Digital Cooperation Organization

DCO E-Waste Management Framework

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UN trade & development
UNCTAD
Intergovernmental Group of Experts on
E-commerce and the Digital Economy
8th session
Session : 'End of life? Digitalization-related waste and circular digital' economy'

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0. DCO Intro & Context of the Framework

The DCO is the only dedicated multilateral inter-governmental organization breaking down barriers and facilitating collaboration across the global digital economy

The DCO's Vision...

"A world where every country, business, and person has a fair opportunity to prosper in a cross-border and sustainable Digital Economy"

The DCO's Mission...

"Achieving social prosperity and growth of the Digital Economy by unifying efforts to advance digital transformation and promote common interests"

Digital Cooperation Organization

Overview: The Digital Cooperation Organization (DCO)

- **The DCO seeks to establish the optimal infrastructure and policies** for the creation of inclusive and equitable digital economies where all people, businesses, and governments can innovate and thrive.
- In pursuit of the Member States' common interests, **the DCO works collaboratively with digital economy stakeholders, including governments, the private sector, international organizations, NGOs, and civil society.**

The DCO Unites Ministries of Communications and Information Technology of 16 Member States:

Bahrain	Bangladesh	Cyprus	Djibouti
The Gambia	Ghana	Greece	Jordan
Kuwait	Morocco	Nigeria	Oman
Pakistan	Qatar	Rwanda	Saudi Arabia

Observers

Over 40 observers from international IT companies, Research institutions, and organizations, such as IBM, VISA, STC, PTCL, UCL, ISDB, etc.

Partners

7 plus Partners, such as ITU, WEF, UNITAR, etc. for possible cooperation to promote digital economy.

DCO'S STRATEGIC GOALS TO ACHIEVE BY 2030

1. **Empower businesses** of the DCO cross-border digital market **to thrive in the global digital economy.**
2. **Leverage the full potential of data** across the DCO ecosystem.
3. Foster an **inclusive, human-focused, and sustainable** Digital Economy.

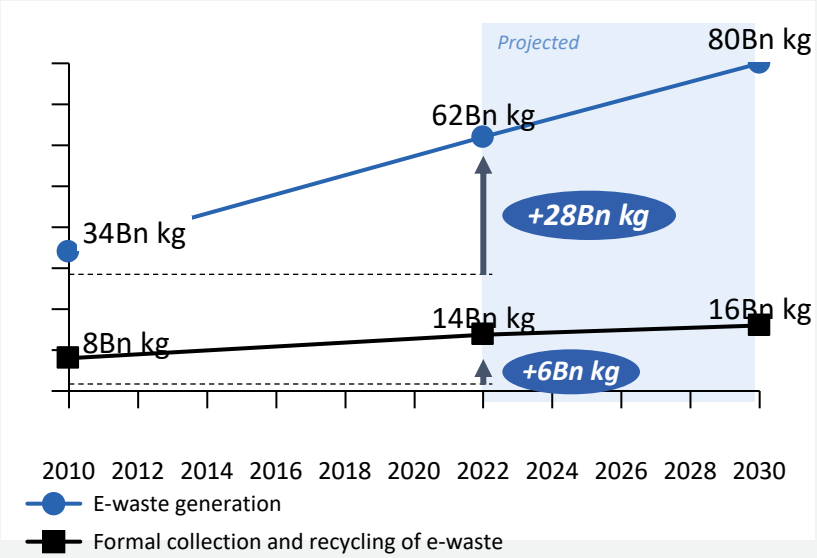
Focus of this initiative

Source: DCO

E-Waste is a Growing Issue: Insufficient and ineffective Collection and Recycling Systems can Result in Non-compliant E-Waste Management.

E-Waste Growth and Environmental Impact

VOLUMES OF GLOBAL E-WASTE GENERATION, COLLECTION AND RECYCLING [2010-2030]



E-Waste generation has **grown by an average of 2.3 billion kilograms** since 2010.

E-Waste **generation** is growing **five times faster** than formal **recycling**.

Poor e-waste management causes **harmful emissions**, posing **health and environmental risks.**

E-Waste contains hazardous materials, including toxic metals, flame retardants, and persistent organic pollutants.

45Mn kg
of plastics containing brominated flame retardants incorrectly managed.

58k kg
of mercury released yearly.

145Bn kg
of **CO2-equivalent emissions** from **mismanagement of refrigerants** released yearly.

Over 11 million informal workers in developing countries **face serious health risks** from handling hazardous e-waste materials.

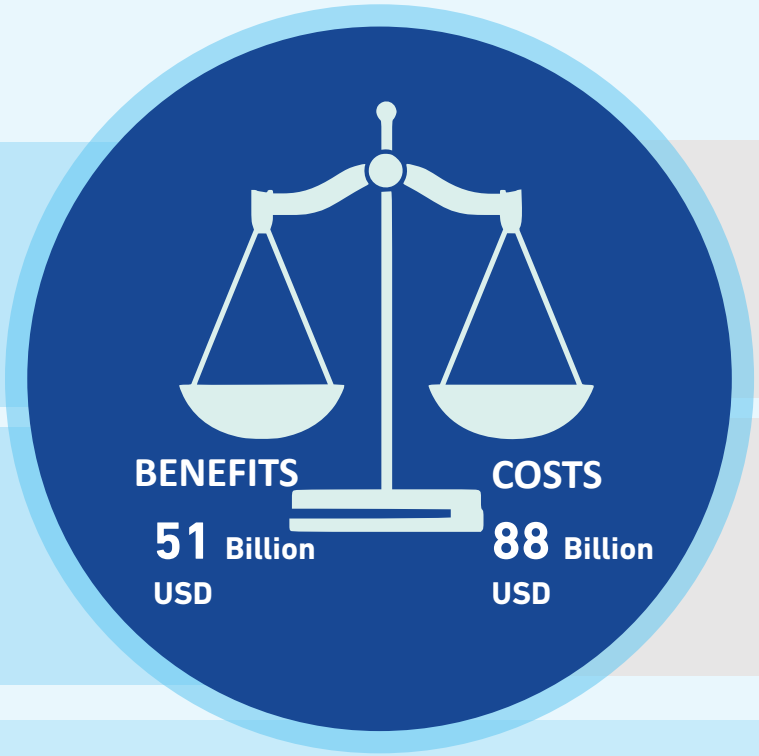
Source: Global E-Waste Monitor 2024, Global Transboundary E-Waste Flows Monitor 2022

At the Current Recycling Rate of Approximately 20%, Global Societal Costs Outweigh Benefits by $37 Billion, Leaving Significant Value Untapped.

Estimated Economic Impact of the Current E-Waste Management System

USD 28Bn
Worth of **recovered metals brought back** into the circular economy.

USD23Bn
Monetized value of **avoided greenhouse gas** emissions.



-37Bn USD cost overall

USD 78Bn
Externalized costs to the population and the environment.

USD 10Bn
Associated with the **cost of e-waste treatment.**

- **Overall economic impact is projected to rise to USD 40 billion in costs by 2030,** if global e-waste management systems maintain their current trajectory.
- However, if a **60%** recycling rate is achieved globally by 2030, there is **potential for up to USD 38 billion in net benefits.**

Source: Global E-Waste Monitor 2024, Global Transboundary E-Waste Flows Monitor 2022

E-Waste Management Best Practices in DCO Member States

E-Waste Value Chain		Best Practices	Covered in...	Example of Best Practice
Import & generation	1	**Place limits on hazardous substances levels in products** manufactured locally		• **SASO Technical Regulations in Saudi Arabia regulate the content** of specified hazardous substances **in manufactured electronics**
	2	**Ban import of e-waste** if e-waste generation exceeds local e-waste processing capacity		• **Qatar prohibits the import of hazardous waste** and materials but permits their export under the Basel Convention.
	3	**Set safety and functionality standards for EEE imports** to ensure lengthened product life cycles		• **Nigeria has set requirements on the safety and functionality of EEE imports** to promote import of quality goods with longer life cycles and reduce import of e-waste falsely labelled as used EEE
Collection, sorting & redeployment	4	**Ensure e-waste value chain actors are licensed** to allow for monitoring & evaluation		• Article 4 of Bahrain's legislation requires any natural person or **entity that collects, transports, processes, or recycles e-waste must be licensed** by the Competent Directorate
	5	**Prioritize data collection to assess and inform** waste management efforts		• **Saudi Arabia's NCWM's[1] Master Plan aims to** assess the existing conditions and waste in each region of the Kingdom and produce a nationally integrated plan for each region
Export & recycling	6	**Define formal value chain structure** to ensure quality & monitoring of mgmt. process		• Ghana developed Technical Guidelines which **outline an optimized flow of waste** through the value chain, with **roles and requirements of each value chain actor clearly defined**
	7	**Allow e-waste export only if national infrastructure lacks capacity** or capabilities		• **Kuwait has banned the export of hazardous waste** unless the required facilities are not available locally. This ensures that feedstock for local processing facilities is not reduced and protects in-country value
	8	**Require reuse potential** to be maintained and prioritized throughout e-waste value chain		• Ghana's Technical Guidelines specify that the potential for reuse of electronic should be maintained (e.g. through upright, secure transportation of electronics and protection of wires)

1. National Centre for Waste Management, DCO Survey 2024; Others: DCO Survey Data

DCO Member States Face Multiple Challenges In E-Waste Management, Including Limited Infrastructure, Data, And Law Enforcement

Common Challenges in E-Waste Management

COMMON CHALLENGES

- **Lack of e-waste specific legislation** and/or challenges with **enforcement.**
- Low **Consumer Awareness.**
- **Limited e-waste** collection, treatment and recycling **infrastructure.**
- **Fragmented Value Chain,** with unregulated **informal sector involvement.**
- **Limited** availability of e-waste **data,** and lack of e-waste **tracking system.**
- **Limited adoption of Extended Producer Responsibility.**
- **Illegal import** of e-waste.
- **Commercial viability** of operating high quality **recycling infrastructure.**

Countries must strengthen e-waste management systems by diagnosing the current situation and empowering private and social sectors.

Source: DCO, Expert interviews, Survey to the DCO Member States

...And also have Several Opportunities to be Leveraged, including Collaboration, Private Sector Incentivization, and Strengthening of E-Waste Legislation.

Common Opportunities in E-Waste Management

COMMON OPPORTUNITIES

- **Strengthen the regulatory framework for e-waste** based on best practices and improve enforcement.
- Initiate initiatives to **raise public awareness about e-waste management.**
- **Reuse electronics** to help bridge the digital divide.
- Foster international collaborations to **address knowledge gaps** in e-waste management and promote effective and sustainable solutions.
- **Collect data to monitor and improve** the e-waste system.
- Embed **e-waste-specific Extended Producer Responsibility** (EPR) in legislation.
- **Leverage the DCO to expand international collaboration and regulate e-waste import/export.**
- **Design incentives** and **Public-Private Partnerships (PPPs)** to promote formal economy.

There is no one-size-fits-all solution: Each country should define its own roadmap to leverage these opportunities, improve e-waste management, and amplify social, economic, and environmental impact.

Source: DCO, Expert interviews, Survey to the DCO Member States

The Benchmark Analysis Showed how Countries Need to Leverage Regional Networks, Strategically Develop Infrastructure to Foster Economies of Scale,, and Improve E-Waste Collection Systems

Key takeaways

Collection systems first

Governments should focus on establishing robust e-waste collection systems to ensure feedstock before investing in recycling infrastructure

Regional collaboration

Pursuing bilateral agreements and harmonizing approaches with countries in the region is a success factor to reach economy of scale

Consumer awareness

Building consumer awareness with the support of NGOs is an important step in building collection systems

Economies of scale

Countries should strategically invest in e-waste recycling technology, aligned with the volume and type of their e-waste feedstock. Regional collaboration will allow specialized services to be developed at economically viable scales

Mobilizing the private sector

The private scale can provide investment, infrastructure and innovation, and can be mobilized through incentives, public private partnerships and extended producer responsibility schemes

Digital Cooperation Organization

1. E-waste Management Framework

We Followed a Four-step Approach to Define a New E-Waste Management Framework, Ensuring it Aligned with the DCO's Objectives

Process for E-Waste Management Framework Development

01

Define The Fundamentals Of The E-Waste Management Framework.

02

Benchmark Best Practices And Existing Frameworks.

03

Design The E-Waste Management Framework.

04

Validate the Framework through Global Roundtables and Review it with DCO Member States.

In The First Step, We Defined the Fundamentals of the E-Waste Management Framework, Looking at the Key Objectives, Ambition, Target Audience, Scope, and Design Principles.

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Validate the Framework using Global Roundtables and a Pilot With DCO Member States.

The DCO Aims to Design an E-waste Management Framework to Enable Governments to take Actions at Both a National and Cross-border Level, based on Best Practices

E-waste Management Framework Fundamentals

Ambition

- Enable countries worldwide **in enhancing their e-waste management systems to (1) promote sustainability in the ICT sector, (2) address the digital divide, and (3)** capitalize on the economic potential of material recovery from e-waste

Objectives

- Define a comprehensive **E-waste Management Framework, including key components to facilitate effective management at both national and international levels**
- Guide governments to improve **e-waste management systems through key success factors and mechanisms based on best practice**

Audience

- Government agencies, **including Ministries, Regulators and Municipalities**

The framework is designed to assist the governments of all countries, and is not limited to DCO Member States

The Scope Definition Ensures that The Framework Is Simple, But Not Simplistic: It Is Applicable to Governments Across The Globe, Looking At The Whole Value Chain, Including Import And Export.

E-Waste Management Framework Scope

The Framework is:

A structured summary of key best practices that countries should consider.

Country agnostic, and applicable to countries with e-waste management systems at all levels of maturity.

Targeting governments, highlighting what they can do to strengthen and scale e-waste management efforts.

Looking both at the national and cross-border e-waste management best practices.

The Framework is not:

A step-by-step toolkit highlighting the implementation processes for best practices.

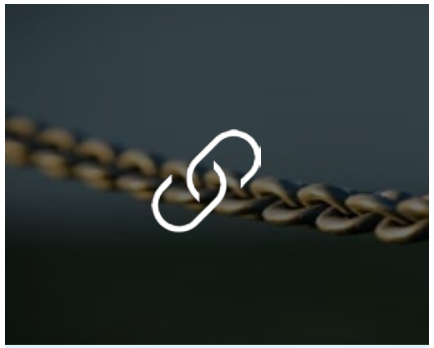
Tailored to DCO Member States, most of whom are in the initial stage of e-waste management system.

Applicable to the private and social sector, to integrate them into national e-waste management systems.

Focused only on e-waste cross-border flows, to support bilateral agreements.

We Determined Five Key Design Principles Which Should Guide The E-Waste Management Framework Development To Ensure That It Meets Its Ambition And Objectives.

Design Principles for the E-Waste Management Framework



Covers The Whole E-Waste Value Chain

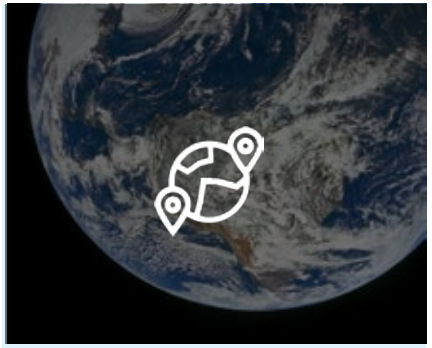
Covers all stages of the value chain, from e-waste generation to landfill.

Considers Both National And Cross-border E-Waste Flows

Focuses on both the national e-waste management systems, and e-waste cross border collaboration.

Exhaustive Coverage Of Government-Driven Mechanisms

Focuses on both national e-waste management systems and cross-border e-waste collaboration.



Country Agnostic: Applicable To Diverse Contexts

Relevant for countries across different regions with varying levels of e-waste management maturity.

Simple, Practical, And Effective

Focuses on practical insights and clear guidance for adopting best practices.

In The Second Step, Key Components And Mechanisms For Successful E-Waste Management Were Identified By Benchmarking Best Practices And Frameworks.

Process for E-Waste Management Framework Development

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Benchmark Best Practices And Existing Frameworks.

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Design The E-Waste Management Framework.

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Validate the Framework through Global Roundtables and Review it with DCO Member States

Eight E-Waste-Specific Frameworks, and Five Waste/Circularity Frameworks were Analyzed, And While None Fulfilled The DCO's Objectives, They Provided Informative Takeaways to Guide the Design of A New Framework.

Summary: E-Waste Specific Frameworks

1 E-WASTE MANAGEMENT FRAMEWORKS (08)

2 WASTE/CIRCULARITY FRAMEWORKS (05)

- Stocks and Flows of E-Waste
- Toolkit for Policy Practices in E-Waste Management
- Global Transboundary E-Waste Flows
- Life Cycle Framework for E-Waste Management
- Policy and regulation frameworks on waste and EPR
- Model Framework for E-Waste Management in East Africa
- Stages in the management of ICT/UEEE and ICT/e-waste
- Model policy framework for the management of ICT/e-waste

Compatibility of the frameworks with Design Principles

Many of the frameworks are country agnostic and include the whole value chain, but few are simple and practical or cover exhaustive government levers

5/8 5/8 3/8 4/8 1/8

Target Audience

Public Sector

Public and Social Sector

Geography

3 Global 1 EU

3 Africa 1 China

KEY TAKEAWAYS

1. The existing frameworks do not completely fulfill the DCO ambitions, objectives, and aim and the guiding principles → **Design a tailored new framework**
2. Frameworks with more than one dimension provide great structure and insights for the audience → **Combine 2+ elements** (e.g. value chain and instruments)
3. Many frameworks focus already on planning, maintenance and monitoring → **Don't focus on the implementation approach**, as this is already covered extensively

In The Third Step, The E-Waste Management Framework Was Designed Based On Insights From Existing Frameworks, Benchmarking, And Current-State Assessments Conducted.

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Validate the Framework through Global Roundtables and Review it with DCO Member States

We Took the Guiding Principles and Desired Characteristics, including Differentiating Factors, to Design the Framework.

Development of Framework Layers

Guiding Principles

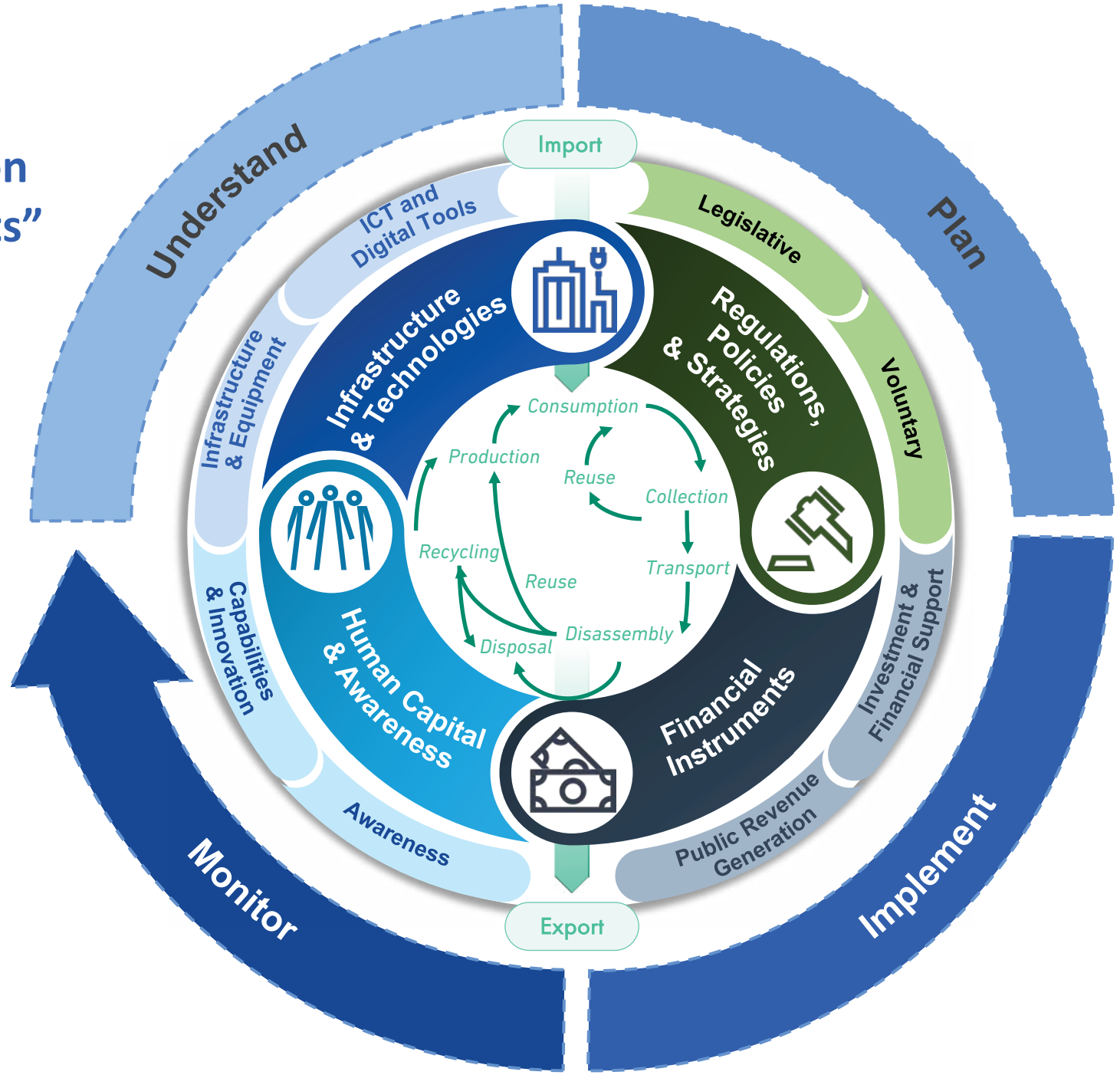
Desired characteristics

Differentiating factor

Framework Layers

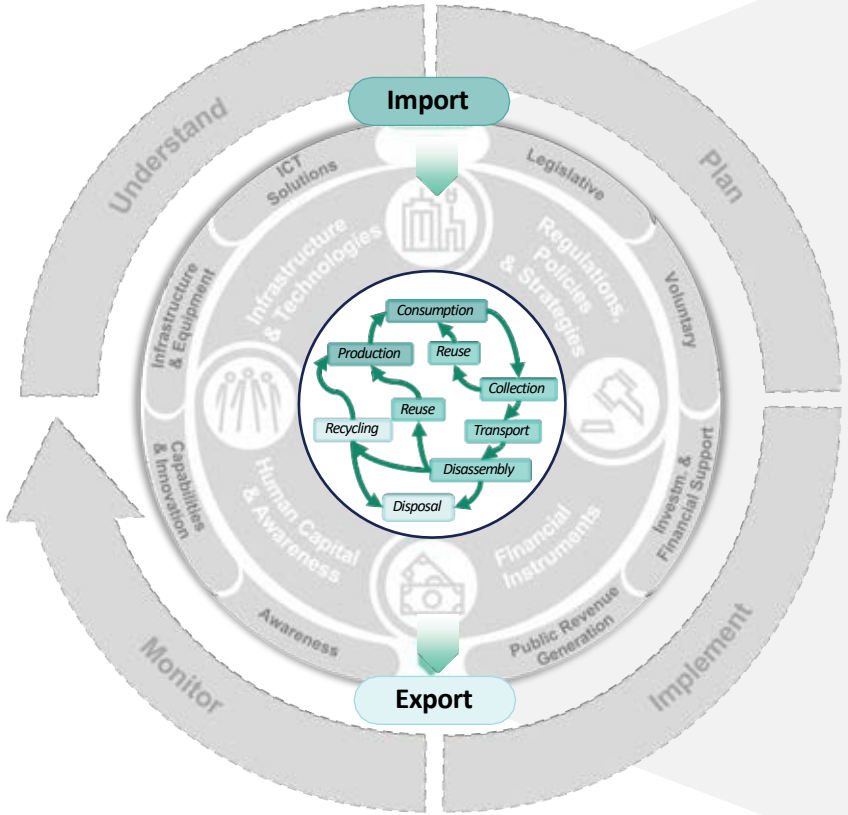
Guiding Principles	Desired characteristics	Framework Layers
Covers The Whole E-waste Value Chain	• Maps government mechanisms exhaustively **across the whole value chain.**	**1** The first layer of the framework structure is the **value chain, including import and export steps.**
Considers Both National And Cross-border E-Waste Flows	• Brings together **national and cross-border considerations** in an integrated framework.	
Exhaustive Coverage Of Government-Driven Mechanisms	• Looks beyond policies to provide **comprehensive coverage of government-driven mechanisms**, including capability building and private sector enablement.	**2** The second layers of the framework consists of key **elements and their dimensions**.
Country Agnostic: Applicable To Diverse Contexts	• Derives content **from best practices** and encourages **countries to identify relevant mechanisms** for implementation **based on their current state.**	**3** The third layer comprises of **Stages for successful implementation of the Framework** is detailed.
Simple, Practical, And Effective	• **Clearly structured**, including no more than two dimensions to ensure comprehensibility, and provides specific **guidance for actioning the framework.**	

"E-Cycle In Action For Governments"



The Value Chain phases, and their related aspects describes the ten key steps that governments need to consider to improve e-waste management

Value Chain Layer: Overview



E-waste Generation	**Import**	Cross-border import of used-EEE or e-waste
	Production	Production of new EEE, including manufacturing, import and distribution
	Consumption	Purchase and use of EEE by consumers
E-waste Processing	**Collection**	Collection of discarded or end-of-life EEE for further processing
	Transport	Movement of collected e-waste to treatment or recycling facilities
	Reuse	Refurbishment or redeployment of used-EEE for continued use
	Disassembly	Separation of e-waste into its component parts
E-waste End-of-life	**Recycling**	Recovery of materials from e-waste, and reintegration into manufacturing
	Disposal	Disposal of non-recyclable waste in landfills or through incineration
	Export	Cross-border shipment of e-waste or recovered materials

The framework four Key elements, and their associated aspects focuses on government mechanisms to support national and cross-border e- waste management

Key Elements: Overview

Regulation, Policies and Strategy	Legislative
	Voluntary
Economic Instruments	Public Revenue Generation
	Investment and Financial Support
Human Capital and Awareness	Awareness
	Capabilities & Innovation
Infrastructure and Technology	Infrastructure & Equipment
	ICT and Digital Tools

The “Regulations, Policies & Strategies” Component Establishes A Regulatory Framework For E-Waste Management That Guides Stakeholder Behavior.

Regulation, Policies and Strategy - Overview

Regulations, Policies & Strategies

This Component defines a regulatory framework for e-waste management by implementing both legislative and voluntary mechanisms to shape stakeholder actions throughout the value chain.

Legislative Mechanisms are mandatory directives issued by authorities, including regulations, policies, mandatory standards, international conventions, and bilateral agreements to ensure compliance and safety throughout the e-waste value chain.

Voluntary Mechanisms provide recommended practices, including strategies and guidelines, encouraging alignment with policy objectives and promoting responsible behavior without legal enforcement.

Regulations, Policies & Strategies are important for:

- **Providing strategic direction** on e-waste management systems and targets, placing responsibility for e-waste management on producers.
- **Ensuring compliance and safety** in e-waste management.
- **Guiding sustainable practices and setting standards** across the e-waste value chain steps and processes.
- **Defining the authority and responsibilities** of the relevant ministries and regulators, as well as the roles of other institutions (NGOs, private sector, etc.)
- **Facilitating international cooperation** to improve global recycling rates.

Success Factors

Clearly Define E-Waste And Its Governance Across Institutions And Stakeholders.

Develop Frameworks In Collaboration With Stakeholders (Both Local And International Private And Social Sectors).

Implement Necessary Systems And Allocate Resources For Enforcement.

Ensure Alignment With International Conventions And Foster Bilateral Agreements.

The “Financial Instruments” Component Establishes Investment And Funding Mechanisms To Support E-Waste Management Through Revenue Generation And Targeted Financial Support.

Financial Instruments - Overview

Financial Instruments

This Component creates investment and funding mechanisms to support e-waste management, facilitating revenue generation and targeted financial support to promote sustainable practices throughout the value chain.

Public Revenue Generation mechanisms create funds through taxes, tariffs, and fees to support e-waste management initiatives, ensuring a sustainable financial base for national e-waste management.

Investment and Financial Support mechanisms offer incentives like tax breaks, grants, loans, and direct investment, promoting industry participation in sustainable e-waste management practices.

Financial Instruments are important for:

- **Generating public funds** to sustain e-waste management systems, channeling the cost of e-waste management upstream in the value chain.
- **Influencing and incentivizing behavior across the e-waste value chain**, from producers to recyclers, aligned with e-waste management goals.
- **Focusing on the step** of the value chain with the biggest bottleneck.
- **Directing and incentivizing private investment** in e-waste management systems, fostering innovation and efficiency.
- **Supporting social sector** involvement in e-waste management.

Success Factors

Strike Balance Between Taxes And Investments, To Avoid The Burden On The Formal Sector And Incentivize E-Waste Flow Through The Informal Channels.

Maximize Private Investment Through Incentives And Funding Towards The Step Of The Value Chain With The Biggest Bottleneck.

Use Financial Incentives To Promote Environmentally Sustainable Behavior, Encouraging The Flow Of E-Waste From The Informal To The Formal Sector.

The “Human Capital & Awareness” Component Focuses On Building Human Capital Across The Value Chain, And On Raising Awareness Among Both Consumers And Businesses.

Human Capital and Awareness - Overview

Human Capital & Awareness

This Component prioritizes capability and skills development guidance for e-waste stakeholders across the value chain, while also raising awareness among consumers and businesses about the importance and urgency of e-waste management.

Capabilities & Innovation mechanisms foster skill development, support innovation, and strengthen capacity across sectors, equipping stakeholders to effectively manage e-waste.

Awareness mechanisms inform consumers and businesses in the formal and informal sectors on the environmental impacts of e-waste and promote responsible disposal practices.

Human Capital & Awareness are important for:

- **Developing capacity and capabilities**, through institutions and human capital, to manage the e-waste management system.
- **Changing consumer and business consumption and disposal** practices.
- **Empowering the informal sector,** potentially integrating it in the formal value chain.
- **Promoting and supporting innovation** across the steps of the value chain.
- **Building necessary skills** for growth and environmentally sound practices in the e-waste management sector.

Success Factors

Build And Train Necessary Government Capacity To Oversee E-Waste Management Initiatives.

Set Up Long-term Awareness Campaigns For Consumers And Businesses To Boost Collection Rates And Increase Feedstock Supply.

Collaborate Internationally For Knowledge-Sharing And Capability Building.

Run Initiatives Collaboratively With Private And Social Sectors, Enabling Innovation.

The Infrastructure And Technology Component Establishes the Physical and Digital Infrastructure and Technology Necessary for Efficient E-Waste Management.

Infrastructure and Technology - Overview

Infrastructure & Technology

This Component builds the essential physical and digital infrastructure, alongside technological tools, to enable effective e-waste management and support data-driven monitoring.

Infrastructure & Equipment includes essential facilities and tools, such as collection points, recycling technologies, and hazardous waste handling systems to support safe e-waste processing.

ICT and Digital tools utilize digital tools for monitoring, compliance, data management, transparency, accountability, and streamlined operations across the e-waste lifecycle.

Infrastructure & Technology are important for:

- **Streamlining and enhancing e-waste collection, processing, sorting, and recycling** to increase efficiency to improve environmental impacts by integrating advanced technologies in the processing and end-of-life steps.
- **Enabling data sharing and global collaborations thereby supporting data-driven decision-making** through centralized tracking and reporting systems, data analytics, and harmonized regulatory compliance.
- **Improving safe disposal practices** with specialized equipment to handle hazardous materials responsibly.
- **Facilitating public awareness and engagement** by making e-waste disposal accessible, leveraging digital platforms for awareness campaigns, and enabling communities to participate actively in proper e-waste management.

Success Factors

Map Value Chain Bottlenecks And Strategically Invest To Address Constraints.

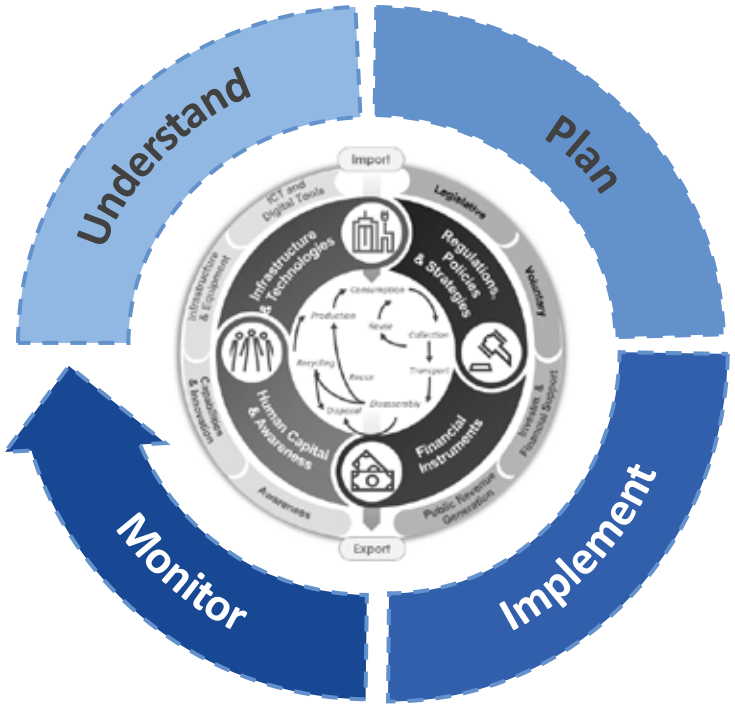
Prioritize The Development Of Collection Systems Before Investing In Specialized Recycling Facilities, Ensuring Alignment Between Capacity And Feedstock.

Assess Local Infrastructure Costs Versus Outsourcing To Regional Hubs To Leverage Economies Of Scale, Particularly For Specialized Processing.

Select Context-appropriate Technology, Emphasizing Manual Processing For Job Creation Where Relevant.

To Use The Framework, A Four-step Approach Is Recommended To Ensure Effectiveness In Enhancing Up Efforts On E-Waste Management And Guiding Change In Diverse Contexts.

E-Waste Management Framework: Application Guide



1 UNDERSTAND

- Develop a clear picture of the current state of the e-waste management value chain and wider ecosystem in the country and set up systems for continued monitoring of the e-waste flows, their impact, and the effectiveness of the current mechanisms.

2 PLAN

- Define desired outcomes and identify key Components (and subsequent mechanisms) to create change, consulting stakeholders, including the private and informal sectors.

3 IMPLEMENT

- Implement initiatives linked to Components identified in the planning stage through communication, execution, and enforcement.

4 MONITOR

- Collect data to enable continuous assessment of initiatives' impact and refine approaches, leveraging technologies and tools, and providing visibility of stakeholders in the e-waste value chain.

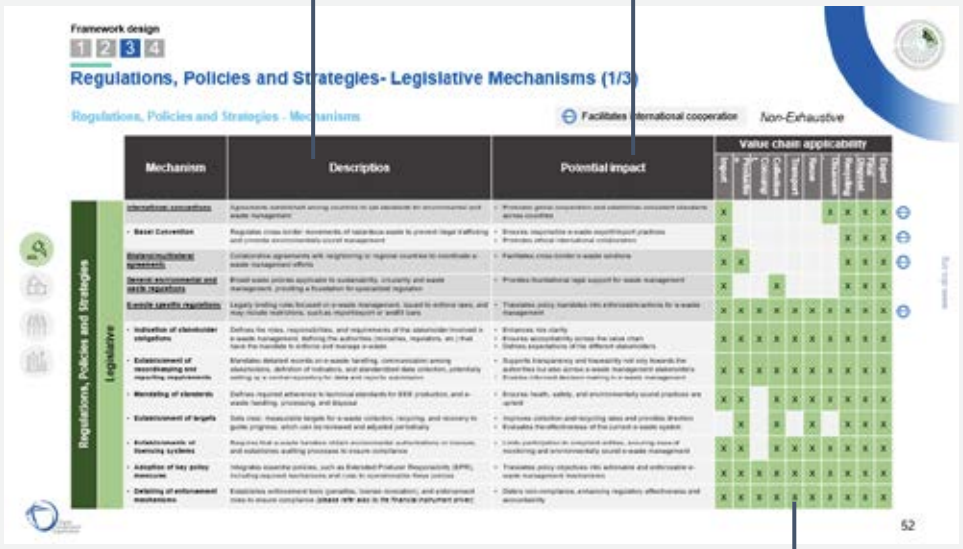
Potential Mechanisms within each Component are listed, with a Description, Potential Impact, Applicability across the Value Chain, Actions for Implementation, and Global Examples.

Overview of Framework Structure

Component Mechanisms

Description

Potential Impact



Value Chain Applicability

Examples of Best Practices

Action Required For Implementation

Global Examples Of Mechanisms

In the Fourth Step, the E-Waste Management Framework was Developed Based on Insights from Existing Frameworks and Findings from Benchmarking and Current State Assessments.

Process for E-Waste Management Framework Development

01

Define The Fundamentals Of The E-Waste Management Framework.

02

Benchmark Best Practices And Existing Frameworks.

03

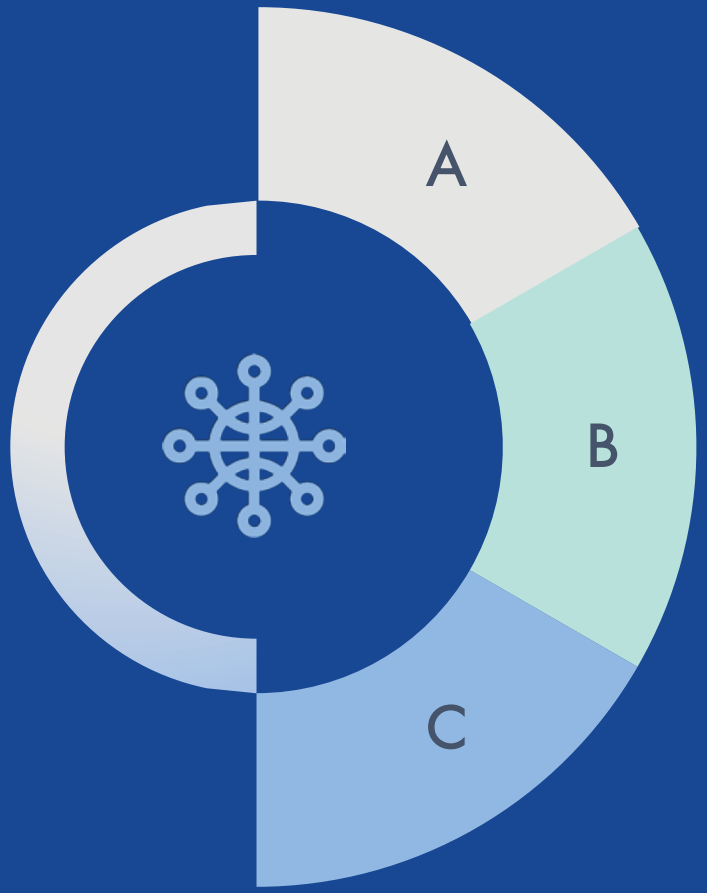
Design The E-Waste Management Framework.

04

Validate the Framework through Global Roundtables and Review it with DCO Member States

We Validated the New "E-Cycle In Action For Governments" Framework with Global Experts through four Roundtables and Reviewed it with DCO Member States.

Activities to Validate the New DCO E-Waste Framework



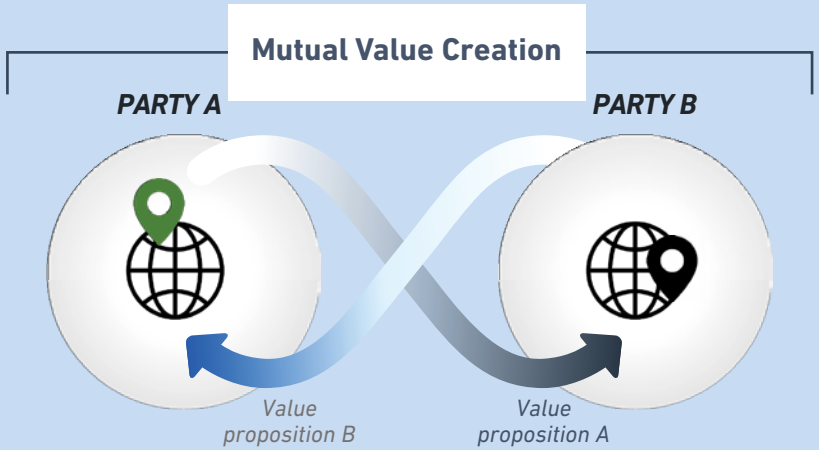
A	**DSA Global Roundtables**	Engaged with global experts from Singapore, London, and the GCC countries through global roundtables.
B	**DCO Member States Knowledge-Sharing**	Received feedback from the Member States through both roundtables and knowledge-sharing sessions.
C	**E-Waste Cross-Border Trade: Bilateral Agreement Workshops**	Reviewed the new framework focusing on e-waste cross-border trade with two Member States during separate Workshops.

A Bilateral Agreement is Defined as a Commitment between two Member States to Exchange E-Waste or Enhance E-Waste Management

Overview of Partnership/Bilateral Agreement

Overview of Possible partnerships or bilateral agreement for Cross-border E-Waste Management

The partnerships or bilateral agreement will be a formal document between two parties from the DCO Member States (e.g., government and/or corporate entities) **to promote e-waste trade, investment, and/or capability building in the e-waste management** – it creates ***mutual value*** based on the unique strengths of both parties.



Example

In 2016, the **government of Ghana formed partnership with the German Federal Ministry for Economic Cooperation and Development** to promote environmentally sound disposal and recycling of e-waste[1]

Source: DCO, Climate insight

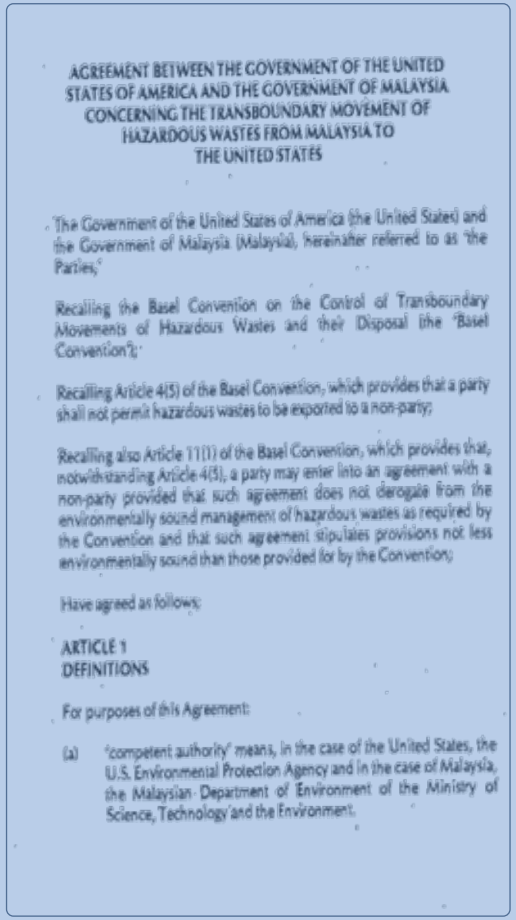
Bilateral Agreements: Designing an E-Waste Trade Agreement Requires Alignment With a Partner Country that Complements National Priorities and Offers Potential for Mutual Benefit.

The Recommended Actions For The Development of a Bilateral Agreement for E-Waste Trade

1	2	3	4
Evaluate national needs for e-waste import (e.g., shortage of feedstock for recycling facilities) **or export** (e.g., lack of domestic recycling facilities)	**Select a partner country that can address these needs**, with priority given to nearby countries to minimize the footprint of e-waste transport	**Ensure compatibility and compliance** with both **national regulations and international conventions**, including the Basel Convention	**Develop a mutually beneficial agreement** that supports both countries' e-waste management goals

Cross-border E-Waste Management - Bilateral Agreement

Core Articles of a Draft Bilateral Agreement for E-waste Trade



AGREEMENT BETWEEN THE GOVERNMENT OF THE UNITED STATES OF AMERICA AND THE GOVERNMENT OF MALAYSIA CONCERNING THE TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTES FROM MALAYSIA TO THE UNITED STATES

The Government of the United States of America (the United States) and the Government of Malaysia (Malaysia), hereinafter referred to as "the Parties,"

Recalling the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (the "Basel Convention");

Recalling Article 4(5) of the Basel Convention, which provides that a party shall not permit hazardous wastes to be exported to a non-party;

Recalling also Article 11(1) of the Basel Convention, which provides that, notwithstanding Article 4(5), a party may enter into an agreement with a non-party provided that such agreement does not derogate from the environmentally sound management of hazardous wastes as required by the Convention and that such agreement stipulates provisions not less environmentally sound than those provided for by the Convention;

Have agreed as follows:

ARTICLE 1
DEFINITIONS

For purposes of this Agreement:

(a) 'competent authority' means, in the case of the United States, the U.S. Environmental Protection Agency and in the case of Malaysia, the Malaysian Department of Environment of the Ministry of Science, Technology and the Environment;

CORE ARTICLES OF THE AGREEMENT

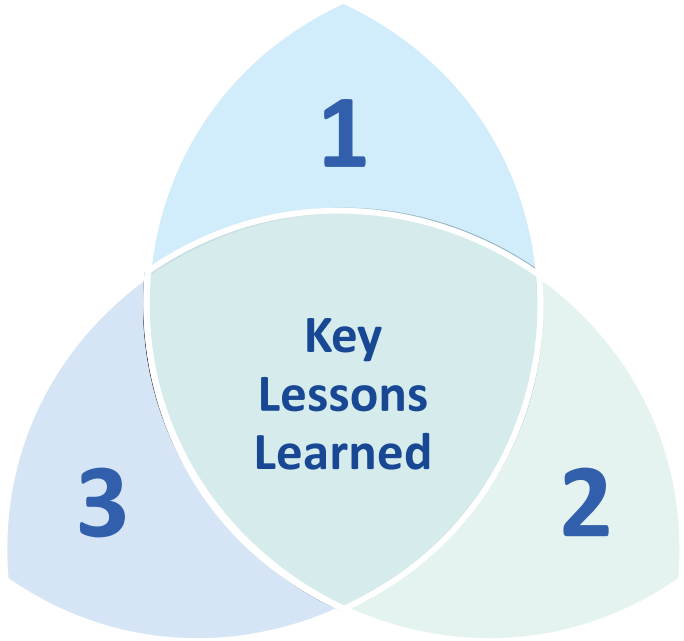
1. **Scope and Definitions:** Delineates the types of electronic waste covered under the agreement and provides definitions (hazardous waste, etc.) to ensure mutual understanding between the parties
2. **Obligations of the Parties:** Outlines the responsibilities of each party, incl. commitments to minimize e-waste generation, enforcing domestic laws, and prevent illegal transboundary movements of e-waste
3. **Transboundary Movement Procedures:** Establishes protocols for e-waste import and export, including prior informed consent procedures, documentation standards, and reimporting obligations to facilitate legal transparent movements
4. **Alignment with International Agreements:** Clarifies that the terms of the agreement should not override each party's obligations to existing or future international agreements, such as the Basel Convention (Environmentally Sound Management standards etc.)
5. **Information Exchange and Cooperation:** Encourages the sharing of information related to e-waste management practices, technologies, and policies, and promotes collaborative efforts for improvement
6. **Administrative Conditions:** Confirms the nature of the agreement's (1) entry into force, (2) conditions for amendment, (3) conditions for dispute settlement, (3) agreement validity and termination process

Source: DCO

From the Validation of the E-waste Management Framework and its Review with Member States, We Derived Various Lessons Learned:

Stakeholder Engagement & Governance

It is crucial to identify the government agencies that are accountable for e-waste management and involve the leadership early in the process. Establish a clear and robust governance approach to build an effective e-waste management system.



E-waste Definition & Capability Visibility

The definition of e-waste should reflect a country's specific needs, priorities, and regulatory context. For countries that are starting the journey of e-waste management, it is difficult to identify the existing recycling and upcycling capabilities – this step is crucial, but it can take time.

Private-Public Collaboration & Regulations Enforcement

Government commitment is a fundamental first step to drive changes in e-waste management, an effective bilateral agreement implies the buy-in of the private sector, which will then recycle or upcycle e-waste. Moreover, strong enforcement of laws and regulations is also essential for e-waste management.

Thank You!

Scan the QR Code to Download the Framework

For Queries : siftikhar@dco.org

Digital Cooperation Organization