

Circular Procurement of Furniture for the City Hall of Venlo

City of Venlo (the Netherlands)

Background

The Venlo Region, located in the southeast of the Netherlands, has expressed its ambition to become pioneers in the transition to a circular economy by developing [several initiatives](#) supporting the implementation of circular economy principles in the manufacturing and construction sectors.

Since 2012, the city hosts the first European [Cradle to Cradle product certification training centre](#), an Institute that provides support to manufacturers and designers in the development of products aligned with circular economy principles. Additionally, the city of Venlo also hosts the [C2C ExpoLAB](#), which provides technical consultancy on the application of these principles within the building environment and governmental processes, such as tenders and policymaking.



These principles were applied to the construction of the new city hall building. After discarding rehabilitation due to a bad technical condition of the building and high maintenance costs, the city of Venlo decided to demolish the old building and erect a new city hall that would satisfy the current needs of accessibility and functionality, while delivering at the same time a positive contribution to the town, the staff, the environment and the economy.

The new building, which will be finished by April 2016, combines several municipal services that were previously distributed all over the city into one complex, including offices, a public hall, meeting rooms and an underground parking. It consists of a three storey parking garage and a total floor space of 13,500m² and a total investment of 46 million euro.

Procurement objectives

A design and build competition was launched in 2009, in which designers were asked to present their vision of a sustainable building, taking into consideration the following key aspects:

- Use of appropriate safe & healthy materials which can be recycled after their lifetime
- Enhance air and climate quality
- Produce and use only renewable energy
- Enhance water quality

Throughout the procurement, C2C ExpoLAB provided technical advice in the call for tenders and was a member of the selection committee in several tenders for the selection of the construction company, key advisors and the interior design.

For the tender process of the office furniture, which started in 2013 with a market consultation, bidders were asked to offer products based on healthy materials with positive impact (free of toxic substances), which would be easy to disassemble, refurbish and retain residual value. The purpose was to create a continuous cycle of materials that can be incorporated into biological or technological cycles with no loss of quality.

Furthermore, the objective of this tender package was not only to achieve an attractive working environment, but to incorporate new business models by implementing the *Total Cost of Ownership* concept, which estimates not only direct costs of products but also indirect costs (e.g. ecological, social) and by asking bidders to offer a take-back system for their products after a period of ten years and to consider the financial residual value of these products, including maintenance.

Criteria used

Subject matter of the contract: Furnishing City Hall Venlo and Nedinsco - Framework Agreement loose furniture

Technical specifications

Minimum requirements given by the Dutch Government in the “criteria for sustainable purchasing” applied. Additional requirements were included to address sustainability issues, such as:

- Office furniture delivered shall have a minimal technical life of ten years. After a period of ten years, all furniture parts and components must be available in the market for a refurbishment of the products.
- Furniture will comply with the European regulations for Formaldehyde, determined in accordance with [EN 120](#), [DIN EN 717-1](#) and [DIN EN 717-2](#).
- Textiles used in furniture must:
 - * not contain chlorinated artificial fibres
 - * not contain halogenated flame retardants, except when applying such substances under
 - * not contain Benzidine based dyes
 - * not contain in pigments, dyes or specific textile fibres higher concentration of certain heavy metals specified in the requirements
- The coating used in/on furniture should comply with the emission limits for antimony, arsenic, barium, cadmium, chromium, lead, mercury and selenium as mentioned in the regulation EN 71-3.

Award criteria

The contract was awarded to the bidder with the most advantageous economic tender. For this purpose, four criteria and the following weighting system were established:

- Quality - 10%
- *Cradle to Cradle* (C2C) - 30%, with a minimum requirement: at least 60% of the highest scoring bidder
- Total Cost of Ownership - 30%, calculated based on the price minus residual cost of products after a period of ten years
- Esthetics - 30%, with a minimum requirement: at least 60% of the highest scoring bidder

A C2C specialist was involved in the assessment body. 100% of the scoring for C2C was delivered when a product had a C2C or equivalent certification. Otherwise, a matrix with a breakdown of the C2C criteria was provided in the call for tenders. A bidder could score 25% of the amount of points, based on the following subcriteria:

- The extent to which the chemical composition of the product is known, till 100 parts per million;
- The extent to which components can be separated, without the need of additional substances or materials which are no longer reusable in the process;
- The extent to which materials can be recycled at the end of the intended lifetime, without losing the original quality or being biological compostable or degradable;
- The extent to which the materials of the product are quickly renewable or recycled materials.

Contract performance clauses

The supplier is obliged to deliver a plan with preventive maintenance to be performed yearly, including service level agreements, such as: response times, temporarily replacing defective furniture, timing for maintenance, etc.

During the term of the contract, the supplier is responsible for all common repairs that have to be performed in furniture. After a period of ten years, the supplier is obliged to take back the furniture and offer possibilities for refurbishment.

Results

The tender for the office furniture comprised two different tender lots: one for single devices and another one for permanent furniture. For each of these lots, three bidders present an offer after a pre-selection procedure.

The contract was awarded to a single supplier in July 2013.

Asking the right (circular) questions to the market and considering a preventive maintenance plan resulted not only in a high number of C2C or equivalent certified materials, but has also guaranteed a residual value of 18% after a period of ten years from the original budget of 1.6m.

Environmental impacts

The main environmental impacts derived from the production of office furniture are the uncontrolled harvest of timber and the use of chemical products of concern, which have severe impacts on the environment and on the indoor climate of buildings/offices impacting on human health.

Design for disassembly makes it easier to recycle and exchange worn-out parts of the product. Furthermore, on-site maintenance works have been procured in order to extend the lifetime of the furniture and ensure the highest quality.

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Lessons learned

One of the main lessons learned through this procurement was the need to carry out a thorough analysis of the whole process before starting the procurement procedure. The market should be involved at the beginning, e.g. through market consultation, as suppliers need to understand the requirements before they are able to provide good proposals.

When searching to apply innovation, the market not only has to be consulted but sometimes it also has to be trained. For this purpose, several training sessions, including architects, buildings contractors, public procurers, technical advisors and product suppliers were organised throughout the lifetime of the project, to ensure that requirements were fully understood and applied. Especially important was to involve the design team at the beginning of the design process in the training.

Asking for take-back systems worked well for the interior package. Some suppliers suggested offering a leasing model for the products instead of a direct sell, but finally the project team decided to purchase the products and use the Total cost of ownership concept, to reduce potential risks.

Contact person furniture tender package: Bas van de Westerlo, C2C ExpoLAB, email: bas@c2cexpolab.eu

Contact person for the building procurement: Michel Weijers, City of Venlo, email: m.weijers@venlo.nl

For related information, please see [European GPP criteria](#) and [Technical Background Report](#) for Furniture and the Technical Background Report and GPP criteria for office buildings (to be published in 2016).