



# Landfill Gas

## Climate Leaders Partner Meeting Washington, DC

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# Who is Interface?

- World's leading commercial carpet, modular tile and broadloom, and interior fabrics manufacturer
  - Founded in 1973
  - Annual sales \$1 billion
  - 5,500 employees in 100 countries
- Comprehensive, systems based sustainability approach to product and process
- Globally recognized for sustainable leadership
- [www.interfaceinc.com](http://www.interfaceinc.com)

# Interface's Vision



- Interface's Vision: To be the first company that, by its deeds, shows the entire industrial world what sustainability is in all its dimensions: people, process, product, place and profits, by 2020 and in doing so will become restorative through the power of influence.

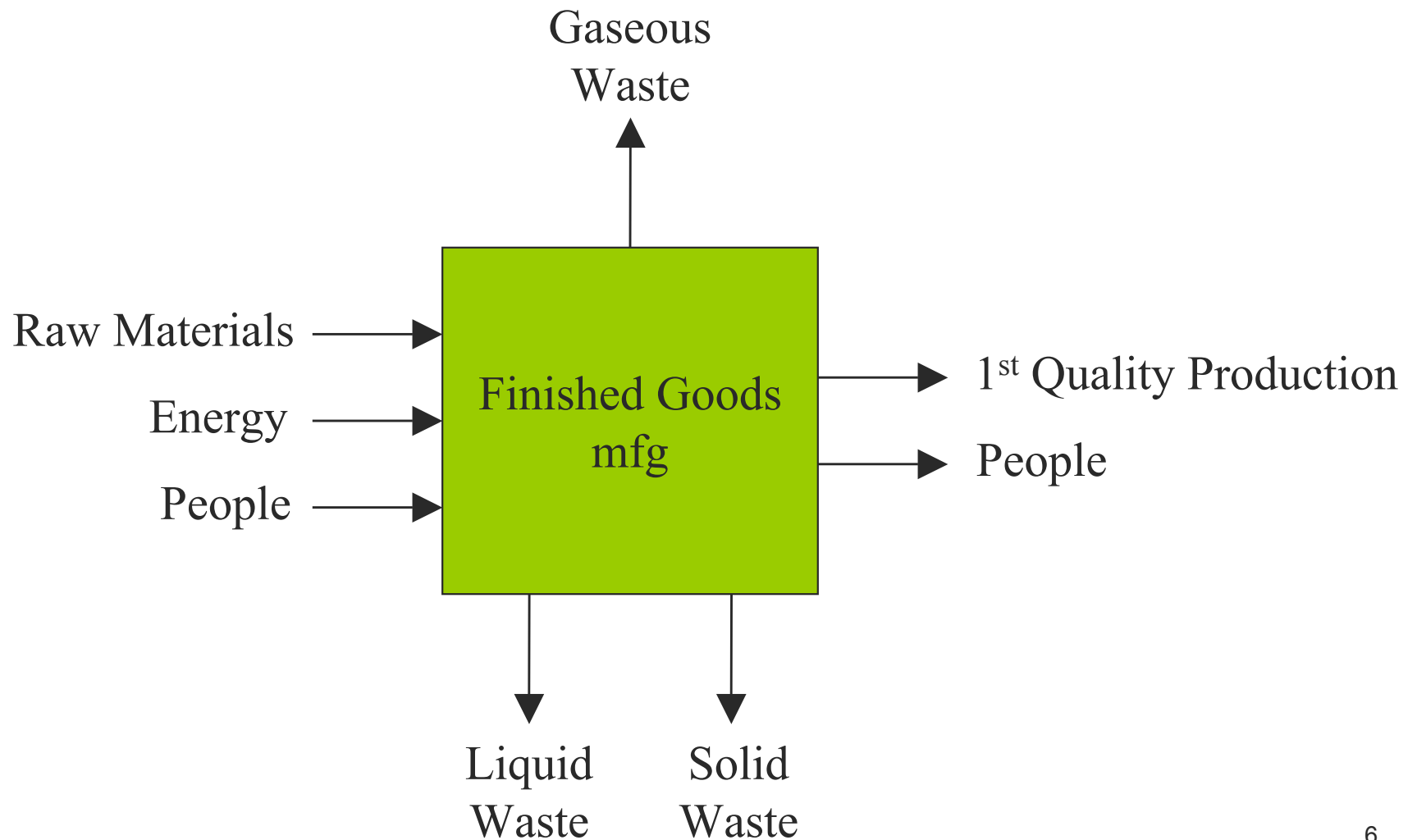
# What are We Trying to Accomplish?

- Trying to sustain our.....
  - Environment
  - Business/Community
  - Economy
- Developing locally and thinking globally, this project was completed for our LaGrange, GA manufacturing location
- Application of a cost effective renewable energy solution

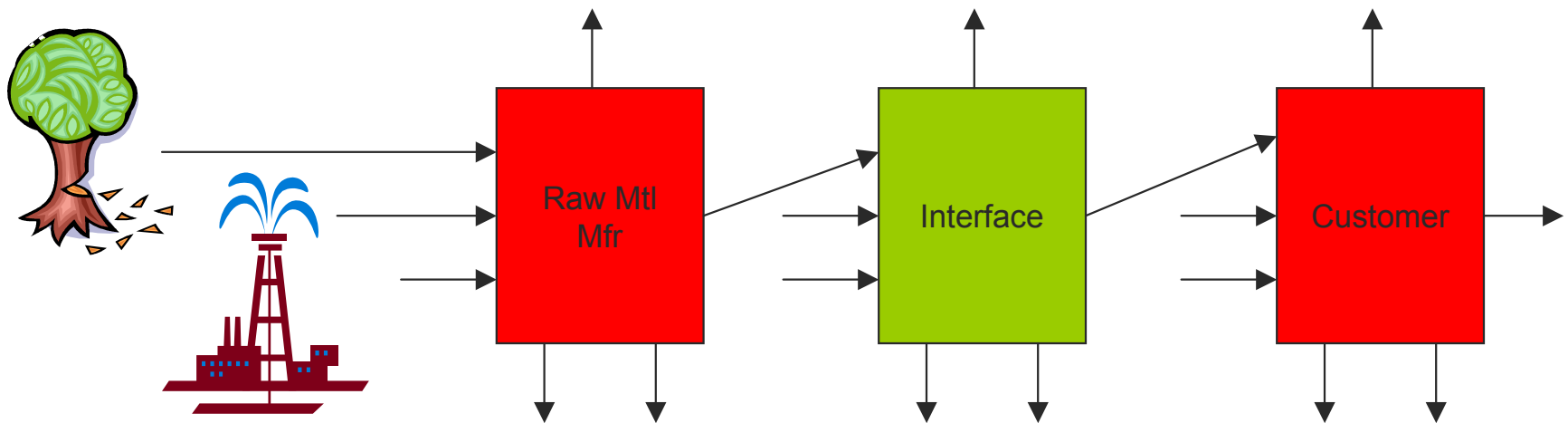
# [ Why? ]

- Corporate Identity – It's simply who we are, walking the talk
- It makes environmental, social, and economic sense
- Customer demand through product requirements and specification – product branding
- Kyoto Compliance

# How? Through System Boundary Analysis

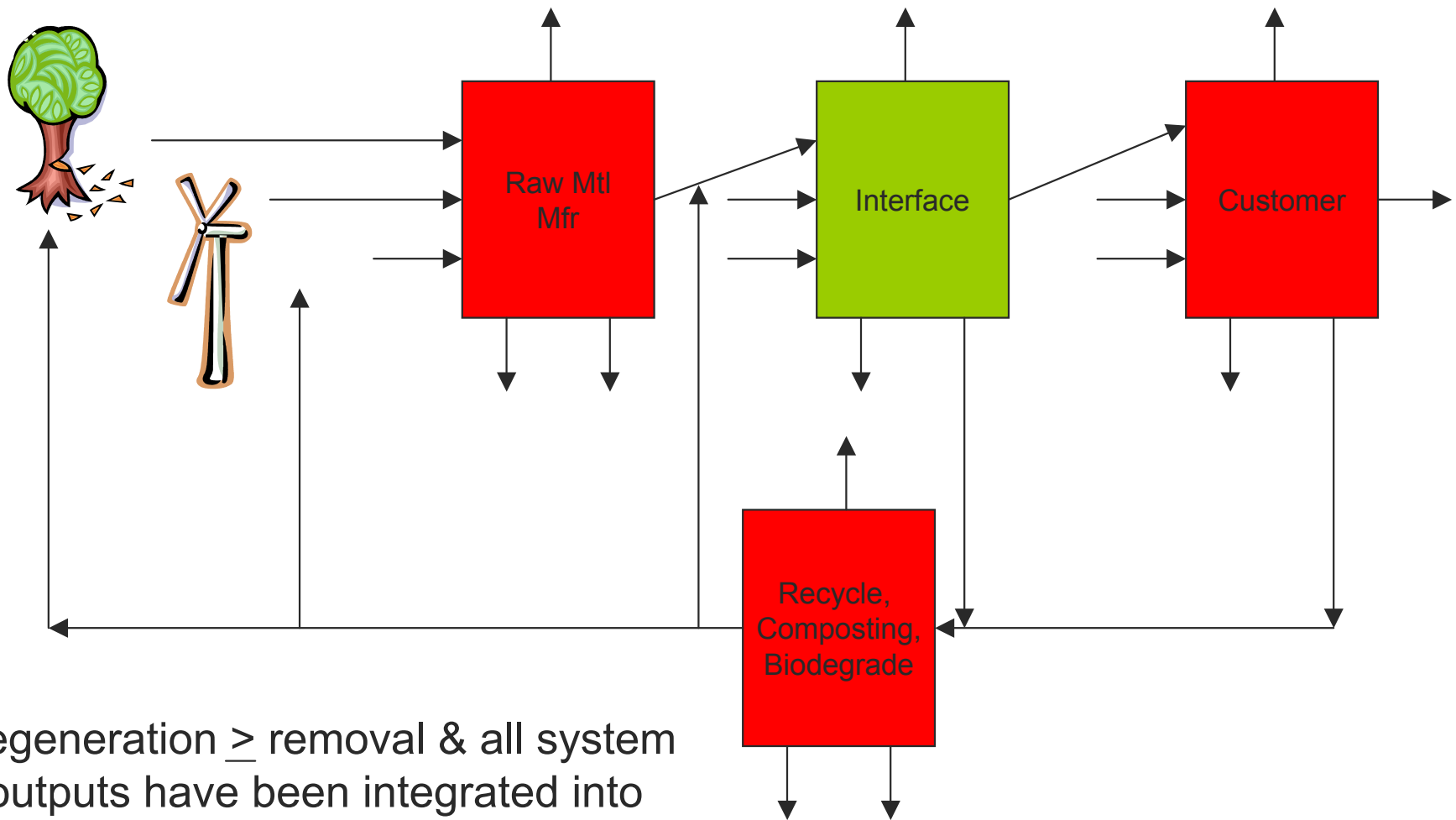


# And, Understanding the Current Industrial “Life Cycle” - Typical



Regeneration < Removal (for all mass and energy) and waste is dispersed with only compliance regard to impact

# And Trying to Evolve it to a Future Sustainable Industrial “Life Cycle” - Prototypical





# Why Landfill Gas?

- First, trying to find a cost effective, environmentally conscious, energy source. This plant is located in west central Georgia, very few options available
- Second, clean the local environment and use the voluntary methane remediation credits to offset Interface's global warming footprint
- Third, improve the economies of the city, the community, and Interface

# Why Landfill Gas? – cont'd

- The decision process
  - Photovoltaics – Already have a 17kw-dc array, very expensive
  - Wind – Not sufficient sustained wind speed in LaGrange area.
  - Biomass – Too expensive at the load required
  - Geothermal – Small outcrop close by but tied to national landmark
  - Landfill Gas – Municipally owned, small rural landfill, approximately 9 miles from plant

# Why Landfill Gas? – cont'd

- The winner.....
  - Landfill Gas – After a rigorous feasibility study it was concluded that this opportunity could offer significant benefits to all three sustainable goals. Decided to use only process heat due to the lack of capital funds for CHP.
  - Why is this a win-win-win sustainable solution?
    - Environmental – Destroys methane and non methane organic compounds that causes 21 times more impact to global warming than CO<sub>2</sub>.
    - Social – Improves community by cleaning environment and reducing the tax burden to citizens.
    - Financial – Long term revenue stream for the city and a cost savings to Interface allowing plant retrofit.

# The Details.....



- LaGrange, GA landfill statistics
  - 85.5 acres total
  - 38 acres, unlined, capped, areas 1 & 2
  - 47.5 acres, Subtitle D, cells 1 through 5, 2 filled, 1 active, 2 non excavated
  - 14.3 Mg NMOC, Tier 2 Air Emission Sampling Results, February 2005
  - 9+ miles from Interface

# The Details (cont'd).....



- Landfill Modification Scope
  - Add bioreactors to cells 1 through 5
  - Construct wall on south and west sides for additional pile heights
  - Plumb areas 1 & 2 and cells 1 through 5 for landfill gas removal, cleaning, and transport
- Schedule
  - Flare started up 9/03, Piping completed and plant start-up Summer 2005

# [ Landfill Gas ]

- Proper development of small rural landfills can offer significant opportunities to communities and businesses, don't overlook them
- Voluntary remediation has significant benefit to the environment as well as the social and financial well being of a community
- Thanks for listening!