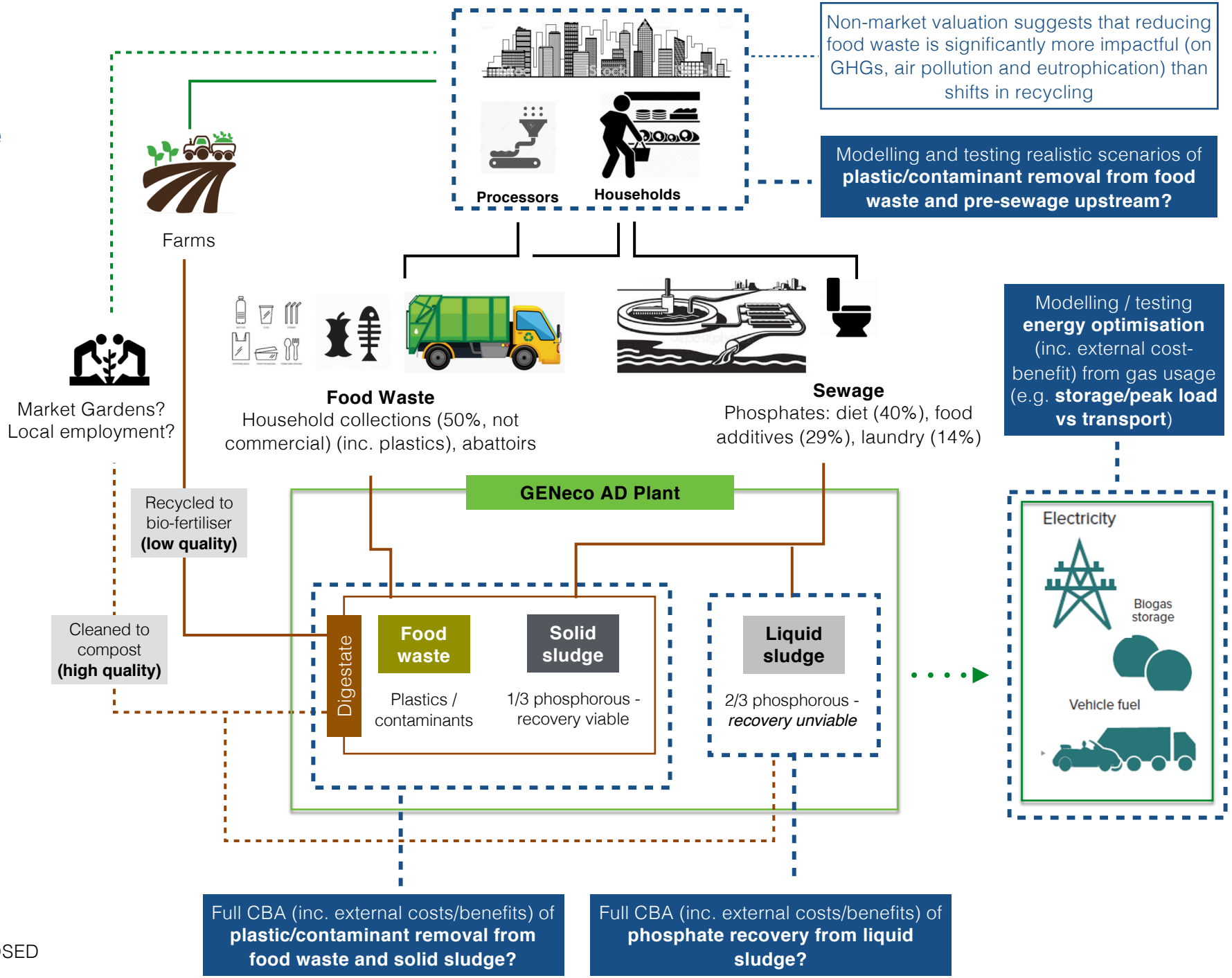
Bristol's FEW ULL Waste Challenge



Bristol's FEW ULL Waste Challenge

CURRENT

Non-market valuation suggests that reducing food waste is significantly more impactful (on GHGs, air pollution and eutrophication) than shifts in recycling

Modelling and testing realistic scenarios of **plastic/contaminant removal from food waste and pre-sewage upstream?**

Processors

Households

Farms

Digestate recycled to land

Market Gardens?
Local employment?

Food Waste
Household collections (50%, not commercial) (inc. plastics), abattoirs

Sewage
Phosphates: diet (40%), food additives (29%), laundry (14%)

Bristol Water Recycling Centre

Anaerobic digestion

Food waste

Plastics / contaminants

Digestate

Biogas

Sewage sludge

4 mg/l phosphorous uptake in sludge

9mg/l phosphorous

Sewage treatment

Treated effluent

5mg/l phosphorous - *recovery neither mandated by regulation nor economically viable in terms of end-product value*

Modelling / testing **energy optimisation** (inc. external cost-benefit) from gas usage (e.g. **storage/peak load vs transport**)

Electricity generation
Biomethane to gas grid
Biomethane to vehicles

Full CBA (inc. external costs/benefits) of **plastic/contaminant removal from food waste and solid sludge?**

Full CBA (inc. external costs/benefits) of **phosphate recovery from effluent and / or anaerobic digestion liquors**

XYZ PROPOSED

XYZ COMPLETED