

Overview of Current Status of Electronics Recycling Industry

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Background

- **LifeSpan Technology Recycling**
 - Denver, Grand Junction (national locations)
 - Recycling and Reuse
 - Collection / Processing
 - Commercial
- **Eco-cycle**
 - Boulder, surrounding communities
 - Recycling
 - Collection
 - Non-profit
- **GRX / Metech**
 - Denver (national locations)
 - Recycling
 - Collection / Processing
 - Commercial

Shared Goals of the Electronics Recyclers

- Do What's Good for Our Customers
- Do What's Good for Colorado
- Do What's Good for the Global Environment

High Level Challenges - Colorado

- Environment
 - Local, State, National, Global concerns
 - Not always as straight-forward as it appears
 - There are always trade-offs
 - Is it better to dispose of a toxic metal in a lined landfill in the US, or to try to recover and re-use the material, with the possibility that it may cause pollution here or elsewhere?
 - Quickly becomes a very complex, non-linear equation
- Privacy
 - Identity Theft
 - National Security Concerns

High Level Solution – Colorado

- Environment
 - Almost always better to recover material
 - Safeguards need to be in place to mitigate potential environmental damage
- Privacy
 - Data destruction

Recycling Industry Customers

- Customers Include:
 - Large OEM's
 - Large Retailers
 - All levels of government
 - Not-for-profits
 - Small, Medium, & Large Businesses
 - Individuals
 - Diverse (sometimes conflicting) Interests

OEM's

- Tend to be agreeable with Producer Responsibility Laws
- Want to have control over take back program
- Want to have control over material flow
- Want to have control over program costs

Retailer's

- Are not generally in favor of Advance Recovery Fees
- Generally have very limited space to receive used electronics
- Do not want the administrative burden of ARF tracking
- Are willing to participate in educational outreach
- Are willing to work with OEMs and Recyclers to make options available to consumers

Government

- A lot of variance in objectives from one agency to another
- Some of the primary concerns:
 - Local Economy
 - Regulatory Compliance
 - Providing needed services
 - Budgetary constraints

Not for Profits

- Many Not-For-Profits that are involved in recycling use fees collected from electronics to help fund general operations
- Most work on very thin budgets
- Much of Colorado's recycling infrastructure is comprised of NFPs
- Tend to be operated and staffed by folks with a genuine concern for the environment

Businesses

- Again, some diverse objectives from one business to another
 - Some have truly embraced sustainability concepts, and made sustainability a part of corporate structure
 - Certainly some “Green Washing” going on
 - Data security/product security/IP security
 - Another form of trash to be dealt with

Individuals

- Various levels of awareness & concern
 - “it’s all a bunch of bunk – just throw it away!”
 - “I think I heard there’s some issues, but I don’t really know what they are”
 - “Yeah, it’s bad, but there are lots of bad things in the world, and I can’t fix them all!”
 - “I’m glad to do my part, as long as it’s cheap and convenient”
 - “We must do whatever we can to stop the pollution caused by our reckless disposal of these toxic materials”

What's Good for Colorado?

- One of the State's leading industries is tourism, so a clean environment is very important
- Maintain a business-friendly environment, especially in these tough economic times
- Maintain a climate that allows community and NFP efforts to thrive
- Eye on the future >> Where do we want to be in 10, 20, 50 years???

If Legislation is the Answer, we need a bill that:

- Protects the business interests of OEMs
- Protects the business interests of Retailers
- Is Responsive to the needs of Governments
- Encourages Community Organizations/NFPs
- Is Responsive to the needs of Businesses
- Is Responsive to the needs of Individuals
- Is Beneficial for Colorado
- Protects the Environment

The Challenge from My Point of View

- All the stakeholders are representative of my Customers
- Stakeholders have diverse, occasionally conflicting interests
- A solution will require compromise by all

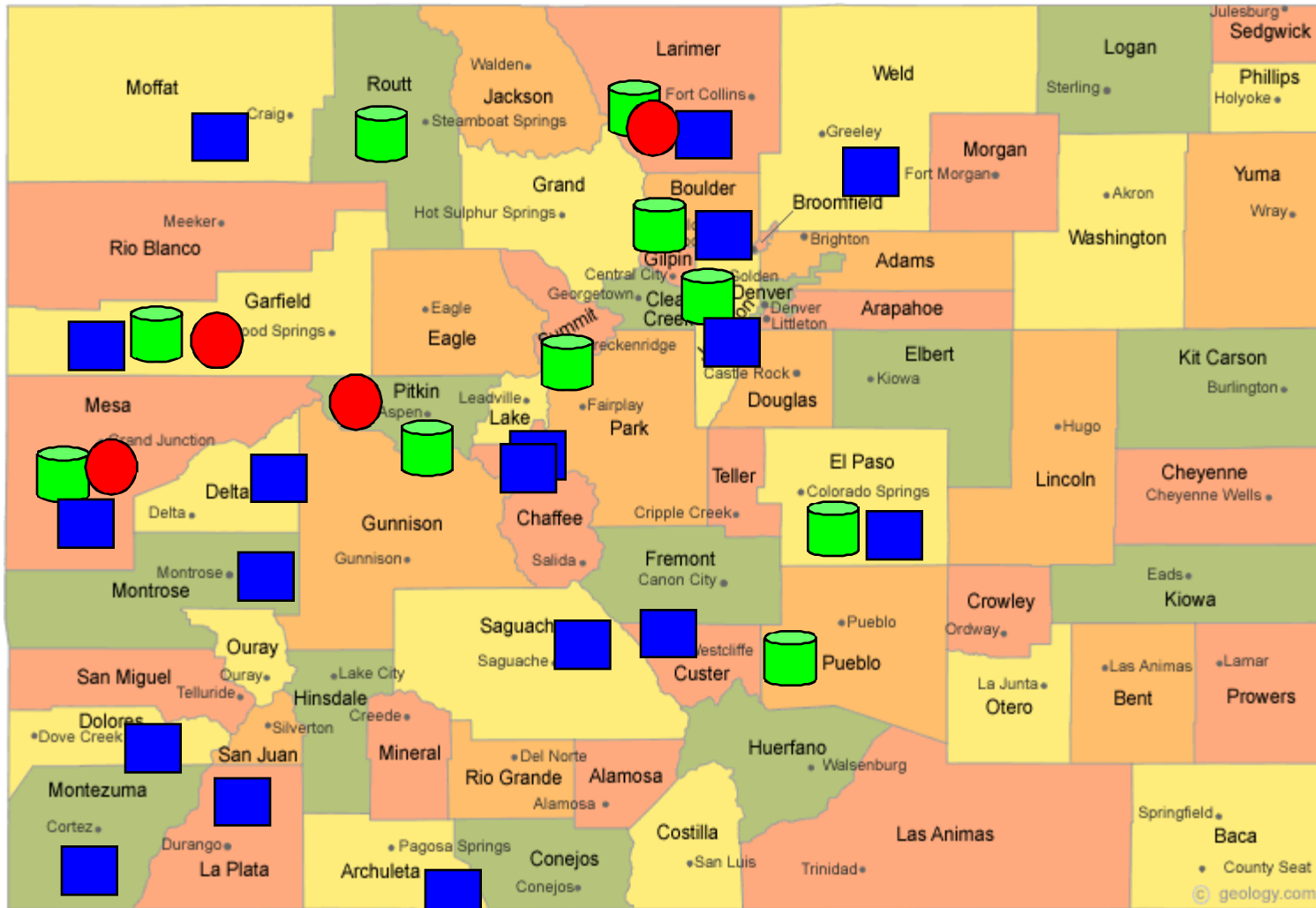
LifeSpan Perspective - Challenges

- Small percentage of electronics being recycled
 - “Tipping Fees” are low
 - Perception of “Free” Recycling is Incorrect
 - Diverse Population Density
 - “Sham” recycling
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- One Solution is not the answer

LifeSpan Perspective - What works

- Customers: Municipalities, non-profits, OEMs and business users
- Rural programs – events and drop-offs
- Reuse/refurbishment programs offset cost of recycling and transportation for OEM's/business users
- Small business – small quantity pickups

LifeSpan Perspective - What works



- Events
- Dropoff
- Ban from Landfill

Eco-Cycle Perspective - Challenges

Our Goal – move toward Zero Waste

- Non-renewable resource recovery
- Avoid pollution of groundwater from landfills and pollution of air from incineration
- Product stewardship – shared responsibility at the end of a product's life
- Design for the environment

Eco-Cycle Perspective - Challenges

Product Stewardship, con't:

- Some voluntary programs are more sincere than others
- Some have admirably high goals
- Remains to be seen whether voluntary programs can move beyond recovery percentages in the low teens (likely moot at this point given multitude of state programs)

Eco-Cycle Perspective - Challenges

- CO needs a collection program that rewards outreach and education, and prioritizes maximum diversion for all parts of the state
- Governments and non-profits have done most of this so far
- Local programs need to be assured of a seat at the table when setting prices
- Existing programs are not set up for tracking and sorting by brand

Eco-Cycle – What works

- Support existing programs, particularly those in underserved areas
- Define “collector” separately from “recycler”, with simplified certification and reporting
- Explore credits for increased diversion through education and outreach
- Focus on collection infrastructure as the key to achieving a phased landfill ban – otherwise it will become a tremendous burden

Eco-Cycle – What works

- Develop a certification program for re-use similar to collector certification – not prohibitive for non-profits but also not creating a loophole for sham operations
- Ideally, create framework legislation that can expand to a second phase of covered devices (if necessary) and other products containing hazardous materials

Consensus on Solution

- Develop Recycling Framework
 - Increase diversion of e-waste – ban E-waste
 - Multiple Program options for both producers and consumers
 - Encourage market based solutions that compete with State program
 - Certified Recycling Processing Program
 - Keep recycling infrastructure in Colorado and grow it