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The sustainability challenge for public procurement of IT in the European Union

Policy, best practice and pathways forward

An independent report produced for Dell Technologies

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About this report

This report examines the issue of sustainable public procurement in the EU for the IT sector, looking to understand how the European Commission's Public Procurement Directives are being applied in the sector; what has been accomplished so far, and what the challenges are for procurers in using sustainability criteria; what is driving current behaviours; and what can be done to encourage greater application and harmonization of sustainability criteria in the public procurement of IT products within Europe.

The arguments contained within this report consist of information provided by Oxford Analytica's expert network, research by its in-house Advisory team, and eleven in-depth interviews with stakeholders from NGOs, national and regional public procurement bodies, trade organisations and IT hardware producers.

At Dell Technologies, we believe that there is an opportunity within the European Union to further integrate social and environmental sustainability priorities in IT public procurement. While initiatives in some member states have been implemented, we are still seeing that most public IT tenders are based on price only. We have thus commissioned this report to better understand the barriers holding back a greater European focus on sustainability, where the opportunities for improvement lie, and what good practices already exist and can be further advanced and validated through strategic procurement and purchasing decisions.

Louise Koch, Corporate Sustainability Director, EMEA at Dell

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Executive Summary

Public sector procurement in the European Union is worth 1.8 trillion euros annually[1], with annual government IT spending estimated to reach some 45 billion euros by 2021[2]. These numbers imply a significant environmental and societal impact from products that have complex, multinational supply chains and significant energy usage when produced and used at scale.

The European Union's Public Procurement Directives of 2014 enable procurers in EU Member States to give greater weighting to sustainability criteria[3] and call for the establishment of common methodologies to take account of environmental and social sustainability concerns. This study examines how governments and the IT industry have responded to these Directives and the other initiatives that exist in this field, including the voluntary guidelines on Green Public Procurement (GPP) criteria and the more recent Social Public Procurement (SPP)[4] criteria, and provides recommendations on what could be done to achieve more sustainable IT procurement in the EU, looking at the barriers, challenges and opportunities.

While the European Commission and the European Parliament have been at the forefront of setting the overall tone and scope for the increase in the use of environmental and social sustainability criteria in public procurement, their success and the impact they have had to date has depended on how rigorously member state governments impose sustainability guidelines and goals. The report finds that while many European public procurement authorities use sustainability criteria, neither their application nor their enforcement nor their metrics are consistent across the region. In the IT sector, several sustainability labels have also been developed to certify products' environmental and energy efficiency merits. Yet the report finds that there is confusion as to how these can be effectively applied to meet the criteria of the Directives or associated national frameworks.

In recent years, there has been an increased focus by public procurers on the social as well as environmental impact of global supply chains. This report highlights responsible production, the circular economy and growing harmonisation of standards as three critical areas of development in sustainability criteria.

Although it is rising, awareness among IT public procurers of established industry frameworks, guidelines, standards and best practices, including those provided by the Responsible Business Alliance (RBA), continues to be limited. There is a need for IT public procurers and all stakeholders involved to align in these areas in order for the implementation of sustainable public procurement in IT to move forward more quickly and more successfully. The study found the following key barriers to implementing more sustainable IT procurement:

- The execution gap between sustainable procurement strategy and practice,
- The diffuse purchasing power of public procurers,
- Difficulty accounting for life cycle costs,
- Limited awareness of practical methodologies for public procurers to assess supply chain responsibility.

In order to overcome these barriers, the report demonstrates that there is an emerging consensus around a collaborative approach that prioritises enhanced dialogue between industry and the public sector. Specifically, this report makes the following recommendations:

For the European Commission:

- Drive the sustainability agenda through international frameworks, guidelines, standards and best practices that in some cases are already established. This includes working with industry and third-party providers on standards for sustainability in supply chains.
- Collect and publish data on progress in sustainability.

For national governments:

- Support the sustainability agenda through capacity building.
- Promote sustainability 'by default' in public procurement.
- Consider options for scaling up individual procurement processes.
- Create national competency centres to share capability.
- Develop tools to measure life cycle costs.

For industry:

- Engage stakeholders at national and European levels on best practices and drive innovations to advance fulfilment of the sustainability agenda.
- Make life cycle cost messaging more central to discussions with public procurers.
- Design products in a manner that reduces barriers to product reuse and repair.
- Improve communication around sustainability efforts.

Europe is buying green, but public IT procurement lags behind

As demonstrated by the stark findings in the United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) report published in October 2018, climate change and the need for society to radically adopt greener strategies is an increasingly pressing concern, and one that requires individuals, industry, and governments to act collectively.

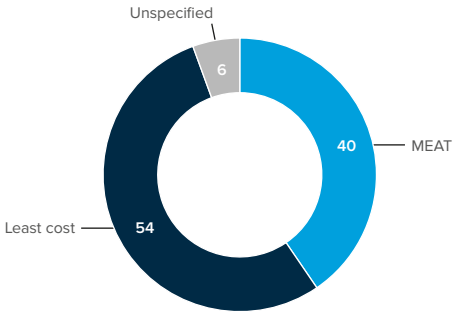
To this effect, there is growing awareness among consumers about the environmental impact of the products they buy and the conditions that are fostered along a product's supply chain and during its manufacture. This has manifested itself in a variety of different initiatives, from public campaigns for bans on non-reusable plastics such as straws, and surcharges on plastic bags at retailers, to environmental and climate impact ratings on foodstuffs, as is currently being discussed in Denmark[5].

Companies too have focused on sustainability, with the rise of roles such as 'Chief Sustainability Officer' and internal programmes to assure supply chain compliance, the use of recycled goods, and increased environmental awareness now commonplace among major multinationals.

Yet for many governments, even in Europe, this turn to sustainability has been somewhat more muted. Though progress has been made, for example through the advancement of the UN Sustainable Development Goals (SDGs), which include responsible consumption, governments have made relatively slow progress on bringing their purchasing power to bear on this problem.

In 2014, the European Commission passed a Directive altering how public procurement should be done within the EU, to allow for the greater use of sustainability criteria in determining public contracts. Before the new Directives were adopted, the European Commission in 2008 proposed that by 2010, '50% of all tendering procedures should be green' and that common Green Public Procurement criteria should be adopted in all member states to ensure standardisation across the single market[6]. Neither of these two goals had been fully achieved, with progress varying widely between member states,[7] while only 45% of public procurement contracts make use of non-price criteria[8]. It is therefore clear that these new mechanisms remain underutilized. Marzena Rogalska, Director for Single Market for Public Administration, DG GROW, European Commission, confirmed at a recent conference that the majority of public contracts were still awarded exclusively on the basis of the lowest price and that the time was "right to focus on the smart application of the new rules in practice".[9]

Figure 1. Tender process of ICT procurement in the EU, by % [10]



Source: Oxford Analytica

Public sector IT procurement – a lost opportunity?

Public bodies in the EU spend 1.8 trillion euros annually, or roughly 14 % of the EU's gross domestic product on products and services.[11] As a result of such scale, European public procurement can have a significant impact on environmental and social sustainability not only within the EU but beyond, as complex supply chains often lie partly outside the EU. Furthermore, the EU is often viewed as a benchmark for best practice in other regions.

Of that sum, total government IT spending in Western Europe is estimated to have amounted to 40.3 billion euros in 2016 and is expected to grow to 45 billion euros by 2021.[12] Given the high-profile nature of the IT industry, and the size of its environmental impact, a number of companies within the IT sector have implemented programmes to advance the energy and resource efficiency of products, make use of more sustainable materials or recycled products in product manufacturing and packaging, and reduce energy use in product transportation. The industry has also formed groupings, most notably the Responsible Business Alliance (RBA), which through its Code of Conduct, and tools for implementation and capacity building, helps companies adopt rigorous standards and audit mechanisms to drive sustainable production of ICT products, making it the leading framework for supply chain responsibility in the IT industry.

However, according to data presented by the Official Journal of the European Union (OJEU) which analysed the public tenders listed on the Tenders Electronically Daily (TED) Database, IT was the only key procurement category in 2015 in which the majority of procurement was still done on a lowest-cost basis, and not through the new sustainability-led criteria.[13] This demonstrates that while some businesses have made strides to becoming more sustainable, this value creation can fail to be captured by public procurers.

Within the EU, the European Commission has attempted to promote sustainable public procurement and use public purchasing power to maximize the environmental benefits produced by using sustainable

products. Through the creation of voluntary guidelines on Green Public Procurement (GPP) criteria[14] and more recently on Social Public Procurement (SPP),[15] the Commission has aimed to help public authorities purchase sustainable products and achieve balance between the three pillars of sustainable development -- economic, social and environmental.[16] However, while GPP criteria are already well established, their use by member states has often been lacking, and thus sustainability remains an elusive goal for public procurement.

In 2017, in its communication on 'Making Public Procurement work in and for Europe' the European Commission stated that "strategic procurement possibilities are not sufficiently used" and that "strategic public procurement should play a bigger role for central and local governments to respond to societal, environmental and economic objectives, such as the circular economy".[17]

This conclusion was echoed by the European Parliament on October 4, 2018 when it adopted a resolution on the EU Public Procurement Strategy, calling for member states to make better use of key criteria, such as life cycle costs.[18] While some governments, including those of Sweden, the Netherlands and Germany are moving forward on sustainability, and many subnational authorities are making progress too, the disconnect between private and public actors, and the lack of a concerted effort to promote sustainable procurement, means that not enough is being done to use the new procurement mechanisms put forth in the 2014 Directives.

But why does this disconnect exist and how can the European Commission and member states work to bridge the divide?

To answer those questions, this report will provide an overview of EU and national regulation, and the sustainability criteria used by governments. It then discusses current examples of best practice in supporting sustainable IT public procurement and the barriers that exist to further implementation. From an analysis of those barriers and best practices, it concludes by identifying steps that the European Commission, national governments, and companies can take to ensure greater uptake of public procurement of sustainable IT products.

Current policy landscape in the EU

Procurement in the public sector is not only a question of euros and cents. It is also driven by policy initiatives and guidelines that can set the tone as well as requirements, as public entities evaluate suppliers and purchase products. Within the EU, these policy initiatives and guidelines exist across different levels of government, ranging from the international, through WTO and EU criteria, to national, regional, and even at the municipal level, as different procurement agencies adopt varying approaches to procurement and the purchase of IT products.

To best understand how public procurement of sustainable IT products can be encouraged, it is necessary to first understand the framework within which European public procurers operate, and where the political and regulatory levers for change exist.

IT public sector procurement in the EU

At the EU level, the current guidelines for public sector procurement are driven not only by European Commission Directives on public procurement but also by international agreements to which the EU belongs.

The EU is a signatory to the WTO Agreement on Government Procurement (GPA), which came into force in 1994 and allows for the inclusion of environmental criteria in public tenders. A 2014 revision explicitly includes sustainability as a legitimate consideration in contract decisions.[19] The EU is also led by the UN Guiding Principles for Business and Human Rights (UNGPs), dating from 2011, which have established state obligations to protect human rights for commercial transactions, including public procurement. The due diligence process from the UNGPs also serves as the foundation for the latest OECD Due Diligence Guidance for Responsible Business Conduct from July 2018, which in turn impacts other legislation proposed by the European Commission, such as non-financial reporting and due diligence for conflict minerals.[20] The UNGPs and OECD guidance therefore offer procurers a framework with which to consider responsible business practice and sustainability, particularly given their consideration of supply chain issues.

EU public procurement is similarly influenced by the United Nations Environment Programme's Sustainable Public Procurement implementation guidelines, the One Planet Sustainable Public Procurement Programme within the 10-Year Framework of Programmes on Sustainable Consumption and Production (10YFP)

and by the International Council for Local Environmental Initiatives (ICLEI) Local Governments for Sustainability platform, which encourages local governments to include sustainability in their procurement and operational decisions.[21]

EU approach – Directives to be applied nationally

Building on these international frameworks, the EU has published a series of Directives to help member states promote sustainability in public procurement, for both IT products and others, within their own legislation.

The main legal foundations for public procurement in the EU are set out in three Directives from 2014 -- the Public Contracts Directive (2014/24/EU), the Concessions Contracts Directive (2014/23/EU) and the Utilities Directive (2014/25/EU) -- which member states had to transpose into national law by April 2016.[22] While the Directives themselves cover a variety of topics, such as concessions and utilities, they were also designed to promote procurement as a policy tool, acting as a framework that enables procurers to implement more sustainable environmental and social criteria.

As such, EU public procurement law calls for the establishment of common methodologies to take account of environmental and sustainability concerns. An example of this can be found in the Energy Efficiency Directive (2012/27/EU), which stipulates that public procurement must occur in line with certain minimum energy efficiency standards related to those in use by *Energy Star*, a US-government-backed labelling programme, making its criteria mandatory for electronic products procured within the EU.[23]

Similar strategies were employed by the Eco-design Directive (2009/125/EC) and Commission Regulation No 617/2013, implementing the Directive, which set out rules for improving the environmental performance of products. These included mandatory design requirements as well as minimum energy efficiency targets, which also apply to IT products.

These EU-regulated minimum standards now act as the baseline for certain environmental criteria within the EU.

Best price-quality ratio

A key aspect of the changes brought in as part of the 2014 Directives on public procurement was a redefinition of how contracts can be awarded in EU member states. These Directives altered the definition of Most Economically Advantageous Tender (MEAT) established in 2004, to allow greater weighting to sustainability criteria such as whole-life costs and circularity in the tendering process.

The best price-quality ratio allows for non-cost-based factors such as environmental and social sustainability to be included in public tenders.

The MEAT is now assessed through a cost-effectiveness approach that may -- but does not have to -- include:

- Life cycle costing (including energy consumption cost, recycling cost, or cost linked to environmental externalities).

- 'Best price-quality ratio' (defined on the basis of qualitative criteria, amongst which environmental and social ones, as compared to costs). This can also take the form of a fixed price or cost, in which case economic operators will compete on quality criteria only. The 'best price-quality ratio' concept has expanded what is possible for contracting authorities to request and use to determine contractors

The changes instituted in 2014 enable public authorities to go beyond the initial product price to account for the overall impact of the full life cycle of a product, including usage, maintenance, and end-of life, as well as environmental externalities such as possible environmental damage from the extraction of raw materials or energy used in the production process -- provided their monetary value can be determined and verified.[25]

Critically, EU public procurement law prohibits public authorities from including criteria within a tender that are known to risk that the contract will have to be awarded to a provider that does not offer the best price-quality ratio.[26] This means that the use of advanced criteria that makes a tender even more balanced towards quality-based metrics or a particular social outcome, such as sustainability, is restricted, as the tender cannot make price a secondary consideration. Price therefore remains a heavily favoured and weighted category, despite the inclusion of other characteristics in the selection process.[27]

Directive on Public Procurement, February 26, 2014

Provision 90 – best price-quality ratio

It should be set out explicitly that the most economically advantageous tender should be assessed on the basis of the best price-quality ratio, which should always include a price or cost element. It should equally be clarified that such assessment of the most economically advantageous tender could also be carried out on the basis of either price or cost effectiveness only.

Article 67 - Contract award criteria

Contracting authorities shall base the award of public contracts on the most economically advantageous tender. The most economically advantageous tender from the point of view of the contracting authority shall be identified on the basis of the price or cost, using a cost-effectiveness approach, such as life cycle costing in accordance with Article 68, and may include the best price-quality ratio, which shall be assessed on the basis of criteria, including qualitative, environmental and/or social aspects. (...) The cost element may also take the form of a fixed price or cost on the basis of which economic operators will compete on quality criteria only. Member States may provide that contracting authorities may not use price only or cost only as the sole award criterion or restrict their use to certain categories of contracting authorities or certain types of contracts. (....). The contracting authority shall specify, in the procurement documents, the relative weighting which it gives to each of the criteria chosen to determine the most economically advantageous tender, except where this is identified on the basis of price alone.

Article 68 – Life cycle costing

Life cycle costing shall to the extent relevant cover parts or all of thefollowing costs over the life cycle of a product: (a) costs, borne by the contracting authority or other users, such as:

costs relating to acquisition, costs of use, such as consumption of energy and other resources, maintenance costs, end of life costs, such as collection and recycling costs and (b) costs imputed to environmental externalities linked to the product during its life cycle, provided their monetary value can be determined and verified.

Space for enhanced environmental, supply chain and social criteria

As part of the new EU purchasing rubric and the broadening of criteria to allow selection partly on non-cost related factors, the 2014 Directives allow public authorities to, where appropriate, embed sustainability requirements, such as requesting that suppliers meet the requirements of eco-labels, demanding the enhancement of environmental factors in the production process, or asking for an offer that considers costs covering the whole life cycle of a product.[28]

The Directives provide the opportunity for public purchasers to request, for example, that no toxic chemicals are used in the product or production process, that energy efficient machines are employed in the provision of goods or services, or that product components are produced in compliance with International Labour Organization (ILO) conventions and applicable labour laws. This represents a new supply chain aspect of public procurement. Social considerations, such as labour market inclusion and where the economic effects of a tender will be felt can now also be included in the procurement process.[29]

Transposing the EU Directives into national legislation

Following the adoption of the Directives, it is the role of national governments to amend or create new national legislation applying the Directives within each EU member state. Though, in the case of public procurement, while the EU has created space for sustainability factors to be used, the Directives themselves do not specify how member states should achieve the goals they outline, leaving it to them to determine how best to implement. Thus, while the new mechanism for evaluating tenders must become part of national law, additional tools to promote the use of sustainability in procurement are not required.

EXAMPLE Denmark has created a **Partnership on Green Public Procurement** between municipal governments, regions and other public organisations, to pursue more rigorous sustainability policies based upon an agreed set of criteria for different products, including IT products. While voluntary, the partnership serves as a tool to pool together the political will of procurers who wish to be at the forefront of green procurement.

Role of national governments

Both the GPP and SPP initiatives are therefore reliant on the willingness of member states to use them. By providing a common reference point, however, they do create the possibility for alignment of procurement practices in the absence of mandatory common criteria.[30]

This dynamic means that while the European Commission and the European Parliament have been at the forefront of setting the overall tone and scope for the increase in the use of sustainability criteria in public procurement of both IT and other products, their success and the impact they have had to date has depended on how rigorously member state governments impose sustainability guidelines and goals.

The key mechanism by which national governments have gone about demonstrating their approach to sustainable public procurement policies has been through the use of National Action Plans (NAPs). Originally requested by the European Commission in 2003, governments were asked to develop NAPs that set out three-year procurement targets for public sector entities and measurements by which to judge their progress. Within these NAPs, and since the 2014 Directives, member states have been encouraged to include environmental criteria developed by the GPP, which help assess the environmental impacts of different products and services and thus can improve the public procurement decisions taken by member states.[31] Overall, NAPs are the tools by which national authorities are able to define their procurement objectives and outline which criteria, including potentially the best price-quality ratio, that they wish to use in public tenders.

Instituting National Action Plans

As of June 2018, 23 member states had adopted NAPs, leaving five (Estonia, Greece, Hungary, Luxembourg, and Romania) yet to do so.[32] The three-year goal-setting metric originally included in the framework for developing NAPs is not routinely revised by all states, with some using longer targets and others simply allowing targets to expire. However, many governments have in practice either referenced the GPP criteria in their NAPs or adopted criteria that reflect these quite closely. For example, the UK Government Buying Standards are largely aligned with the GPP criteria even though they do not strictly reference GPP criteria directly.[33]

NAPs have led to improvements, but have also created misalignment in:

- The application of criteria;
- assessment of sustainability performance; and
- assignment of value to sustainability performance beyond regulatory compliance.

While NAPs are not legally binding on governments, they can be on local public authorities and they set the tone politically for how organisations should think about and work towards implementing Green Public Procurement processes. The specificity provided by NAPs is in contrast to the EU Directives, which do not prescribe specific measures.

While some criteria have become mandatory, sustainability is still very much a policy-driven process, and the NAPs serve as the political manifestation of a national willingness to promote and encourage sustainability. The programmes and goals outlined within NAPs are often extended to the subnational level, with regions or municipalities developing their own initiatives either in concert, or under the guidance of, national authorities. For example, both the Netherlands and Finland have set targets for all government bodies, applying national-level goals to regional and municipal bodies as a means of setting the tone for all public procurement in the country. This is an important characteristic of how member states promote sustainable procurement.

The reality, however, is that the content, nature and ambition of NAPs differs widely within the EU. While some countries, such as Germany and Belgium, have forced national procurers to adopt life cycle costing methods, and some, such as France, have enacted rigorous targets for the percentage of public procurement

contracts that should include environmental and social clauses, others have not gone beyond the GPP criteria standard of having 50% of all public procurement contracts use GPP criteria.

While NAPs have been effective tools at the national and municipal levels, they have also led to uneven development in the application of criteria, assessment of sustainability performance, and the value assigned to a contractor's sustainability performance beyond regulatory compliance, as member states are free to choose how ambitiously they wish to make use of methods within the GPP criteria.

IT sustainability – increasing focus on social criteria

Although within the EU there are different international, national, and sub-national mechanisms to promote sustainability in the public procurement of IT products, the methods for how this sustainability is judged are relatively consistent across the EU due to the use of GPP and its standardized criteria, as well as by adherence to external certifications.

For the IT sector, this means that there are a few established and well-understood categories of additional criteria that are used to judge products, regardless of contract type or length. Although the exact metrics or requirements of contracts vary significantly, there is broad consensus around what constitutes environmental sustainability. Yet, there are also new areas where sustainability criteria can be applicable to IT products, particularly social impact -- an area less rigorously defined by the GPP criteria and not present in all eco-labelling criteria.

Traditional criteria

Following the provisions of GPP criteria, sustainability for IT products within the EU is usually broken down into four main areas that have an environmental or material focus:

- energy consumption;
- use of hazardous substances;
- product lifetime extendibility; and
- end-of-life management.

While further divided into core and advanced technical criteria (to assist governments hoping to pursue more or less stringent procurement strategies), the four categories are the general framework used by procurers when evaluating IT products.

Energy consumption

Energy use is often the most easily understood and universal standard, which continues to be the number one criterion considered by public procurers.[35] As energy output is a metric closely related to carbon emissions, products with lower energy consumption are deemed to be more sustainable.

While the EU-US Energy Star agreement expired in February 2018, the 2012 EU Energy Efficiency Directive still mandates that central governments should procure office products that comply with energy efficiency requirements no less demanding than those listed in Energy Star product specifications.[36] This use of Energy Star within an EU Directive and by sustainability labels has effectively codified its standards as the EU minimum in terms of energy efficiency.

Hazardous substances

Some substances used in the manufacture of IT products are known to be hazardous as they can be released into the environment during manufacture, use and disposal. These chemicals are thus actively regulated by the EU through REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals), which was first passed in 2006, and Restriction of Hazardous Substances (RoHS), which was most recently updated in 2011, with companies required to document the effective recovery, reuse and recycling of listed materials. The presence of these materials in IT products as well as the systems and processes put in place by the provider to minimize, account for, and monitor the use of these materials are thus considered one of the base environmental criteria for IT goods.

Extended product lifetime

The ability of a product to be reused or repaired, so increasing its lifetime and reducing the need for a replacement product to be made or purchased, is another staple among the criteria for judging product sustainability. In this regard, IT products are judged on the warranty and service agreements they provide, the availability of spare parts and the future availability of those goods, the ability of the product to have key components readily repaired, and, when applicable, the ease at which the product battery can be replaced.[37]

End-of-life management

The final criterion is how products are disposed of, known as end-of-life management. This encompasses some of the previous environmental criteria, namely the presence of hazardous substances, but also factors in the ability to recycle a product, the ease with which this can be done, and how circular the product component can be, i.e. its potential for reuse.

This is an area where some industry players are already making strides. For example, certain IT companies already source significant volumes of computer components from recycled materials and ensure that a very high percentage of all materials used are recyclable.

Sustainability certifications and supply chain management systems

These four categories of sustainability criteria represent a myriad of different standards that must be met and monitored by manufacturers, creating a significant challenge for compliance.

As a means of solving this and communicating compliance with public procurers and other purchasers, various standards and sustainability labels have been developed, such as Energy Star for energy efficiency. Additionally, specific standards have been developed for individual product categories including the Electronic Product Environmental Assessment Tool (EPEAT), which covers desktop computers, notebooks, thin clients, workstations, monitors, servers, imaging equipment, and other product categories. Another standard for comparability is the ECMA-370 -- The Eco Declaration, a voluntary product declaration that defines the environmental attributes for IT and Consumer Electronics products during their entire life cycle. Certifications such as TCO Certified are also increasingly being used. TCO Certified products must meet a range of social and environmental criteria that cut across the product's life cycle, including manufacturing, use, and end-of-use recycling. These forms of third-party verification thus already constitute the industry standard for ensuring corporate compliance with the sustainability criteria associated with the GPP guidelines.[38]

The IT industry has also been active in developing supply chain management systems for more than a decade. The Responsible Business Alliance (RBA) was founded in 2004 by a group of electronics companies seeking to create an industry-wide standard on social, environmental and ethical issues in the industry supply chain. The founding members, which included major electronics brands such as Dell Technologies and HP, as well as large Tier 1 suppliers, saw an opportunity to drive change across the industry by creating a unified approach and ensuring that suppliers were held to a common standard.

The efforts within the RBA have resulted in a comprehensive programme for companies to independently assess and measure that their products and services are produced in line with internationally-recognised standards, such as ILO conventions on workers' rights and UNGP. Today the RBA comprises over 140 electronics, retail, auto and toy companies, together directly employing over six million people. In addition to RBA members, Tier 1 suppliers to those members are required to implement the RBA Code of Conduct.

Increasing role of social, circular and standards

The four traditional criteria highlighted above represent the established view of how to gauge the sustainability of IT products and mainly involve environmental factors. However, the definition and view of sustainable procurement within the EU is changing. Decision-makers are increasingly moving beyond factors labelled as environmental, and towards those focused on social sustainability, and how to involve social metrics in the procurement process -- despite the reporting challenges they present. Of the 29 EU and EEA States that have transposed the the 2014 EU public procurement Directives into national law, 23 countries have adopted national legislation that reflects social sustainability criteria.[39]

Interviews with sustainable procurement experts from both the EU and North America identified three changes underway in how sustainability is defined, evaluated, and monitored within the EU, with each change either creating a greater emphasis on social criteria, or helping to reduce barriers to the inclusion of those standards.

#1 – Focus on responsible production

The first change taking place within sustainable IT procurement is a push for the inclusion of more social sustainability factors in how products are evaluated, and how companies engage with their suppliers and workers. The inclusion of social criteria for public contracts has become increasingly included in regulatory frameworks following not only the 2014 EU public procurement Directives but also the 2011 creation of the UNGPs, and, most recently, the updated 2018 OECD Due Diligence Guidance for Responsible Business Conduct, which has expanded what can be included in public tenders and set new international standards in business behaviour, stimulating change.[40]

Public procurers are increasingly interested in social sustainability criteria and in metrics that show organisational behaviour.

Working conditions and labour rights throughout the supply chain, including in markets outside Europe, have thus become important for European public procurers, who do not wish to purchase IT products that are manufactured in conditions that impact negatively on employees or their communities. As mentioned by experts from industry groups and third-party verifiers of IT supply chain sustainability, including the RBA, this trend has seen the development of criteria related to supply chain responsibility, where some procurers, particularly in the Nordic countries, are increasingly asking manufacturers to provide information on the working conditions in which their products are made.

This increased desire to look beyond the ‘hard’ criteria found in the products themselves, which can be tested in a laboratory, has gone in tandem with increased standards from national procurers and the work of organisations such as Electronics Watch and Know the Chain, independent groups that monitor labour rights issues within the IT supply chain.[41]

Discussions with such groups demonstrated that procurers are increasingly interested in evaluating organisational behaviour.

Discussions with a sustainability label identified issues such as how firms incentivise their supply chains, how they audit and manage their suppliers, and how they do capacity building at the factory level, all of which could become increasingly important components of public procurement for IT products.[42]

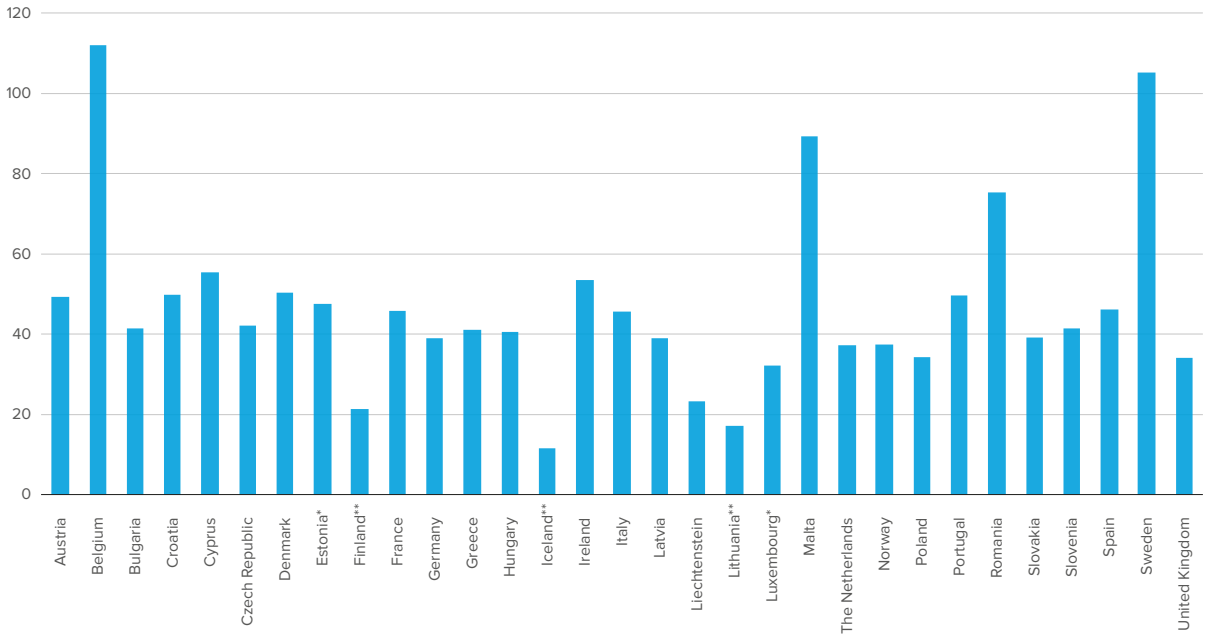
Industry has been aware of this growing requirement due to the monitoring of groups such as the RBA and its Code of Conduct updates, as well as the enhanced international framework for due diligence represented by the updated OECD guidance. The IT industry has expanded its investments in independent certification and audit programmes to show that it is compliant with these new criteria. The industry leaders are now producing annual reports with descriptions of supply chain management systems and key performance indicators such as aggregated audit results.[43]

This desire to include social responsibility criteria represents a new challenge for both procurement agencies and IT manufacturers. Unlike environmental metrics that can often be tested in a lab, compliance with social criteria and norms of business behaviour is more difficult to ascertain, and requirements from different procurers vary significantly. To solve this issue, a recommended option is for public procurers to set compliance with the RBA Code of Conduct as a set of criteria for supply chain responsibility in their contracts, and to lay out best practices on how suppliers can document their programmes and management systems for supply chain responsibility.

#2 – Increased pressure to develop a circular economy

In tandem with an increased focus on how manufacturers interact with their supply chains, which can be considered the beginning of the product life cycle, the drive to include social sustainability criteria in the public procurement process for IT products has created a similar focus on life cycle management and the creation of a circular economy. In Europe, this aspect is governed by the Waste Electrical and Electronic Equipment (WEEE) Directive from 2012, which sets out standards for how electronic waste should be disposed of and incentivises processes to increase its uptake. This has led to a growth in e-waste recycling within the EU, with the recycling rate of e-waste expanding from 27.8% in 2010 to 41.2% by 2016.[44]

Figure 2. Recycling rate of e-waste (% of total)[45]



*2015 data, **2014 data

Source: Oxford Analytica

Even though the impacts are often removed from the direct supply chains of the brand firms themselves, manufacturers are increasingly being asked to consider the effects of how electronic products and packaging materials are reused, recycled and accounted for in the procurement process. This manifested itself in the April 18, 2018 decision by the European Parliament to update EU rules on waste management and include schemes for Extended Producer Responsibility (EPR), which will become mandatory for all packaging by 2025.[46]

Brand companies are increasingly aware of the need for a circular economy and several have developed tools to demonstrate their commitment to this practice. Notable examples of this are the use, by some companies, of recycled plastics in the manufacture process, including from old computers, creating a closed loop process that contributes to the reuse and recycling of e-waste. Firms such as Dell Technologies and HP have also integrated recycled ocean plastics into their product packaging and introduced programmes to measure their overall carbon footprint, as additional means of showing commitment to life cycle management and the creation of a circular economy.[47] Programmes such as these are not yet always considered by public procurers.

"The aim should be to go further by mobilising national purchasing powers to have circular procurement and make Europe a leader in the circular economy." – Marika Lautso-Mousnier, Member of Cabinet of Jyrki Katainen, Vice President for Jobs, Growth, Investment and Competitiveness, European Commission Forum Europe, *Driving Sustainability in European Public Procurement event, Brussels, November 27 2018*

#3 – Harmonization of standards

The increased demand for visibility throughout the product life cycle has spurred the third change in how sustainability is dealt with: a push for the harmonization of sustainability standards across geographies or third-party labels.

The RBA Code of Conduct serves as an industry-wide tool to harmonize different international norms and standards so that one mechanism of compliance can help demonstrate to procurers the various different criteria met by a manufacturer.

Conversations with procurers, as well as sustainability labels such as EPEAT, revealed that both types of organisations are making efforts to harmonize standards for criteria that are aspirational or behavioural in nature, such as how a company interacts with its supply chain and employees, or manufactures products to make it easier for them to be recycled or taken apart, and thus improve/mediate the social and environmental impacts of remanufacturing or reuse.[48] This is helping to give manufacturers a clearer picture of the information they need to provide. It is also simplifying the process for procurers as there is more consistent data being captured, and at scale.

The RBA Code of Conduct, to which their member companies have committed, seeks to incorporate all relevant international norms and standards, including the Universal Declaration of Human Rights, ILO International Labour Standards, UN Guiding Principles on Business and Human Rights, OECD Guidelines for Multinational Enterprises, ISO and SA standards, and many more. As a result, a certain degree of harmonization of best practices can already be observed, at least among RBA member companies, which are often described as the most advanced in the industry.

This harmonization of standards, however, has not been without difficulties. While it has raised the bar in terms of what manufacturers are expected to provide, limited use of sustainable public procurement criteria in tenders for the IT sector means that the efforts of firms that have undertaken voluntary initiatives, or that comply with certifications such as EPEAT or TCO Certified, or the RBA Code of Conduct, are often not taken into account in public procurement decisions.

Deborah Albers – Vice President, Responsible Business Alliance

The Responsible Business Alliance (RBA), is a non-profit coalition of leading companies dedicated to improving social, environmental and ethical conditions in their global supply chains. The RBA is comprised of more than 140 members directly employing over six million people. Deborah Albers is Vice President at the RBA. Deborah's role includes strategic development across the organization including new programmes and services for members, as well as RBA's work involving public procurement.

What is the Responsible Business Alliance doing to help develop sustainability criteria?

Our approach is based on a Code of Conduct that is regularly updated, most recently in 2018. The Code provides the flexibility that is needed when some governments have more progressive requirements than others, so that if a country asks for more detailed information, an RBA member can point to our Code of Conduct and say "I meet these requirements" because it covers nearly 100 percent of most public buyers' requirements. Areas that are not covered by the code are often aspirational and not easily auditable. I like to use a living wage as an example. It is an aspirational goal but is often defined differently in each country, which can put suppliers in a difficult position. We are helping public buyers distinguish between an aspirational goal, one to which suppliers must aspire, and a verifiable requirement of the bid. We want to show governments that most standards they set can be covered in our Code of Conduct or met through our voluntary initiatives.

What are the relative roles of producers and procurers in establishing sustainability criteria?

It is the job of the buyer to describe what the working conditions must look like for the supplier that builds the product. Most will be reasonable, while some will be aspirational and difficult to measure, but it is then up to the supplier to show that it has a management system that enables it to adhere to these requirements with confidence, and that it regularly tests this system to make sure that it is functioning. The buyer needs to be committed to the requirements it makes, and the supplier has to be committed to putting in place a system to meet them.

What should be the next step in promoting sustainability criteria in the IT sector?

Once suppliers see that multiple procurers are serious about the same criteria, they can appreciate the need to invest in the necessary changes and a partnership can develop as both sides look for ways to work together in this area. We are starting to see companies make decisions about who is in their supply chain based on the ability of these suppliers to demonstrate that they meet the values of the customers.

What are the challenges on the public procurement side to greater sustainable IT procurement?

Procurement in Europe no longer depends exclusively on price, and buyers now have the ability to include social and environmental criteria. But as public procurement agencies use this ability to varying degrees, that flexibility produces different demands that can be extremely difficult for suppliers to satisfy in a practical way.

It is similarly difficult to harmonize criteria across 20 or 30 countries when every framework agreement is different. And those differences can continue within a country, between different government levels and agencies. At the moment, as everyone involved in public procurement is forging their own paths, we hope to keep people working together toward the same goals, identifying the most important requirements on which every public buyer can agree.

Case studies – sustainable IT sourcing at the national level

As the criteria for sustainability in IT products have shifted, so too have EU government approaches. Minimum standard setting is no longer sufficient to drive improvements in sustainability, and while the European Directives provide objectives, many member states struggle to implement these effectively. Some member states have taken this challenge head on and made attempts to foster ways of ensuring sustainable IT products are purchased at both the national and subnational levels. The following three case studies are examples of how some EU member states and their subnational governments have gone about trying to encourage sustainable IT procurement and implement programmes that drive sustainability in the sector.

Netherlands

The Netherlands has incorporated sustainability in procurement thinking since its 2003 Government Procurement Plan. This fostered a focus on stimulating sustainable innovation and creating a larger space for a market-based approach to procurement, which was followed by the Dutch parliament deciding that all national government IT equipment and services should be procured sustainably by 2015. While this has not yet been achieved, the national government, regions, and municipalities have sought to encourage this process through innovative solutions.

National

- **Opening procurement scope to refurbished or remanufactured equipment.** As part of a project to develop a national framework agreement on sustainable procurement, the word 'new' was taken out of the requirements for the purchase of IT products. This enabled the consideration of refurbished or remanufactured machines in the procurement process. Although this did not automatically mean that previously-used equipment would be purchased, it made such acquisitions possible and allowed their sustainability advantages to be taken into consideration. In addition, the procurement criteria included that the products supplied could be used again for another cycle at the end of the lifespan or use phase. [49]

- **Established a help desk**. The Netherlands Public Procurement Expertise Centre (PIANOo) established a help desk to provide public authorities with resources that include guidelines on working through the procurement criteria process, developing stakeholder involvement, and understanding best practices. It also provides links to training that public procurers can

By removing the word 'new' from the national framework, public procurers gained the option of purchasing refurbished or remanufactured IT products.

follow and offers tools to help contracting authorities engage with suppliers in managing supply chain risks during contract implementation.[50]

- **Gathering and sharing corporate experiences and elements of best practices.** In 2011, the Netherlands introduced 'Green Deal' agreements under which the central government helps not only other tiers of government but businesses and civil society groups to implement sustainable procurement plans. The goal is for at least 10% of the total procurement budget to be spent on circular projects by 2020. The Green Deal on Circular Procurement, launched in 2013, was notable because it collected the experiences of the organisations being helped and the main structural challenges that they encountered. This allows the central government to work on ways to overcome those barriers, from modifying legislation and providing greater insight to offering more help by fostering networking mechanisms that enable organisations to share and pool experiences, knowledge and solutions. The data gathering has given government a better sense of the challenges that suppliers face in meeting sustainability criteria and the solutions that they come up with to overcome them, widening the knowledge of best practices.[51]

Subnational

- **Socially responsible procurement manifesto.** The Socially Responsible Purchasing Manifesto, presented by PIANOo in 2016, commits different government authorities, including national, provincial and municipal, to develop their own action plans to further the use of sustainability and social responsibility in procurement. While voluntary, over 150 government bodies have signed on, and have thus taken the step of creating their own policy objectives for sustainable procurement, including for IT products, helping to foster greater momentum for the use of those criteria.[52]
- **Developing a pragmatic guidebook to sustainable procurement.** The city of Amsterdam regards sustainable procurement as an important instrument in realising policy goals on sustainability and climate change. As part of this approach, it has taken the country's central government sustainable procurement criteria as the starting point for a city procurement policy that goes even further. As a result, its most recent framework agreement for computer procurement includes a requirement for suppliers to provide an environmental assessment of the product and usage, supplanting a reliance on just an Energy Star rating. They also require compliance with ILO norms and conventions. The city has developed its own guidebook to help ensure compliance with the city's overarching sustainable procurement policy, under which environmental and social criteria add up to 30% of the determining criteria in the selection phase of the tendering procedure.[53]

Germany

Germany has steadily increased the role of SPP and GPP criteria in its national procurement processes. Signifying this trend, the country's 2015 National Action Plan on Sustainability adopted the latest EU public procurement law and framework contracts for the central purchasing body, Kaufhaus des Bundes, as well as an emphasis on energy efficiency as an element of the country's climate protection strategy. It also included a mandatory target for all federal authorities to use life cycle costing in their procurement procedures by demanding tenderers provide an analysis of life cycle costs.[54]

National

- **Online tools and training programmes.** The Procurement Agency of the Federal Ministry of the Interior (BeschA) launched a National Competence Centre for Sustainable Public Procurement in 2012 to provide support to all levels of government. It offers guidelines and other material addressing issues around sustainable procurement as well as training programmes and the ability to respond to direct inquiries via telephone and email.[55] Another national source of information and help is the Sustainability Compass, produced on behalf of the Federal Ministry for Economic Cooperation and Development, which provides advice on how to consider sustainability at all phases of procurement. One of its most useful features is the ability to find municipal best practices, arranged by federal state and accessible via an interactive map.

Subnational

- **Coming together to work with and support a specialized intermediary.** The city of Bremen has included environmental as well as social criteria in its public tenders, together with a reference to ILO norms. It has been keen on centralizing purchasing for several cities and states at the same time, to allow for a more robust application of environmental and social criteria. This has led to them working with Dataport, a specialized intermediary body that negotiates with suppliers on behalf of the local governments.
- When Bremen, Hamburg, and Schleswig-Holstein recently came together to use Dataport for a combined IT hardware purchase, Dataport approached bidders that would potentially be interested in managing sustainable supply chains related to the products involved. Prospective bidders were asked to outline in writing what they thought was generally possible in this area, what they were willing to offer in this particular procurement, and how their compliance could be verified. When Dataport found that it did not have enough in-house expertise to effectively specify the social

criteria requirements in the tender, it was able to bring in expertise from the government of Bremen to help draft the text covering social production and to evaluate the responses.[56]

Sweden

Although Sweden's most recent National Public Procurement Strategy (2017) is intended for central government authorities, the expectation is that representatives of municipalities and county councils will adopt a similar approach to match their public procurement policy objectives. Together with promoting efficiency and encouraging market competition, the strategy puts environmental and social concerns among its seven policy objectives for procurement.

Setting ambitious sustainability standards can test the market and demonstrate to procurers what is currently possible.

National

National capacity building programmes. To support the adoption of its policy objectives, the National Agency for Public Procurement offers recommendations on environmental and social requirements to be used when purchasing goods, services and works. The agency not only produces written guidelines and documentation but also offers support via telephone, email and an online forum. Help with social responsibility criteria is organised by product type, and there is also an online tool that helps authorities identify specific criteria for individual products.[57] In addition, since 2010, contracting authorities and SMEs have had access to a free online tool called CSR Compass. This resource enables contracting authorities to access templates and guidance on sustainable procurement practices, as well as offering templates and supporting materials to companies looking to create a code of conduct for sustainability.[58]

Subnational

Setting ambitious standards for sustainability when purchasing IT equipment. In 2010, Stockholm County Council introduced stringent new environmental requirements for purchasing computers. To prepare a tender for new computers, the Council used its own set of procurement criteria, which are more robust than the EU standard. Among the requirements were that all equipment meet the latest Energy Star top ratings and have a 20% better Typical Electricity Consumption; be free of lead, mercury, PVC and halogenated flame retardants; and contain at least 10% recycled plastics. Although not all tenderers were able to meet all, or even a majority, of the sustainability criteria, the Council was still able to place the contract. As a result of using these criteria, it expected that over a period of three years it would reduce the climate impact of its computers by 40%, reduce the associated weight of hazardous substances by eight million kilograms, and cut its carbon dioxide emissions by two million kilograms.[59]

- **Using a questionnaire to check progress.** In Sweden, some procurement authorities use a standardised questionnaire to check progress and compliance. At agreed intervals, the winning bidder must complete a questionnaire about social rights and measures along the supply chain. With the help of an evaluation sheet that uses a traffic light system to indicate levels of concern, authorities can then assess whether the bidder is compliant with the agreement. All 16 county councils in Sweden have joined forces and demand the same social standards and procedures from bidders, creating scale in Sweden and making this approach possible.

Developing successful strategies

The experiences from the Netherlands, Germany and Sweden allow us to pull together some general lessons about successful strategies for developing the use of sustainability criteria in government IT procurement.

Educate public procurers on existing standards. As shown through the national capacity building programmes in both Sweden and Germany, one of the most impactful measures that can be taken is to proactively educate public procurers on what the current sustainability criteria in NAPs and GPP are, and how to implement them. Sustainability criteria can only be used by procurers that are aware of them, and of how to incorporate them into public tenders. Increasing knowledge of those standards is thus a key strategy for increasing their use and making sure that public authorities are aligned on what can and should be asked of the market.

Previous public procurement rules, which strictly divided buyers and producers, scared off both companies and public authorities from having this conversation. But dialogue is essential to drive shared understanding and accelerate progress.
-Louise Koch
Corporate Sustainability Director, EMEA at Dell Technologies

Align on verification of social sustainability criteria

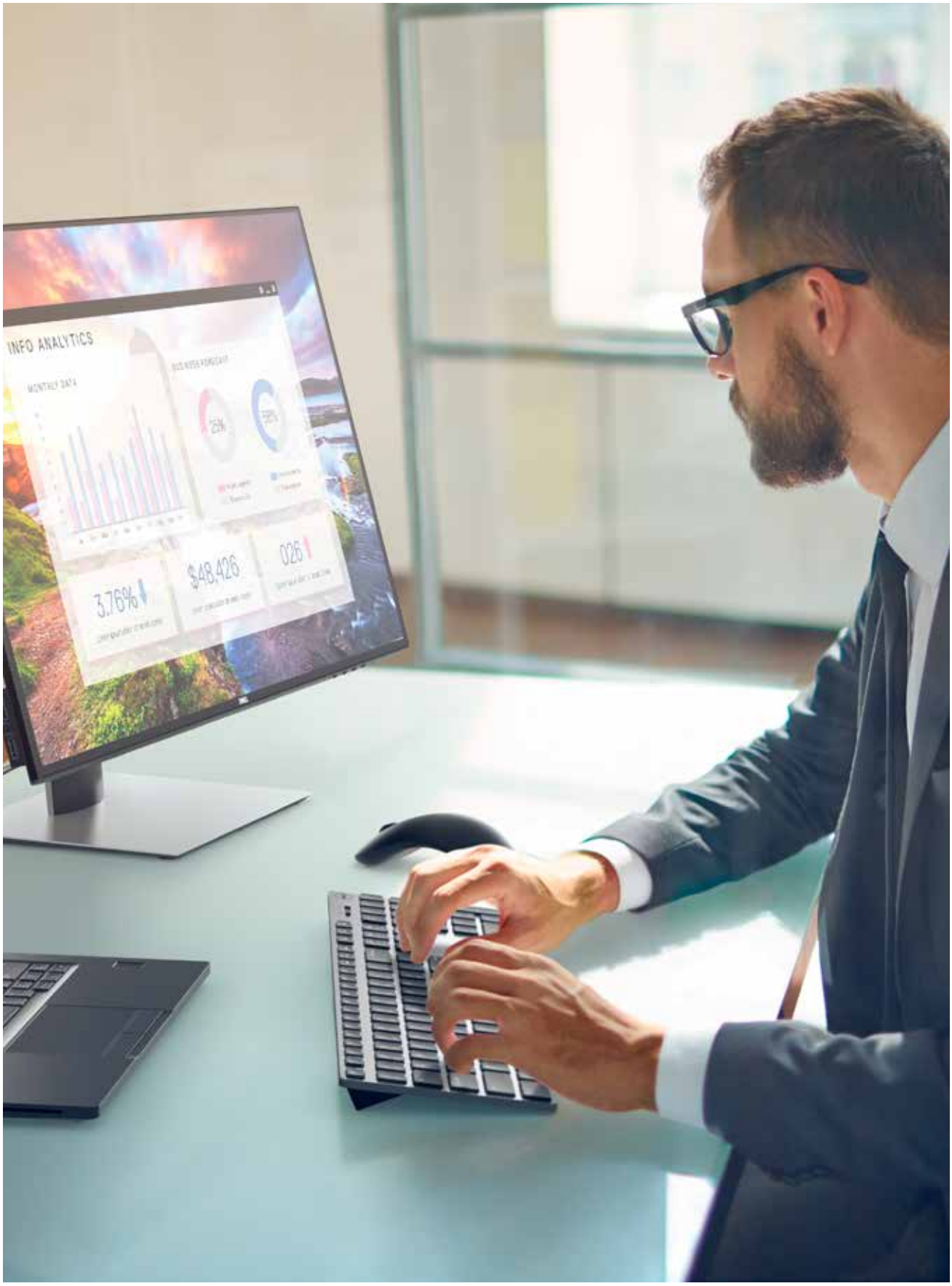
With regards to environmental, and particularly social, criteria for sustainability in procurement, it can be challenging to find practical and affordable ways of determining compliance. While municipal governments in Sweden have made use of questionnaires, and the city of Amsterdam has created a guidebook for following procurement standards, neither are particularly scalable or likely to be uniform.

Industry groups have, however, sought to lower this burden by making use of sustainability labels, industry standards and protocols such as the RBA code of conduct. It is important for public procurers and the industry to coalesce around what are the relevant disclosures that provide meaningful insights and demonstrate robust governance protocols, so that they can be included in third party verification tools, which can then help create some uniformity around what information is both sought after and provided.

Continue to evolve criteria on sustainable products and incentivise performance

National and subnational governments can help in creating new approaches to sustainability by revising their procurement criteria, to be at the forefront of developments and to align closely with the EU Directives. One example is placing new emphasis on the idea of circular procurement. This may mean starting with relatively limited criteria but expanding their scope over time.

It is also useful to incentivise businesses for improved performance and differentiate between producers that meet the qualification criteria, and those that go beyond. By creating mechanisms to reward manufacturers for meeting award criteria and overcoming barriers to adoption of more advanced standards, governments will be in a stronger position to find producers that are able to meet their advanced criteria.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Klaas van der Sterren – Policy Advisor, Government of the Netherlands

Klaas van der Sterren is a policy advisor for the Government of the Netherlands on effective and efficient (re)use of waste and materials. He is also involved in international projects aiming for knowledge transfer and the global development of a circular economy. Klaas has a focus on two main product categories: Plastics and ICT hardware. For the latter, Klaas has been active in projects that seek to implement circularity in procurement processes.

What have Dutch efforts been like to promote the sustainable public procurement of IT products?

A few years ago we looked at the recycling of e-waste to see if we could extend the life cycle through refurbishment. It quickly became clear that we needed a holistic approach in how we use IT if we wanted to do things sustainably. We created three pilot projects. One was to see if IT hardware containing data could be prepared to be reused instead of discarded, another was to replace 1,000 laptops in Utrecht, and the final one was a national framework agreement that allowed the purchase of products that were refurbished rather than new. Recently, I have been working with municipalities on ways in which procurement can encourage the market to produce more sustainable products.

The challenge for the Netherlands is that its market is too small to influence how big companies produce and develop their equipment. We need to scale up and organise across Europe in order to have serious conversations with brand owners. We also need to concentrate on what is possible. If I want a sustainable future in which products have no negative impact, I need thirty years. But with procurement I have a 1-2 year timeline, and thus have to think about achievable steps. One thing we can do now is to foster a dialogue with the market to help us talk the same language about sustainability and create a shared vision on what sustainable IT should look like in 2030 or 2040 and how we get there. At the same time, we keep facilitating procuring organisations in their practical operations to challenge the market now.

What about the municipal level? What type of interest and activity have you witnessed there?

The Netherlands has a strong interest in sustainability. Local authorities commit to things like being a sustainable village by 2030, or a climate neutral town by 2035. Individuals involved in procurement see their role as helping to achieve these goals, but they often get little support from organisations for developing sustainability criteria. Sustainability is not the responsibility of procurers, but of us all, and we need organisations to facilitate steps towards sustainable IT procurement, rather than leaving it to individuals to force change. At the moment, this is still a bottom-up process. Even when procurers can buy IT equipment that is not new, it still takes individuals to push them to consider it. Our next step is to change the default method of thinking, to buy X computers by asking: a) what do we really need, b) what can be reused or refurbished, and c) should we own or use as a service?

On a wider level, the challenge is not having ideas but producing results. The Utrecht pilot collapsed as suppliers could not deliver the refurbished equipment in the time they promised; although we learned a lot, including the extent of support for refurbished equipment, the project failed.

The bigger challenge for us now is to develop our thinking from the linear economy -- make, use, discard -- and move towards a more circular one. This is still a vague concept we hope to soon discuss with brand owners.

Barriers to increased sustainable IT procurement and how they can be overcome

While the Netherlands, Germany, and Sweden are examples of where governments are engaged in finding ways to promote sustainable IT public procurement, there are still significant barriers to making it easier for sustainable IT goods to be purchased and provided. These obstacles exist at both the procurer and provider levels and either restrict the potential for the purchase of sustainable IT products or create opportunity costs that are too great for either party to overcome. The advancement of sustainable IT procurement within the public sector requires both governments and industry to make concerted efforts to reduce barriers to adoption and to accelerate progress. This means creating an environment that encourages a greater exchange of relevant information so that public procurers appreciate what is involved in meeting the sustainability criteria set out in NAPs and through the GPP guidelines, and so that they can develop practical and reasonable approaches for verifying conformance. It is not that new regulation is needed, but more that additional guidance is required so that national and subnational authorities can make better use of existing regulation, as that regulation already allows for sustainability criteria to be included in public tenders.

While conducting this research and speaking to experts from procurement agencies, NGOs, the IT industry and industry groups, four barriers to increased procurement of sustainable ICT products were identified. The below table provides an overview of those barriers and summarizes the number of recommendations we then make to each of the European Commission, national policymakers and industry.[60]

Table 1: Overview of barriers to public procurement of sustainable IT products and resulting recommendations to stakeholders.

Barriers to further adoption	Recommendations for:		
	European Commission	National policymakers	Industry
A. Execution gap from sustainable procurement strategy to practice	2	2	
B. Diffuse purchasing power of public procurers		2	
C. Difficulty accounting for life cycle costs		1	2
D. Limited awareness of practical methodologies for public procurers to assess supply chain responsibility	1	1	2

A. Execution gap from sustainable procurement strategy to practice

Although national governments and subnational entities often have formal policies in place to implement a framework for sustainable IT procurement or to support NAPs, there is frequently a disconnect between that ambition and either end users or individuals in charge of procurement -- both in terms of their knowledge of those policies, as well as their ability to successfully integrate them into existing procurement practices. This exists on multiple levels, as there are -- depending on the circumstance -- instances of pushback against sustainability goals, a lack of knowledge of sustainability strategies, or insufficient training on how to implement those strategies, leading to them being underutilized.

It is common for individuals involved in procurement, particularly within subnational entities, not to be fully educated on NAPs as they relate to sustainability or aware of how to utilize and evaluate sustainability criteria in public tenders. This knowledge gap exists as a result of either the infrequency with which those bodies do procurement, or a lack of training on sustainable procurement. The limited awareness or training on these topics is compounded by the added time and complexity of using these criteria in the tendering process, further hampering the ability of procurers to achieve sustainability goals.[61]

Representatives of the European Commission have confirmed that a lot of the groundwork has been done and all the necessary supporting materials have been drafted, but that there remains an awareness and skills gap on the side of the public authorities: “Even if public authorities would like to do better, they often do not know how”. [62]

Peter Defranceschi, Head of the Brussels office of the International Council for Local Environmental Initiatives (ICLEI), stated that while he feels all the critical elements to making a success of sustainable public procurement, such as criteria, labels and good practices, already exist, it may now be necessary to move from a purely voluntary approach to a more mandatory one based on clearly defined binding targets.[63]

Although several experts have spoken in favour of moving from a voluntary approach to a more mandatory one to address the existing execution gap, imposing more stringent obligations via NAPs on local public procurers would conflict with local autonomy and fail to take into account practical constraints such as lack of time and resources.

Recommendations for national governments

1. Support the sustainability agenda through capacity building

For sustainable procurement of IT products to increase, individuals involved in procurement at the national and subnational level need to become more aware of and aligned with sustainability criteria and NAPs. Procurement bodies need to implement programmes to train staff on environmental and social criteria and provide access to resources needed to implement the necessary internal processes. National governments can assist by providing a central source of this information, perhaps within the bounds of a national competence centre. National competence centres could also lead efforts to develop smarter ways to evaluate sustainability criteria, such as the incorporation of third-party evaluations, including eco-labels and the RBA Code of Conduct.

2. Promote sustainability 'by default'

To shift the mindset of public procurers on the inclusion of SPP criteria, while respecting local autonomy and practical constraints by not imposing mandatory targets, NAPs should include the concept of sustainability 'by default', including recommendations for sector-specific sustainability criteria and clear guidelines for evaluating supplier performance. Rather than leaving the public procurer the freedom to decide whether to include sustainability criteria, public procurers that choose not to include sustainability criteria would need to proactively opt out and provide a justification for that decision. The resulting administrative burden could be reduced by providing a catalogue of standard justifications for public procurers to choose from if sustainability criteria are not applicable for the specific procurement.

Recommendation for the European Commission

3. Drive the sustainability agenda through international frameworks and best practice

Given its scale and ubiquity as a subject of public procurement in the EU, the IT sector should form a critical part of the European Commission's efforts around sustainability. The European Commission should promote the adoption of existing international frameworks which contain economic, environmental and social criteria, such as the 2018 OECD Due Diligence Guidance for Responsible Business Conduct (RBC) and the UNGPs. It should also work with industry and national governments to promote best practice, engaging with standards such as the RBA Code of Conduct, which provides industry with concrete steps to achieve greater sustainability, and procurers' assurances that sustainability criteria are being met. Finally, the European Commission could increase capacity

at the European level by providing provide a repository at the European level for best practice and training based on the experiences of procuring agencies across the continent.

4. Collect and publish data on progress in sustainability

The European Commission has acknowledged that, in aggregate, member states are falling short of targets around green procurement criteria. To focus minds on these goals the European Commission needs to provide more transparency on progress on both the proportion of green tender processes run and the level of penetration of sustainability criteria within individual members states. This could be achieved by regularly collecting and publishing data on procurement in a report that ranks the performance of member states. Such a report would also act as a catalyst for regular discussion among stakeholders on the state of sustainability within procurement.

B. Diffuse purchasing power of public procurers

Although total public procurement accounts for 14% of EU GDP each year, public procurers themselves are fragmented, and often operate on a small scale when purchasing IT products. Only 11% of public tenders in the EU are carried out through cooperative procurement between public buyers.[64] This creates a limiting factor in the advancement of sustainable IT procurement. While national governments may be slower to adopt more detailed NAPs or to try pilot projects, subnational governments are often nimbler, but are on occasion unable to successfully pursue projects as they represent too small of an opportunity for suppliers. Sometimes the scale of the order is simply too small or specific to be actionable in the market, as the gains provided by the contract would not be sufficient to outweigh the opportunity costs and operational challenges presented by developing new processes or auditing existing ones to meet the requirements set out in the tender.

This diffuse purchasing power of public procurers means that in the absence of defined national frameworks that clearly provide for enhanced sustainability criteria and therefore encourage producers to supply products in line with those criteria, the market may not be able to or willing to provide special solutions that meet the requirements of only a subnational body. This limits the ability of those groups to successfully incorporate more sustainable products into their tenders or push the market forward.[65]

Recommendations for national governments

5. Consider options for scaling up individual procurement processes

The example of the joint procurement procedure in Germany run by Bremen, Hamburg and Schleswig-Holstein discussed above demonstrates that it is possible to move forward the sustainability agenda through achieving scale. Again, national procurement agencies can act as a central hub, bringing partners together, as well as and documenting and sharing experience and insights.

One way this can be achieved is by creating a specialized intermediary able to represent the interests of the procuring bodies and liaise directly with industry before and during rounds of procurement. When necessary, these intermediaries should be able to draw on the expertise of the organisations they represent -- industry and national bodies.

6. Create national competency centres to share capability

To overcome problems of scalability -- particularly at the subnational level -- national procurement agencies can develop competency centres that offer procuring agencies access to expertise and information on best practice. As in the Netherlands, Germany and Sweden, the knowledge garnered by national agencies can be disseminated at the subnational level through softer measures such as help desks and training, or more formal measures, such as the Netherlands' Green Deal. This creates more coherence across bidding procedures at different levels and gives suppliers clear guidance as to what is expected of them.

These competency centres could further tackle the problem of scalability by acting as a contact point for industry. Through informal discussions held separately from specific tender discussions, procurers can understand current and future capability and best practice, while keeping industry informed of government priorities and the nature of demand.

C. Difficulty accounting for life cycle costs

Even when accounting for cost alone when assessing the sustainability impact of public purchases, challenges remain, as procurement professionals need to look beyond the initial costs of a product and its initial energy use to take account of non-visible factors and those with a delayed impact. The 2014 Directives expanded on the definition of Most Economically Advantageous Tender (MEAT) to allow procurers to consider not only the running costs of a product, but other externalities that do not necessarily appear on the balance sheet, most notably environmental considerations.

Energy efficiency is the most commonly valued environmental criterion used by public procurers.[66] However, it often represents a lowest common denominator and falls short of representing the true life cycle cost, which would require additional and more advanced criteria. Thus, while the life cycle cost of sustainable IT products is often lower than that of less sustainable alternatives, public procurers can lack either the experience or the ability to look with confidence beyond the initial costs.[67] This problem is often compounded by the organisational structure of procurers, whereby the cost of procurement and cost of use are covered by different departments or functions, making it more difficult for procurers to justify including the cost of use in public tenders.[68]

Very often, procurers still require training and tools to help them understand how to draft and score criteria that can accurately reflect the true cost of the purchase, running and disposal of goods in public tenders. Sustainable procurement can be a mentality and outlook as much as it is a process, given that it requires looking at social, environmental and cost concerns across both different departments and budget cycles. Instilling this knowledge takes time, and contracting groups that procure IT products infrequently will often lack the technical capabilities to include these factors in procurement.[69]

Recommendation for national governments

7. Develop tools to measure life cycle costs

National governments could implement tools to encourage life cycle cost measurement that make calculating it a simpler and easily repeatable-process with clear evaluation criteria. Denmark, for example, has developed an online tool that can calculate Total Cost of Ownership -- one aspect of life cycle costs -- for a variety of IT products, including computer and displays, which has enabled its procurers to more readily take advantage of this metric. The availability of such tools makes it much easier for procurers, particularly in subnational authorities or public entities that do not regularly procure certain goods.

Recommendations for industry

8. Make life cycle cost messaging more central to discussions with public procurers

While some brands are already using frameworks such as 'net positive' to talk about their products and issues such as recyclability, discussions with sustainability labels and procurement agencies made clear that there is an opportunity for manufacturers to improve the framing of their products within the confines of that structure, and present information about life cycle costs to public procurers in a more impactful and decisive manner. Doing so will in turn empower purchasers to consider their products even if the upfront per unit cost is higher than their competitors and help make it clear that certain goods fit within the best price-quality rubric.[70]

9. Design products in a manner that reduces barriers to product reuse and repair

Life cycle costing and the advancement of the circular economy incorporate the ability and cost of products to be reused and repaired. However, this goal and market competition are in some ways competing forces for the IT industry. Yet, public procurers are looking for suppliers that rise above those pressures and allow a product's life span to be maximized, even if that happens outside of a single firm's own supply chain. Manufacturers should therefore ensure that programmes are in place so that products can be easily repaired by authorized bodies and ensure product design does not limit the ability of components to be refurbished or to be included in remanufactured goods.

Doing so will make it clearer to purchasers that the life span of products can be extended and that some costs from products can be recouped when products are replaced, as they can be more easily sold to new users rather than simply taken out of service. This will only serve to reinforce the benefits of a life cycle approach and clearly demonstrate how goods from sustainable producers allow public purchasers to meet certain environmental criteria.[71]

D. Limited awareness of practical methodologies for public procurers to assess supply chain responsibility

The 2018 OECD Due Diligence Guidance for Responsible Business Conduct (RBC)[72] and the 2011 UNGPs have provided a clear standard of responsible business conduct, including as it relates to supply chains. The RBC details what is expected in terms of communications, contracting and pre-qualification processes for both suppliers and other business relationships. Nonetheless, procurers are often unclear as to how to assess the level of compliance with this guidance. They have traditionally relied on their own evaluations of internal supplier procedures, which vary in quality and can often be unfeasible at a smaller scale.

One solution is for procurers to engage with and adopt third-party standards, such as the RBA Code of Conduct. Agreement between procuring authorities and industry on third-party standards would mark a significant breakthrough in terms of meeting sustainability criteria in supply chains, as well as bringing new economies to procurement procedures.

Recommendation for European Commission and national governments

10. Work with industry and third-party providers on standards for sustainability in supply chains

As with recommendation 3 above, the European Commission and national governments should promote international frameworks on sustainability. The supply chain is an area where the need is particularly acute given the challenge of proving compliance in a manner that is not burdensome to both procurer and supplier -- particularly at smaller scale. For these reasons a substantive dialogue on the recognition and acceptance of third-party standards by the European Commission and national governments could drive improved compliance in supply chains.

The European Commission has made it clear that it does not believe that it should be defining guidelines for sustainable procurement by itself, but that it would on the contrary welcome a collaborative approach based on initiatives taken by Member States, local authorities and the industry to drive sector-specific progress. Agreement around third-party standards, notably the RBA Code of Conduct, could prove most effective in establishing a clear and cost-effective framework for evaluation.

Recommendations for industry

11. Engage in the further development of the sustainability agenda

Several leading firms within the IT sector, notably the members of the RBA, have robust risk assessment, mitigation and management systems in place. Aligned to their RBA Code of Conduct commitments, members undertake regular monitoring and audits, and work to educate suppliers and resellers so that they can improve and align their own processes, as those further removed from the procurement process are often less knowledgeable on issues of sustainability.[73] However, these efforts are not being undertaken by all players in the industry, and even when they are, they are not always consistently and effectively communicated to customers and stakeholders. Firms must therefore work to implement and advance robust programmes for risk-based supply chain management in line with criteria such as those produced by the RBA.

Moreover, it is not enough for industry players to just follow existing good practices for sustainability. As understanding of the economic, social and environmental impact of corporate activity increases, including within the IT sector, there is both a commercial and moral imperative for industry to commit to furthering the sustainability agenda, in collaboration with regulators and procurers at the national and European levels.

12. Improve communication around sustainability efforts

Firms should be prepared to clearly communicate the scope and impact of their sustainability programmes, so public procurers can better understand the maturity and effectiveness of the firm's supply chain governance practices. As part of this communications effort, firms need to ensure their suppliers provide them with the data needed to answer questions posed by public procurers.

Lidia Capparelli – Head of Green Public Procurement, CONSIP

CONSIP is an Italian national procurement agency, providing national and subnational authorities with tools and expertise to manage their purchases of goods and services, stimulating companies to compete competitively with the public system. Lidia Capparelli is the Head of Green Public Procurement at CONSIP, and has been involved with sustainable procurement since 2006.

How does CONSIP work to involve sustainability in the public procurement process?

At CONSIP, our framework agreements are mandatory for all levels of the Italian government, including local authorities under certain conditions. As all our instruments and frameworks are related to green procurement, sustainability is a mandatory issue. Working in conjunction with a committee headed by the Ministry of Environment that includes the Ministries of Agriculture, Health, and Economy, we have developed and codified a set of environmental minimum common criteria. These exist for IT hardware products that suppliers can use to show they are meeting our sustainability goals. Specifically, the mandatory requirements refer to technical criteria and contract clauses. We use the mandatory criteria and integrate others related to the life cycle approach when possible.

How do you choose when to supplement or expand mandatory criteria with additional ones?

We study the market to determine the most economically advantageous option. If we choose the lowest price because the product is standardized, as is normal in the IT sector, suppliers must still meet the minimum criteria. Procurement of innovative solutions not yet in the market is not our priority. It is not our role to set standards for tomorrow; we focus on the needs of today. However, we are glad to work where possible as part of an innovation partnership that allows us to talk with suppliers, putting out ideas and seeing how suppliers respond. Our role is to encourage an innovative approach to new products at the design stage, rather than enforcing change through procurement criteria. We also aim to make suppliers aware of all the rules involved in procurement and help them navigate the process, especially as the rules and frameworks differ across Europe.

Does IT equipment present any particular procurement challenges?

At the national level, we come together to buy IT hardware in large quantities because this gives us the best price and service. However, this also means that the equipment tends to be standardized. At the local level, we encourage the authorities to work directly through an electronic marketplace, which allows for customization if needed. This means operating on two levels: a best price-quality ratio or lowest price for standardised products, and the electronic marketplace that allows for greater inclusion of other standards. While local authorities can also add sustainability criteria, for example on life cycle management, they often lack the ability to assess compliance with those standards; it takes time build up the necessary knowledge, training, and market understanding.

Is there anything that suppliers can do to encourage procurement agencies to make greater use of sustainable criteria for IT?

We have experienced very little pressure from suppliers to make more use of sustainability criteria. When we have included issues such as dangerous substances or greater recyclability, they have sometimes been unprepared. There is competition on price and technical specs, but not yet on sustainability issues such as production or disposal.

Looking ahead – the future of sustainable IT public procurement

Although the publication of the 2014 EU Directives has opened up opportunities for sustainability to be incorporated into the procurement processes of national and subnational agencies, overall progress remains relatively limited, with sustainability criteria still widely underutilized in many parts of the EU. This need not remain the case however, and there are many tools that can be used and policies implemented by both public and private actors that can help stimulate further procurement of sustainable IT products.

Some of these pathways for improvement exist between industry and procurement agencies, as both need to do a better job of communicating with the other to build a shared understanding of sustainability solutions and relevant criteria already available, building on industry best practice and existing standards. Once procurers align their tenders and their evaluations more closely with these practices and standards, manufacturers will more readily be able to demonstrate compliance, such as through adhering to the RBA Code of Conduct and international eco-labels such as EPEAT and TCO Certified.

As more detailed and sector-specific guidance for national authorities on how to define and use sustainability criteria is lacking, there is uneven progress within the EU on sustainability in public procurement. Thus, even if industry and more proactive public procurers make efforts to connect sustainability strategies more closely with those making procurement decisions, there would remain a large gap between those relatively few procurers and the overall market, limiting the potential impact of European public procurement on IT sustainability.

To resolve this, and create EU-wide momentum, the European Commission could recommend the use of the RBA Code of Conduct for supply chain responsibility as well as international standards for product sustainability and life cycle costing, and over time help public procurers to build up the capacity to successfully evaluate based on this. In doing so, the European Commission will not only give public procurers the direction and impetus they need to involve sustainability criteria in more tenders for IT products in line with the 2014 Directives, but also will help to lower barriers for industry by making clear the sustainability criteria they will be judged on throughout the EU.

Such measures would be likely to further reverberate throughout the market and set a strong precedent for private procurers within the EU, which would also see their options for procuring sustainable IT products increase. By taking a proactive approach to how public authorities purchase IT products sustainably,

the European Commission can help make sure that sustainable procurement becomes the norm, not the exception, within the EU, for both public actors as well as private enterprises.

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