

Economic Value of Alberta's Recycling Sector

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Eunomia Research & Consulting



Eunomia's Locations

Eunomia's Service Areas



Waste & Recycling

Service design and redesign, service optimization risk mitigation; in the vanguard of efforts to establish a circular economy; combining policy and operational expertise



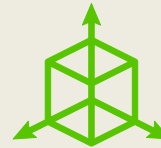
Evaluation

Evaluation of projects and programmes to assess their effectiveness, and make proposals for changes; due diligence for the clean-tech sector



Policy & Strategy

Developing coherent, fully-costed and forward thinking policies and strategies on waste, energy, air pollution, climate change, marine pollution and the natural environment, at the European, national, regional and municipal level.



Sustainable Business

Supporting businesses to become more resource efficient, reducing impact on the environment whilst generating commercial benefits. Includes circular economy business models and approaches.



Procurement

Helping the public sector deliver value from, and green, public procurement. Supporting businesses to improve life-cycle impacts and enhance resilience of supply chains



Green Economy

Development of policies to support a green economy, spanning environmental fiscal reform, sector-specific policy and regulation, and the development of mechanisms to support the natural environment

Eunomia's Experience

Alberta (2019)
EPR Study

Ontario (2019)
Cost benefit analysis
if non-alcoholic DRS
alongside curbside

CE in Furniture
Sector,
Construction
Sector (2017)

Economic Impact
Assessment of industrial
Sector from Implementing
a Circular Economy
(2019)

Litter Pathways
to the Aquatic
Environment

DRS in
Hong Kong

Turkey: DRS
Design and
Cost Benefit

California (2018)
Legislative
review aimed
and improving
performance)

EU Single Use
Plastic Directive
EPR Modulation of
Fees

Reducing
Littering of
Single Use
Plastics (2019)

France: Impact
of DRS on
Municipalities

Kenya: Plastic
Packaging Flow
and Illegal
Dumping

USA (2018)
Toolkit for Carpet
EPR

Current: Scope and Approach

Economic Value

Contribution to GDP
Jobs, Indirect and Induced & Wages
Revenue for Material
Investment
Tax Revenues

Programs Sectors

Residential

ICI

C&D

Stewardship

Service Components

Collection

Sorting

Transportation

Processing

Remanufacturing

Data Data Data

Tonnes
(by material
& sector)

Job Activity and
Financials
(by activity, sector
material and service
component role)

Investment (capital
and/or asset
depreciation)

Step 1: Gather and review existing publicly available data

- Tonnes:
StatsCan
- Jobs and Employment:
Eunomia
previous studies, other economic reports
- Financial:
Annual financial reports

Step 2: Identify service providers in the value chain

- RCA membership list
- Contracted service providers for stewardship programs
- Internet research

Step 3 Design survey tools to verify data gathered and to fill data gaps

- Email survey
- Telephone interviews

Step 4: Complete surveys

- Non-Disclosure Agreement to guarantee confidentiality and data protection

Step 5: Review and validate

- Review returns
- Clarification questions
- Verification emails

Tonnage Information

Tonnages Collected
- Curbside
- Drop-off depots
- Beverage depots

Tonnages Transported
- from depots to sorters/processors
- from sorters/processors to end users

Tonnages Processed
- Materials sorted via MRFs, C&D MRFs, etc
- Materials processed for sale to end users

Job Intensities

Collection Job Intensities

Transportation Job Intensities

Sorting/ Processing Job Intensities

Direct Impact

Direct Jobs
- Reception /Collection
- Transportation
- Processing

Investment Requirements

Salaries and Benefits

GVA breakdown

Direct GVA

Direct Compensation of Employees

Gross Operating Surplus (includes consumption of capital)

Production Taxes

Economic Multipliers

Employment Multipliers

GVA Multipliers

Total Impact

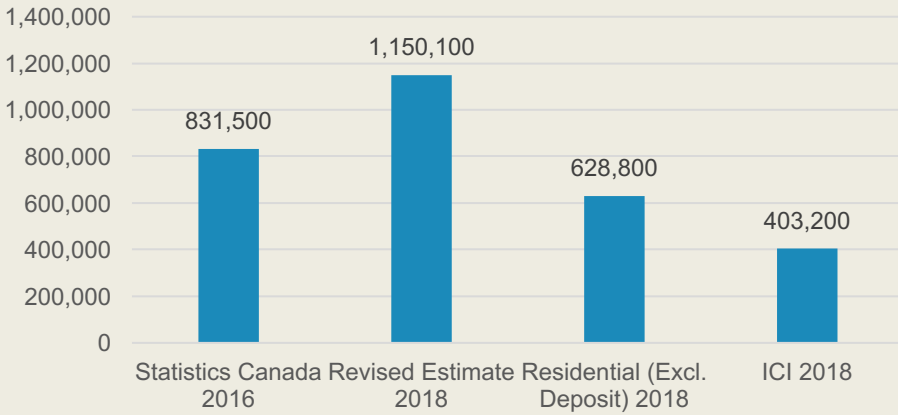
Indirect and Induced Employment

Indirect and Induced GVA

Current: Economic Value

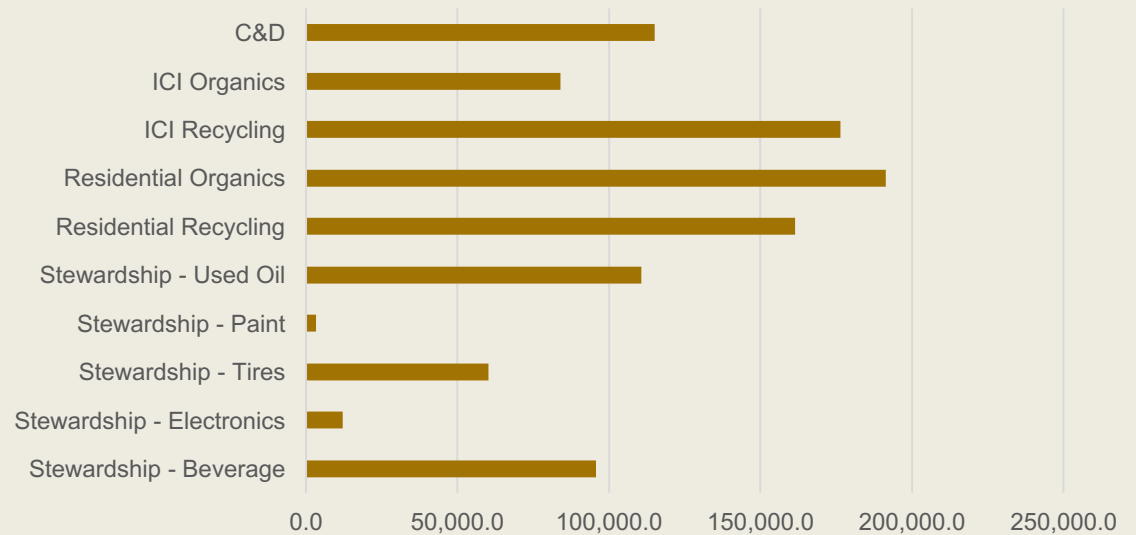
Tonnes

Tonnage of Material Collected for Recycling in Alberta

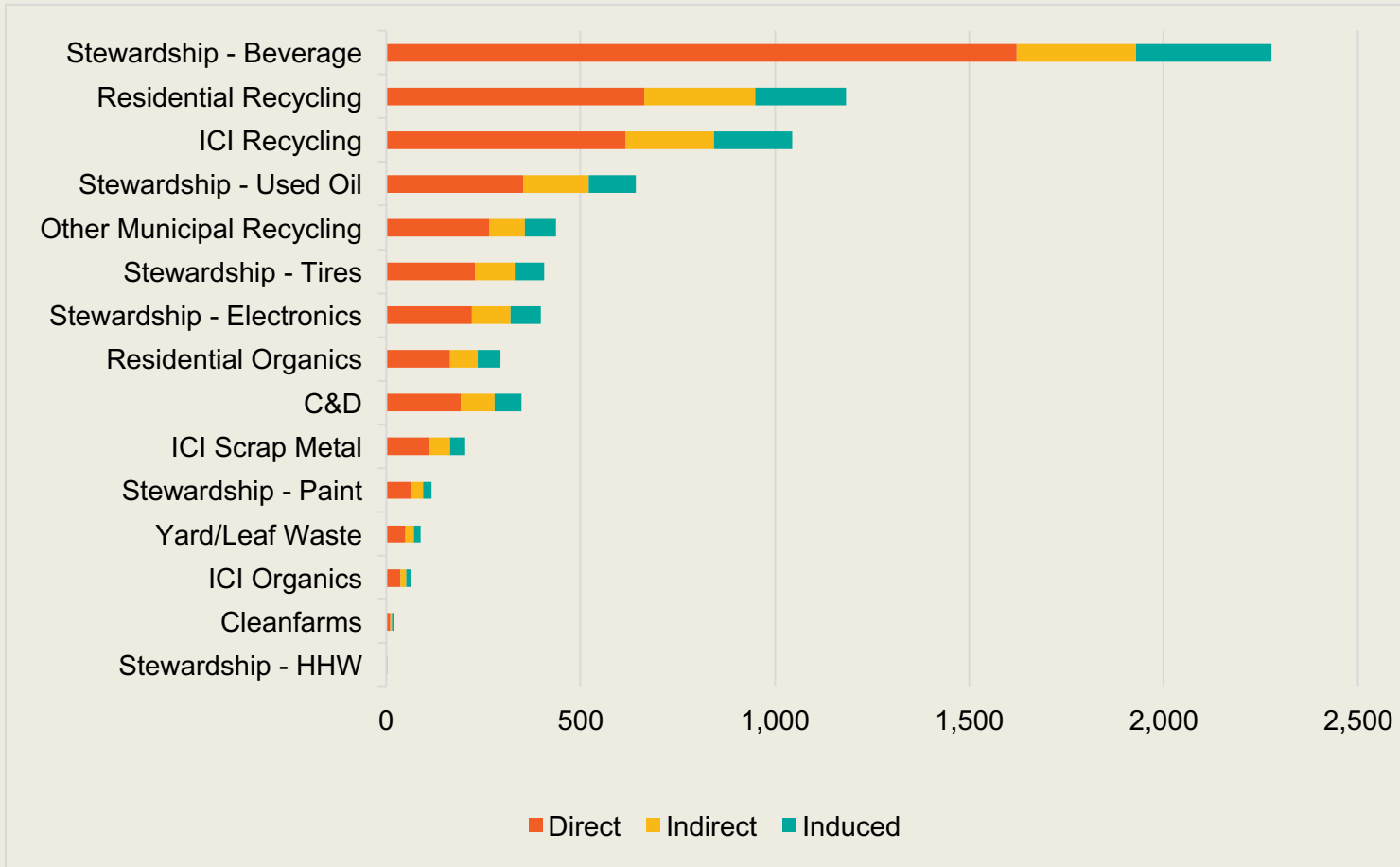


Beverage containers 95k tonnes, 2018

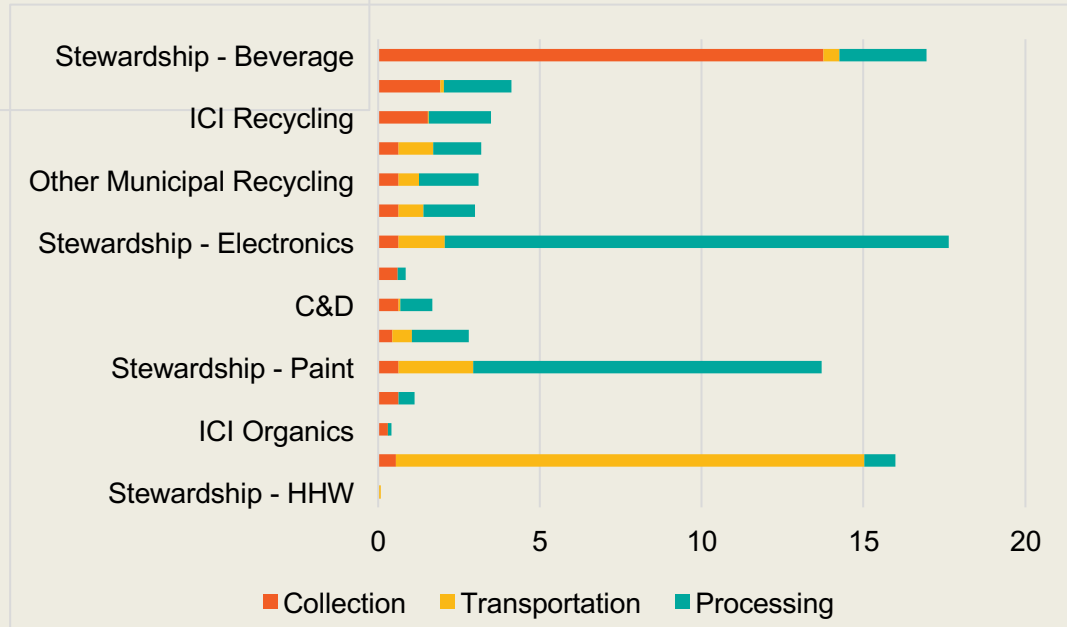
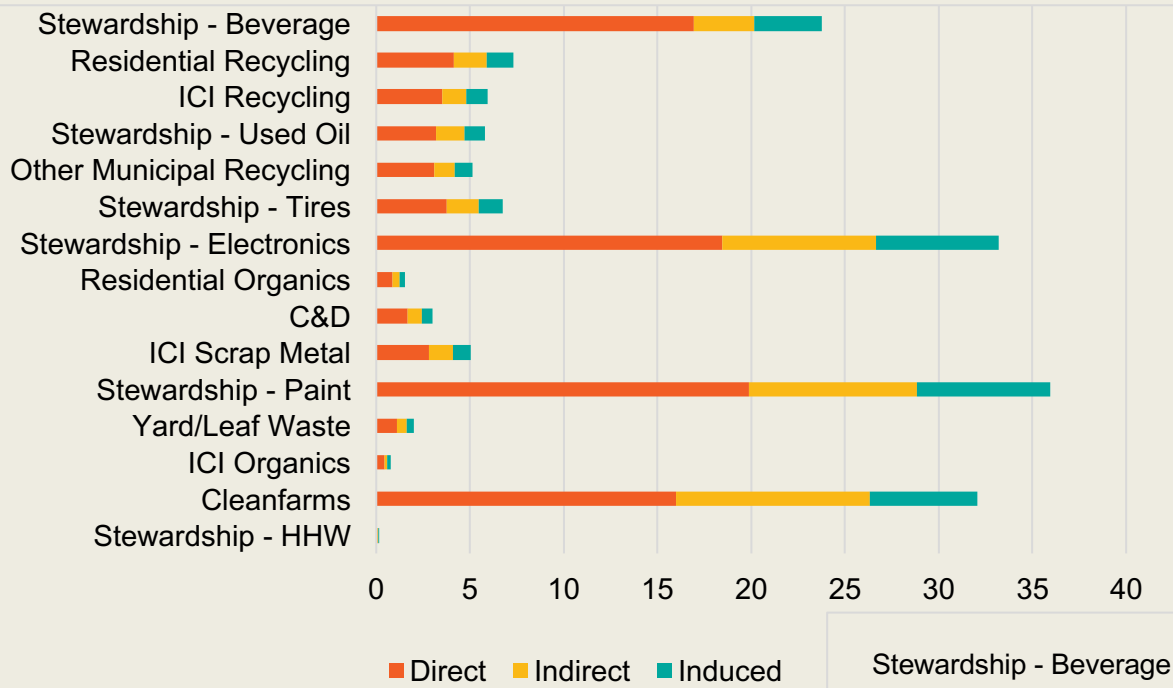
Tonnage Collected



Jobs



Jobs per 1,000 Tonnes Collected

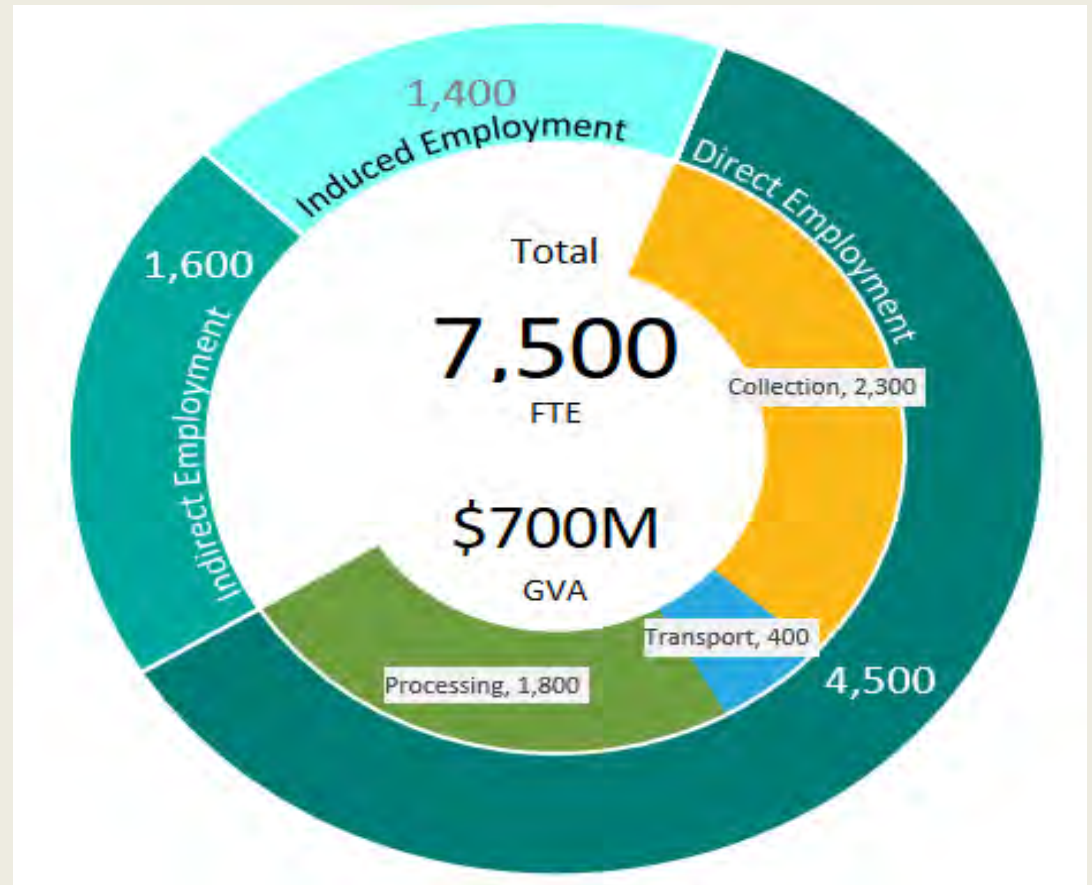


Gross Value Added

- Income based approach to measuring the contribution of the sector to GDP
 - Compensation to employees – wages
 - Gross operating surplus of a company
 - Gross trading profit before taxes, depreciation, finance charges
 - Taxes on production
- \$700M resulting from 1.2M tonnes

Total Economic Benefits

- Wages - \$370M
- \$80M value of the secondary material
- \$60M in tax receipts



Future Potential: Approach

Identify Recyclable Material

- Review waste composition data
- Review other jurisdiction recycling programs for best practice
- CCME Phase 2 list of
- Carryout gap analysis

Quantify Tonnage

- Use where applicable waste composition data to ascertain kg/capital
- Where composition not accurate, pro-rata data from other jurisdictions

Calculate Economic Benefits

- Interviews with recycling processors for additional items
- Literature review
- Extrapolate data from existing recycling programs

Future Potential: Economic Value

Tonnes

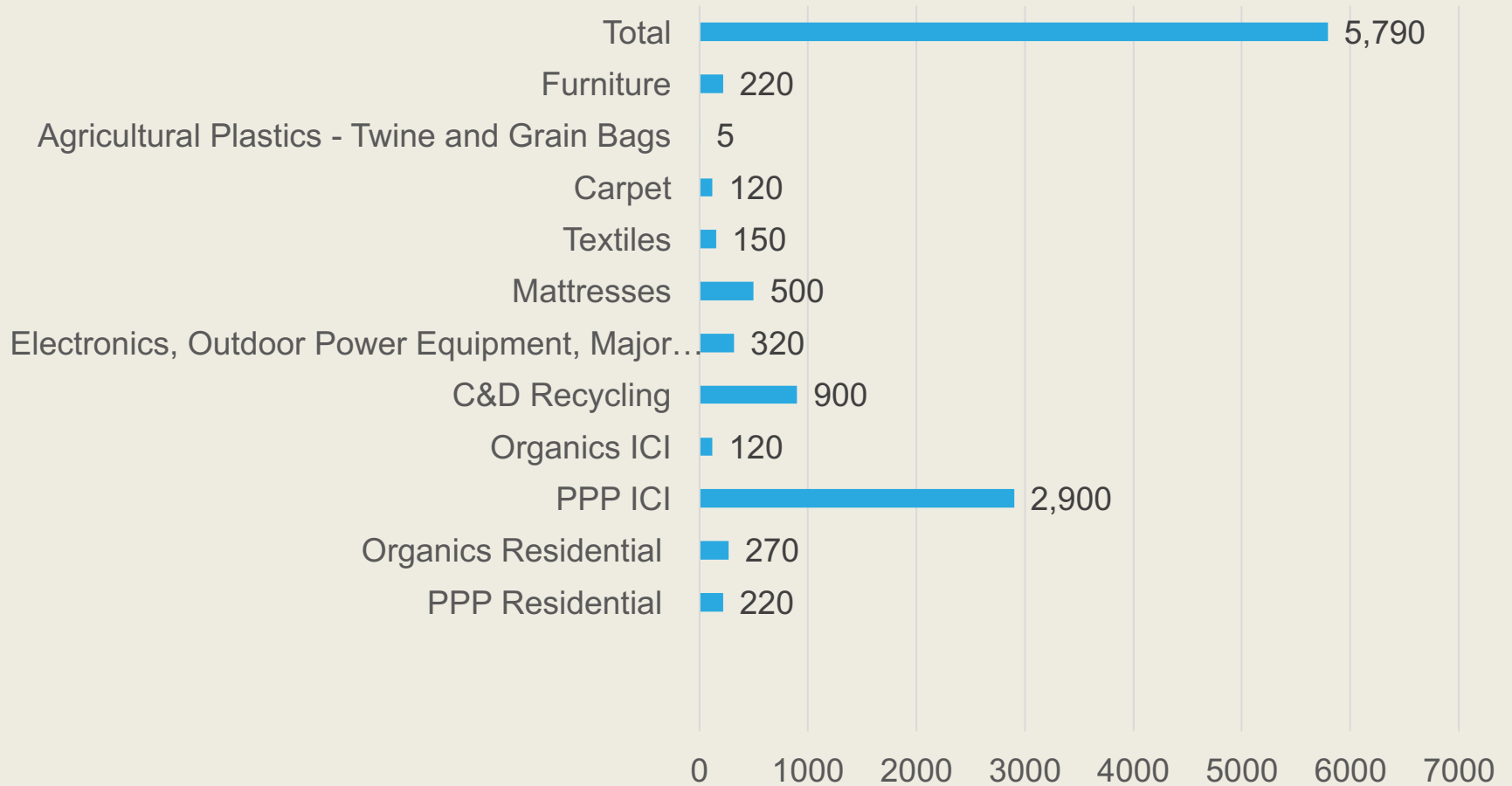
Incremental Tonnes Diverted Through High Diversion Practices



Additional 1.2M tonnes in total potential

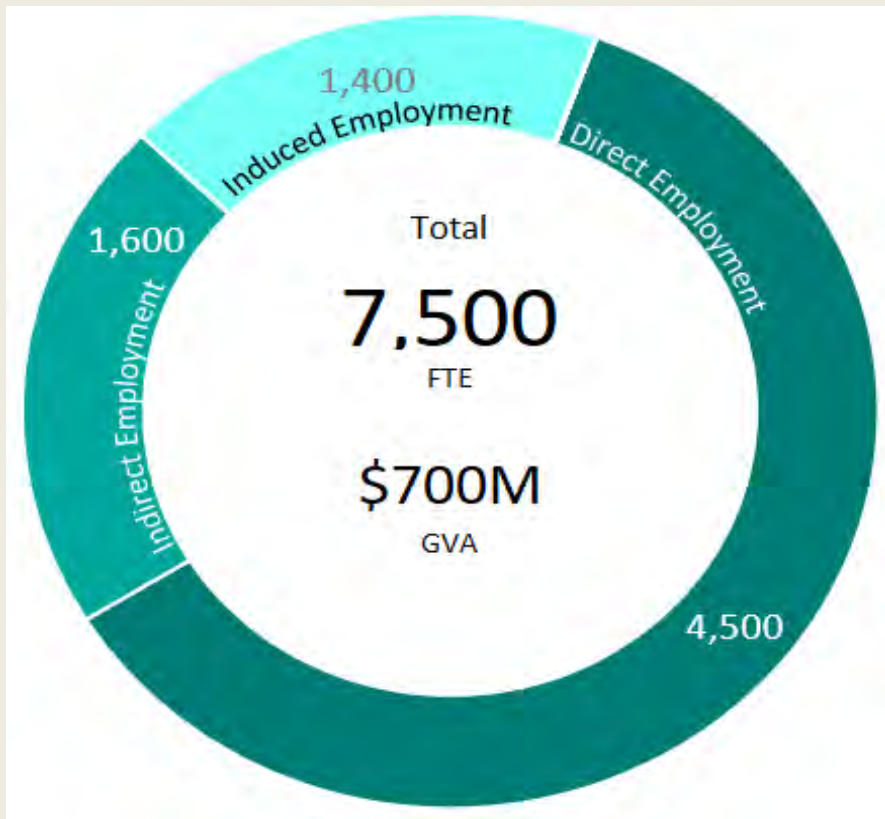
Jobs

Direct, Indirect and Induced Jobs (FTE)

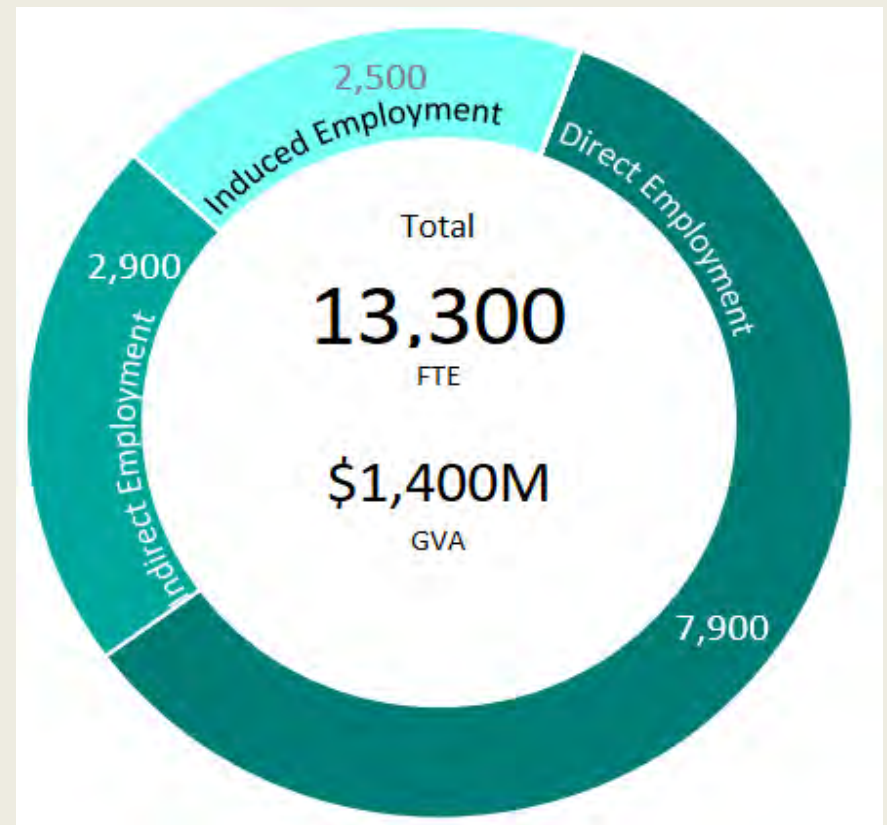


Total Economic Potential

Current



Future Potential



Challenges, Takeaways and Q's

Challenges

- **Challenges**
 - **Availability**
 - **Consistency**
- **Takeaways**
 - **Biggest potential is ICI**
 - **Expand current electronics stewardship program potential for programs for carpet and mattresses**
- **Q's**



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