

Transform Compost Systems  
The Fraser Valley Regional District  
The District of Kent

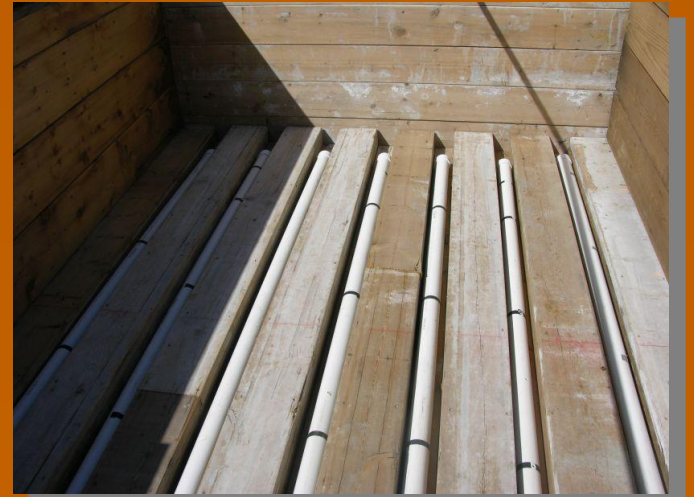
# Pilot Household Organics Composting Project



# Project Design



# Project Design 2



# Composting Process



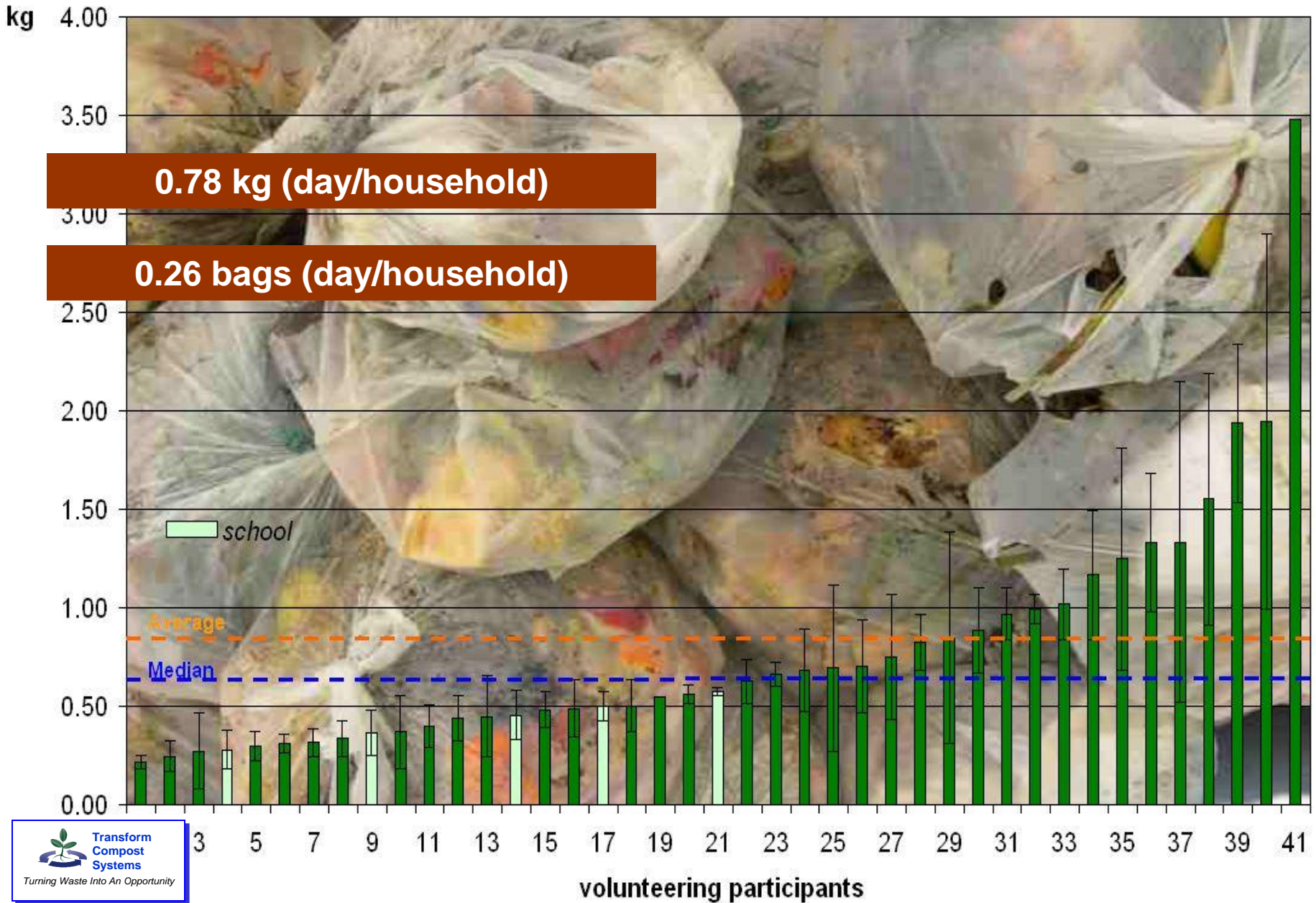
High temperatures kill pathogens



Aerobic composting conditions for odor management



# Average Organic Household Waste



# Biodegradable Plastic Bags

Complete decomposition of  
*Biobag* bags



Partial decomposition  
of *Ecosafe* bags



👉 Presence of plastics did not impede microbial activity

# Compost Quality

Under controlled aerated composting

- Total *coliforms* < 20 MPN/g
  - *E. Coli* < 3 MPN/g
- Compliance with OMRR - regulations



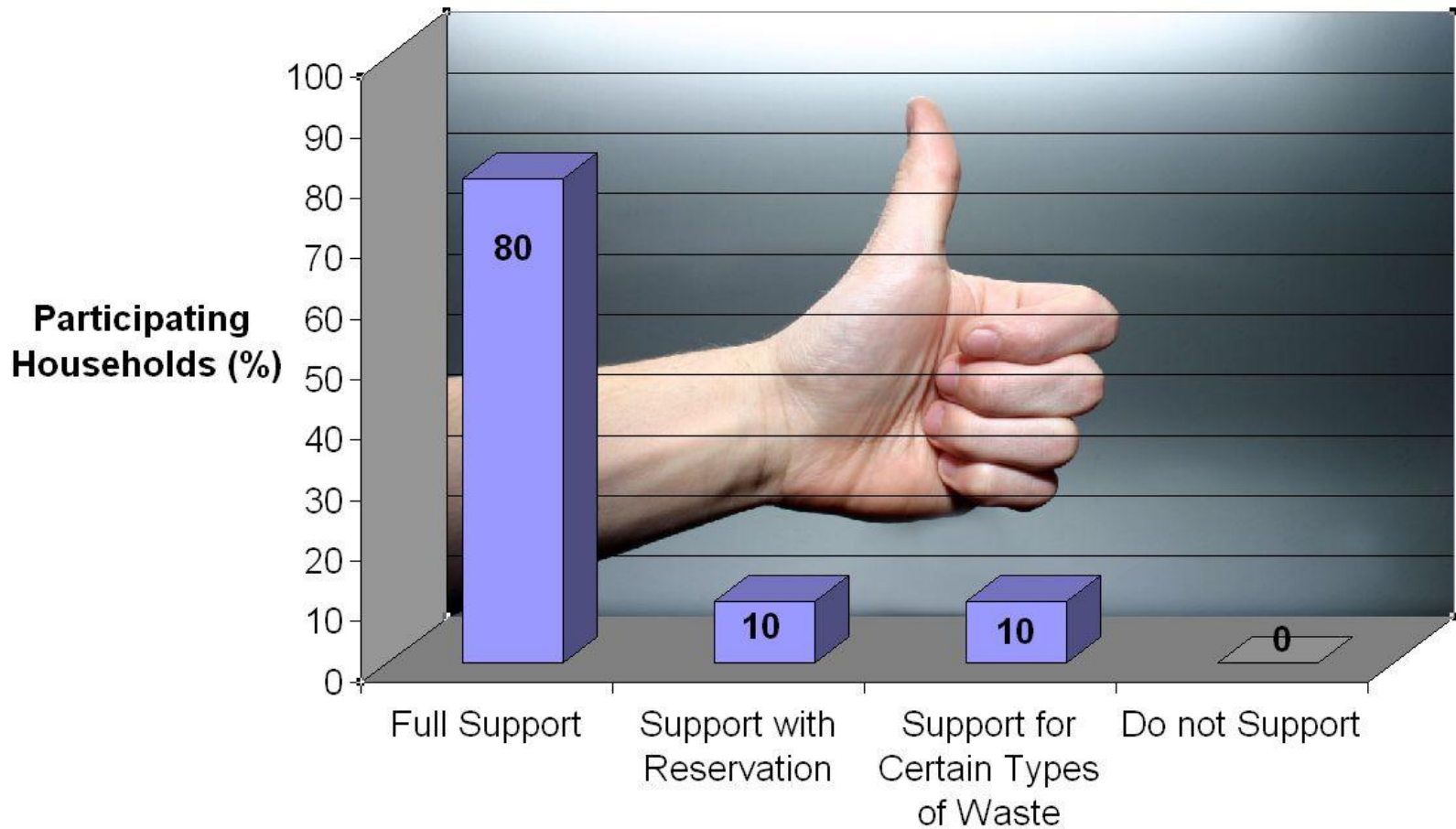
# Feedback 1



- Simple, clean and odorless procedure
- 3 out of 4 favor the 'Ecosafe' bag
- Containers work well
- Integrated garbage pick-up (recycle, garbage and organics)
  - 87% would like to see integrated garbage pick-up
  - 13% would support integrated garbage pick-up if little extra cost

# Feedback 2

## Support for a Residential Organic Waste Curbside Collection and Composting Program



# C o s t s

of waste collection per household and per year  
(Agassiz, BC)

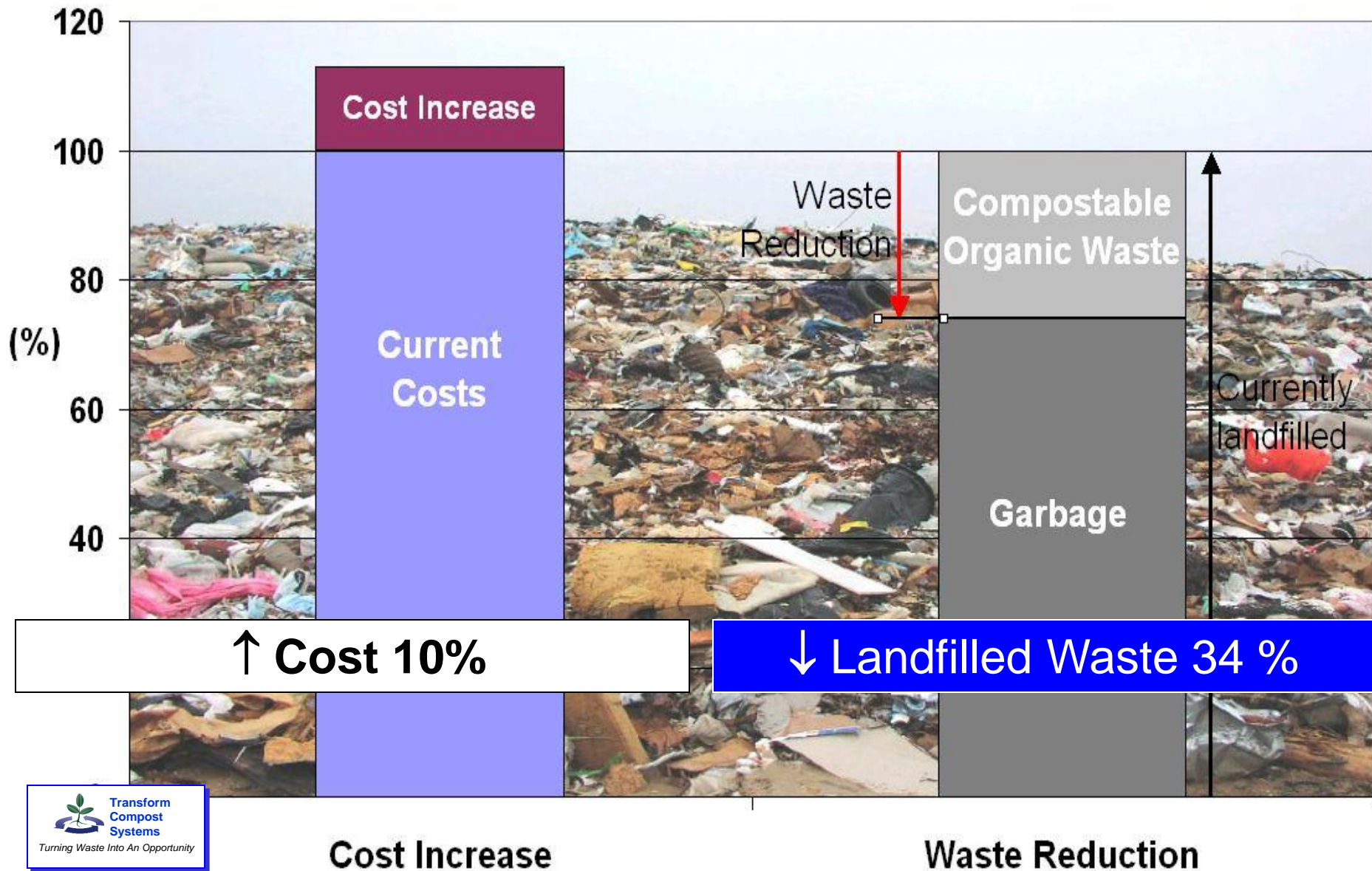


Estimated <u>current</u> costs	<b>\$128.90</b>
Cost increase for organic waste collection	+ \$7.20
Biodegradable bags	+ \$8.00
Savings on landfill tipping fees	- \$2.20
Total costs	<b>\$141.90</b>

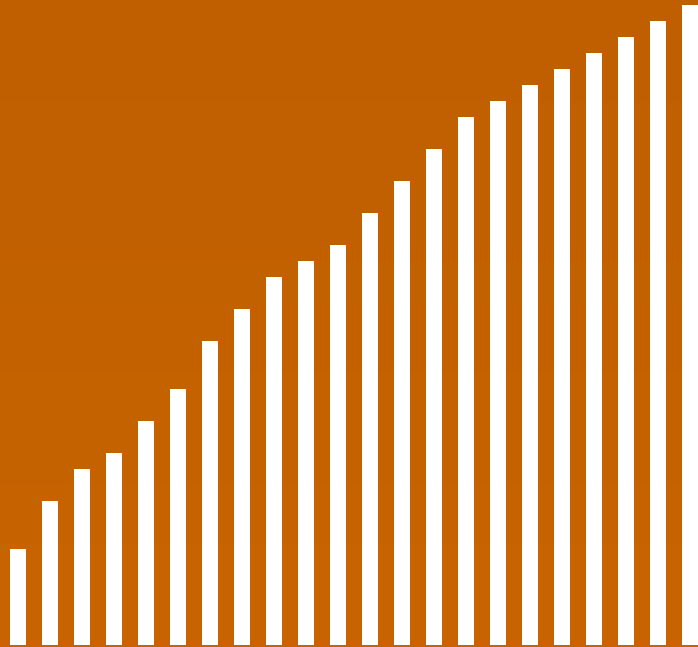
**Total Cost Increase \$13 or 10%**

# Costs as compared to Waste Reduction

## Residential Waste



# Outlook 1



2031:

(projected) FVRD Population: 462,666

FVRD disposal in landfills: ????? tonnes ...

... and no more landfill capacity in FVRD !

2006:

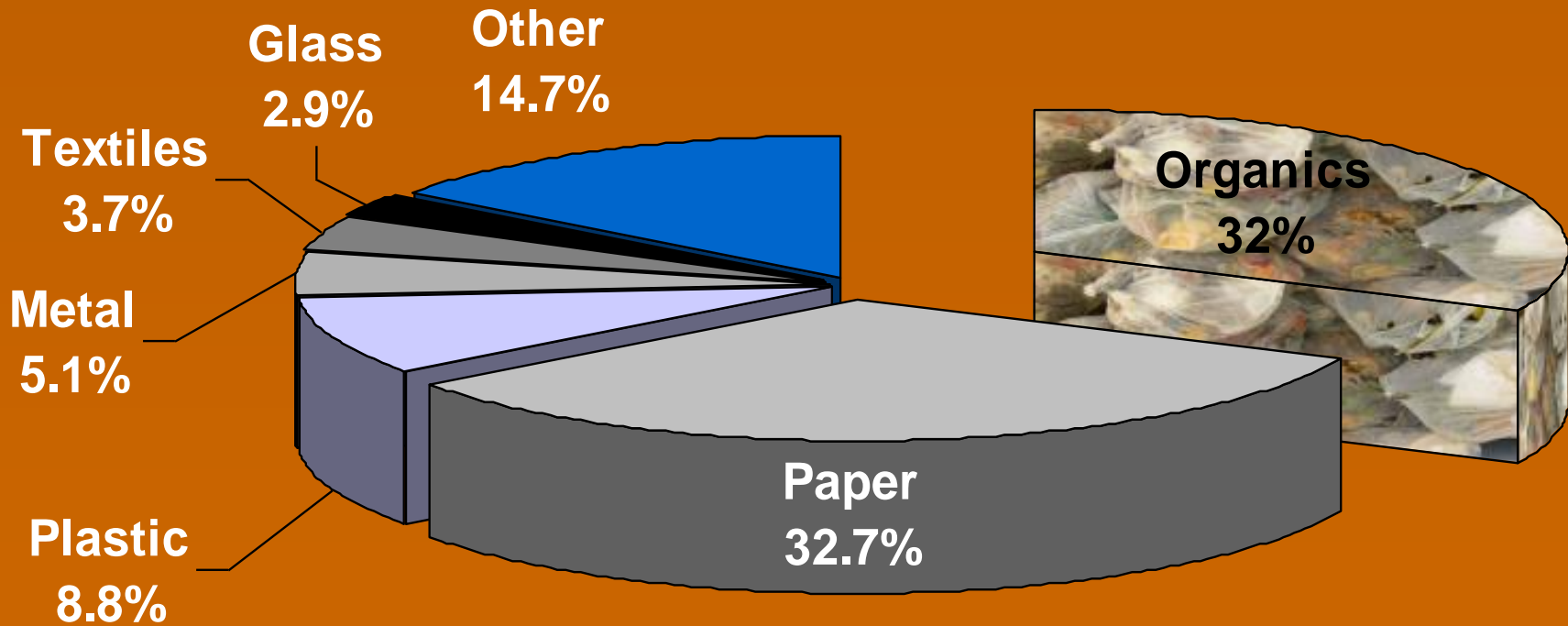
FVRD Population: 237,550

FVRD disposal in landfills: 138,119 tonnes

# Outlook 2



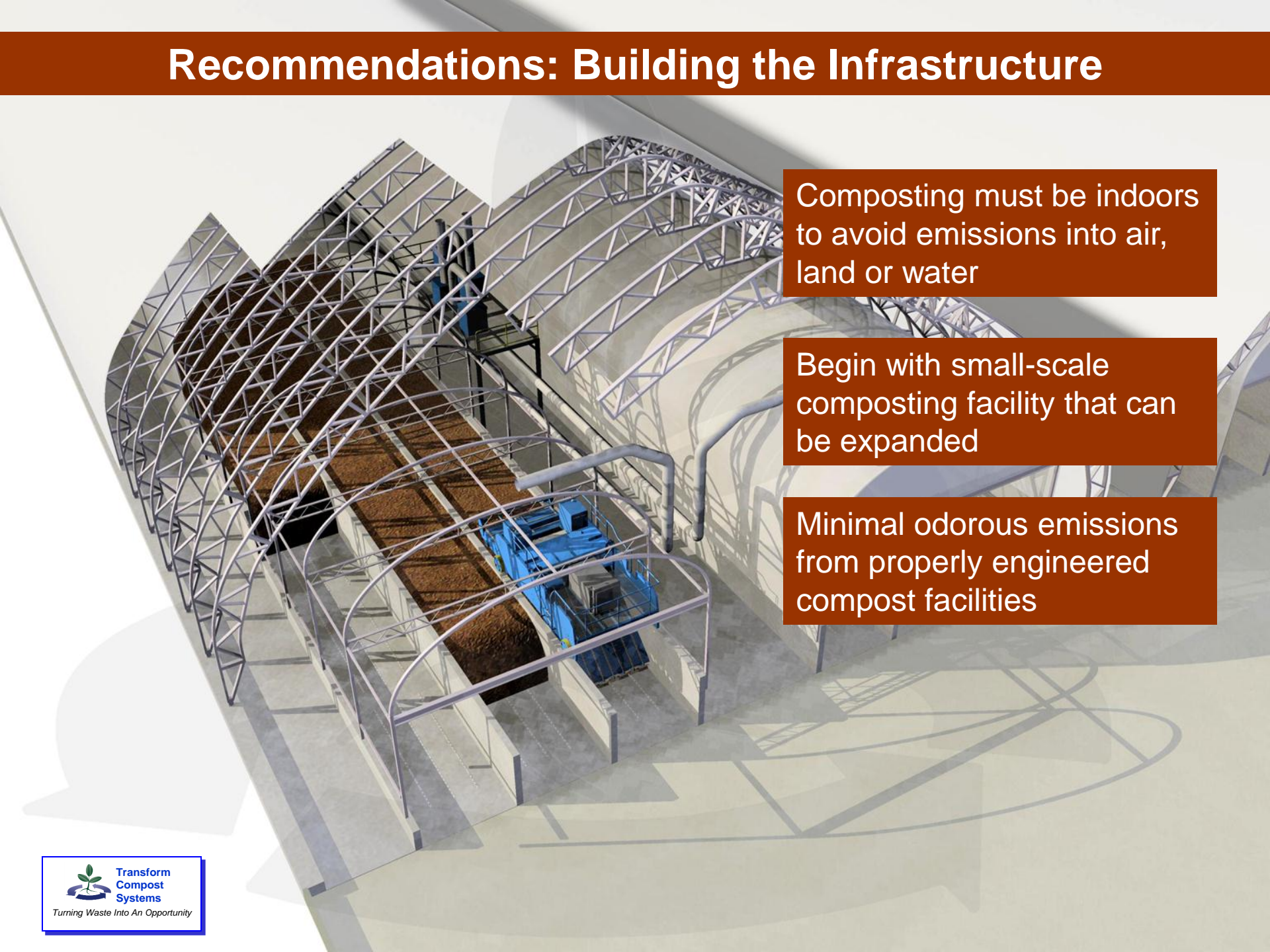
Composition of all discard generated in FVRD (2005)



# Recommendations: Curbside Collection and Composting

- Community-based composting
  - considerable waste reduction
  - more efficient than backyard composting
- Curbside collection with green bins outside and degradable bags indoors
  - convenient
  - simple
  - odorless and clean
- Include yard waste
  - further waste reduction
  - better compost quality

# Recommendations: Building the Infrastructure



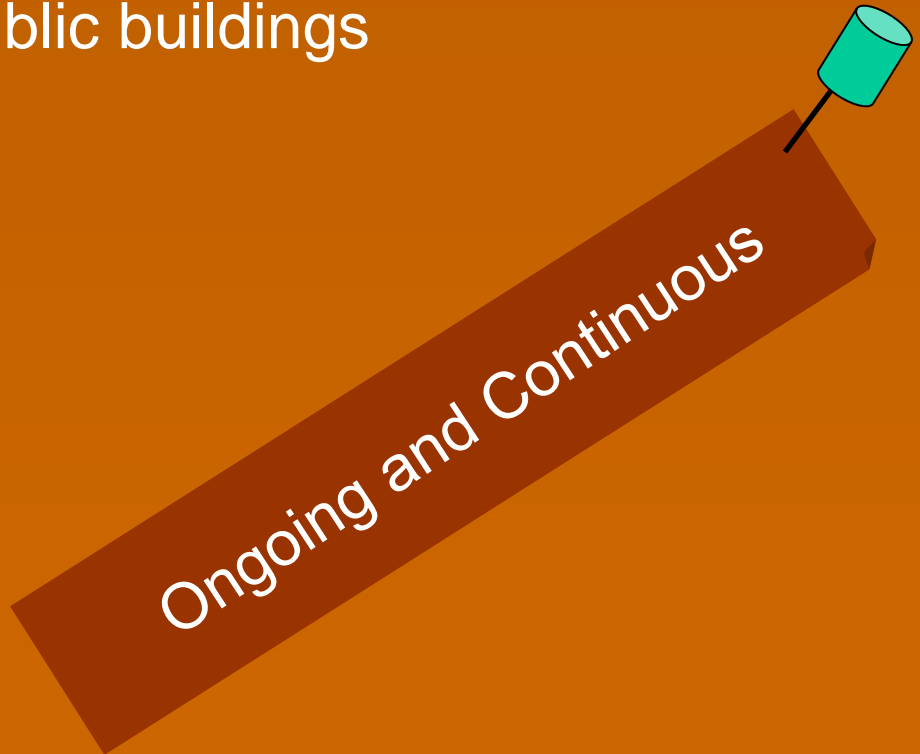
Composting must be indoors to avoid emissions into air, land or water

Begin with small-scale composting facility that can be expanded

Minimal odorous emissions from properly engineered compost facilities

# Recommendations: Engaging the Community

- Newspaper and public utility bill supplements, hand-outs
- Recycling in schools, public buildings
- Public events
- Telephone hotline



# Recommendations: Improving the Settings

- Consider the full costs of landfill disposal
  - external costs: greenhouse gases, and other air, water, and land pollutants, and remediation costs
  - composting (and recycling) more competitive
- Coordination and consistency in waste management
  - same tipping and collection fee to avoid waste migration
  - standard collection procedure
  - common effort – higher efficiency – cost reduction
- Hire a recycling promoter / coordinator
  - can be commissioned to private company or non-for profit organization
- Creation of sample households (monitoring)

# Summary



## Question

## Answer

- Do we have a **simple** and **odorless collection** method?
- Is there an **environmentally sustainable**, odorless composting **technology**?
- Is waste diversion by composting **economically** sustainable?
- Are the **residents** ready?
- Is the **private industry** ready to design, build and operate a composting facility?

Yes

Yes

Absolutely

Yes

Yes

**Where should we go from here?**