

INSIGHTS FROM CIRCULAR BUSINESSES

2021



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Circularity is on the rise. Leading businesses understand the imperative to transition their business models to future-proof their companies in the face of looming resource constraints and society's growing inability to manage its waste. This report unpacks the nature of the transition at the company level. It is based on research conducted in 2015 and then in 2021 of companies pursuing circular innovations. The research was commissioned by the National Zero Waste Council, an initiative of Metro Vancouver, which brings together governments, businesses, and NGOs to advance a waste prevention agenda that maximizes economic opportunities for the benefit of all Canadians. In 2021, the Council published the Circular Economy Business Toolkit, which includes case studies of six businesses pioneering in the circular economy (see side bar).

This companion report looks across the case studies to unearth insights and lessons to innovate and scale circular economy business models. Several key themes were identified. They are summarized below.

CASE STUDIES

Enterra Feed Corporation	BMW Share Now
Enviro Image Solutions	Frogbox
Toronto Tool Library	Philips

Note that some of the case studies were analyzed via publicly available information. Thus, fewer conclusions can be drawn from them and not all the following generalizations apply.

COMPANION REPORT: CIRCULAR ECONOMY BUSINESS TOOLKIT

Check out this how-to guide published by the National Zero Waste Council for businesses of all sizes and sectors, to explore the opportunities of circular modes of design, production, and service. The toolkit shows how to develop a circular business strategy, steps to include circular concepts in the design process, and strategies to engage stakeholders in the circular initiative. The toolkit includes six case studies of circular business in action – which are the source of the insights in this report.



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OVERVIEW

The case studies revealed insights on the following topics:

- Social purpose and entrepreneurship
- Innovation cycles
- Customer reception
- Funding and technology
- Collaboration and impact
- Waste and logistics infrastructure
- Business benefits
- Long-term investment and visions
- Areas for future research

KEY THEMES

GENERAL CHARACTERISTICS

All case study businesses were founded about ten years ago and are now into mature stages of growth, scale, and iteration. All are working within established, conventional industries, creating alternative products to existing products. Their diverse business models from social enterprise to clean technology commercial businesses, to joint venture, to small business, include a combination of business to business (B2B) and business to customer (B2C) arrangements.

SOCIAL PURPOSE BUSINESS

All are social value businesses or joint ventures, with corporate purposes to create solutions to societal problems through their core business. They all have an explicit environmental intent alongside commercial objectives. *(For a definition of a social purpose business see: https://socialpurpose.ca/wp-content/uploads/sites/6/2021/12/spi-social-purpose-business-definition-v-02_feb-18-21.pdf)*





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SOCIAL ENTREPRENEURSHIP

All ventures are led by visionary and broad- and forward-thinking entrepreneurs who possess systems thinking, collaboration and innovation skillsets and mindsets. They can see the big picture and notice paradoxes and disconnects between sustainable and unsustainable practices. They are out of the box thinkers with the courage and inspiration to challenge the status quo, conventional wisdom, existing mindsets and entrenched habits and behaviours. By looking at large systems from a fresh point of view, they observe problems and inefficiencies with the way manufacturing, production and consumption are currently organized, or our “take, make, waste” approach to life and business. This enables them to see underutilized assets, cost inefficiencies, systemic malfunctions, long-term negative consequences, externalized costs, constraints, and the solutions to be found in nature’s approach to design to create new design guidelines and parameters, cost-efficiencies, new customer propositions and value creation opportunities.

They can foresee and are impatient to realize the future we want. They are curious, relentless inventors on a mission to both grow their business and realize societal benefits. Some, but not all, have prior sustainability knowledge and literacy which informs their analysis and worldview. They are all driven by the intent to be disruptive, challenge incumbent business models, re-think industrial processes and re-conceptualize systems of production and consumption – while saving money for their business or customers and generating new revenue lines.

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INNOVATION CYCLES

All the case studies reveal cycles of researching, experimenting, testing, piloting, and iterating, some over the course of many years and others following a more rapid prototyping model.

Most, but not all the case studies, demonstrate a hard pivot five or more years along the innovation path. These pivots reveal radical business model disruption as they involve partnering with competitors through contracts, joint ventures, or new companies set up to sell their circular products.

It is notable that all case studies showed continuous cycles of innovation as a result of applying an environmental, sustainability and circular economy lens to existing practices. It appears that a sustainability mindset can find multiple ways to create additional customer and marketplace value. By applying a sustainability lens to all stages of production and consumption, up and down the value chain, new opportunities for innovation can be spotted and realized. As well, one single sustainability innovation can be a gateway to many add-on customer benefits and features, whether sustainable or not.

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CUSTOMER RECEPTION

These six case studies are all oriented to meeting existing customer needs in new ways, rather than creating new, possibly artificial, customer needs and wants.

All products and services are price competitive, cheaper or cost saving over the long-term compared to alternatives. Many financial benefits are realized by customers immediately and are a top driver of customer take-up. Notably, it appears that initial customer drivers are quality, convenience, and price, while the environmental benefits are secondary but ultimately a very attractive feature. The environmental benefit, however, is a factor in customer loyalty and retention. Once they understand the environmental features, customers value the environmental “story” and often use this to build their own brand or identity.

Typically, there is a customer education and trialing period to overcome perception and habitual barriers because customers need to be encouraged to adopt new ways of thinking and action.

Early adopter customers are also important actors in the innovation’s success. Sometimes first customers are even involved in the experimentation process providing useful feedback on how to tailor and adapt the product for improved functionality.

As well, there is a focus on product extensions and value-added benefits once the first product is launched. This serves to increase customer interactions, deepen customer relationships, foster loyalty and build stickiness, not to mention generate new revenue opportunities.

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FUNDING AND TECHNOLOGY

Many case study businesses relied on outside capital. In a few instances the capital providers (including investors, donors, governments, and foundations) were values- and sustainability-aligned funders.

Most examples harnessed technology to drive their innovation, sometimes using off-the shelf technology (e.g. tool library software, de-packaging machinery) or building their own proprietary technology.

COLLABORATION

Collaboration is a strong feature of all the case studies. In fact, all circular innovators depended on collaboration for their success. Customers, competitors, suppliers, the public sector, and investors were mentioned as collaborators and partners to co-create, launch, grow, scale and iterate the business. The social purpose of the enterprise and recognized circular economy trend was a frequent factor in attracting and developing partnership opportunities. In hindsight, it is possible to see the business ecosystems which were established around these ventures to foster their success.

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IMPACT

All ventures are focused on scaling and extending their reach, influence, and impact, often by expanding the market opportunity. All are expanding in North America or internationally (the only exception operates in a global network of similar businesses). They believe (some backed up by projections) that by expanding they are multiplying their sustainability benefits correspondingly.

While all are generating important sustainability impacts, they do not have a comprehensive approach to measuring their environmental or social benefits. “Tonnes of waste diverted” is a common metric, but greenhouse gas emission reductions or other environmental benefits are under reported.

Even though their environmental benefits are not thoroughly quantified, all the organizations are focused on limiting or reducing the overall negative environmental impacts of their operations.

With regards to social sustainability, all demonstrate job creation potential including both entry and professional level positions.

WASTE AND LOGISTICS INFRASTRUCTURE

While the case studies were chosen to be representative of the Accenture five Circular Economy Business Models¹, many demonstrated holistic waste prevention and diversion practices over and above the particular Accenture business model. They were taking deliberate measures to close the waste loop on their enterprises, upcycling and repurposing their wastes, extending the life of product inputs, recovering energy from by-products, and practicing resource recovery. Some of these efforts reduce their operating costs and create new revenues and product lines.

¹ Accenture. (2014) Circular Advantage: Innovative Business Models and Technologies to Create value in a World without Limits to Growth.

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All the ventures are involved in logistics infrastructure, moving goods and materials to and from one place to another. They are all engaged in designing and creating the goods and materials infrastructure necessary to support their zero waste, circular economy and waste prevention and diversion objectives, which for them has become a cost of doing business. However, this is largely a one-time expense, and becomes a proprietary and replicable feature of their business.

BUSINESS BENEFITS

In addition to the main business benefits of product and service innovation, revenue generation and customer acquisition and retention, the following business benefits of their circular economy models were revealed by the case study businesses:

- **Employee attraction and retention** – Employees (and volunteers) seek out and value the opportunity to work for a solutions-oriented business
- **Brand and reputation** – Circular economy businesses generate media attention and industry awards enhancing their credibility and improving public recognition, as a form of earned media
- **Partnership opportunities** – Circular economy businesses attract partners and collaborators who are excited about the new economy and wish to support it
- **Government support** – Some jurisdictions eagerly provide assistance to pioneering social purpose business and seek to create an enabling environment to accelerate the circular economy



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Other business benefits from circular economy business models, such as cost savings, security of supply, access to resource inputs, and price stability and predictability, appear to be realized by others in the supply chain, rather than these six case study businesses.

LONG-TERM INVESTMENT AND FUTURE VISIONS

All the case study businesses demonstrate a long-term mindset. Early prototypes lead to hard pivots and ten or more years on many of the businesses look different from their original inspiration. This requires a long-term commitment, investment, and perseverance. It appears that all the businesses and their leaders have clear visions for their future growth and potential with further innovations in the pipeline. Their visions relentlessly combine commercial and social objectives, showing the intent to significantly improve social conditions through their circular economy innovations.

***Their visions
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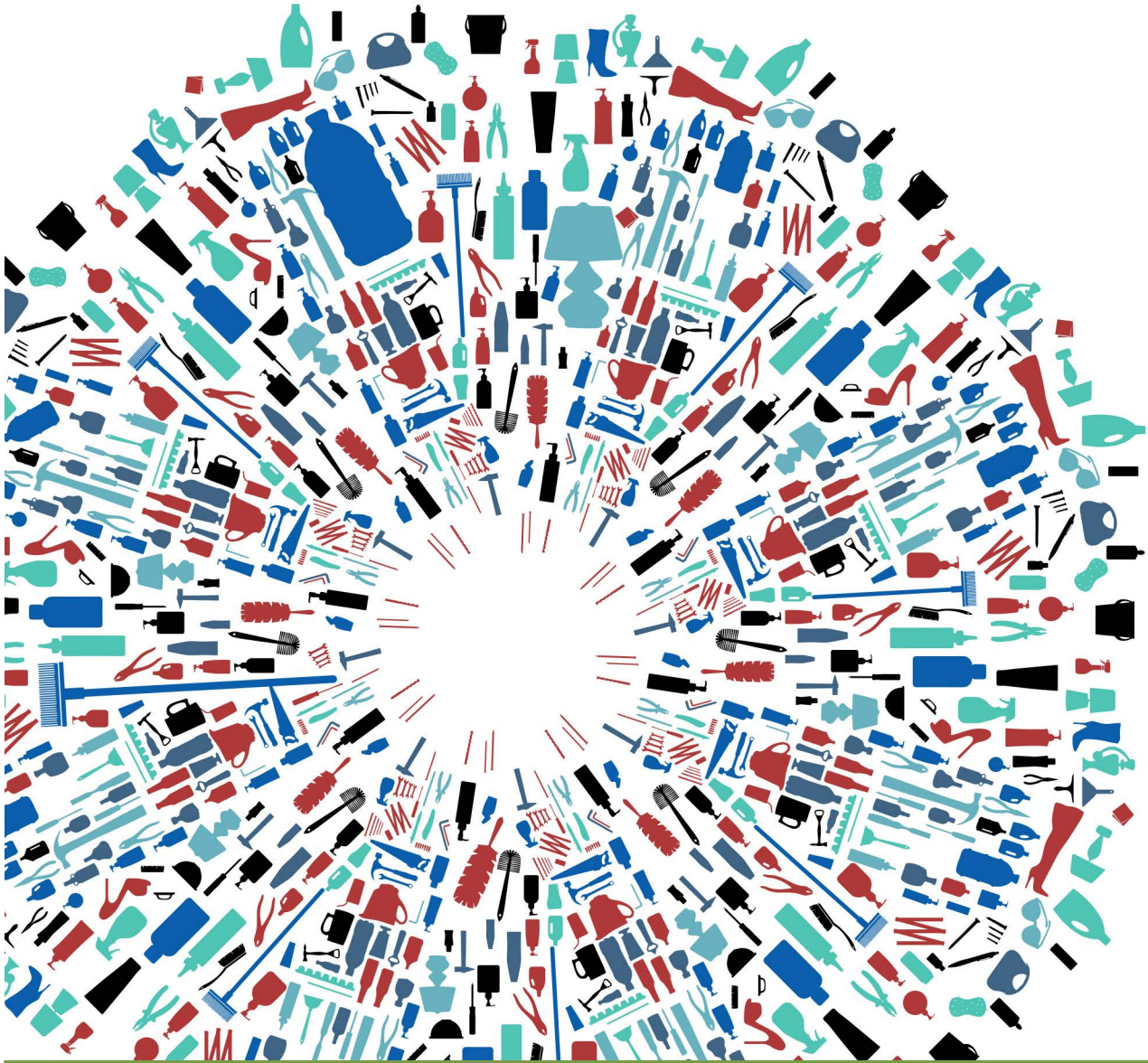
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FUTURE RESEARCH

The following are some examples of desirable future research which could reveal further opportunities to innovate and scale circular enterprises to realize a circular economy:

- Role of business ecosystems to enable circular innovation
- More examples of product design as a solution
- Characteristics and competencies of circular economy innovators
- Role of emerging technology and reverse logistics
- Customer perspective including motivations and drivers to become early adopters
- Role of government as enabler or barrier
- Investors as partners and their barriers and motivations
- Circular economy metrics and impacts
- Identification of 'circular economy' principles followed by circular economy businesses
- Impacts on competing businesses and conventional systems
- Role of industry associations
- Challenges and solutions in reconceiving waste flows
- Innovation cycles in circular economy businesses
- The purpose of circular economy businesses



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