

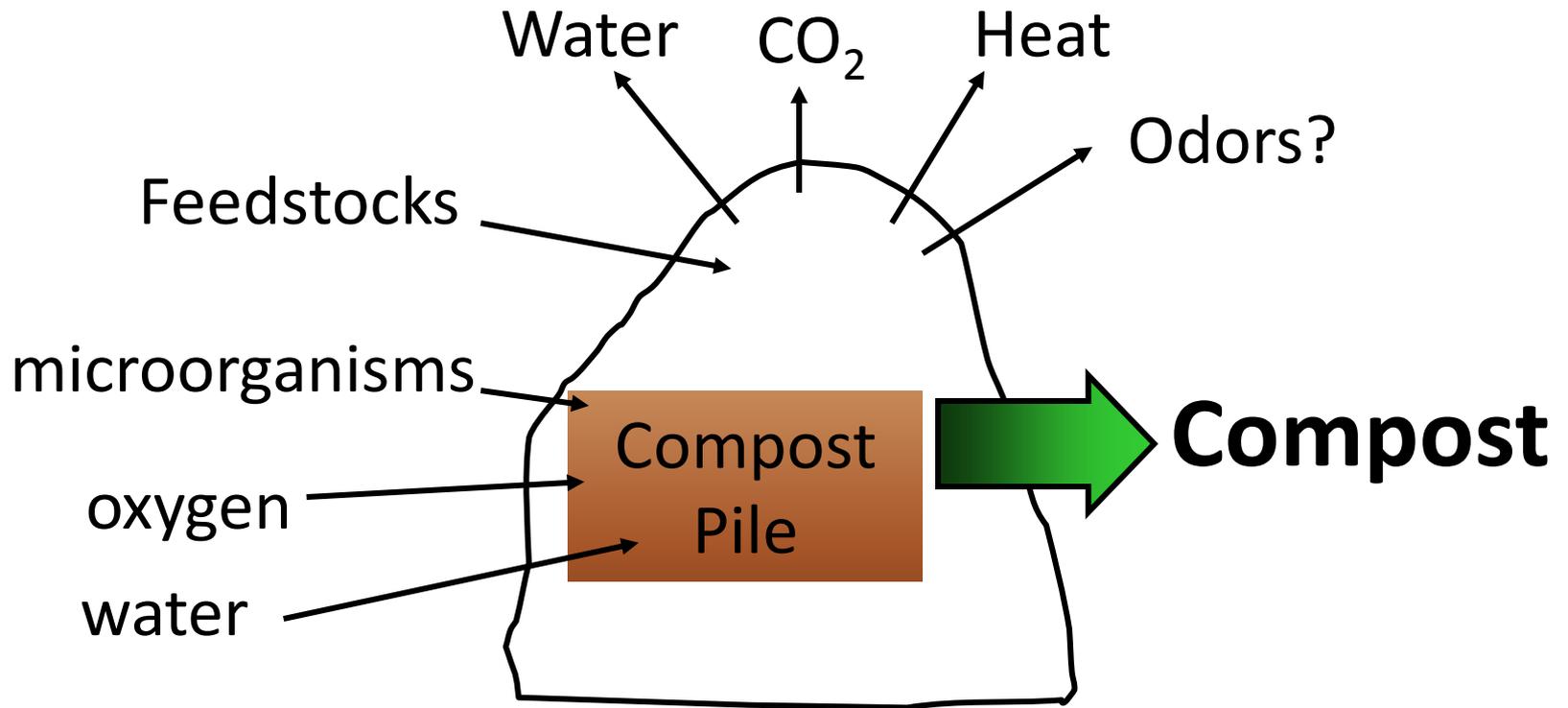
Maryland Food Recovery Summit

November 30, 2016

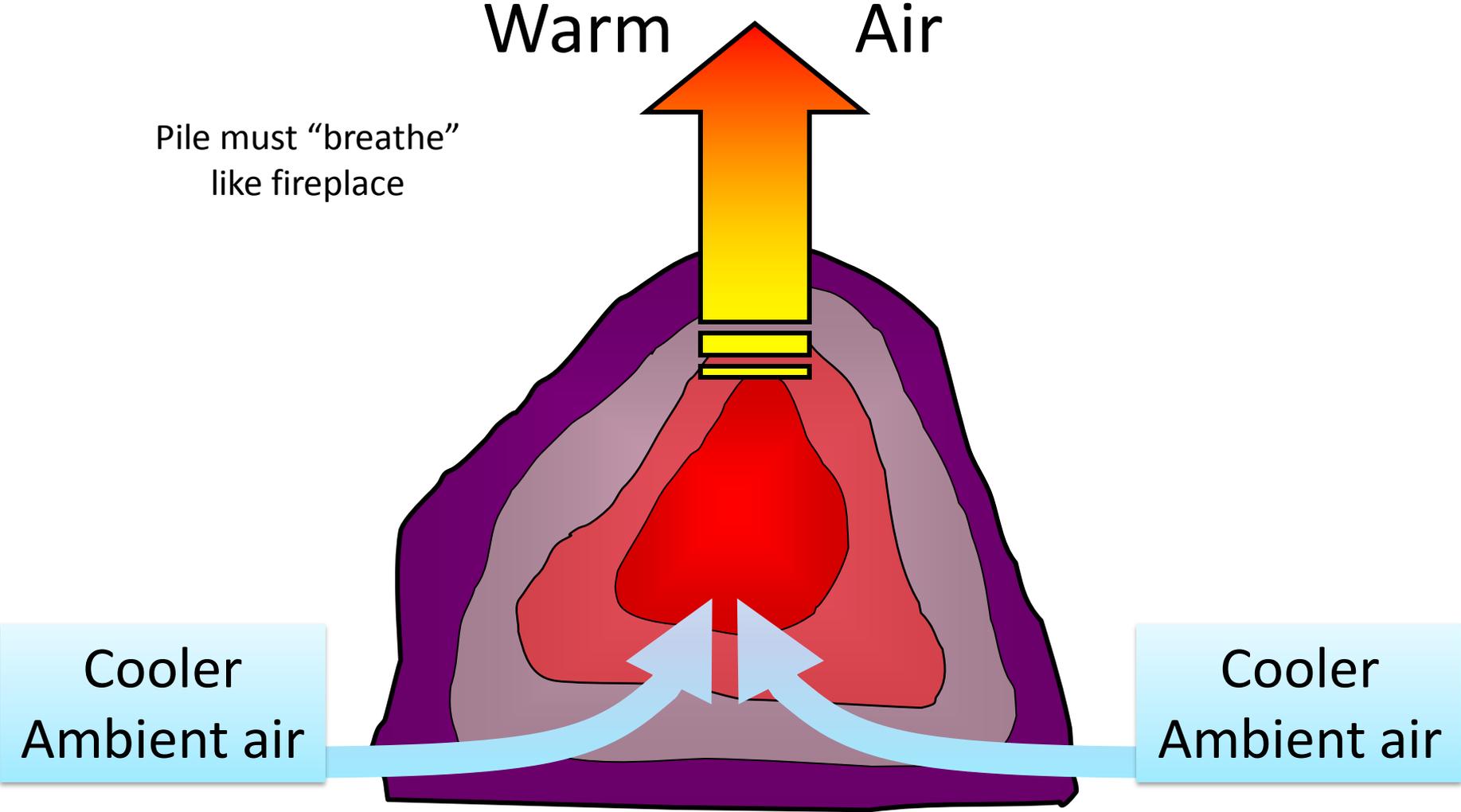
Scalable Food Scraps Composting



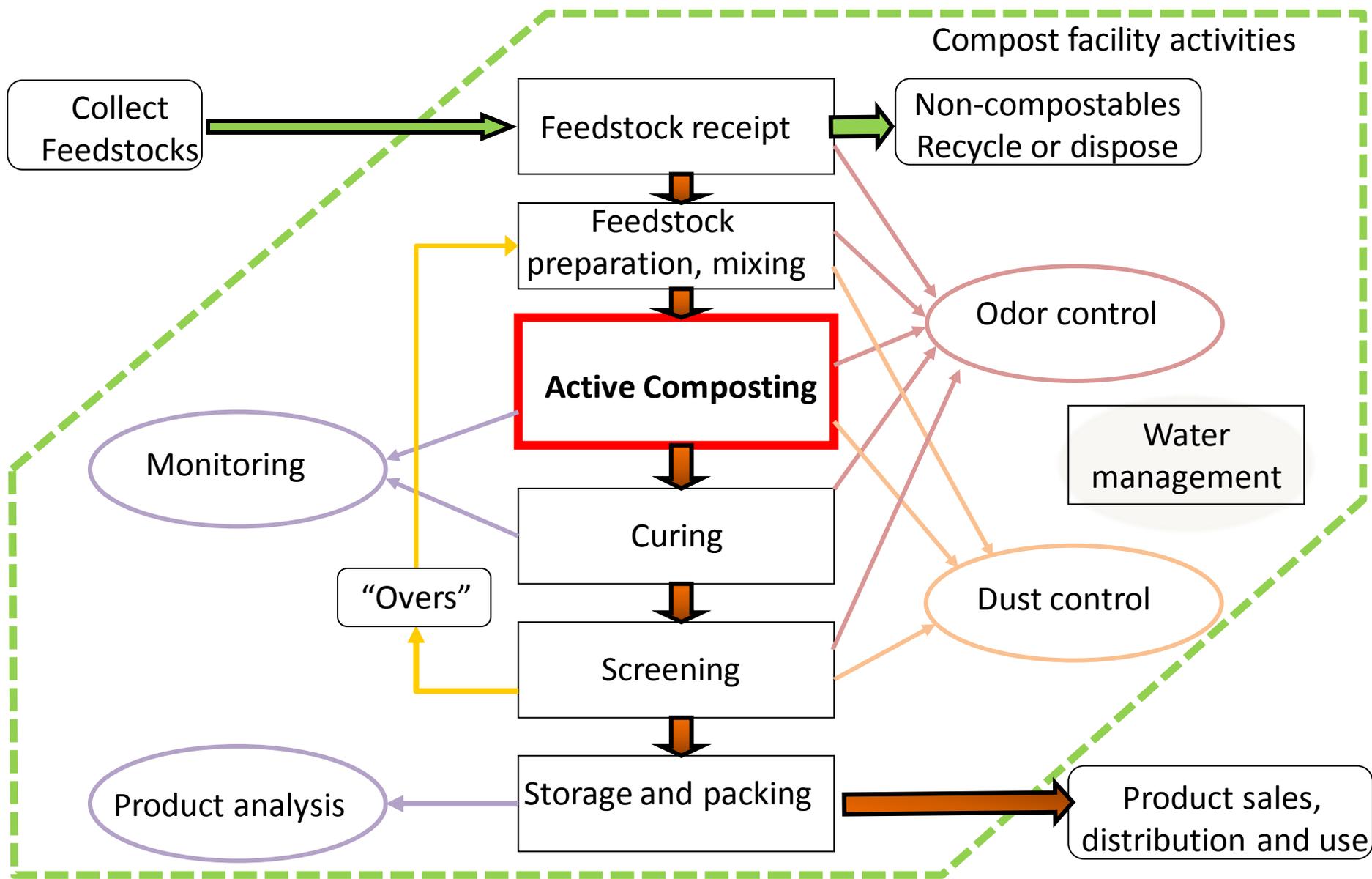
The Composting Process



Convective Aeration (chimney effect)



Flow of materials and activities at the compost facility



Methods

■ Piles

- Unturned static – not suitable for putrescibles
- Assisted passive aeration - suitable

■ Turned windrow

- Method of turning important to control costs

■ Aerated static pile

- Aerated bins or piles

■ In Vessel

- Fixed-capacity systems

Assisted Passive Aeration



Assisted Passive Aeration



Fish processing wastes and wood chips

Animal mortalities and mulch



4" plastic piping with
aeration holes drilled on
both sides

Turned Windrow



Rolling Along

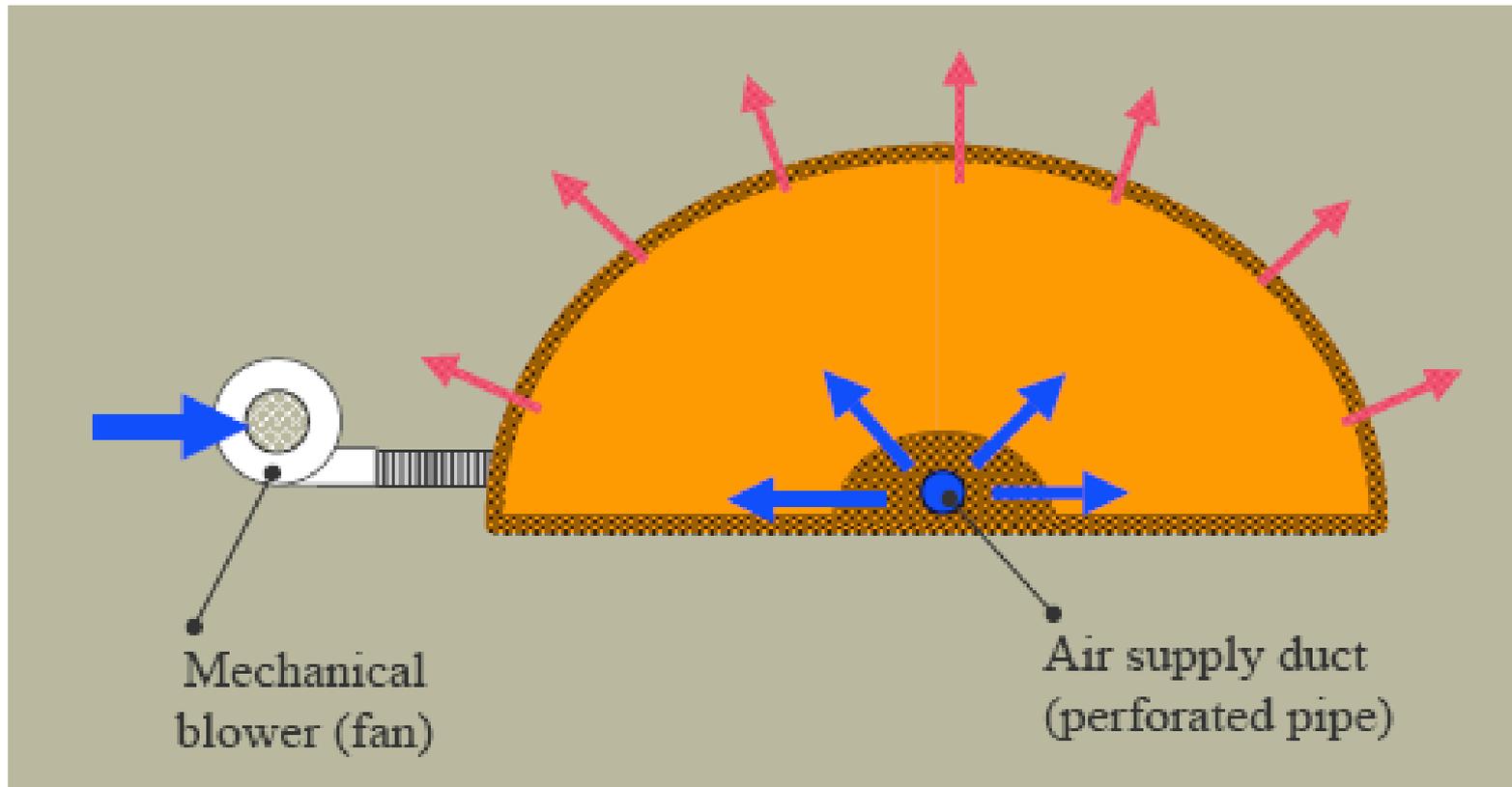


Aerated static pile composting

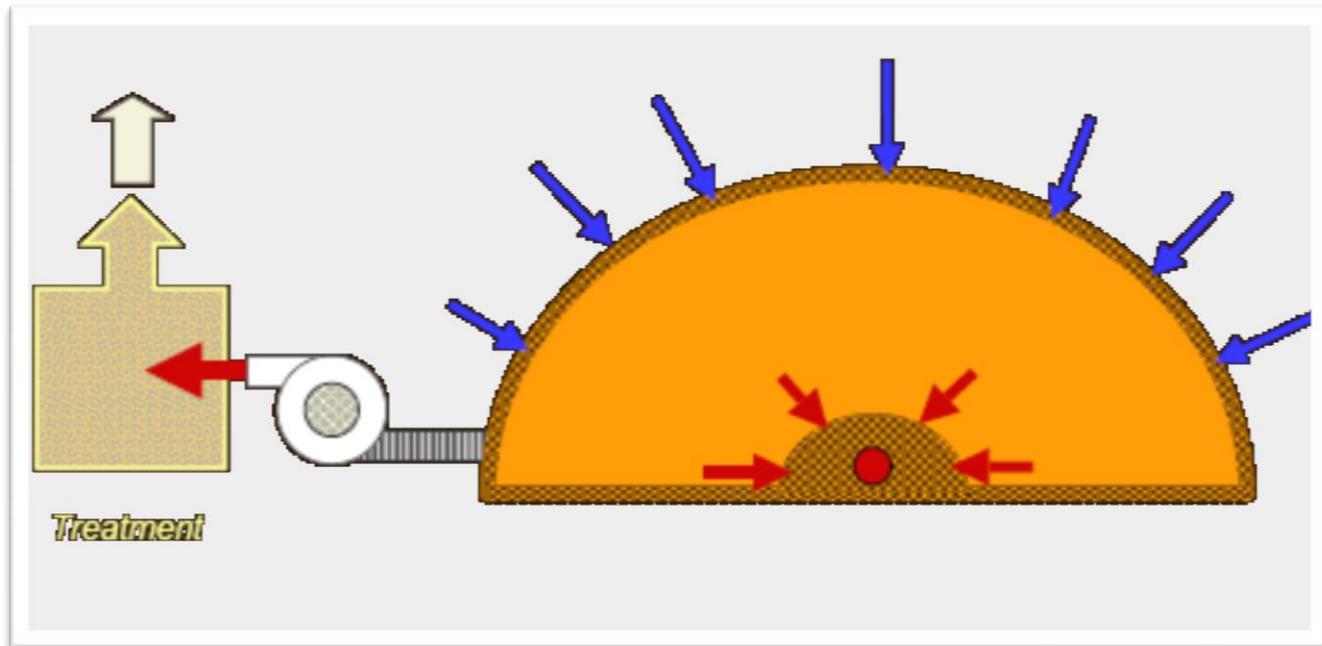


Sewage sludge and woodchips at treatment plant

Forced Aeration: Positive



Forced Aeration: Negative



Aerated Bins



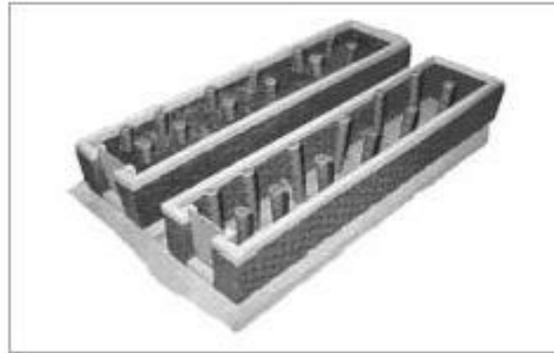
In-vessel composting



Scalability in Composting Systems

- Understand your volumes, now and in future
 - Food scraps – heavy and dense (usually)
 - Bulking ratio: 2:1 to 4:1 (by volume)
 - Depends on nature of bulking material and extent of paper in food scraps wastestream
- Start with BYC-style bin or bunker
 - Add additional bunkers as program grows
 - Add equipment and technology as funds allow
 - Materials handling equipment – i.e. skid steer loader
 - Technology – forced aeration

Household/Community Composting



Facility/Institutional

Philadelphia Prison



St. John's University (NY)



Univ. of NC - Asheville



Facility/Institutional

Appalachian State Univ.



Colorado State University



Toyota Plant – Georgetown, KY

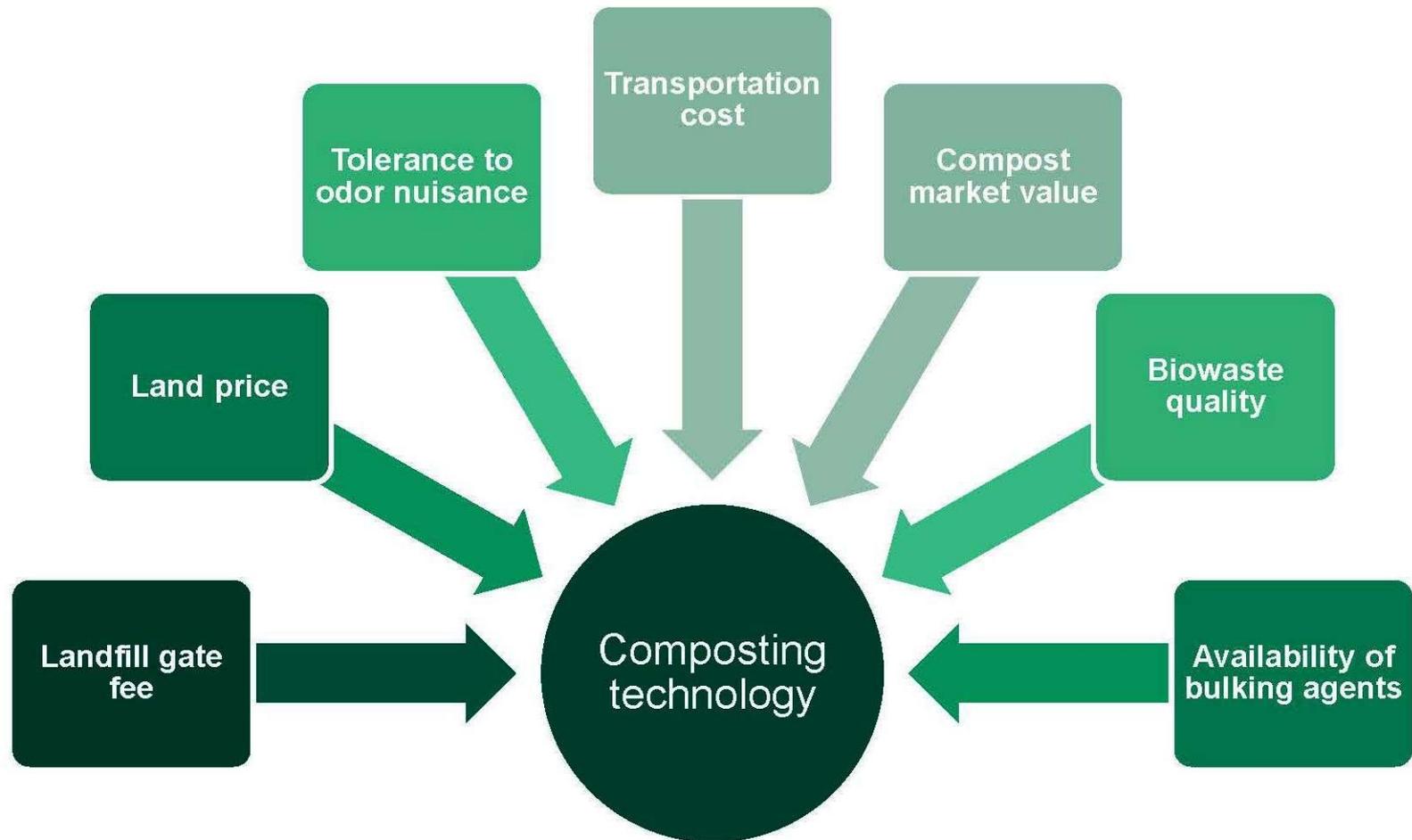
Modular Industrial/Municipal



Centralized Industrial/Municipal



Composting Technology Boundary Conditions



Source: CCAC/ISWA



Questions?

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