R&D Needs Summary

- Sustainable recovery of nutrients (e.g. Phosphorus)
    - Metal recovery
    - Water soluble chemicals
    - Recycle nutrients back to ecosystem
- Biochemicals
    - Produce chemicals from waste
- Collection network optimization
    - Mechanical separation
    - Multi-residential & rural recycle
- Plastics
    - Increase of types that can be recycled
    - Non-biodegradable plastic contamination
- Characterizing waste streams
    - Lack of readily available data
    - Inclusive, transparent, objective data
- Historical case studies
    - Draw conclusions and knowledge from past
    - Failure and gap analysis
- LCA costing for processes and options
    - Technical, environmental impact
    - Inform policy decision-making
- Ash utilization in thermal treatment
    - Recovery as another "R"
    - Urban mining
- Data
    - Need status, measure to manage, definitions
- Full costing to set objectives and desired outcomes
- Advanced EFW
    - Barriers, needs, support, social understanding
- Markets