

Recycling Industry Strategic Plan



Photo credits:

Sustainability Victoria, 2018 (Cover, 17, 18, 25)

Metropolitan Waste and Resource Recovery Group, 2018 (pages 5, 9)

Environment Protection Authority Victoria, 2018 (page 13)

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Printed by Finsbury Green, Melbourne

ISBN 978-1-76077-117-1 (print)

ISBN 978-1-76077-118-8 (pdf)

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Minister's foreword



Victorians are keen recyclers. Over the last 30 years recycling has become embedded as a key service that Victorians use and expect.

Recycling helps protect our precious natural environment by reducing the use of virgin materials and the amount of waste disposed of in landfill.

The recycling sector is also an important part of Victoria's economy, adding value and creating jobs.

Over the past four years, the Andrews Labor Government has provided a record amount of funding to address waste and resource recovery issues, totalling over \$100 million. This includes providing \$37 million dollars to deliver this Strategic Plan, strengthening Victoria's recycling sector and ensuring our recycling efforts are rewarded.

Victoria is developing a waste and resource recovery system that minimises waste generation, maximises resource recovery, and works toward sending zero waste to landfill.

A resilient recycling sector is a key part of meeting these important goals.

As the recycling industry continues to transform - including responding to changes in international markets - it is essential that Victoria's sector is on a sure footing to deliver services into the future and to minimise the costs of recycling to households.

To achieve this, we have developed a *Recycling Industry Strategic Plan* that sets out the pathway to a safe, resilient and efficient recycling system in Victoria.

In developing this Strategic Plan, we have listened to the views of the recycling industry, manufacturers, local government and environment groups, along with the community more broadly.

The Strategic Plan includes a set of complementary actions, which we will deliver in partnership with industry, local government and the community.

The actions will create a more stable and productive recycling sector, improve the quality of recycled materials we generate, and develop new markets for these materials.

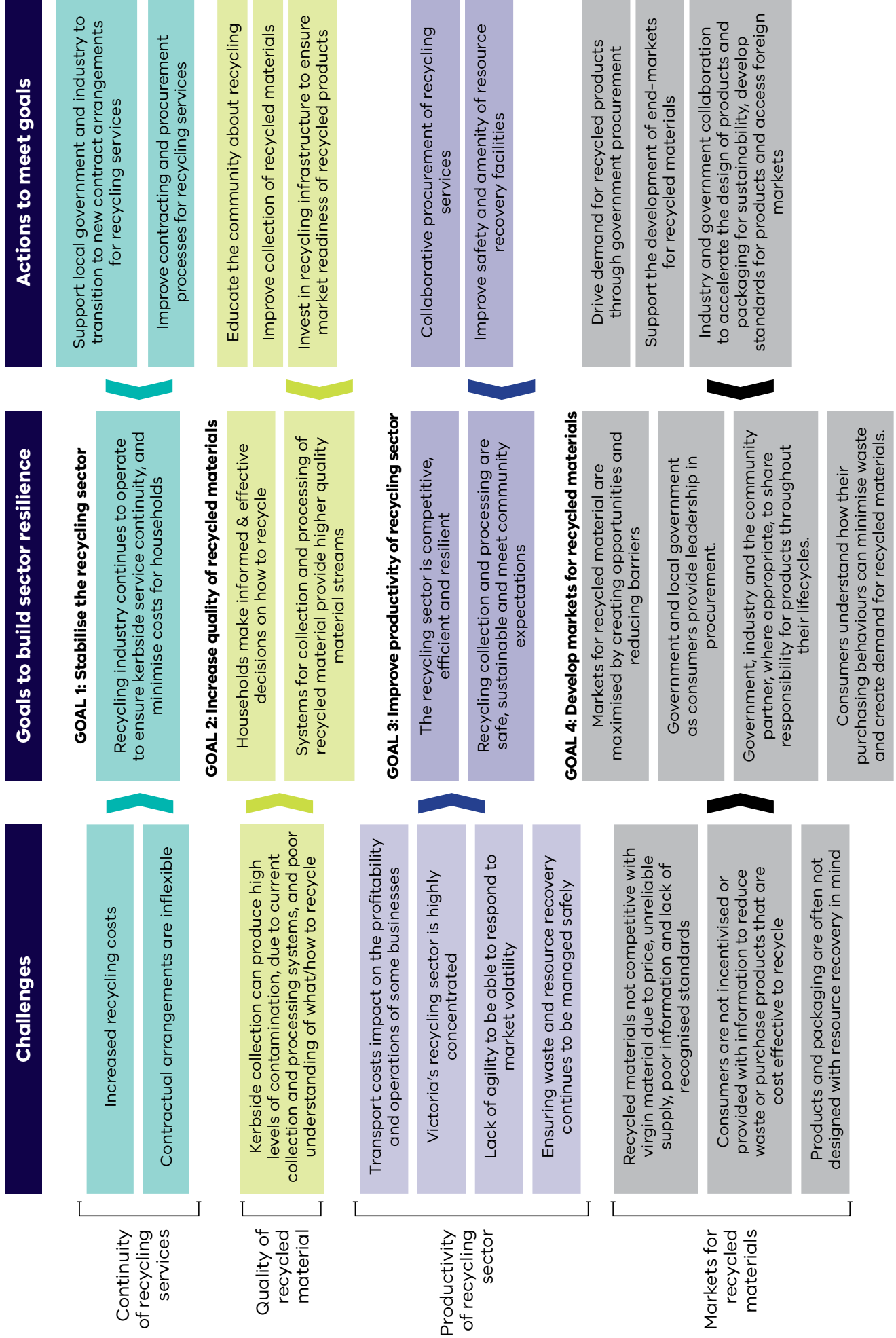
The Federal Government also has an important role to play in driving the sustainable design of products and packaging, helping to grow markets for recycled materials at a national level, and seeking international trade certainty for these recycled materials.

The Andrews Labor Government is committed to supporting the recycling sector to transition to a more resilient model, which delivers the services and benefits we expect while minimising costs for Victorian households and businesses.

The Hon. Lily D'Ambrosio MP

Minister for Energy, Environment and Climate Change
Minister for Suburban Development

Summary of the Strategic Plan



1. Introduction



1.1 Purpose and scope of the Strategic Plan

This *Recycling Industry Strategic Plan* (Strategic Plan) sets out the pathway to a safe, resilient and efficient recycling system in Victoria, where kerbside recycling services continue to be provided to households.

Recent disruptions in global recycling markets have highlighted and exacerbated some underlying fragilities in Victoria's recycling sector.

These disruptions have most significantly impacted Victoria's kerbside recycling system, and this has impacted households through increases in council waste management charges.

In acknowledgement of this, the Strategic Plan specifically focuses on kerbside recycling. It sets the vision and goals for kerbside recycling in Victoria, and maps out a clear set of actions to help us get there. The actions will support the recycling industry to transition to a more resilient model, that provides safe and efficient services to Victorian households and businesses.

Everyone has a part to play: collaboration between industry, community, and local, state and federal governments is needed to help the sector to respond to current challenges.

Although the focus of the Strategic Plan is on kerbside recycling, the actions set out in this plan will benefit the entire recycling sector.

1.2 How the Strategic Plan was developed

The Strategic Plan has been developed through targeted engagement with the recycling industry, manufacturers, local government, environment groups and research organisations. It has been informed by the views of the community and stakeholders through ongoing engagement on waste and recycling matters.

It has also been informed by data and analysis relating to the resource recovery sector. This includes prices and flows of recycled materials, and the status of and trends in local and export markets.

The Victorian Recycling Markets Government Taskforce, which is made up of relevant Victorian Government departments and agencies, as well as the Municipal Association of Victoria, has provided advice to government on the content of the Strategic Plan.

Opportunities identified by the Victorian Government Resource Recovery Facilities Audit Taskforce, which was established to improve the safety of recycling facilities, have also informed the Strategic Plan.

1.3 Victorian Government waste and resource recovery framework

Victoria has a strong track record of continuous improvement in waste management and resource recovery. The current disruptions to global recycling markets require an immediate focus to stabilise and improve the resilience of the Victorian sector, and create better economic and environmental outcomes for our state.

The Victorian Government's waste and resource recovery policies and programs are summarised below. These complement the suite of actions included in this Strategic Plan that will deliver a more resilient recycling sector. Together they provide a holistic framework for managing waste and recovering resources in Victoria.



1.4 Existing policy and strategic framework

The *Environment Protection Act 1970* provides the overarching regulatory framework for waste and resource recovery in Victoria. One of the guiding principles of the Act is the waste hierarchy, which seeks to minimise waste generation, maximise resource recovery, and minimise disposal to landfill.

Victoria was the first Australian jurisdiction to establish a comprehensive, long-term waste and resource recovery infrastructure planning framework. This framework, established under the Act and finalised in July 2017, consists of a 30-year *Statewide Waste and Resource Recovery Infrastructure Plan* and seven 10-year *Regional Waste and Resource Recovery Implementation Plans*. Together, these plans set out the infrastructure we need to manage and recover resources from waste. The framework provides industry with information and certainty to invest in waste and resource recovery infrastructure in Victoria.

The infrastructure planning framework is complemented by specific strategies on waste education, market development for recovered resources, and organic waste recovery.

Victoria also has in place a landfill levy, which was introduced in 1992 to provide a pricing incentive to increase resource recovery and divert waste from landfill.

Together, the Act, infrastructure planning framework, and complementary strategies help maximise Victoria's productive use of resources and move us towards zero waste going to landfill. They ensure Victoria captures more of the inherent value in materials, and minimises the significant challenges associated with landfills, including: adverse impacts on amenity, public health and the environment; limits to Victoria's existing landfill capacity; and the planning challenges and costs of establishing new landfills, particularly the significant aftercare costs.

Waste to energy technologies could also begin to play a larger role in Victoria's waste and resource recovery sector, and could lead to better economic and environmental outcomes. Recovering energy from waste can capture value from materials that would otherwise be lost to landfill. Waste to energy plays an important role for waste that cannot feasibly be recycled.

Waste to energy is not a solution to the current issues facing the recycling system, but can reduce reliance on landfill over time. In 2017, the Victorian Government released a waste to energy discussion paper. The government is now considering feedback and the appropriate role for waste to energy technologies in Victoria's waste and energy system.

The government is also responding to specific waste issues, including:

- delivering on the Victorian Government's election commitment to ban e-waste from landfill; and
- reducing the impact of plastic pollution on our environment, including banning single use plastic bags.

1.5 Existing programs

The Victorian Government also delivers a range of programs designed to help achieve our waste and resource recovery objectives.

The government is supporting new and upgraded resource recovery infrastructure through:

- the \$13.6 million Resource Recovery Infrastructure Fund, which leverages private investment in infrastructure to increase our capacity to locally process recovered materials
- \$16.5 million to support upgrades to e-waste collection and storage facilities across Victoria, and to deliver a statewide e-waste education campaign
- an investment facilitation service which promotes opportunities for recovery, helps business case development for infrastructure investment and coordinates the investor's relationship across government.

The government is also working to drive demand for recovered resources. This includes:

- the \$2.5 million Resource Recovery Market Development Fund, which will leverage private investment and help develop local markets for recyclable materials
- VicRoads increasing the use of recovered materials, including glass and waste tyres, in construction of roads
- supporting research institutes and end users to partner to identify and test new, innovative uses for these materials.

1.6 Victorian Government waste portfolio

Victorian Government waste portfolio agencies also support waste management and recycling (see Figure 1):

- the seven Waste and Resource Recovery Groups (WRRGs) work with local government and businesses in their regions to identify positive local solutions to waste problems
- Sustainability Victoria (SV) delivers a range of infrastructure investment, market development and waste education programs
- the Environment Protection Authority (EPA) regulates the waste sector to protect public health and the environment
- the Department of Environment, Land, Water and Planning (DELWP) oversees waste and resource recovery policy in Victoria



Figure 1 Recycling sector structure and roles



<p>SERVICE DELIVERY</p>	<ul style="list-style-type: none"> • Local government: provides and procures recycling services • Metropolitan and regional waste and resource recovery groups: coordinate and facilitate the delivery of recycling services
<p>REGULATION</p>	<ul style="list-style-type: none"> • Environment Protection Authority: protects the environment and public health • Local government: undertakes land use planning • Fire agencies: manage fire risks
<p>MARKET DEVELOPMENT</p>	<ul style="list-style-type: none"> • Sustainability Victoria: facilitates and promotes the recycling sector
<p>POLICY AND STRATEGY</p>	<ul style="list-style-type: none"> • Victorian Government: sets strategic policy direction • Federal Government: oversees national waste policy and is responsible for trade between Australia and other countries

2. Current state

2.1 Recycling in Victoria

Over the last 30 years Victorians have become accustomed to recycling, and understand the benefits that recycling provides to communities and the environment. Recycling has become a key service that Victorians use and expect. Our enthusiasm for recycling has helped raise recycling rates. Across all sectors, 67 per cent of waste was recycled in Victorian in 2015-16, which is the second highest recovery rate among Australian states.

There are benefits to the economy, society and the environment from recycling:

- The recycling sector is a significant part of the Victorian economy. The Victorian waste and resource recovery industry has an annual turnover of \$4 billion, provides 12,000 full time equivalent jobs and involves 590 businesses.
- Waste contains valuable materials that can be recovered for reuse, helping preserve resources for future generations.
- Recycling helps avoid the environmental and social costs of using virgin materials in products and disposing of waste in landfill: recycling just one plastic bottle saves enough energy to power a computer for 25 minutes.
- Recycling helps reduce our reliance on landfill: recycling one tonne of paper saves three cubic metres of landfill space.

Victoria generated 12.7 million tonnes of waste in 2015-16, of which 8.5 million tonnes were recovered. Over one million tonnes of municipal waste are recovered each year, mainly through the kerbside recycling system. All 79 Victorian councils have a comingled kerbside recycling service, covering 96 per cent of Victorian households. The key materials recovered from municipal waste are organics, metals, glass, paper/cardboard and plastics (see Figure 2).

Victoria's municipal recycling rate is comparable to the national municipal recycling rate and the Organisation for Economic Co-operation and Development (OECD) average, as shown in Figure 3. However, the OECD average proportion of waste going to landfill is much lower, as many countries combust waste for energy generation.

Figure 2 Recovered municipal waste by material type, Victoria, 2015-16 (tonnes)

Source: Sustainability Victoria (2017)

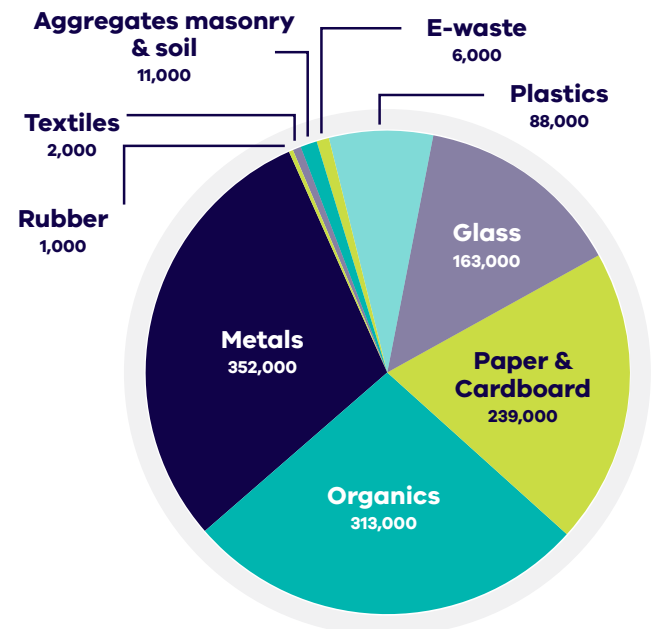
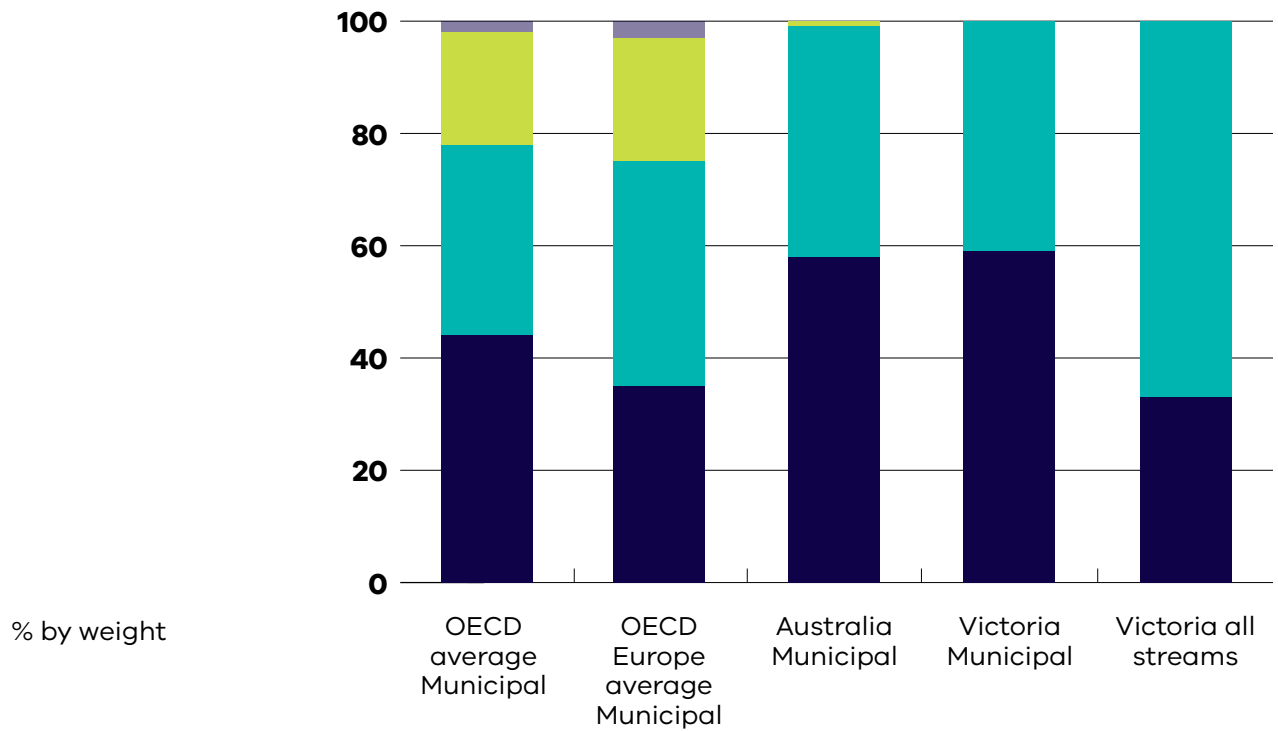




Figure 3 OECD, Australian and Victorian resource recovery and waste disposal

Source: OECD (2015), Sustainability Victoria (2017)



- Other**
- Energy recovery**
- Material recovery***
- Landfill**

*(recycling + composting)

2.2 Recycling sector challenges

2.2.1 Impact of China's trade measures

Victoria's waste needs are growing and becoming more complex. Based on current trends, it is estimated that Victorians will create 20 million tonnes of waste a year by 2045, which is an increase of around 60 per cent. Products and packaging are increasingly being made from complex composite materials that are difficult to recycle.

Over several years, the Victorian Government has established a range of policies and programs to respond to these challenges and reduce our reliance on landfills. However, recent trade measures introduced by China have placed additional pressure on Victoria's recycling system, particularly kerbside services.

From 1 January 2018, China restricted import of a range of low quality or unsorted waste materials, including plastics and paper/cardboard. China now requires imports of these materials to have a contamination rate of 0.5 per cent or less. China has announced further import restrictions over 2018-19.

China previously received 55 per cent of the world's recycled paper and plastic, and global recycling markets are experiencing a major shock: demand and prices for paper and plastic have fallen.

Table 1 outlines the impacts on different recycled material streams. The value of mixed paper/cardboard and mixed plastics has fallen significantly. Higher quality paper, cardboard and plastics have also fallen in value, but reports indicate that these material streams will partially recover in the short-term.

Although the amount of paper and plastic that was exported to China represents a small proportion of total waste recovered in Victoria, the market shock has made a significant impact on local government waste services including Victoria's kerbside recycling system. Mixed paper/cardboard and mixed plastics represent a large proportion of household recycling, and the fall in value of these materials has reduced processors' revenue and impacted the viability of kerbside services under existing pricing arrangements. Significant action is needed to ensure that this change does not result in continued cost increases, through council waste charges.

This is why the Victorian Government has stepped in to help local government and the recycling industry respond to changed market conditions, providing \$13 million in short-term funding to help reset pricing for kerbside services and fast-track industry investment. Kerbside services have continued to operate and household material is continuing to flow through the recycling system. Markets in other countries, mainly south-east Asia, are absorbing some of the paper and plastic displaced by China's trade measures.

While markets continue to fluctuate, there is the potential for increased stockpiling of materials. The Victorian Government has brought in new rules, and is actively auditing recycling facilities, to ensure that materials are stored in a way that minimises risk to public health and the environment.

The recent market shock has highlighted some key factors affecting the resilience of Victoria's recycling sector. There is a need to act in the near-term and long-term to transition to a more resilient sector, ensure recycling services are maintained and the costs for households are minimised. No single solution exists and the sector will need to adjust over the next few years while markets settle and action takes effect.

Key factors that are affecting the resilience of the recycling sector are explained in more detail below. These issues have come through strongly in targeted engagement with local government and industry, and from analysis of the recycling market.



Table 1 Impacts of trade restrictions introduced by China in January 2018 on kerbside recycling^a

Material	Current impacts
Paper and cardboard	<p>Cardboard price has fallen, is anticipated to partially recover</p> <p>Mixed paper price has fallen significantly, is anticipated to recover weakly and remain low</p> <p>Kerbside mixed paper stream is the most affected, as commercial paper/cardboard is better sorted and of higher quality</p>
Plastics	<p>Polyethylene terephthalate (PET) (commonly used in water bottles, soft-drink bottles and food containers) price has fallen, has stabilised and is not anticipated to fall further in the short-term</p> <p>High density polyethylene (HDPE) (commonly used in milk bottles, juice bottles and packaging for personal care and cleaning products) price has fallen, has partially recovered and is anticipated to remain stable in the short-term</p> <p>Mixed plastics price has fallen significantly, is not anticipated to recover in the short-term</p> <p>Kerbside mixed plastics stream is the most affected, as commercial plastic is better sorted and of higher quality</p>
Glass	<p>Not affected by China's restrictions, not exported</p> <p>Glass prices have been very low for many years</p> <p>Glass contaminates processing facilities and other materials, particularly paper/cardboard</p>
Metals	<p>Not currently affected by China's restrictions</p> <p>Aluminium price has increased slightly over the past year and may have partially offset the impact of declines in paper and cardboard and plastic prices</p>

^a Analysis at March 2018 prices

2.2.2 The kerbside recycling system is exposed to commodity market fluctuations

The fall in commodity values for paper and plastic following China's trade restrictions has increased the cost of providing kerbside recycling services across Australia. This has put pressure on service provision under current contractual arrangements, and in many instances has resulted in price increases for households.

Contracts for kerbside recycling services generally have minimal flexibility to adjust to market changes, meaning that the impact of commodity price fluctuations is often borne by one party.

This contractual situation puts pressure on collectors and processors and has led to uncertainty for councils and households about potential disruptions to kerbside recycling services.

2.2.3 Contamination and sorting arrangements can reduce the quality of recycled materials

Low quality, low value materials represent a large proportion of Victoria's kerbside collection system. Cleaner, more homogenous materials have higher commodity values and stronger end markets.

Contamination reduces the quality of recycled materials and has an impact on the viability of kerbside collection services, as it increases processing costs and reduces the value of materials in local and international markets.

Contamination occurs when items that cannot be recycled are placed in kerbside recycling bins by households. Local government and industry have raised that, while Victoria has a good history of recycling behaviour, there is a lack of clear and consistent messaging about recycling and therefore confusion in the community about how to recycle correctly.

Contamination is also caused by methods of sorting and collection. Victoria's comingled kerbside system aggregates paper, metal, plastic and glass, which are sorted after collection. The recycling industry has highlighted the problems caused by glass in the comingled stream: glass can be crushed and become embedded in other materials, particularly paper and cardboard.

Inconsistencies and significant variability in kerbside recycling services and systems between local government areas across Victoria also create confusion and contribute to contamination.

Where materials are contaminated to the point where they cannot be recovered, their value is lost and these are usually sent to landfill, creating further costs for disposal and management.

Contamination can also be exacerbated by the design of products and packaging, which are increasingly made from complex composite materials that are difficult to recycle. This causes confusion for households about what can be placed in kerbside recycling bins, and increases the cost and complexity of processing material.

2.2.4 Issues affecting investment and innovation in the recycling sector

Victoria's current kerbside collection system produces large volumes of lower quality materials, such as mixed plastic and paper/cardboard, which are difficult and costly to sort and process. Previously, there was a strong export market for these mixed materials, but this has weakened following China's trade restrictions. When markets were stronger, there was limited incentive for capital investment in equipment that could sort and process material to a higher quality. Recyclers are now expected to develop new business models and identify new downstream markets. However, given the sudden change in market conditions, it will take time for new technology and infrastructure to be developed.

Entry to the market and investment in capital is highly dependent on the ability for industry to secure long-term supply of sufficient volumes of recyclable material. This can be difficult, particularly in regional areas where population density is lower and higher transport costs impact on the viability of services.

Service providers in regional areas have highlighted that high transport costs have placed additional pressure on their operation, and that their costs are closely related to the proximity of infrastructure for regional transfer and sorting.

Encroachment of sensitive land uses around existing recycling facilities creates uncertainty for the industry and the community, and can limit investment. As populations grow, residential and other sensitive developments have been proposed, and in some cases constructed, within existing resource recovery facility buffers. This has resulted in adverse amenity impacts for local communities, while also placing pressure on facilities to change or cease their operations. It also impacts new investment in facilities.

2.2.5 Ensuring appropriate regulations to protect public health and the environment

Appropriate regulation ensures the safety of public health and the environment, and that the recycling sector operates in line with community expectations.

A fire at a major recycling facility in July 2017, highlighted the risk posed to the community, public health and the environment from the stockpiled combustible materials at resource recovery facilities.

In response to this incident, the Victorian Government established the Resource Recovery Facilities Audit Taskforce to identify stockpiling of materials, audit facilities that pose a fire risk, and take regulatory action to reduce this risk.

To support this, an interim waste management policy was declared requiring facilities to store materials in a manner that minimises risk to human health and the environment.

Stockpiles of combustible material can burn for days, generating hazardous air pollutants (including smoke), oil, runoff and leachate that affect the soil, waterways and air.

The Resource Recovery Facilities Audit Taskforce identified that the resource recovery sector was generally ill-equipped to manage fire risks at facilities.

Due to the ongoing risks presented by stockpiling of recycled materials, the government continues to actively regulate recycling facilities to minimise risk of harm to human health and the environment, and ensure community safety.

2.2.6 Markets for recycled materials can be weak or can be difficult to access

Demand for some recycled materials can be weak because manufacturers may use virgin or imported materials rather than recycled materials. This can be due to price competitiveness or perceptions about the quality of recycled materials.

The recycling industry and manufacturers have raised concerns that there is a lack of standards and specifications to provide assurance on the quality of recycled material, and that costs to create these standards are often prohibitively high. This is a barrier to increased use of recovered resources in products and infrastructure.

When purchasing products, households, business and government do not always have access to information about the recycled content of products and packaging. This limits their ability to buy recycled, that would otherwise create significant demand for material recovery for use in production.

The recycling industry has emphasised the importance of access to strong and diverse end markets for recycled materials as a key component of a resilient resource recovery system.



3. Vision and goals



3.1 The vision

The Strategic Plan addresses the key factors affecting the recycling sector's resilience.

This section sets out the vision for a resilient recycling sector and the goals that need to be achieved to deliver this vision.

Vision: the Victorian recycling sector is resilient.

A resilient recycling sector has the following characteristics:

- the sector can adapt to market disruptions and opportunities, and provide cost-effective services to households that are also safe and reliable
- current resource recovery rates are maintained and built on into the future
- the long-term supply of recycled materials is aligned with demand from downstream markets and uses
- it is part of a waste and resource recovery system informed by circular economy principles, where there is a circular pathway from production, to consumption, to resource recovery (see Figure 4).

A resilient recycling sector is a key part of a waste and resource recovery system that minimises waste generation, maximises resource recovery, and works towards zero waste going to landfill.

Creating a resilient recycling sector, which maintains and builds on current resource recovery rates, will be challenging in the short-term while markets for recovered materials remain volatile.

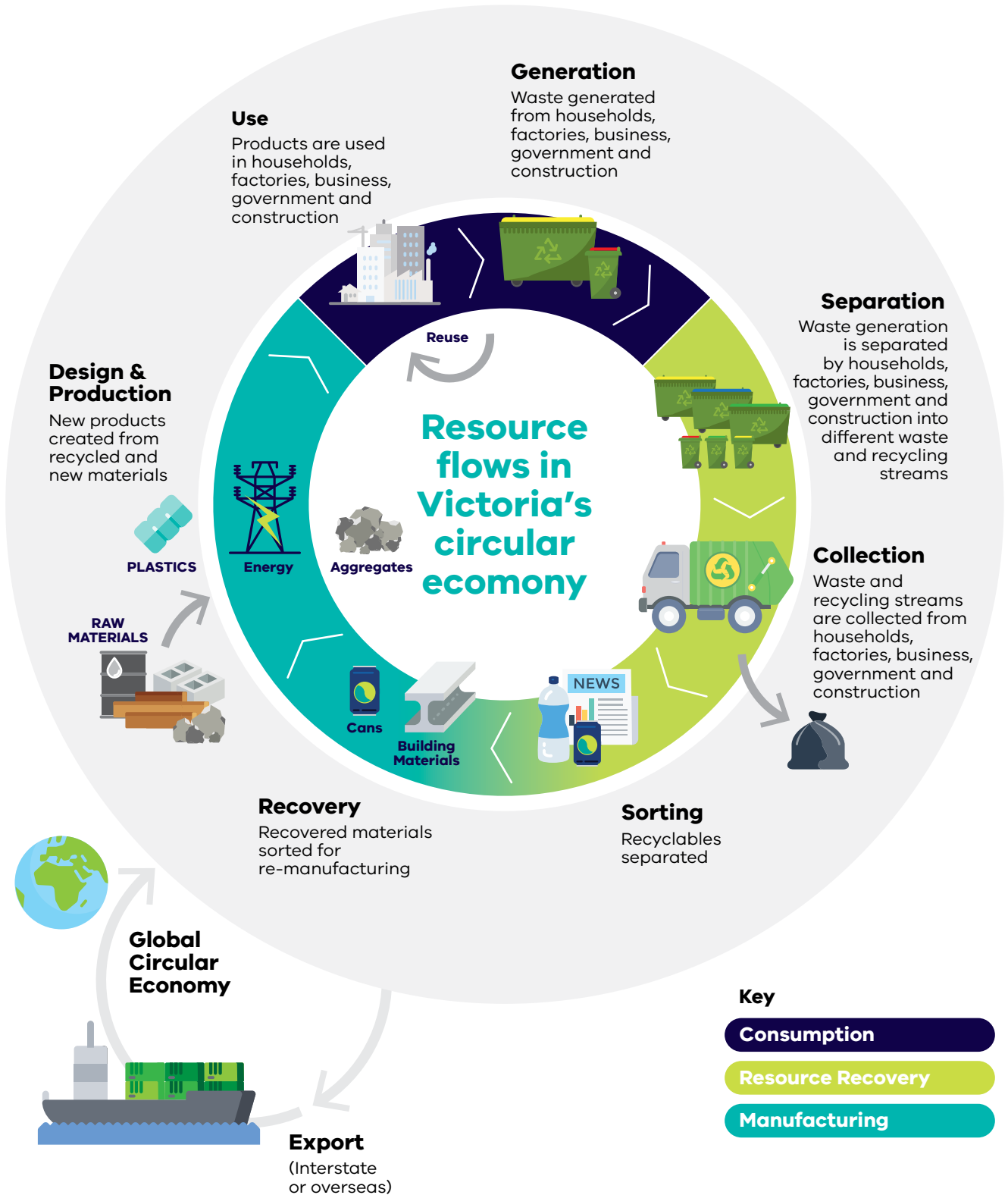
As Victoria's population grows, so too does the amount of waste that we generate. Maintaining our current resource recovery rate of 67 per cent will therefore require recovery of a greater amount of materials each year. Using current estimates, in 2045 we will need to recover 4.5 million tonnes more than we do now. We will therefore also need to focus on reducing the total volume of waste generated.

This Strategic Plan provides the settings to maintain this rate of recovery. It also seeks to ensure recycling services continue to be provided, and to minimise the costs of these services to households and businesses.

Moving towards a future in which zero waste is disposed of to landfill will require ongoing action in the longer term. This will include measures to reduce the amount of waste being generated and disposed of, and to lift resource recovery rates.

The government will outline its broader waste management goals in a whole-of-government circular economy policy and action plan, to be released in 2020.

Figure 4 Waste and resource recovery circular economy



3.2 Goals

The following four goals are key to delivering the vision of a resilient recycling system. Each goal has a set of descriptors that explain what success looks like. The actions to achieve these goals are set out in section 4.

Goal 1. Stabilise the recycling sector

Recycling services continue to be reliable and cost effective for the community.

New and consistent contractual approaches support the development of a recycling sector that is more flexible, and resilient to market changes.

Goal 2. Increase the quality of recycled materials

Consumers make informed and effective decisions about how they recycle, which maximise the value of recycled materials.

Cost effective systems for collection and processing of recycled material provide higher quality material streams that maximise value.

Goal 3. Improve the diversity and productivity of the recycling sector

The recycling sector is competitive, agile, transparent and has appropriate risk dispersal to be responsive to market challenges and opportunities.

The recycling sector is appropriately regulated to ensure a level playing field for all participants, and to protect against risks to public health and the environment.

Appropriate land use planning helps provide certainty for industry and minimises adverse impacts on the health and amenity of communities.

Goal 4. Develop markets for recycled materials

The value and market penetration of recycled products improves as there is more certainty about the quality of recycled materials, so they can be more competitive with virgin resources.

Product and processing innovation and technology improvements drive the increased use of recycled materials.

Government, industry and the community partner, where appropriate, to share responsibility for products throughout their lifecycles, including designing for sustainability.

Products are available that are recyclable and contain recycled material, and consumers make informed decisions to purchase these products.

Governments at all levels lead the market by increasing demand for products that contain recycled materials through procurement approaches where appropriate.

The Federal Government provides leadership, takes action and invests to open up markets for recycled materials, and to minimise waste at the source.





4. Actions

This section identifies a suite of complementary actions that will allow the Victorian recycling sector to achieve the vision and goals set out in section 3. Together, these actions will build resilience in the recycling sector, maintain kerbside recycling services, minimise the costs to households and enable the broader economic and environmental benefits of recycling to be realised.

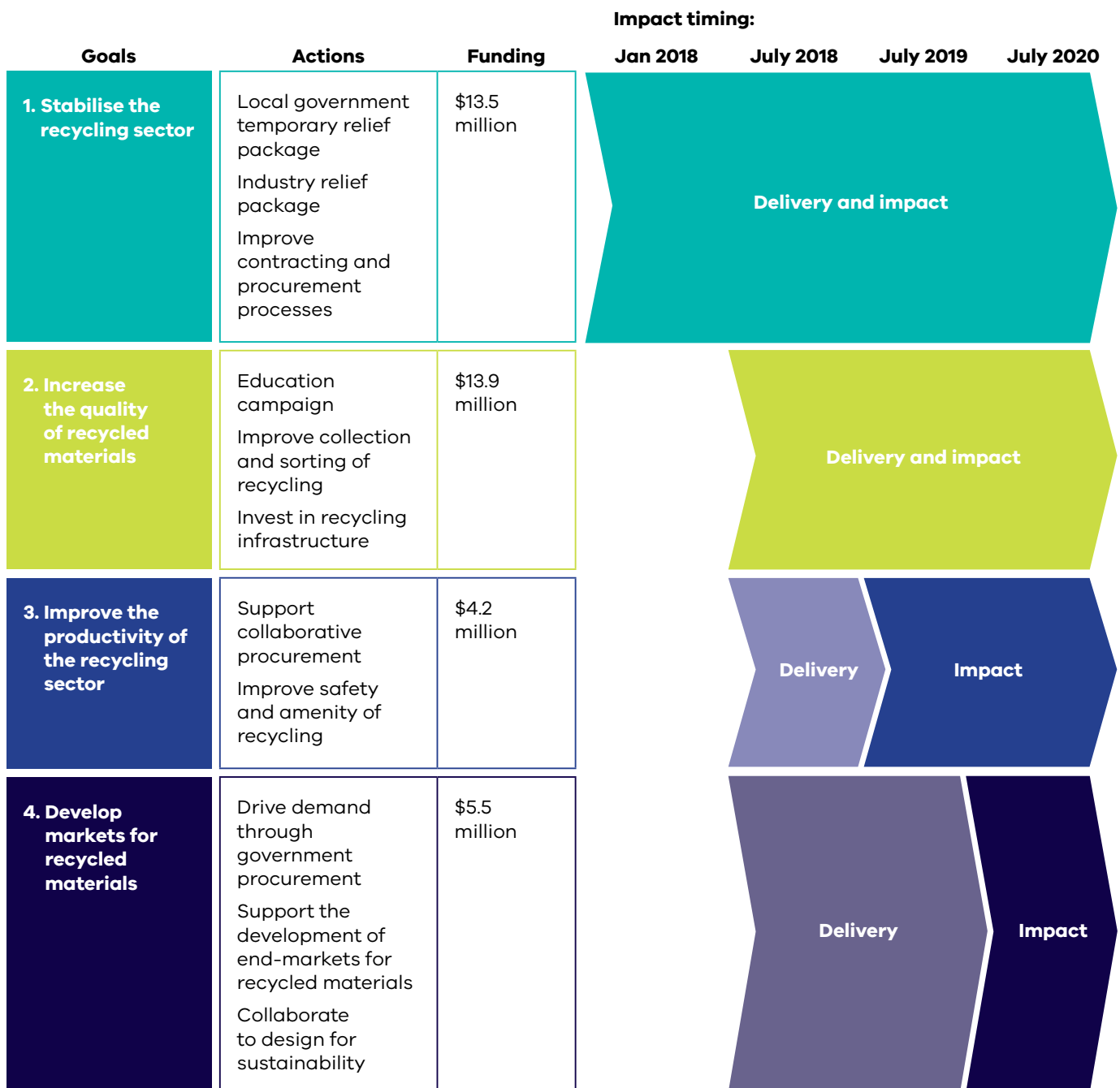
Figure 5 (across) shows the actions under Goal 1, to stabilise the recycling sector, that are already underway. Those relating to Goal 2, increasing the quality of recycled materials, will begin immediately as these are considered high priority and can make a difference over the next one to two years. Actions under Goals 3 and 4, relating to sector productivity and end markets for materials, will also begin soon and will impact over the longer term. For more detail about the timing of the delivery and impact of the actions see Figure 7.

These actions will be delivered by all sector participants, consumers and waste producers, the resource recovery industry and manufacturers, and government.

This section explains the key role that government will play in supporting the delivery of these actions, including in relation to timing, responsibility and funding commitment.



Figure 5 Goals, actions and funding



Goal 1. Stabilise the recycling sector

Action 1.1 Support local government and industry to transition to new contract arrangements for recycling services

The Victorian Government has provided a \$13 million package for councils and industry to support the ongoing kerbside collection of household recyclable waste.

The Victorian Government has provided \$12 million in temporary relief funding to local government to cover a portion of price rises in kerbside collection services between 1 March and 30 June 2018. Councils have also been offered commercial or legal advice to assist in contract renegotiation if required.

This funding is supporting local government to meet immediate cost pressures resulting from China's trade measures, and ensures that kerbside collection services are maintained.

The Victorian Government has also allocated \$1 million in short-term relief funding to the recycling industry to assist the transition to new market conditions. Grants of up to \$500,000 have been made available, with works to be contracted by 30 December 2018.

This funding will help fast-track development of new infrastructure that improves the quality of recovered paper, cardboard and plastic.

Lead: Local Government Victoria (LGV), Sustainability Victoria

Partners: Local government, recycling industry, Municipal Association of Victoria (MAV)

When: 2018

Action 1.2 Improve contracting and procurement processes used by local government for recycling services

LGV and the state's Waste and Resource Recovery Groups (WRRGs) will partner with MAV and local government over 2018 and 2019 to develop more flexible, consistent and transparent contracting for recycling services and undertake contingency planning. This is aimed at providing clarity and certainty for the community, a more diverse recycling industry and greater resilience to market changes.

LGV, the WRRGs and MAV will work with local government to build capacity and develop resources to support best practice contracting of recycling services. This will include development of:

- model clauses for contracts, including on the transparent exchange of market and other information
- variable pricing models, allowing recycling service prices to vary within a contract based on contamination levels and/or changes in value of recycled commodities.

Greater flexibility and transparency in contracting will support councils to continue providing recycling services to their communities. The risk of service disruption and contract termination will be reduced by ensuring the profits or losses associated with contamination or recycling market fluctuations are appropriately shared between service providers and councils. Sharing of information will enable service providers and councils to better assess ongoing risks and effective delivery of services.

This action will be supported by the new approaches to collaborative procurement of recycling services included in Action 3.1.

Over time, this action will reduce market volatility - as experienced with China's trade restrictions - and improve competitiveness of the market, minimising the costs of recycling services for households.

The metropolitan WRRG, in collaboration with regional WRRGs, will work with councils to improve contingency planning for potential recycling service disruption. This will include:

- development of model contingency plans for councils, led by WRRGs
- establishment of a contingency panel for rapid emergency service provision in the case of recycling service disruptions.

Good contingency planning will minimise the impact on communities in the event of a disruption to recycling services.

Improved contracting and procurement processes for recycling may be expanded to other waste streams in the future and deliver additional benefits.

Lead: LGV, MWRRG

Partners: WRRGs, MAV, local government

When: 2018 to 2019



Goal 2. Increase the quality of recycled materials

Action 2.1: Educate the community about recycling

Sustainability Victoria will deliver a three year statewide education program to equip the community with information on recycling effectively. This will include a campaign focussing on how best to recycle in households.

A state-wide communications and education campaign will provide clear, consistent information to the community on how to recycle effectively and how purchasing decisions can support the recycling sector.

The first part of the program will feature simple core messages about how to recycle effectively, aimed at reducing contamination and improving the quality of recycling materials.

The program will also consider complementary messaging on reducing waste and how to support recycling through smart purchasing decisions.

The campaign will also be integrated with existing education programs, such as ResourceSmart Schools. State and local government will collaborate to ensure that the campaign aligns with and is supported by local government messaging.

Lead: Sustainability Victoria

Partner: WRRGs, local government, MAV

When: 2018 onwards

Action 2.2 Improve collection of recycled materials

DELWP will assess how different options for improving kerbside collection services, including greater separation of materials at the source and consistency of services across Victoria, could drive improvements in the quality and value of recycled materials.

The Victorian Government will work with the recycling industry, local government and the community to improve collection systems to increase recycling efficiency and the quality of recycled materials.

With additional investment in collection and recovery, improved sorting will enhance the quality and value of recycled materials by producing more homogenous, uncontaminated material streams. Importantly, this can result in more end market options and more revenue for these materials.

Through better collection systems, these downstream benefits will offset the up-front costs of new collection systems.

The government will undertake an assessment of different segregation approaches to kerbside recycling, to improve the quality and consistency of the recycling collected at the kerbside.

This will assess options for source separation of recyclable materials, including different combinations of separating glass, paper, cardboard and plastics in kerbside recycling.

The assessment will also consider options for greater consistency in how recycling occurs across Victoria. Consistency can help to promote a more competitive kerbside collection system, support the community to recycle more effectively and assist education programs to be successful.

In consultation with stakeholders, the assessment will consider the costs, benefits and implementation challenges of different approaches to sorting recyclable material and reducing contamination.

In considering options for improving material quality, it is important to determine the most cost-effective measures for sorting materials along the value chain, in households, during collection, or in sorting and processing infrastructure (see Figure 6).

For this reason, when investigating kerbside separation systems, it will be important to consider how the options for source separation interact with education programs and with the investment in sorting infrastructure at material recovery facilities at Action 2.3. Future investments made under Action 2.3 will need to take into account the alternative benefits of sorting earlier in the value chain.

The results of this assessment will also be used to inform the improved contracting and procurement approach discussed in Action 1.2.

Lead: DELWP, Sustainability Victoria

Partners: Recycling industry, local government, MAV

When: 2018 to 2019

Action 2.3 Invest in recycling infrastructure to ensure market readiness of recycled products

The Victorian Government will provide targeted financial support for infrastructure investment to help the sector to transition to changed market conditions.

- Sustainability Victoria will deliver a further two-year infrastructure investment program aimed at improving the value of recycled material through better collection, sorting and processing.
- This program will supplement the \$1 million already provided for urgent works and the \$13.6 million Resource Recovery Infrastructure Fund.
- This program will also consider priority regional infrastructure projects to specifically address the additional cost impacts faced by regional Victoria in delivering recycling services.

The recycling industry is principally responsible for investment in infrastructure to process material for end markets. The government is providing targeted assistance to help the sector to respond to changed market conditions.

This will be implemented by expanding the Resource Recovery Infrastructure Fund.

This action builds on the short-term relief funding (Action 1.1) and will leverage significant private investment in infrastructure that reduces contamination of recycling streams,

including new or upgraded sorting systems or advanced processing technologies.

Improving the quality of recycled materials, particularly mixed plastics and paper, will increase opportunities for sale and potentially allow access to higher value markets. It will also support manufacturing and other production that uses recycled materials. Importantly it will also help ensure that Victoria is equipped to manage the increased volumes of waste produced by our growing population.

To ensure the benefits of infrastructure investment are delivered across Victoria, this program will also consider proposals for regional infrastructure projects. This will help address the cost pressures faced by regional councils associated with transport of recyclables, and associated issues with access to infrastructure.

This process will be informed by the *Statewide Waste and Resource Recovery Infrastructure Plan* and *Regional Waste and Resource Recovery Implementation Plans*. Where appropriate the plans will be amended to reflect the current state of the sector and future infrastructure needs.

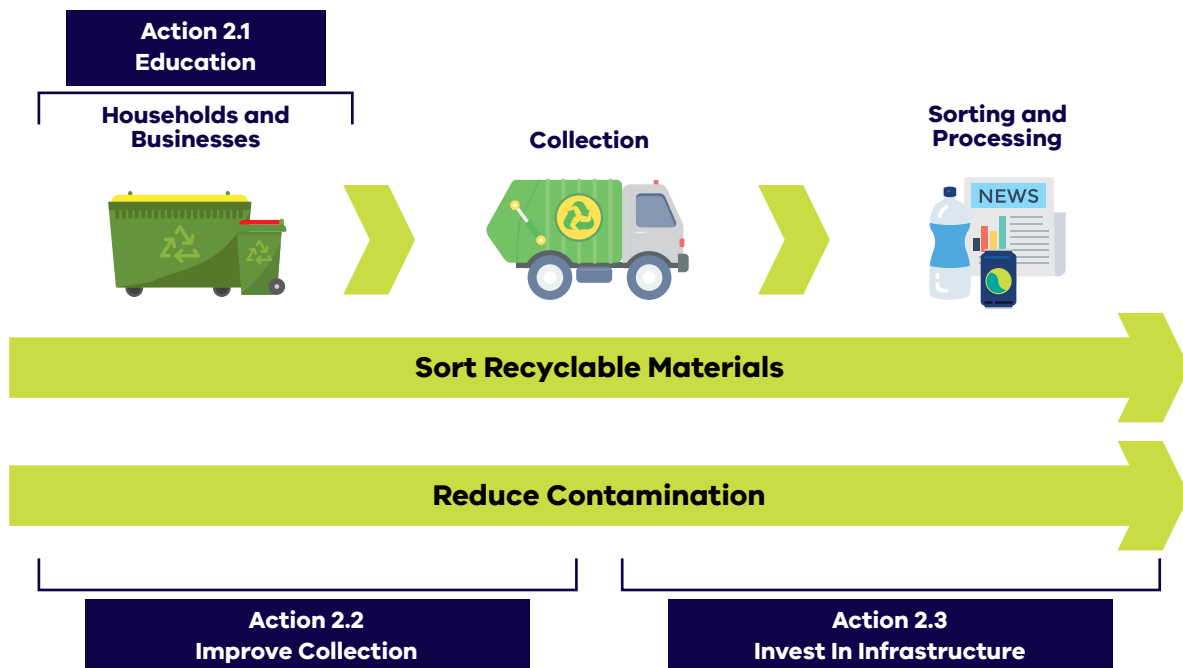
Lead: Sustainability Victoria

Partners: Recycling industry, WRRGs, local government

When: 2018 to 2020

Figure 6 shows how Action 2.1, 2.2 and 2.3 work together to deliver the goal of increasing the quality of recycled materials.

Figure 6 Actions to increase the quality of recycled materials



Goal 3. Improve the productivity of the recycling sector

Action 3.1 Support collaborative procurement of recycling services

To promote greater participation in the recycling sector WRRGs and LGV will facilitate collaborative procurement of recycling services.

MWRRG and LGV, in collaboration with regional WRRGs, will work with councils to facilitate collaborative procurement of recycling services where appropriate.

Collaborative procurement of recycling services can provide strong benefits for industry service providers, councils, households and businesses.

Benefits include:

- reduced tendering and contract management costs for local government
- the opportunity to drive down the costs to local government of providing recycling services, and pass on cost savings to ratepayers
- offering larger recycling volumes to market provides economies of scale and greater certainty for industry, which encourages investment in infrastructure and technology, and can attract new entrants to the Victorian recycling sector.

There are also longer term benefits to the sector arising from the certainty of supply of large volumes of recycled material, and the entry of new sector participants, including greater competition, improved redundancy and enhanced productivity through investment in new systems and technology.

Lead: MWRRG, LGV

Partner: Recycling sector

When: 2018 and ongoing

Action 3.2 Improve safety and amenity of resource recovery facilities

Government will act to reduce risks to public health and the environment from resource recovery facilities.

The Resource Recovery Facilities Audit Taskforce identified that the resource recovery sector needs to be better equipped to manage fire risks at facilities, and recommended a range of interventions to reduce these risks.

The Victorian Government will implement the recommendations of the Resource Recovery Facilities Audit Taskforce. Key actions include:

- development of a Waste Management Policy (Combustible Recyclable and Waste Material) to ensure that the fire risks continue to be managed to reduce the impacts to human health and environment
- review of the legislative framework to identify gaps and ensure that regulators including the Environment Protection Authority (EPA), fire services and local government have appropriate powers and clarity for regulatory decision-making
- ongoing monitoring, surveillance and regulation of the sector to reduce risks from resource recovery facilities and stockpiled combustible materials (including recyclables)
- encouraging industry leadership to address risks, including through accreditation systems, codes of practice, training and contingency planning
- improving information on sites that store combustible material
- advocating for national solutions where appropriate.

A more detailed action plan for the implementation of the Resource Recovery Facilities Audit Taskforce will be published shortly.

The government will also work to improve the use of buffers around recycling facilities in the land use planning system, to protect communities from amenity impacts and increase certainty for the recycling industry.

Lead: EPA

Partner: Melbourne Fire Brigade, Country Fire Authority, DELWP, Emergency Management Victoria, WorkSafe, local government

When: 2018 to 2021

Goal 4. Develop markets for recycled materials

Action 4.1 Drive demand for products containing recycled materials through government procurement

The Victorian Government will support the market by increasing demand for recycled content and products in government procurement.

- Sustainability Victoria, in consultation with the Department of Treasury and Finance, will assist government departments and agencies to identify opportunities to increase procurement of recycled content and products (including, where appropriate, developing their own commitments and targets).
- Consistent with the sustainable procurement objectives in Victoria's Social Procurement Framework (SPF), the Department of Treasury and Finance will work with Sustainability Victoria to develop guidance materials covering the procurement of recycled content and products.

The Victorian Government will also support local government to drive increased procurement of recycled content and products.

Sustainability Victoria, in consultation with the Department of Treasury and Finance, will work with departments and agencies across government to:

- review product categories, to identify significant opportunities for positive procurement strategies, that can increase the procurement of products containing recycled content
- identify priority products and applications containing recycled content for consideration in government purchasing
- assist departments and agencies to develop their own targets and commitments, where appropriate, for increased procurement of recycled content and products.

The SPF includes requirements for Victorian Government departments and agencies to consider recycled content when undertaking procurement activities. The Department of Treasury and Finance, in consultation with Sustainability Victoria, will develop tools and guidelines that complement this framework to identify opportunities to use recycled content and products where appropriate.

LGV will work with local government and MAV to update local government Best Practice Procurement Guidelines to encourage the procurement of recycled content and products, where available. This will be supported by a Model Procurement Policy developed by the MAV.

Lead: Department of Treasury and Finance and Sustainability Victoria

Partners: Victorian Government Purchasing Board, LGV, MAV, Victorian government departments and agencies, local government

When: 2018 to 2021



Action 4.2 Support the development of end-markets for recycled materials

Sustainability Victoria will deliver a two-year program to leverage and facilitate:

- research and development to drive innovation in design and production of products made from recovered materials
- accredited standards and specifications for recycled materials
- investment in secondary and tertiary processing of recycled material
- manufacturing and other industries to use recycled materials locally.

The Victorian Government will increase investment in research and development for design and production using recycled materials.

The government will work with business and the Federal Government to update existing, or develop new, standards and specifications. This will increase consumer and business confidence in the quality and safety of recycled content in products, and support the scaling up of new or existing products.

Combined, these efforts will encourage the development and commercialisation of recycled content products, which will increase demand for recovered resources within Victoria and strengthen end markets.

This action will build on the Resource Recovery Market Development Fund, contribute to delivering the *Victorian Market Development Strategy for Recovered Resources*, and strengthen and expand the end markets for the Victorian recycling industry.

In addition, the Victorian Government will develop a whole-of-government waste policy that will transition Victoria towards a circular economy. The policy will provide long-term direction and certainty for Victoria’s waste and resource recovery industry.

Lead: Sustainability Victoria, DELWP

Partners: Research institutions, manufacturing and construction sectors, Federal Government

When: 2018 to 2020

Action 4.3 Industry and government collaboration to accelerate the design of products and packaging for sustainability, develop standards for products and access foreign markets

Victoria will work with the Federal Government to:

- increase the proportion of products and packaging that are made with recycled and recyclable content
- develop Australian Standards for products and materials with recycled content which will lower barriers to recycled material competing with virgin material
- undertake proactive measures to ensure that foreign markets for Australian recycled materials and goods are accessible and grow over time.

State and Federal government must work together with business and the recycling sector to strengthen shared responsibility for products and packaging throughout their life-cycles.

In April 2018, Federal and state environment ministers agreed on several actions to reduce waste and increase our domestic capacity for recycling, including:

- bringing forward the update of the National Waste Policy, which will include circular economy principles, to the end of 2018
- working with the Australian Packaging Covenant Organisation to make 100 per cent of Australian packaging recyclable, compostable or reusable by 2025 or earlier.

The Victorian Government will seek to work with state and Federal governments to strengthen voluntary, co-regulatory and mandatory product stewardship arrangements.

Product stewardship schemes distribute responsibility for the life-cycle of products and packaging among producers, sellers, users and disposers. The Federal Government’s upcoming review of the *Product Stewardship Act 2011* provides an opportunity to evaluate the effectiveness of existing schemes and to build on their strengths.

The Victorian Government will partner with the Federal and other state governments and work with the Australian Packaging Covenant Organisation to be more ambitious in the areas of labelling and design of new products, and in discouraging use of complex composite products that are difficult to recycle and cause contamination. This may include adopting standards to ensure that mixed material

products and packaging can be easily dismantled and recycled, and that products are made from plastics that are practical to recycle.

A recycled content labelling scheme has the potential to encourage shared responsibility among producers and consumers, encourage producers to use more recycled content in packaging, and provide better information to consumers to inform purchasing decisions.

The Victorian Government will seek to collaborate with Federal and state governments to jointly invest in research and development to drive innovation and develop domestic markets for products made from recovered materials. This builds on Action 4.2.

In addition, the Victorian Government will seek that the Federal Government makes significant effort to:

- develop Australian Standards for products and materials utilising recycled content, where this would enable greater access to markets
- implement policies and programs which promote an increase in the proportion of products that are made with recycled and recyclable content
- proactively seek access to foreign markets for Australian materials and goods containing recycled content, including establishing terms of trade which allow industry greater confidence in the ongoing export of recycled goods and materials
- take a strong position in international forums on the need for greater certainty regarding the trade of recycled materials in global markets and how trade measures should support this. This is of particular importance in relation to further recycling import restrictions announced by China and trading partners in Southeast Asia
- implement a Federal Government recycled content and products procurement framework for its departments and agencies.

Collectively these efforts will increase the proportion of products and packaging that are made with recycled and recyclable content, strengthen demand for recovered resources, grow domestic markets for products with recycled content, and create opportunities and certainty for industries exporting to foreign markets.

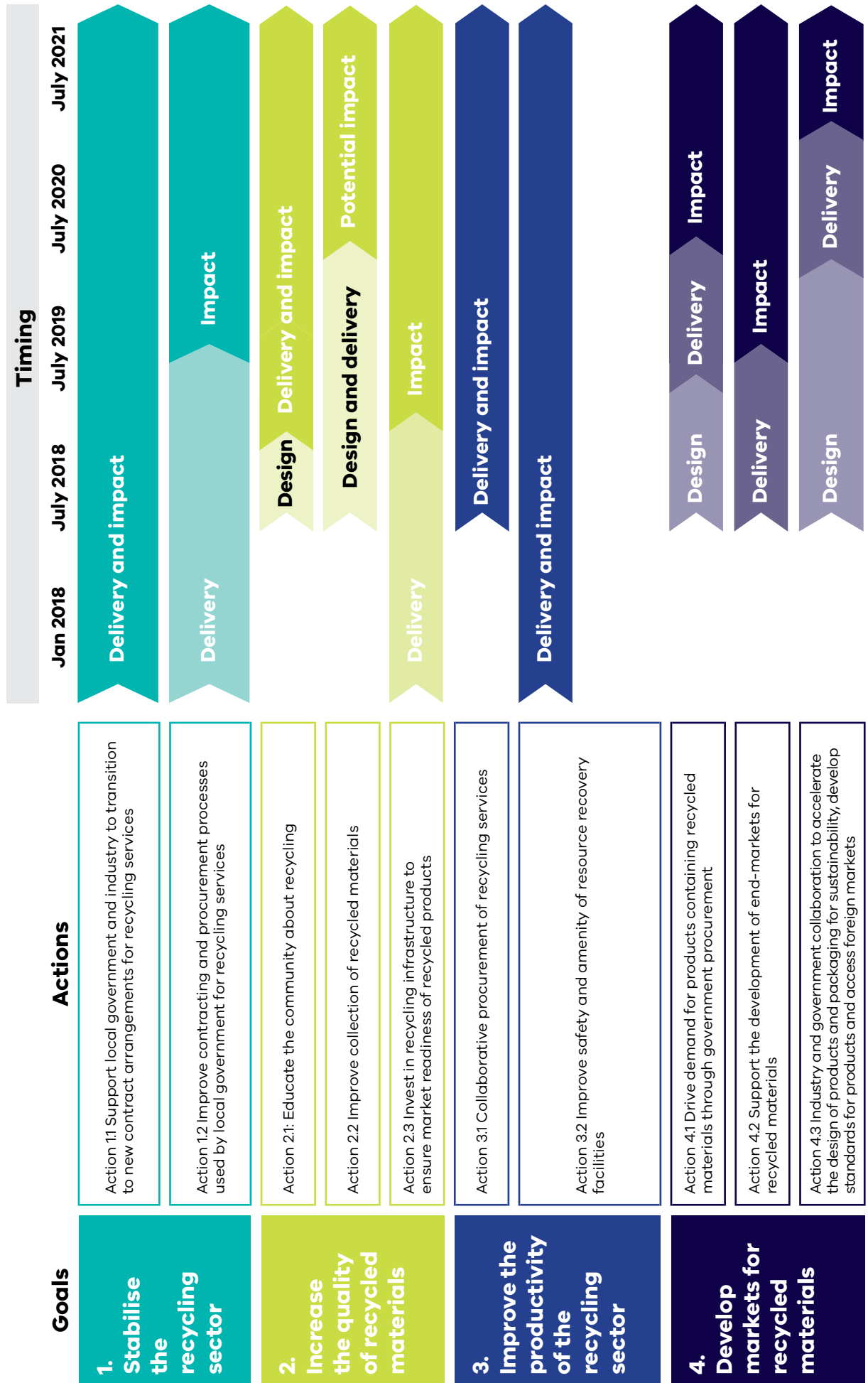
Lead: Federal Government

Partners: State governments, industry associations and non-government organisations

When: Ongoing

Figure 7 on the next page, shows the timing of the design, delivery and impacts of the actions included in the Strategic Plan.

Figure 7 Action delivery



Further information

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Local Government

Contact your local council or

visit knowyourcouncil.vic.gov.au

