated their needs in a functional statement of requirements and an interior concept, after which the dialogue started with suppliers. It is very important to have an open dialogue and to create trust between the contracting authority and suppliers: not only to establish what is being offered, what business models are possible, etc. This also ensures mutual understanding for each other's roles, needs, challenges, risks and vocabulary. Based on feedback, the enquiry was finalised. Bidders were given a look and feel document to give an idea of the interior of the new centre.

ProRail did not set circularity requirements for its tender request; it only awarded sub-criteria for circularity. The criteria were Sustainability (design, production, measures to extend the lifespan, measures for high-value re-use after end of lifespan and the suppliers vision and plans regarding circular operational management), User Value (assuring desired quality level, product warranty, flexibility and unique product characteristics) and Costs (total cost of ownership). This will be required more firmly in the future.

A difficulty is that no clear or sharp definitions are available with regard to (parts of) the circular economy. What makes one product more 'circular' than another product? What do we mean by toxic substances, critical materials, upcycling and downcycling? The importance of the different components of a circular offer relative to each other is not (yet) clear. For example, which is better: a long lifespan or a short lifespan but with the possibility of high value re-use?

Barriers

Circular products often come with a higher price tag. When you use more expensive 'classics', the purchase price is high, but so is the residual value. It is up to the suppliers to weigh these factors themselves.

Results

"The carpet tiles are flexible and dust reducing, and produced from environmentally friendly material. The supplier is responsible for ensuring the quality of the carpet for 10 years and that it is either directly reused or recycled to such a high value that the raw materials can be used again. We chose the best value at the end of the user period. A lot can happen in ten years."

Geerke Hooijmeijer-Versteeg, interim Project Manager Facilities, ProRail

No long-term contract was ultimately signed for furniture because calling for bids for a service, including maintenance instead of 'ownership', proved problematic. ProRail still purchased the furniture and in spite of various discussions with the furniture supplier, a use agreement was not reached.

ProRail will have to look at how the furniture can be re-used with the highest possible value after the user period. Of the 210 furniture pieces (chairs, tables, cupboards, curtain rails, fencing, etc.), 81 of the existing furniture of ProRail is refurbished and re-used. This results in a saving of CO₂eq 2430kg (19%), saving of material 820 kg (21%) and 18,960 Euro cost savings (28%).

A 10-year service and maintenance contract is signed with the supplier Desso for flooring for an area of 514m². 100% of the Air Master tiles can be re-used or recycled. The quality of the floor is monitored. Compared to traditional not fully reusable tiles, this provides an environmental gain of 579 kg CO₂eq. (62%), 245 kg of material (79%) and 531 Euros (24%) (due to longer life).

Next steps

ProRail's sustainability policy for 2016-2030 includes a new ambition that by 2030, at least 10% of dismantled materials must be available for re-use. Furthermore ProRail will be carbon neutral by 2030.

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The first – and most critical – finding of the pilot was that a clear vision is essential before starting work. Taking this a step further, it is important to talk to suppliers at all stages. Intensive dialogue can help to identify potential earnings models, but also allows the partners to get to know each other and cement aims and ambitions.

Once the pilot was up and running, ProRail discovered that:

- Paying for use and maintenance worked well, although it encountered a number of challenges:
 - With leasing, there is an additional party involved, such as a bank; and,
 - Paying in instalments means there is no leverage to bear if the supplier fails to perform. ProRail opted for a large initial instalment then increasingly lower amounts so the level of pre-financing was acceptable to the supplier.
- Custom work was much more difficult to approach in a circular way than standard products.
- Good research into prospective partners is essential. In retrospect, ProRail should have taken more time on the question of which parties were best suited to take part in the pilot.
- The offer with the best circular qualities did not automatically win the maximum number of points for quality, which resulted in price having too much of an impact. ProRail used a price/quality ratio of 30/70 for awarding the contract. Looking back, a more effective weighting method should have been developed, and thoroughly tested.
- Taste and trends can be at odds with the circular economy. It is proportionally more difficult to find a new owner for a custom stool in lurid purple. The circular economy seems to benefit the most from modular standard products.
- Circular/C2C products are often somewhat more expensive. This is not a problem as long as this is compensated by lower maintenance costs, longer lifespan and/or higher residual value.

Advice to others

Make requests for information qualitative. When ProRail began the procurement process, it asked for insight into the materials used. Since each party gave information, each had to be awarded maximum points.

"Circular purchasing involves a dose of guts, positive energy, getting started properly, lobbying and determination."

Geerke Hooijmeijer-Versteeg, interim Project Manager Facilities, ProRail

Criteria/tools are needed to assess the raw materials used in a product, such as the nature of the materials, the degree of recycled content, toxicity, biobased materials, critical materials, etc., for example using a 'product passport'. A passport like this would have to be practical for purchasers and anyone who has to use it.



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Case studies were generated as a result of pilots carried out for REBus by WRAP or RWS and the named organisations from 2013 to 2016.

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