Purchasing Framework for energy efficient client computer systems

Scottish Government (United Kingdom)

Background

Scottish Procurement provides a range of commercial, property, programme and project management services to the Scottish Government and wider public sector in Scotland. Scottish Procurement has a vision "to be world leaders in innovative public procurement, asset management and project assurance, enabling the best outcomes for Scotland."

One of the key priorities for Scottish Procurement is to embed sustainability in all activities. This is in line with the Procurement Reform (Scotland) Act 2014 which established laws to maximise the environmental, social and economic benefits through effective and efficient procurement activity.

Image: Pixabay

As a significant procurer of electronics products, in a market where costs reductions are continually required, the aim of Scottish Procurement was to deliver practical, innovative measures to ensure continuity of supply and the minimisation of risks, including reputational impact, within global supply chains.

Procurement objectives

Scottish Procurement established a new suite of frameworks for the supply of ICT client devices in 2016. The frameworks are for use by the Scottish Government and any other Scottish public sector organisations. The new ICT frameworks were developed in collaboration with users of the framework and extensive engagement with the market. This included establishment of a User Intelligence Group of stakeholders, and regular conference calls and face-to-face meetings with industry experts, all major manufacturers, resellers and other organisations within the supply chain.

The frameworks, which are estimated to be valued at up to £250 million over 4 years, cover the following categories:

- Mobile Client Devices
- Thin Client Devices
- Web Based & Proprietary Devices
- Desktop Client Devices
- Workstation Client Devices
- Tablet Client Devices

Scottish Procurement wanted to focus on circular economy outcomes through end of life management of devices, energy and environmental management, packaging, fairly and ethically traded supply and fair work practices.

Criteria used

Previous framework agreements, established by Scottish Procurement, have considered corporate social responsibility. On this occasion, the Sustainable Public Procurement Prioritisation Tool was used to examine the environmental risks and opportunities. This is a tool to aid all procuring organisations across the Scottish Public Sector, designed to bring a standard structured approach to the assessment of spend categories. At the same time the Life Cycle Impact Mapping tool was completed to flag up a range of issues for further consideration. This helped to identify areas for focus with regards to environmental and socio-economic risks and opportunities.

Subject matter of the contract:
Framework contract for Information and Communications Technology (ICT) Client Devices

Technical specifications:
Energy efficiency: All products are required to meet or exceed the minimum energy efficiency standards detailed in the minimum specification for each device, based on Energy Star. Documentation is supplied to support Energy Star accreditation. This is in accordance with compulsory promotion of energy-efficiency criteria by contracting authorities, as stipulated in Article 6 – Regulation (EC) No 106/2008.

Product lifecycle: All products are required to meet or exceed the minimum of Electronic Product Environmental Assessment Tool (EPEAT) Gold or Silver Compliance dependent on the product category, with documentation supplied by the manufacturer to support the EPEAT accreditation.

Management of delivery fleet: All deliveries should be managed in order to minimise emissions, including use of efficient logistics, full loads and driver training. Contractors are required to continually monitor and report on the fleets' efficiency and work to reduce the environmental impact over the term of the framework agreement.

Innovative packaging: to embed a focus on waste minimisation and a more circular approach, innovative packaging solutions were sought that included take-back pallet or crate systems and alternative packaging materials. Packaging specifications included:

- Minimisation of waste, through the principles of sustainably sourced materials as well as reduction, re-use and recycling methods, such as through the use of creative packaging design, innovative environmentally friendly materials, and re-usable packaging such as unboxed palletised packaging.
- Adherence to all EU packaging and waste regulations where applicable and ensure that plastics used for product packaging do not include halogen containing polymers.
- Recycled materials, with packaging containing a minimum of 50% recycled content, or, as an alternative use sustainably sourced materials.

End of life management of devices and circular economy: The contract aims to extend the products useful life while ensuring compliance with waste electrical and electronic equipment (WEEE Directive) and data security requirements. Emphasis was placed on repair, refurbishment and re-use of devices and the frameworks sought to embed this as a key requirement and encourage the market to go further. The Statement of Requirements included that the contractor will "extend devices' useful life, through appropriate measures such as product design, take back of products aligning with framework public bodies replacement cycles, re-use of devices or parts or re-conditioning of devices".

Award criteria:
The tender was assessed by MEAT with social, economic and environmental factors scored, contributing to 20% of the quality score. This incorporated:

- Environmental impact (weighting 20%), including, but not restricted to, carbon and other emissions, waste minimisation, heat or noise output. Not restricting the scope allowed bidders to include other environmental factors that might be relevant during the life of the framework. These were considered during the MEAT assessment of the proposed approach.
- Social & ethical responsibility (weighting 40%), ensuring that goods supplied under the framework agreement are produced in accordance with all International Labour Organisation (ILO). With the support of Sustainable Procurement Limited, bidders had to demonstrate that they have a robust process in place for the selection, ongoing monitoring and management of their supply chain.
- Workforce Matters (weighting 10%), including empowerment and training of employees and paying a living wage.
- Packaging (weighting 15%), including details of plans and proposed initiatives to reduce and eliminate packaging and waste under the framework.
- End of life management (weighting 15%), including end of life management of devices, promotion of re-use, re-condition, re-manufacture and recycling as well as compliance with security and WEEE requirements.

Contract performance clauses:
The contractor will adhere to, and fulfil all obligations relevant under the Waste Electrical and Electronic Equipment WEEE Directive and Restriction of the Use of Certain Hazardous Substance (RoHS) guidelines, for the duration of this framework agreement, minimising waste to landfill by ensuring that all waste equipment that cannot be re-used is recycled.

Results

Extensive market engagement before the tendering process commenced ensured that potential bidders were aware of requirements and provided with the opportunity to obtain necessary accreditation and engage fully with their supply chain. The number of bidders varied by client device tender, ranging from four to seven and in line with expectations.

Six single supplier framework agreements with an estimated total value of up to £250 million were awarded for a maximum period of four years. Based on the average cost of comparable devices in the previous frameworks, the new frameworks represent total savings of £100 million. Each framework agreement will also deliver significant environmental benefits, including a reduction in carbon emissions through the inclusion of latest environmental and energy efficiency certification.

Circular economy: contractors demonstrated how they will extend the useful life of devices through re-use of components and devices. While this is readily available for certain devices from the manufacturer or its 'end of life' partner, it is variable for tablet devices, which can be difficult to disassemble and repair/repair components/upgrade. The successful contractor has introduced a 'buy back' scheme for older tablet devices, contributing to circular economy outcomes. Users of the frameworks are provided with a buyer's guide setting out the criteria the devices meet.

Environmental Impacts

Energy efficiency: According to the Energy Star website, most studies report that for an office desktop computer (PC) primary energy consumption during use is more than three to four times higher than the primary energy needed for manufacturing and materials production, whilst the energy costs/credits of waste disposal and recycling are comparatively low (<15% of production energy). This is the result for a typical office PC, used 8 hours per day (including Standby) over 260 days. In the most recent version of the Energy Star requirements, products must meet stringent total energy consumption (TEC) requirements for estimated annual energy consumption. All devices are required to have both system and display sleep modes, and wake on LAN and wake management functions (with the exception of small-scale servers which do not require system sleep mode). These requirements ensure energy savings when computers are being used and performing a range of tasks, as well as when they are turned off or into a low power mode.

Packaging: as well as the use of innovative sustainable packaging materials (for example bamboo and mushroom) and reusable crate systems, the take-back of all packaging is available through the desktop and mobile client device framework agreements. A re-usable crate holding 18 devices has been introduced for tablet devices, removing all packaging for end use organisations.

Lessons learned

- The importance of early market engagement. It became clear that Scottish Procurement's engagement with the market resulted in responses to the tender that were more relevant and comprehensive.

- The importance of identifying risks and opportunities early and clarifying the optimum way to address these. For example applying fair work requirements to a product is an example of meeting the requirements of the Sustainable Procurement Duty, as required in the Procurement Reform (Scotland) Act 2014.

- Supply chains can be extensive; identify where key life cycle risks and opportunities exist and identify how to address them. For example, it is easier for manufacturers to manage their own supply chain, but resellers have a role in working with their manufacturer partners to understand and take part in managing these risks too. Quarterly reviews with contractors allow for identification and management of the risks as soon as the contractor becomes aware of them.

- Achievement of all intended sustainable outcomes is due to contractors as well as end users. Framework users have an important role in:

  - Reviewing the buyer's guide to identify devices that represent the best balance of cost, quality and sustainability.

  - Considering whether to procure devices – or whether there are opportunities to extend useful life or re-use.

- Scottish Procurement recognises the need to work with successful contractors to determine appropriate goals and measures with a focus on continuous improvement. Performance and progress will be carefully monitored through contract management and a balanced scorecard, which has been developed in conjunction with the contractors. The approach accounted for varying levels of supplier capability and does not stipulate a predetermined level of performance or progress in the areas of reducing social, economic and environmental impact.

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For related information, please see European GPP criteria for Computers and Monitors, and the Technical Background Report.