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Voice of the Recycling Industry

Institute of
Scrap Recycling
Industries, Inc.

The State of the U.S. Electronics Recycling Industry

Eric Harris – ISRI

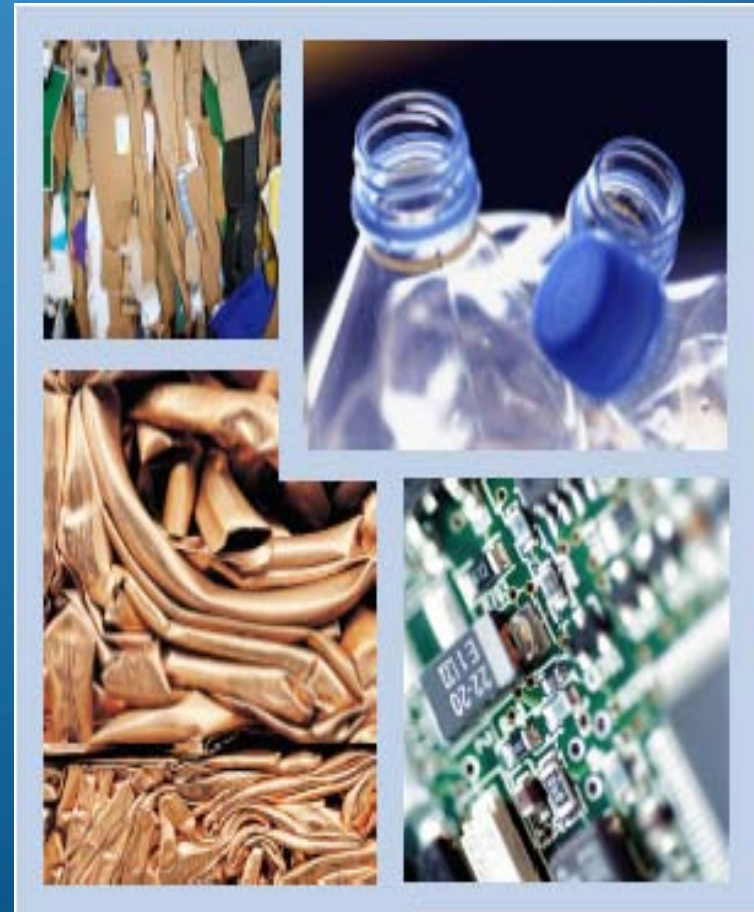
E-Scrap Conference, October 5, 2011

Presentation Overview

- ISRI Overview
- Survey Project and Methodology
- Company Profiles/Inputs
- Industry Inputs
- Economic Profile
- Perspectives

ISRI - Process, Broker & Consume

Over 1,600 member companies,
3000+ facilities that process,
broker & consume scrap metals,
paper, plastics, glass, textiles,
electronics and rubber.



ISRI & Electronics Recycling

- Represent ~ 350 companies that process electronics
- Robust, Electronics Division
 - 5 active committees
- Fastest Growing Segment

Survey Project

- **Objective**
 - Obtain current, key data and demographics for the U.S. electronics recycling industry
- **Scope**
 - Electronics Recyclers
 - Scrap Recyclers – that also handle electronics
 - Original Equipment Manufacturers (OEMs)
 - Non-Profit/Not-for-Profit Organizations
- **Sponsor: Recycling Research Foundation**

Methodology

- Conducted by IDC –independent, global market researcher
- Survey participation provided a statistically accurate and comprehensive representation of the market
- Survey data and IDC industry data used to estimate industry metrics

Company Profiles

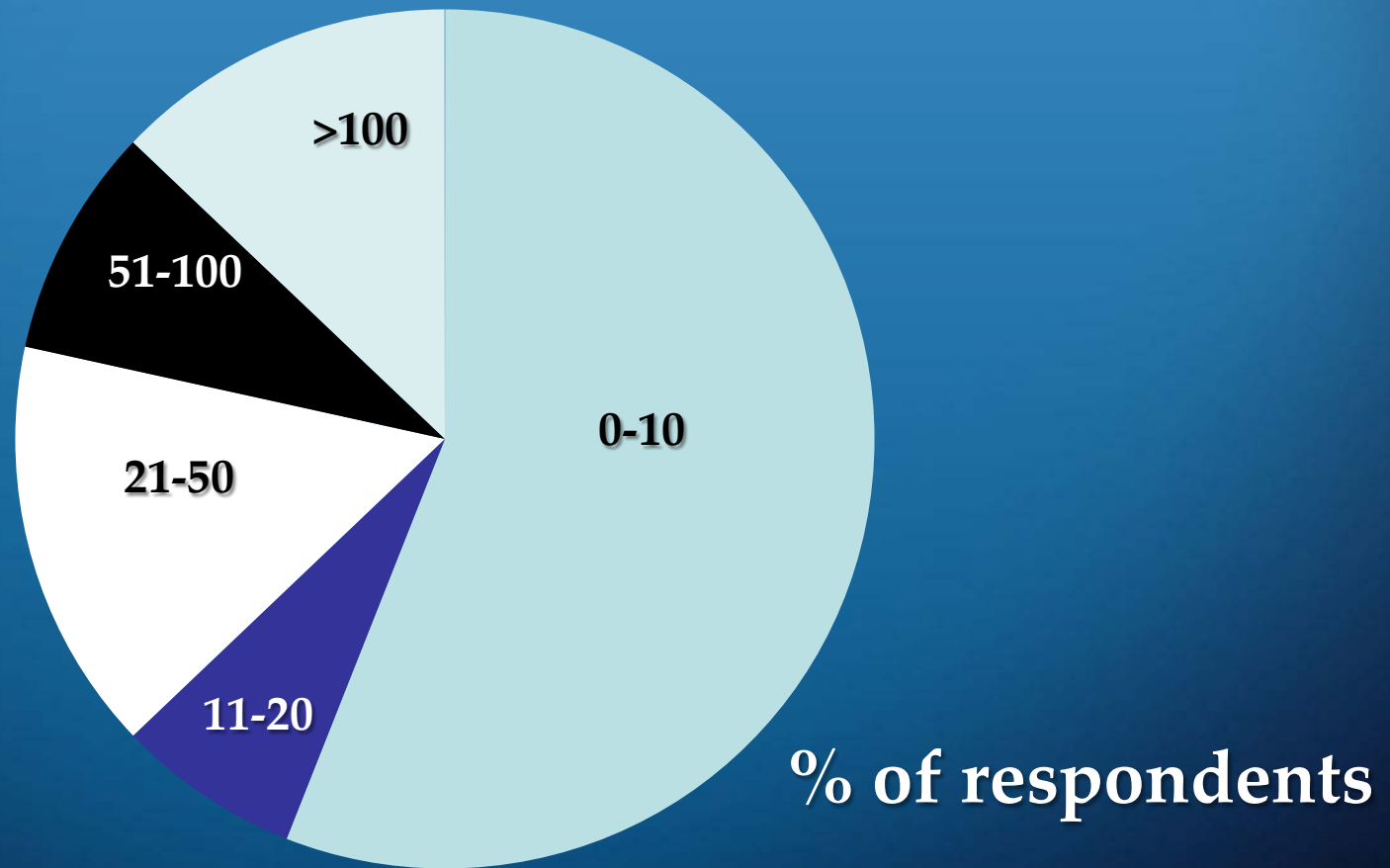
- **Survey Respondents – 182 U.S. organizations**
 - **57% Electronics Recyclers**
 - **16% Scrap Recyclers**
 - **4% OEMs**
 - **16% Not-for-Profit Organizations**
 - **7% Other**
- **50% ISRI Members/50% Non-Members**
- **All regions of the U.S.**
- **Large, Medium, and Small companies**

Company Inputs

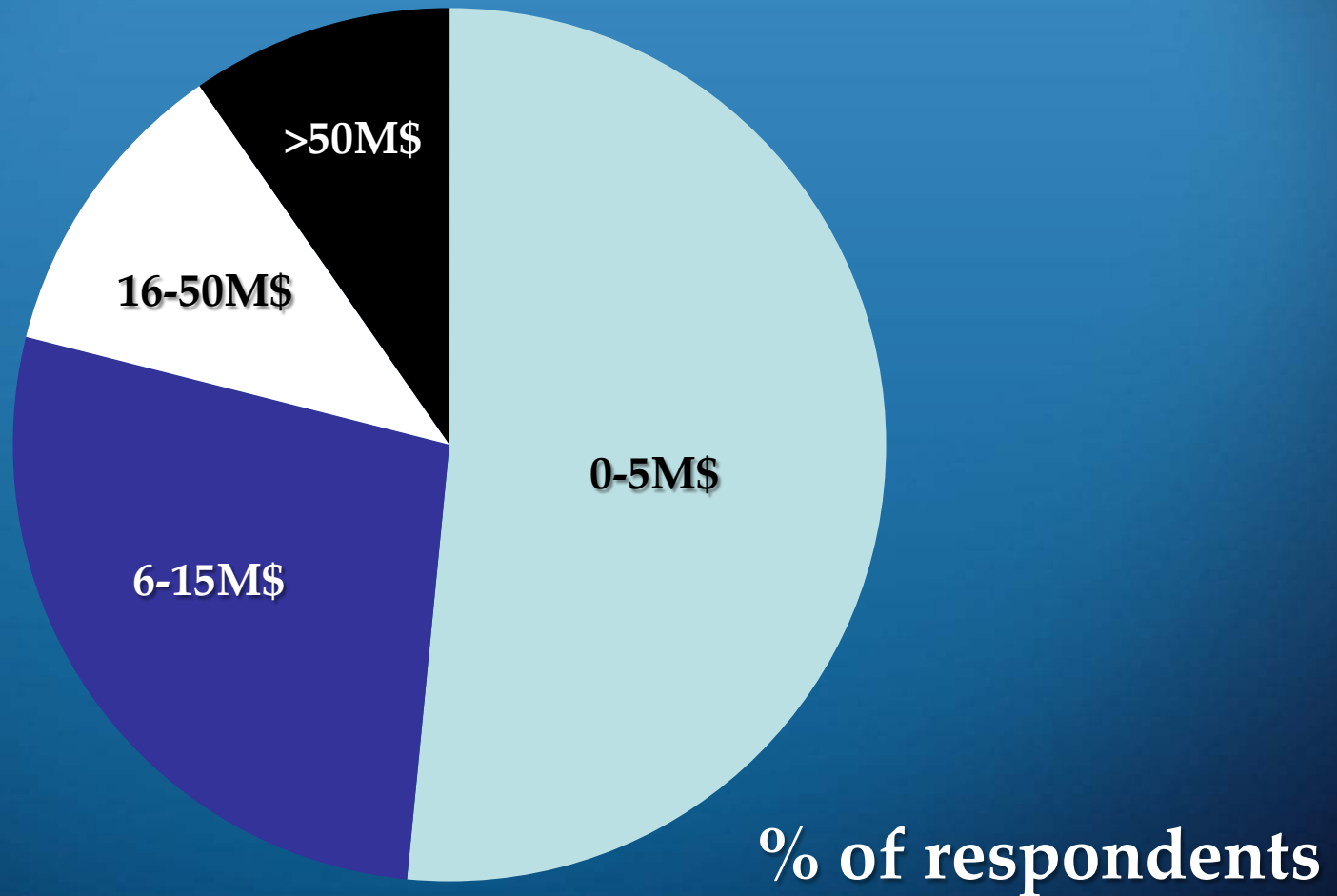
- **Company FTEs?**
- **Company revenues?**
- **Company volumes?**
- **Years in the business?**

Full Time Employees (FTEs) – 2010

(Electronics Recycling Operations)

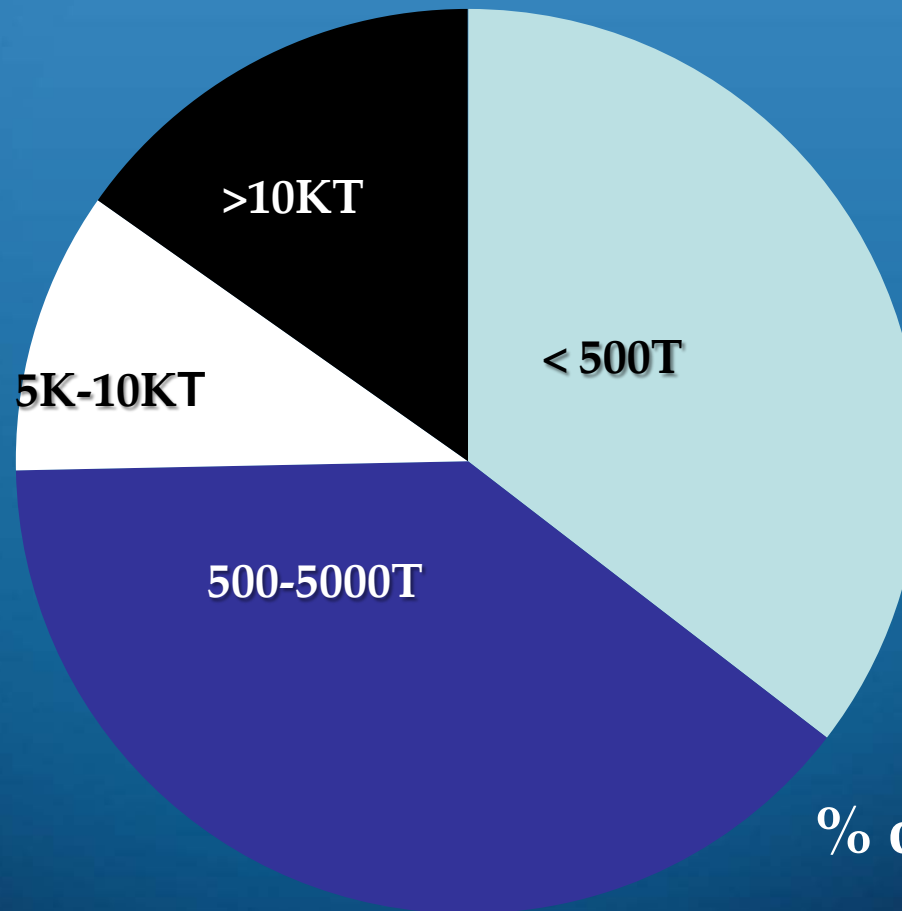


Electronics Recycling Revenue - 2010



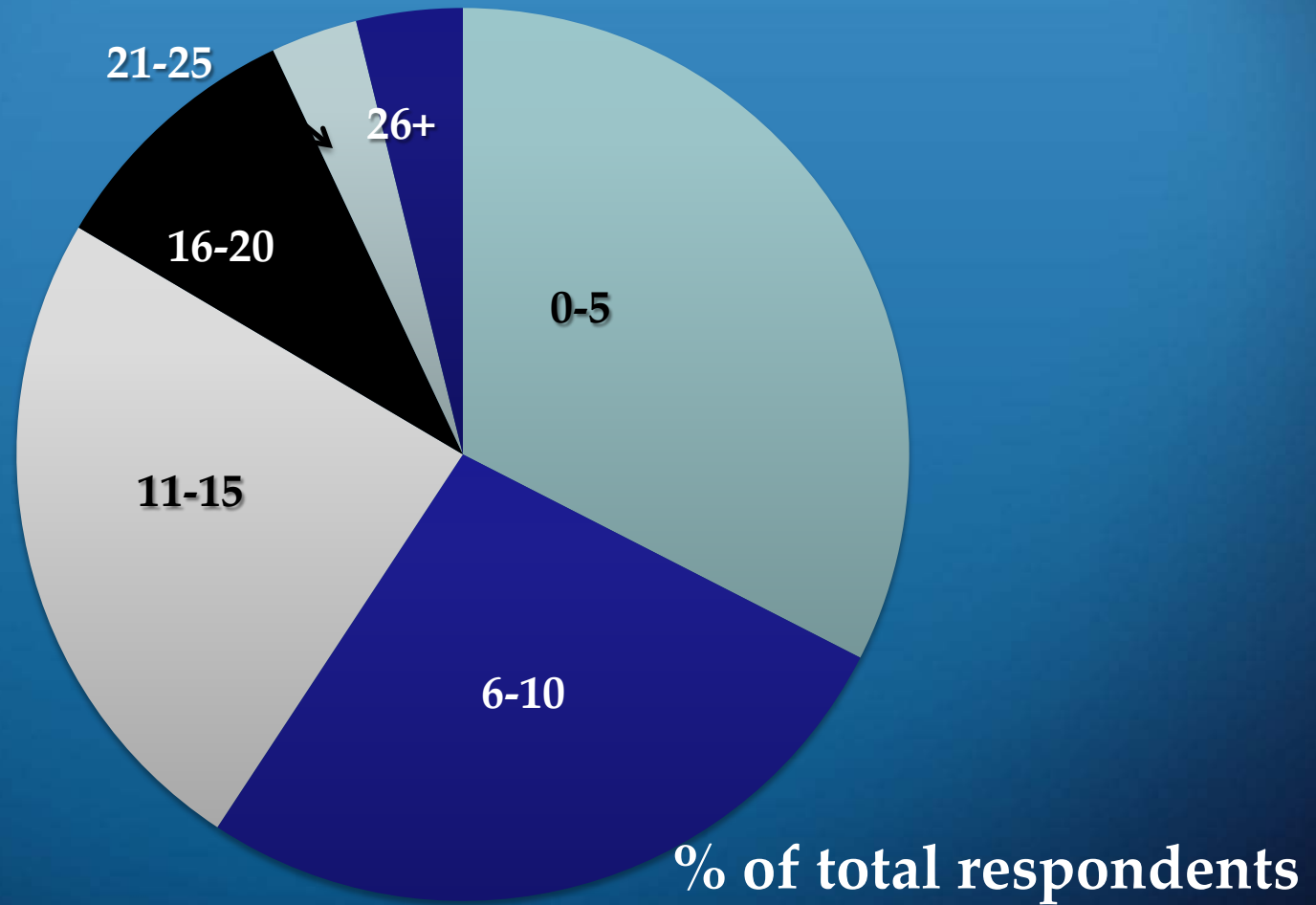
2010 Input Volume of Electronics Processed

(U.S. short tons)



% of respondents

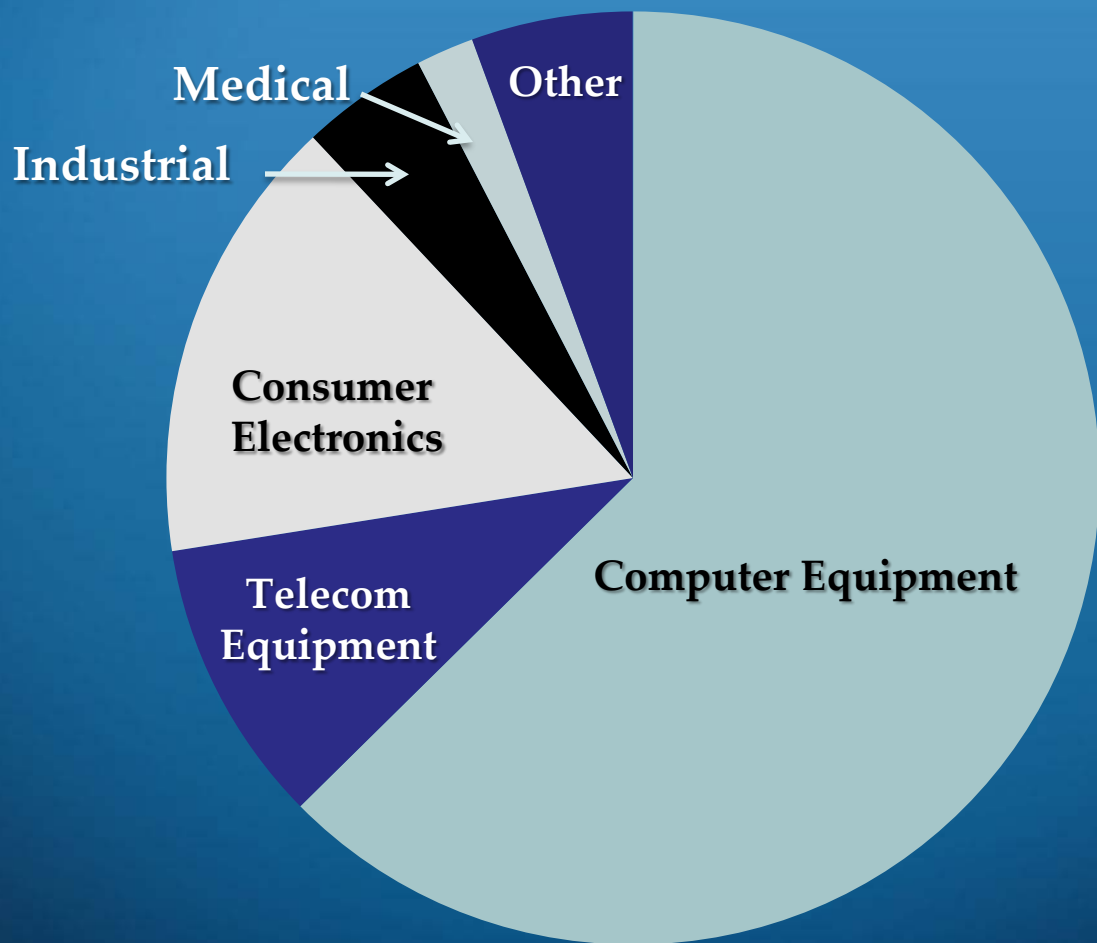
Years in the Electronics Recycling Business



Industry Inputs

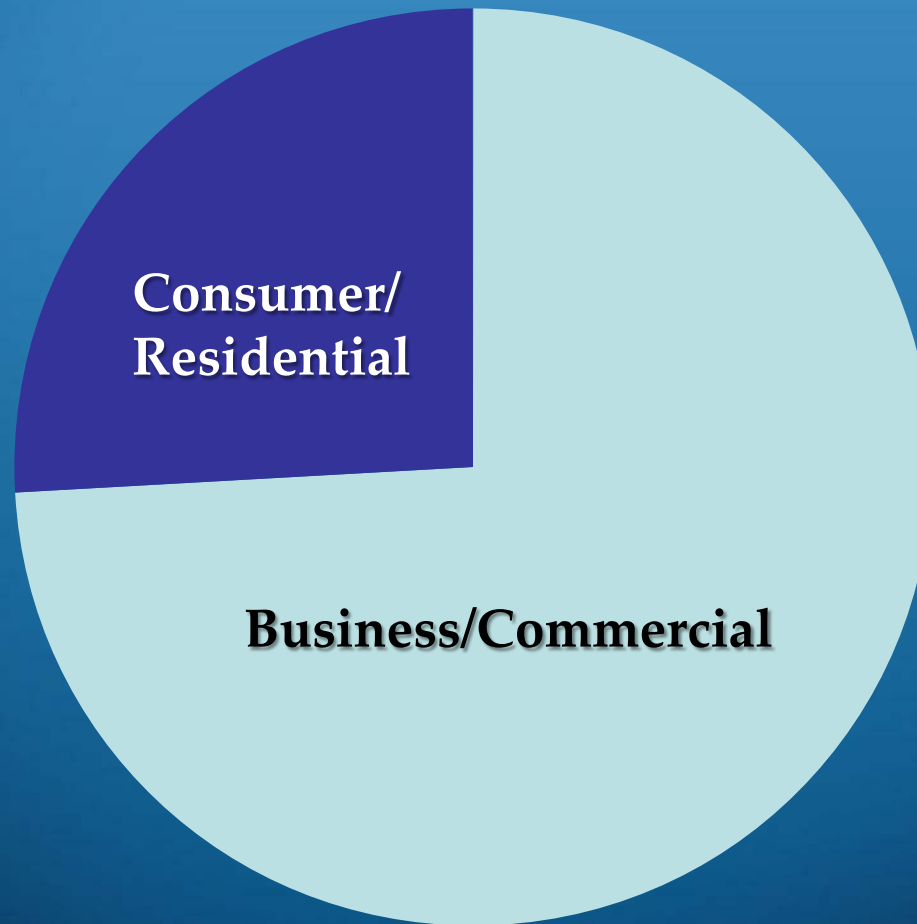
- What is being recycled?
- Where did it come from?
- How much was recycled?

Types of Equipment Recycled



% by Weight

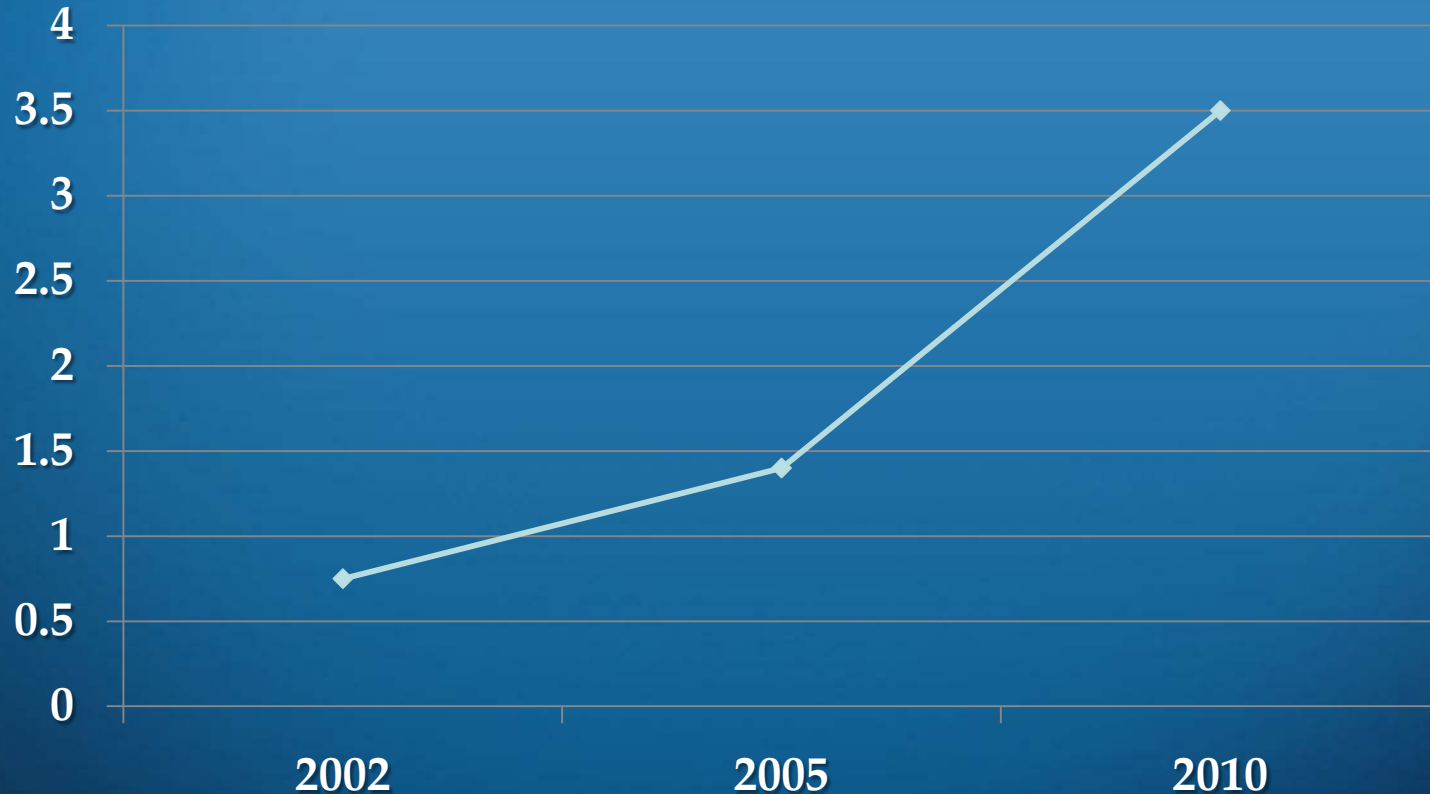
Sources of Equipment



% by Weight

Total Volume of Electronics Recycled (U.S.)

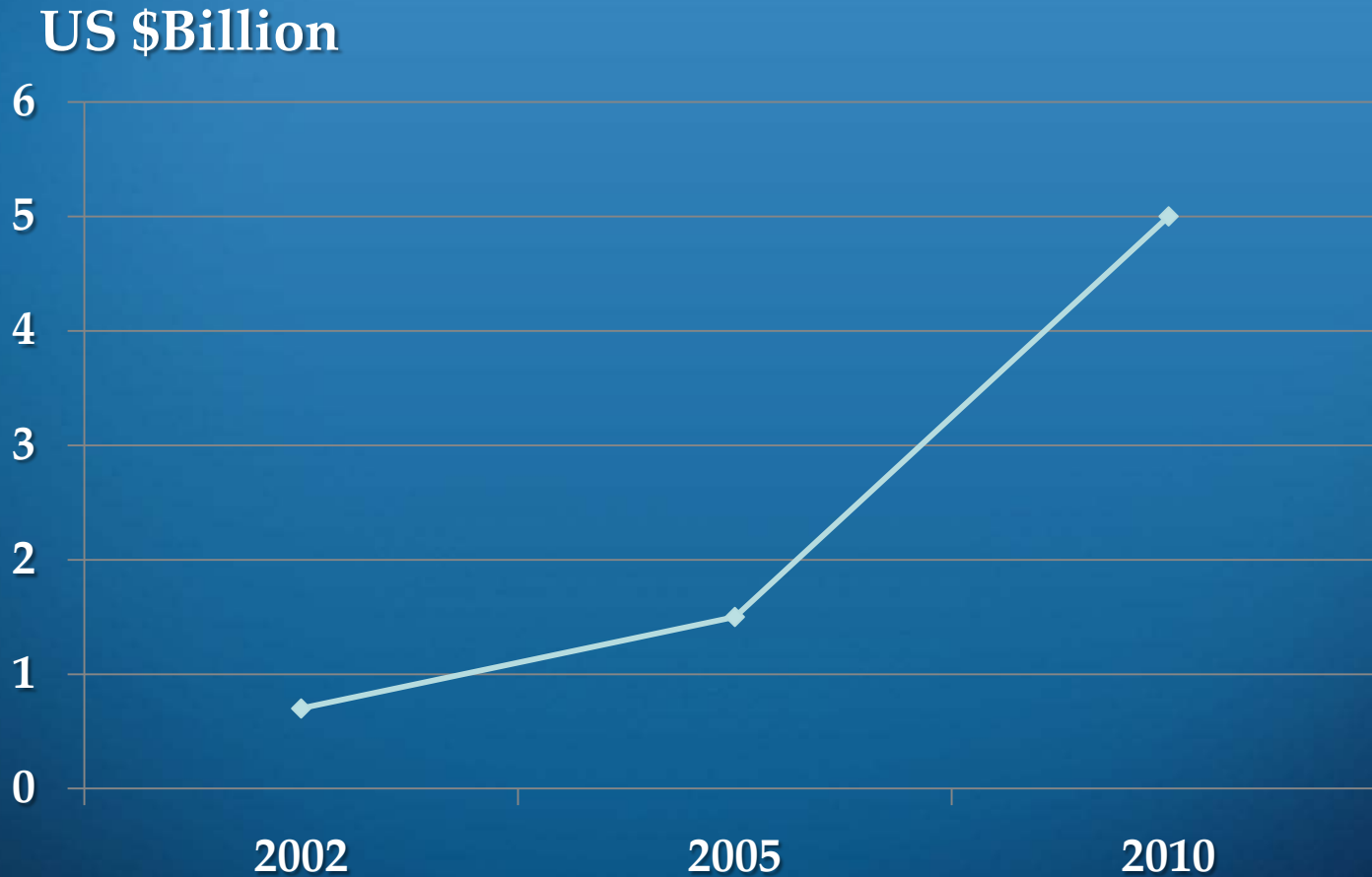
M Tons



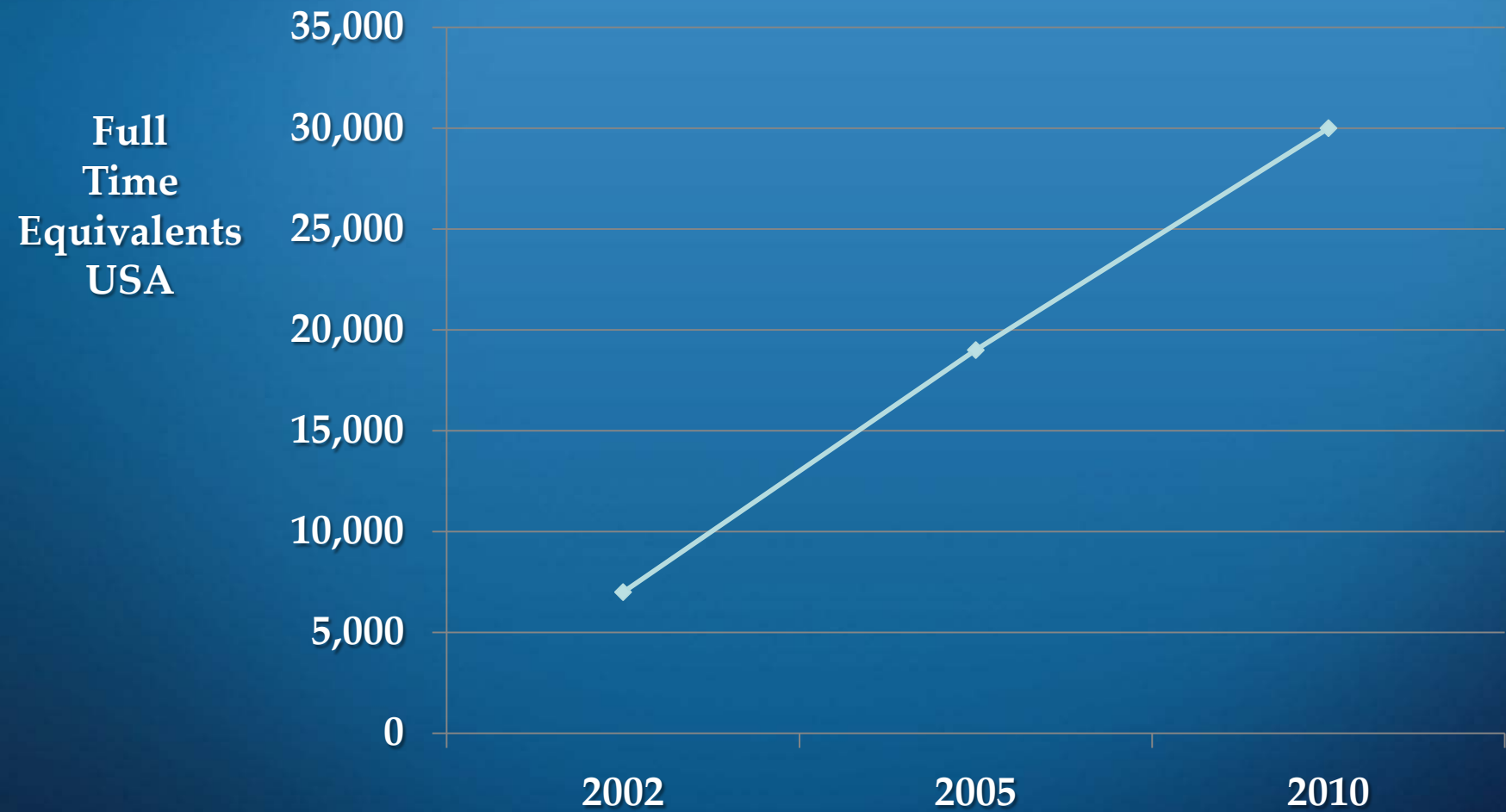
Economic Profile

- **Economic impact?**
- **Industry FTEs?**
- **Industry outputs?**

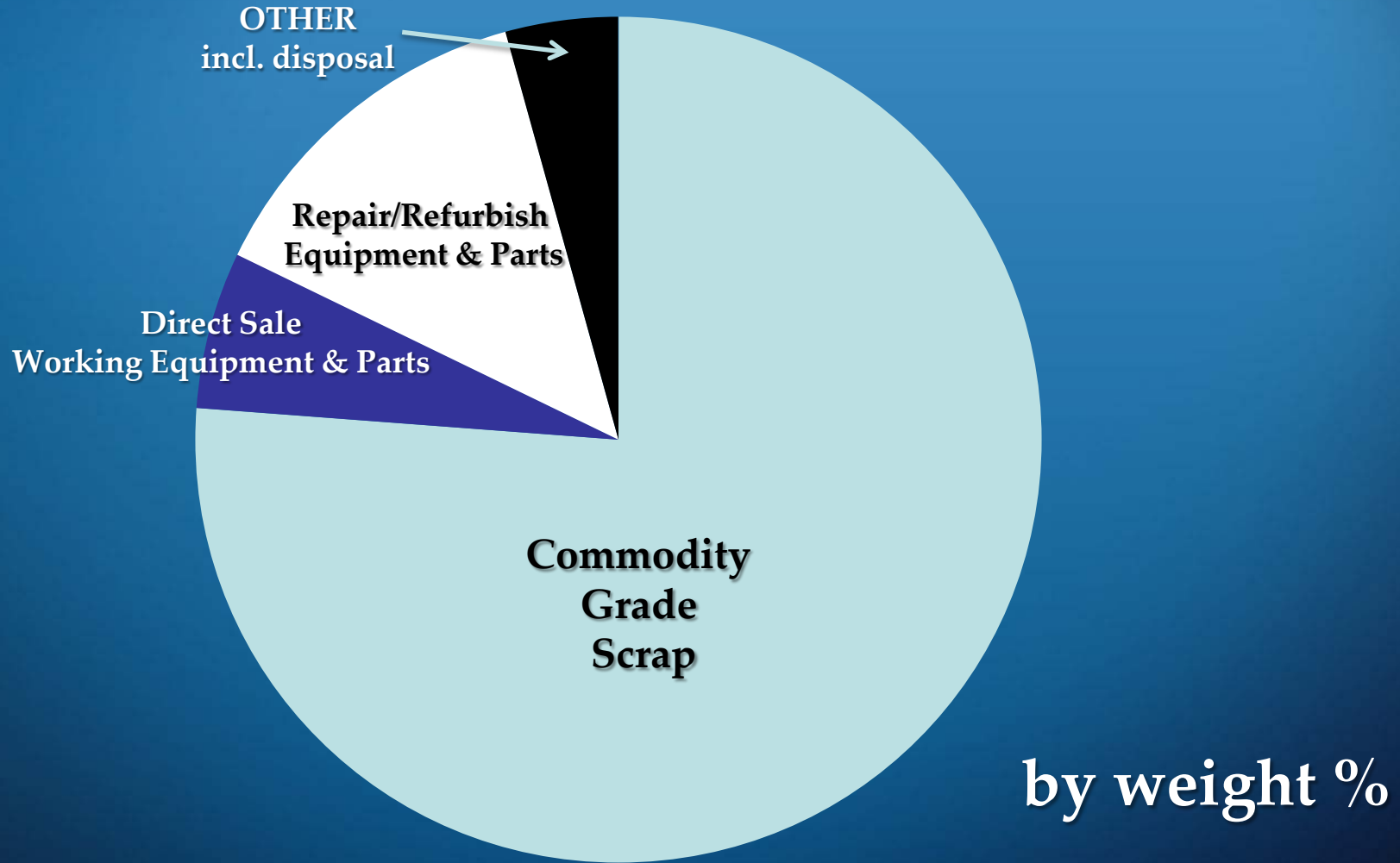
Electronics Recycling Revenue – Trend (U.S.)



Full Time Employees in Electronics Recycling



Outputs of Electronics Recycling in the U.S.



OEM Perspectives

- **Priorities for Selecting a Recycler**
 - Downstream due diligence
 - Data & facility security
 - Pricing
 - Third party certification
- **Certification Preferences for selecting Recyclers**
 - R2/RIOS™ most frequently cited



Third-Party Certification

- Companies with certified facilities ~ 44%
- Most popular certifications:
 - ISO 14001 ~ 65%
 - ISO 9001 ~ 44%
 - R2 ~ 37% (R2/RIOS ~ 24%)
- Top reasons for pursuing certification:
 - Competitive advantage
 - Customer requirement
 - Operational improvement

Key Challenges

- **For Electronics Recycling Companies**
 - Cost of operations
 - Securing supply of equipment
 - Markets for commodities and products
- **For Electronics Recycling Industry**
 - CRT glass markets
 - Legislation/regulations
 - Consumer electronics

Estimates of total U.S. Industry (2010)

- Volume Processed ~ 3-4M tons
- Gross Revenue ~ US\$5 billion
- Employment (FTE) ~ 30,000
- CAGR ~ 20%

Key Findings for U.S. Market

- Quick growth and more growth
- Electronics are recycled in America, not “dumped” overseas
- Incentives needed for household electronics
- Premium standards, R2/RIOS™, on the rise

Contact Information

Eric Harris

**Associate Counsel, Director of
Government & International Affairs**

EricHarris@ISRI.org

202-662-8514