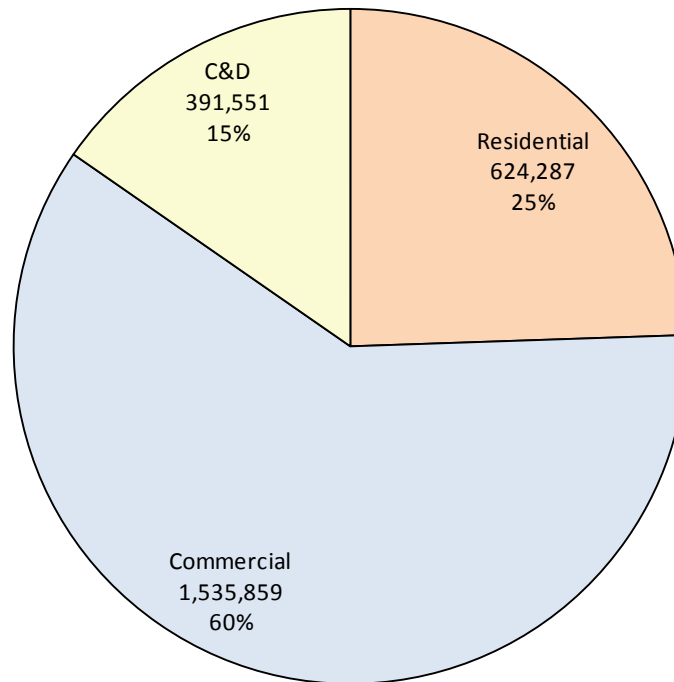


Alternative Waste Disposal
Technologies Presentation
SWRAC Meeting
May 28, 2015

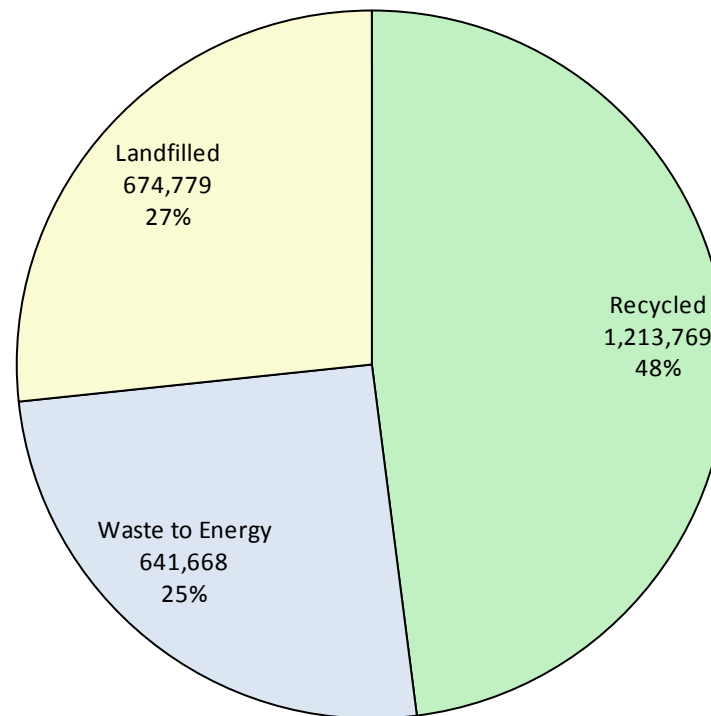


Philadelphia MSW Generation by Sector



2013 Data

Philadelphia MSW Management



2013 Data

Exceeding Greenworks Goal of 70% Diversion from Landfill

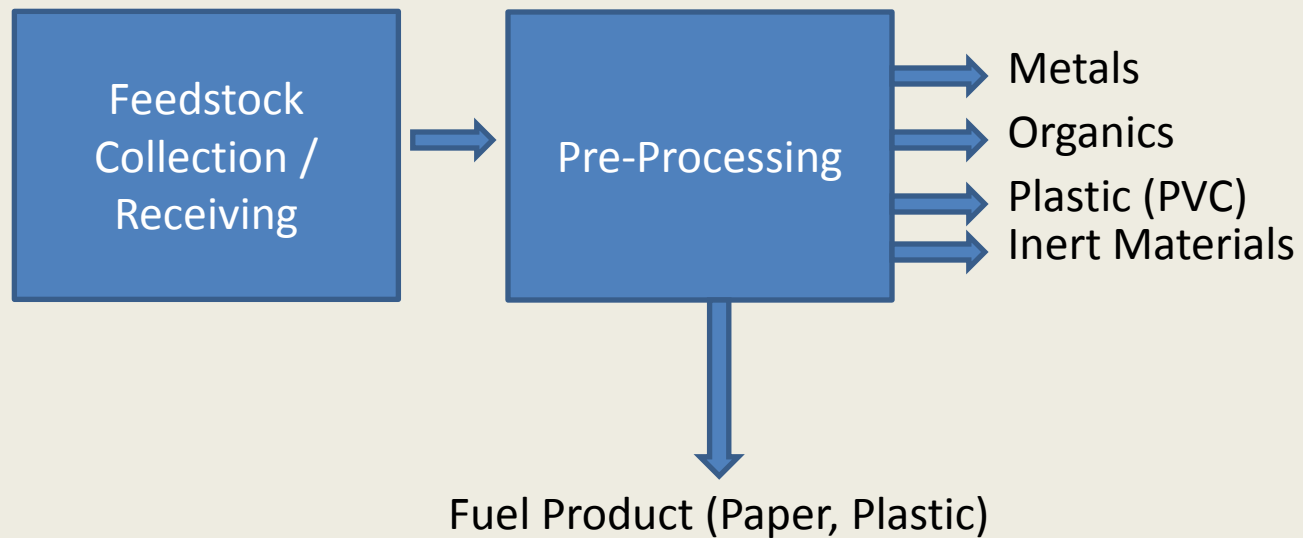
Alternative Waste Disposal Technologies

- MSW Feedstock (SSOW, Mixed Waste, MRF Residuals)
- Presentation
 - Waste Management SpecFuel™
 - Anaerobic Digestion
 - Gasification
 - Enzymatic Hydrolysis

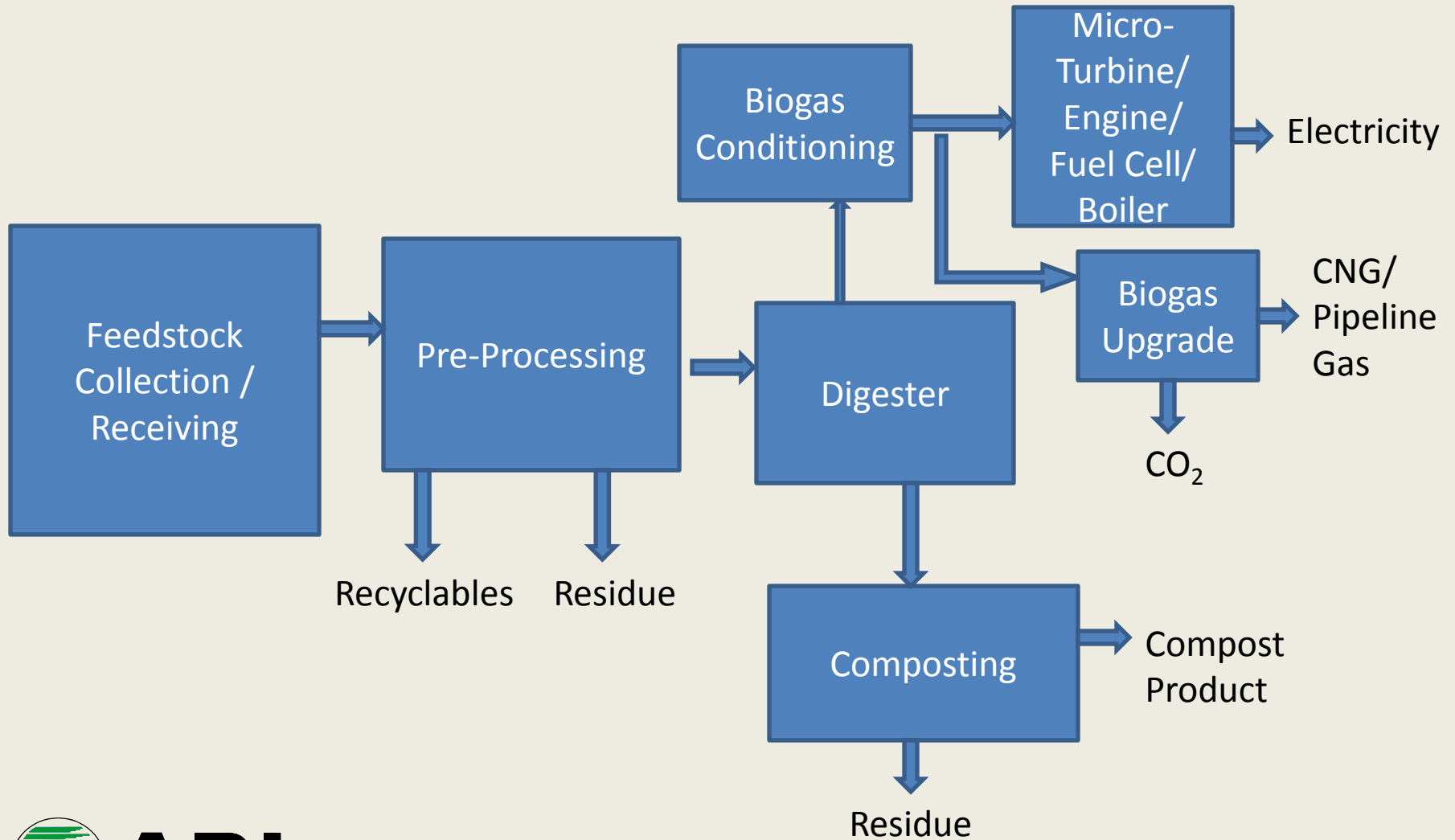
Streets Department RFP for Disposal Capacity in 2011

Allowed for Consideration of
Alternative Waste Disposal
Technologies

Waste Management SpecFUEL™



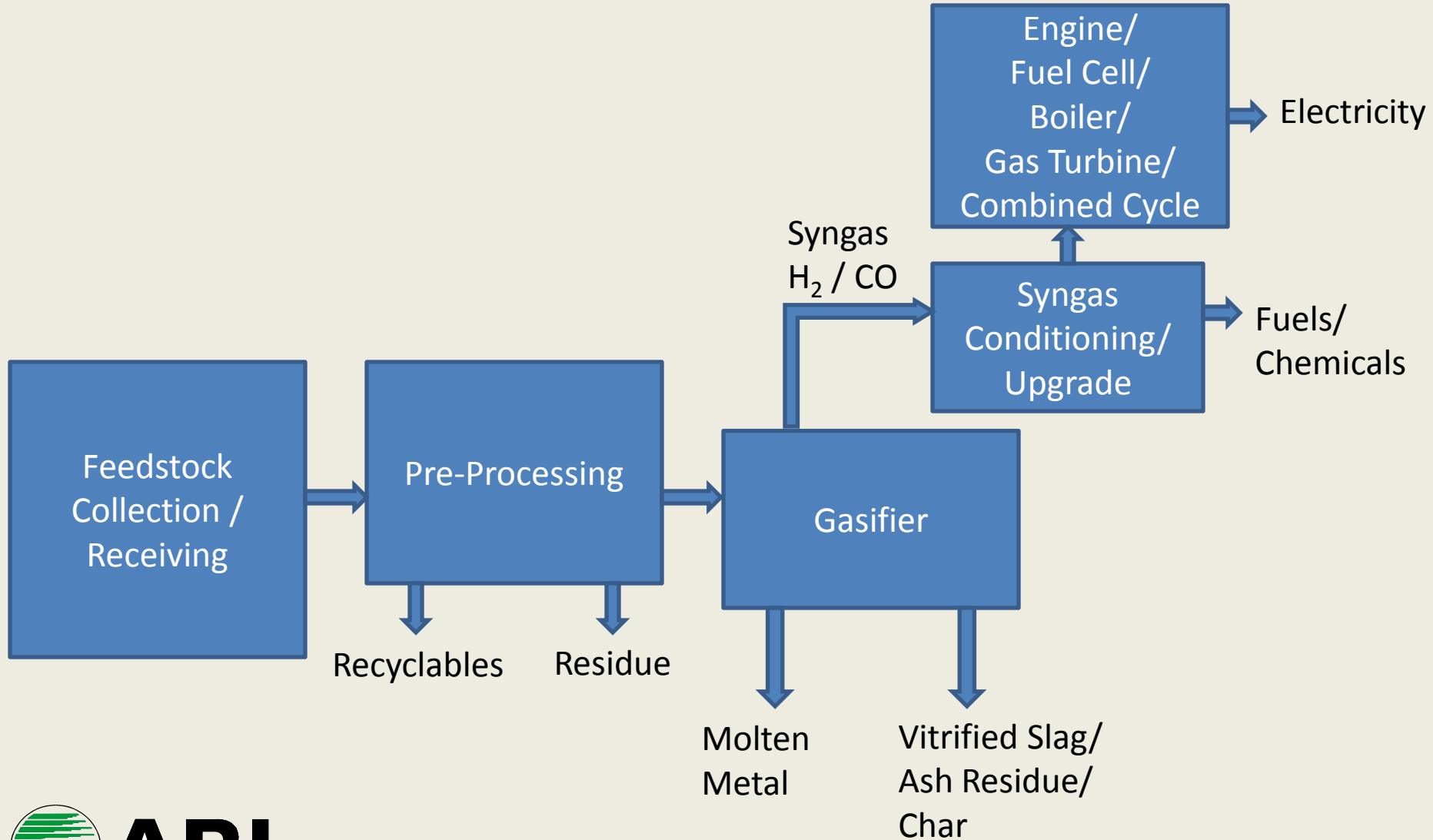
Anaerobic Digestion



Anaerobic Digestion

- Production of Renewable Electricity or Fuels
- Biological Process – Environmental Attributes
- Potential for Integration with Wastewater Treatment
- Lower Energy Recovery
- Diversion Potential Depends on Market for Compost Product

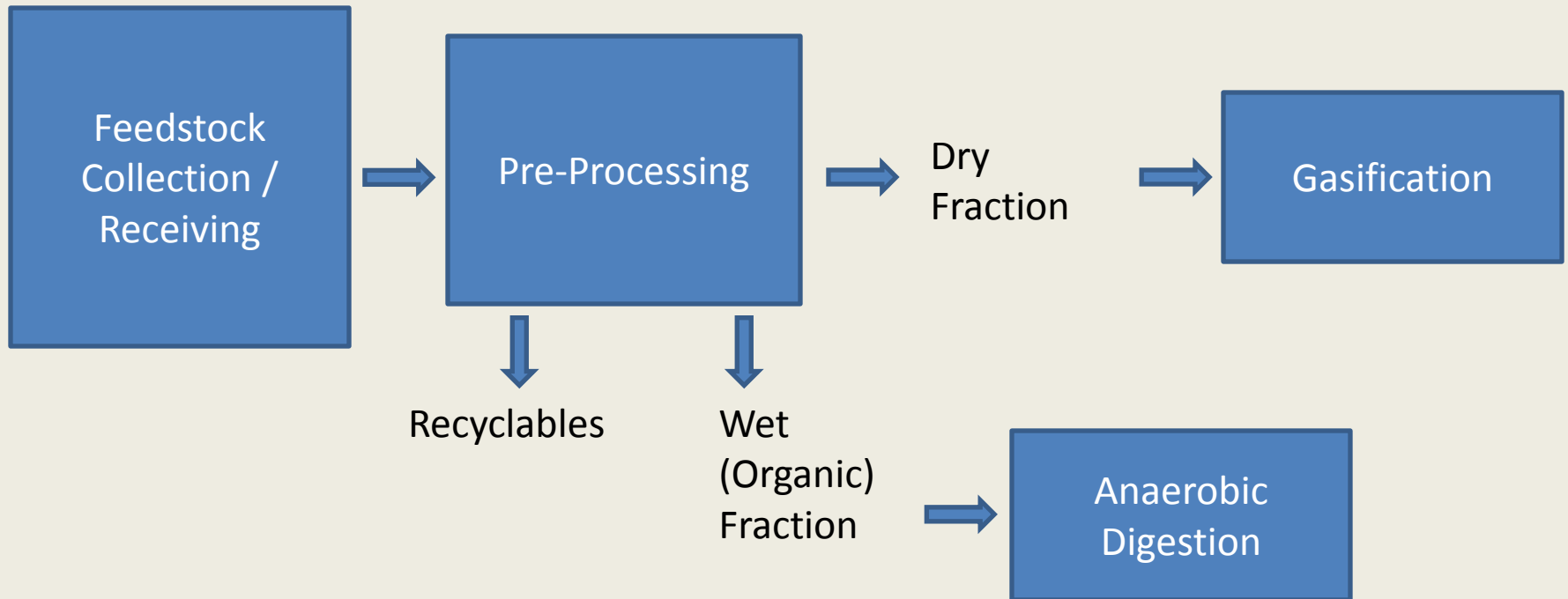
Gasification



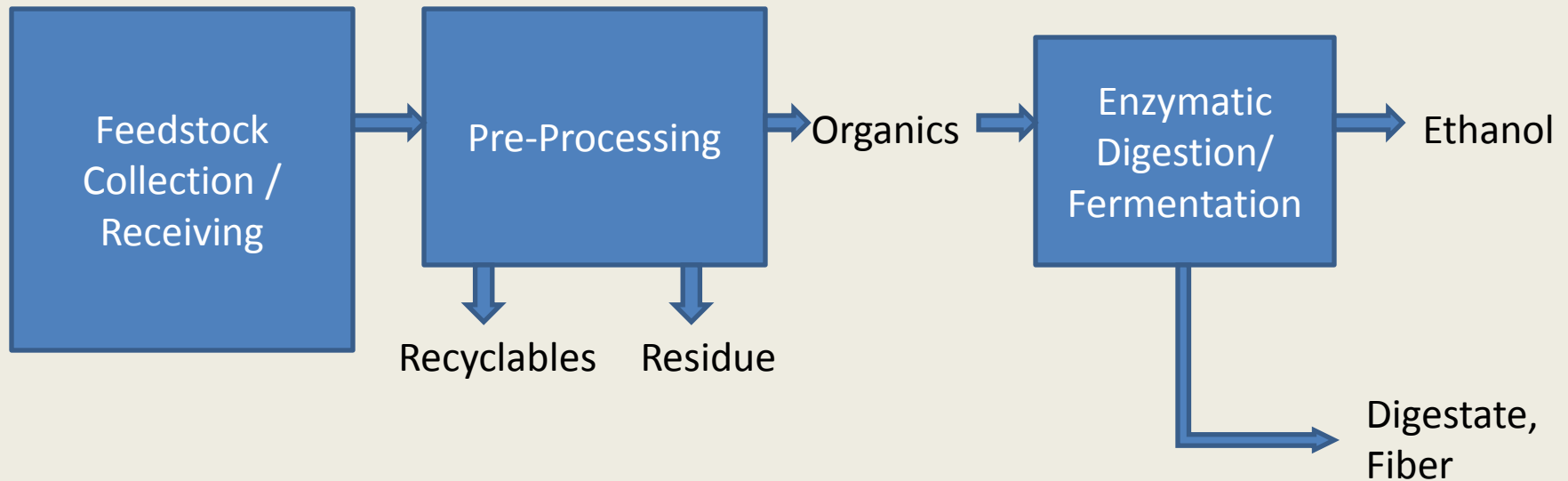
Gasification

- High Energy Recovery
- Production of Electricity, Fuels, Chemicals
- Diversion Potential Depends on Market for Vitrified Slag, Ash Residue, or Char Product
- Established Overseas, not yet in U.S.

Integrated Approach (Anaerobic Digestion/ Gasification)



Enzymatic Hydrolysis



Enzymatic Hydrolysis

- Early Development Phase
- Production of Renewable Fuels
- Biological Process – Environmental Attributes
- Markets for Fiber Product

Selected Alternative Technology Projects

