

Framework contract for sustainable office materials based on “Cradle to Cradle” principles

Ludwigsburg (Germany)

Background

The [City of Ludwigsburg](#) is a mid-sized city with 90,000 inhabitants located in the South West of Germany. The City has a [sustainable development strategy](#) that includes the use of procurement to achieve its sustainability goals. In 2017 the City government instructed all public procurement departments to follow “Cradle to Cradle” principles. For the construction sector, service providers, and transport services, the instruction is mandatory as of January 1, 2019. For all other procurements, procurers are advised to follow the principles as much as possible. With this decision, the City wants to reduce the exposure to chemicals by the product users and the overall environmental impact and resource demand of its purchases.



“Cradle to Cradle” is a design concept that requires products to declare all substances used during the production and in the final product as well as their environmental impact. Products are also designed for easy reuse and recycling. Other principles include the use of renewable energy, reduction of CO₂ emissions and the careful use of water. To support procurers with the implementation of these principles, the city has developed several product group specific guidelines. The guidelines have been developed following a similar structure to the EU GPP guidelines.

As a long-term goal, the city of Ludwigsburg wants to only procure products and services that fulfil these criteria. As a result of Ludwigsburg’s Cradle to Cradle principles, it was awarded the German [BME-Award for Innovation Procurement](#).

Procurement objectives

In 2018, Ludwigsburg wanted to award a new two-year framework agreement for office stationary and office material (such as copying paper, pens, folders, desk equipment). The city aimed to purchase a lean range of products with high ordering volume, which would decrease the overall price while also allowing for green criteria to be included in the call for tender.

The city first identified the demand for office material of all public administration departments as well as all schools, day care centers, and public companies. The demand was pooled and based on this, a list of product groups was defined. The list contained 38 product groups and 295 individual products. For each product group, the city then undertook market research to understand which sustainable alternatives were available and based on this, defined ambitious sustainability criteria for each product. For some products no clear sustainable alternative option was available on the market. For these products, bidders had to fill in a product declaration, which is guided by Cradle to Cradle principles (see below in “Criteria used”). This approach encouraged suppliers whose products could comply with some sustainability criteria, even though no certification is available.

The City of Ludwigsburg also wants to encourage its suppliers to produce and deliver products as sustainably as possible. For this framework, bidders were assessed on the sustainability performance of their delivery service. For all products, the tender asks for a minimum amount of packaging, and where possible, it should be made of recyclable or other sustainable materials. Suppliers could also propose a reuse scheme for packaging. Bidders were encouraged to reduce plastic as much as possible in their packaging.

Criteria used

Subject matter of the contract:

Two-year framework agreement, with a view to extension, with a single supplier for the delivery of office supplies to about 100 delivery points within the City of Ludwigsburg. This also includes the development and maintenance of a web-based ordering system that all procuring departments can use to order office material.

Selection criteria:

To be eligible to participate in the tender suppliers had to be able to supply all products detailed in the product list, at large volumes. The supplier had to be able to deliver to all delivery points within three working days and to provide personal customer service.

Technical specifications:

The list of required products contained 295 individual products. Based on prior market research, the strictest possible green criteria were included in the technical specifications. Below is a list of example specifications that were used for products containing different materials.

Paper-based products (such as folders, binders, graphic paper, etc.)

- Must fulfil the criteria of the “[Blauer Engel](#)” (The German Ecolabel) or an equivalent ecolabel.

Products containing Plastic

- Required to contain a minimum of recycled material or to be made of biodegradable material. For example: casings for markers are required to contain 80% renewable resources, calculators needed to contain a minimum of 70% recycled material in the plastic components, and pencil sharpeners needed to be made of 90% bioplastics.
- Where alternatives exist: must be made of renewable resources.
- Where possible/applicable: free of PVC, free of chlorine, free of phthalates.
- Where “Blauer Engel” certification is available for office materials containing plastic, “Blauer Engel” criteria or equivalent for these products had to be fulfilled.

Products containing wood and rubber

- Wood and rubber elements contain 100% [FSC](#) certified (or equivalent) wood/rubber.

Products which conventionally contain solvents (such as glue)

- Must be solvent-free.
- Wherever possible, refillable options for pens and markers were requested.
- For the web based ordering system, the contractor was required to highlight products that have environmental certifications such as “Blauer Engel” and add a function to the product search that allows the clients to search for these products. The contractor is also required to add new products to their range and delete products as requested by the contracting authority.

Award criteria:

The contract was awarded based on the most economically advantageous offer. Assessment was based 80% on price and 20% on sustainability criteria. Sustainability was assessed using a point based system, with a total of 200 available points.

A maximum of 100 points could be achieved by filling in product specific "Cradle to Cradle"-based criteria declarations. The declarations only had to be submitted for some products, including folders, binders, a plastic based calendar desk cover, and glue sticks. Points were awarded based on how well bidders scored on the following aspects:

- **Raw materials for products:** Are raw material sources known and has the supplier checked whether the use of these raw materials causes any health risks and environmental impacts during the production and use of the final product? (15 points) Does the material contain potentially hazardous chemicals above the tolerable threshold? (A list of these chemicals is provided by the City of Ludwigsburg and is based on the ["Cradle-to-Cradle" banned list of chemicals](#), which goes beyond standard REACH regulations for hazardous chemicals) (15 points)
- **Circularity:** Has the bidder assessed which components of the product should re-enter biological and technical material cycles? This does not include energetic or thermic reuse. (20 points) Does the bidder have take-back and reuse schemes for this product? (15 points)
- **Energy management:** Overview of energy consumption and CO₂ emissions related to the production of this product (5 points), CO₂ emissions related to the production, transport, and use of the product are below threshold identified in DIN norm 14040, 14044 (DIN is the [German Institute for Standardization](#). The norm is similar to [ISO 14044](#)) (5 points)
- **Water:** All business activities along the entire supply and production chain of the product are tested for the impact on the local water balance (5 points). Water shortages and risks for fragile ecosystems related to the water use of producing the product are known and plans for improvement exist (5 points)
- **Social Responsibility:** The production process including the supply chain has been assessed for compliance with human rights standards (10 points), The contractor employs people with limited access to employment opportunities to perform the contract (5 points)

Another maximum of 100 points could be achieved by complying with the following sustainability criteria (applies to all products):

- Packaging and delivery of the product: 50 points maximum for reducing packaging, plastic, and using recycled materials
- Delivery transport: 30 points maximum depending on the share of electric and hybrid vehicles in the delivery fleets used for the framework
- Recycling services: 10 points for offering takeback and recycling systems
- Social Responsibility: 10 points for showing awareness of social responsibility, i.e. supporting social projects linked to the contract. Proof needed to be submitted.

Contract Performance Clauses:

Delivery costs must be included in the price. It must be possible to return orders within 30 days at no extra cost, and faulty products must be taken back and replaced within 48 hours. The winning bidder is required to provide statistical data on orders and volumes on a bi-annual basis. It is also required to offset its delivery related emissions through supporting climate protection projects or similar.

"Thanks to the good performance in the award criteria, Lyreco (the winning supplier) was able to clearly differentiate itself from its competitors... competing in this tender has also helped them in improving their sustainability profile for upcoming public tenders in other cities."

Results

For this framework procurement green criteria were included both in the technical specifications and the award criteria. It was published as an open, European competition. The City of Ludwigsburg received three bids. Bidders found the sustainability criteria challenging to fulfil with their own product range and have included new products specifically for this tender.

The tender was awarded to Lyreco, which in order to be eligible for this tender, commissioned the development of a new product that adhered to higher sustainability standards (a sticky note cube that complies with “Blauer Engel” certification). Lyreco achieved an average of 83 out of 100 possible points in the “Cradle to Cradle”-based criteria declarations, making it the best bidder in this category. Lyreco achieved 70 out of 100 possible points in the other award criteria and was therefore in second position in this category. Thanks to the good performance in the award criteria, Lyreco was able to clearly differentiate itself from its competitors. The contracted supplier has mentioned to Ludwigsburg that competing in this tender has also helped them in improving their sustainability profile for upcoming public tenders in other cities. The total contract volume is €165,000.

The City of Ludwigsburg also observed that the market is more aware of concepts such as “Cradle to Cradle” thanks to the bidders’ declaration that had to be included for some products. Bidders get a clear sign of the direction in which the City of Ludwigsburg wants to move in terms of sustainability.

Environmental impacts

Environmental impacts of office materials vary per product group. For paper and wood based products these include forest destruction and loss of biodiversity, water and energy consumption, water pollution, and the use of harmful chemicals. In addition, plastic packaging and waste due to consumables are key environmental impacts of office material. Many of these impacts could be addressed in this tender. Thanks to the criteria applied in the technical specifications and the award criteria, most products included in the framework contract comply with certification schemes such as FSC, Blauer Engel, and even Cradle-to-Cradle criteria.

The city of Ludwigsburg is in frequent contact with their supplier to encourage them to include more “Cradle to Cradle” based developments, such as a recycling programme for their own products and including more green products in their product range.

Lessons learned

The City of Ludwigsburg concludes that the additional work invested in researching and applying ambitious sustainability criteria has paid off and has not resulted in higher costs, thanks to a lean product range and high order volumes. The City also concludes that using green criteria does have an impact on the market, beyond the winning bidder, as several bidders have increased the share of green products in their range of products as a result of this tender.

Contact person:

Patrick Scholz, City of Ludwigsburg, P.Scholz@ludwigsburg.de

For related information, please see European GPP criteria for [Copying and Graphic paper](#) and the [Technical Background Report](#).