Collection, transportation and disposal of hazardous and non-hazardous hospital waste
Region of Emilia-Romagna (Italy)

**Background**

Established in 2005, Intercent-ER operates as the central purchasing body for all public administrations in the Emilia-Romagna region. Intercent-ER offers e-procurement services to health-service institutions and to other regional administrations – such as municipalities, universities, schools, provinces, and publically owned companies.

Since its establishment, Intercent-ER has awarded more than 250 framework agreements, involving 700 administrations and hundreds of suppliers. In recent years, the organisation has awarded more than 50 framework agreements with environmental criteria and nine framework agreements which included social clauses.

**Procurement objectives**

Intercent-ER recognised the need of the main regional health institutions to award a contract for the management of hospital waste. Due to the economic value and the level of complexity of this service, Intercent-ER – in collaboration with some of the region’s health institutions – decided to establish a joint procurement initiative, in order to capitalise on financial savings and to make a significant impact on reducing hospital waste in the region.

An open tender was published in December 2013. The tender was divided into two geographical lots. The two lots had an estimated value of 54 million euro, excluding VAT.

**Criteria used**

**Subject matter of the contract:** The provision of safe collection, transportation and disposal of hazardous and non-hazardous hospital waste, for all hospitals and institutions owned by the Department of Health in the Emilia-Romagna region.

**Selection criteria:**

Bidders were required to have an environmental management system (such as **EMAS**) certification.

**Technical specifications:**

The winning supplier(s) would be required to:

- Analyse products disposed of in order to determine the chemical and physical properties of all waste. This waste must then be managed accordingly, and if identified as hazardous, disposed of and/or recovered as appropriate.
- Provide appropriate containers and labels to dispose of harmful waste;
- Transfer waste to plants licensed to dispose and/or recover the relevant waste in accordance with **D.Lgs. 152/2006 Rules concerning the environment** and the **Emilia Romagna Government decision n. 1155/2009 Guidelines for waste management in the Health sector**;

**Award criteria:** The contract was awarded on the basis of the most economically advantageous tender (MEAT). 50% of the points were awarded for quality and the remaining 50% for price.

As part of the quality criteria, bidders were scored according to their technical merit, which was evaluated on the basis of a
number of key technical requirements. These included environmental considerations such as:

- Traceability of waste solutions - Guarantee the traceability of each individual load, and each individual container, through to the final destination of the hazardous waste (4 points).
- Propose procedures for the management of emergency situations (e.g. in scenarios where there are insufficient staff or vehicles available, or problems with equipment) and unforeseen situations (e.g. overproduction of waste, variations in the amount and/or type of waste produced) (3 points).
- Use of vehicles with a lower environmental impact (i.e. hybrid LPG vehicles, electric vehicles, etc.) during the provision of the service (2 points).

**Contract performance clauses:**

The winning suppliers were obliged to provide an assessment of the environmental impacts using a life cycle assessment (LCA) methodology, according to ISO standard 14040, for each healthcare institution and hospital, and were required to report on these findings following the end of the first year of the contract.

**Results**

Five companies applied for this tender with two suppliers being awarded a framework agreement (one supplier winning each lot). Both of the winners were able to fulfil all of the required environmental criteria. The final value of the awarded contracts was lower than the initial estimated value, as although the value of the tender was originally estimated at 54.5 million euro, the awarded contract had a value of 37.2 million euro. Therefore, Intercent-ER saved 17.3 million euro, or 31.8% of what they expected to spend on this contract.

In 2016, Intercent-ER will receive the results of the LCA from the winning suppliers. The suppliers are required to present their results in accordance with the ISO 14040 standard, in order to evaluate the environmental impacts of the waste packaging, transportation and disposal, with particular reference to dangerous waste with contagious risks. The reliability of this LCA will be attested through a formal evaluation by a third party. Intercent-ER will evaluate the final results in order to present ideas for improvement to the suppliers. The results will also be used to improve technical requirements for the next tender.

In 2015, Intercent-ER received an honourable mention at the CompraVerde awards in Rome for this tender. The CompraVerde Technical Scientific Committee was particularly impressed by the LCA approach used.

**Environmental impacts**

If not managed correctly, waste, in particular hospital waste can have serious, harmful effects on: the local environment, employees working in the hospital, and people in the surrounding areas. Poorly managed hospital waste can result in physical, chemical, biological and environmental hazards. Environmental hazards can include air, water and soil pollution, which may occur if hazardous medical waste is not separated from non-hazardous waste and disposed of correctly. In such cases, hazardous waste may end up in landfill which can lead to a high risk of fire and/or even explosions at landfill sites. Also, the wrongful disposal of hazardous waste can lead to soil, water and air pollution.

For these reasons, Intercent-ER was particularly careful when setting the green criteria for this tender, as they wished to ensure that any negative environmental impacts would be significantly reduced.
Lessons learned

Intercent-ER recognised that GPP policies and criteria can be successfully applied not only when purchasing standardised goods, but also when purchasing complex and customised services such as waste management services. Additionally, they established that it is possible to receive a good price offer, while also ensuring that environmental requirements are fulfilled.

This particular tendering process demonstrated to Intercent-ER that joint procurement can be a very useful approach for GPP. Intercent-ER included various experts from a number of public bodies in the Emilia Romagna region in the preparation of the tender documentation for this tender. Finally, the organisation established from this tender that suppliers operating in the market for waste management services are generally ready and capable of meeting such environmental requirements.

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For additional information on GPP criteria and waste, please see European GPP criteria for Waste Water Infrastructure and the Technical Background Report. Further good practice on waste management and collection and green procurement can be found here.