

Sparking the Circular Economy in Melbourne's Manufacturing Industry

EXAMPLES AND EXPERIENCES FROM 25 LEADING VICTORIAN BUSINESSES

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SUMMARY

Monash University, in partnership with the South East Melbourne Manufacturers Alliance (SEMMA), and funded by Sustainability Victoria, is investigating the status of the Circular Economy (CE) adoption in Victoria's manufacturing sector. Through the project, we aim to:

- Establish the extent of relevant circular economy practices (waste prevention, reuse, remanufacture, and upcycling) being implemented by businesses and their tier-one suppliers, across four manufacturing sub-sectors in South East Melbourne, and how effective they are in delivering circular economy outcomes.
- Identify and develop practical approaches for manufacturing businesses to adopt circular economy strategies and practices, where their implementation will lead to a reduction of waste by up to 20% in their operations and tier-one suppliers.
- Identify potential barriers and challenges to adopting these new approaches and identify how these can be overcome through education, training, mentoring, and other support services for businesses and their tier-one suppliers.

This report presents the findings of phase one of the project. We identify 25 leading and celebrated CE businesses in Victoria, and undertook in-depth interviews to explore their experiences and outcomes. Through the interviews we discovered:

- Drivers for CE adoption
- Benefits of adopting CE strategies and practices
- Critical success factors for effective CE implementation
- Barriers and challenges for the implementation and spread of CE
- Key learnings for others' adoption of CE strategies and practices

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ACKNOWLEDGMENTS

The project is completed in a partnership between a team in the Monash Business School, Monash University, and the South East Melbourne Manufacturers Alliance (SEMMA).

The project is funded by Sustainability Victoria.

We are very appreciative of the availability and insights of Victoria's leading circular economy businesses who participated in this phase of the project.

PART 1 BACKGROUND

Researchers in Monash University's Monash Business School, in partnership with the South East Melbourne Manufacturers Alliance (SEMMA), and funded by Sustainability Victoria, are investigating the status of the Circular Economy (CE) adoption in Victoria's manufacturing sector. Through the project, we aim to:

- Establish the extent of relevant circular economy practices (waste prevention, reuse, remanufacture, and upcycling) being implemented by businesses and their tier-one suppliers, across four manufacturing sub-sectors in South East Melbourne, and how effective they are in delivering circular economy outcomes.
- Identify and develop practical approaches for manufacturing businesses to adopt circular economy strategies and practices, where their implementation will lead to a reduction of waste by up to 20% in their operations and tier-one suppliers.
- Identify potential barriers and challenges to adopting these new approaches and identify how these can be overcome through education, training, mentoring, and other support services for businesses and their tier-one suppliers.

This report presents the findings of phase one of the project. We identify leading and celebrated CE businesses in Victoria, and undertook in-depth interviews to explore their experiences and outcomes. Here, we present these initial findings that establish the extent and experience of CE strategies and practices implemented by businesses across four manufacturing sub-sectors (i.e., plastics, textiles, general engineering, and food). The findings inform the project's subsequent phases in developing seminars and workshops to facilitate other manufacturing businesses to adopt, scale, and spread circular economy strategies.

The interview sample represents 25 leading CE adopters who generously volunteered their time to share their knowledge, primarily representing the four industry types targeted by the project. These participating CE leaders are characterised in Table 1. We have categorised each business as either:

- i. A business with CE built-in from inception
- ii. Businesses using 'waste' as a resource
- iii. Adoption of CE into linear business model

In this summary report, we focus on the dominant themes that emerged across the interviews. These themes have created a central narrative, though it is important to note there is greater levels of nuance and insight which will be used as the foundation for the seminars and workshops in the later phases of the project. The central narrative is signalled as:

- Drivers for CE adoption
- Benefits of adopting CE strategies and practices
- Critical success factors for effective CE implementation
- Barriers and challenges for the implementation and spread of CE
- Key learnings for others' adoption of CE strategies and practices

Through the remainder of the report we will briefly elaborate on each of these signal points in the central CE narrative.

TABLE 1: LEADING CIRCULAR ECONOMY BUSINESSES

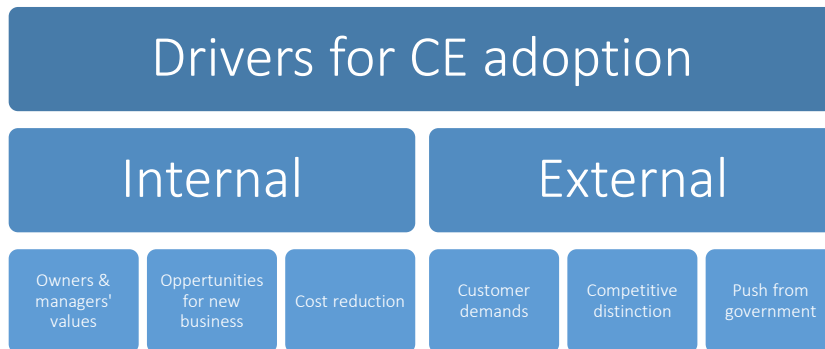
| Company | Interviewee | Industry | Business operation CE built into |
|--|--|-------------------------------------|---|
| CE built-in from inception | | | |
| – A.BCH | Founder | Textile | A circular fashion label |
| – Biersal Brewery | Founder | Food | Brewing operation |
| – BuildFit | Founder | Manufacture/Construction | Validating waste into public infrastructure |
| – Close the Loop | Founder | Sustainable/CE solutions | Manage take-back, recovery, and reuse programs |
| – Grainstone | Founder | Food | Advanced food ingredients |
| – Precious Plastic Melbourne | Founder | Plastics | Machines for repurposing/recycling plastic waste, manufacture products from recycled plastic |
| – Retub | Founder | Plastics | Single-use plastic reduction |
| – Smart Recycling | Founder | Recycling and Pallets | Transforms waste into pallets and building products |
| – BXB Technologies | Founder | CE park | Proposed CE park in Hastings |
| – Textile Recyclers Australia Pty Ltd | Founder | Textile | Upcycling and recycling of clothes. |
| – Unpackaged Eco | Founder | Cleaning and personal care products | Zero waste shopping |
| – Upparel | Founder | Textile | Clothes and textile upcycling |
| Businesses using ‘waste’ as a resource | | | |
| – Casafico | Managing Director | Building materials | Waste processed into building products |
| – Egans Asset Management | Founder | Furniture | Sustainable office workstations/furniture |
| – IM Group | General Manager | Automotive/Mechatronics | Remanufactured automotive mechatronics components |
| – Interface | Sustainability Manager | Textile | Reentry carpet take back program provides EOFL (End of First Life) solutions through reuse and reprocessing into new products |
| – Road Maintenance Pty Ltd | Owner/ Managing Director | Road construction | Using plastic waste and old tyres for road construction |
| Adoption of CE into linear business model | | | |
| – Arrow MPS | Founder | Mechanical | Machines developed for circular solutions |
| – Busy Bee Brushware | Sales & Office Manager | Brushware | Manufacturing of industrial brush-ware. |
| – Fortress Resistors | Managing Director | Electronics | Design and manufacture of power resistors |
| – Integra Systems | Commercial Director | Engineering | Product Development & Manufacturing |
| – Jardan | Operations Manager & IT Manager | Furniture | Furniture manufacturing |
| – Sensient Technologies | Director of Operations | Food | A developer of food colouring and flavours |
| – Successful Endeavours | Founder | Electronics/Design | Design and manufacture of electronics |
| – WE-EF Lighting | Head of Operations & Sustainability Ambassador | Electronics | Manufacture high-quality lighting |

PART 2 CENTRAL CE ADOPTION AND EXPERIENCE NARRATIVE

In this part, the central narrative is presented. For each, the key themes are presented in figurative format, with a selection of exemplary quotes.

1 DRIVERS FOR ADOPTING CE STRATEGIES AND PRACTICES

The key drivers for adopting CE strategies and practices could be divided into internal and external motivated, with the internal drivers (from within the business and leadership team) dominating.



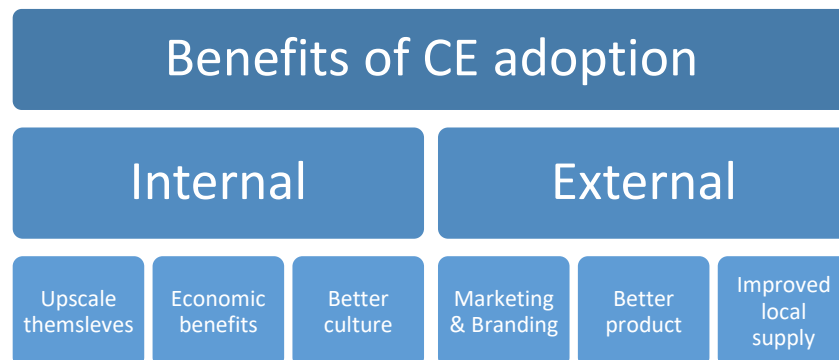
"We've started it because we genuinely want to make a difference"

"Historically, it's been about cost control. Now, it's being driven by our customer base"

"The circular economy has always been driven by values from the ground up"

2 BENEFITS OF ADOPTING CE PRACTICES INTO BUSINESS OPERATIONS

Participants noted many benefits of adopting CE strategies and practices. These are grouped under benefits internal to the company and external stakeholders.



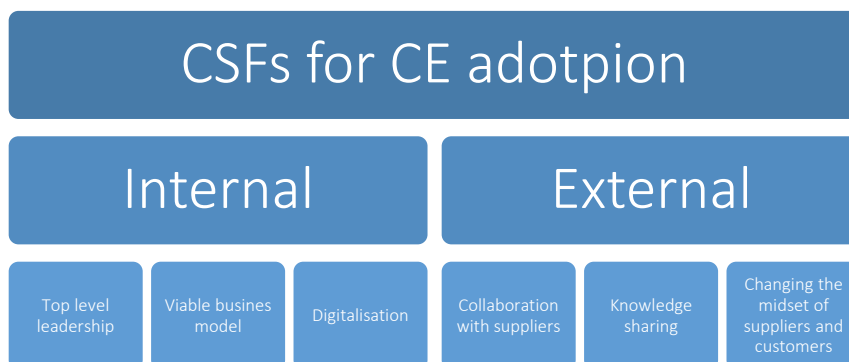
"It's certainly got a benefit for the people that work here, understanding that they are in that environment"

"We're not just telling a story, we're telling a story and creating a value proposition, which is a marketing exercise as well"

"Keep the price the same and just have the ultimate product, which is pretty much what we've done"

3 CRITICAL SUCCESS FACTORS FOR EFFECTIVE IMPLEMENTATION OF CE

The critical success factors (CSFs) for successful CE implementation, scaling, and spreading were also categorised into internal and external aspects.

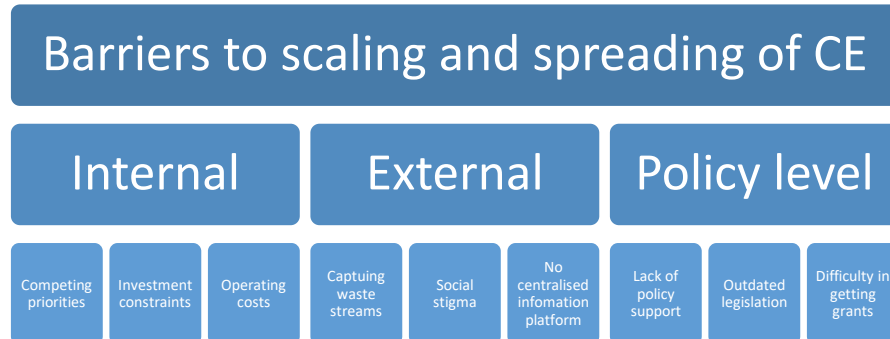


"Probably because we want to improve the profitability of the business, efficiency of business. Those sorts of things are important to the moment, given we've been through a couple of really difficult years"

"The stigma is, if it's recycled, it must be poor quality. That is nonsense, and it should not stop procurement"

4 BARRIERS OR CHALLENGES TO SCALING AND SPREADING OF CE

While being CE leaders, many of the businesses still faced barriers or challenges to adoption, scaling, and spreading of CE. These were categorised as internal, external, and policy level attributes.



“To truly make an impact, we have to demonstrate that sustainability equals success, both environmental impact and commercial success”

“This is where we see circular economy as being very much a collaborative initiative. We cannot develop a circular economy model for our products alone”

5 LEARNINGS SHARED BY THE LEADING BUSINESSES IN ADOPTING CE

Below are learnings shared by the interviewees to other businesses looking to start their circular journey.

- **Update Process Vision:** Each business producing a product should build circularity, including repurposing or recycling into the product.
- **Extend Circularity to the Supply Chain Level:** Redesign the business model - Take a systems approach and build circularity into the whole supply chain.
- **Be part of CE value chain:** Ensure that there is financial viability to the business model. It is crucial for businesses to be profitable to sustain the idea that will create a CE.
- **Ensure Visibility:** Be transparent and genuine in what you do in the CE space. Demonstrate to others what you do.
- **Communicate Your Understanding of CE Value Creation:** Help people understand the value of what they are contributing to as a part of CE space.
- **Be an Active Contributor to CE Ecosystem:** Create networks of like-minded communities. Engage with others in collaboration and knowledge mobilisation on best practices in CE.

PART 3 CONCLUSION

Victoria is the home of a number of leading CE businesses. While the number is small, these businesses are great models of what can be achieved, and their experiences provide both insights and guidance for other businesses about to start the CE journey.

The participant leaders were at different maturity levels on their circular journey. Circular start-ups and companies that have transformed their traditional linear business models to circular models demonstrate mature CE strategies, and others were on the journey to circularity.

The central narrative demonstrates that the leading CE efforts are driven by leaders' values and passionate customers, while top-down policy facilitation is just starting to emerge. While each of the leading CE businesses have faced some barriers and challenges, they have largely overcome these to provide a range of benefits to their supply chain participants, and their communities.

The narrative, while celebrating the success of the leading CE businesses, provides valuable insights for those about to start their circular journey. The narrative is not the path, though sensitises businesses to key considerations for the first steps along the path. The findings facilitate the project's next phase that promotes awareness and capability to adopt CE strategies in manufacturing businesses in Southeast Victoria through seminars and workshops.

PARTICIPATING LEADING CIRCULAR ECONOMY BUSINESSES

A.BCH

ARROW
Machines | Parts | Service



BuildFit

Busy Bee
BRUSHWARE

BXB
TECHNOLOGIES

casafico



Close the Loop

EGANS
A SHEET IN THINKING

WISE
OFFICE RECYCLING
PROGRAM

F **FORTRESS**
RESISTORS

GRAINSTONE

IM Group
innovative mechatronics

Integra Systems
Make your vision real

Interface

JARDAN



rētub
reuse. retub.

RM
Road Maintenance P/L

SENSIENT

SMART
RECYCLING

successful
ENDEAVOURS

Textile Recyclers
Australia Pty Ltd.

UNPACKAGED

UPPAREL

we-ef

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