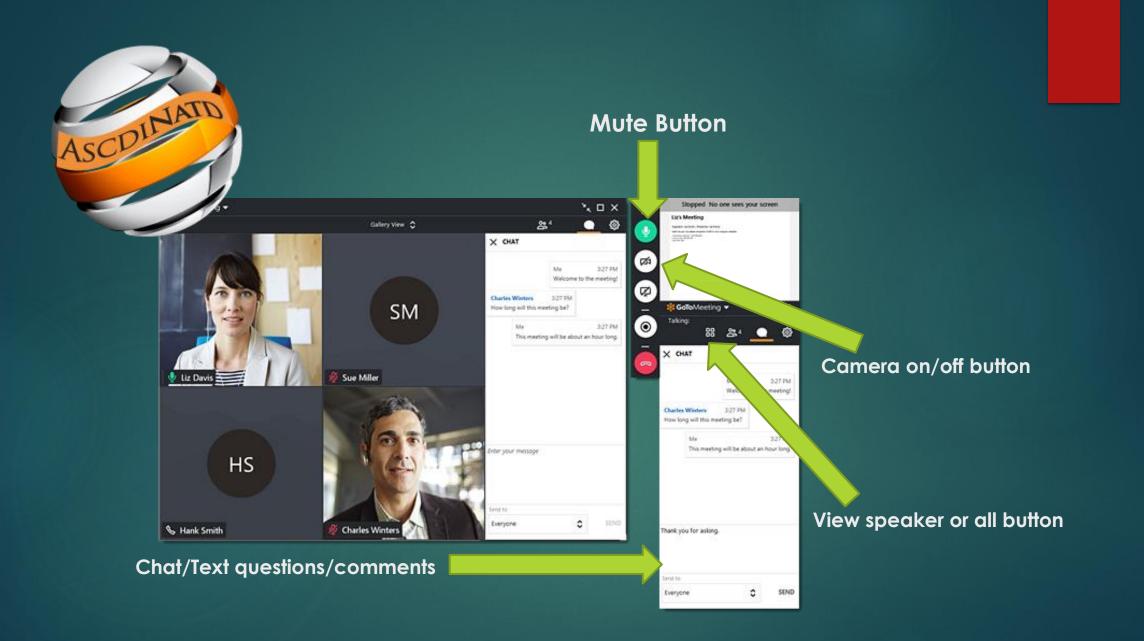
Why Certify?









<u>Kelsey Cameron</u> <u>Sales Executive</u>



the vested group



TEST. REPAIR. REUSE. RECYCLE

Certification... is it worth the investment?



The who & why behind R2

Trends driving the growth of R2

Overview of R2 requirements

The benefits & costs of certification

R2 was developed in response to growing concern about the unsafe recycling & disposal of used electronics













The who & why behind R2

Trends driving the growth of R2

Overview of R2 requirements

The benefits & costs of certification

60%

experienced breaches caused by **3rd Party** service providers

3rd-Party Data Risk Study by Ponemon Institute

Surveyed **1000+** CIOs & Security Professionals

Residual data recovered from remarketed devices

48% of hard drives35% of mobile devices



Ineffective attempts made to remove data

75% of hard drives 57% of mobile



Self-made claims cannot always be trusted

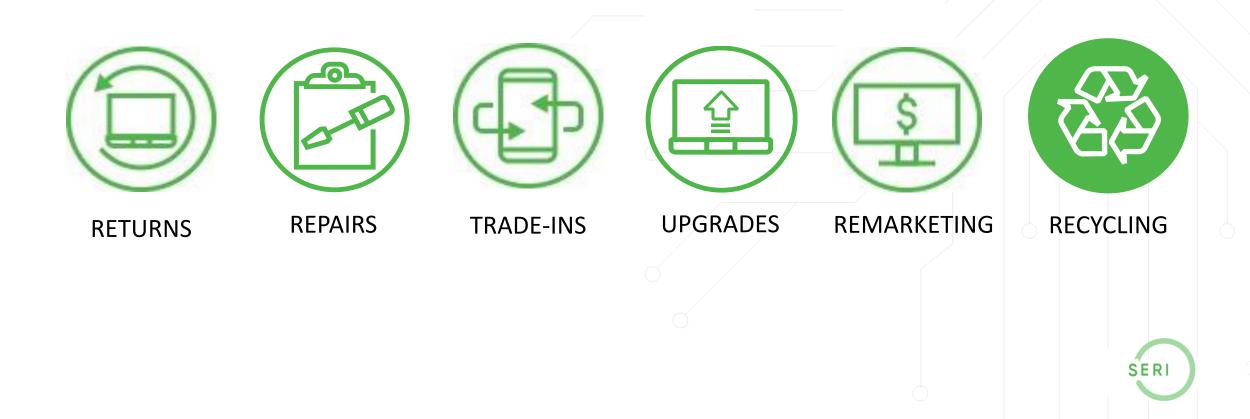


A powerful tool for evaluating 3rd-party service providers

R7



Growth driven by more reliance on third-party service providers



Growth driven by customer / supplier need to reduce non-compliance risks



Growth driven by multi-national corporations wanting to harmonize & simplify



Growth driven by other R2 facilities choosing to use R2 downstreams

VS



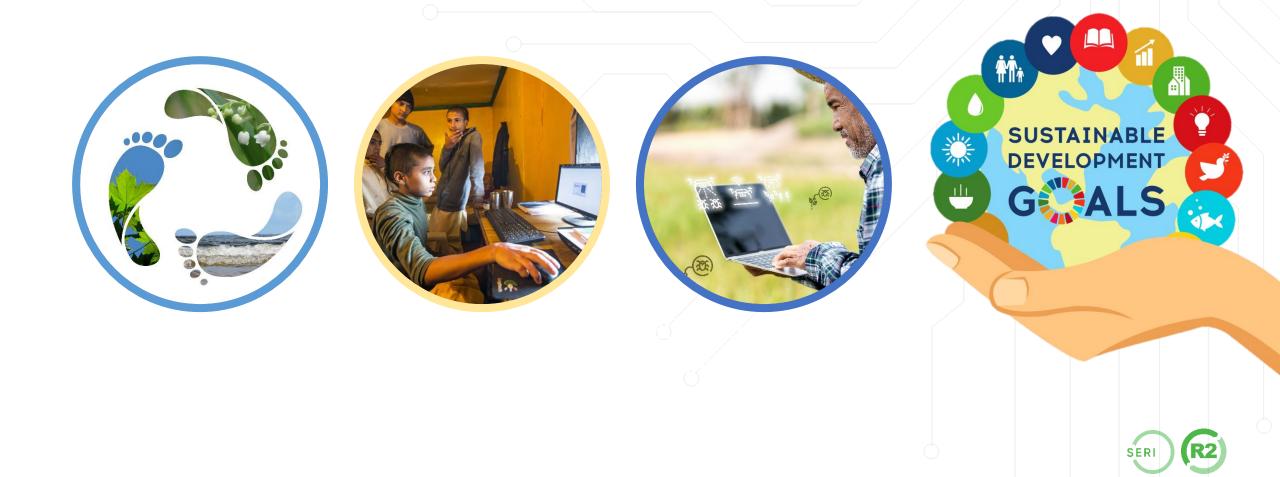
Annual verification U tracking of <u>entire</u> downstream reuserecycling chain

CERTIFIED

V3

Streamlined verification for R2 vendors that have been verified through certification process

Growth of R2 driven by heightened awareness of corporate responsibility



Growth driven by other entities requiring R2 Certification

RECYCLER QUALIFICATION OFFICE (RQO)

LE BUREAU DE LA QUALIFICATION DES RECYCLEURS (BQR)

ROP 2015 AUDIT PROCESS

RECYCLER AUDIT PROTOCOLS

APPROVED RECYCLERS

FAOS RESOURCES

CONTACT



The Recycler Qualification Office (RQO) administers the following assessment and approval programs:

English	•
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ANNOUNCEMENTS

Example:

Canada's Recycler Qualification Office



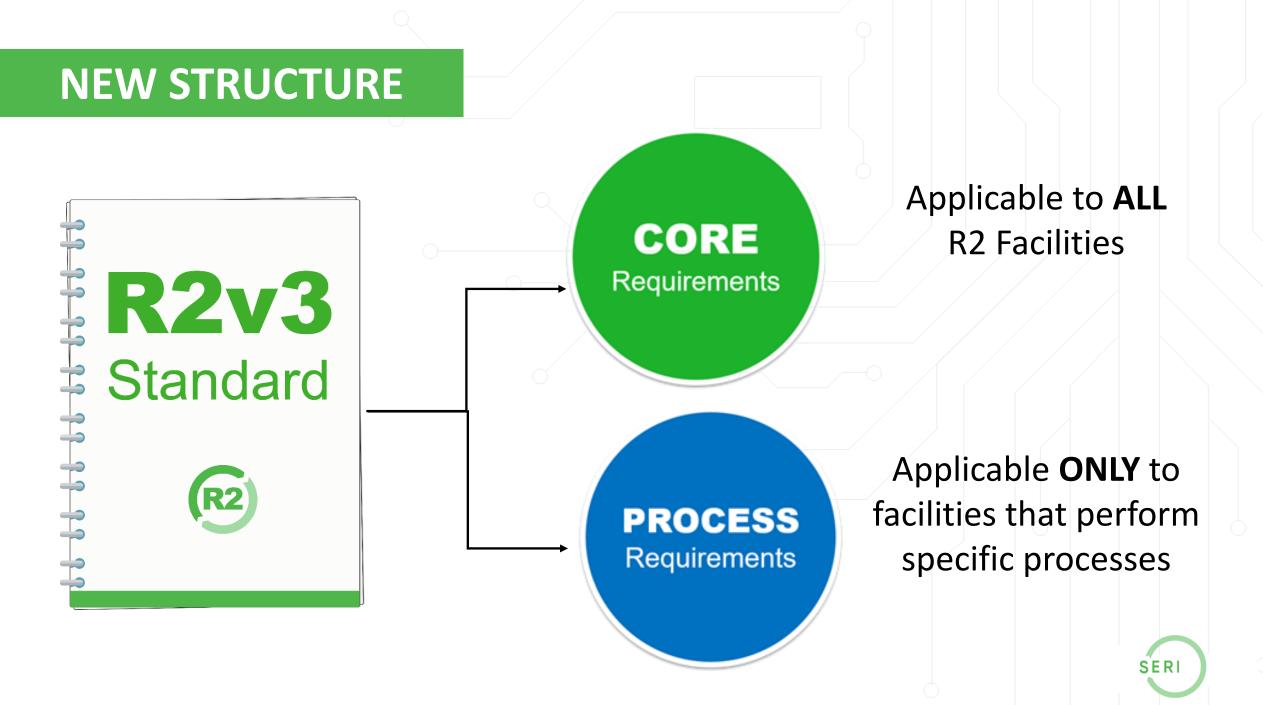
The who & why behind R2

Trends driving the growth of R2

Overview of R2 requirements

The benefits & costs of certification

SER



CORE REQUIREMENTS

APPLY TO ALL R2 CERTIFIED FACILITIES

- 1. Scope
- 2. Hierarchy of Responsible Management Strategies

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- 3. EH&S Management System
- 4. Legal and Other Requirements
- 5. Tracking Throughput
- 6. Sorting, Categorization and Processing
- 7. Data Security
- 8. Focus Materials
- 9. Facility Requirements
- **10.** Transport

PROCESS REQUIREMENTS

Appendix A - Downstream Recycling Chain

APPLY ONLY TO FACILITIES ENGAGED IN THESE SPECIFIC PROCESSES

Appendix B - Data Sanitization

Appendix C - Test & Repair

Appendix D - Specialty Electronics Reuse

Appendix E - Materials Recovery

Appendix F - Brokering*

*Core 3 and Core 9 may not apply for brokers who do not physically receive or handle equipment

SER

Core 1

Transparency about Scope of Certification

- Includes all R2 Certifiable operations (collection, processing, resale...)
- At the facility <u>and</u> under its control (collection points, warehouses...)
- Does not include non-certifiable processes (scrap, appliances, new equipment...)



Mobile Traders Inc. (DBA) Second Life Phones

1234 International Street - Suite 101 Your City, State/Province,

SCOPE:

Logical sanitization, testing and repair of mobile phones

Appendix A - Downstream Chain Appendix B - Data Sanitization Appendix C - Test & Repair



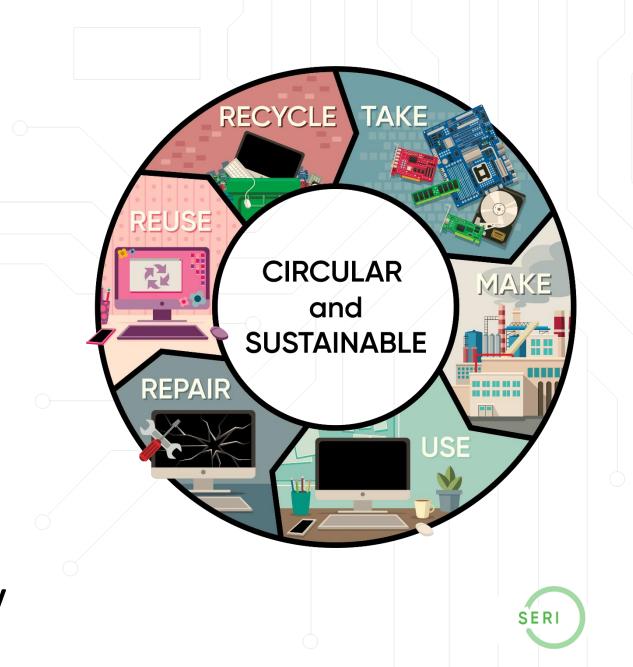
Core 2

R2v3 addresses FULL LIFECYCLE

of electronic products

PRIORITIZES REUSE

to support a circular and sustainable economy



Core 4, 5, 8, 9,

Reduces Risk

of noncompliance and environmental incidents & liability... CertifiedISO 14001Environmental
Management SystemWeither SystemImagement System

Strong EH&S requirements Risk Assessments & Controls

> Downstream tracking & due diligence throughout the downstream chain

> > SERI

Core 3, 4

R2 Harmonizes & Simplifies oversight and legal compliance for multi-national corporations





SER

Core 7, Appendix B

Reduces Risk of data breaches, noncompliance and liability...



- Strong Data Security Controls
- Data sanitization plan
- Effective data sanitization methods & quality controls
- Data Protection Representative

ADDITIONAL Requirements in Appendix B

- Traceability by device
- Sanitization Software w/electronic records
- Enhanced quality controls & data audits
- Enhanced security controls & video monitoring

Appendix C, D

Strong REUSE requirements to ensure quality TESTING REPORT



Certified Quality Management System





Environment Health & Safety Quality

SERI

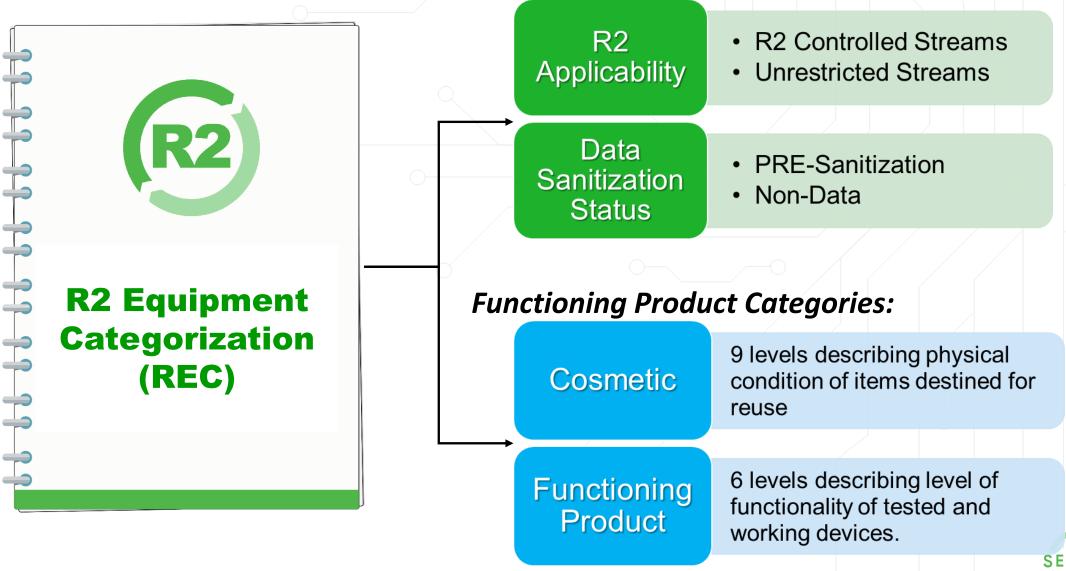
R2 Reuse Plan detailing...

- Testing procedures
- Qualifications & Training
- Quality assurance plan

Sanitization according to Appendix B

Detailed testing records

Processing Categories:



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Core 5, Appendix A

Strong Downstream Accountability

Annual Verification of each vendor in downstream chain

Tracking flow of equipment, components, materials throughout the *entire* downstream until final disposition

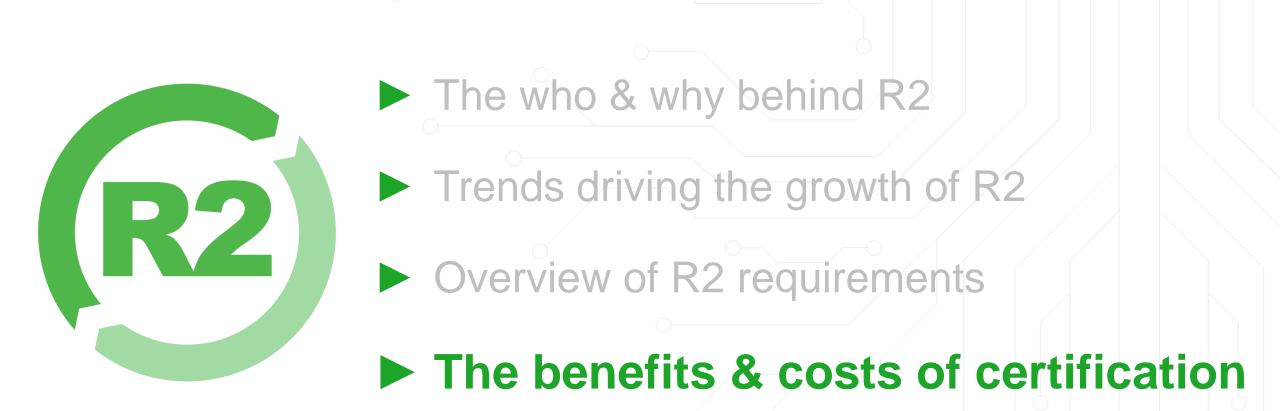
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Auditing R2v3



- R2 is more than a Management System, it's a Stainability Standard
- Focus on *effectiveness* of systems
- Focus on *outcomes* and impacts
- Qualifications & training of facility personnel
- Qualifications & training of Auditors





SER

R2 is practical and comprehensive

Independent

R2 is <u>not</u> created or managed by membership organization that pays dues

Accredited

Consensus Standard written by an ANSI Accredited Standard Developer

Comprehensive

Includes all the necessary elements for responsible reuse & recycling of electronics

Universal

Applicable for all points in lifecycle of used electronics. Complements national & local regulations. Fills in gaps where regulation and oversight are lacking



Benefits of R2v3 for Suppliers/Customers

- Improved quality in certification and credibility of results
- Addresses the needs of many and diverse market sectors.
- Provides transparency into the specific activities and operations audited

R2 accounts for 78% of Certifications







USA and Mexico

90 Facilities

<u>http://e-stewards.org/find-a-</u> recycler/ 16 EU Member States

192 Certified Operators

https://www.weeelabex.org/operato rs-list/ 34 Countries

1000+ Facilities

https://r2directory.org

SERI

Benefits of R2v3 for Certified Facilities

- Access to auctions and increased supply
- Increased credibility with customers
- Improved quality and consistency in operations
- Safety improvements

R2v3 Training & Resources



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	R2 Guidance &	Knowledge Base	
	Search for guidan	ce by keyword or topic	
	Take A Quick Video Tour of th	e Knowledge Base → Click Here	
R2)			RECENTLY ADDED
Getting Certified	Video Library	Podcast Library	Guidance for developing and R2v3 Reuse Plan October 20, 2021
Download R2 Standard / REC / Code of Practices	Translation instructions for R2 videos	Episode 1 - Using the R2 Appendix Determination Tool	"Verify" versus "Validate" October 15, 2021
🛗 Intro to R2 webinars	▶ Definitions & Overview	Episode 2 - Helpful hints when scheduling your Internal Audit	Difference between "Data Security" v "Data Sanitization" requirements October 15. 2021
 Summary of R2v3 Key Steps in the Certification Process 	▶ Code of Practices ▶ Core 1 Scope	Episode 3 - Writing your Data Sanitization Plan	Episode 3 – Writing your Data Sanitization Plan October 15, 2021
✤ Find a Consultant	Core 2 Hierarchy Core 3 Environmental Health		Episode 2 – Helpful hints when scheduling your Internal Audit October 1, 2021
			October 12-14 (Online Course) October 1, 2021
		8	Episode 1 – Using the R2 Appendix Determination Tool September 23, 2021
R2 Training - CORE Requirements	R2 Training - PROCESS Requirements (Appendices)	Common Questions & Answers about R2v3	Appendix Determination Tool September 21, 2021
Translation instructions for R2 videos	Translation instructions for R2	Click Here to Submit Your	Sample Downstream Flowchart September 21, 2021
▶ Definitions & R2v3 Overview	Applicability & Overview of	Question	New Updates to the R2 Code of Prac

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https://sustainableelectronics.org/knowledge-base/ 🕌 Enalish 🛛 🐨 ABOUT \checkmark JOIN THE MISSION MAKING A DIFFERENCE \checkmark FOR BUSINESS \checkmark R2 \checkmark FIND AN R2 CERTIFIED FACILITY (Q) R2 Guidance & Knowledge Base Search for guidance by keyword or topic Take A Quick Video Tour of the Knowledge Base → Click Here RECENTLY ADDED... **R**2 Guidance for developing and R2v3 Reuse Plan Getting Certified Video Library Podcast Library October 20, 2021 "Verify" versus "Validate" Download R2 Standard / REC / Translation instructions for R2 Episode 1 - Using the R2 Appendix October 15, 2021 Code of Practices videos **Determination Tool** Difference between "Data Security" vs. Intro to R2 webinars Definitions & Overview Episode 2 - Helpful hints when "Data Sanitization" requirements scheduling your Internal Audit October 15, 2021 A Summary of R2v3 Code of Practices Episode 3 - Writing your Data Episode 3 – Writing your Data % Key Steps in the Certification ▶ Core 1 -- Scope Sanitization Plan Sanitization Plan Process October 15, 2021 Core 2 -- Hierarchy % Find a Consultant Episode 2 - Helpful hints when Core 3 -- Environmental Health scheduling your Internal Audit October 1, 2021 October 12-14 (Online Course) October 1, 2021 ? Episode 1 – Using the R2 Appendix Determination Tool September 23, 2021 R2 Training - CORE Requirements R2 Training - PROCESS Common Questions & Answers Appendix Determination Tool Requirements (Appendices) about R2v3 September 21, 2021 Translation instructions for R2 Sample Downstream Flowchart

Translation instructions for R2.

Olick Here to Submit Your

R2 Knowledge Base provides free training videos, podcasts, articles, and other resources

videos

SMALL PHONE

REFURBISHER

Mobile Phone Reseller

- CORE 2 employees (6 by end of year)
- Appendix A-Downstream Recycling Chain .25 (<5 non-R2v3)
- Appendix B-Data Sanitization
- Appendix C-Test and Repair

Audit Time Guidelines

1

- - .25 (logical only)
 - .5 (w/QMS audit)
 - 2 R2 Audit Days

R2 & RIOS → Approximately 3.5 Audit Days

MID-SIZE PHONE REFURBISHER **Mobile Phone Reseller** CORE - 27 employees Appendix A-Downstream Recycling Chain Appendix B-Data Sanitization Appendix C-Test and Repair

Audit Time Guidelines 1.25 0 (only R2v3) 1 (logical/physical) 1 (w/QMS audit) 3.25 - R2 Audit Days

R2 & RIOS → Approximately 5.25 Audit Days



SMALL, FULL-SERVICE REPAIR & RECYCLING FACILITY

LARGE, FULL-SERVICE REPAIR & RECYCLING FACILITY

Full-Service Repair &	& Recycling	Audit Time Guidelines
• CORE - 12 employ	/ees	1
• Appendix A-Down	stream Recycling Chain	.25 (<5 non-R2v3)
• Appendix B-Data S	Sanitization	.50 (logical & physical)
• Appendix C-Test a	nd Repair	.50 (w/QMS audit)
• Appendix E- Mater	rials Recovery	.25 (manual)
		.50 (other processing)
		3 - R2 Audit Days
R2 & RI0	OS 🗲 Approximately	5 Audit Days
	,	
Full-Service Repair &	& Recycling	Audit Time Guidelines
 Full-Service Repair & CORE - 150 employ 		Audit Time Guidelines
• CORE - 150 emplo	oyees	1.25
• CORE - 150 emplo	byees stream Recycling Chain	1.25
 CORE - 150 emplo Appendix A-Down 	oyees stream Recycling Chain Sanitization	1.25 .5 (6+ non-R2)
 CORE - 150 employ Appendix A-Down Appendix B-Data S Appendix C-Test and 	oyees stream Recycling Chain Sanitization	1.25 .5 (6+ non-R2) 1 (logical & physical)
 CORE - 150 emplois Appendix A-Down Appendix B-Data S Appendix C-Test and 	byees stream Recycling Chain Sanitization nd Repair alty Electronics Reuse	1.25.5 (6+ non-R2)1 (logical & physical)1 (w/QMS audit)
 CORE - 150 employ Appendix A-Down Appendix B-Data S Appendix C-Test and Appendix D-Special 	byees stream Recycling Chain Sanitization nd Repair alty Electronics Reuse	1.25 .5 (6+ non-R2) 1 (logical & physical) 1 (w/QMS audit) .5
 CORE - 150 employ Appendix A-Down Appendix B-Data S Appendix C-Test and Appendix D-Special 	byees stream Recycling Chain Sanitization nd Repair alty Electronics Reuse	 1.25 .5 (6+ non-R2) 1 (logical & physical) 1 (w/QMS audit) .5 .5 (manual disassembly)
 CORE - 150 emplo Appendix A-Down Appendix B-Data S Appendix C-Test an Appendix D-Specia Appendix E- Mater 	byees stream Recycling Chain Sanitization nd Repair alty Electronics Reuse	 1.25 .5 (6+ non-R2) 1 (logical & physical) 1 (w/QMS audit) .5 .5 (manual disassembly) .75 (other processing) 5.5 - R2 Audit Days



BROKER OF SMARTPHONES

Mobile Phone Broker

- CORE 4 employees
- Appendix A-Downstream Recycling Chain
- Appendix F-Brokering

Audit Time Guidelines .25 (<5 non-R2) .75 (w/QMS audit) 2 - R2 Audit Days R2 & ISO QMS -> Approximately 3.5 Audit Days



Thank you!



Patty McKenzie

Director of Education & Outreach

Patty@SustainableElectronics.org (202) 921-2261



Upcoming

January 20, 2022 – Newport Beach, CA Micro Meeting (Live)

Why Certify?



Thank you for joining us today.

Why Certify?



Thank you for joining us today.