



Solid Waste Roadmap

Food Scraps Transfer & Processing Capacity Development

Metro Council Work Session
July 21, 2015



Metro | *Making a great place*

Presentation Outline

1. Project overview
2. Review of work to date
3. Discussion of options
4. Next steps

Project Question

What actions should Metro take to ensure there is adequate capacity to transfer and process food scraps collected from the region's businesses and residents?



Key Barriers to Progress

- 1. Supply:** Private investment in processing infrastructure requires confidence in supply of food scraps, which the region does not currently provide.
- 2. Proximity:** It is challenging to locate processing capacity in or near the region.

Supply

1. Require businesses to recover food
2. Use Metro's authority to direct food to specific facilities
3. Provide financial signals or incentives



Proximity

1. Consider both nearby and more distant options for processing.
2. Understand the trade-offs from sending food to distant processors.



Project stages



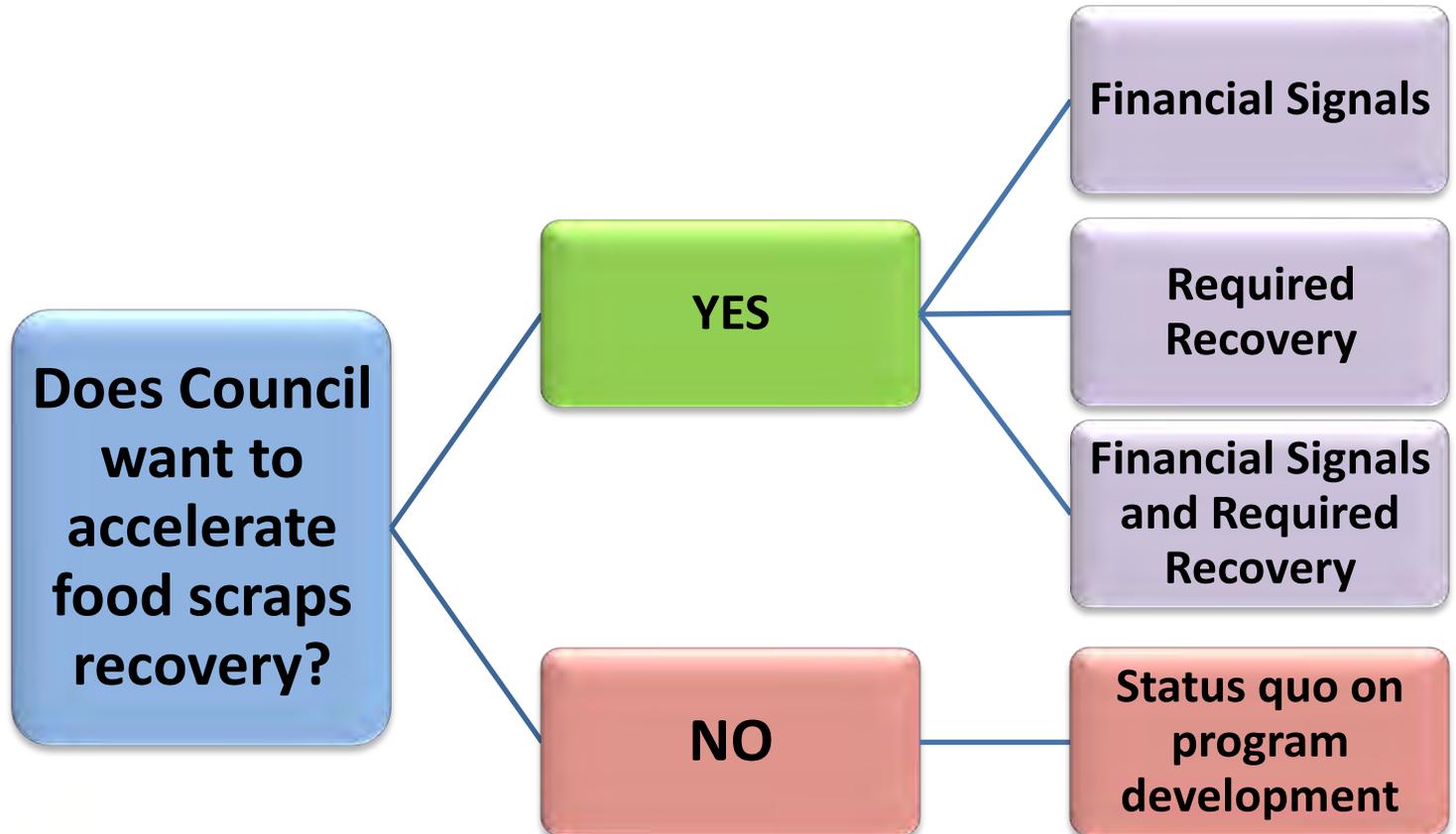
Options

Generators

**Transfer
Services**

Processors

Decision Tree: Generators



Options: Generators

Goal: Increase the supply of food scraps available for processing.

Option 1: Metro uses financial signals to encourage businesses to separate food scraps.

- Food scraps tip fees at Metro and/or private transfer facilities are set substantially lower than solid waste.
- Local governments establish subsidized collection rates (with or without tip fee adjustment).

- Little to no supply certainty.
- Unknown to what degree cost reductions will incent behavior.

Options: Generators

Goal: Increase the supply of food scraps available for processing.

Option 2: Metro enacts required recovery of food scraps to create more supply.

- Food-generating businesses are required to separate food scraps.
- Haulers must provide collection service to those customers.
- ☐ Greater supply certainty.

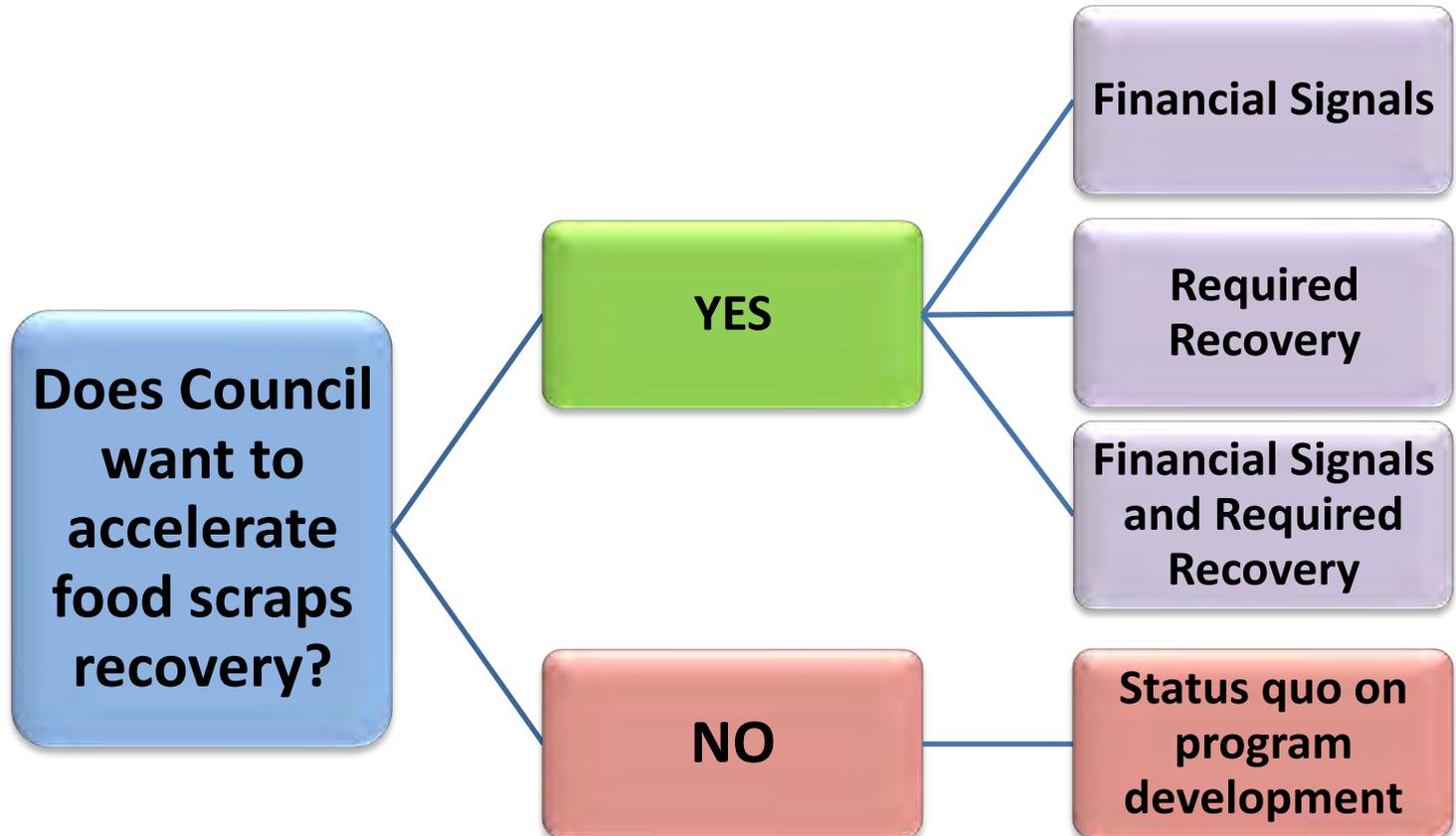
Options: Generators

Goal: Increase the supply of food scraps available for processing.

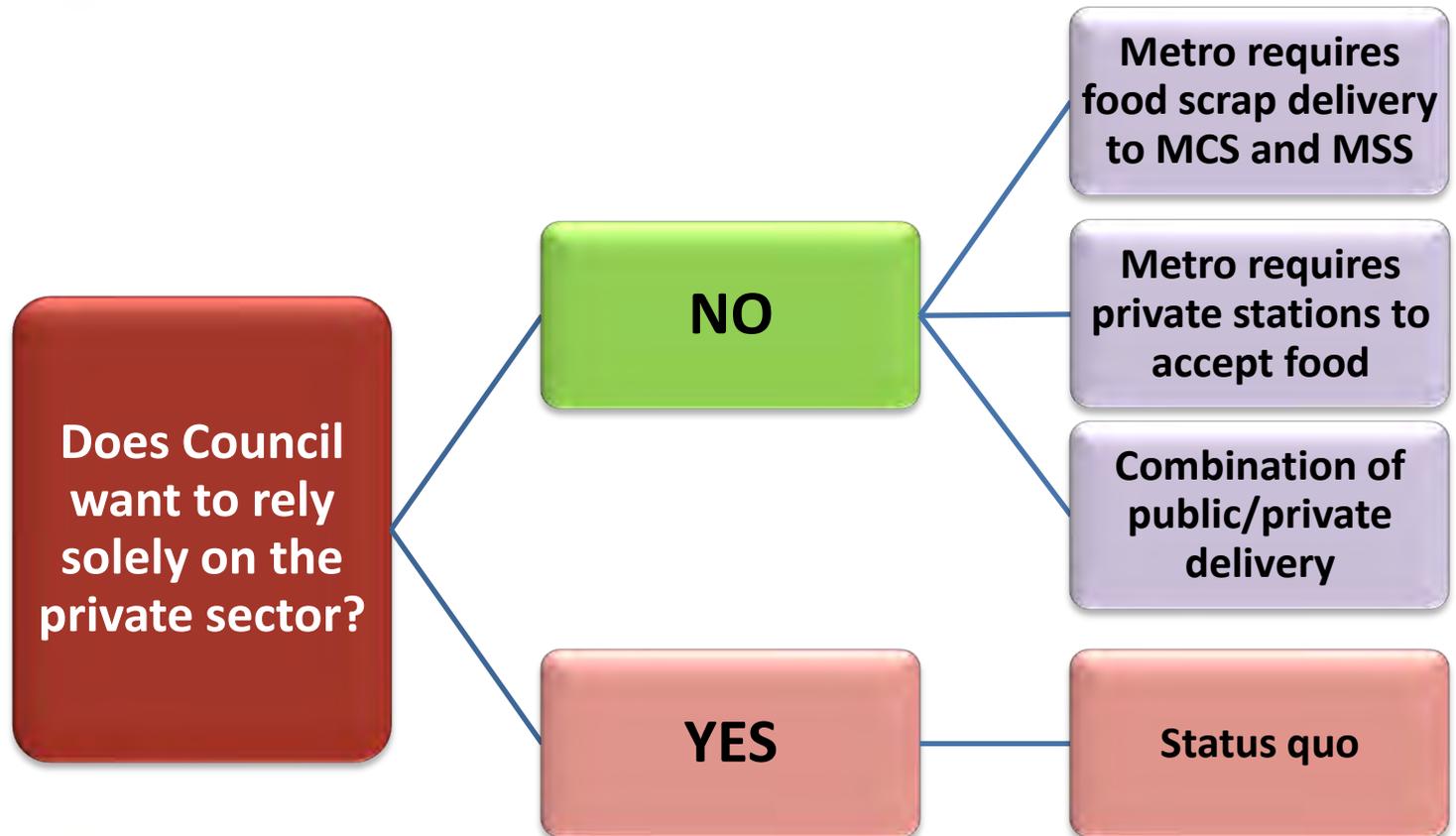
Option 3: Metro uses a combination of financial signals and required recovery to create more supply.

- Reduced rates alone may not be enough to incent participation.
- Allows for increased supply certainty and potentially reduces cost of participation.

Generator Options Questions?



Decision Tree: Transfer Services



Options: Transfer

Goal: Provide adequate, strategically-located transfer services for the region's food scraps.

Option 1: Metro assures services by requiring delivery of all food scraps to public facilities.

- All food scraps must be delivered to Metro Central and South stations.
- Allows for greatest degree of concentration of food scrap supply and system predictability.
- Lack of geographic equity of service.
- Private transfer facilities are not system participants.

Options: Transfer

Goal: Provide adequate, strategically-located transfer services for the region's food scraps.

Option 2: Metro assures services by requiring some or all private facilities to accept food scraps.

- Designated private facilities must accept food scraps.
- No Metro participation in transfer services.

- Some degree of geographic equity of service.
- Lower degree of feedstock concentration.
- Will require operational changes and possibly capital equipment investment .

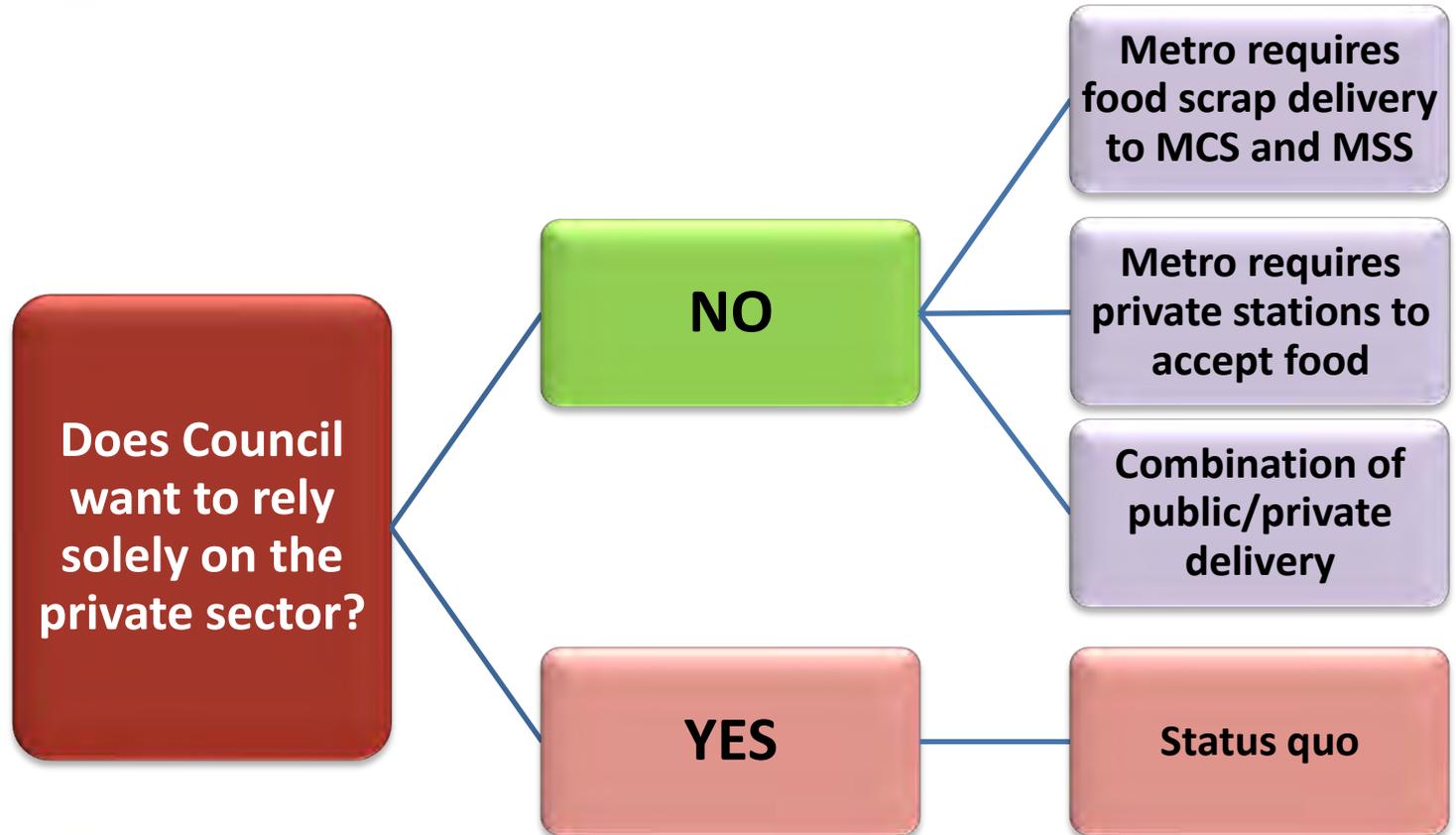
Options: Transfer

Goal: Provide adequate, strategically-located transfer services for the region's food scraps.

Option 3: Metro assures services through a combination of select public/private facilities.

- Metro Central, South and select private stations provide transfer services.
- Allows for concentration of feedstock and some degree of system predictability.
- Greater geographic equity of service.
- Will require operational changes and possibly capital equipment investment.

Transfer Services Questions?

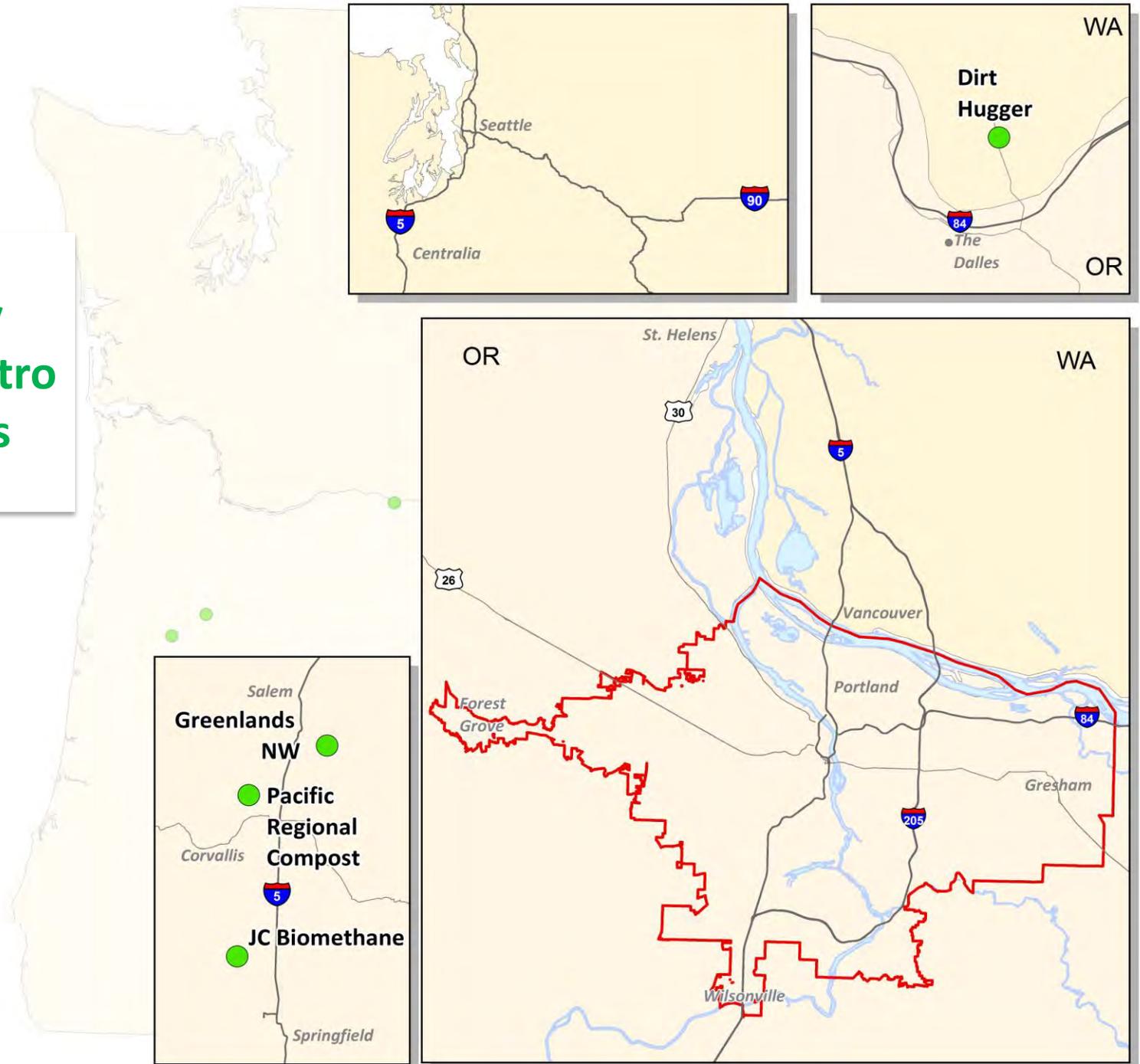


Processing and Proximity



Food Scrap Processing Facilities

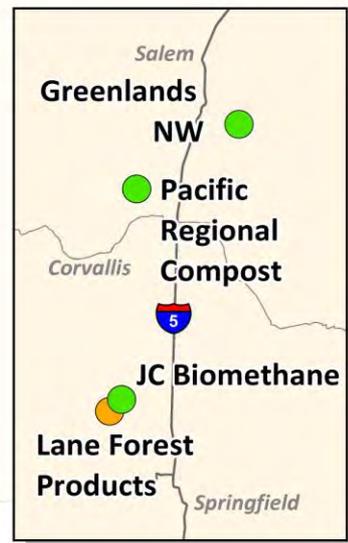
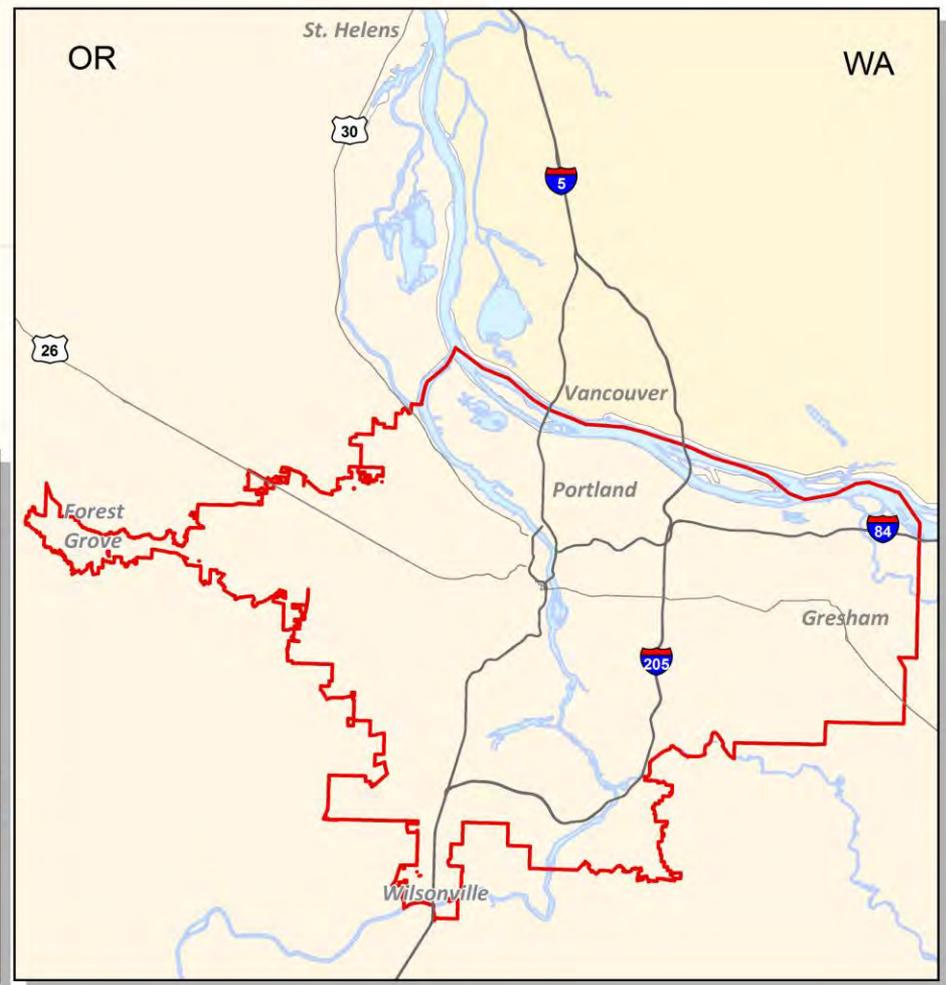
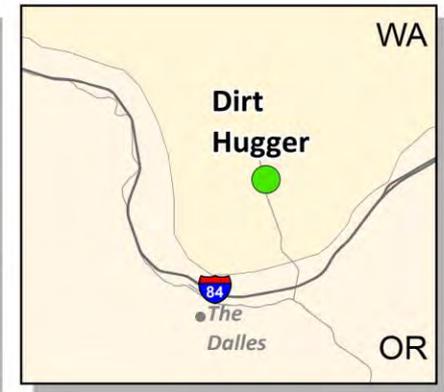
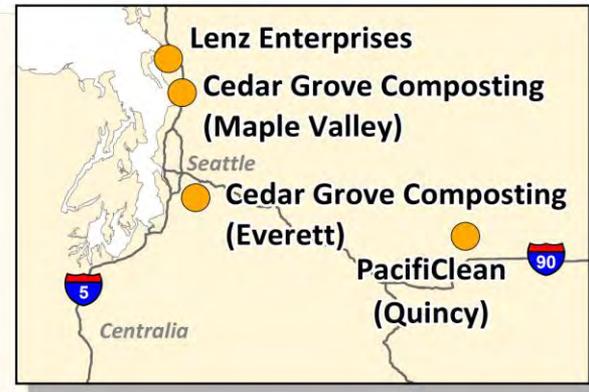
• Currently receiving Metro food scraps



Food Scrap Processing Facilities

• Currently receiving Metro food scraps

• Potential recipients



Proximity Analysis

Relative emissions compared to a 10-mile transport distance.

Distance (miles, one way)	Smog/trip (NOx)	GHG/trip (CO2e)	Particulates /trip
50	4.3x	4.1x	3.4x
100	8.2x	7.9x	5.0x
300	24.7x	23.8x	15.0x

Distance
to JC-Bio



Emissions Analysis: Key Points

- The overall greenhouse gas emissions benefit of recovering food waste rather than sending it to landfill far exceeds transportation-related emissions.
- Some emissions could be significantly reduced by the use of clean fuels such as CNG.
- Distance to end-markets will also have emissions impacts.

Proximity Analysis

Transport Costs

Distance (miles)	Cost/ton	Tons/load	Cost/load
50	\$6.50	30	\$195.00
100	\$13.00	30	\$390.00
300	\$39.00	30	\$1,170.00

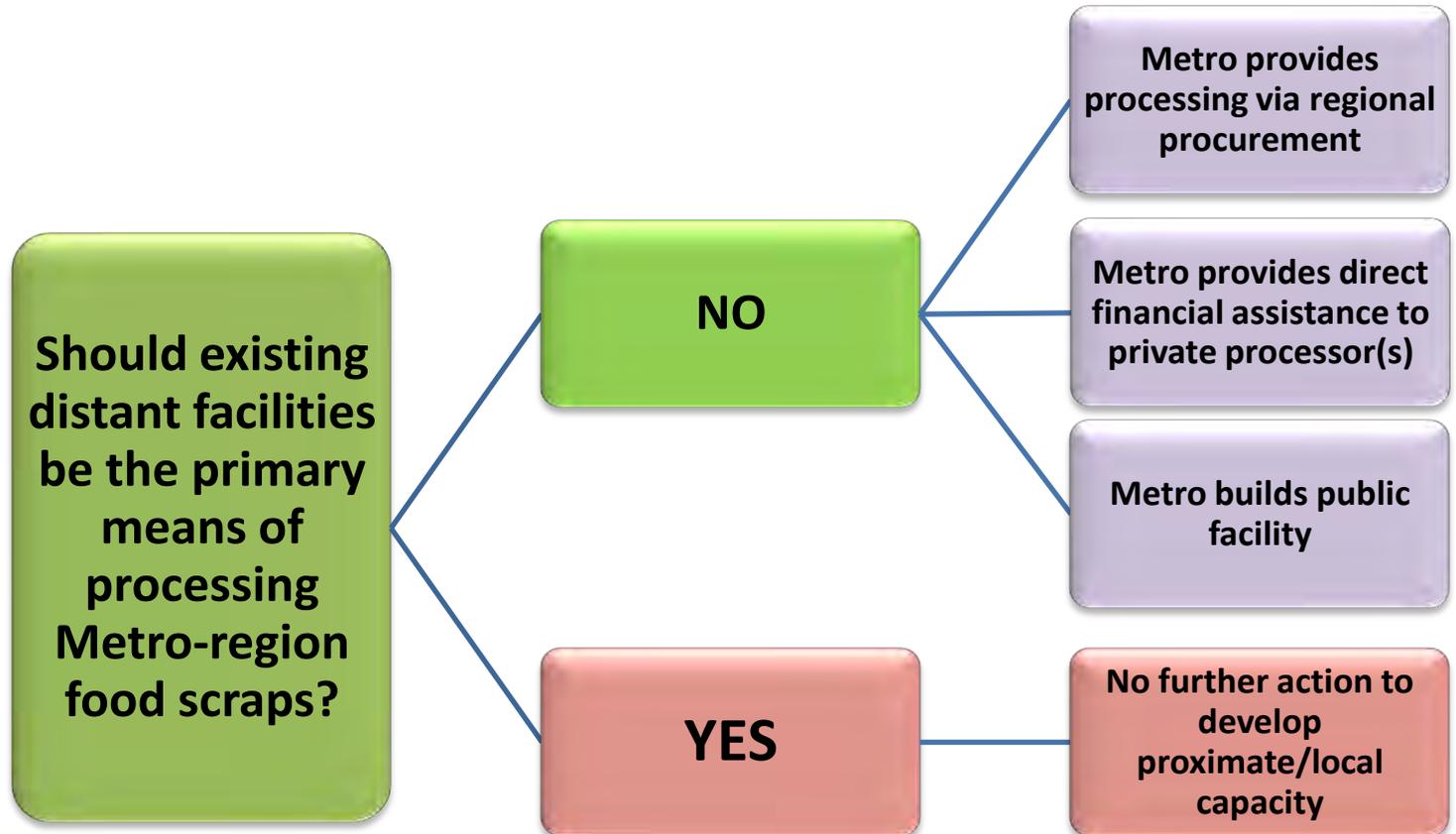
Distance
to JC-Bio



Questions?



Decision Tree: Processing



Options: Processing

Goal: Ensure adequate processing capacity for the region's food scraps.

Option 1: Metro directs all regional food scraps to processors that it procures.

- Competitive procurement for best suitable processor(s).
- Concentrates feedstock to one or more processor creating high degree of supply predictability.
- Contributes to longer-term system and cost predictability.
- Removes choice for system participants.

Options: Processing

Goal: Ensure adequate processing capacity for the region's food scraps.

Option 2: Metro provides financial assistance to private facilities.

- Metro provides grants, loans or other financial support.
- Lower degree of system coordination or predictability.
- May spur private investment and development.

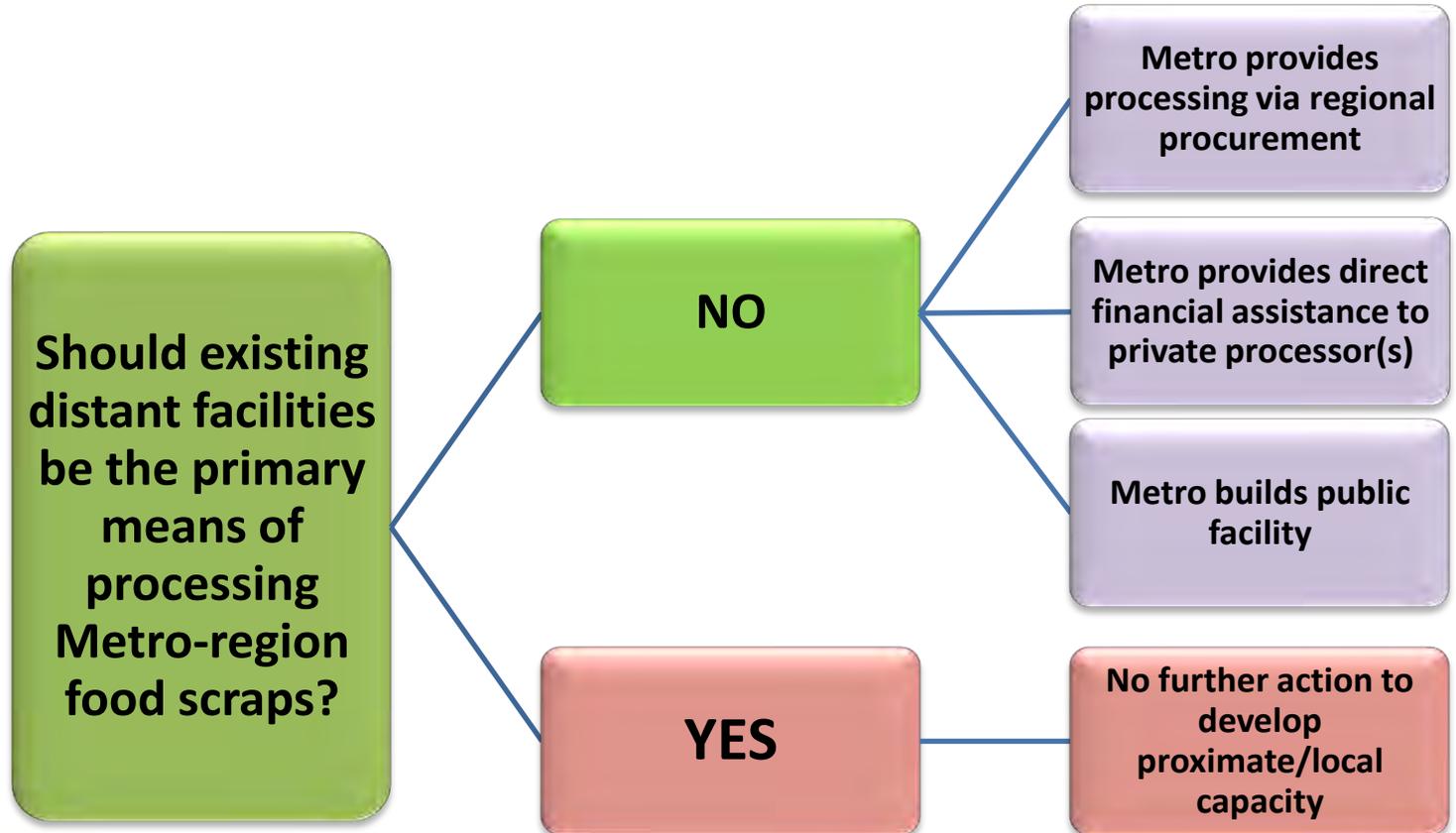
Options: Processing

Goal: Ensure adequate processing capacity for the region's food scraps.

Option 3: Metro builds a new facility alone or in partnership with a private entity.

- Concentrates feedstock to one processor.
- Contributes to longer-term system and cost predictability.
- High capital cost if Metro goes it alone.
- Limits choice for system participants.

Processing Questions?



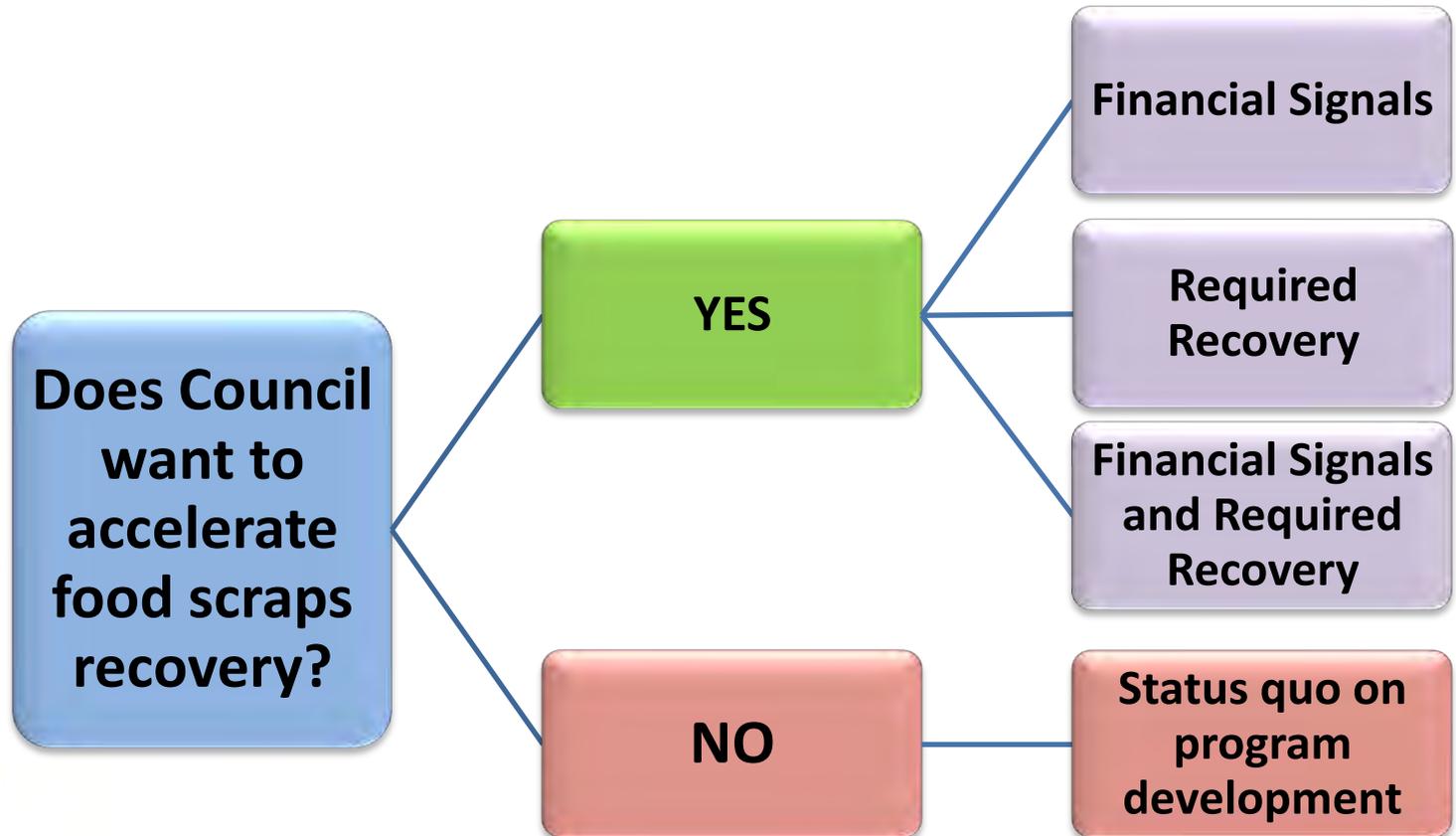
SWAAC Feedback

- Stronger Metro involvement in all stages of the food scraps recovery system is necessary for growth, consistency and predictability.
- Support for considering a mandatory approach to supply, coupled with incentives.
- Ensure that any incentives are transparent with regard to potential rate impacts.

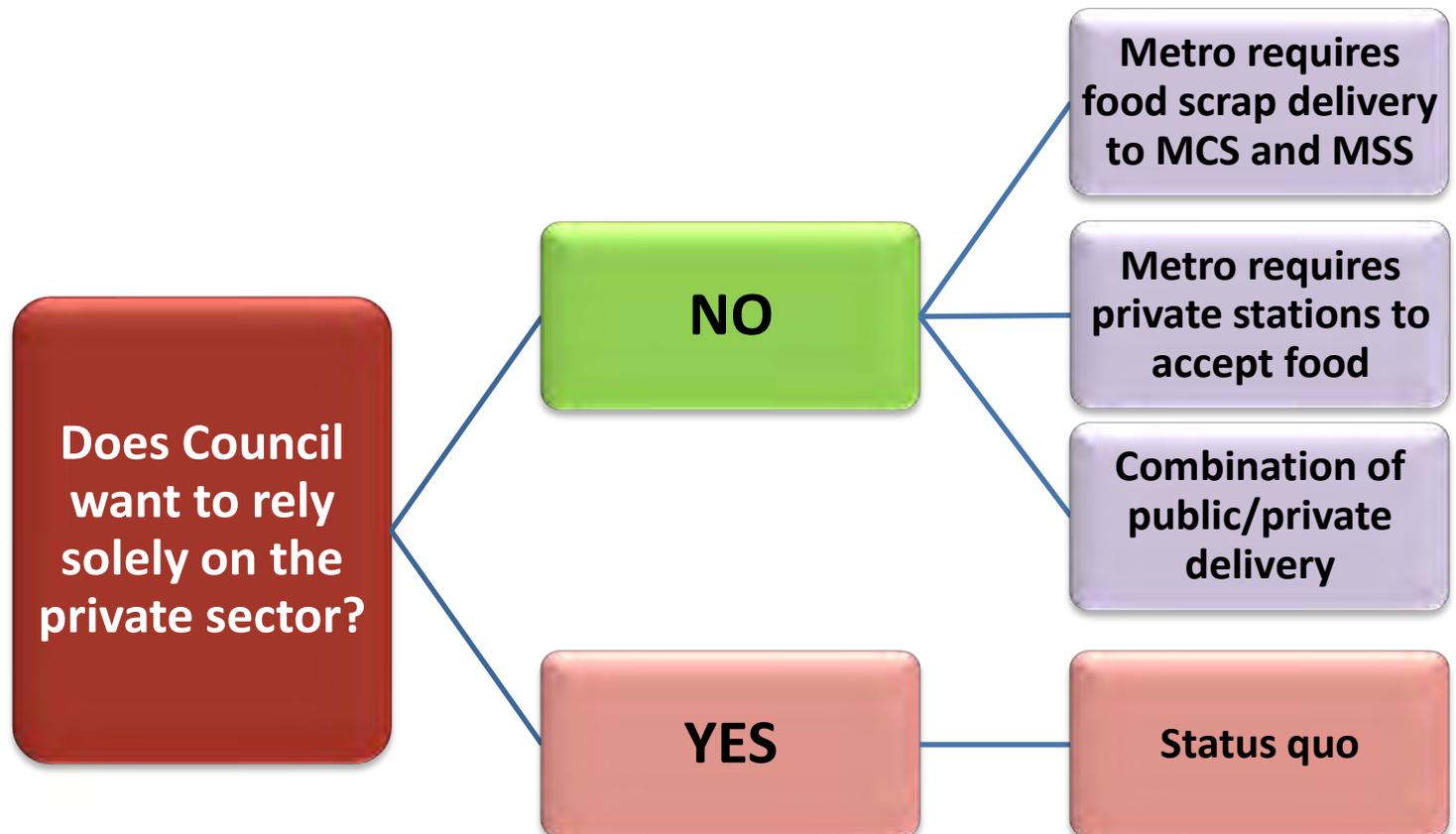
Narrowing Options



Does Council want to accelerate the recovery of food scraps from businesses?



Does Council want to rely solely on the private sector to take the initiative in transfer services?



Should existing distant facilities be the primary means of processing Metro-region food scraps?

