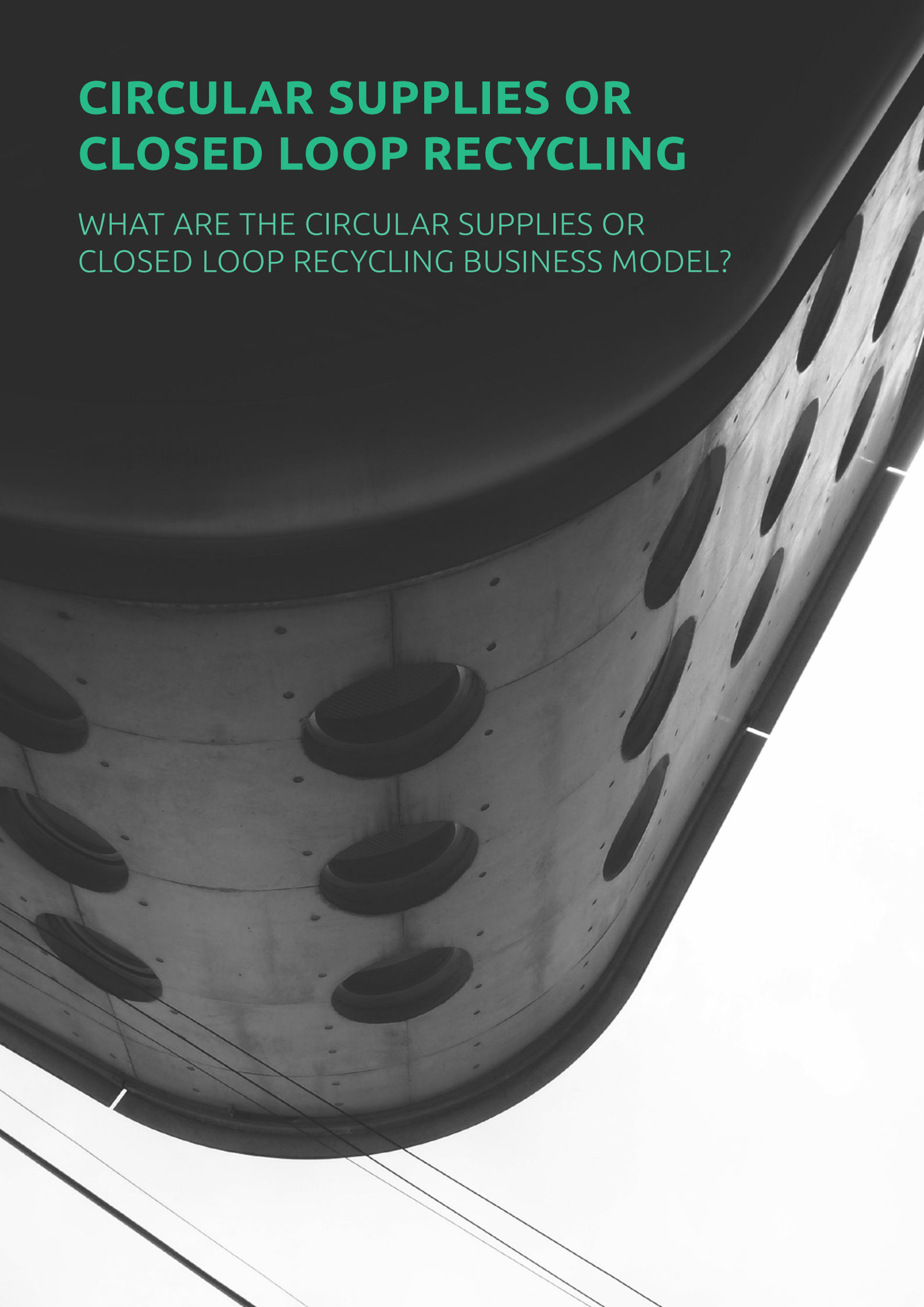


CIRCULAR SUPPLIES OR CLOSED LOOP RECYCLING

WHAT ARE THE CIRCULAR SUPPLIES OR
CLOSED LOOP RECYCLING BUSINESS MODEL?



CONTENTS

Circular Supplies or Closed Loop Recycling _____	1
Expected Learning Outcomes _____	4
Self-Reflection Exercise _____	5
Introduction to Closed-Loop Recycling _____	6
The Practical Applications of a 'Closed-Loop Recycling' Business Model _____	9
Opportunities for Closed-loop Recycling Business Models _____	12
Setting up a Closed-Loop Recycling business. ____	15
Completing a Sustainability SWOT Analysis. ____	19
Final assessment task _____	22
Final test _____	25
Further Reading and Resources _____	27



Watch the following video to learn about a Circular Supplies or Closed Loop Recycling Business Model.

This video will introduce a Circular Supplies or Closed Loop Recycling business model and provide examples of it in action. It will explain how the Circular Supplies or Closed Loop Recycling business model can benefit both customers and manufacturers, and how it promotes sustainability and the circular economy.



EXPECTED LEARNING OUTCOMES

KNOWLEDGE	<ul style="list-style-type: none">• Knowledge of the opportunities for the closed-loop recycling model.• Knowledge of case studies where closed-loop recycling is used.• Knowledge of how closed-loop recycling processes differ from open-loop recycling processes.
SKILLS	<ul style="list-style-type: none">• Discuss the environmental and economic benefits of closed-loop recycling.• Complete a SWOT Analysis exercise to assess the suitability of a closed-loop model in one's business idea.• Develop a design plan to use post-consumer products to create a new version of the same product.
ATTITUDES	<ul style="list-style-type: none">• Recognise the importance of closed-loop recycling for environmental and economic sustainability.• Acknowledgement of the economic benefits of closed-loop recycling.





SELF- REFLECTION EXERCISE

Welcome to the Circular Supplies or Closed Loop Recycling self-reflection exercise! You will face 8 questions that will test your initial knowledge of Circular Supplies or Closed Loop Recycling business models before exploring the content of this EduZine. How much do you know?

[Click here to be taken to the self-reflection exercise.](#)



INTRODUCTION TO CLOSED-LOOP RECYCLING

So, before we look at what a closed-loop recycling system is, we need to look at what an open-loop recycling system is and see how these two systems differ.

An open-loop recycling system is a recycling process that delays dumping by remaking manufactured goods into new raw materials and waste products. In contrast to a closed-loop recycling system, which is a recycling approach through which a manufactured good is given new life by recycling it back into itself or a similar product without deterioration or waste (General Kinematics, 2018).

Fedkin (2020) reports that closed-loop recycling is a more sustainable concept, signifying that the recycling of a material can be completed repeatedly without damaging the properties of the product. As opposed to open-loop recycling, where the material is not recycled repeatedly, eventually causing it to become waste.

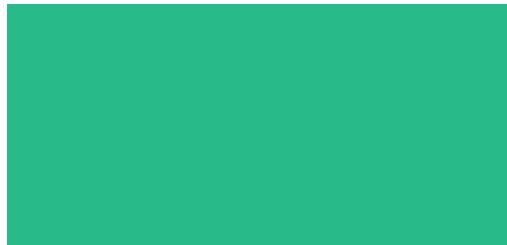
There appear to be many benefits of closed-loop recycling systems (Pro Design Group, 2022):

- The system helps to minimise pollution because it produces next-to-nothing levels of greenhouse gases.
- It preserves natural resources as it is a recycling process that wants to use the same materials over multiple life cycles.
- It even boosts businesses' public image who implement the system into their practice. Sustainability has become more popular than ever, and more people want to support it as much as they can.



- Closed-loop recycling system promotes collaboration with other businesses. Some materials that may be considered waste to a business could be used by other businesses to produce new products and vice versa, resulting in trusted and mutually beneficial partnerships

For more information on the closed-loop recycling/circular economy business model, take a look at the following video:



**THE PRACTICAL APPLICATIONS
OF A 'CLOSED-LOOP RECYCLING'
BUSINESS MODEL.**

Praised by sustainability professionals for their innovative closed-loop production and supply chain connections they have made with some of the well-known brands in the world in the beverage can and automotive industries, Novelis is a notable example of a closed-loop recycling business model (2022).

The company manages its global manufacturing and recycling footprint to supply regular, high-quality products all over the world. The company reports that each year they recycle more than 82 million beverage cans, turning them back into new beverage cans in approximately 60 days (Novelis, 2022).

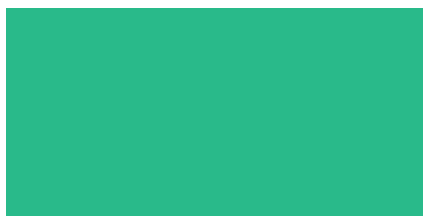
Novelis (2022) states that sustainability is at the centre of the company and what they do. The company says that they take its responsibility very seriously to reduce the carbon footprint of its industry. The company works extremely hard to foster a more circular aluminium industry. To back this up, the company's expanded use of recycled aluminium, which is present in "57% of Novelis' inputs, is at the core of its innovative, circular business model."

As a matter of fact, the company was the first of its kind to establish the largest automotive closed-loop recycling strategy in the world. This undertaking recycles waste aluminium from the automotive manufacturing operation. This strategy involves the company reclaiming as much aluminium waste as they can take from their customers and giving this waste a new life, allowing the products/materials to have multiple lifecycles, and promoting sustainability and a circular economy (Novelis, 2022).



Having more companies implementing closed-loop recycling business models that continuously recycle their products allowing them to have multiple lifecycles, lessens not only promotes sustainability and the circular economy but also helps companies financially e.g., manufacturing costs of production, materials, etc. It's a win-win for everyone!

For more on how Novelis employs the Closed-loop recycling model, look at the following video:



OPPORTUNITIES FOR CLOSED-LOOP RECYCLING BUSINESS MODELS

Closed-loop recycling might be assumed a part of environmental sustainability agendas. However, the primary distinction between a circular economy and traditional sustainability measures is that the circular economy is not attempting to lessen a negative footprint but instead, develops a positive one.

So, what are we doing to achieve this? Well in 2019, the European Commission declared that by 2050, the European Green Deal seeks to make the EU the first climate-neutral continent in the world. The Green Deal will help businesses in the future by having:

- remodelled, energy-efficient buildings,
- cleaner energy and advanced technological innovation,
- more durable products that can be restored, recycled and reused.

One-third of the 1.8 trillion-euro investments from the NextGenerationEU Recovery Plan and the EU's seven-year budget will fund the European Green Deal (European Commission, 2022).

Through closed-loop recycling, businesses can make a real difference in the circular economy. Adopting a closed-loop recycling process allows businesses to leave a positive carbon footprint by using their materials for multiple life cycles and build trusted and collaborative partnerships with other businesses that also seek to promote sustainability.



Businesses are adopting circular thinking not only to think sustainably but also to increase sales. In recent years, many companies have turned to closed-loop models such as recycled clothing and refurbished electronics.

The circular economy is a component of the European Green Deal, which encourages businesses to move to circular in various areas such as:

- packaging,
- batteries,
- repairability of products

Having businesses move to circular makes sure that recyclable materials can be utilised over multiple life cycles and operated in a closed loop. It not only lessens the reliance on imports of raw materials but likewise climate-damaging emissions simultaneously (Interzero, 2022).

Many countries are becoming more sustainable by implementing circular economy policies throughout the world. China, Japan, Canada, France, Germany, Finland, the Netherlands, the UK, and Scotland are prime examples of this green shift.

Also, closed-loop resources need less labour and energy to recycle into repurposed products.



SETTING UP A CLOSED-LOOP RECYCLING BUSINESS.

Is developing a closed-loop recycling business something that you are interested in incorporating into your business? The initial step in a closed-loop recycling system is collecting recyclable products. For instance, collecting customer waste. Once these products are collected, they are usually processed at recycling facilities and prepared to be used once again (Amcor, 2020). It is noteworthy for businesses to begin with something that is not overly complicated. For instance, a product that uses raw materials that can sustain their quality after they are recycled. So, these materials can be used over multiple lifecycles. A fitting example of this is aluminium.

Then it is time to look at the manufacturing of the products. Producing new products from recycled materials is the next step in the closed-loop system. This could consist of making the same product (for instance, turning used beverage cans into new beverage cans), or it could be making them into something completely different (for example, using recycled chewing gum to make soles for shoes) (Amcor, 2020). What businesses need to look at here is deciding how the process can have a positive impact on the environment.

Embracing a circular model is not something that can be achieved overnight, it needs to be a multi-year transition. Start small and then build over time to ensure sustainability is being achieved correctly by supporting the circular economy.



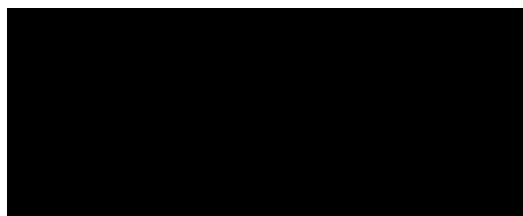
According to Business in The Community Ireland (2020), there are some initial steps businesses can implement to promote a circular economy:

- 1. Know Where You Stand:** Firstly, businesses should look at what they are doing already to support a closed-loop recycling system. For instance, is the business discarding waste exponentially, are the business' materials recyclable and sustainable, etc? This will allow businesses to identify and understand what they are already doing to support a closed-loop recycling system and what they are not.
- 2. Lay the Foundation:** Businesses should create a list of objectives to reach their closed-loop recycling goals. Businesses should look at how they will achieve, the timeframe, etc. After answering these questions, they should devise a plan.
- 3. Best Practices:** For any business to promote closed loop recycling it is important to remember to lead by example. For example, incorporating a recycling day once a month for employees gets employees more aware of the importance of this system and its value to the business.

These are just some examples of initial steps for businesses to use to support closed-loop recycling in their businesses, and this will be looked at in further detail in the management topics of IO3.



An excellent example of a small business that has successfully implemented a Closed-Loop recycling business:



**COMPLETING A
SUSTAINABILITY
SWOT ANALYSIS.**

Now that you have decided to consider implementing a closed-loop recycling business model, it is time to see what you are working with! One way to determine your strengths and opportunities is to conduct a business SWOT Analysis. A Sustainability SWOT Analysis is an effective method to examine the Environmental and Social Challenges and Big Trends, SWOT, and Prioritisation and Action. Let us try it out!

First things first, you start off with a general examination of the environmental and sociocultural challenges and trends connected to your business. For example, a lack of natural resources.

Next is your SWOT Analysis. For a SWOT Analysis to be successful you must avoid depending on your own, partial version of your business. Believe it or not, you are unconsciously biased! Instead, it would be worthwhile to gather a group of employees to construct an expansive and insightful list of comments.

Strengths (S) are something that your business does well, or in a way that differentiates you from other businesses. For example, your business uses recyclable raw materials.

Weaknesses (W), like strengths, are intrinsic parts of your business. Understanding what can be enhanced and the types of approaches you should avoid is vital for business success. For example, you may use recyclable raw materials however there is no system for consumers to return their used products after they use them, causing an increase in landfills.



Opportunities (O) are gaps or prospects for something positive to change within your business. For example, you might not have the facilities to recycle your materials within your business properly, but there is another business in your area that can provide you with this service and create a closed-loop recycling system.

Threats (T) comprise anything that can negatively affect your business. It is important to expect threats and plan to avoid them. For example, you may be trying to promote a closed-loop recycling system, but your consumers might not be well-informed about the importance of recycling products. This means that you would need to put more effort into explaining what you are doing.

Finally, you look at your Prioritisation and Action! From looking at your Environmental and Social Challenges and completing your SWOT Analysis, which of these challenges and opportunities are the most important for your business to look at and what are you going to do to achieve your sustainability goals?

To find out more about how to complete a Sustainability SWOT Analysis, check out this article: <https://www.threebility.com/post/the-sustainability-swot-analysis>



FINAL ASSESSMENT TASK

TITLE OF THE TASK:

Closed-Loop recycling business model.

AIM OF THE ACTIVITY:

This activity aims to allow innovative entrepreneurs completing this EduZine the opportunity to fill out a SWOT Analysis template for their own business and then use this to develop a closed-loop recycling business model.

TIME REQUIRED:

Participants will need 2-3 hours to achieve this task.

- 2 hours to complete the SWOT Analysis.
- 1 hour to plan how to use the SWOT Analysis to implement a closed-loop recycling business model in your business.

MATERIALS REQUIRED:

The Sustainability SWOT Analysis can be completed with a pen or paper, or online using a laptop, tablet, or smartphone.

An example of how to complete a Sustainability SWOT Analysis: <https://www.threebility.com/post/the-sustainability-swot-analysis>

STEPS TO COMPLETE THE TASK:

- **Step 1:** First, examine the Environmental and Social Challenges and Big Trends that may influence your sustainability goals. You need to ask yourself what you see changing in the world and which related challenges do arise from these changes. For instance, water pollution, lack of natural resources, etc.
- **Step 2:** Next, it is time to complete your SWOT Analysis! Look at your strengths (S). What is your business doing well right now that is promoting a closed-loop recycling business model and helping you achieve your sustainability goals?
- **Step 3:** Next it is time to analyse your business' weaknesses (W). What is your business lacking or doing incorrectly that is not promoting a closed-loop recycling business model and helping you achieve your sustainability goals?
- **Step 4:** What opportunities (O) does your business have to promote a closed-loop recycling business model and can help you to attain your sustainability goals? For example, potential partnerships.
- **Step 5:** Lastly, examine your threats (T). What is threatening your business right now that could prevent your business from having a closed-loop recycling business model and achieving your sustainability goals?
- **Step 6:** Now it is time to reflect! How are you going to use this information to implement a closed-loop recycling business model and achieve your sustainability goals in your business?
- **Step 7:** Time to put your plan into action!



FINAL TEST



Are you ready to test the knowledge you have gained from this EduZine? Do you feel that you know more about a Closed-Loop Recycling Business Model now than when taking the self-reflection quiz at the beginning? Once you have read all the articles in this EduZine, you will have no problem in completing this quiz!

[Click here to be taken to the final test.](#)



FURTHER READING AND RESOURCES

Circular Economy Solutions

<https://ctlgroup.com.au/circular-economy-solutions/#:~:text=A%20circular%20economy%20employs%20reuse,waste%2C%20pollution%20and%20carbon%20emissions.>

Closed Loop Economy: What does it mean and how does it work?

<https://www.quincyrecycle.com/closed-loop-economy-what-does-it-mean-and-how-does-it-work/#:~:text=A%20closed%2Dloop%20economy%20is,the%20creation%20of%20something%20new.>

Is 'closed loop' the future of recycling?

<https://www.bbcgoodfood.com/howto/guide/closed-loop-future-recycling>

What is Closed Loop Recycling?

<https://www.amcor.com/insights/blogs/what-is-closed-loop-recycling>

What is Closed Loop Recycling?

<https://www.biffa.co.uk/biffablog/2018/june/your-guide-to-closed-loop-recycling>

What does Closed Loop mean?

<https://www.roadrunnerwm.com/blog/what-does-it-mean-to-close-the-loop>

What is Closed-Loop Recycling?

<https://www.youtube.com/watch?v=wkOePLDjp9c>



Implementing a closed-loop recycling business model.

<http://breakthrough.unglobalcompact.org/breakthrough-business-models/closed-loop/>

Is closing the loop the future of global business?

<https://www.forbes.com/sites/next-1000/2022/04/18/closing-the-loop-is-the-future-of-business/?sh=332ea6206877>





LEARNING CIRCLE



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