

Reducing E-waste Through Purchasing Decisions

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Margaret Renas, P.E. LEED AP



ILLINOIS SUSTAINABLE
TECHNOLOGY CENTER
PRAIRIE RESEARCH INSTITUTE



Delta

Delta Institute

Mission Areas:



When we talk about E-waste...

- Electronics nearing end of useful life
- May contain hazardous materials
- May contain valuable materials



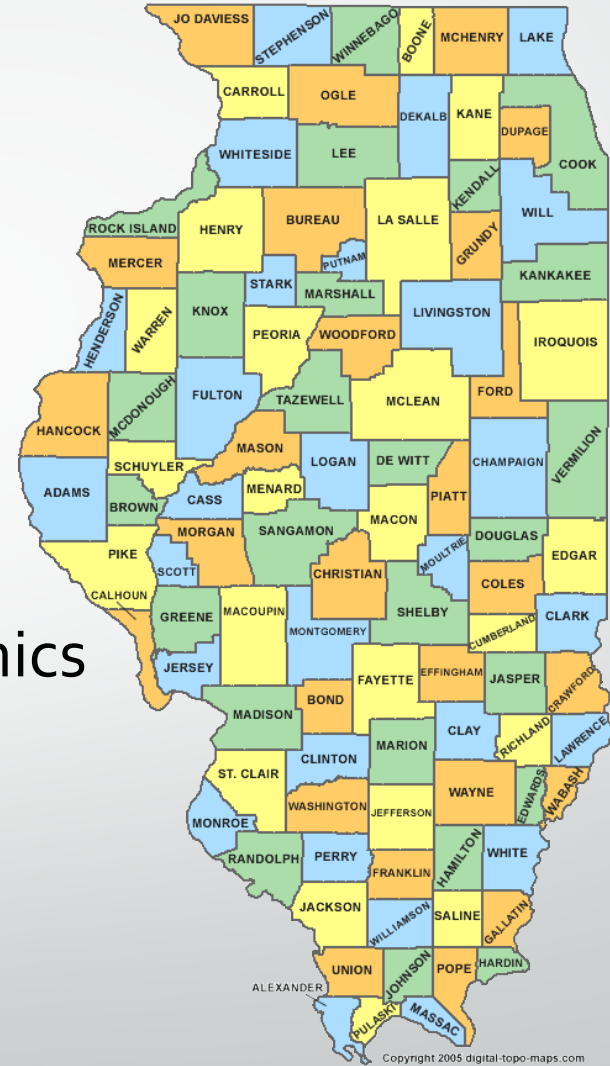
Why does management of E-waste matter?

- Conserves natural resources
- Keeps potentially harmful materials out of soil, air, and water
- Protects human health
- Keeps growing waste out of declining landfill space



Status of E-waste Recycling in Illinois

- Recycling Rate = 14%
- Nearly 100,000 estimated tons awaiting end-of life management
- Over 200,000 estimated tons of electronics in storage
- Manufacturer take back programs
- Consumer Landfill ban

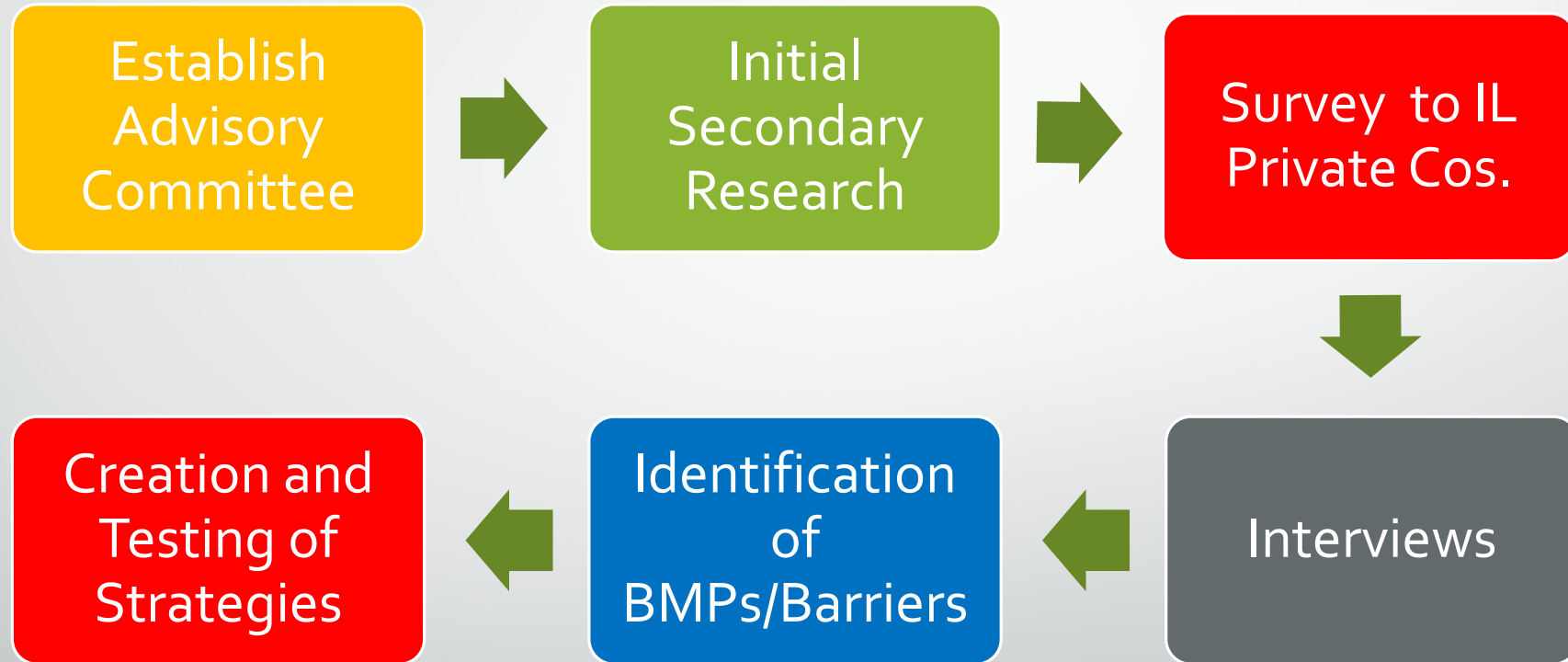


Project Objectives for Study on Private IL Companies:

1. Identify Opportunities and Best Management Practices (BMPs)
2. Identify Barriers
3. Create strategies



Project Methodology:



Establish Advisory Committee

Organization	Description
BlueCross BlueShield of Illinois	Healthcare insurance provider
Business Innovation Services (U of I)	Consulting/Technical Assistance to IL companies
Center for Neighborhood Technology	Environmental and energy non-profit
Illinois Sustainable Technology Center (U of I)	Environmental and energy research institute
Motorola Mobility	Multi-national telecommunications
Northeast Recycling Council	Environmental non-profit
Responsible Sourcing Solutions/UL Environmental	Environmental consulting group focusing on purchasing/UL branch promoting sustainability
Supply Chain Services, Inc.	IT assets disposal and electronics recycling company
USMe	Electronics recycling company

Initial Secondary Research

Possible Challenge/Barrier Areas:

- Awareness/Familiarity - Green Electronics Purchasing Certifications
(Energy Star vs. EPEAT, RoHs, TCO)
- Perceptions of Certifications
- Company Purchasing Strategies
+
Reduce, Reuse and Repurchase

Survey to IL Private Companies

- Content: Delta (22 questions + subparts)
- Design Assistance: U of I Survey Research Lab
- Distribution: 2,662 Illinois companies assisted by DCEO, IFMA, Prudential Plaza (+ follow-ups)
- 54 Completed Surveys – 90% with contact information!
- 34 Private Sector completed surveys
- Substantive Differences vs. Statistically Significant Differences
- 9 Companies identified for Interviews (4 interviewed)

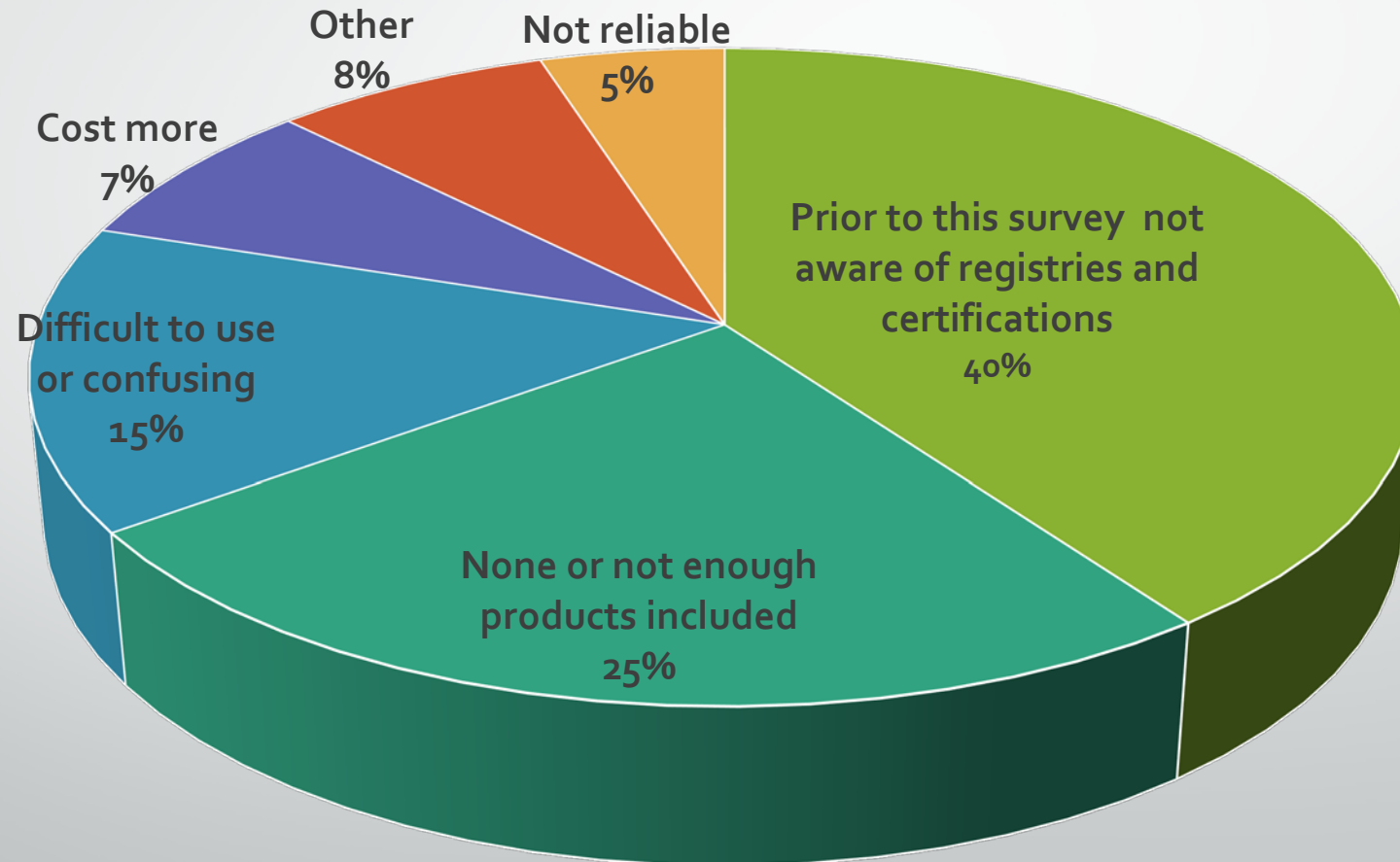
Interviews

- Purchasing
 - ✓ Sustainability Plan/Green Electronics Purchasing Policy
 - ✓ Awareness of Certifications Promoting Use
 - ✓ Negative Perceptions
 - ✓ Tools/training needed for using Internal Criteria
- Recycling
 - ✓ Benefits of Recycling contract or policy
 - ✓ Link between Procurement and Recycling
 - ✓ Awareness of Certifications Promoting Use.

Identification of BMPs/Barriers

- Purchasing
 - ✓ Sustainability Plan/Green Electronics Purchasing Policy
 - ✓ Awareness of Certifications Promoting Use
 - ✓ Reasons for Negative Perceptions
 - ✓ Tools/training needed for using Internal Criteria
- Recycling
 - ✓ Benefits of Recycling contract or policy
 - ✓ Link between Procurement and Recycling
 - ✓ Awareness of Certifications Promoting Use
 - ✓ .

Identification of BMPs/Barriers



Identification of BMPs/Barriers

Emerging Theme:

- 1) Most respondents are not aware of registries and certifications and**
- 2) Those that are aware have persisting negative perceptions**

Creation and Testing of Strategies

Presentation to educate companies on existence and ease of use of purchasing and recycling certifications and registrations

- **Live! at Chicago Green Office Challenge**
 - 25 Distinct Companies Attended – June 18th
- **Video taped webinar**
 - EARN CGOC POINTS!!



Text Poll:



1. Are you familiar with certifications and registries for purchasing and recycling electronics?
 - Text **393584** to ###-#### for YES
 - Text **393599** ###-#### for NO
2. After seeing this presentation, are you more or less likely to use certifications and registries when purchasing or recycling electronics?
 - Text "X" ###-#### if more likely
 - Text "Y" ###-#### if less likely
 - Text "Z" ### -#### if no impact

Recycling: R2 & E-Stewards

- Two recycler certifications, both accredited by ANAB
- Assess environmental, health and safety practices
- Certified recyclers subject to continued oversight by certifying body



Recycling: R2 & E-Stewards – A Comparison

		
Emphasis	CRTs and CRT glass; circuit boards; batteries; items containing mercury	Hazardous electronic waste
Environmental Health & Safety Management System	Requires plan in place	Requires ISO 14001
Export to Developing Countries	Only when legal to send and receive	Prohibited
Prison Labor	No position	Prohibited
Geographic Scope	National	Global

Recycling: R2 & E-Stewards

- How do I find certified recyclers in my area?
 - R2 - <http://www.r2solutions.org/>
 - E-Stewards - <http://e-stewards.org/>



Data Security: Recycling & NAID

- Data security is one of business' biggest concerns about retiring electronic equipment
 - NAID is a trade organization for companies that provide data destruction services
 - Mission to promote information destruction industry, and standards and ethics of its member companies



Data Security: Recycling & NAID

- Security Questions to Ask Your Recycler
 - What data sanitation program/process do you use?
DoD 5220.22-M software based method
 - How many passes does it involve?
 - Can I receive documentation of quantity recycled and/or Certificate of Destruction?
 - If not NAID certified, what security measures are in place?
 - Can I be present during destruction?



Data Security: Recycling & NAID



- How do I find NAID certified data destruction professionals in my area?
 - <http://www.naidonline.org/>

Reducing E-Waste at Point of Sale: EPEAT

- Registry to identify electronic products with reduced environmental impacts
- 120 million EPEAT notebooks, desktops, and monitors were purchased globally in 2011. Compared to non-EPEAT products, these will:
 - Eliminate enough mercury to fill 1 million thermometers
 - Save enough electricity to power almost 1 million homes for a year
 - Avoid 9MMT air emissions and 16,000 MT of water pollutant emissions



Reducing E-Waste at Point of Sale: EPEAT

- Reduce the use of primary materials equivalent to 14 Empire State Buildings (4.4 MMT)



Reducing E-Waste at Point of Sale: EPEAT

- Reduce toxic materials equivalent to 266 elephants (1,381 metric tons)



Reducing E-Waste at Point of Sale: EPEAT

- Verification is two-step process:
 - 1. Manufacturers sign contract guaranteeing accurate product declarations
 - 2. EPEAT randomly select products for audit by committee of experts



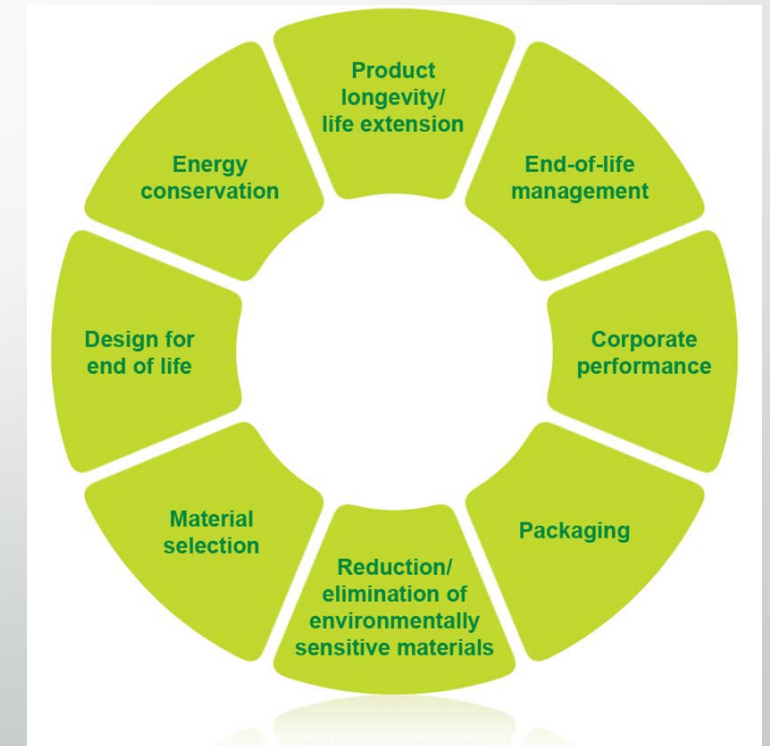
Green



Greener



Greenest



Reducing E-Waste at Point of Sale: EPEAT

- Perceptual barriers to using EPEAT products:
 - Website is difficult to use
 - Registrations are not reliable
 - Not enough products are registered
 - Registered products cost more



Reducing E-Waste at Point of Sale: EPEAT

- How do I find an EPEAT product that meets my needs?
 - <http://www.epeat.net/>



E-Waste

JEOPARDY!

Purchasing	Recycling	Data Security	"Re"
<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>
<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>
<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>
<u>500</u>	<u>500</u>	<u>500</u>	<u>500</u>

PURCHASING

THESE are:

1. Product longevity
2. EOL management
3. Corporate performance
4. Packaging
5. Reduction of environmentally sensitive materials
6. Material selection
7. Design for end-of-life
8. Energy conservation

RECYCLING

THESE are the two major recycling certification programs



CGOC Challenge 2.04 - Write an ENERGY STAR or EPEAT purchasing policy for up to 100 points!

- **Complete the Activity**
- Modify the section of your purchasing policy that refers to appliances to specify [ENERGY STAR](#) or [EPEAT](#) appliances/electronics
- Identify appliances/electronics that may require replacement in the near future (next 0-2 years)
- Identify potential [ENERGY STAR products](#) or [EPEAT products](#) to estimate specific savings or added costs

- **Earn Challenge points**
- Mark the Activity as 'Complete'
- Upload the appliance section of your purchasing policy
- Note: If you included both [ENERGY STAR](#) and [EPEAT](#) in your policy, complete this activity a second time for double points!



Text Poll: (11 of 25 responses)

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2. After seeing this presentation, are you more or less likely to use certifications and registries when purchasing or recycling electronics?

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- Text "Z" ###-#### if no impact

Answers to Pre Question:

CGOC E-waste presentation

Prior to the June 18, 2012 CGOC presentation were you familiar with certifications and registries for purchasing and recycling electronics?

Answer Options	Response Percent	Response Count
Yes	36.4%	4
No	63.6%	7
	<i>answered question</i>	11
	<i>skipped question</i>	0

Answers to Post Question:

CGOC E-waste presentation

After seeing this presentation, are you more or less likely to use certifications and registries when purchasing or recycling electronics?

Answer Options	Response Percent	Response Count
More likely	90.9%	10
Less likely	0.0%	0
No impact	9.1%	1
	<i>answered question</i>	11
	<i>skipped question</i>	0

Recommendations

1. Identify Strategic Communication Opportunities around Awareness

<http://www.delta-institute.org/ewaste/>

2. Develop Cross-Promotional Strategies for Best Practices (Certifications)



3. Identify Opportunities to Link Best Practices to Incentive

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Project Manager, Delta Institute
312 554-0900 X 13
mrenas@delta-institute.org

