

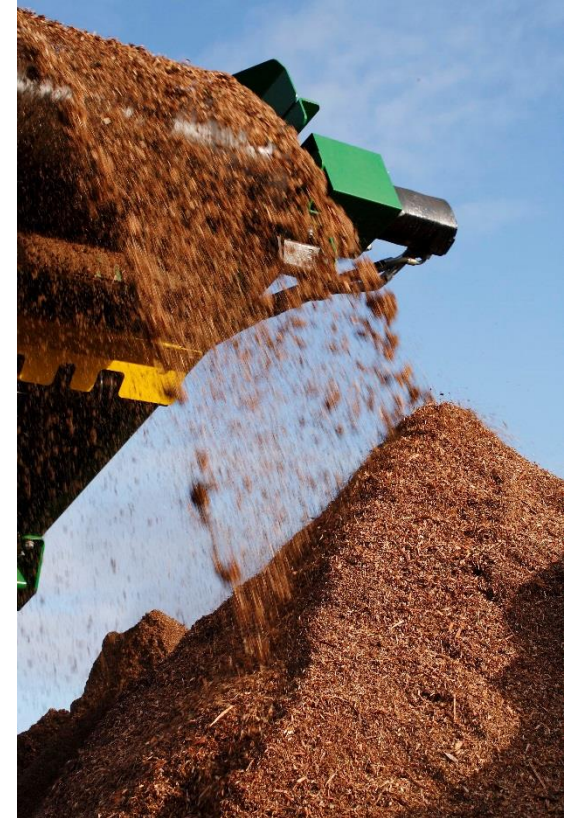


Victoria's Waste and Resource Recovery Infrastructure Planning Framework

Shannon Smyth
Acting Director - Resource Recovery

Covering today

- Overview of Sustainability Victoria
- Waste and Resource Recovery Planning – Victorian context
- Victoria's integrated statewide waste and resource recovery system
- Implementation - Strategies and Program



Sustainability Victoria's programs



Climate change



ResourceSmart Schools



Boosting business productivity



Home upgrades



Community power hubs



Commercial built environment



Waste education



Social impact investment



Organics collections
sustainability.vic.gov.au



Resource Recovery Infrastructure

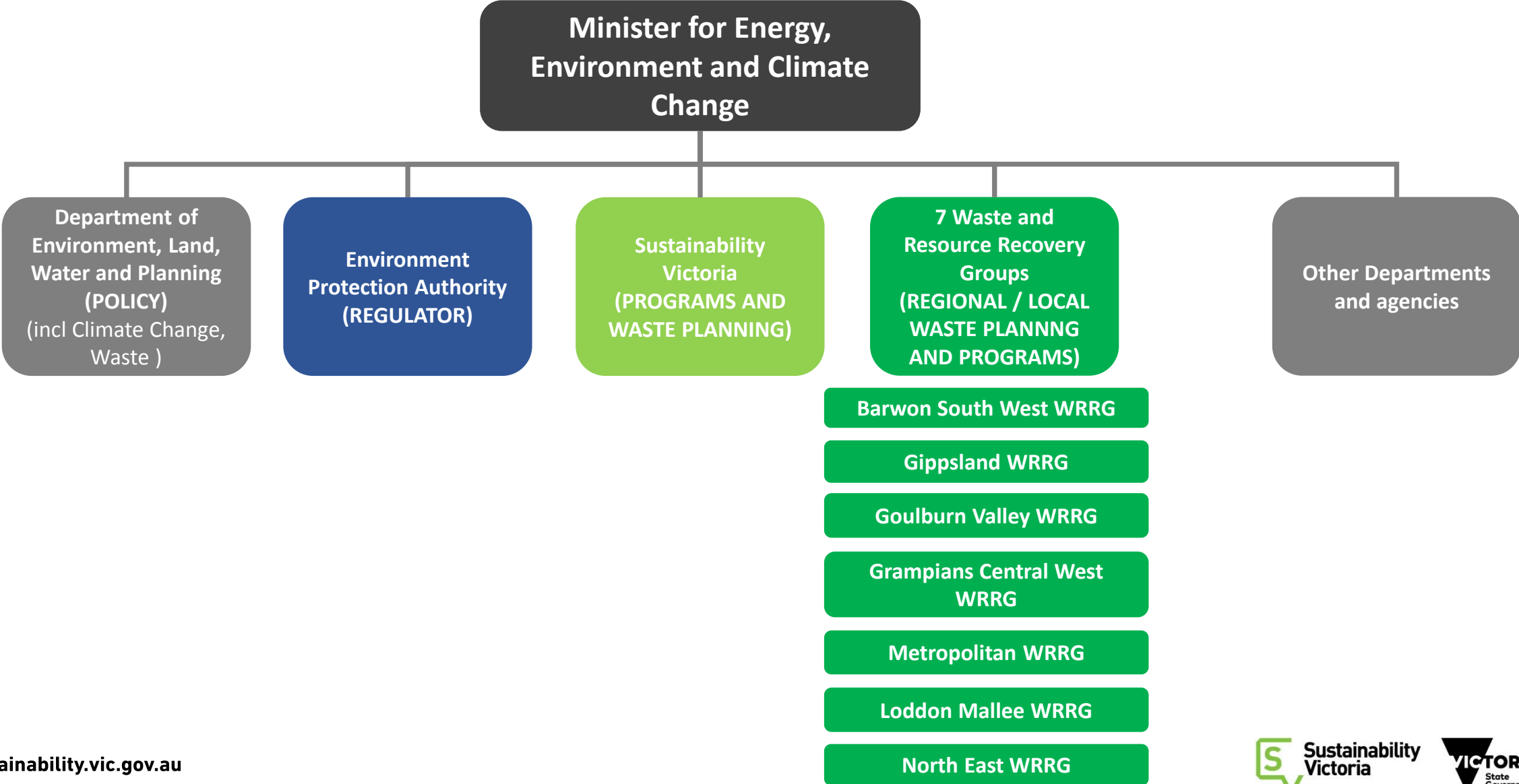


Household chemicals collections



Information / guidance

Waste Portfolio



Victoria - Overview

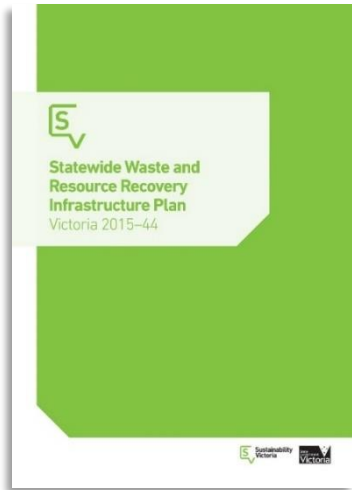


WRR Infrastructure Planning Framework Objectives

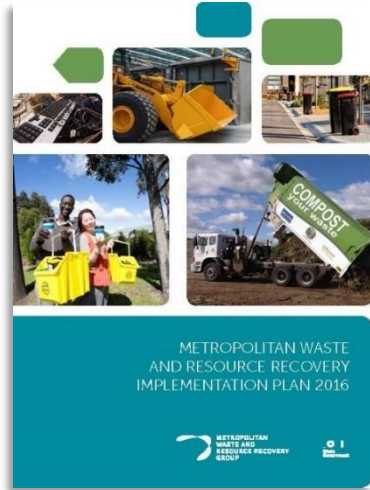
- (a) to ensure **long-term strategic planning for waste and resource recovery infrastructure at State and regional** levels; and
- (b) to facilitate the **integration of State-wide** directions for the management of waste and resource recovery infrastructure **and regional infrastructure needs**; and
- (c) to enable waste and resource recovery infrastructure planning to be—
 - (i) effectively **integrated with land use and development planning and policy**; and
 - (ii) effectively **integrated with transport planning and policy**;
- (d) to ensure Sustainability Victoria and the Waste and Resource Recovery Groups **work together to integrate** the State-Wide Waste and Resource Recovery Infrastructure Plan and Regional Waste and Resource Recovery Implementation Plans; and
- (e) to enable waste and resource recovery **infrastructure planning decisions to be made at the appropriate level** of the Framework

The Framework

SWRRIP 2015, 7 Regional Implementation Plans and SWRRIP 2018



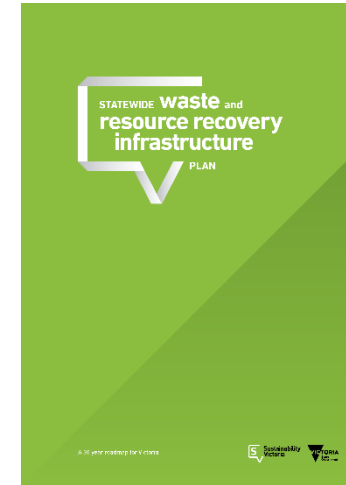
July 2015



Oct 2016



July 2017



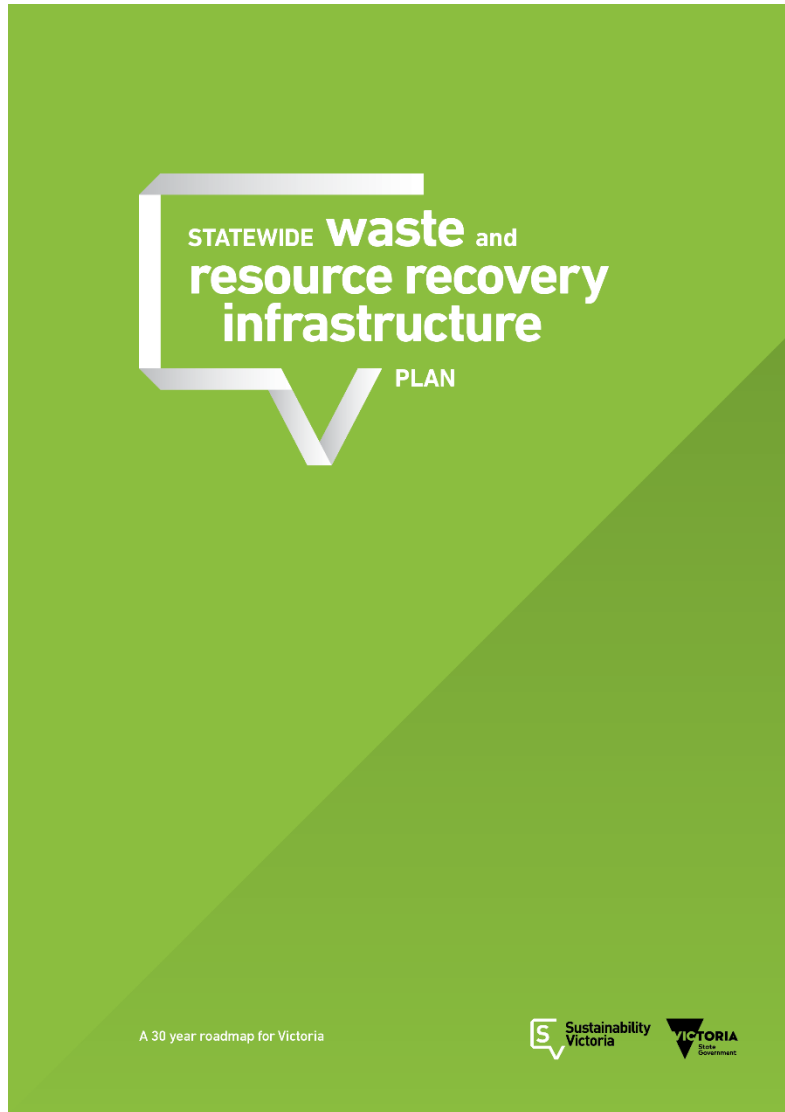
April 2018

Integration and Alignment

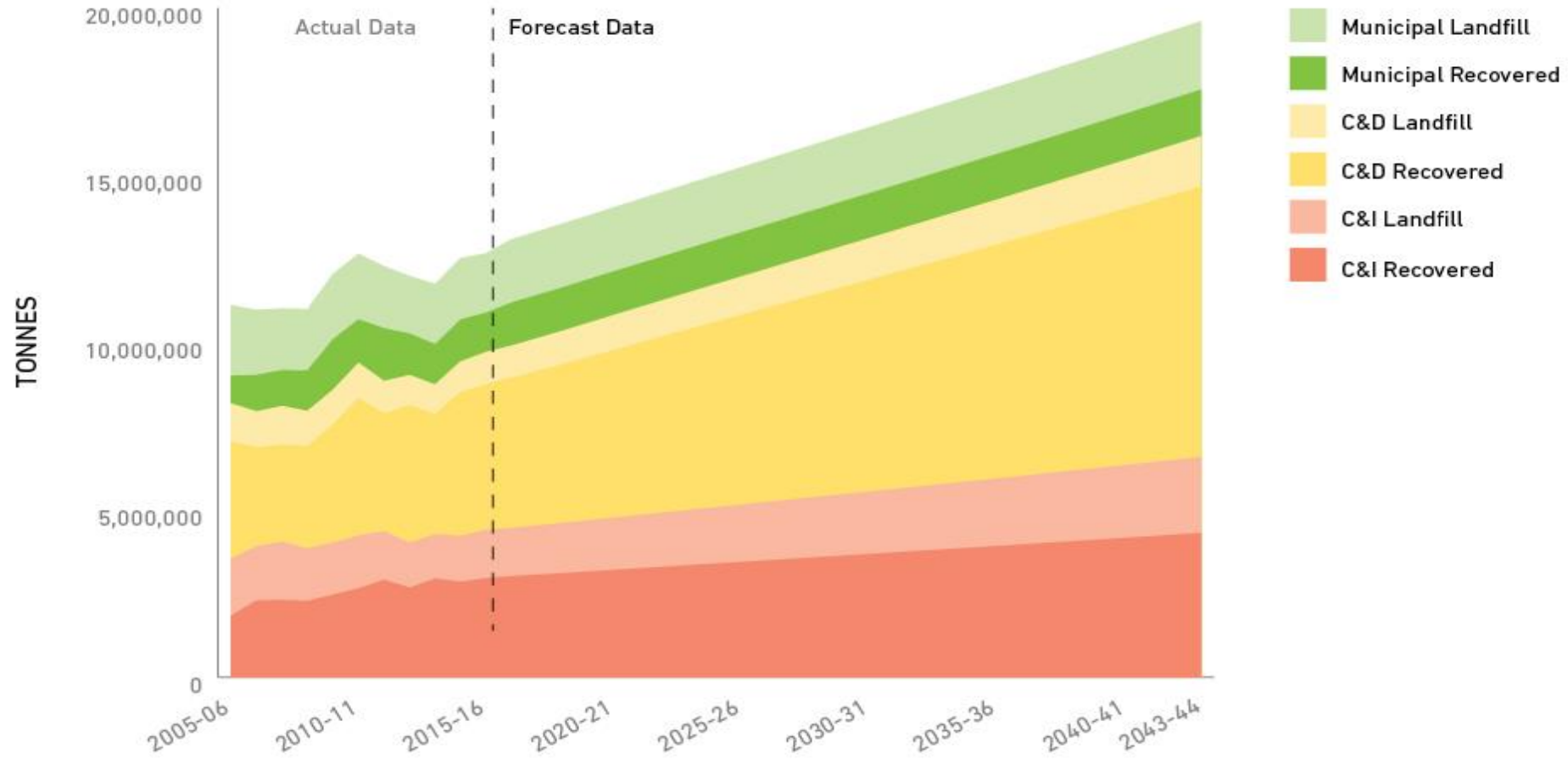
SWRRIP and its scope

- 30 year plan for all (non-hazardous) solid waste
- WRR Infrastructure – collection, sorting, recovery, reprocessing, WtE, disposal
- Materials managed and opportunities
- Reflects regionally identified needs and opportunities
- Goals and Strategic Directions
- Responds to policy and legislation
- Decision-making guidelines
- Actions for government

Of the 100 LG/reprocessors responding to the SWRRIP annual survey - 66% said they used the SWRRIP with 92% rating is as "useful".

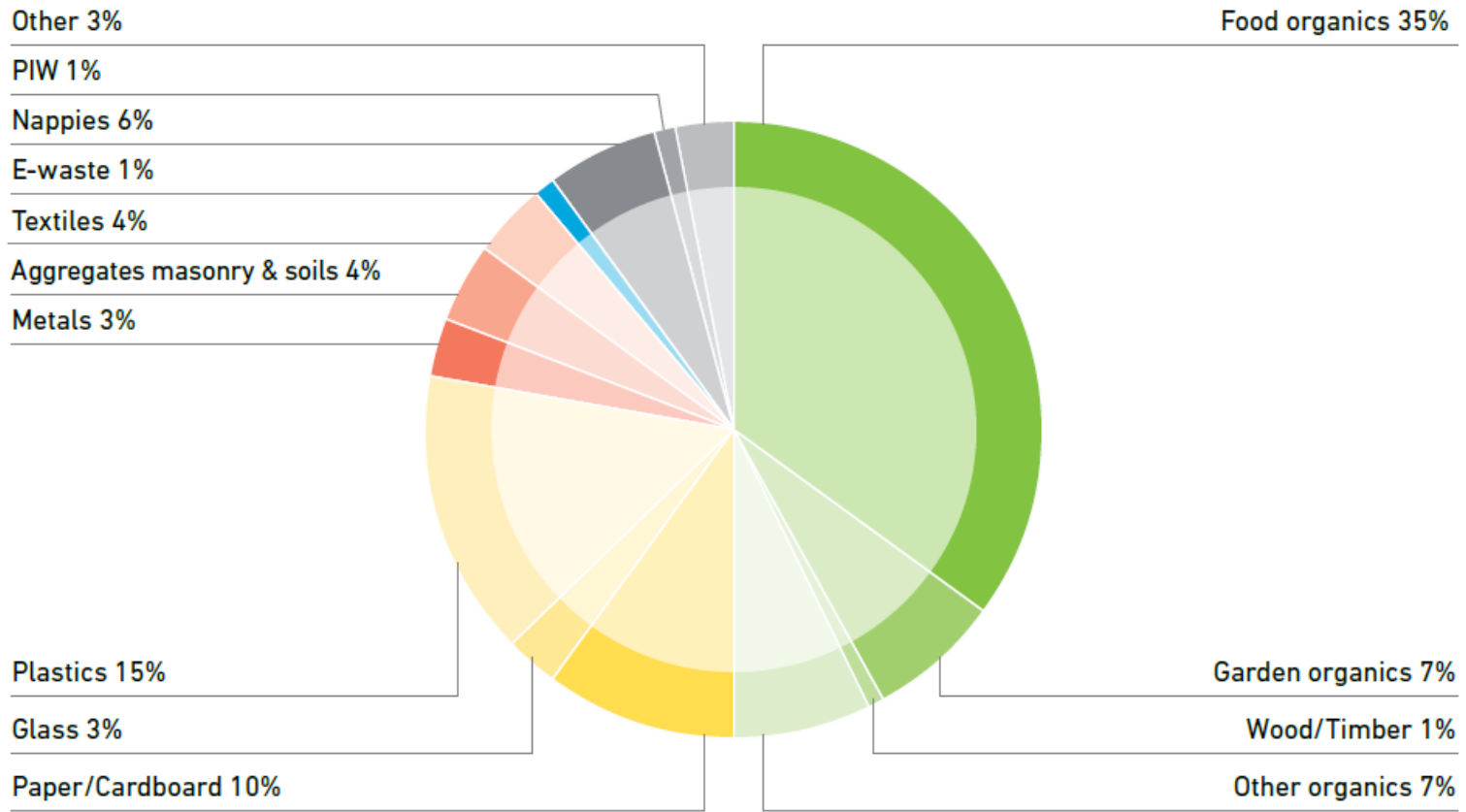


The need for a 30 year plan



Around eight million additional tonnes of waste to be managed

Composition of materials entering landfills (MSW and C&I)



GOAL 1

Reduce our reliance on landfills.

GOAL 2

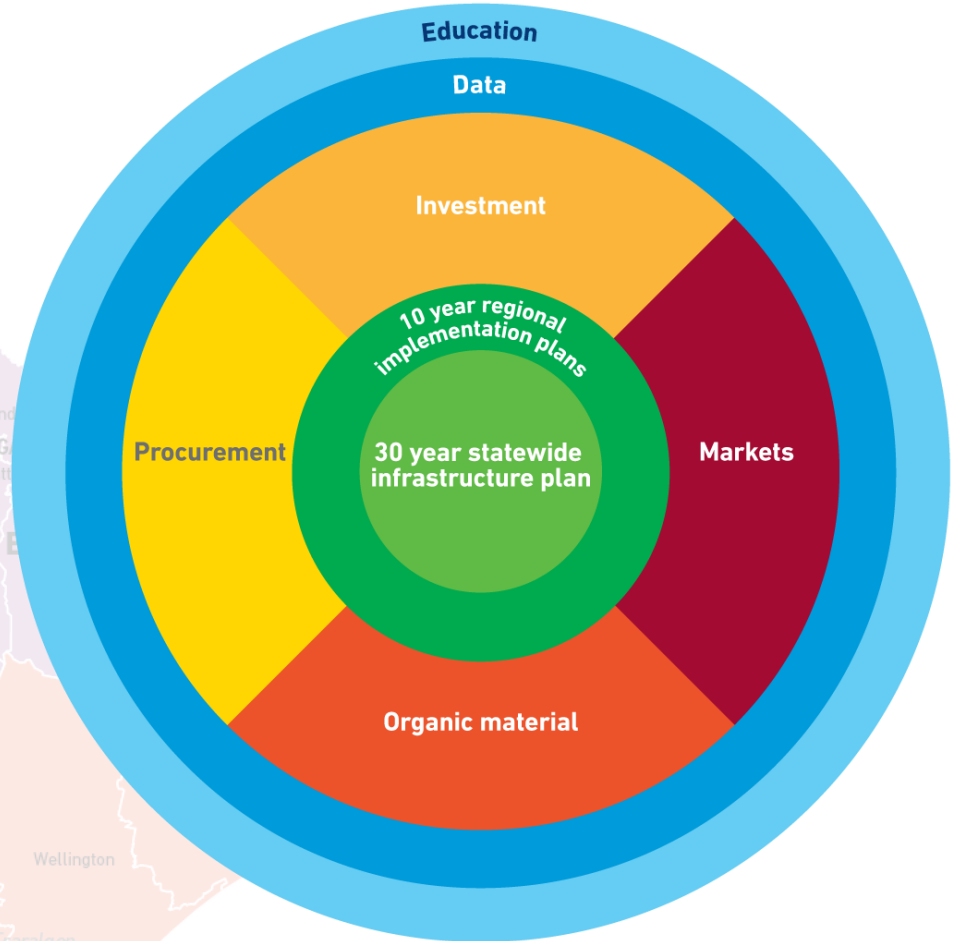
Encourage resource recovery and recycling through the consolidation and aggregation of our waste.

GOAL 3

Raise the standard of waste and resource recovery facilities by improving their performance.

GOAL 4

Improve the evidence base for decision making at all levels of government, industry and the community.



SWRRIP Vision

Victoria has an integrated statewide waste and resource recovery system that provides an essential community service to:

- › protect the community, environment and public health
- › recover valuable resources from our waste
- › minimise long term costs to households, industry and governments.

SWRRIP Purpose

To provide strategic direction for the management of waste and resource recovery infrastructure to achieve an integrated system that effectively manages the expected mix and volumes of waste, reflects the principles of environmental justice to ensure that impacts on the community, environment and public health are not disproportionately felt, supports a viable resource recovery industry and reduces the amount of valuable materials going to landfill.

Goals
What we want to achieve in 30 years

GOAL 1
Landfills will only be for receiving and treating waste streams from which all materials that can be viably recovered have been extracted.

GOAL 2
Materials are made available to the resource recovery market through aggregation and consolidation of volumes to create viability in recovering valuable resources from waste.

GOAL 3
Waste and resource recovery facilities including landfills are established and managed over their lifetime to provide best economic, community, environment and public health outcomes for local communities and the state and ensure their impacts are not disproportionately felt across communities.

GOAL 4
Targeted information provides the evidence base to inform integrated statewide waste and resource recovery infrastructure planning and investment at the state, regional and local levels by industry, local government, waste and resource recovery groups, government agencies and the broader community.

Long Term Strategic Directions
What we want to do differently

STRATEGIC DIRECTION 1
Prioritise viable recovery
Resource recovery will be undertaken by local government and industry to maximise the diversion of recoverable materials from landfills where:

- › it is economically viable
- › there is a viable market for end products
- › it results in better community, environment and public health outcomes.

STRATEGIC DIRECTION 2
Reduce landfill reliance
Planning for new landfill airspace, including the scheduling of new landfill sites, will be based on:

- › volumes of residual waste streams remaining after all materials that can be recovered viably have been extracted
- › a demonstrated need for additional airspace.

STRATEGIC DIRECTION 3
Aggregate materials
Consolidation and aggregation of material streams, around a hubs and spokes network, to achieve quantities for reprocessing will be undertaken if:

- › there is a market for the feedstock
- › there is a viable business case
- › potential community amenity, environmental, public health impacts are minimised.

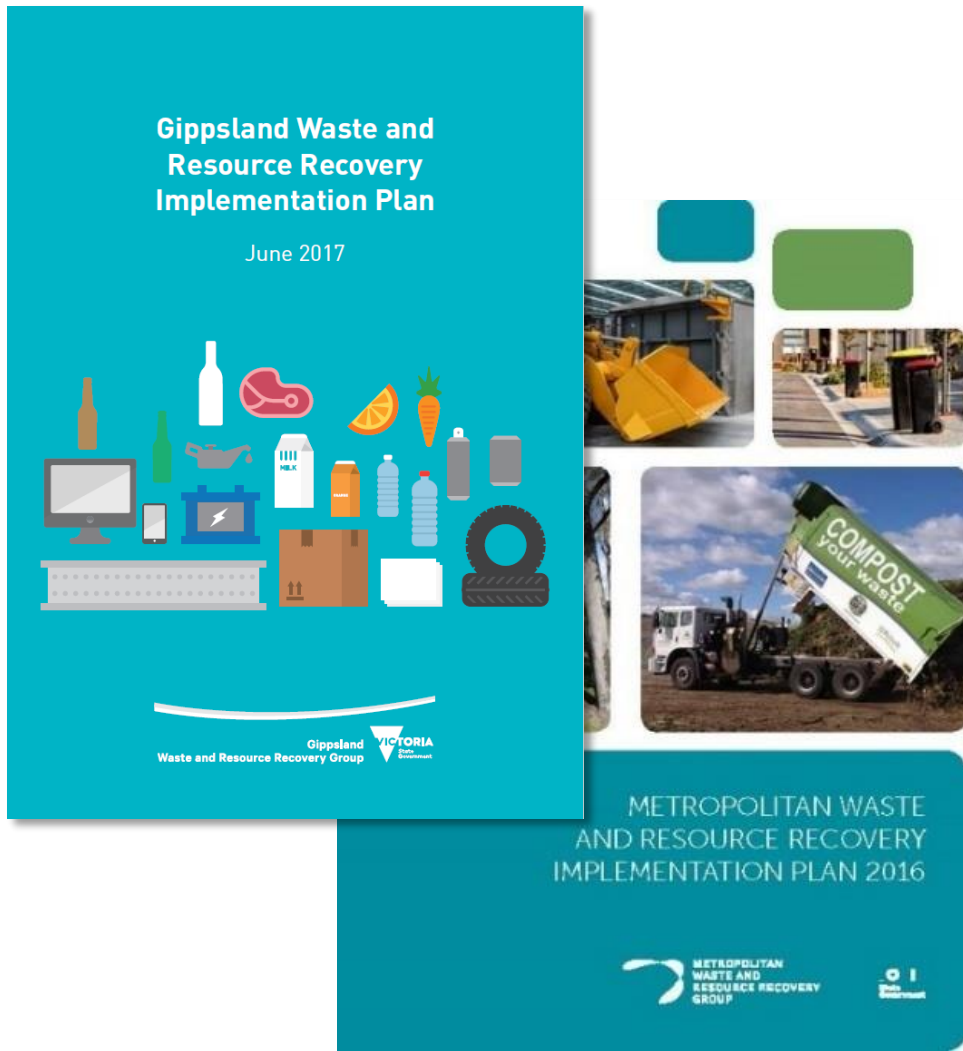
STRATEGIC DIRECTION 4
Utilise land
Suitably located and zoned land will be available for the expected mix of infrastructure required to manage waste and materials streams.

STRATEGIC DIRECTION 5
Evidence-based decision making
Decisions to determine waste and resource recovery options will be based on evidence to:

- › maximise economic outcomes
- › provide cost-effective service delivery
- › reduce the community amenity, environmental and public health impacts.

STRATEGIC DIRECTION 6
Integrated planning
Integrated statewide planning and decision making will be capable of addressing local, regional and state needs to facilitate a cost-effective statewide network of waste and resource recovery infrastructure.

Waste & Resource Recovery Infrastructure Plans



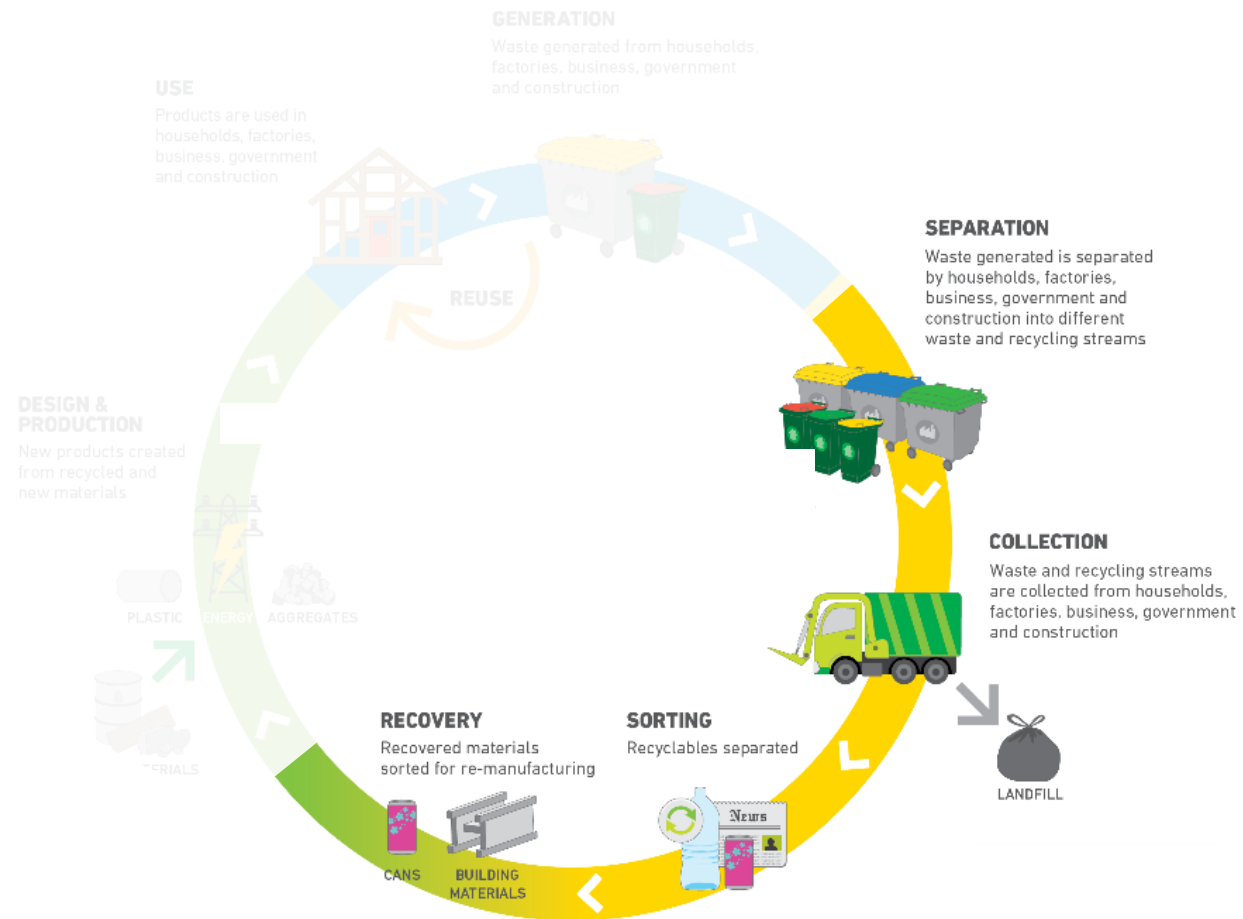
- Provide a regional profile W&RR system
- At 10 years plan for how (non-hazardous) solid waste will be managed
- Projection on volume of waste to be managed
- Infrastructure schedule – Landfill & RR
 - Current operational capacity
 - Indicates gaps and future needs

(A landfill must be included in the schedule to be considered for Works Approval by the EPA)
- Reflects regionally identified priorities and opportunities
- Identifies opportunities to achieve the goals of the SWRRIP

Strategy Delivery – A circular approach



Investing in infrastructure

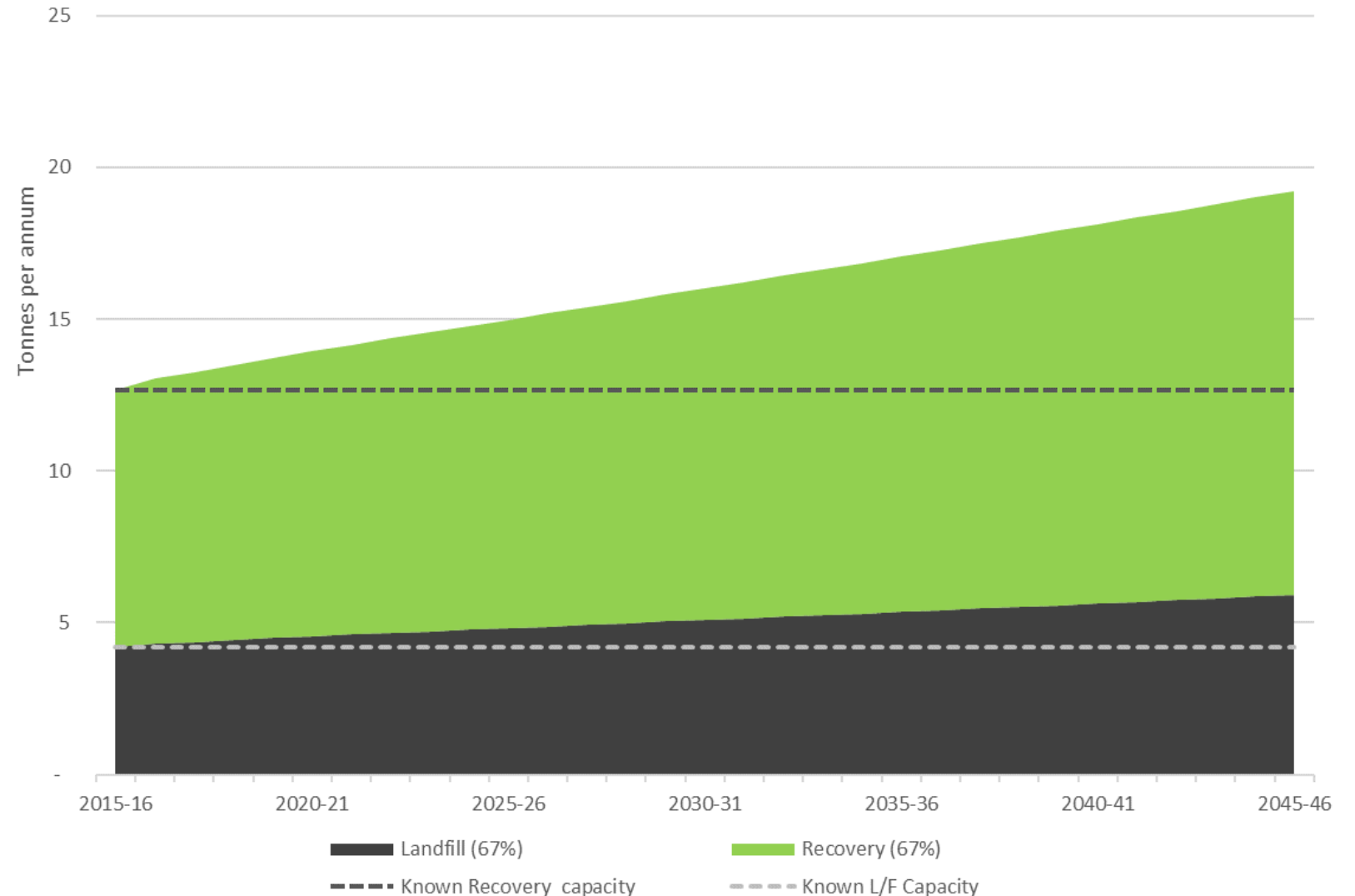


The Infrastructure challenge

Maintaining service provision requires an additional:

- **4.9 million tonnes of recovery capacity**
- **1.8 million tonnes of landfill capacity**

of capacity by 2045/46 just to maintain business as usual at 67% recovery.

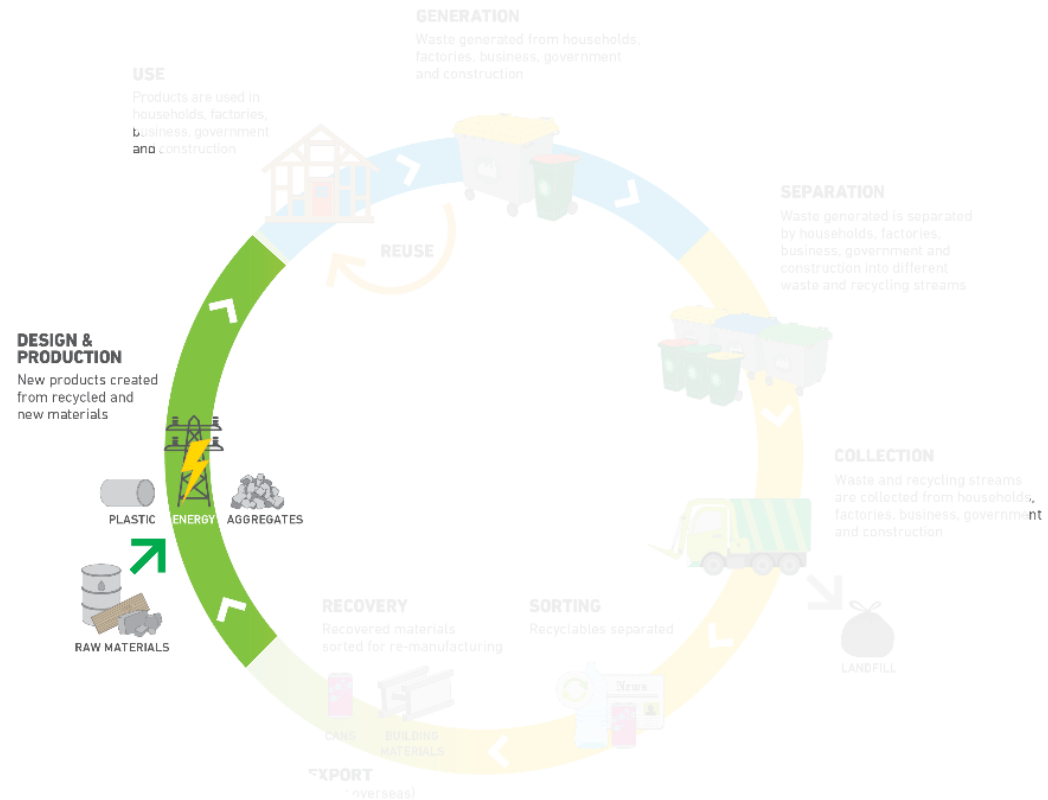


Investing in infrastructure

- **\$13.6 million** Resource Recovery Infrastructure Fund:
 - Round 1 - **\$5.1 million** for 14 metropolitan projects, announced July 2017
 - Round 2 - **\$4.2 million** for 13 regional projects, announced 15 June 2018
 - Round 3 – Over **\$3 million** now open
- **\$2 million** towards supporting waste to energy infrastructure
- **\$15 million** towards supporting e-waste collection and storage infrastructure
 - Capacity capability alignment with AS/NZ Standard
 - Establishing reasonable access a key focus
- SV's Investment facilitation Service – provides ongoing investment and government navigation



Market Development – Defining the challenge

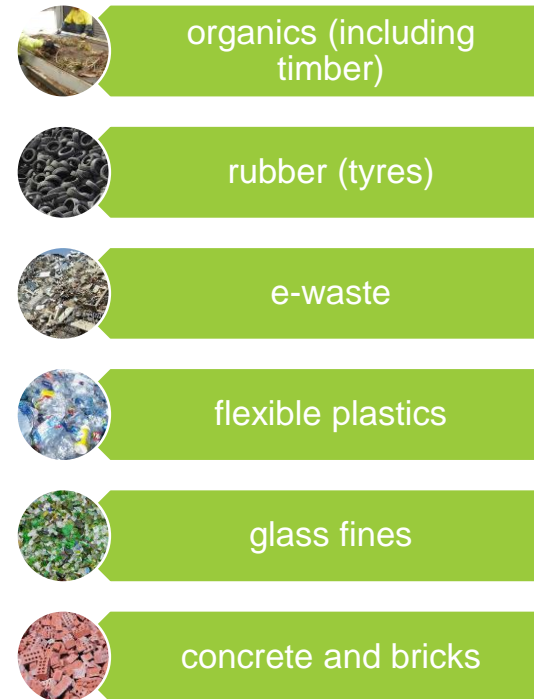


Market Development Strategy

Realise the full economic value of resource recovery opportunities while protecting the environment, public health and amenity

Key points of intervention;

- **Research** into product development and performance
- **Product specification** development focused on improving quality standards
- **Product procurement** focused on government as a procurer
- **Product stewardship** partnerships



Developing markets – Creating the pull

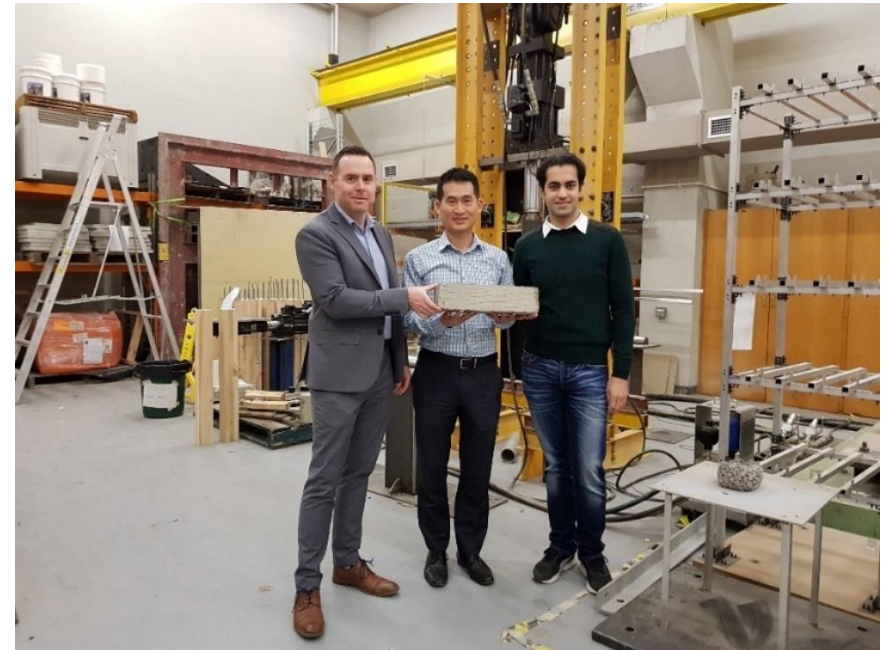
R&D Grants

Partnerships between industry, bodies and universities

- Pavement & footpath construction
- Plastics in railway sleepers
- Glass in lightweight concrete
- Plastic in kitchen bench-tops, tiles and aggregate surfaces
- Renewable energy applications
- Fire resistance in building materials

Product Specification Development

- Crushed rock
- Glass Fines
- Tyres



\$2.5m Market Development Program Launch

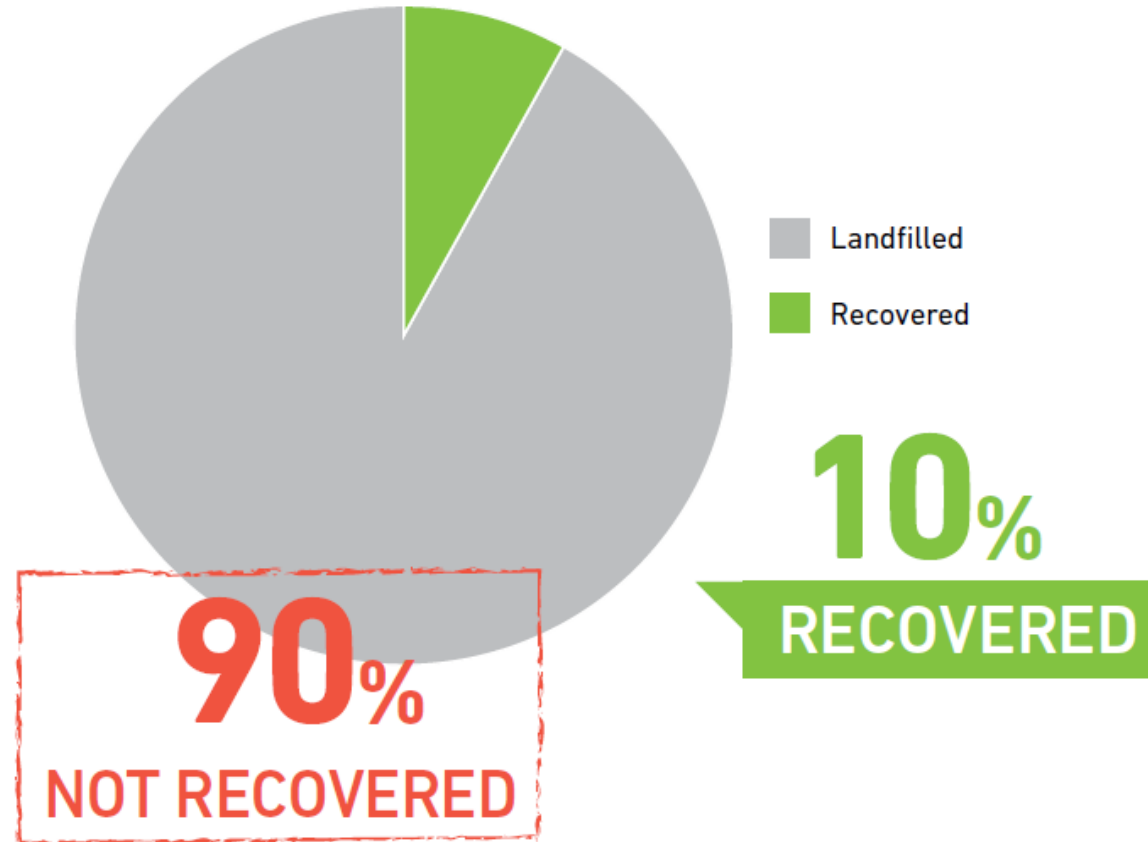
Downer - Asphalt road construction

SV funding to

- Downer- construction of the Road and
- Close the Loop for equipment to produce the plastic additive
- Incorporating
 - 200,000 plastic bags
 - 63,000 glass bottles
 - 50 tonnes reclaimed asphalt



Food Organics – a lost resource

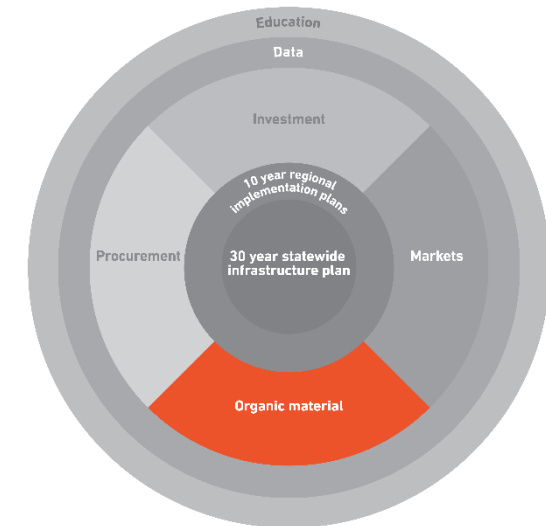


Victorian Organics Recycling and Recovery Strategy

A 30 year strategy to better manage organic waste which prioritise the protection of the environment, human and animal health; and builds the knowledge, skills and infrastructure for Victoria to realise the benefits of using organic resources.

Seven strategic directions

1. Better Practise environmental management
2. Sustainable Markets
3. Leverage existing Assets
4. Identify Future needs
5. Education to facilitate change
6. Building collective knowledge
7. Streamlined governance and string leadership

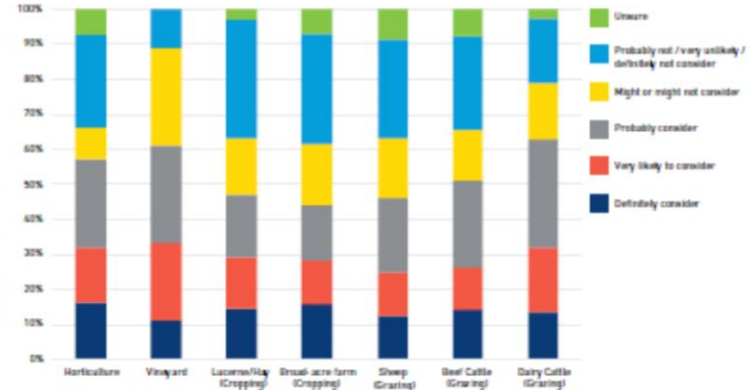


Identifying Markets Opportunities



Opportunities for using recycled organic products

Horticulture, vineyards, dairy and beef farming were identified as the most likely users of recycled organic products.



Of those who were likely to use recycled organic products and indicated they would:



Farmers identified the top three important benefits of using recycled organic products as:

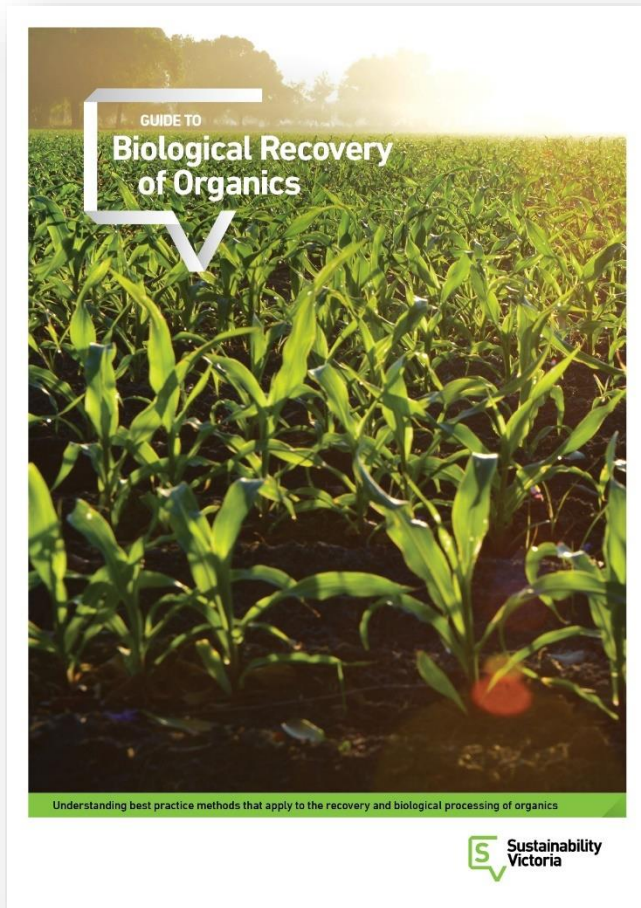


Barriers to using recycled organic products

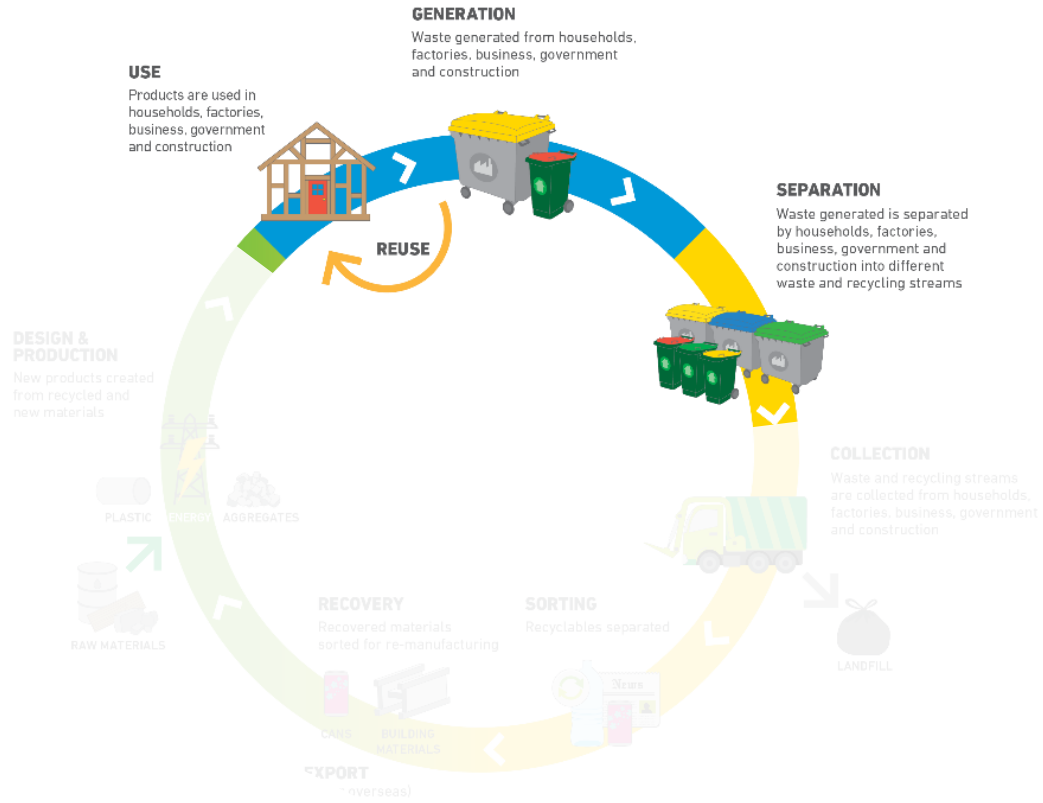
The key concerns from farmers about using recycled organic products are:

- > **Potential for contamination due to lack of control of feedstocks**
- > **Biosecurity – ensuring products are free of disease and weeds**
- > **Availability and the ability to spread products using standard farmer equipment**

Supporting emerging technologies – Industry & Govt guidance



Education



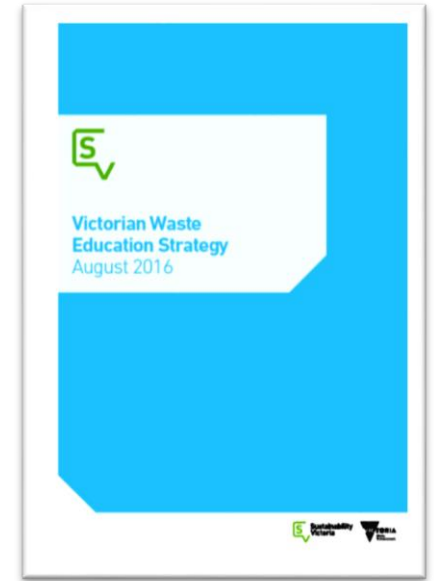
Victorian Waste Education Strategy

Provide a state-wide coordinated approach to waste and resource recovery education that supports best practice programs so that Victorian's

- are well informed and taking practical action to reduce waste, minimise its environmental impact and maximise its value
- understand the importance of effective waste management and recovery of valuable resources.

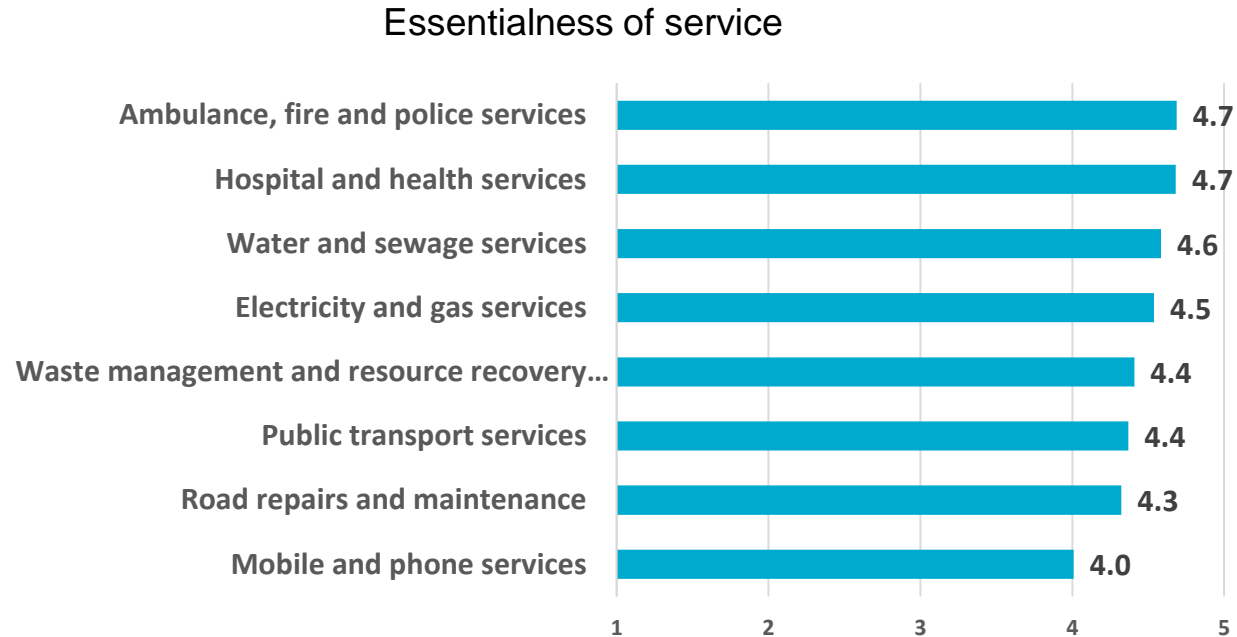
Six Strategic Directions

1. Focus on improving Victorian community's perceptions of WRR
2. Waste avoidance with a strong focus on food waste avoidance
3. Improving RR which includes funding and resources for LG and other stakeholders
4. Litter and Illegal dumping with a strong focus on Litter
5. School programs delivered through RSS Waste Module
6. Building capability and capacity of delivery partners



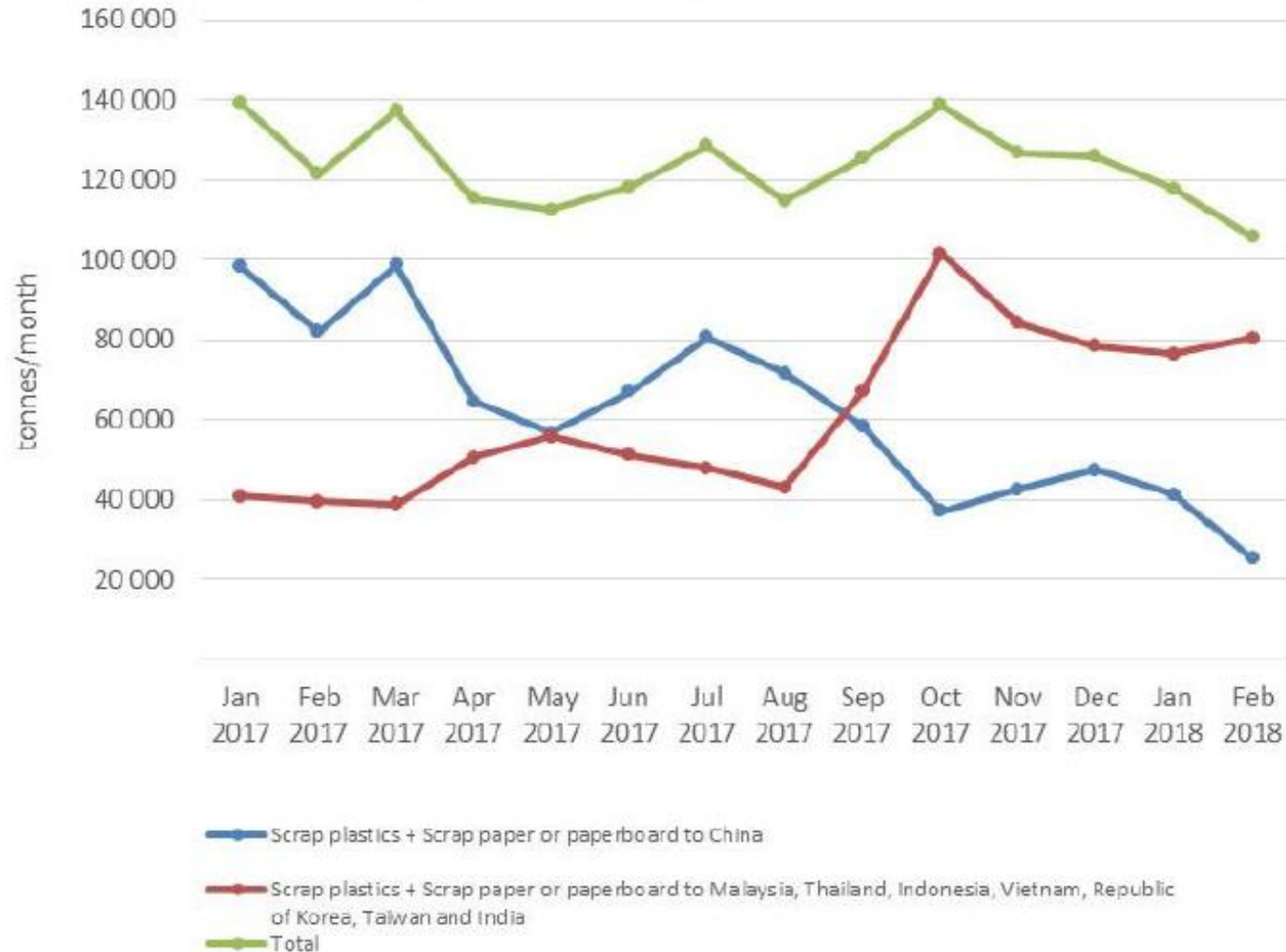
CSIRO- Waste as an essential Service

- SV worked with CSIRO on a social research project to understand community perceptions and expectations of the waste and resource recovery sector.
- The research identified several factors that are important to building community trust and acceptance or Social License to Operate
 - Governance
 - Engagement
 - Benefits
 - Knowledge



China National Sword (Blue Sky)

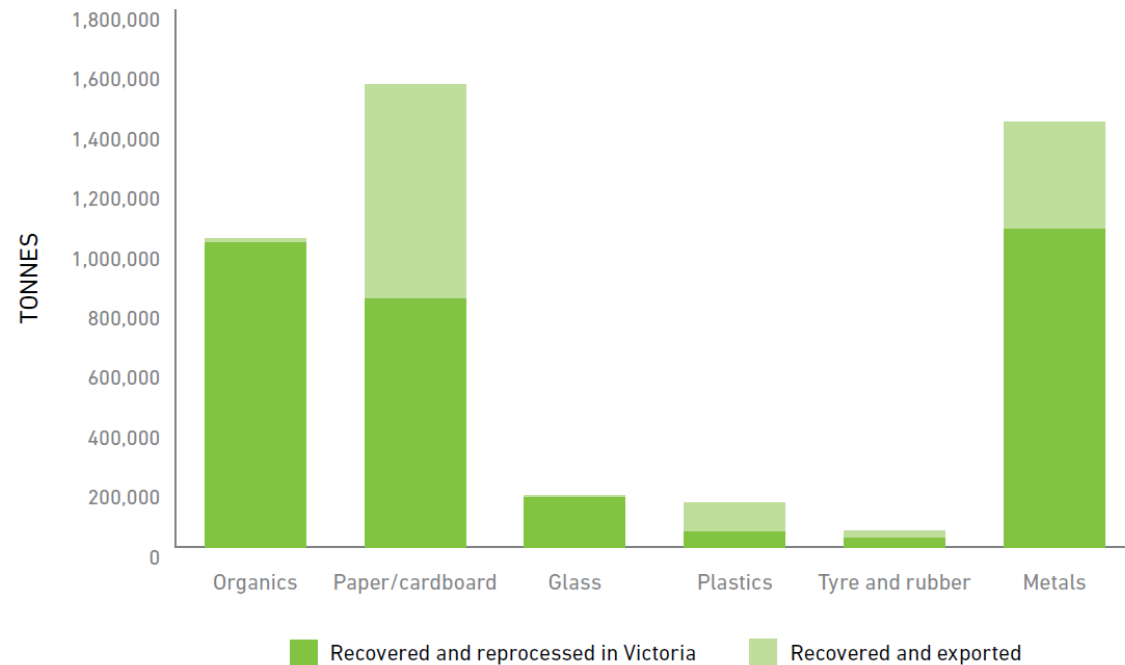
Figure E-1 – Australian exports of HS 3915 and HS 4707 codes from January 2017 to February 2018 – To China versus combined Malaysia, Thailand, Indonesia, Vietnam, Republic of Korea, Taiwan and India



Domestic capacity and capability

- Challenge is set – opportunity exists
- Move from a strong recovery market to strong recycling market
- \$13M Program to support LG transition to new contractual models
 - \$12M local government
 - \$1 M Industry transition support
 - Community Education

FIGURE 4.3
MATERIALS RECOVERED IN VICTORIA FOR EXPORT (2015–16)





Thank you

Shannon Smyth
Sustainability Victoria