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Capacity building of regional suppliers' network

Market research of office IT equipment

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Introduction

The objective of this market research is to collect and analyse the information from the particular target market with a view to green public procurement - in this case, office IT equipment - PCs, notebooks, and monitors.

The energy consumption of these products during their active lifetime is the most significant environmental impact and should, therefore, be the main focus of the green public procurement. Environmental impacts from acquiring raw materials, manufacturing components, final assembly, and transport amongst these stages are not insignificant, however, the nature of the value chain is such that focusing on user phase and end of life stage would deliver immeasurably higher environmental benefits. The focus of GPP should, therefore, be on extending the useful life of the product as it is a relatively simple and effective approach to reducing environmental impacts with user's behaviour.

This market is heavily influenced by fashion trends, life span, and the combination of all of these. For example, the current trend towards using tablet personal computers rather than other forms of notebook computers might be possibly environmentally advantageous by reducing initial impacts and running costs, however, it increases the overall material consumption, by purchasing additional electronic equipment.

Green Public Procurement (GPP) is a voluntary instrument. There are however some EU Directives that define the mandatory requirements for the public procurement in general and specifically of the energy-related products and services. Mandatory requirements are also set by the national policy targets addressing energy efficiency, climate change, and promotion of the GPP. Energy and climate policy targets always include a CO₂ emissions reduction to a certain level. Some procurement areas, for example, office IT equipment, are on the high priority list to reduce CO₂ emissions.

This market research consists of several parts, which together forms a specific product market report. Market research consists of analyses of the legal and political framework, as well as formulating requirements for improvement. This study provides answers to questions that lead to conclusions, based on market research results.

EU GPP criteria are used in this market research because in such a way it's possible to compare the results of market research among other participating countries. However, the national regulation framework is significant, as it may be different in EU member states.

Environmental impact of office IT equipment and the key GPP criteria

Environmental criteria for PCs, notebooks and monitors are grouped together in one group. The core criteria for PCs, notebooks and monitors focus on the inclusion of technical specifications regarding energy consumption, as this has been identified as the aspect having the most significant environmental impact. In addition, the core criteria include some simple, easy to understand (and verify) criteria addressing the lifetime of products. These lifetime criteria have been selected on the basis of the EU Ecolabel, Blue Angel, and Nordic Swan.

In the comprehensive criteria, a number of further aspects are included in the specifications and award stage:

- Energy management functions on the hardware itself;
- Noise emissions;
- The use of mercury in LCD monitor backlighting;
- The disassembly of equipment;
- Recycled content and recyclability;
- The use of flame retardants with certain risk-phrases (carcinogenic, mutagenic or harmful to reproduction) in plastic parts.

IT equipment effects on environment and corresponding GPP criteria:

Key Environmental Impacts	GPP Approach
Energy consumption and resulting Carbon Dioxide (CO ₂) emissions	Purchase energy efficient models
Air, soil and water pollution, ozone formation (smog), bioaccumulation or food chain exposure and effects on aquatic organisms due to hazardous constituents e.g. mercury content of LCD displays and flame retardants	Purchase products with a restricted amount of hazardous constituents and promote take back options
Negative impact on the health of employees due to noise, causing stress for those sensitive to such sounds	Purchase products with a restricted noise level
Use of energy, finite resources and harmful emissions related to the production of IT products (raw material acquiring, manufacture of components)	Design for recycling, longer life and promote take back options
Generation of waste material including packaging and final disposal	Ensure the recyclability of the packaging used
Energy consumption and resulting Carbon Dioxide (CO ₂) emissions	Increase the use of recycled packaging
Air, soil and water pollution, ozone formation (smog), bioaccumulation or food chain exposure and effects on aquatic organisms due to hazardous constituents e.g. mercury content of LCD displays and flame retardants	Safe disposal (recycling, re-using) of final products
Negative impact on the health of employees due to noise, causing stress for those sensitive to such sounds	Purchase energy efficient models
Use of energy, finite resources and harmful emissions related to the production of IT products (raw material acquiring, manufacture of components)	Purchase products with a restricted amount of hazardous constituents and promote take back options Purchase products with a restricted noise level

Regulatory framework of the office IT equipment

This section provides information on EU legislation that is relevant for office IT equipment. It is important that contracting authorities are aware of it, as some of the responsibilities which the Member States have agreed upon by voting through this legislation may have some consequences for contracting authorities. This is the case for example, if, according to this

legislation, a product has to be disposed of in a certain way or if the manufacturer or supplier has to implement a take-back scheme for a certain product. Some of the legislation also requires products to be labelled or indicate, for example, if they contain a certain amount of a hazardous substance. This is useful information for the contracting authority and can ease verification of compliance with certain requirements.

The EU Energy Star Regulation was adopted on 17 December 2007 which makes the purchase of energy efficient IT products compulsory by central government authorities as well as the European Commission and other community institutions. This will only apply to contracts above the threshold values outlined in the Public Procurement Directives (2004/18/EC and 2004/17/EC). The Regulation defines “energy efficient” to mean “not less demanding” than the ENERGY STAR requirements. As such it represents a significant step forward in driving the market towards the development of more energy efficient IT equipment. The latest version of ENERGY STAR standard (2011) for office IT equipment is 5.0 but the new version 6.0 is under development and public consultation is underway.

Other important regulations defining legal basis for procurement of IT equipment:

1. **Directive 2009/125/EC on the Eco-design Requirements for Energy-using products (EuP).** The EuP directive establishes a framework for the setting of eco-design requirements for energy-using products with the aim of ensuring free movement of those products within the internal market. The Directive aims to encourage manufacturers to produce products which are designed to minimise their overall environmental impact, including the resources consumed in their production and disposal. The European Union’s Framework Directive on Eco-Design of Energy-Using Products (Directive 2009/125/EC) establishes a framework to set mandatory ecological requirements for energy-using and energy-related products sold in all 27 Member States. Its scope currently covers more than 40 product groups (such as boilers, lightbulbs, TVs and fridges), which are responsible for around 40% of all EU greenhouse gas emissions. The 2009 revision of the Directive extended its scope to energy-related products such as windows, insulation materials, and certain water-using products.
This directive has been introduced in Latvian legislation by Cabinet Regulation No. 941 (6 December 2011) Regulations Regarding Ecodesign Requirements for Energy-related Goods (Products).
2. **Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE)** Directives 2002/96/EC on waste electrical and electronic equipment and 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment are designed to tackle the fast increasing waste stream of electrical and electronic equipment and complement European Union measures on landfill and incineration of waste.
3. **Directive 2002/95/EC on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment.** The Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment 2002/95/EC24 (commonly referred to as the RoHS Directive) dictates that Member States shall ensure that, from 1 July 2006, new electrical and electronic equipment put on the market does not

contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE).

There are, however, certain acceptable limit values and exemptions listed in the Annex to the Directive for these substances (e.g. the use of mercury in fluorescent lamps, lead in the glass, etc.). This means that these substances still exist - to some extent - in electrical and electronic equipment. The Annex to the Directive has been amended several times (2005/618/EC, 2005/717/EC, 2005/747/EC, 2006/310/EC), altering the list of exclusions and limit values. The new Directive (in June 2011, Directive 2011/65/EU) applies to the same restricted substances as the original Directive. This will extend protection from dangerous chemicals to more electrical appliances and improve the safety of products such as mobile phones, refrigerators, and electronic toys

4. **REACH Regulation (1907/2006)25 and LSD 2008.** The new REACH (registration, evaluation, authorisation and restrictions of chemicals) Regulation (1907/2006) was adopted in December 2006 and entered into force on 1 June 2007. It provides a new regulatory framework for the collection of information on the properties of chemicals on the European market, and also for future restrictions on their use. This directive in Latvia is implemented through the Chemical Substance Law.
5. **Directive on Batteries and Accumulators and Waste Batteries 2006/66/EC.** The 2006 Battery Directive, officially repealing the 1991 Battery Directive, was approved July 4, 2006, and became official on September 26, 2006. It gives the European Member States until Sept. 26, 2008, to implement its national laws and rules on batteries. The Battery Directive has an objective of reducing the amount of hazardous substances used in the manufacture of batteries e.g., lead, lead-acid, mercury, cadmium, etc., and better waste management of these batteries. Requirements of this directive in Latvia has been implemented by Cabinet Regulation No. 139 “Regulations Regarding the Requirements for the Use and Labelling of Certain Equipment and Products Containing Hazardous Chemical Substances and Regarding the List of Goods Harmful to the Environment”.
6. **Directive 2010/30/EU of the European Parliament and of the council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products.** This directive has been implemented into Latvian legislation through Law On the Energy Performance of Buildings.

Market analyses

In order to assess the situation in the Latvia’s Office IT equipment market and its compliance with the GPP criteria and willingness to offer such products in public procurement, on 7 July 2016, a meeting was arranged with market participants. Overall, 71 companies were invited to the meeting. However, only 3 representatives (Ltd. CAPITAL, Ltd. Datakom, and Latvian Electrical Engineering and Electronics Industry Association - LETERA) responded and attended the meeting.

Office IT equipment market is changing rapidly. Desktop computers remains a dominant tool for public institutions, but, with improvements in terms of cost, battery life, and weight laptops are quickly gaining ground. That said, demand for tablets is also predicted to be

growing fast. Additional trends in the sector are cloud computing, including Software-as-a-Service (SaaS) and other cloud-based computing solutions as well as server virtualization allows to eliminate entire server farms and slash the associated operating costs.

Office IT equipment sold in Latvia are primarily imported, however, there are several companies producing their own desktop and laptop computers in Latvia. For example from 2006 Capital, Ltd is producing laptop computer Gauja™ and desktop computers NEO; MA Datori, Ltd is producing desktop computers Master and Matrix. Data from Central statistical bureau show that computer production in Latvia has been growing since 2009 and together a production with other electronics constitutes an important part of the national economy.

Data from Procurement monitoring bureau demonstrates that office IT equipment (personal computers - 30213000-5 & displays - 30231300-0) represents an only small part of the total public procurement – 20.9 M EUR or 1.12% (see Table 1). According to official information in 2015 out of 51 tenders, only one have highlighted that they have included environmental criteria in their procurement. However, we believe most of the IT equipment tenders include some of the environmental criteria, especially energy related. Additionally to open tenders office IT equipment is also being purchased in Electronic procurement system where 20% of all the Office IT equipment was sold via green catalog which is in line with the GPP criteria (see Table 1).

Table 1. Total number and amount of procurements in 2015

Procurement system	Nr. of procurements		Total costs in EUR (without VAT)	
	Total	including GPP	Total	including GPP
Procurement monitoring bureau	51	8	20 855 977	246 664
Electronic procurement system	-	-	11 175 639	2 261 174

According to the data from Procurement monitoring bureau and Electronic procurement system some of the biggest distributors in this sector over the last years are:

- Capital AS
- TelCom, Ltd
- Datakom, Ltd
- MS Modius, Ltd
- Baltijas Informācijas Tehnoloģijas, Ltd,
- ATEA, Ltd
- Multisistēma Rīga, Ltd

The main conclusion from the market research is that energy efficient EnergyStar certified computers and displays are freely available in Latvia and there is a high competition among

the producers and distributors. However, procurers have to pay more attention to the ensure all the products provided have adequate quality, energy efficiency, and noise certification.

EU legislation that is relevant to Office IT

EU legislation act	Requirements	Affected products
Directive 2012/27/EU http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:315:0001:0056:en:PDF LV: http://likumi.lv/ta/id/280932-energoefektivitates-likums	on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC	Central governments and EU Institutions must purchase office equipment with energy efficiency levels at least equivalent to ENERGYSTAR.
Regulation (EC) No 106/2008 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:039:0001:0007:EN:PDF LV: http://likumi.lv/doc.php?id=284894	on a Community energy-efficiency labelling programme for office equipment (recast version)	Establishes the rules for the Community energy efficiency labelling programme for office equipment (hereinafter referred to as the Energy Star programme) as defined in the Agreement.
Directive 2009/125/EC DIRECTIVE 2009/125/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 Octo http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0125&from=en LV: Cabinet Regulation No. 941 Adopted 6 December 2011 Regulations Regarding Ecodesign Requirements for Energy-related Goods (Products) http://likumi.lv/doc.php?id=241282	on the Eco-design Requirements for Energyusing products (EuP)	Establishes a framework for the setting of eco-design requirements for energy-using products with the aim of ensuring free movement of those products within the internal market.
Directive 2002/96/EC DIRECTIVE 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 http://eur-lex.europa.eu/resource.html?uri=cellar:ac89e64f-a4a5-4c13-8d96-1fd1d6bcaa49.0004.02/DOC_1&format=PDF	on Waste Electrical and Electronic Equipment (WEEE)	Tackle the fast increasing waste stream of electrical and electronic equipment and complement European Union measures on landfill and incineration of waste.
Directive 2002/95/EC DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002L0095&from=en	on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment	Dictates that Member States shall ensure that, from 1 July 2006, new electrical and electronic equipment put on the market does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE).
REACH Regulation (1907/2006) and LSD 2008 Green Public Procurement Office IT equipment Technical Background Report http://ec.europa.eu/environment/gpp/pdf/tbr/office_it_equipment_tbr.pdf LV: Chemical Substances Law http://likumi.lv/doc.php?id=47839	On new regulatory framework for the collection of information on the properties of chemicals on the European market, and also for future restrictions on their use	The restrictions provide a procedure to regulate that the manufacture, placing on the market or use of certain dangerous substances shall be either subject to conditions or prohibited.
Directive 2006/66/EC	on Batteries and	Aims to reduce the amount

<p>http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:266:0001:0014:en:PDF LV: Cabinet Regulation No. 139 Regulations Regarding the Requirements for the Use and Labelling of Certain Equipment and Products Containing Hazardous Chemical Substances and Regarding the List of Goods Harmful to the Environment http://likumi.lv/doc.php?id=128396</p>	<p>Accumulators and Waste Batteries</p>	<p>of hazardous substances used in the manufacture of batteries e.g., lead, lead-acid, mercury, cadmium, etc., and better waste management of these batteries.</p>
<p>COMMISSION REGULATION (EC) 1275/2008 http://www.topten.eu/uploads/File/Ecodesign%20Regulation_Standby_1208.pdf</p>	<p>for standby and off mode electric power consumption of electrical and electronic household and office equipment</p>	
<p>COMMISSION REGULATION (EU) No 801/2013 amending Regulation (EC) No 1275/2008 with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, and amending Regulation (EC) No 642/2009 with regard to ecodesign requirements for televisions http://www.topten.eu/uploads/File/Networked-Standby_Ecodesign-regu_801-2013.pdf</p>	<p>ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment</p>	
<p>COMMISSION REGULATION (EU) No 617/2013 implementing Directive 2009/125/EC of the European Parliament and of the Council http://www.topten.eu/uploads/File/Ecodesign_Computers-Servers_617-2013.pdf</p>	<p>ecodesign requirements for computers and computer servers</p>	
<p>DIRECTIVE 2010/30/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010L0030&from=EN LV: Law On the Energy Performance of Buildings http://likumi.lv/doc.php?id=253635</p>	<p>on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products (recast)</p>	