

**Wealth from Waste Workshop at the World Resource Forum  
Tuesday June 2, 2015. 11.15am-12.45pm  
Workshop Outputs (write-up from tables)**

Question asked was:

Consider Australia's role in shifting towards closing the loop for aboveground metals waste.

Each table focus on ONE part of the value chain and consider the following:

1. Briefly describe the vision, what this would look like.
2. What are the emerging models, projects, approaches (local or international)?
3. What are the key barriers and challenges to this achieving this vision?
4. What role for industry, business, government, consumers, researchers? What types of collaborations are needed?

**Table 1. Mining and Extraction**

**Vision**

- Maximising Resource Productivity
- Whole of resource processing
- Contribution of traditional mining industry to secondary (or urban) mining industry
- Mining to produce metal to meet shortfall from metals recycle

**Barriers and Challenges**

- Mining industry completely disconnected from end-of-life products

**Innovations and Enablers**

- Resources or metals recovery
- Use high quality metals from primary ore to add to recycled metals to meet specification such as building codes

**Stakeholders – role and interface between**

- Local (-)– improve data/information from landfill
- Product designers/manufacturers to engage in accepting recycled metal.

**Table 2. Processing and Refining**

**Vision**

- Circular
- Maximise Production
- Minimise Losses
- Zero Harm
  - Use of renewable energy
  - Carbon neutral

- Techno/economically sustainable
- Minimising primary production

### **Barriers and Challenges**

- Complex feedstock
- Logistical challenges
- Limited processing capability
  - Infrastructure
  - Technical (metallurgy)
- Prioritisation of recovered metals
- Existing business model

### **Innovations and Enablers**

- Incentives to change behaviour
- Carbon pricing
- Technology to remove impurities – robust
- Find ways of using less pure products

### **Stakeholders – role and interface between**

- Gov't, Education, Business, End User, NGO – Primary Industry Collaboration
- Benchmarking, leverage

## **Table 3. Design and Manufacture**

### **Vision**

- Importance of design all through the supply chain (across silos)
- Sustainability **IS** part of the functionality future capability and knowledge creation
- Regulation to drive design – customer or regulation driver
  - Eco-design

### **Barriers and Challenges**

- Regulation
- Culture change
- If client 'wants' it... price
- Hard to regulate good design outcomes
- Consideration of externalities
- Use of waste as barrier
- Spatial settings (linked to innovation and enablers)

### **Innovations and Enablers**

- Where will Australia lead?
  - 'niche' opportunity?
- Innovative product development
  - Leading use of recycled materials
- Scale, generation of materials close to source, local
- Use of waste as opportunity

- How to use 'design' to create behaviour change and reduce mass consumption

#### **Stakeholders – role and interface between**

- Better Collaboration
- Recognise legitimacy of initiating in industry and other stakeholders
- Bring in mainstream (e.g. AIG, Sustainable business Aus, Aus Business Chamber)
- Professional institutions
- Showcase!

### **Table 4. Consumers, Retailers, Sales and Marketing**

#### **Vision**

- Consumers educated about product lifecycles and costs/benefits of materials in products
- Companies investigating/implementing environmental value proposition
- National product declaration program (links to national coordination barrier)
- Consuming less? Slowing the loop down – re-use, re-deployment

#### **Barriers and Challenges**

- Cost
- Free-riders
- National Coordination – COAG
- E-waste problem – opportunity for industry
  - Brand rep/cost savings

#### **Innovations and Enablers**

- Recyclability/Recycling Index – Footprint
- Health initiative/behaviour change – potential models e.g. slip, slop, slap
- Convenience – collection infrastructure (door-to-door service)
- Professionalism of sustainability – importance of middle agent

#### **Between innovation and role of stakeholders:**

- Educate the public – costs \*Recyclability index
- Moving to new models – using less

#### **Stakeholders – role and interface between**

- \*Retailers – collection agents
  - Awareness through sales/marketing
  - Education
- Sustainability teams in orgs.

## **Table 5. Waste Industries, Collection and Sorting**

### **Vision**

- Capacity
- Capability
- Connections
- Transparency – to optimise sustainable resource efficiency

### **Barriers and Challenges**

- Positive externalities but no reward
- Regulatory framework – disincentive - red tape
- Environmental silo thinking
- Cash Based industry – crime?
- Policy Settings Lack industry understanding
- Reverse Logistics

### **Innovations and Enablers**

- Positive Regulatory Environment
  - Price signals
  - Policies and programs
- Research
- New business models

### **Stakeholders – role and interface between**

- Education + Awareness
- Accountability
  - Consumers
  - Producers

At the end we committed to continuing the conversation with stakeholders to develop appropriate transition pathways.