



JASANZ

R2 LAUNCH EVENT

Corey Dehmey

SERI CEO

April 18th, 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

Luca Bruno /AP



2013



Michael Sohn/AP

LIVING IN A CONNECTED WORLD



CONSUME & DISPOSE MINDSET



THE ELECTRONICS LIFECYCLE TODAY



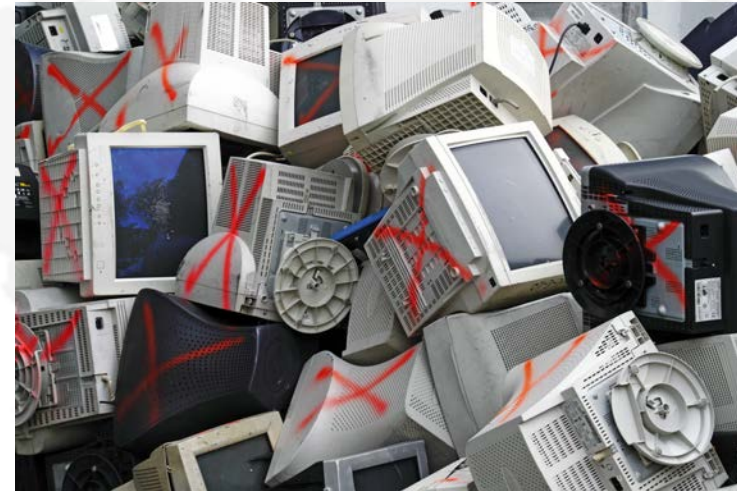
THE GROWING GLOBAL CHALLENGE

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

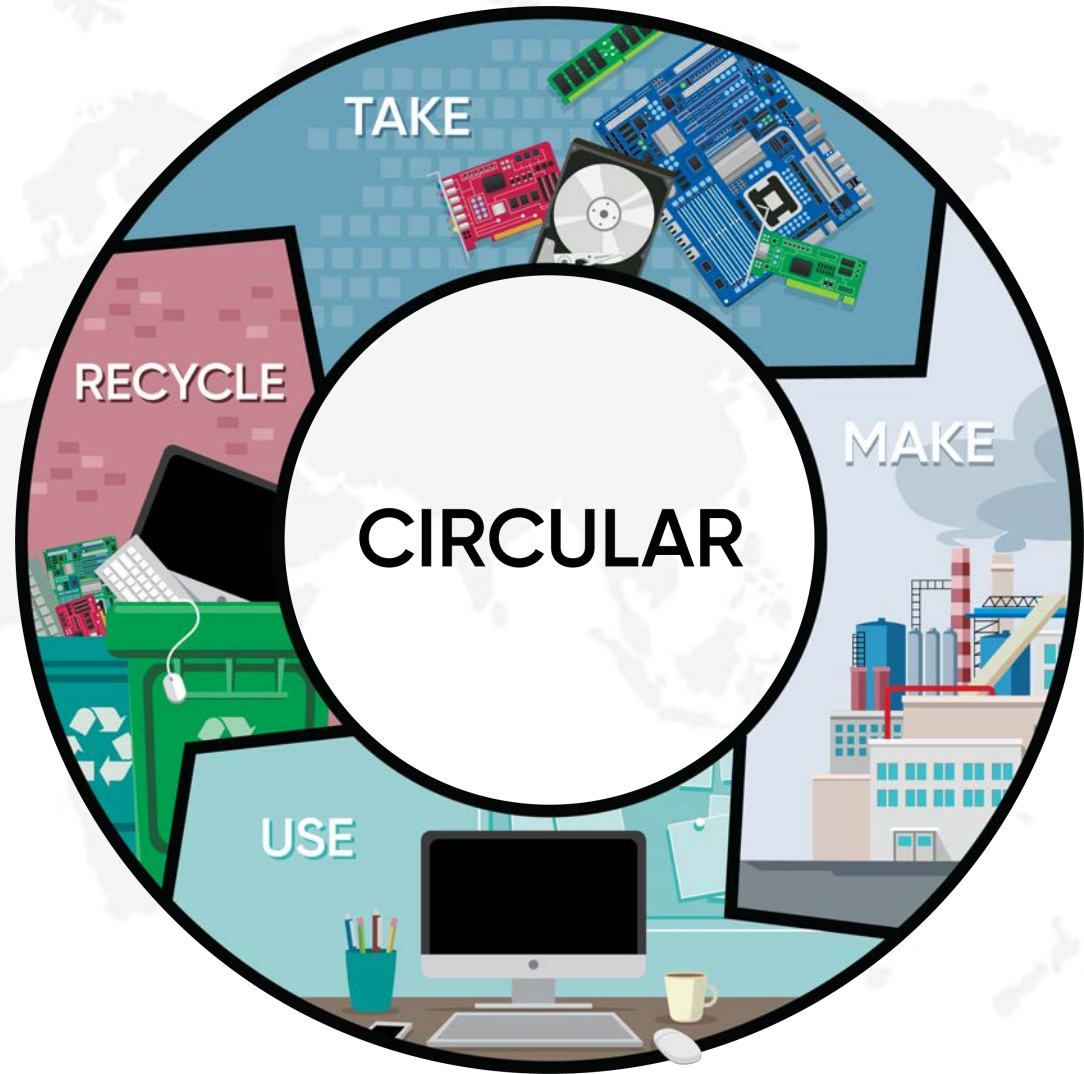


Devices become obsolete and
are replaced with greater
frequency

MANAGING E-WASTE DOESN'T SOLVE THE PROBLEM



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**

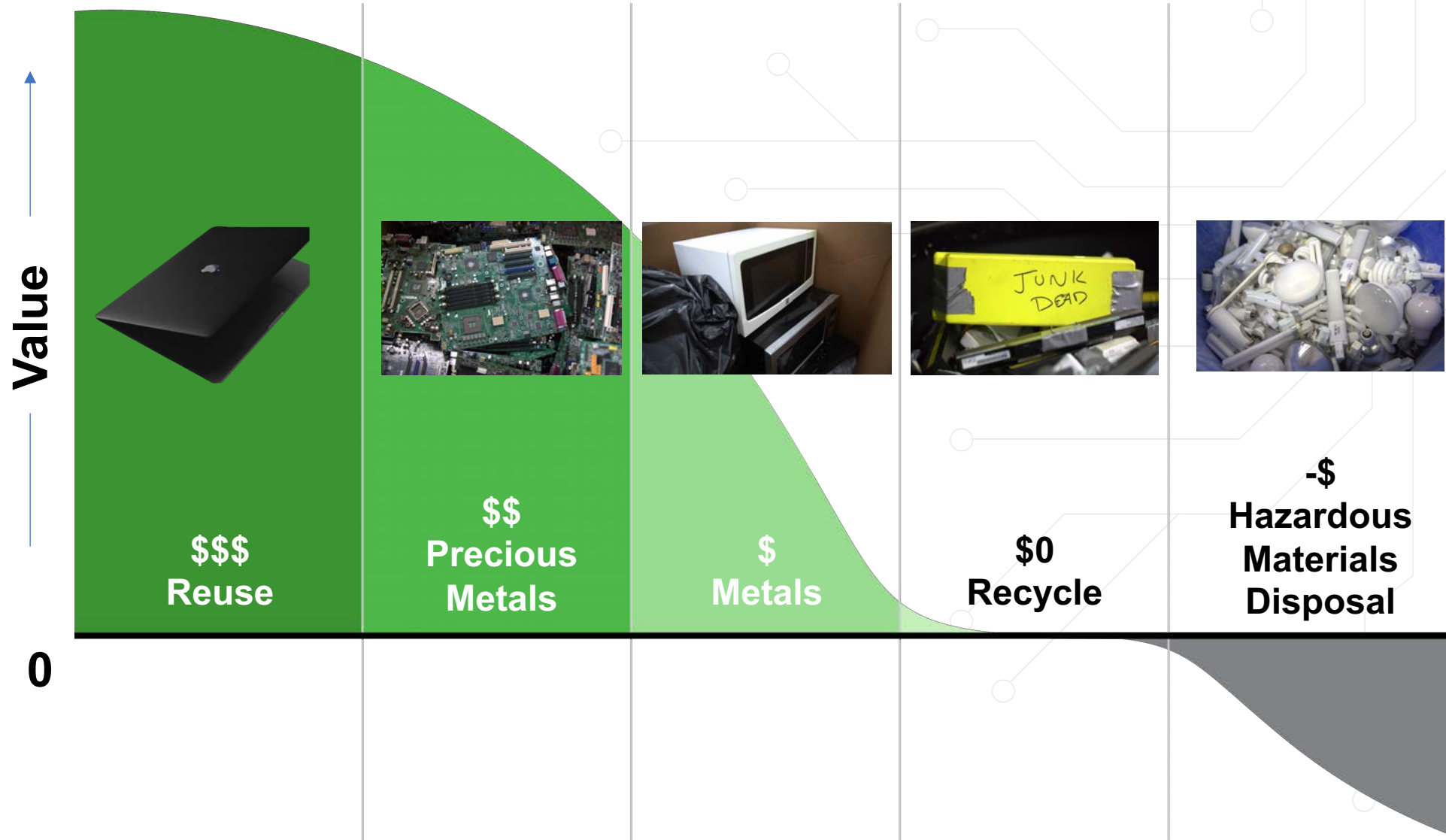




HOW DO WE GET TO **ELECTRONICS SUSTAINABILITY?**



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 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



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



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



4 Countries

111 Facilities

www.e-stewards.org/find-a-recycler/



16 EU Member States

192 Certified Operators

www.weeelabex.org/operators-list/



42 Countries

1158 Facilities

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



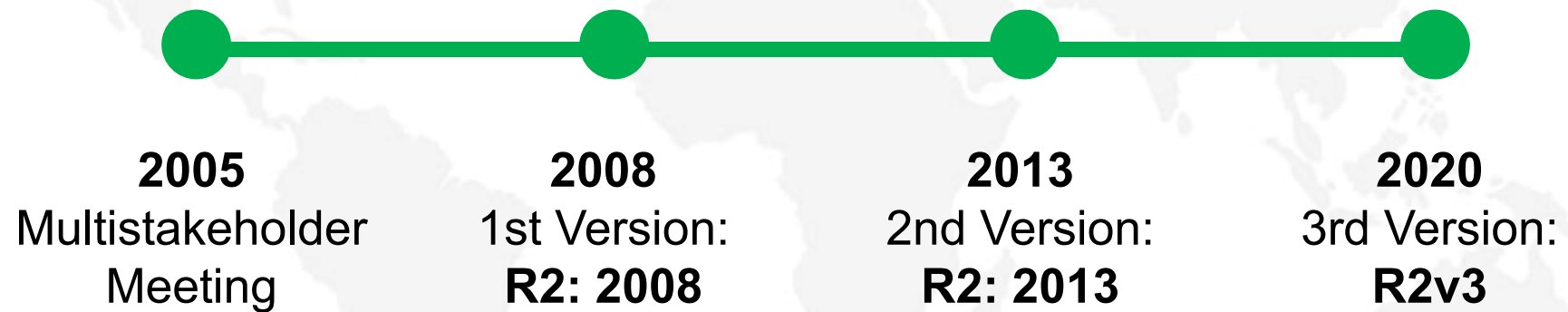
REMARKETING



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

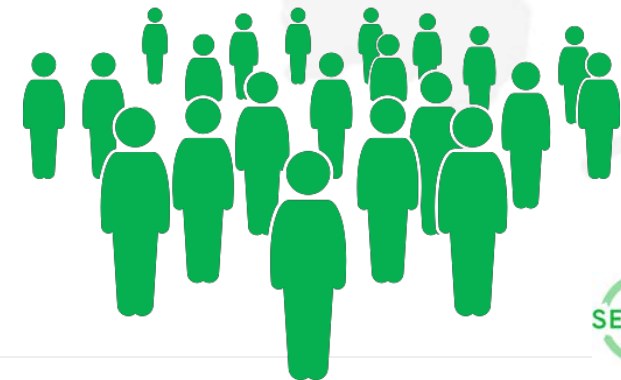
- **R2 is a consensus-based standard.**
The participation of many voices and stakeholders in the revision process makes for a stronger and more effective standard.
- **SERI is an ANSI accredited standard developer.**
- **SERI is audited by ANSI** to ensure the development process meets essential requirements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

- 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?**

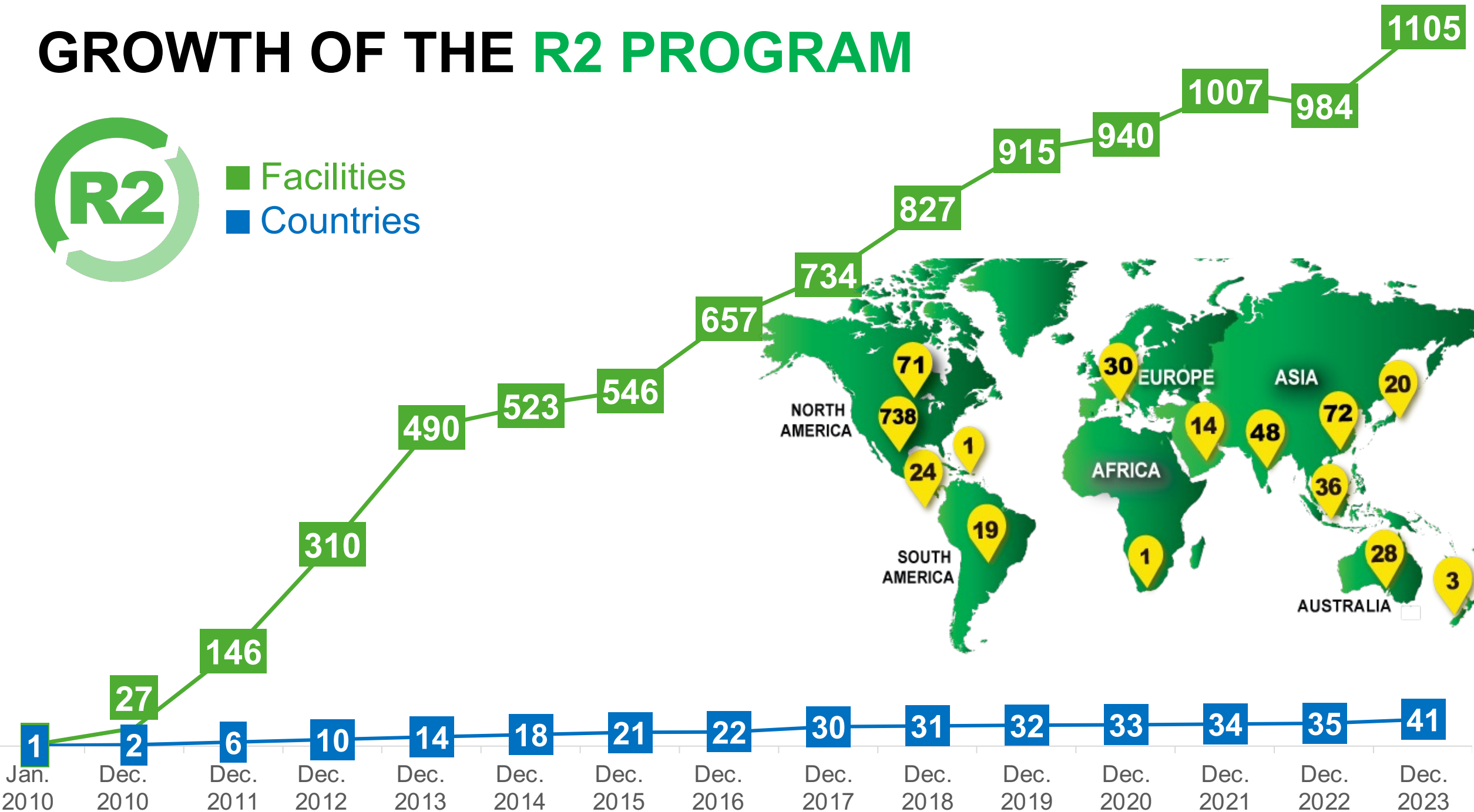
- New supply channels
- Diversify Business
- Global Businesses require R2 to harmonize reuse and recycle supply chain
- OEMs standardizing their supply chains
- R2 Certified Facilities prefer R2 Certified downstream vendors



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

SEARCH BY LOCATION

RESET

VIEW LIST OF R2 CERTIFIED FACILITIES BY:

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



Sign SERI License Prior to
Stage 1 Audit



Pay SERI License Fee Prior to
Stage 2 Audit



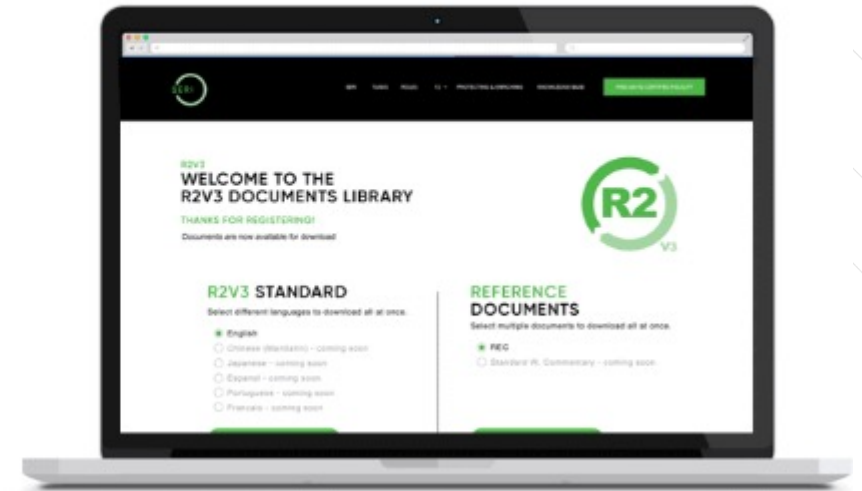
DOWNLOAD FOR FREE

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



<https://sustainableelectronics.org/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

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



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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



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
- 8 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



THE ROLE OF SERI



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

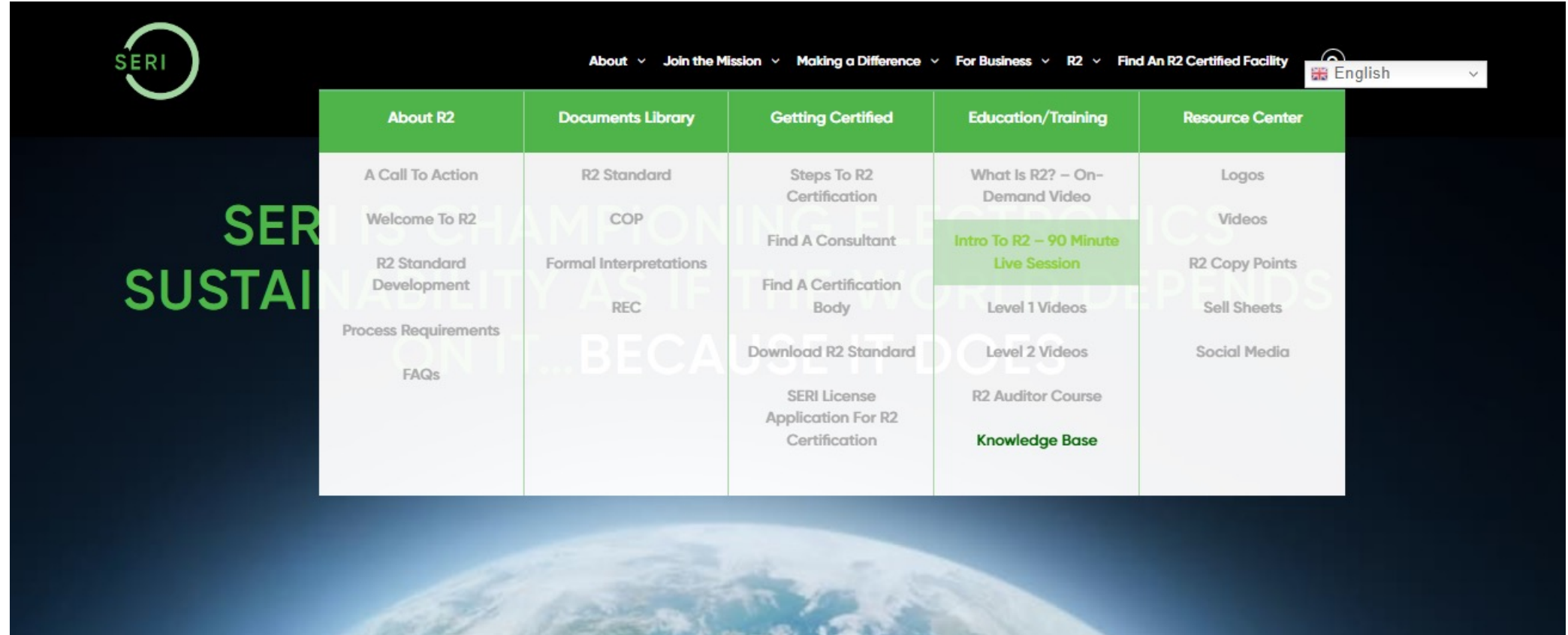
's IMPACT

- 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 with a dark blue header and a light blue background featuring a globe. 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, along with a language dropdown set to English. A large green text overlay on the left reads "SERI IS CHAMPIONING ELECTRONICS SUSTAINABILITY AS IF THE WORLD DEPENDS ON IT... BECAUSE IT DOES". A table of navigation links is displayed in the center, with the "Intro To R2 – 90 Minute Live Session" highlighted in green.

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	Intro To R2 – 90 Minute Live Session	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
			Knowledge Base	



CHAMPIONS OF ELECTRONICS SUSTAINABILITY

SustainableElectronics.org

GET SOCIAL WITH US:
Follow R2 Certification & SERI

