



circular
business
models



Circular Business Models



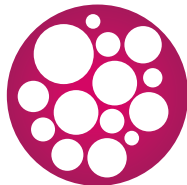
closed-loop recycling



downcycling



upcycling



industrial symbiosis



collection services

Enabling Business Models



product as service



personalisation



lock-in



modularity



local loop



Questions you want to ask yourself:

Which macro trends affect your part of the business?

Which consumer trends can be supported by any of the models?

Which models can you combine to increase market development opportunities?

What are the requirements to make this model successful?



This deck is an accompaniment to the Circular Business Model Toolkit developed by Forum for the Future. This document gives more detail about the 10 Business Models Innovations we identified as driver for a circular economy. The notes section of every business case also includes more detail on the potential market growth opportunities, the potential to apply the example to FMCG brands and the scalability of the case.

BUSINESS MODELS ARCHETYPES FOR A CIRCULAR ECONOMY

circular business models

Circular business models (CBMs) are disruptive innovative business models aiming to drive the sustainability of the whole business network (system) through circularity. They are instruments of translating products and services designed for reuse into attractive value propositions.

enabling business models

Business models that are not circular business models inherently but that can enable or enhance the classic Circular Business Models and their circularity.

Exercise: Circular Business Models Combinations

The 'Circular' and 'Enabling' business models can be mixed and matched in order to come to innovative business models ideas. Typically a Circular Business Model can be well matched with one or two Enabling business Models, but also combination of several Circular Business Models is possible. However one rule for ensuring driving the circular economy with the models is to choose at least one Circular Business Model for the combination.

Eg :

A. circular business model + enabling model

B. circular business model + enabling model + enabling model

C. circular business model + circular business model



e.g. case study Nespresso



e.g. case study Philips



e.g. case study Tide Cold Water Detergent



closed-loop recycling

DEFINITION

Using raw materials from existing products to make new products in order to move from a linear (make-use-dispose) towards a more circular system/business.

CUSTOMER BENEFITS

Functional

- Price reduction through material cost saving
- Incentives for recycling
- No waste disposal costs

Emotional

- Status
- Ethical consumption

MARKET GROWTH OPPORTUNITIES

- Secure supply of materials, increases resilience of the business against supply chain shocks
- Reduced material costs
- Reduced disposal costs
- Improved reputation / brand equity (CSR)
- Increased marketing opportunities through more interaction points with consumer
- Improved customer engagement through interaction points



downcycling

Submodel: Down-cycling

DEFINITION

Turning materials from one or more used products into a new product with lower quality

CUSTOMER BENEFITS

Functional

- Price reduction through material cost saving
- Incentives for recycling
- No waste disposal costs

Emotional

- Status

MARKET GROWTH OPPORTUNITIES

- Secure supply of materials, increases resilience of the business against supply chain shocks
- Reduced material costs
- Reduced disposal costs
- Improved reputation/brand equity (CSR)
- Increased marketing opportunities through more interaction points with consumer
- Improved customer engagement through interaction points
- Lower input costs as no extraction costs



closed-loop recycling downcycling

Closed- loop recycling Example A (downcycling) North Face

North Face is committed to reaching its closed-loop targets, including using 100% recycled materials for all of its polyester fabric by 2016. Its “Clothes the Loop” recycling program is designed to extend the lifecycle of clothing and footwear by collecting discarded items and either reusing or refashioning them into basic materials for use in manufacturing.

North Face has also partnered with I:CO USA, a company that sorts the collections at its recycling centres. It organises collected items into more than 400 categories to determine which can be resold or recycled into raw materials such as insulation, carpet padding and stuffing for toys. I:CO’s goal is to create an endless loop of material reprocessing by giving used clothing and shoes a new life.

CLOTHES THE LOOP
HELP US PRESERVE OUR PLANET





closed-loop recycling downcycling

Closed- loop recycling Example C (downcycling) Nike

Nike's "Reuse-a-Shoe" programme takes worn out athletic shoes, grinds them down and uses the material to create new places to play. Surfaces made with Nike Grind cover about 632 million square feet, "which is nearly enough to cover the area of Manhattan". The initiative invites people to apply to get a playground from the recycled material in their area. In addition to playgrounds, Nike Grind is also used to make new products like the zipper pull on the Nike Vapor jacket.



WORN OUT. PLAY ON.

Reuse-a-Shoe grinds down worn out athletic shoes and turns them into new places to play.



THE ULTIMATE COMEBACK

Surfaces made with Nike Grind cover about 32,000,000 square feet - nearly enough to cover Manhattan. Get your own surface by visiting the Nike Grind site to get a quote.

GET A QUOTE

image source: http://www.nike.com/us/en_us/c/better-world/reuse-a-shoe



downcycling

Collection Services Example C

M&S Shwopping

Shwopping is a recycling scheme for clothes where customers can bring any old items of clothing into an M&S store, including items from other retailers, put them into a 'Shwop Drop' box, and receive a clothing voucher that they can then spend in store. All clothing goes to Oxfam, who either resell it in one of their stores or on their website, forward it on to the needy countries, or recycle the fibres to make new material (which businesses like M&S can use to make new clothes). Oxfam uses the money raised to help people around the world overcome poverty.



SHWOPPED?

Chance to win a
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How to win: Visit www.marksandspencer.com/shwopped to enter
the draw. You'll need to be logged in to your account.
Prizes are awarded weekly. See www.marksandspencer.com/shwopped for full details.

Find out more www.marksandspencer.com/shwopped

MARKS & SPENCER **Oxfam**

SHWOP DROP

image source: www.juststyle.com



upcycling

Submodel: upcycling

DEFINITION

Turning materials from one or more used products into a new product, implying an improvement in quality.

CUSTOMER BENEFITS

Functional

- Increased quality of product compared to original product
- Prolongation of usage
- Price reduction through material cost savings
- Incentives for recycling
- No waste disposal costs

Emotional

- Status: Unique product leads to desirability
- Personalisation of products

MARKET GROWTH OPPORTUNITIES

- Environmental or raw materials security, increases resilience of the business against supply chain shocks
- Reduced material costs
- Reduced disposal costs
- Improved reputation/brand equity (CSR)
- Increased marketing opportunities through more interaction points with consumer
- Improved customer engagement through interaction points
- Lower input costs as no extraction costs
- Increased product value through recycling of lower value products



closed-loop recycling



upcycling

Closed- loop recycling Example A (upcycling)

Method

In an initiative designed to put beach waste to good use, Method teamed up with beach clean-up groups and volunteers to collect plastic debris from the beaches of Hawaii. It then worked with recycling partner Envision Plastics to create bottles made with the plastic waste, and used them to bottle its cleaning products.



image source: <http://methodhome.com/beyond-the-bottle/ocean-plastic/>



closed-loop recycling



upcycling

Closed- loop recycling Example B (upcycling) HP

HP's cartridge recycling program "Planet Partners" was started in 1991 and has since taken back and reprocessed more than 566 million ink and toner cartridges worldwide. It extends to more than 50 countries and covers 90 percent of cartridges sold.

According to HP, thanks to the program, no part of an original HP cartridge is sent to landfill. Everything that comes back is fully recycled or goes to thermal recovery. As a result, the company has pioneered a method of recycling the plastic recovered from its cartridges and reintroducing it into the manufacturing process for new cartridges, creating a closed loop process.



image source: <http://www.greenbiz.com>



closed-loop recycling



upcycling

Closed- loop recycling Example C

(upcycling)

Worn again

British company, Worn Again, has a mission to make sure that textiles, yarn and clothes are recycled infinitely. In a recent project with Eurostar, they turned old staff uniforms into 250 bags for train managers, using 39 different pattern pieces taken from old Eurostar jackets, raincoats, and train head cushions.



Julia
Team Manager



industrial symbiosis

DEFINITION

The sharing of services, utility, and by-product resources among industries in order to improve resource efficiency.

CUSTOMER BENEFITS

Supply solution rather than customer facing value proposition

MARKET GROWTH OPPORTUNITIES

- Extracting value from material streams
- Fuelling growth through cost efficiency
- Ensuring business continuity by securing the supply of constraint raw materials
 - Lower costs of raw materials



industrial symbiosis

Industrial symbiosis Example A Timberland and Omni United

Timberland, the outdoor wear specialist, partnered with tyre manufacturer Omni United, on an innovative collaboration designed to make it easier for the material in old tyres to be repurposed as soles for footwear. Co-branded as Timberland Tires, the partnership aims to reduce demand for virgin rubber from the footwear industry.

Omni United also has a tyre return process designed to ensure new tyres are returned to recycling facilities. These facilities will turn old tyres into sheet rubber for use by Timberland sole manufacturers. This cross-industry collaboration shows that very different industries can find synergies to drive business and sustainability benefits.

Timberland®



TIRES





industrial symbiosis

Industrial Symbiosis Example B Ecover Glocal

Glocal is an experimental project by Ecover on the island of Mallorca to explore the potential to produce cleaning products using local waste materials and manufacturing methods from the island. The end goal is to find a commercially viable business model using a closed-loop system that delivers products based on the optimal use of locally available resources that can endlessly be regrown, recycled or reused.





industrial symbiosis

Closed- loop recycling Example C DuPont and Procter & Gamble – Tide Cold Water Laundry Detergent

DuPont collaborated with Procter & Gamble to use agricultural waste and renewable biomass in the North American laundry detergent Tide. The aim of this collaboration was to achieve zero net carbon emissions by moving from corn and petroleum to cellulosic-based ethanol made from harvest by-products. DuPont will produce this renewable, cellulosic ethanol at the company's new bio refinery, currently under construction in Nevada, Iowa.



image source: <http://rewearathon.com/>



collection service

DEFINITION

Providing a service to collect old or used products

CUSTOMER BENEFITS

Functional

- Convenient and responsible disposal of their goods

Emotional

- Peer-to-peer pressure to dispose responsibly
- Unique brand experience
- Status: Ethical consumption as status symbol
- User /brand experience

MARKET GROWTH OPPORTUNITIES

- Consumer or industry partner pay for collection
- Sell products on
- Additional funding sought from local authorities
- Ensuring business continuity by securing the supply of constraint raw materials
- Lower input costs as no extraction costs
- Secure supply of materials, increases resilience of the business against supply chain shocks
- Improved reputation/brand equity
- Increased marketing opportunities through more interaction points with consumer
- Improved customer engagement through interaction points



collection service

Collection of used products Example A Terracycle & Febreze

TerraCycle is an organisation on a mission to eliminate the idea of waste. It provides waste collection programs (each one is called a 'Brigade') for previously non-recyclable, or difficult to recycle, waste. The collected waste is then converted into new products, ranging from recycled park benches to upcycled lunchboxes.

One of the 12 Brigades focuses on 'Air and Home Care' that collaborates with Febreze. It helps to collect air and home care products, including trigger heads, pumps and caps and flexible home cleaning wipe packs. Febreze sponsors the Brigade and the consumer contest that is created around it, incentivising consumers to send their packaging back

ACCEPTED WASTE

All brands and sizes of plastic bottle caps and plastic trigger heads.

All brands and sizes of flexible wipe packaging (used for home cleaning products)

All brands and sizes of pumps and caps for home cleaning products

All brands and sizes of plastic air freshener packaging

All brands and sizes of plastic air fresheners and air freshener cartridges





collection service

Collection Services Example B Nespresso

Nespresso implemented a collection system for their coffee capsules that is customised to local recycling opportunities of individual countries. Depending on the country there are lots of different ways that the capsules can be recycled. Capsules are collected and recycled in national or local packaging recovery and recycling schemes, or collection points are used or developed.

In some countries, a supporting iPhone app helps customers identify the closest collection point to return their used capsules for recycling. A “Recycling home” initiative is also in place, where the postman picks up used capsules when delivering a new order directly at consumers' homes.

For B2B customers, there are customised capsule collection solutions. Collection systems have now been set up in 26 countries, helping the Nespresso to reach 80% global capsule collection capacity.





collection service

Collection Services Example D Beijing Subway Recycling Program

To encourage people to recycle more, the city of Beijing installed 34 “reverse” vending machines in subway stations that see more than 60,000 people pass through daily. When a passerby inserts an empty plastic bottle, the machine’s sensor scans it to assess the value of the plastic and spits out a public transportation credit or extra mobile phone minutes.

There is also the option for people such as tourists to insert bottles without collecting rewards. The free rewards system makes recycling more appealing and demonstrates how recycling programs can increase their success by analysing consumer behaviour and defining concrete engagement points

400-650-1300

饮料瓶回收机

请先扫描屏幕条码





product as service

Enabler: Product as a Service

DEFINITION

Offers that put the focuses on offering a solution rather than a product only. This leads to a marketable set of joint products and services that are capable of fulfilling a user's needs together.

CUSTOMER BENEFITS

Functional

- Company takes on risk for products
- Guarantee of functionality
- Convenience through subscriptions and renewable services

Emotional

- Less space needed because of dematerialisation
- Trend/novelty
- Accessibility to new products through new price models
- User /brand experience

MARKET GROWTH OPPORTUNITIES

- New revenue stream through service
- Less material costs through dematerialisation
- Product lock-In
- Premium Price for Service
- Improved reputation/brand equity (CSR) through improved customer service
- Secure supply of materials, increases resilience of the business against supply chain shocks
- Repair reduces cost of new material input but may lower overall demand for new products



product as service

Product-Service-System / Lock-in Example A Splosh

Instead of buying new bottles of cleaning fluid on a regular basis, Splosh customers purchase a one-off 'starter box' that contains a range of simply designed bottles. Inside each bottle is a sachet of concentrated liquid and customers add warm tap water to create cleaning products that clean with comparable effectiveness to competitors. These bottles can then be used repeatedly, with refill sachets delivered in boxes through the post.



image source: www.splish.com



product as service

Product-Service-System / Lock-in Example C Philips - Pay per Lux

With its 'Pay per Lux' service, Philips is shifting from a one-time sale to a lifetime service model. The company offers customers a full long-term lighting service for offices including electricity. The idea is a cradle-to-cradle rental scheme whereby Philips retains responsibility for the performance of the lighting over a 15-year period and customers pay for the energy consumed through a quarterly fee.

The solution encompasses a total service and warranty solution that fits within the 15-year timescale of the contract. Any replacements during the life of the contract will make use of the latest LED lighting technologies. This service aims to create energy and carbon savings compared to traditional office lighting installations.



image source:<http://www.lighting.philips.nl/>



product as service

Product-Service-System / Lock-in Example C Lego - Pley

Lego's Pley system is a rent-play-return subscription service that enables kids, parents, and fans to test out Lego sets without committing to buying what can be expensive collections. Pley subscriptions are available at three levels: \$15, \$25, and \$39 per month, depending on the size of Lego set desired.

Pley offers free shipping both ways and doesn't charge for up to 15 lost pieces. Customers can choose from hundreds of Lego sets and add them to their queue. After kids are finished with the set, parents can return them to get the next set in the queue. Each returned Lego set is sorted and weighed and the bricks are cleaned with a sanitizer that is both eco-friendly and child-safe, so the sets are ready for the next user.





lock-in

Enabler: Consumer Lock-in

DEFINITION

An offer that forces consumers to carry on using a specific product or service on a regular base.

CUSTOMER BENEFITS

Functional

- Convenience in some cases

Emotional

- Access to a desirable brand, service, product

MARKET GROWTH OPPORTUNITIES

- New revenue streams through service or product diversification
- Increased use through contract
- Long term contracts and customer loyalty
- Pay per use
- Premium price
- Improves and ensures customer relationship
- New and scalable marketing opportunities



lock-in

Lock-in Example A gDiapers

gDiapers' are nappies that consist of a reusable outer part that come in different colours and prints, plus a disposable and compostable insert. The disposable inserts are cradle-to-cradle Certified Silver, flushable and break down in home compost. People can choose to turn waste into a resource by composting the disposable inserts (wet ones only) or flush them down the toilet. The nappies are made of cellulose, wood fluff pulp, and a super absorber, plus it contains no inks, dyes, polypropylene, perfumes, or elemental chlorine.

This product is more sustainable than common diapers as the parts are compostable. Additionally, because of the unique design of the outer pants customers are required to buy the inserts from this specific company, locking the consumer in to buy replacement parts from this company only.



flush

Put poop
where it belongs

or



compost

Turn inserts (wet ones only)
into compost

or



toss

When you can't
flush or compost



lock-in

Lock-in Example B Soda Maker

Soda Maker comes with either a plastic BPA-free carbonating bottle or a glass carbonating bottle. All bottles are reusable and uniquely designed. Every Soda Maker also comes with a gas cylinder that carbonates the beverage.

To add flavours to the water, customers can choose from a selection of over 100 flavours. The gas cylinder and the flavour concentrates create the lock-in to this product. To have constant soda water at home people customer need to replace the gas cylinder when empty and a collaboration with Collect+ makes it easy for customers to return the empty cylinders, which are then refilled with gas. The flavours to add to the soda water are branded under Soda Stream to create a further lock in to the product.



3 EASY STEPS TO EXCHANGE YOUR GAS ONLINE



1. ORDER ONLINE
2. RECEIVE IT IN THE POST
3. RETURN YOUR EMPTY VIA COLLECT+



lock-in

Lock-in Example C Brita fill and go

Brita Fill and Go offers a sustainable solution to disposable water bottles. The integrated carbon filter of the Brita refillable plastic bottle removes chlorine and impurities from traditional tap water. Each filter works at a peak capacity for approximately one week. After this time the customer has to replace the filter, the shape of which is specifically designed to fit the Brita bottle. Hence, users are required (locked-in) to buy a filter from the company regularly to use their bottle continuously.



image source: <http://pamperedpresents.com/>



lock-in

Lock-in Example D Replenish / Clean Path

Replenish draws on the same principles as Splosh. Consumers buy a refillable bottle and only replace the screw bottom pod. By turning the bottle upside down, squeezing concentrate from the refill pod into the built in measuring cup and adding water, users mix their own cleaning product. Walmart has adopted the design and rebranded it to Clean Path and it is now exclusively available at the retailer.



image source: <http://www.mycleanpath.com/>



local loop

Enabler: Local Loop

DEFINITION

As production processes are re-shored back into the countries where the business has its main markets, the local manufacturing loop becomes closer and benefits clustering of industries.

CUSTOMER BENEFITS

Functional

- Strengthening of local economy

Emotional

- Authenticity: locally produced products

MARKET GROWTH OPPORTUNITIES

- More control and reduced risk to value chain interruptions
- Lower logistics costs
- Increased efficiency because of centralisation



local loop

Local Loop Example A Natura Ecoparque

Natura launched the Ecoparque at the beginning of 2014 and is home to the company's new soap factory. It is intended to attract partners, leverage demand for social biodiversity ingredients and promote local entrepreneurship. Natura aims to have production in a shared industrial area in which companies form a cooperative network that permits them to exchange resources and create sustainable businesses in the Amazon.

Ecoparque replaces the old Natura factory in the region and is responsible for the complete soap production process. Previously only the mass was produced in Pará and was sent to São Paulo for processing. With the transfer of production, the region is gaining a higher added value operation and driving the development of the local economy through the generation of jobs and new business opportunities. The unit will allow the company to triple soap production capacity by 2015, boost the use of Amazonian social biodiversity ingredients and reduce costs through having the production process close to the supply chain.



Commitment to the Amazon

Natura's relationship with the Amazon began 15 years ago when the company made a key strategic decision to incorporate Brazilian biological ingredients in great part from the Amazon region into its products, combining science and traditional knowledge with the generation of work and income opportunities for hundreds of extractivist families.

This led to the birth of the Bioscience, which encouraged the company to develop innovative concepts and drive its research and development strategy in the region, resulting in a large number of ingredients and product technologies.



modularity

Enabler: Modularity

DEFINITION

A design that divides a product into smaller parts that can then be independently created, used and replaced.

CUSTOMER BENEFITS

Functional

- Cost efficiency: no need to buy a whole new product because of parts replacement

Emotional

- Individualisation of product
- Gamification features
- User/brand experience

MARKET GROWTH OPPORTUNITIES

- New revenue stream opportunities eg repair service/upgrades/replacement
- Cost reduction though reuse of materials (parts replaced)
- Price premium on parts must outweigh business benefit of selling full product
- New service opportunities around parts must outweigh business benefit of selling full product
- Improved customer relationship
- Marketing opportunities though increased touch-points with consumer
- Infinite services and updates opportunities around one product
- Lock-in by product design



modularity

Modularity Example A

Google Ara

The Google Ara phone has a base layer called an endoskeleton (or 'endo'), a bare motherboard with no screen, processor, battery, or anything you would normally associate with a smartphone. Modules, bought separately or as part of a kit, can be attached to the endo to create a complete phone, which you can switch around at the push of a button to create an individual design. Google's Ara will be released in the spring of 2015.



image source: <http://www.tested.com>



modularity

Modularity Example B Electrical Toothbrushes

Many electrical toothbrushes come with modular heads these days. The consumer buys an initial full set consisting of a main body and toothbrush head. But instead of buying a completely new toothbrush after the head comes to the end of its lifetime, like with disposable toothbrushes, consumers only replace the head, which they can buy in multipacks. Often the heads have a premium price and are the actual and continuous revenue model behind it.



image source: <http://www.oralb.co.uk/>



modularity

Modularity Example C

Bobble

Bobble water bottles are similar to Brita Fill. The refillable plastic bottle's integrated carbon filter removes chlorine and impurities from traditional tap water. Each filter works at a peak capacity and has to be replaced for full functionality. The customer can choose from filters in different colours, which represent the modular part of the product.





personalisation

Enabler: Personalisation

DEFINITION

Company creates data management opportunities that enable product personalisation.

CUSTOMER BENEFITS

Functional

- Better fitting products to individual consumer needs

Emotional

- Customisation and personalisation of products
- Unique user/brand experience (sense of ownership, etc.).
- Status through unique, personalised product

MARKET GROWTH OPPORTUNITIES

- Supply chain optimisation leads to more accurate production and cost reduction because of reduced material inputs
- Fuelling growth through optimised (lean) manufacturing process
- Reduced disposal costs
- Charge premium for customisation or unique features only available through customised route.
- Increased marketing opportunities and improved customer service through product personalisation
- Improved reputation/brand equity (CSR)



personalisation

Customised Production Example A Geneu

Geneu is the world's first DNA personalised, anti-ageing skincare collection. The flagship store in London offers an in-store geneOnyx test which looks at your genetic predisposition to skin ageing and determines whether you are more prone to dark spots, stress or dehydration. It promises that the results will reveal the most effective ingredients for the person's specific skin type. The example shows how new data can influence the demand-supply model and customise the end product.c



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personalisation

Customised Production Example B Lyf Shoes

Lyf is working up a customized 3D-printing service for shoemaking whereby customers can build their own modular shoes. Not only can the customer choose the design and look of the shoes but the fit too. A data sensor in the shoe informs customers about their walking habits and if the shoe is supporting the feet in the right way. The shoes are also registered with sewn-in QR codes that hold information about the footwear such as the design artist, size and material composition.

The business model aspires for Cradle-to-Cradle philosophies and incentivises customers to close the loop. After the shoe's use period is over, the company takes them back for a 15 percent discount and the shoes are then disassembled with most component parts upcycled. What can't be upcycled is recycled or composted.

This example shows how data can be used to improve and customise the product. It also shows how tracked data can be used for driving circularity through the material composition data stored in the QR code that simplifies the recycling process after usage.

