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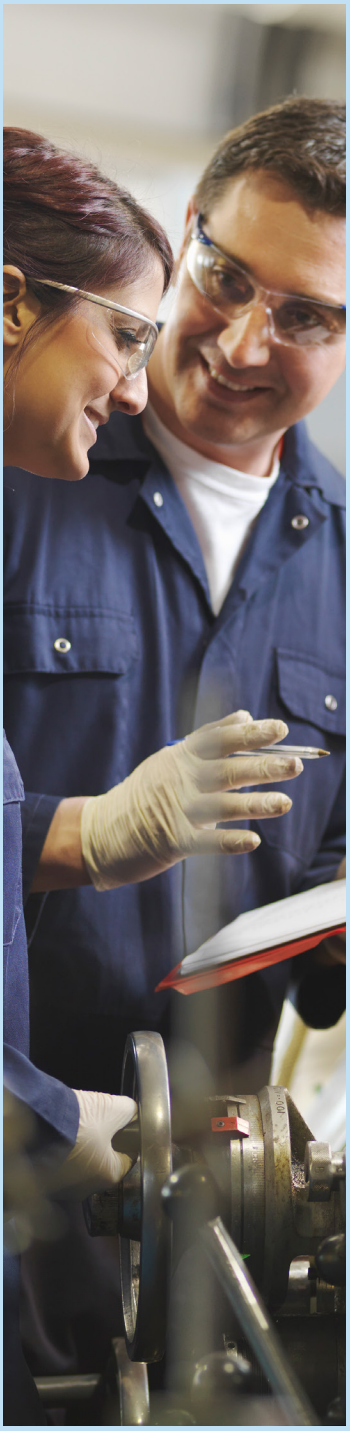

C2C MANUFACTURING AND SOURCING - A STEP TOWARDS SUSTAINABLE GREEN ECOSYSTEMS

Abstract

Increased social awareness, government legislation, UN directives and international environment pacts make Cradle-to-Cradle (C2C) sourcing and manufacturing an imperative that companies can't ignore.

Most companies in their quest towards building a sustainable and eco-friendly supply chain are now looking at ways and models to eliminate wastage and thereby protect the environment. Cradle to Cradle (C2C) manufacturing is one step in this direction. A registered trademark of McDonough Braungart Design Chemistry (MBDC) consultants, Cradle to Cradle Design is a sustainable business strategy that attempts to eliminate waste. It involves building and incorporating production processes where the end products / outputs are safe and fully biodegradable or recyclable in nature. The concept is somewhat similar to other popular terminologies such as Circular Economy or Sustainable Business.

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Growing global popularity

As its popularity increases, the C2C manufacturing model is being implemented by a number of companies, organizations and governments around the world, predominantly in the European Union, China and the United States. Some of the popular product categories in C2C manufacturing are auto & tires, basic materials, building supplies & materials, fashion & textiles, interior design & furniture, packaging & paper, and home & office supplies.

Companies including Aveda, Ecover, Puma and Shaw Industries have cut costs, improved product value, developed new revenue streams and avoided risks using the C2C product standard. For example, Shaw Industries, the world's largest carpet manufacturer, developed its first C2C product, the EcoWorx tile, which is now its fastest growing carpet product. Compared to the uncertified version previously manufactured, the report shows that energy efficiency measures and the switch to renewables, have cut by over half the environmental cost of making carpet tiles.

Certified sustainability quotients

Manufacturers these days can obtain C2C certification which is considered as a mark of product quality and gives them an edge in sales. The C2C certification program recognizes multiple levels of achievement as per criteria / parameters that covers aspects such as material health, re-utilization, renewable energy, and social fairness, based on which assessing agencies award five levels of product certification: Basic, Bronze, Silver, Gold, and Platinum. Today, there are a large number of C2C certifying agencies across globe including MBDC and EPEA International. There are consulting firms too which advise companies to maximize sustainability when designing new products, for e.g. as metabolic does for chemical manufacturers.

The effect of regulatory nudges

The European Union (EU) has set ambitious goals and has taken brave steps toward a circular economy. Stakeholders have recognized that C2C certified products are already designed and optimized for the circular economy, and that the ability to measure sustainability is an essential component for achieving sustainable development. With the introduction of directive 2014/95/EU, sustainability has become a legal requirement for many companies across the EU. Further, there is an increased pressure on US companies as well to reduce green emissions. The US Environmental Protection Agency (EPA) recognizes C2C product standards and these have achieved the highest level of preference in purchases made by federal agencies. United Nations Development Program (UNDP) is also making sure to achieve the Sustainable Development Goals (SDGs).

The role of sourcing

The sourcing and procurement (S&P) function has moved from the traditional cost center model into a profit center. As clients request 3rd party offshore service providers for market intelligence, product intelligence and supplier long listing apart from regular Sourcing activity, each of these activities give scope for pitching an alternative C2C product/supplier.

C2C products can be sourced directly from C2CCertified.Org or through C2C keyword searches in popular online catalog portals like Amazon.com. Apart from this, specialty software such as Normative are capable of assessing a company's social and environmental impact automatically by analyzing their bookkeeping records, using artificial intelligence combined with the world's largest sustainability research database.

It is a popular misconception that C2C products are expensive. But the reality is that they are quite cost-competitive when compared to non-C2C products, since they pass on to the customer most of the sops and perks given to them by government. Their quality and durability may not be on par with regular items, but many users accept this as part of their social responsibility and commitment towards a greener world. Moreover, the increasing regulations by various governments across the world will eventually make it imperative for organizations to source green.

Challenges galore

Supply chain reliability

As for any business model, both trust and integrity are extremely important. This is one of the most critical reasons, it might take more time than usual to establish a robust and reliable supply chain. A single disparity in a technical or biological nutrient in the supplier's method can result in a disruption in the C2C plan.

Recycling

When it comes to the optimal recycling of materials, the products at the civic amenity sites are not manually disassembled, and have each part sorted in a bin. Instead, one needs to have the entire product sorted in a certain type of bin. Also, the extraction of rare earth elements and other materials make it more uneconomical.

Difficulties in modifications

As we are aware products are made specific to a model and what goes into its making or by introducing something different than a particular product, let alone a wholly new product, without almost completely going back to square one to find the right technical components will be difficult. This is perhaps the most undesirable feature of using the C2C model. The C2C design has a certain amount of flexibility dearth that makes it difficult for a manufacturer to modify a product line differently.

In the end, the viability of a C2C system will depend on the product, the manufacturer and the end user.

What lies ahead

The world would be a better place if, instead of merely focusing only on profit, every company would also realize the social and environmental costs of their purchases and sourcing. However, it also needs to be understood that C2C manufacturing and sourcing is not just an enterprise's social responsibility for a sustainable future, but it also holds out a profitable proposition for those companies that adopt it.

This is because, even as increased social awareness, government legislations, United Nations directives and international environment pacts make C2C sourcing and manufacturing imperative, companies that have taken up the gauntlet are already benefitting. With the use of C2C certified input of raw materials and C2C certified manufacturing processes, they are claiming higher carbon credits and also seeing increased sales.

Once adoption of C2C manufacturing truly takes off, businesses and consumers alike will have a far greener and more sustainable tomorrow to look forward to.

Author

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References

- *https://en.wikipedia.org/wiki/Cradle-to-cradle_design*
- *https://www.trucost.com/trucost-news/cradle-cradle-products-innovation-institute-releases-impact-study-business/*
- *https://www.infosysblogs.com/bpo/2018/01/c2c-manufacturing-and-sourcing.html*

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