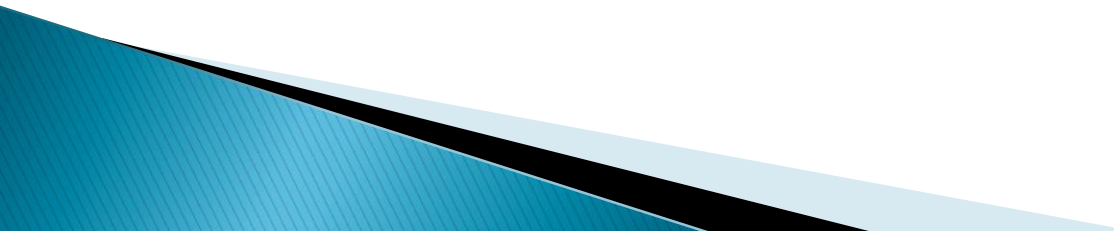# 2011 Survey of R2 Certified Recyclers

R2 Solutions

www.r2solution.org

Promoting environmentally responsible practices throughout the electronics recycling industry.

R2 Solutions and the R2 Standard

- R2 Solutions is the non-profit housing entity for the R2 Standard.
- Was formed in September 2010.
- There are more than 130 R2 certified facilities around the globe.
- Through the support of R2 Solutions, the R2 Standard continues to evolve through an open, multi-stakeholder process.
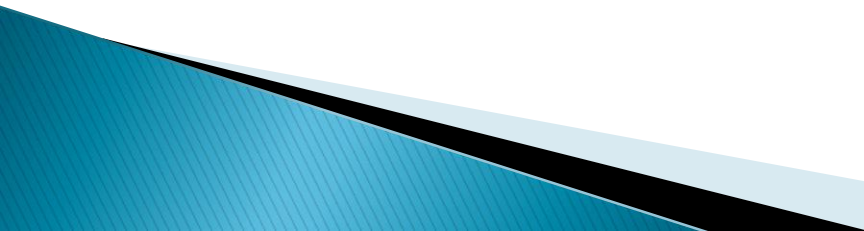
R2 Solutions

Goals of the organization:

- Assure open, transparent, and balanced governance of the R2 Standard
- Educate about responsible recycling practices
- Promote the use of the R2 Standard

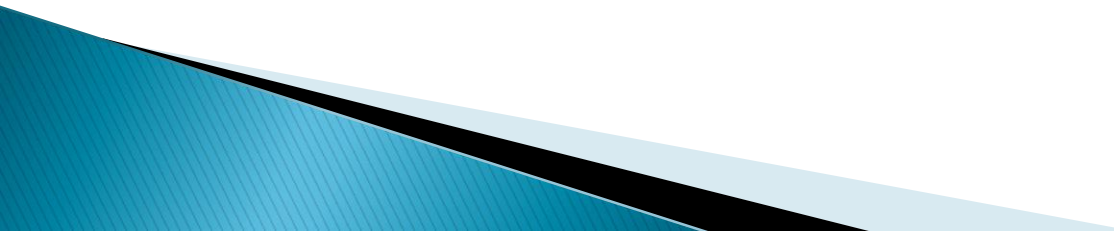Survey aimed to collect information that would support all three of these goals.

2011 Survey of R2 certified recyclers

R2 Solutions surveyed all certified recyclers to better understand:

- How the R2 Standard has shaped operational performance in the industry,
- What the experience of becoming R2 certified and operating as an R2 certified recycler has been like,
- The areas of the Standard where further development may be needed; based upon the first-hand experience by R2 certified recyclers.
- The effectiveness of R2 Solutions' support to those seeking R2 certification, and educating the public about the value of R2 certification.
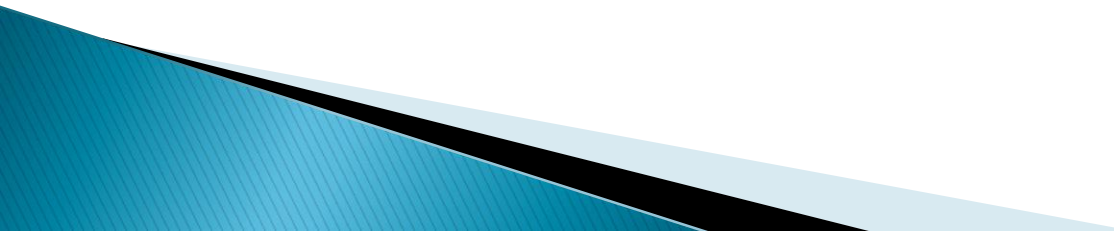
2011 Survey of R2 certified recyclers

- Survey went to 52 recyclers, representing 112 facilities
- Received 37 responses, representing 81 facilities
- A little over a 70 percent response rate for recyclers *and* represented facilities

Nature of certified facilities

No. of Employees

- 1–50 — 46%
- 51–100 — 26%
- 101–150 — 5%
- 151–200 — 6%
- Over 200 — 17%
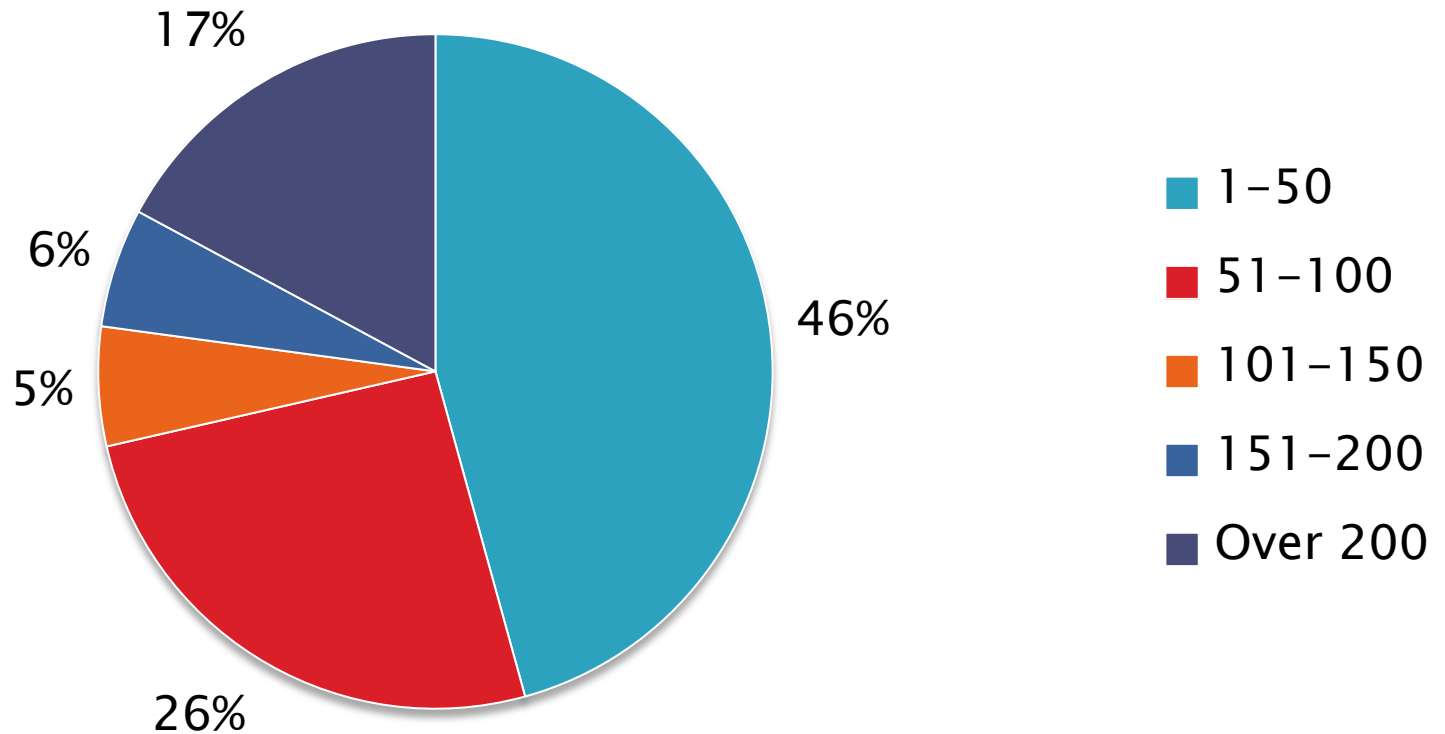
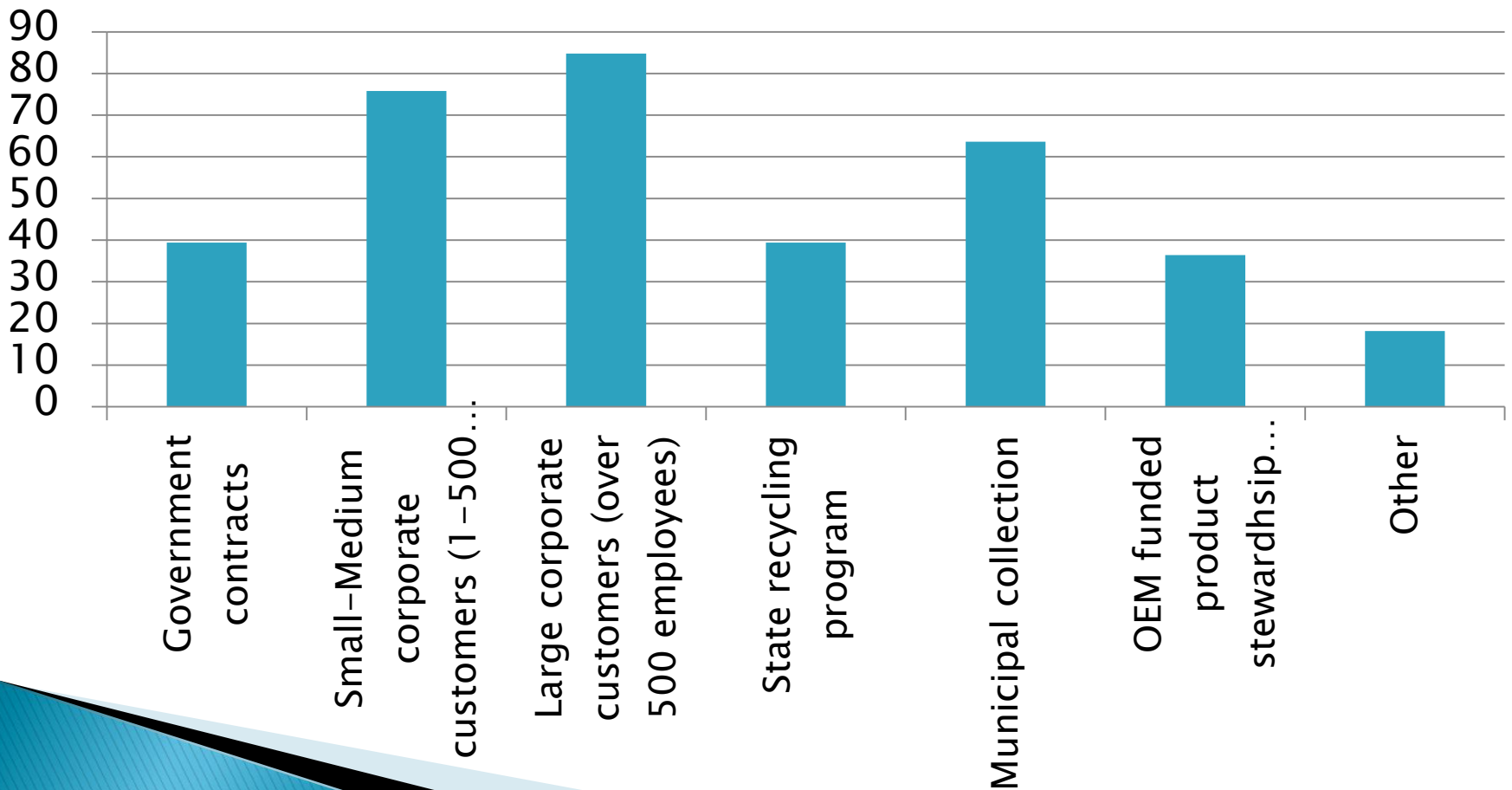# Nature of certified facilities

- Combined capacity of reporting recyclers 347,754 tons/year.
- Ranging from 200 t/y to 100,000 t/y
- Those that reported reuse estimated an average 18.2% reuse rate.

Where volumes come from

Source of materials

Certification process

- Average timeframe for the certification process (from time they contracted with a CB until certification) – 8.2 months
  - Of the firms that reported the certification process took longer than 1 year, none had hired a consultant.
  - Everyone that hired a consultant obtained certification in less than one year.

- 54% sought the help of a consultant to prepare for the audit.
  - 59% of those firms retained the consultant to help ensure ongoing conformance.

Why R2?

Primary reason for choosing R2 certification
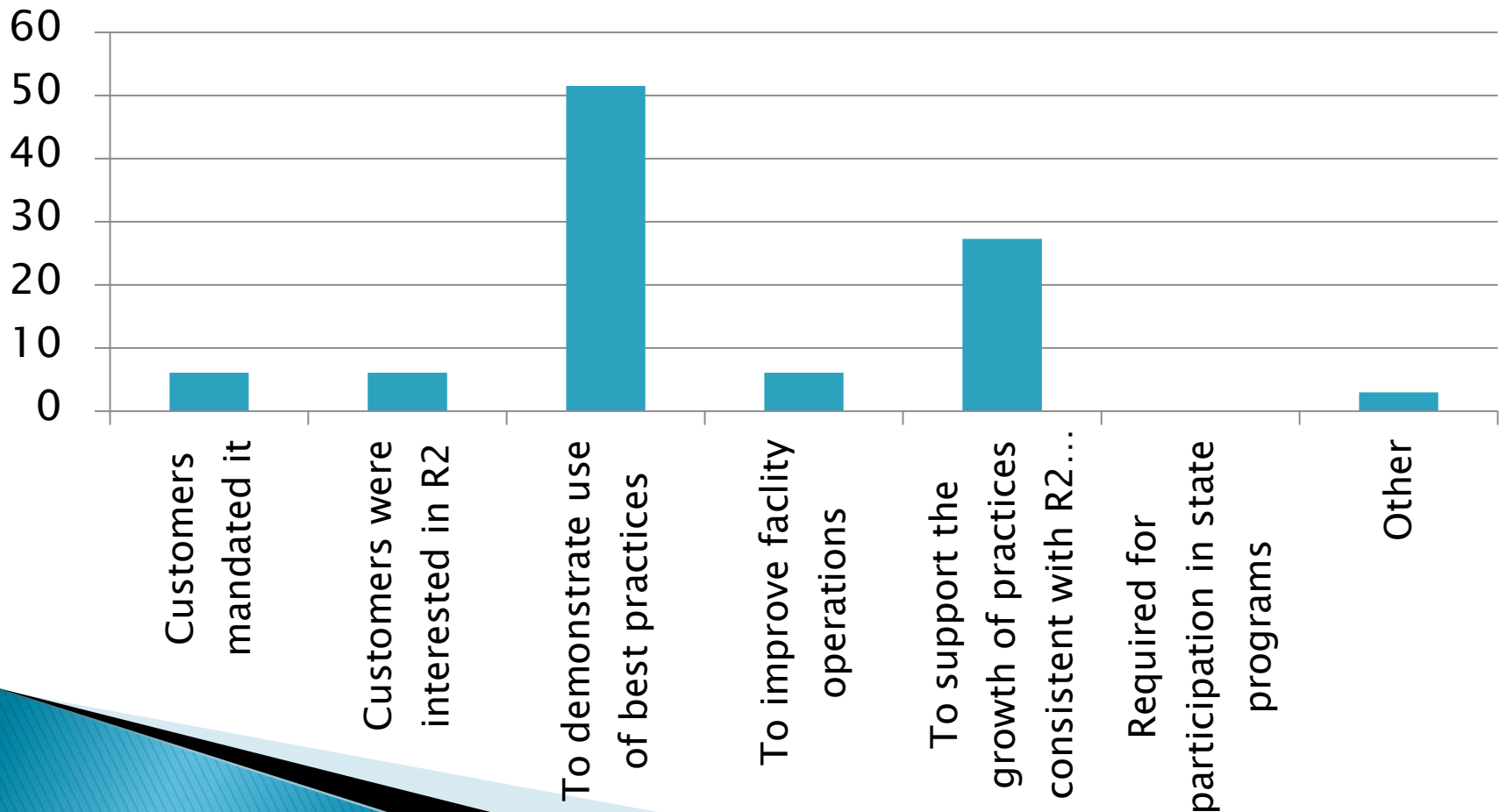
Environmental, Health and Safety Management Systems

▶ Did they have a certified management system in place before being R2 certified (ISO, RIOS, etc.)?

Yes	No
48.5%	51.5%

▶ If no, did they seek a certified EHSMS at the time of the R2 audit?

Yes	No
81.8%	18.2%

▶ **While a certified EHSMS is not required, 91% of respondents now have it.**

Operational changes as a result of R2

Operational changes that occurred because of certification

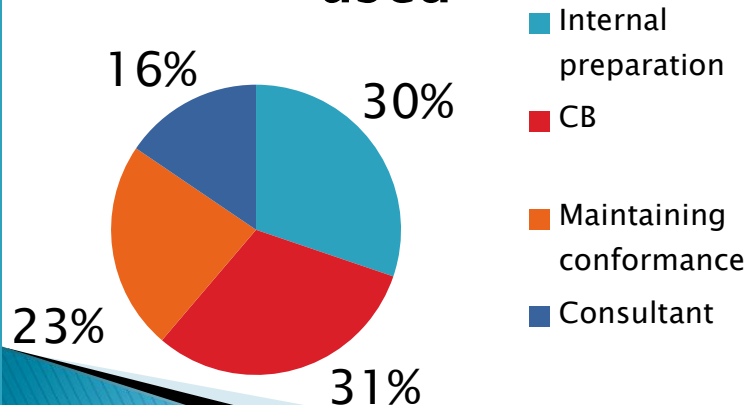| Operational change	Percent of respondents
Sought different downstream vendors that meet R2 requirements.	50.0%
Adopted an EHSMS plan where there had previously been none.	42.9%
Modified an existing management system to meet R2 requirements.	60.7%
Have a plan for continuous improvement for EHSMS for the first time	46.4%
Have closure plan in place for the first time	46.4%
Separating and managing focus materials differently, according to the Standard	50.0%
During audit preparation discovered we had not been knowledgeable of, or in compliance with all applicable regulations, but are confident the facility is now in full compliance.	46.4%

Cost of certification: Large recyclers (Over 100 employees)
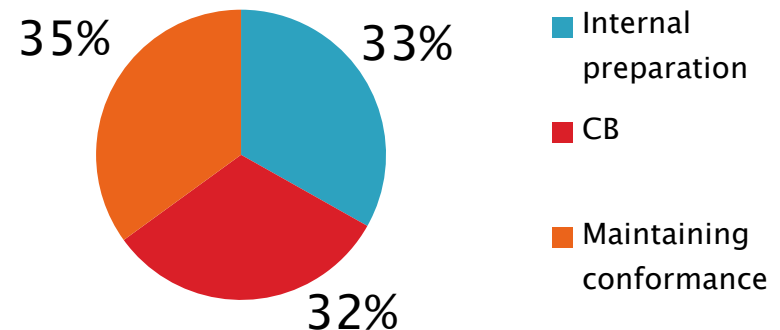
Average cost reported = $127,333

Average number of certified facilities = 3

Average cost of certification per facility = $42,444

Distribution of costs if consultant was used

- 16%
- 30%
- 23%
- 31%

Legend:
- Internal preparation
- CB
- Maintaining conformance
- Consultant

Distribution of cost if a consultant was not used

- 35%
- 33%
- 32%

Legend:
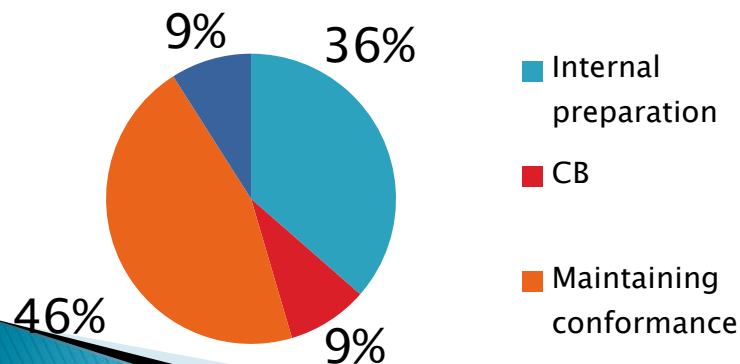- Internal preparation
- CB
- Maintaining conformance

Cost of certification: Medium recyclers (50–99 employees)

Average cost reported = $91,666

Average number of certified facilities = 3

Average cost of certification per facility = $30,555

Distribution of costs if consultant was used

9%
36%
46%
9%

- Internal preparation
- CB
- Maintaining conformance

Distribution of cost if a consultant was not used

50%
38%
12%

- Internal preparation
- CB
- Maintaining conformance

Cost of certification: Small recyclers (less than 50 employees)
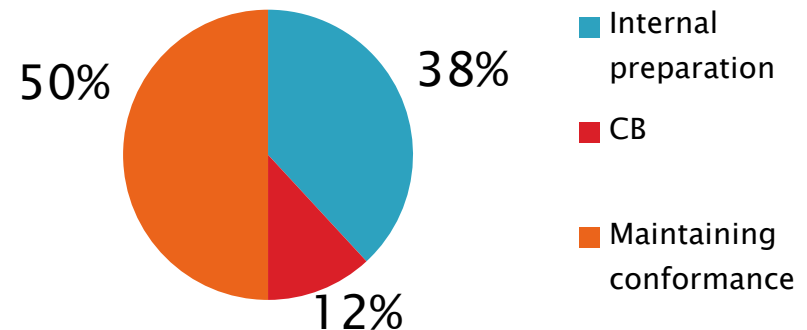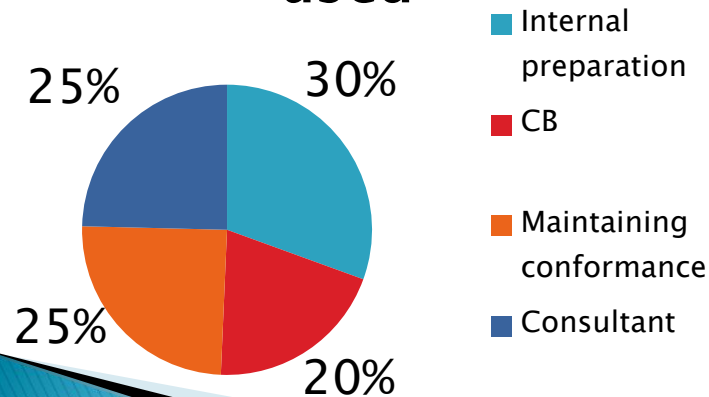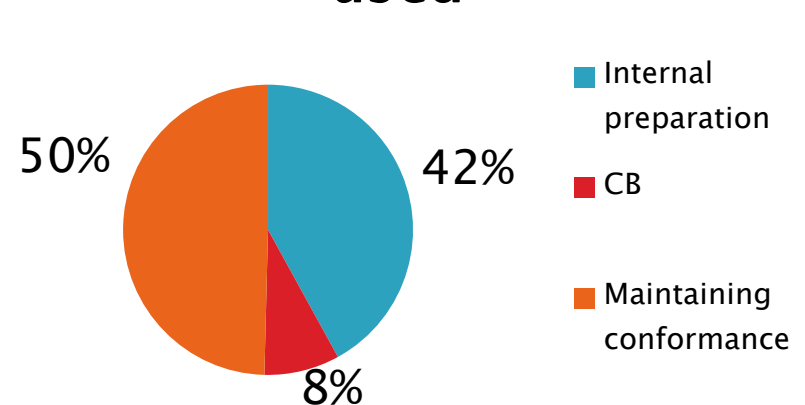
Average cost reported = $79,887

Average number of certified facilities = 1.2

Average cost of certification per facility = $66,572

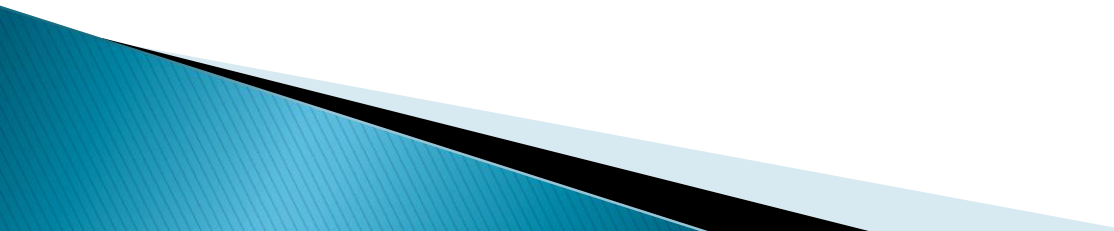## Distribution of costs if consultant was used

25%   30%

25%   20%

- Internal preparation
- CB
- Maintaining conformance
- Consultant

Distribution of cost if a consultant was not used

50%   42%

8%

- Internal preparation
- CB
- Maintaining conformance

# Recommendations for improving the certification process

- Formally integrate ISO, OHSAS or RIOS so recyclers don't have to be audited separately on those.
- Continue a site based certification process, but reduce the time/effort to conduct a Stage 1 audit for multiple sites which use a previously audited management system.
- Offer multi-site certification.
- Develop guidance document.

R2's impact on business

79.3% agree that R2 certification has helped attract business.
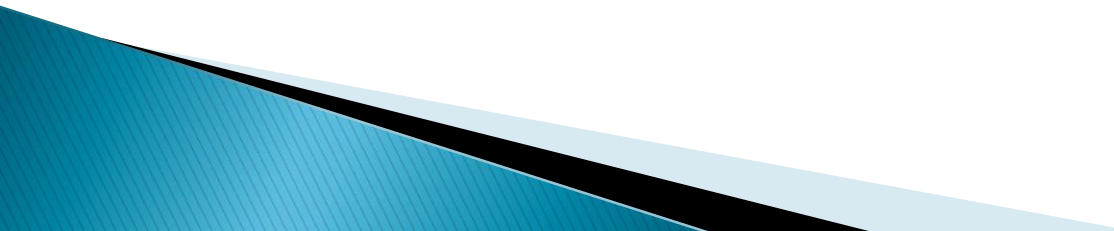
How R2 has helped with clients
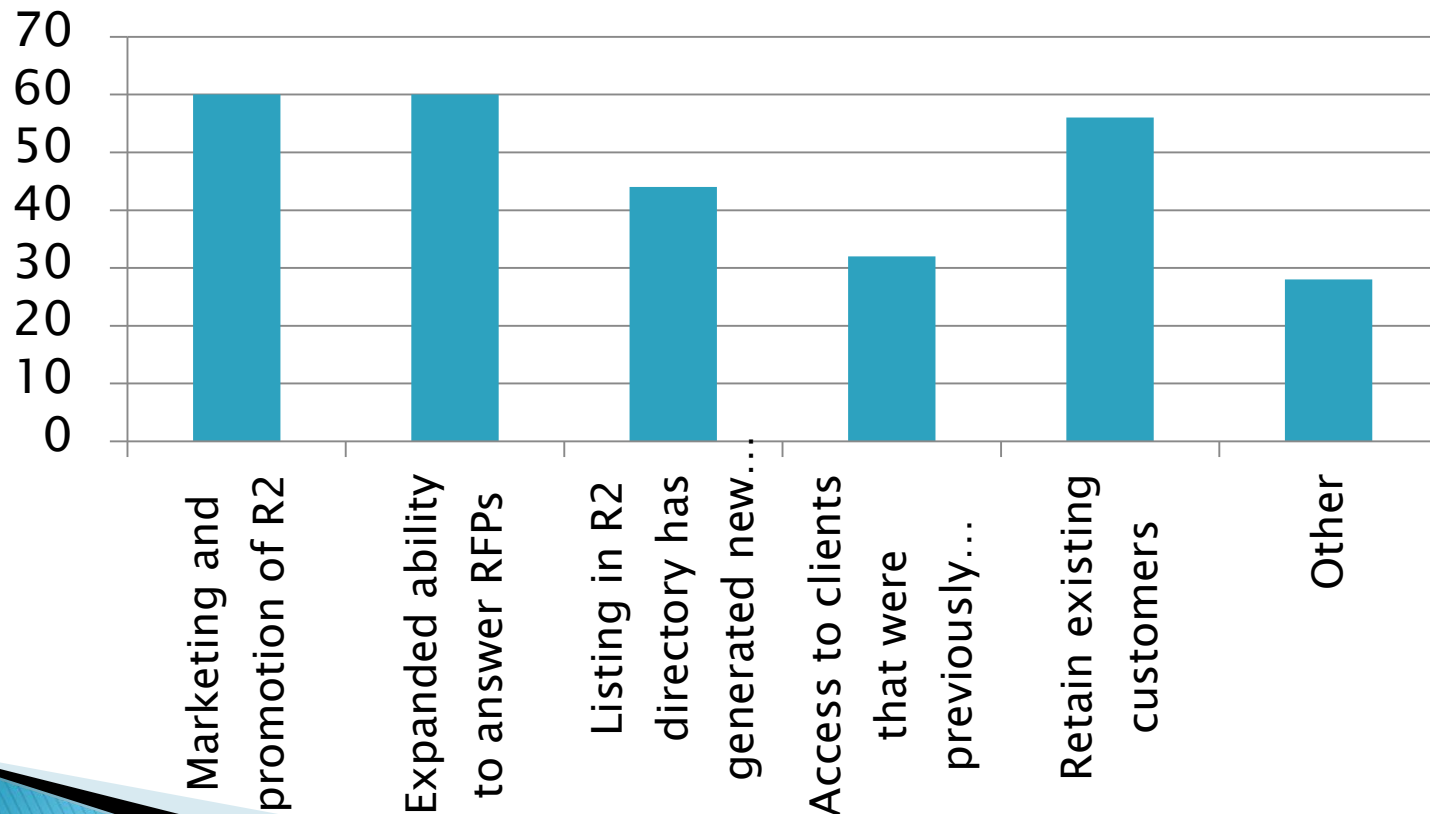
Business growth attributed to R2

- 29% report adding employees
  - average of 9 employees.
- 21% report new investment
  - data destruction and data security, key functionality testing equipment, processing equipment, transportation trailers.
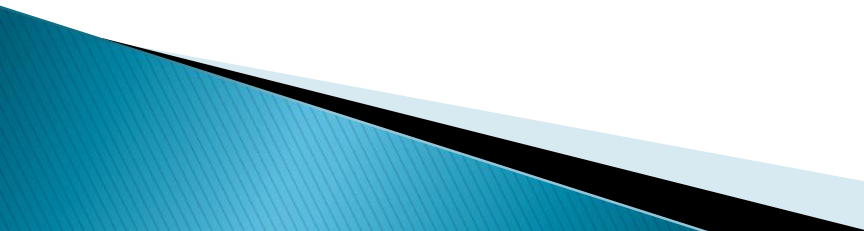
Maintaining conformance – Challenges

- Maintaining buy-in of full disclosure from downstream vendors.
- Auditing transportation providers for brokers.
- Tracking safety record of freight companies can be challenging.
- Maintaining all the requisite records.
- Performing continuous improvement activities on a regular basis.

R2 performance

Statement	True	False
The number of on-site audits from customers has decreased.	12%	88%
The on-site audits by customers have been less time consuming	68%	32%
We have had customers ask us to obtain additional certifications, or whether we are considering additional certifications.	64%	36%
I feel more confident that the downstream vendors I am using are handling materials in an environmentally safe and legal manner.	84%	16%
Work place safety and/or worker testing have improved.	80%	20%
The PDCA model has been an effective system for ensuring ongoing conformance.	96%	4%
R2 has been worth the time and investment.	96%	4%

Conclusions – Implementation of R2

- Certification appears to be costing small recyclers more on a per-facility basis, at least if no formal EHSMS plan was already in place.
- Certification is creating major operational improvements for companies that previously had no EHSMS in place.
- CBs account for 1/3 or less, of the total costs of certification and compliance.
- Data suggests the use of a consultant may expedite the audit preparation process and recyclers have found value in retaining consultants after certifications are achieved.

Conclusions – Implementation of R2

- Certification is affecting downstream vendor selection, and creating greater confidence in the downstream vendor practices.
- R2 Certification has not reduced the number of facility audits, but does seem to expedite them.
- Certification seems to be a helpful tool in gaining recognition in the marketplace.
- Certified recyclers feel that R2 certification has helped them attract business.
- May see more double certification in the marketplace.

Part II: R2 Standard

Recommendations for Guidance & Standard Revisions
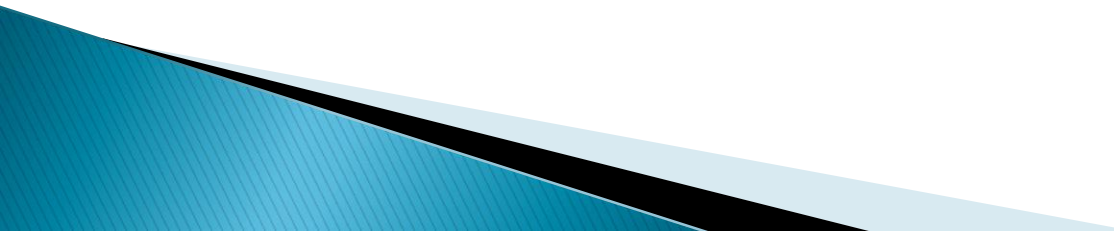
Provision 1: EHSMS

Guidance recommendation

- What constitutes a sufficient EHSMS?
- How are the written goals required in section (a) to be quantified?

Standard revision

- Require certified EHSMS.

Provision 2: RRD Hierarchy

Guidance recommendation

- Offer clarification that some recovery needs to occur and not everything could be dismantled or shredded.

Standard revision

- Consider changing the word "dispose" in the RRD hierarchy.

Provision 3: Legal Requirements

Guidance recommendation

- Detail how the recyclers identify and document legal requirements.
- Explain how and how often evaluation of compliance needs to occur.

Standard revision

None offered

Provision 4: On-Site EHS
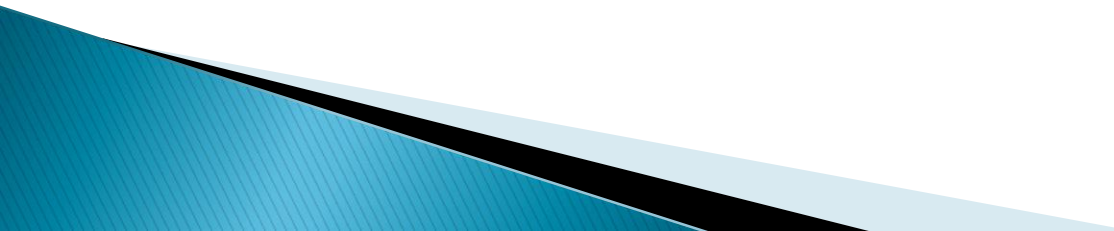
Guidance recommendation

▸ Need more information about what is expected in monitoring.

Standard revision

None offered

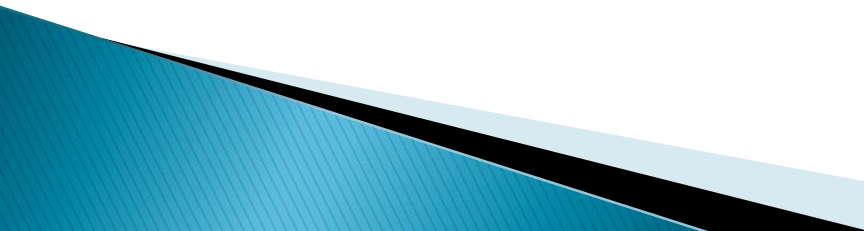# Provision 5: R2 Focus Materials

Guidance recommendation

- Describe what level of diligence is required for R2 certified downstream vendors.
- Detail what is expected when performing downstream due diligence.
- Clarify the documentation that is required for each downstream?

Provision 5: R2 Focus Materials

Standard revision

▸ More specific language about the removal of batteries and mercury–containing devices.

▸ What is the technology that "safely and effectively manages equipment if equipment is shredded with mercury–containing devices.

▸ Better clarify what a circuit board is.

▸ Better clarify the classification of toner cartridges.

Provision 6: Reusable Equipment

Guidance recommendation

None offered

Standard revision

- Make language very clear about tested and functional equipment that is eligible for export.
- But do not make the provision more stringent.

Provision 7: Tracking Throughput

Guidance recommendation

▸ Need clarity on what recordkeeping is required for downstream vendors.

Standard revision

None offered

Provision 8: Data Destruction

Guidance recommended

▸ Need to define what acceptable data destruction methods are.

▸ In general, more details about what constitutes conformance is needed so it can be relayed to auditors.

Standard revision

▸ Should operations that shred hard drive be subject to the same verification requirements as those that do not?
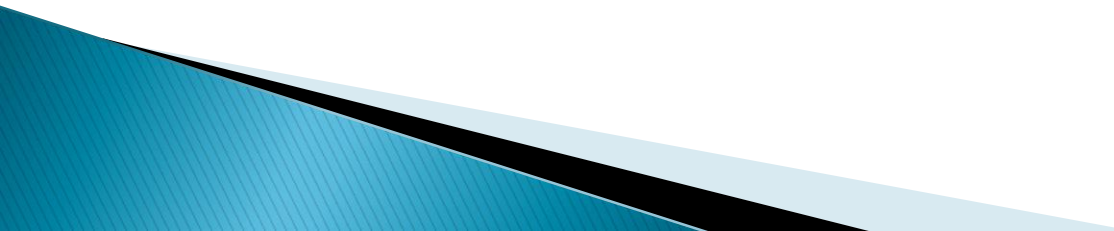
Provision 9: Storage

Guidance recommended
None provided

Standard revision
None provided

Provision 10: Facility Security

Guidance recommended
None provided

Standard revision
None provided

Provision 11: Insurance, Closure Plan, and Financial Responsibility

Guidance recommended

▸ Define "sufficient financial instrument".

Standard revision

▸ 11(b) should be revised to state that a sufficient financial instrument shall be in place [only] if it is a Federal, State or local requirement.

Provision 12: Transport

Guidance recommended
- Clarify what constitutes an acceptable safety record.
- Detail "adequate documentation", particularly since states have different regulations and tracking systems for freight carriers.

Standard revision
- Focus should be more on preparation of materials for transport versus carrier qualifications.
- Public information on transporter regulatory infractions are only available for a two year term so the standard should be revised from a three year requirement to a two year requirement.

Provision 13: Recordkeeping

Guidance recommendation

▸ Define what a "single location" is.

Standard revision

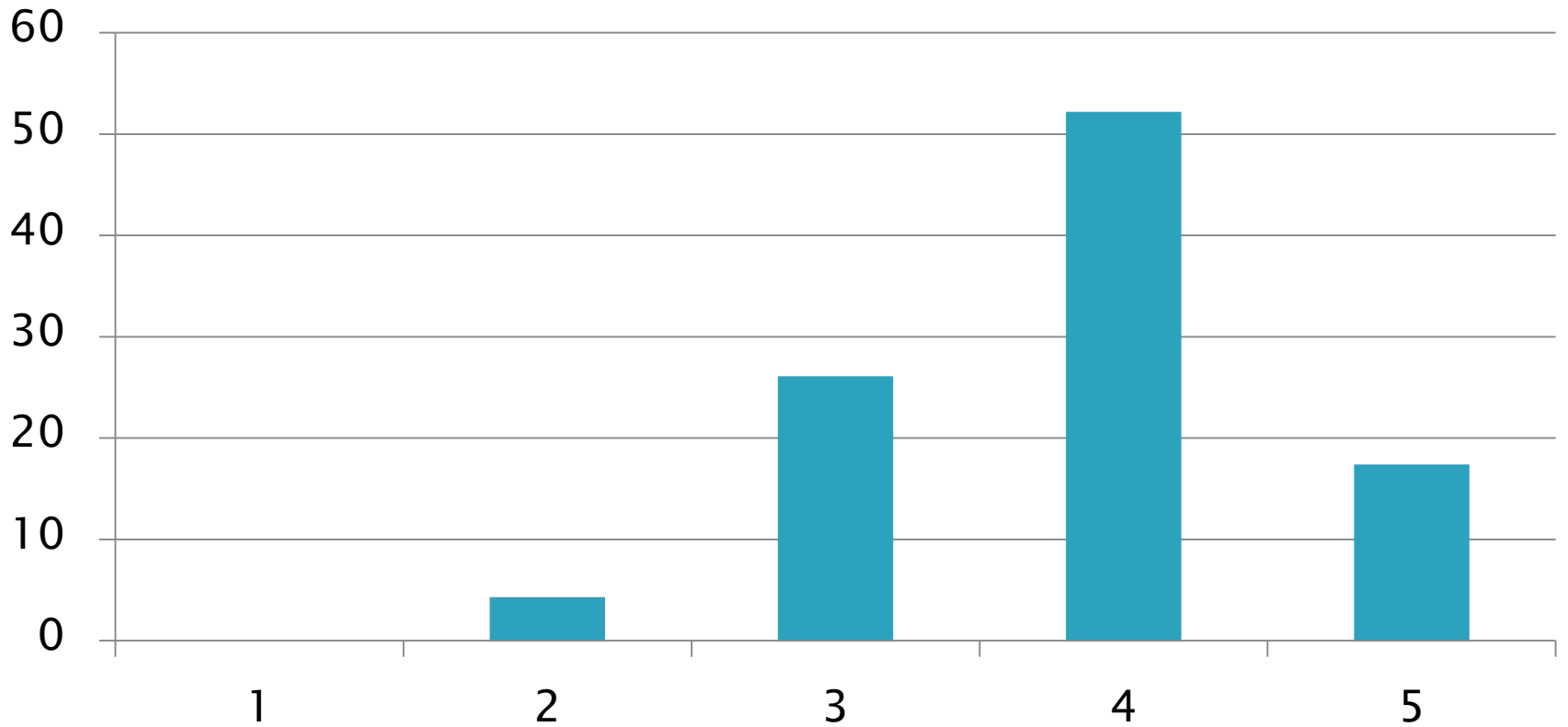▸ Rephrase "single location" so that it means the documents should be accessible from a single location.

Part III: R2 Solutions

Survey responses about the performance of R2 Solutions in supporting and informing recyclers

R2 Update
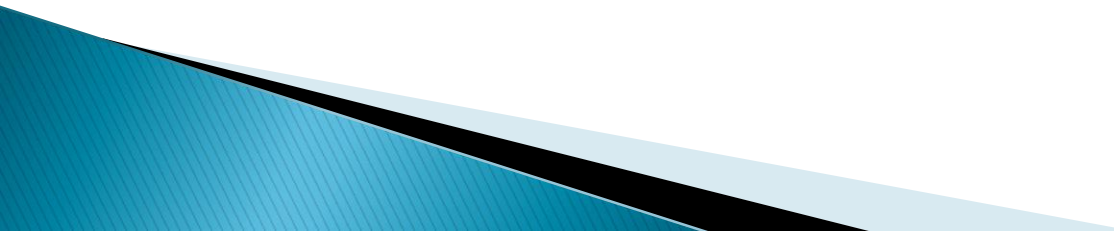
R2 Update

Type of content people would like to see more of:

- EHS guidance relating to challenges in the industry
- Continual improvement suggestions
- Direction and clarity on compliance (maybe a Q&A session on this?)
- Marketing support
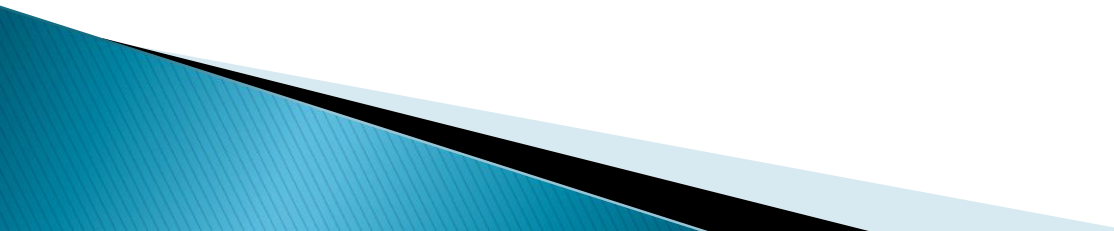
Transparency

Among the top priorities of R2 Solutions is maintaining the transparency of the standard development process and the activities of R2 Solutions, as well as maintaining the R2 Standard. Do you feel that you have adequate access to important information regarding the process for maintaining and updating the R2 Standard and other R2 Solutions activities?

Answer	Percentage
Yes	45.8%
No	20.8%
Unsure	33.3%

Transparency

Recommendations for increasing transparency:

- Allow voting on revisions to the standard.
- Would like to see a public comment period for any changes to the Standard.
- Open meetings.
- Have a network for sharing information as to due diligence and transparency.

R2 Solutions' activities

Are there activities that you would like to see R2 Solutions become more involved in?

Answer	Percentage
Yes	54.5%
No	45.5%

Suggestions:
1.) Educating customers about the importance of choosing a certified recycler,
2.) Further promotion of the R2 Standard,
3.) Consolidated marketing efforts supported by fees from recyclers.
4.) Lobbying.

R2 Solutions' activities

Are there additional ways that R2 Solutions could support recyclers during the auditing process or after they receive certification?

Answer	Percentage
No	72.7%
Yes	27.3%

Suggestions:

1.) Create an appeals process to resolve conflicts between recyclers and auditors.

2.) Provide interpretations to auditors.

3.) Random witness audits.

4.) Defend and promote the R2 Standard.

Quality assurance

Do you think there is a need for R2 Solutions to conduct an official training for the auditors and/or the recyclers?

Answer	Percentage
No official training is needed	30.4%
Yes, auditor training is needed	21.7%
Yes, recycler training is needed	4.3%
Yes, both auditor and recycler training is needed	43.5%

Quality Assurance

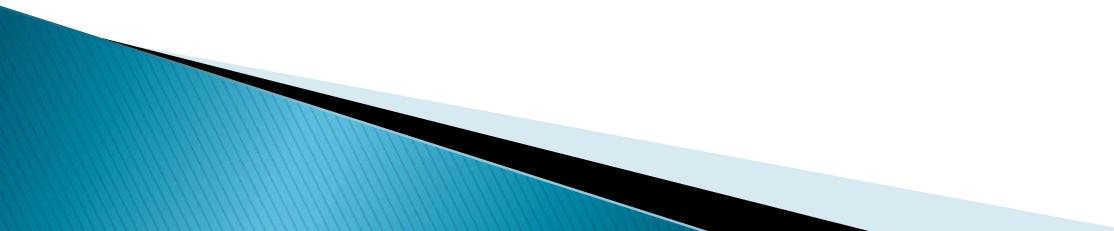Would a "spot checking" program contribute substantially to maintaining the integrity of R2?

Yes – 81.8%
No – 18.2%

Do you think participation in a "spot checking" program should be voluntary, or mandatory for all types of these recyclers?

Answer	Percentage
Voluntary	20.8%
Mandatory	54.2%
Unsure	25.0%

Conclusions – Operations and programs

- The organization of R2 Solutions allows for many of the transparency measures recyclers would like to see.
- However, it seems R2 Solutions could do a better job communicating the opportunities for public involvement.
- R2 Solutions should evaluate its role in marketing of R2 recyclers, or assisting recyclers with marketing.
- R2 Solutions should evaluate how official R2 training can be offered to auditors and recyclers.
- Seems to be general support for implementing a "spot checking" element as part of the QA program.

Questions?

John Lingelbach, Executive Director
lingelbach@r2solutions.org

www.r2solutions.org