



# JASANZ R2 LAUNCH EVENT

**Corey Dehmey**

**SERI CEO**

**April 18<sup>th</sup>, 2024**





**Est 2010**

**Charitable  
Nonprofit  
Organization**

## OUR MISSION:

SERI works to create a world where electronic products are reused and recycled in a way that results in resource preservation, the well-being of the environment, and the health and safety of workers and communities.

## OUR PROGRAMS:



SERI is an ANSI accredited standard developer, and well known for the **R2 Standard**, the world's most widely adopted standard for secure and sustainable electronics reuse and recycling.





2005



2013

# LIVING IN A CONNECTED WORLD



# CONSUME & DISPOSE MINDSET



# THE ELECTRONICS LIFECYCLE TODAY



# THE GROWING GLOBAL CHALLENGE

Improper management of used electronics has caused devastating harm to the environment and to people.

This problem grows as:



Global demand for electronics  
continues to rise



Devices become obsolete and  
are replaced with greater  
frequency

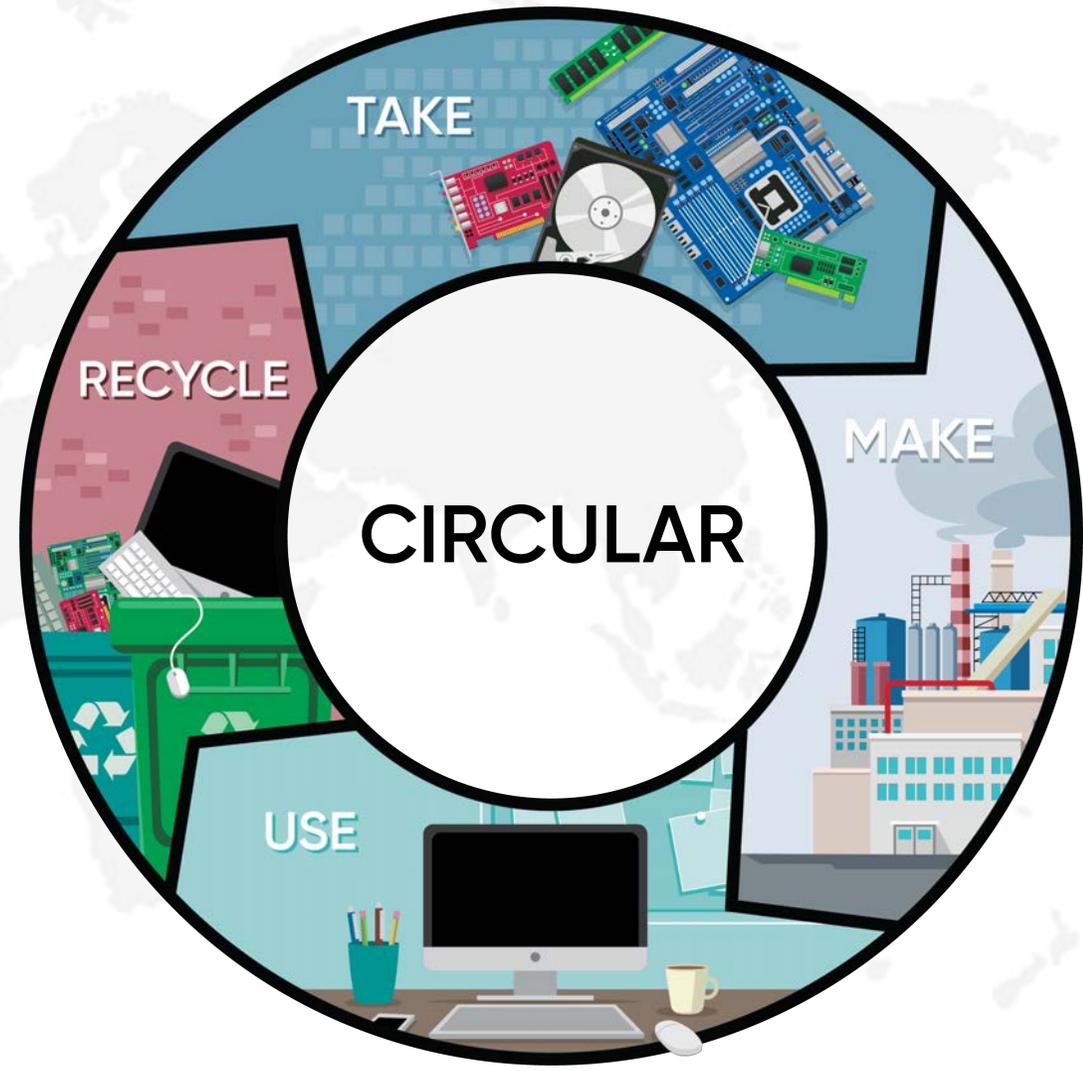
# MANAGING E-WASTE DOESN'T SOLVE THE PROBLEM



Image by kjpargeter on Freepik



# WHAT ABOUT RECYCLING?



# CLIMATE CHANGE

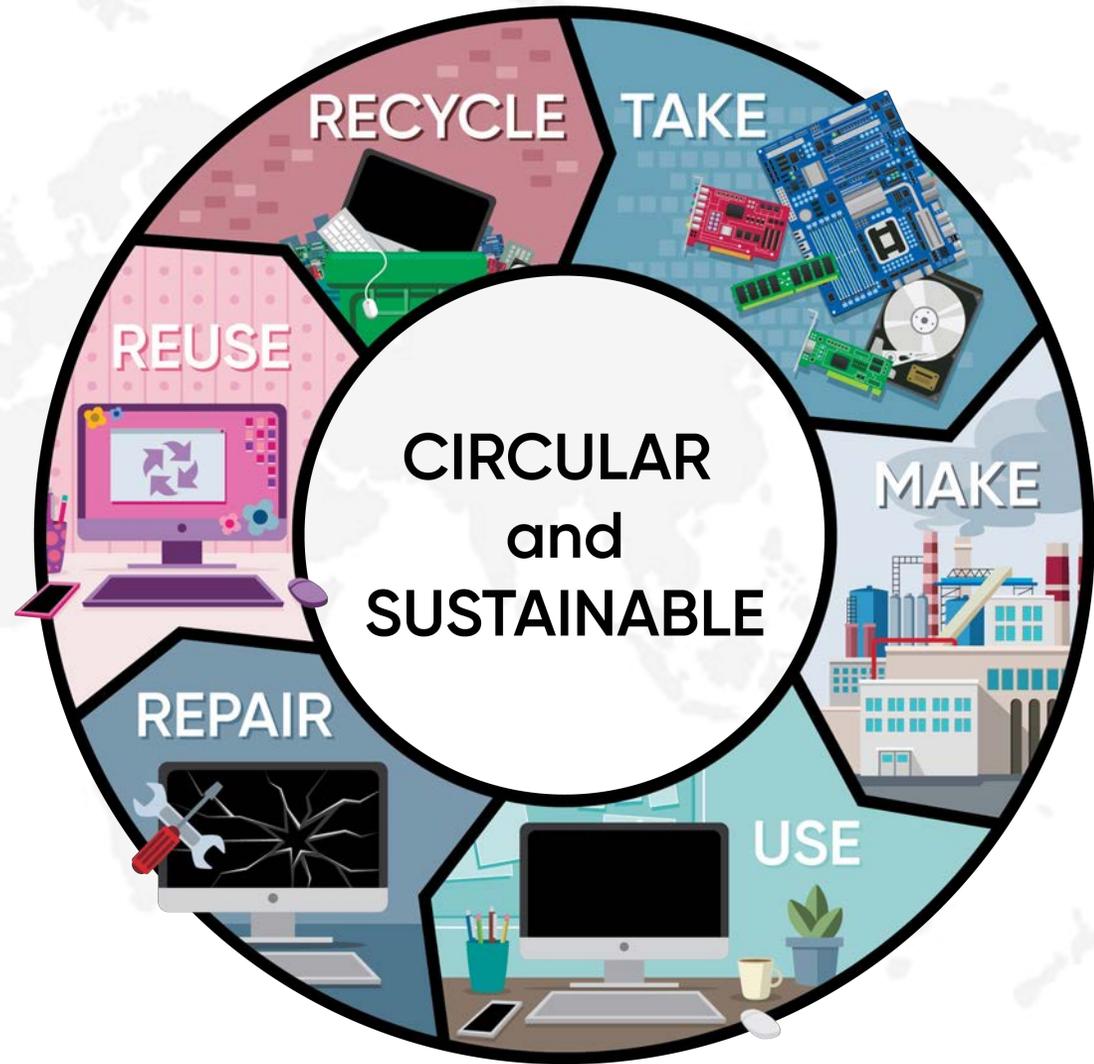
On average 80% or more of the total carbon impact of that device comes from the manufacturing process.

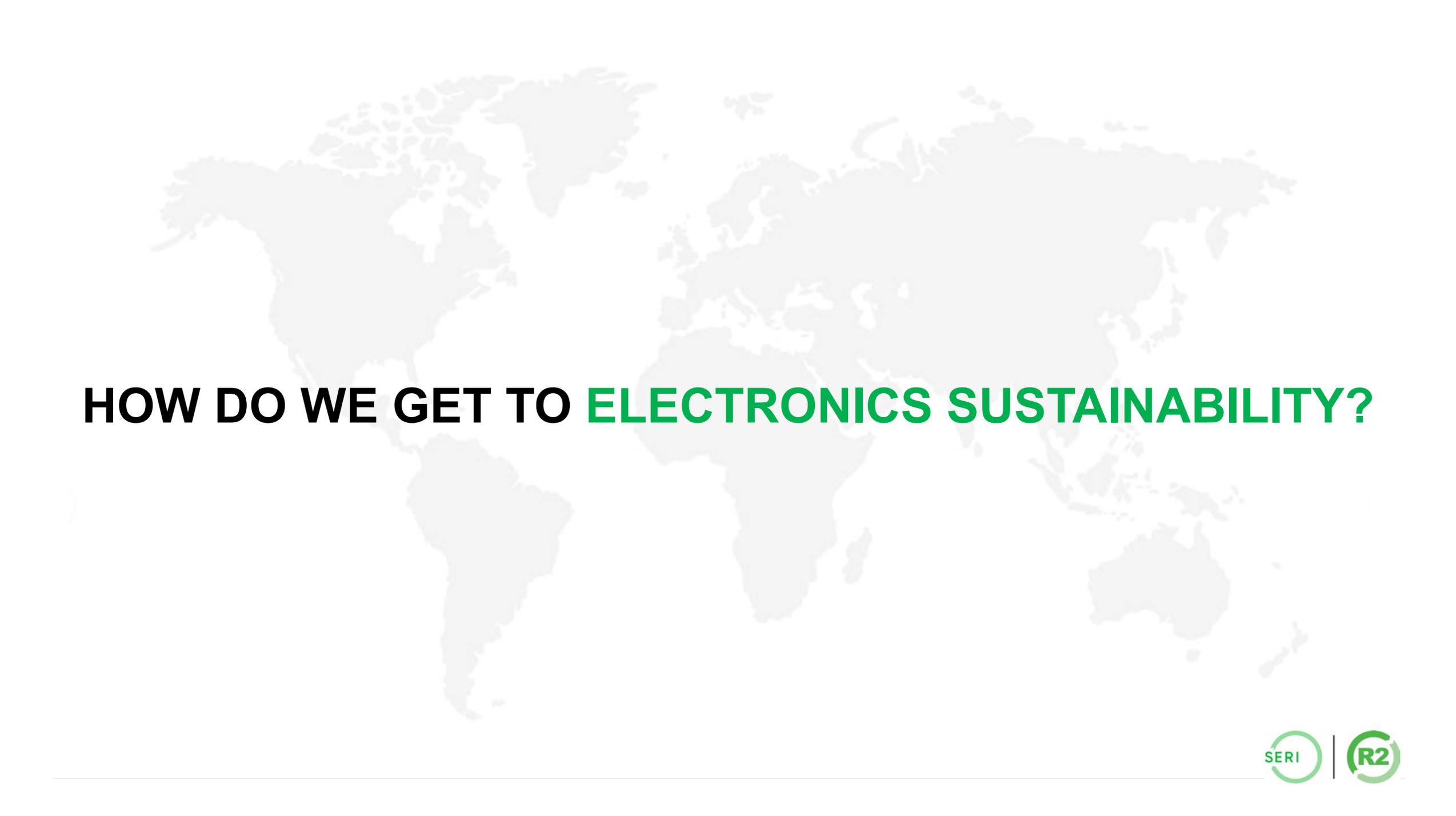
That's 80% of the total carbon impact over the entire life of that laptop...



**... BEFORE YOU EVER TAKE IT OUT OF THE BOX!**

**THE GOAL  
HAS TO BE  
CIRCULAR AND  
SUSTAINABLE**

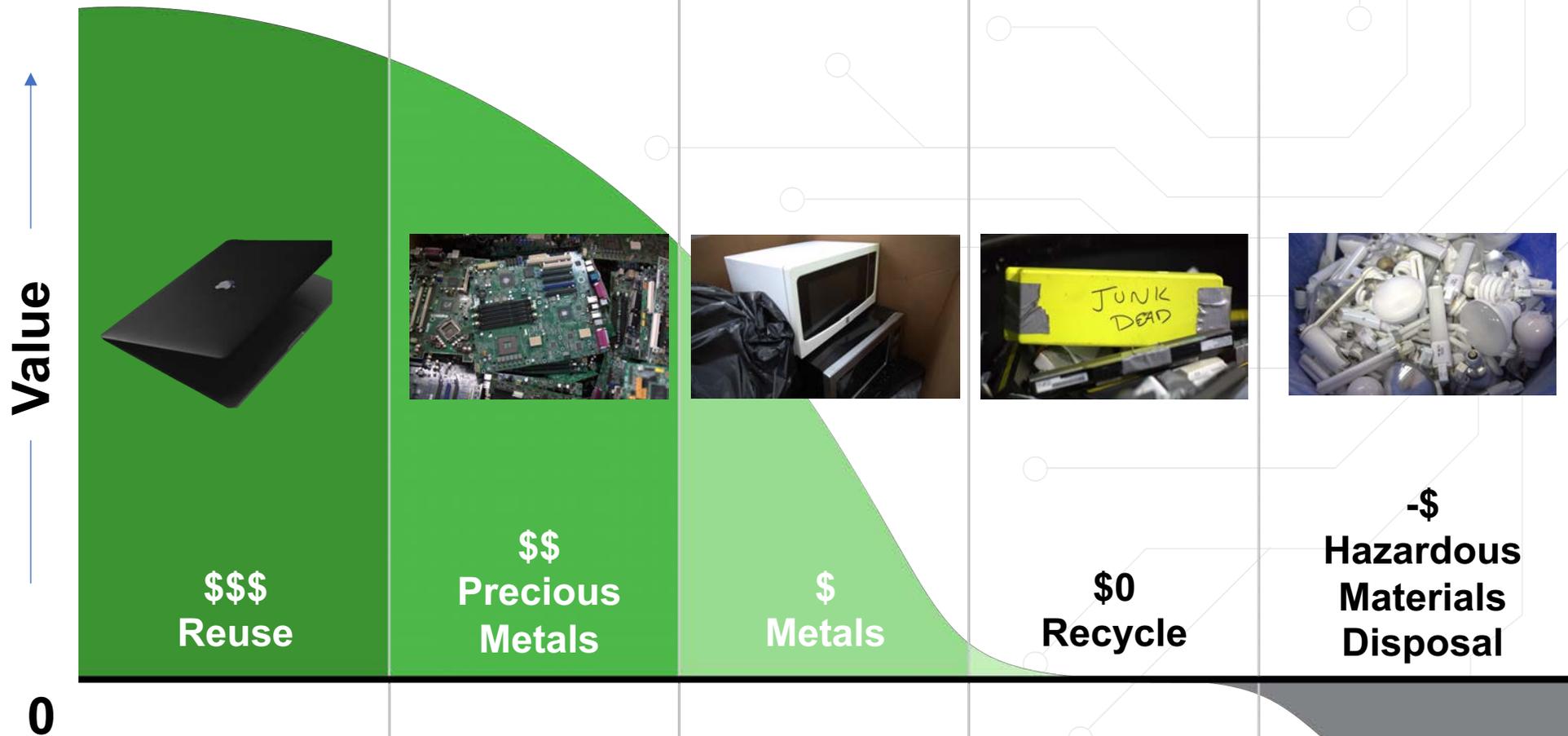




# HOW DO WE GET TO **ELECTRONICS SUSTAINABILITY?**



# MARKETS DRIVE BAD DECISIONS



# THE LIMITATIONS OF REGULATIONS

- Varying Scopes
  - End-of-life
  - Consumers
  - Wastes and Transboundary Movements
  - Extended Producer Responsibility (EPR)
- Local to the country
- Not consistent across the world
- Lack of effective oversight

# THE PROBLEM FOR BUSINESSES

- Multi-National Businesses
- Patchwork of regulations ≠ consistent results
- Increased costs
- Does not prevent brand damage

# Morgan Stanley to pay \$35M after hard drives with 15M customers' personal data turn up in auction

Morgan Stanley

Morgan Stanley hired a moving and storage company with “no experience or expertise in data destruction services,” according to the SEC and failed to properly monitor the moving company’s work. Some of the hard drives were later found on an internet auction site with customers’ personal data still stored within.

# HOW DO YOU KNOW?

"They'll take it all for free!"

"I got a guy!"

"Trust us... we do it right"

"Don't worry... your data is safe with us"

# INTEGRATING ELECTRONICS BEST PRACTICES INTO A CIRCULAR ECONOMY

1

## *STANDARDS*

Identify and Document  
Best Practices to meet  
the goal



# ELECTRONICS SUSTAINABILITY STANDARDS

**CENELEC**

EN 50625-1  
EN 50625-2-1  
EN 50625-2-2  
EN 50625-2-3

EN 50625-2-4  
CLC/TS 50625-4  
EN 50614



**STANDARDS  
Australia**  
AS/NZS 5377



# INTEGRATING ELECTRONICS BEST PRACTICES INTO A CIRCULAR ECONOMY

1

## *STANDARDS*

Identify and Document  
Best Practices to meet  
the goal

2

## *CERTIFICATION*

Create accountability to  
the Practices Best

# ELECTRONICS SUSTAINABILITY CERTIFICATIONS

## AS/NZS 5377

2 Countries

47 Facilities

[register.jas-anz.org/certified-organisations](http://register.jas-anz.org/certified-organisations)



4 Countries

111 Facilities

[www.e-stewards.org/find-a-recycler/](http://www.e-stewards.org/find-a-recycler/)



16 EU Member States

192 Certified Operators

[www.weeelabex.org/operators-list/](http://www.weeelabex.org/operators-list/)



42 Countries

1158 Facilities

[www.r2directory.org](http://www.r2directory.org)



# INTEGRATING ELECTRONICS BEST PRACTICES INTO A CIRCULAR ECONOMY

1

## ***STANDARDS***

Identify and Document Best Practices to meet the goal

2

## ***CERTIFICATION***

Create accountability to the Best Practices

3

## ***COMMITMENT***

to Best Practices by everyone

# WHOLE LIFECYCLE THINKING



RETURNS



REPAIRS



TRADE-INS



UPGRADES



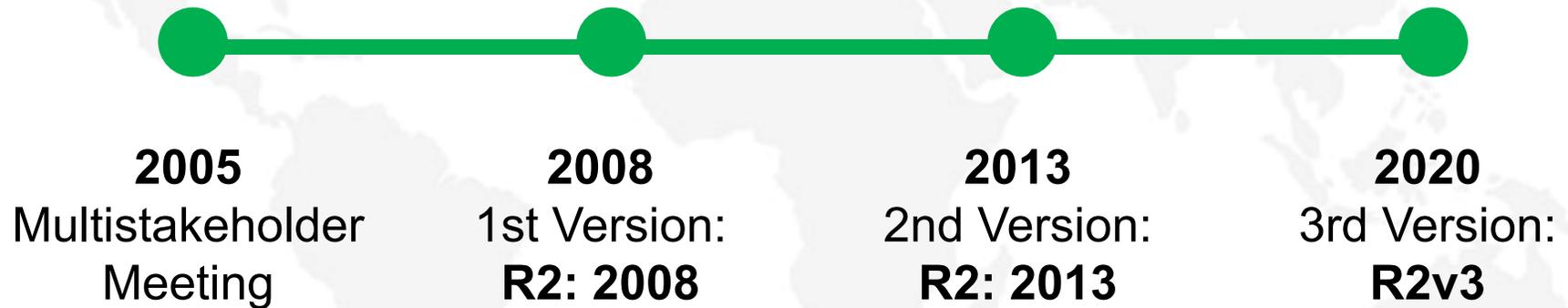
REMARKETING



RECYCLING

# THE R2 STANDARD





# WHO DEVELOPS THE REQUIREMENTS?



**R2 Technical Advisory Committee (TAC),**  
a diverse group representing:

- small/mid/large scale recyclers & refurbishers
- auditors and certification bodies
- electronics manufacturers and retailers
- users/customers of R2 certified facilities
- environmental protection agencies and advocates
- other industry experts

# THE STANDARD DEVELOPMENT PROCESS

OPEN, BALANCED, CONSENSUS BASED

- **R2 is a consensus-based standard.**  
The participation of many voices and stakeholders in the revision process makes for a stronger and more effective standard.
- **SERI is an ANSI accredited standard developer.**
- **SERI is audited by ANSI** to ensure the development process meets essential requirements for openness, balance, consensus and due process.



R2 Technical Advisory  
Committee (TAC)



Public  
Comment



# WHAT DOES THE **R2 STANDARD** COVER?



- Electronics
- PV Modules (Solar Panels)
- First use through end-of-life
- Focus on effectiveness & outcomes of systems and procedures

# MANAGEMENT SYSTEMS

Document	EMS	HSMS	QMS
RIOS:2016 – Recycling Industry Operating Standard	●	●	●
ISO 14001:2015 – Environmental Management Systems	●		
ISO 45001:2018 – Occupational Health and Safety Management Systems		●	
EN ISO 45001:2023 – Occupational Health and Safety Management Systems		●	
AS/NZS 4801:2001 – Occupational Health and Safety Management Systems		●	
ISO 9001:2015 – Quality Management System			●
TL 9000 Quality Management System for the Telecommunications Industry			●
ISO 13485:2016 Medical Devices – Quality Management Systems			●



# INTENDED OUTCOMES OF R2



- Data Sanitization
- Environmentally Sound Management
- Worker safety
- Health of Communities
- Circular Economies
- Legal Compliance
- Import/Export Compliance
- Quality of Reused Electronics

# WHO RELIES ON THE R2 STANDARD?

## CASE STUDY:

### HOW R2 BECAME THE BACKBONE OF CANADA'S EPR PROGRAM

#### CANADIAN STRATEGY OF USING R2 AS A FOUNDATION ACCELERATES EPR PROGRAM DEVELOPMENT

Extended producer responsibility is a tricky topic, especially for regulators attempting to create a program and its governance structure from scratch. The complex process can be slow, expensive, and challenging to ensure participation and buy-in from all stakeholders.

But Canadian electronics producers and retailers illustrated a strategy to speed the process and ensure a more complete, nimble rule set and oversight: adopting the R2 standard as the basis for the EPR strategies across the country.

#### ESTABLISHING AND REVISING THE STANDARDS

Canada's first electronics standard emerged in 2004, developed by consumer electronics companies through the industry-led organization Electronics Product Stewardship Canada (EPSC). They devised the Electronics Recycling Standard (ERS) to ensure processors operating under the industry-led stewardship programs properly recycled materials in a safe and environmentally responsible manner while preventing illegal e-waste exports.

The ERS has been revised several times. EPSC took a new tactic with the 2015 revision and based the ERS on the R2 standard, created by U.S.-based organization Sustainable Electronics Recycling International. R2 was built as a global standard and therefore can create harmony among a country's diverse regional programs, such as at the provincial or state levels.

"The standards were very close," said former R2 Director Sean De Vries. "The manufacturers' association asked if there was a need to have their own standard anymore or if R2 would give the same thing if they adopted it as a baseline – and anything unique to Canada could be added on top of that."

#### REDUCING EPR PROGRAM LEGWORK

R2 was an established standard at the time of the 2015 ERS revision, and R2 certification had been gaining steam in the United States and globally. Canadian electronics businesses, most of which are global entities, recognized that adopting a commonly used international recycling standard would streamline the EPR process and make compliance simpler and more efficient.

"As recycling programs became more sophisticated... it seemed to make more sense," said Shelagh Kerr, EPSC president and CEO.

Using the R2 standard as a foundation removes a significant portion of the legwork involved with establishing or revamping an EPR program. R2 also is nimble enough to evolve as the industry does and eliminate challenges with updating stewardship programs and regulations.



Champions of Electronics Sustainability

[sustainableelectronics.org](http://sustainableelectronics.org)

- EPR Programs
- OEMs
- Multinational Companies
- Government
- Returns
- Mobile
- Data Centers
- Business IT Assets
- Consumer Collections





# CERTIFICATION PROGRAM



# ELIGIBILITY FOR R2 CERTIFICATION



R2 applies to any facility in the Reuse / Repair / Recycling Chain

Requirements in R2 adapt to many different business models

- Collectors
- Manual Dismantlers
- Materials Recovery Processors
- Refurbishers
- Brokers/Traders

Note: Only legally registered businesses are eligible for R2 Certification

# WHY COMPANIES **SEEK R2 CERTIFICATION?**

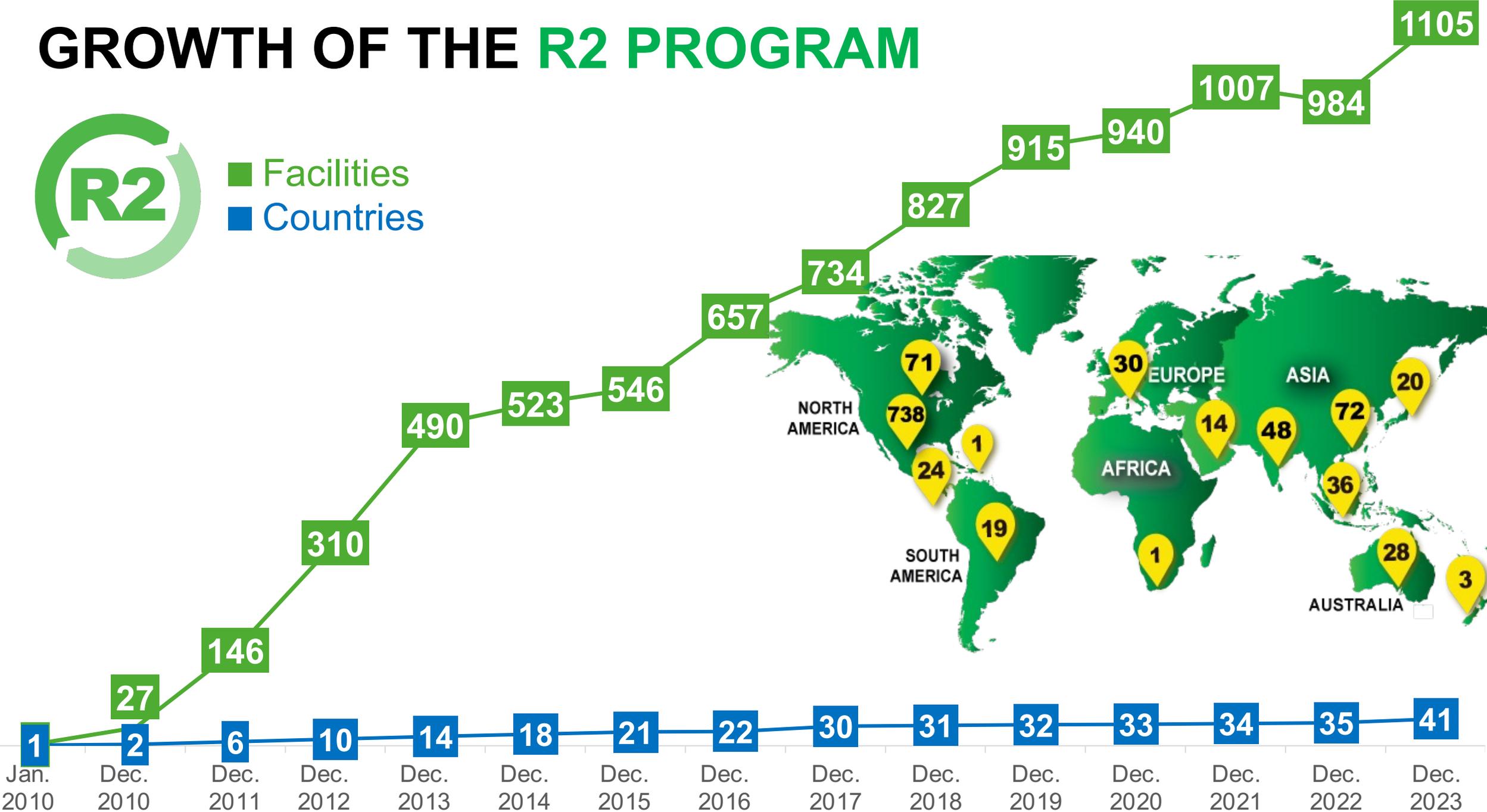
- **New supply channels**
- **Diversify Business**
- **Global Businesses require R2 to harmonize reuse and recycle supply chain**
- **OEMs standardizing their supply chains**
- **R2 Certified Facilities prefer R2 Certified downstream vendors**



# GROWTH OF THE R2 PROGRAM



■ Facilities  
■ Countries





**33 R2 Certified Facilities in Australia and New Zealand**

**206 R2 Certified Facilities in Asia**



## FIND R2 CERTIFIED FACILITIES

**1159**  
FACILITIES

**42**  
COUNTRIES

**7**  
REGIONS

Search our database of all R2 certified facilities from around the world.



**Geographic Search** | **Advanced Search** | **Search by Name**

 **USE CURRENT LOCATION**

OR

**ENTER AN ADDRESS TO FIND NEARBY FACILITIES**

Address

City  Postal Code

Country

State/Province

Miles  20

**SEARCH BY LOCATION**

RESET

**VIEW LIST OF R2 CERTIFIED FACILITIES BY:**

Region

Country

State/Province

City/Town

**FILTER BY AREA**

RESET

# R2 DIRECTORY

<https://R2Directory.org>



# ACCREDITATION BODIES



*ISO/IEC 17021-1 and R2 Code of Practices*



# ACCREDITED CERTIFYING BODIES FOR R2



# 6 to 12+ MONTH CERTIFICATION PROCESS



Download Standard



Education & Implementation



Optional Consultant



Optional R2 Auditor Training Course



3-6 months in advance

Schedule with Certification Body



Internal Audits & Corrections



Stage 1

Sign SERI License Prior to Stage 1 Audit



Stage 2

Pay SERI License Fee Prior to Stage 2 Audit



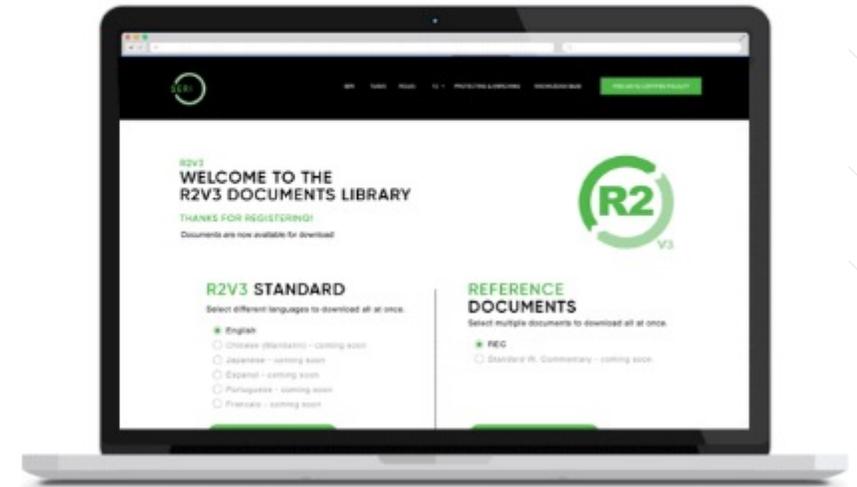
# DOWNLOAD FOR FREE

R2V3

## WELCOME TO THE R2v3 DOCUMENTS LIBRARY

HERE YOU'LL FIND THE CURRENT R2 STANDARD AND  
REFERENCE DOCUMENTS LIKE THE COP, REC, AND ANY  
FORMAL INTERPRETATIONS.

DOCUMENTS ARE AVAILABLE FOR FREE DOWNLOAD BY  
FOLLOWING THESE THREE EASY STEPS.





# KNOWLEDGE BASE



Search for guidance by keyword or topic

[Take A Quick Video Tour of the Knowledge Base → Click Here](#)

### Getting Certified

- Download R2 Standard / REC / Code of Practices
- Intro to R2 webinars
- Summary of R2v3
- Key Steps in the Certification Process
- Find a Consultant

### Important R2 Links, Tools, Templates

- Register Your Downstream
- Request Copy of your DSV Registration Confirmation
- Request Copy of your SERI License Acknowledgement
- Formal Interpretations for R2v3
- Templates and Guides

### Video Library

- Translation instructions for R2 videos
- Intro to R2 - Translations
- Definitions & Overview
- Code of Practices
- Core 1 -- Scope
- Core 2 -- Hierarchy

### Podcast Library

- Podcast 1 - Using the R2 Appendix Determination Tool
- Podcast 2 - Helpful hints when scheduling your Internal Audit
- Podcast 3 - Writing your Data Sanitization Plan
- Podcast 4 - Writing Your R2 Reuse Plan

### R2 Training - CORE Requirements

- Translation instructions for R2 videos
- Definitions & R2v3 Overview
- Core 1- Scope
- Core 2- Hierarchy
- Core 3- Environmental, Health & Safety
- Core 4- Legal & Other

### R2 Training - PROCESS Requirements (Appendices)

- Translation instructions for R2 videos
- R2v3 Appendix Applicability Guidance
- R2v3 Appendix Determination Tool
- The Scoop on Scope: What you need to know about scope for your R2 certification
- Clarification on Appendix E

### Common Questions & Answers about R2v3

[Click Here to Submit Your Question](#)

### Code of Practices & Program Information

Download R2 Standard / REC / Code

### Auditor Training & Resources

- Advisory 22 - Transition Plan for R2v3 (version 1.4)

### RECENTLY ADDED...

- SERI R2v3 Auditor Course: Sept. 19, 20, 21 (online) June 29, 2023
- Request Copy of your DSV Registration Confirmation June 27, 2023
- Request Copy of your SERI License Acknowledgement June 27, 2023
- Clarification on Appendix E Applicability March 30, 2023
- Appendix E Applicability Flowchart Guidance March 30, 2023
- R2v3 Appendix Determination Tool March 30, 2023
- R2v3 Appendix Applicability Guidance March 30, 2023
- Determining which Appendices (PROCESS Requirements) apply to your facility March 30, 2023
- Common questions about Industrial Hygiene requirements March 29, 2023
- R2v3 and IH Monitoring: A Quick Primer and Key Resources March 29, 2023
- Advisory 22 – Transition Plan for R2v3 (version 1.4) March 16, 2023



# R2 Guidance & Knowledge Base

Powerful Search Tool

Search for guidance by keyword or topic

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## Getting Certified

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- Find a Consultant



## Transitioning to R2v3

- R2v3 Formal Interpretation #1.0 - Data Sanitization Software
- IMPORTANT MESSAGE for R2 facilities and consultants about auditor availability and transition timing
- A Successful Transition to R2v3 - Webinar & Resource Guide
- Podcast 10 - What Have We



## Video Library

- Translation instructions for R2 videos
  - Intro to R2 - Translations
  - Definitions & Overview
  - Code of Practices
  - Core 1 -- Scope
  - Core 2 -- Hierarchy
  - Core 3 -- Environmental Health & Safety

## RECENTLY ADDED...

SERI R2v3 Auditor Course: July 10, 11, 12 (online)  
May 1, 2023

Clarification on Appendix E Applicability  
March 30, 2023

Appendix E Applicability Flowchart Guidance  
March 30, 2023

R2v3 Appendix Determination Tool  
March 30, 2023

# 40+ TRAINING VIDEOS



Search



## CORE 3

Environmental, Health & Safety  
Management System

Level 1 – The Intent



### R2v3 Training Videos

Unlisted R2 Training - 8 / 40



- 5 Core 1.2 Scope R2 Training 6:09
- 6 Core 2.1 Hierarchy R2 Training 3:51
- 7 Core 2.2 Hierarchy R2 Training 7:13
- Core 3.1 EH&S Management System R2 Training 3:14
- 9 Core 3.2 EH&S Management System R2 Training 10:03
- 10 Core 4.1 Legal R2 Training 3:16
- 11 Core 4.2 Legal R2 Training 8:12
- 12 Core 5.1 Tracking Throughput R2 Training 4:51
- 13 Core 5.2 Tracking Throughput R2 Training 9:20
- Core 6.1 Sorting

# ONLINE TRAINING CLASSES

- Intro to R2 webinars
- R2v3 Auditor Training
- More in development



# LIVE SERI SUPPORT



[Info@SustainableElectronics.org](mailto:Info@SustainableElectronics.org)



# THE ROLE OF SERI



- Standards Development
- Stakeholder Engagement
- Education
- Support
- Scheme Oversight

# R2's IMPACT

- Support National E-Waste Regulations
- Circular Economy Goals
- Environmentally Sound Management
- Quality of EPR Programs
- Digital Inclusion
- Economic Development
- Channels
  - Consumer Recycling
  - Returns Channel
  - Mobile Trade-Ins
  - Business IT Asset Refresh



# INTRO TO R2 WEBINAR

## FRIDAY 19 APRIL

The screenshot shows the SERI website navigation menu. The SERI logo is in the top left. The navigation bar includes links for 'About', 'Join the Mission', 'Making a Difference', 'For Business', 'R2', and 'Find An R2 Certified Facility'. A language dropdown menu is set to 'English'. The main navigation menu is organized into five columns:

About R2	Documents Library	Getting Certified	Education/Training	Resource Center
A Call To Action	R2 Standard	Steps To R2 Certification	What Is R2? – On-Demand Video	Logos
Welcome To R2	COP	Find A Consultant	<b>Intro To R2 – 90 Minute Live Session</b>	Videos
R2 Standard Development	Formal Interpretations	Find A Certification Body	Level 1 Videos	R2 Copy Points
Process Requirements	REC	Download R2 Standard	Level 2 Videos	Sell Sheets
FAQs		SERI License Application For R2 Certification	R2 Auditor Course	Social Media
			<b>Knowledge Base</b>	



# CHAMPIONS OF ELECTRONICS SUSTAINABILITY

[SustainableElectronics.org](https://SustainableElectronics.org)

**GET SOCIAL WITH US:**  
Follow R2 Certification & SERI

