# **Circularity: Transforming Electronics** Procurement for a Sustainable Future

Join the Global Electronics Council (GEC) for a webinar on integrating sustainable procurement practices for a circular economy. The session includes insights on GEC's Purchaser Guide for Circularity and updates on the EPEAT Circularity Criteria.

Date: Wednesday, April 3, 2024

**Time:** 8 am - 9 am PDT | 11 am - 12 pm EDT | 5 pm - 6 pm CEST

Location: Virtual Event



Ralitza Naydenova Communications & Operations Lead CEP



Beth Eckl Advisor, Sustainable Procurement Strategic Sourcing OhioHealth



John Watt Circular Procurement Consultant International Telecommunication Union (ITU)



Bob Mitchell Chief Executive Officer, Global Electronics Council



GLOBAL ELECTRONICS COUNCIL®

Patty Dillon VP of Criteria and Category Development Global Electronics Council



Kaushik Ramakrishnan Senior Director, Strategic Growth Global Electronics Council

# Chatham House Rule

Participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed



# Housekeeping

- All participants are muted by default
- To ask a question to a speaker or panelist, please enter it into the Q&A panel of the video conference interface
- The meeting moderator will ensure questions are either answered through a video conference interface or live during moderated panels
- If we aren't able to answer all questions during the webinar, GEC staff will follow up with the participant afterward





# Agenda & Panelists



Welcome & Introduction



**Update on EPEAT Circularity Criteria** 



**CEP Partnership** and Roadmap



**GEC Circularity Guide** 



ITU Circularity
Guide



**Purchaser Perspective** 



**GEC**Chief Executive Officer

#### Patricia (Patty) Dillon

GEC
Vice President,
Criteria and
Category Development

#### Ralitza Naydenova

CEP
Communications &
Operations Lead, Circular
Electronics Partnership

#### Kaushik Ramakrishnan

**GEC** Senior Director, Strategic Growth

#### John Watt

ITU
Circular Procurement
Consultant

#### Beth Eckl OhioHealth Sustainable

Procurement

Advisor





#### **Global Electronics Council**

As a mission-driven nonprofit, the **Global Electronics Council** (GEC) accelerates the market for sustainable electronics.

Founded in 2006, GEC is an independent, international & impartial nonprofit that empowers procurement professionals and other key stakeholders through a variety of engagements & offerings, including the EPEAT, Type-1 ecolabel.

**GEC Staff** are located in the United States, Canada, Belgium, and The Netherlands.

Volunteer, highly diverse and non-industry representatives on the **GEC Board of Directors**.



Sustainability for a Connected Future

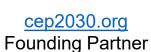
Visit GEC.org





#### GEC: Convening the ICT Sector & Purchasers







<u>circularandfairictpact.com</u> Supporting Organization



<u>cirpassproject.eu</u> Consortium Partner



On EPEAT
Advisory Council



<u>epa.gov/greenerproducts</u> EPEAT recommended



globalecolabelling.net
GEC is a Board Member



globalelectronicscouncil.org /training

Co-developed Sustainable Procurement training



www.sustainablepurchasing.org
/climate-collaborative
Member & Contributor





#### What Makes EPEAT Credible & Impactful

# Multi-stakeholder Consultation



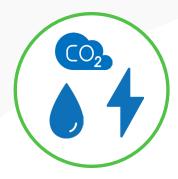
A cross-section of diverse stakeholders define criteria

# Full Life Cycle Impacts



Criteria address
sustainability
impacts across the
product life cycle from
material extraction to
end of life

#### Science-Based



Criteria focus on priority impacts, based on evaluation of available science and evidence

# Leadership Performance



Criteria represent marketplace leadership with only the top 25-30% of products typically able to meet the criteria

# Third-Party Verification



Independent verification ensures that products conform with criteria initially and on an ongoing basis





#### The Largest Selection of Sustainable Electronics



# COMPUTERS & DISPLAYS

Desktop Computers
Integrated Desktop Computers

**Monitors** 

**Notebooks** 

Signage Display

Tablets/Slates

Thin Clients

Workstations



**Printers** 

Copiers

**Multi-Function Devices** 

Scanners

Fax Machines

**Digital Duplicators** 



#### **PHOTOVOLTAICS**

Modules Inverters



#### NETWORK EQUIPMENT

Routers Switches



#### **TELEVISIONS**



#### **SERVERS**

Blade Servers
Multi-Node Servers
Pedestal Servers
Rack-Mounted Servers



#### **MOBILE PHONES**



# UPDATE ON EPEAT CIRCULARITY CRITERIA



Patricia (Patty) Dillon Vice President, Criteria and Category Development Global Electronics Council



#### **EPEAT Sustainability Impact Criteria**



#### **CLIMATE**

Reducing greenhouse gas emissions in the manufacturing supply chain and product use. Climate Change Mitigation Criteria



#### **CIRCULARITY**

How products are designed for longevity, reuse and recycling, and which ones responsibly address packaging, water, and waste.

Sustainable Use of Resources Criteria



# CHEMICALS OF CONCERN

Eliminating the use of toxic chemicals that are hazardous to human health and the environment.

Chemicals of Concern Criteria



# RESPONSIBLE SUPPLY CHAINS

The responsible sourcing of materials, fair labor practices, and worker health and safety in the electronics supply chain.

Corporate ESG Performance Criteria





# Developing Horizontal Criteria by Sustainability Impact Area







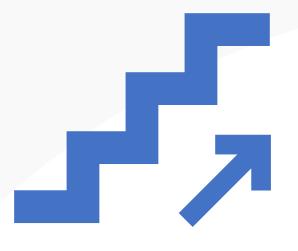




# Evolving with Science, Policy and Best Practices

#### The Early Years (2006 – 2017)

- Product energy efficiency
- F-GHG emissions
- Recycled & biobased content plastics
- Design for recycling
- Responsible e-waste recycling
- Restrict heavy metals (lead, mercury, cadmium)



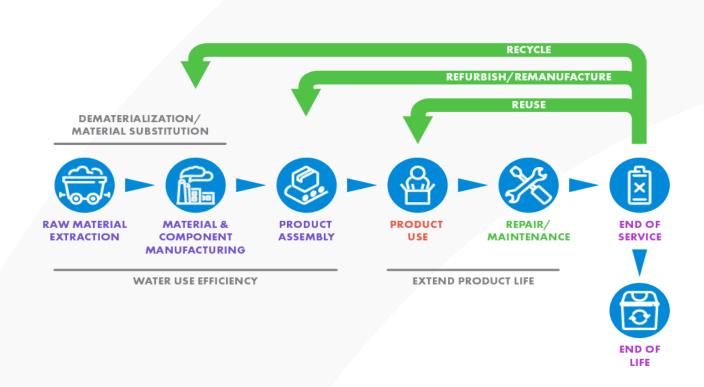
#### The Evolution (2018 – 2024)

- Use of renewable electricity
- Energy efficient manufacturing
- GHG science-based targets (new)
- Higher recycled content plastics
- Recycled content metals & critical minerals
- Product longevity
- Secure data deletion
- Chemical inventory & full substance disclosure
- PFASs (new)
- Manufacturing process chemicals (new)
- Fair labor & worker health and safety
- Responsible mineral sourcing





## Circularity Criteria



Coming October 2024

- Use and disclosure of recycled content plastics, base metals and critical minerals/rare earth elements
- Product longevity via access to firmware/software, durability, use of long-life batteries, interoperability, secure data deletion and access to repair
- Product design for repair, reuse and recycling
- Responsible end-of-life management/recovery, reuse and recycling
- Recycled content packaging & water stewardship



# CEP PARTNERSHIP AND ROADMAP



Ralitza Naydenova
Communications & Operations Lead
Circular Electronics Partnership

# Circular Electronics Partnership

Circularity: Transforming Electronics Procurement for a Sustainable Future

3 April 2024





# The need for a coordination platform

**Plenty of NGOs and other organizations** work with the private sector on individual projects towards circular electronics.

The risk of overlap in project objectives between initiatives is high, as well as misalignment in project outcomes

This is not helpful and **hampers collective progress** towards a mutual global goal of transforming the industry to a circular economy.

**Coordination between initiatives is imperative** 



# **About CEP**

The Circular Electronics Partnership (CEP) is a coordination platform for its six founding partners, industry members, and the wider stakeholder network driving collective and converging action on global initiatives for circular electronics.

#### **Partner organizations**







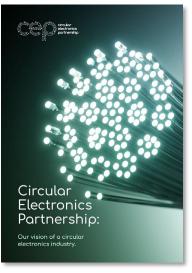
Sustainability for a Connected Future







#### **Industry vision**



Download Our Vision at www.cep2030.org



# **2024 Members**

#### Partners

















































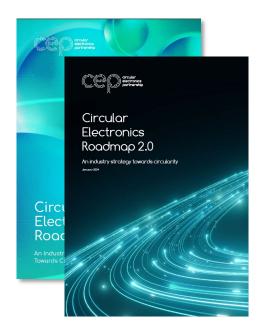






# **How** does CEP work?

#### **Roadmap**



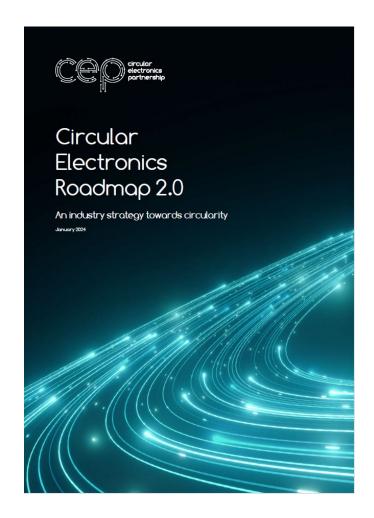
Download the CEP Roadmap at www.cep2030.org

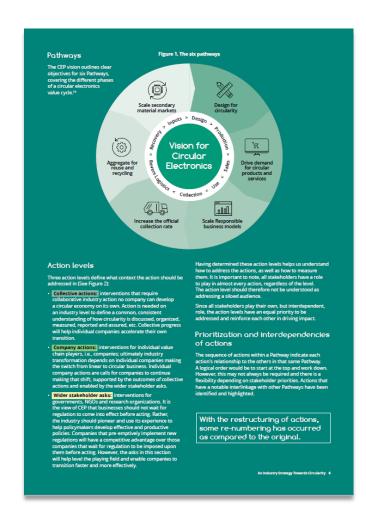


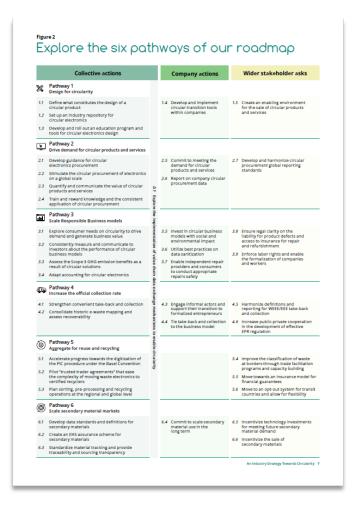
#### **Project dashboard**

		1   Design for Circularity	2   Drive demand for circular products and services	3   5	Scale responsible business models		4   Increase the official collection rate	5	Aggregate for reuse and recycling	6	Scale secondary material markets
	1.1	Define circular products and services	2.1 Develop guidance for circular electronics procurement	3.1	Explore consumer needs on circularity to drive demand and generate business value	4.1	Strengthen convenient take-back and collection	5.1	Accelerate progress towards the digitization of the PIC procedure under the Basel Convention	6.1	Develop data standards and definitions for secondary materials
Collective actions	1.2	Set up an industry repository for circular electronics	Stimulate the circular     procurement of electronics on a     global scale	3.2	Consistently measure and communicate to investors about the performance of circular business models	4.2	Consolidate historic e-waste mapping an assess recoverability	5.2	Pilot "trusted trader agreements" that ease the complexity of moving waste electronics to certified recyclers	6.2	Create an EHS assurance scheme for secondary materials
	1.3	Develop and roll out tools and education for circular electronics design	Quantify and communicate the value of circular products and services	3.3	Assess the scope 3 GHG emission benefits as a result of circular solutions			5.3	Plan sorting, pre-processing and recycling operations at the regional and global level	6.3	Standardize material tracking and provide traceability and sourcing transparency
			Train and reward knowledge and the consistent application of circular procurement	3.4	Adapt accounting for circular electronics						
0.1 Explore the implementation of value chain data exchange mechanisms to enable circularity											
Company actions	1.4	Develop and implement circular transition tools within companies	2.5 Commit to meeting the demand for circular products and services	3.5	Invest in circular business models with social and environmental impact	4.3	Engage informal actors and support their transition to formalized entrepreneurs			6.4	Commit to scale secondary material use in the long term
anya			2.6 Report on company circular procurement data	3.6	Utilize best practices on data sanitization						
Comp				3.7	Enable repair providers and consumers to conduct appropriate repairs safely						
Wider stakeholder asks	1.5	Create an enabling environment for the sale of circular products and services	2.7 Develop and harmonize circular procurement global reporting standards	3.8	Ensure legal clarity on the liability for product defects and access to insurance for repair and refurbishment	4.5	Harmonize definitions and reporting for WEEE/EEE take-back and collection	5.4	Improve the classification of waste at borders through trade facilitation programs and capacity building	6.5	Incentivize technology investments for meeting future secondary material demand
stakeho				3.9	Enforce labor rights and enable the formalization of companies and workers	4.6	Increase public-private cooperation in the development of effective EPR regulation	5.6	Move towards an insurance model for financial guarantees	6.6	Incentivize the sale of secondary materials
Wider								5.7	Move to an opt-out system for transit countries and allow for flexibility		

# Roadmap 2.0 To be published on 15 April 2024





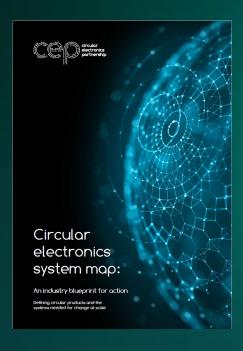




# **NEW** CEP updated roadmap overview

	1   Design for Circularity	2   Drive demand for circular products and services	3   Scale responsible business models	4   Increase the official collection rate	5   Aggregate for reuse and recycling	6   Scale secondary material markets
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Com			3.7 Enable consumers to conduct safe repairs			
		2.7. December and because of the distribution	I			
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# **System Map** 2022 Industry Blueprint for action



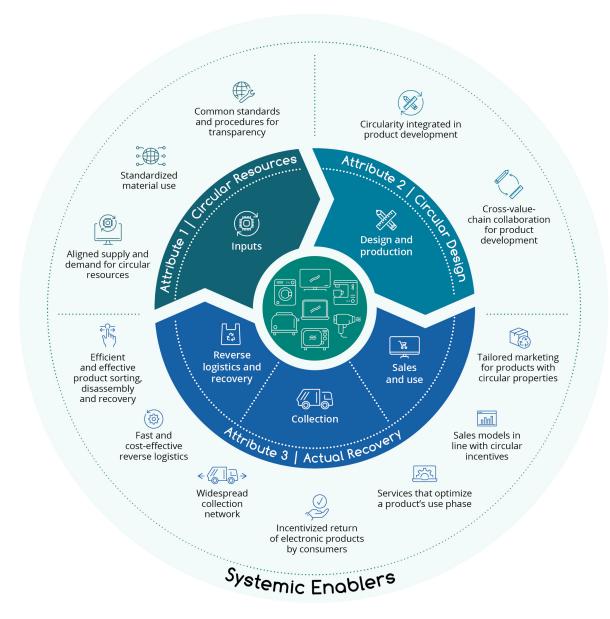
Download from www.cep2030.org or scan:





#### Project report resulting from roadmap action P1.1

#### Defining circular products and the system needed for change at scale

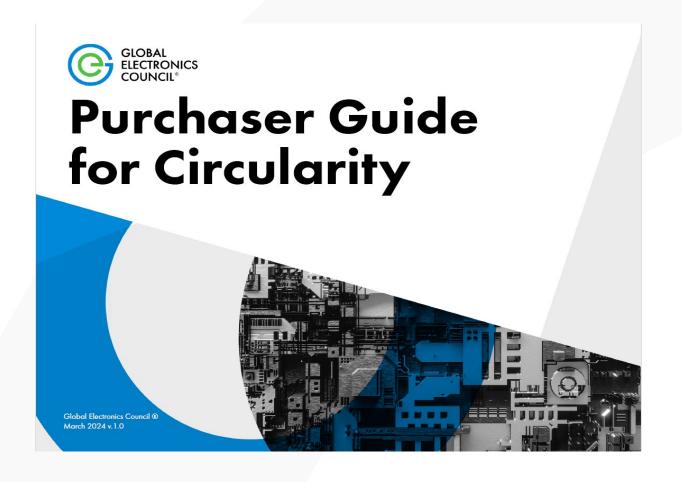


# GEC PURCHASER GUIDE FOR CIRCULARITY



Kaushik Ramakrishnan Senior Director, Strategic Growth Global Electronics Council

## Launching the GEC Purchaser Guide for Circularity

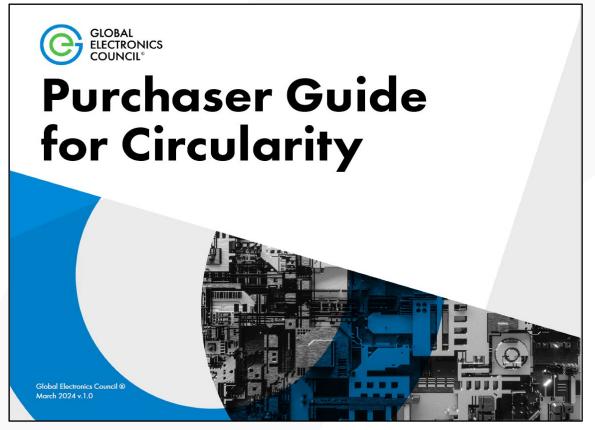


A resource for purchasers to...

- Engage external and internal stakeholders on circularity
- Establish suitable organizational policies and procedures
- Embed circularity into ICT procurement



#### A collaborative effort through the CEP







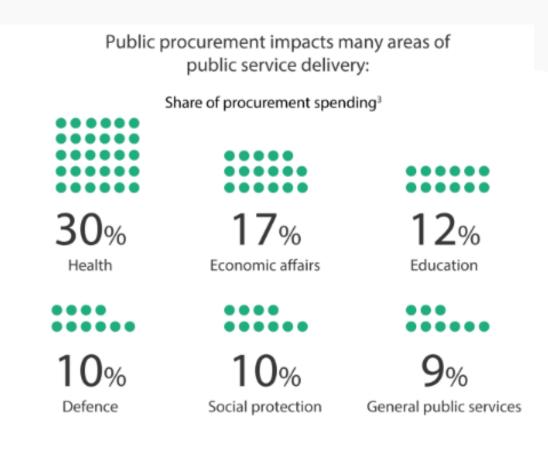
## Leveraging the power of procurement to drive systemic change

Public procurement - a large share of the global economy:

- 12% of GDP in OECD countries
- 30% of general government expenditures
- 63% spent at the sub-national level

Public procurement is supporting:

- · delivery of public services to citizens
- · achievement of broader policy goals





# Guide structured in two parts

#### Part 1

08	PROCUREMENT QUESTIONS AND SUPPORTING DOCUMENTATION
09	A. Current Best Practices
09	Questions 1.1-1.6: Product Attributes
12	Questions 2.1-2.4: Vendor Commitments and Practices
15	B. Transformational Circularity
15	Questions 3.1-3.4: Various Topics
	•

#### Part 2

17	END-OF-USE
18	Sample Policy
18	Responsible End-of-Use Options
19	Data Security and Sanitization
19	Employee Awareness and Training
19	Continuous Improvement
20	Sample Procedures
20	Responsible End-of-Use Options
21	Data Security and Sanitization
21	Employee Awareness and Training
22	Continuous Improvement



## Part 1: Example

#### 1.4 Product Attributes - Recovery of Scarce Resources

Objective: The purpose of this question is to determine if the product design allows for recovery and recycling of critical minerals and rare earth elements. Electronic products contain numerous metals and minerals that are rare or available in limited quantities across the globe, such as, lithium in batteries, gallium in semiconductors, and rare earth elements dysprosium and neodymium in magnets\*. Preservation of these and other scarce global resources can be possible if sourced from recovered material streams.

#### \*See Terminology section for example list

Question(s): Identify metals and minerals in the product considered rare or found in limited quantities, and whether sourcing for any of these minerals or metals derives from recovered materials. Are any other alternative sources of rare or critical materials expected in the manufacture of this product within the next five years?

#### Examples of Supporting Documentation: \_ \_ ~

- Identification of rare and critical minerals and metals type and location in the product
- · Availability of disassembly instructions for recovery of components containing rare and critical minerals in the product
- Describe the efforts to identify and/or develop alternative sources of minerals and metals for applications in this product



## Part 1: Procurement Questions & Supporting Documents

#### **Product Attributes to Consider:**

- Longevity
- Post-consumer Content
- Disassembly, Reusability and Recyclability
- Recovery of Scarce Resources
- Manufacturer Designs Enable and Do Not Hinder Secondary Material Recovery
- Sustainable Packaging Content and Readily Recyclable

#### **Vendor Commitment and Practices:**

- Renewable Energy
- Product Recovery, Reuse, and Recycling
- Closed-Loop Component and Material Recovery
- Donation Program



#### Part 2: End-of-use Policies & Procedures

#### Sample Policy

- Responsible End-of-Use Options
- Data Security and Sanitization
- Employee Awareness and Training
- Continuous Improvement
- Reuse by Technology Product or Service Provider
- Reuse within the Organization
- Repair

- Refurbishment and Resale
- Donation
- Recycling
- Data Security and Sanitization
- Employee Awareness and Training
- Continuous Improvement
- Innovation and Collaboration



# EPEAT is a simple, credible and impactful tool to implement circularity in procurement



# Multi-stakeholder Consultation



A cross-section of diverse stakeholders define criteria

# Full Life Cycle Impacts



Criteria address
sustainability
impacts across the
product life cycle from
material extraction to
end of life

#### Science-Based



Criteria focus on priority impacts, based on evaluation of available science and evidence

# Leadership Performance



Criteria represent marketplace leadership with only the top 25-30% of products typically able to meet the criteria

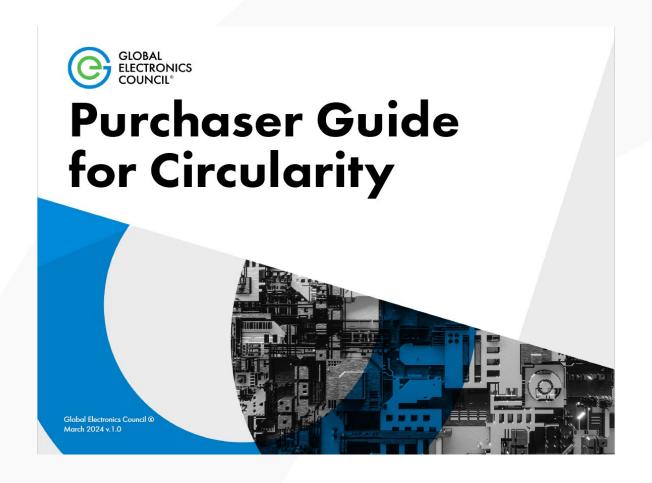
# Third-Party Verification



Independent verification ensures that products conform with criteria initially and on an ongoing basis



## Accessing the guide



- Version 1 available for download. Link to be sent to webinar participants
- Version 2 Updated with references to EPEAT circularity criteria to be launched in Q4 2024



# ITU CIRCULARITY GUIDE FOR ITC GOODS FOR THE PUBLIC SECTOR



John Watt
Circular Procurement Consultant
International Telecommunication Union (ITU)

# Circular and Sustainable Public Procurement ICT Guide







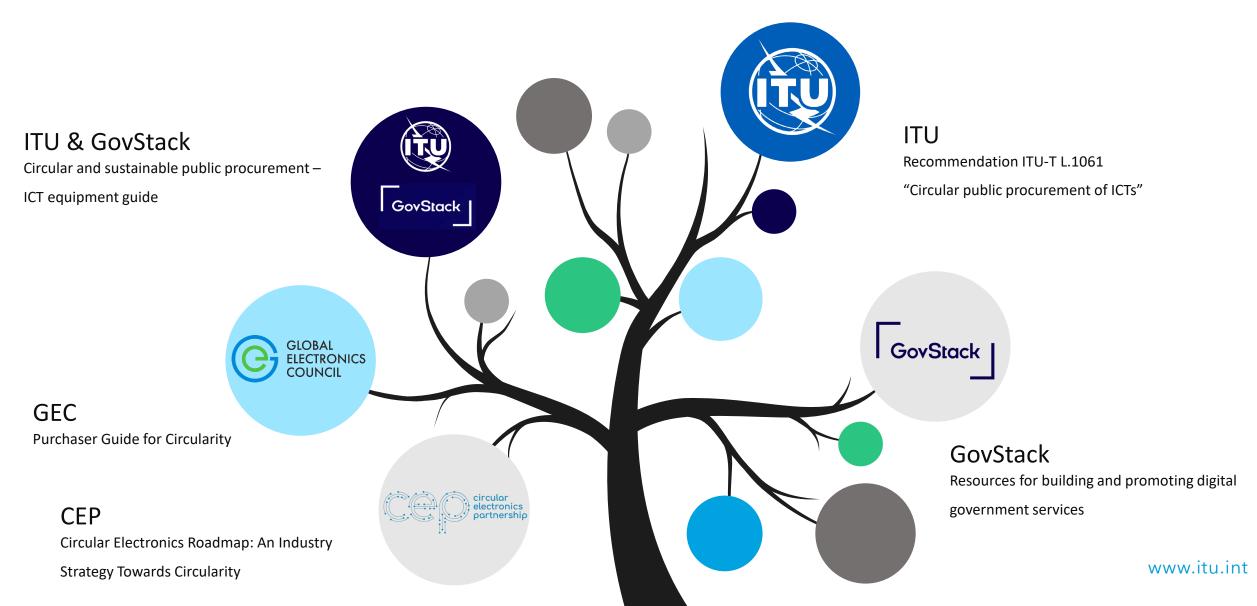






## Working in parallel

Within an ecosystem of resources for sustainable & circular public procurement of ICT



# **Aligning with ITU Standards**

ITUPublications
Recommendations

International Telecommunication Union Standardization Sector

#### Recommendation

ITU-T L.1061 (03/2023)

SERIES L: Environment and ICTs, climate change, e-waste, energy efficiency; construction, installation and protection of cables and other elements of outside plant

E-waste and circular economy

Circular public procurement of information and communication technologies



#### Provides a set of principles to:

- Maximize usable life
- Maximize the use of energy-efficient equipment
- Minimize any resulting amount of e-waste produced, and the adverse effects of ewaste
- Increase recyclability, thereby contributing to circular economy realization

#### **ITU-T Recommendations**

4000+ global telecom standards, approved by and widely adopted by ITU members

### **Working in parallel**

Recommendation ITU-T L.1061 and Guide created at the same time

### **Complementary publications**

Guide serves as a "how-to" of the Recommendation and build on other resources

## Method for guide development

Consultations with governments, industry and sector partners

New and existing case studies of best practices

Based on public procurement needs of GovStack and other countries

Working with GovStack project and Study Group for Reccomendation ITU-T L.1061

### Guide structure



### POLICY AND STRATEGY

Policy making, strategy, guiding principles.





# CREATING THE CONDITIONS

Building capacity, target setting.



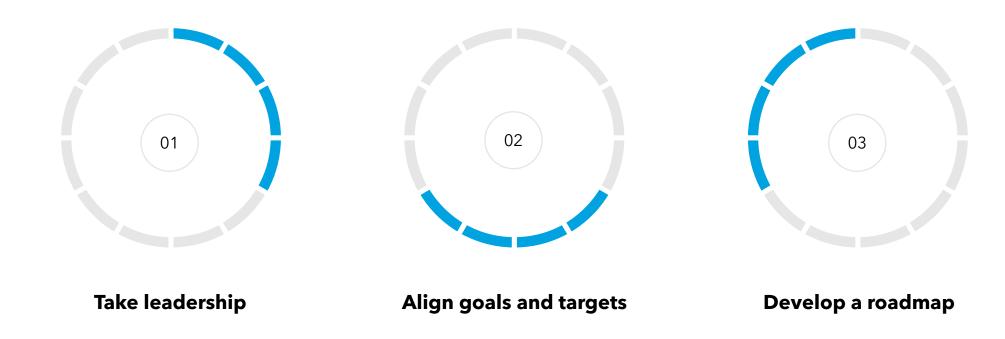


## PROCUREMENT PROCESS

Planning and executing procurement.

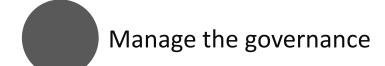
# Setting the agenda for sustainable and circular ICT

### Subsections in **Policy and strategy**



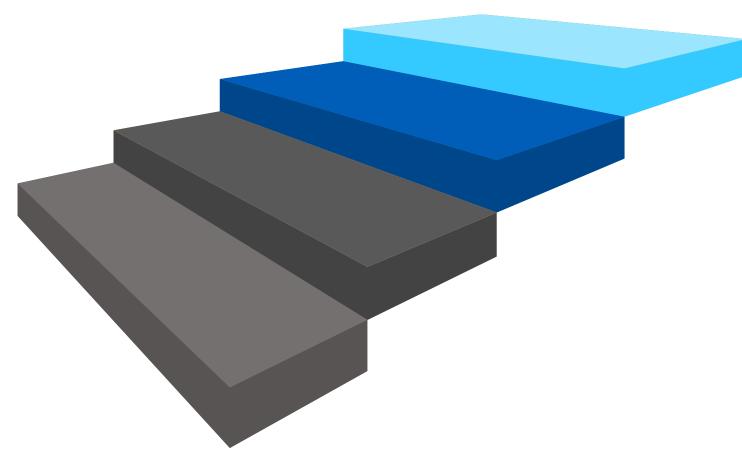
### Capacity building to make it happen

Subsections in **Creating the conditions** 



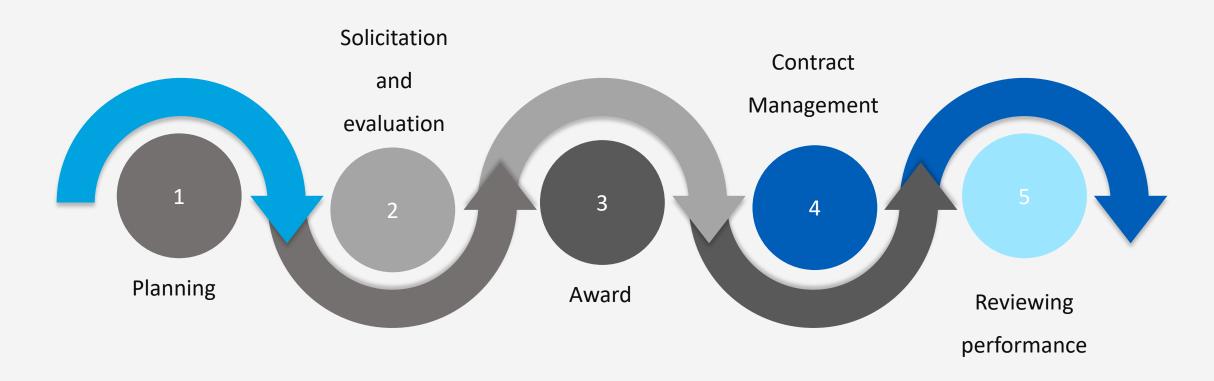


Engage stakeholders



### Circular and sustainable procurement on the ground

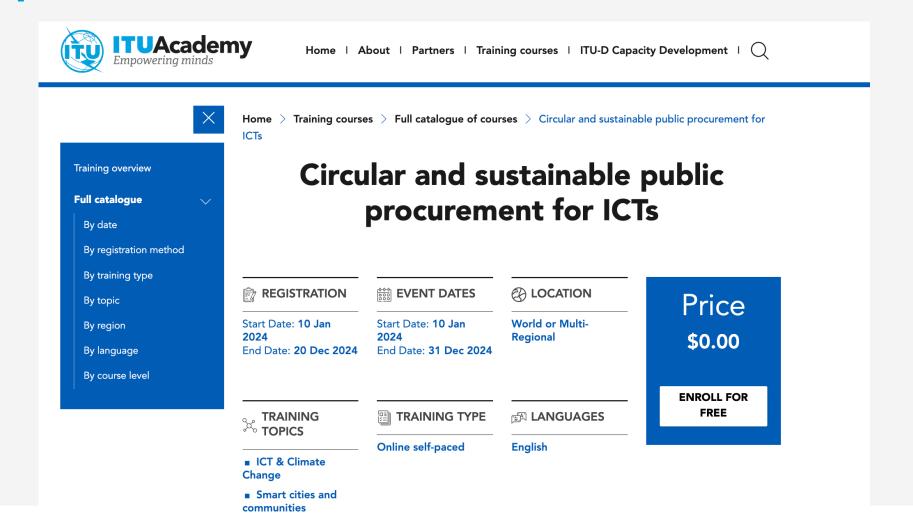
Subsections in **Procurement processes** 



# e-learning based on the guide

ICTs and the

environment



### Check out our resources









Recommendation ITU-T L.1061 "Circular public procurement of ICTs"



GovStack |

# OHIOHEALTH A PURCHASER PERSPECTIVE



Beth Eckl
Advisor, Sustainable Procurement Strategic Sourcing
OhioHealth Supply Chain Services
OhioHealth



**Purchasing Sustainable and Circular Goods at OhioHealth** 

Beth Eckl, Advisor, Sustainable Procurement

April 2024

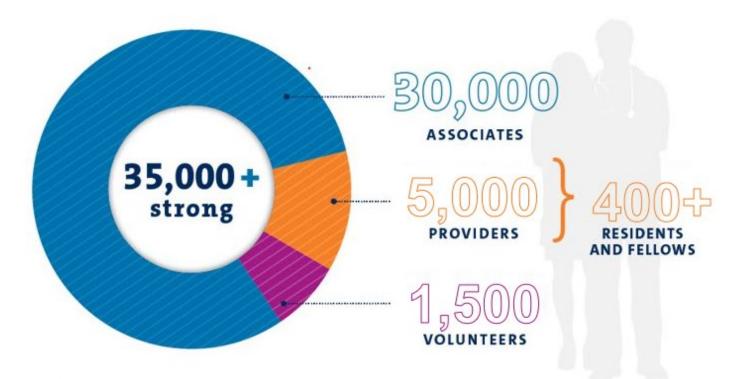


# OhioHealth

West Ohio Conference of United Methodist Church



We are a faith-based, not-for-profit healthcare system.



Represents Fiscal Year 2023 Data

3.8M
OUTPATIENT VISITS

589,209 EMERGENCY VISITS

163,920 ADMISSIONS & OBSERVATIONS

**120,241** SURGERIES

14,823 BIRTHS

\$6 Billion

5.3%
NET OPERATING INCOME

# Why Do We Care about Sustainability?

"Climate Change is the greatest health threat of the twenty-first century, and also the greatest opportunity to address social determinates of health"

-The Lancet

SUSTAINABILITY
HAS A DIRECT
IMPACT
on human health.

# Sustainability - Our 5 Key Focus Areas











# **Sustainability & Circularity – Foundational Elements**

- Overarching: launched a new Responsible Purchasing program in 2022
  - New sustainable purchasing policy
  - Leadership support for new purchasing standards – standardized criteria
  - Embedded sustainability into supply chain process
- Prioritized three sustainability areas in buying goods and services
  - 1. reducing emissions
  - eliminating chemicals of concern
  - 3. conserving resources



# **Conserving resources/circularity – What We've Done**

### Reuse, recycle, donate Close to 5 million items annually

(electronics, textiles, metals and plastics)



#### **Electronics**

- 1. Medical devices
- 2. IT devices

#### **Textiles**

- 3. Nurse, doctor and patient gowns
- 4. Sterilization wrap
- 5. Cubicle curtains
- 6. Incontinence/wound care pads
- 7. Scrubs
- 8. Baby burpees
- 9. Microfiber mops

#### **Plastics**

- 10. Sharps containers
- 11. Fluid management systems

#### Metals

12. Rigid sterilization containers

# From sterilization wrap to new goods









We collect sterilization wrap for recycling

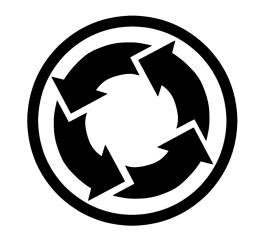


# Circularity – From Food Waste to Soil Amendment

70 tons/year composted food waste supports community soil amendments







# Reducing emissions – What We've Done



Specify EPEAT for electronics

Expanded into three categories EPEAT criteria supports circularity



Parts harvested to reuse, refurbished for reuse

Reduces GHG emissions



Purchase over 55,000 reprocessed devices annually



Created an energy assessment questionnaire in RFPs for clinical electronic equipment

Medical devices: no energy efficiency standards or certifications

## **Lessons Learned**

- Lack of ecolabels
- Take-back program challenges
- Drive demand
- Foster partnerships
- Utilize total cost of ownership



# Contact Beth.Eckl@OhioHealth.com



Q&A