

# **An Analysis of LEGO's Promotion of Sustainability and Impact on Consumer Ideals**

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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## **Introduction:**

Plastic is one of the most common raw materials in the world. About 450 million tons are produced every year (Ritchie et al., 2018). This raw material is then processed into one of the many products that are used today. However, after these products are used, they are often thrown away. This results in the environmental pollution seen in the world's landfills and oceans. Plastic waste is a problem for two reasons. The first reason is that plastic takes an extremely long time to degrade. Depending on the type, it can take up to 500 years for it to fully decompose (Hughes, 2022). Because of this, there is no easy way to get rid of it, resulting in the large build-up of plastic waste in the last few years. The second reason is that plastic is environmentally hazardous. Organisms can get trapped in the plastic or ingest it, resulting in a higher mortality rate (Welden, 2020). Plastics can also be broken down into microplastics, which may poison organisms who accidentally consume it, causing them to have detrimental health effects (Okafor, 2023). Overall, there is a continuous increase of plastic waste that contributes to the decrease in environmental health.

One of the ways to stop this growth is to identify the key contributors and how they propose to fix the problem. In this case, companies that produce and use plastic are the main contributors, as only twenty companies are responsible for more than half of the world's throwaway plastics (Meredith, 2021). If these companies were to reduce their waste, there would be less plastic being thrown away. As a result, it is important to determine what steps these companies have taken to solve this problem. The main goal of this paper is to analyze how one large corporation that uses plastic in their products aims to reduce their waste. The company that this paper will be focusing on is LEGO.

LEGO is a popular toy manufacturer that makes plastic bricks for children to build with. There are two reasons why LEGO was chosen. The first reason is their size. LEGO is a global corporation that makes products for consumers all around the world. They are a significant contributor to the world's plastic waste, which means it is worth determining their methods of reducing this waste. The second reason is that LEGO actively advocates for sustainability. In fact, one of LEGO's (2024c) four promises is to create a more sustainable environment. As a result, their policies and advertising regarding sustainability is easily accessible. This paper will show how LEGO promotes and contributes to its idea of sustainability and how its consumers react to this promotion.

### **Literature Review:**

It is important to analyze LEGO's methods of promotion because they have a significant effect on society. In a paper analyzing LEGO's role as a sustainability leader, authors Nils Stockmann and Antonia Graf (2020) state that LEGO has a lot of power as a company. They are one of the largest toy manufacturers in the world, allowing them to distribute their products on a global scale. Consumers are aware of LEGO's values and how they have been promoting those values for the last few decades. LEGO works with other major companies like Disney and Shell to create products that advertise their branding. All of this results in LEGO having the ability to considerably influence the ideals of their consumers. Sometimes, LEGO indirectly uses this power to promote ideals that go against sustainability. In order to show this, Stockmann and Graf use one of LEGO's themes as an example. There is a significant amount of motorized vehicles depicted in their products that are based on the real world. By doing so, they are promoting the idea that this is a common occurrence in society and present in a positive light. As a result, most consumers will adopt this ideal and also normalize the use of motorized vehicles as their main

form of transportation. This goes against LEGO's goals for sustainability. Many of the vehicles depicted are unsustainable, as they utilize fossil fuels and are environmentally unfriendly. By promoting their use, consumers will continue to use these forms of transportation, preventing them from stopping environmental damage. As shown by this, LEGO can indirectly influence consumers in a way that does not contribute to their sustainability branding. LEGO utilizes its power to promote their values to their consumers both directly through their branding and indirectly through their products.

Another reason why these methods must be analyzed is because LEGO also interacts with a lot of different consumers. Christoph Hiennerth et al. (2013) discuss the synergies between LEGO as a producer and its users. They do so by compiling a list of real world examples where a company or consumer partners with LEGO to accomplish a specific goal. This list contains a variety of users, from individuals to medium-sized businesses. As shown by this list, LEGO is able to influence many people and companies from around the world. This means that whatever actions they take will have a large impact on the world.

The main methods of promotion that will be analyzed are advertising and company policies, as they are used by other large companies. In a paper talking about smart cities, Jathan Sadowski and Roy Bendor (2019) discuss the branding of two popular tech companies, Cisco and IBM. Both companies believe their "smart" technology can be used throughout society. They say that it is part of the ideal future, that consumers will benefit from the dispersion of products. In order to spread this idea, they utilized their branding on their products to inspire consumers and press conferences to directly let consumers know what they plan to do. Their policies also help indirectly show to consumers that their products follow a certain standard that

will be enforced in this society. As shown by this, companies use advertising and company policies to spread their values to their consumers.

The final part of this literature review aims to provide a comparison between what LEGO and other large plastic corporations are implementing. In a study analyzing how companies aim to reduce their plastic waste, Zoie Diana et al. (2022) determined major sustainability trends. They compiled these reports of all the major companies that use or produce plastic. Then, they searched through these reports to find the most common methods of waste reduction. They also examined what percentage of companies report plastic-related data and discussed ways to influence these companies to do more to reduce their waste. The results of the study showed that there are two solutions: recycling and reducing the amount of plastic packaging used. It also found that collaborations with companies inspire more action by them to reduce their plastic waste. These results will be used to determine if LEGO performs similar actions to those of other companies.

### **Case Study: LEGO's Sustainability Framework**

Every year, LEGO makes its sustainability goals and results available for consumers in the form of a sustainability report. This report includes an outline of their objectives, what they have achieved so far, and what actions they will take in the future to further their progress towards those goals. LEGO (2024b) separates their goals into three distinct targets: children, environment, and people. For the purpose of this paper, only the environment target will be discussed in detail. LEGO (2024d) further defines three goals associated with the environment. The first goal is circularity, which refers to the longevity of their products and how much they are reused. The second goal is sustainable materials and packaging, which refers to recycling and using plastic alternatives. The final goal is climate action, which refers to how much they are

able to cut back on both direct and indirect greenhouse gas emissions. These goals will be used to determine if LEGO's actions support their sustainable future.

### ***Circularity***

LEGO has tried to utilize advertising campaigns to show consumers how sustainable their products are. One of the most recent examples is the LEGO *Replay* campaign. Consumers who have old LEGO products that they do not use anymore can send these products back to LEGO (2024a). These donations are distributed to kids who are unable to get these products normally. This campaign is a forward effort by LEGO to show their consumers that they care about reusing their products. They also want to show that they want to give to those who are less fortunate. This campaign also provides more awareness of the situation and encourages consumers to think about the environment. Overall, the LEGO "Replay" campaign serves as an example of how LEGO pushes its idea of sustainability to their audience.

### ***Sustainable Materials and Packaging***

LEGO has incorporated many of their policies to show its consumers they are for a more sustainable future. One of those policies is making their products more sustainable. Many LEGO products are made from plastic, which is an unsustainable material if it is not recycled. Because of this, their products contribute to the world's plastic waste problem. Since LEGO aims for their products to be sustainable, they have to incorporate one of two solutions. The first solution is recycling to reduce the amount of new plastic they need for their products. LEGO attempted to incorporate this first solution by using old plastic bottles as the material for their products (Cooban, 2023). However, due to financial and structural issues, they could not fully adopt this new material. This showed that they were having a hard time living up to their sustainability values. Despite this, they continue to look for a recyclable material that can be used in their

products, signifying that they are still dedicated to their sustainability goals (Milne, 2023). The second solution for LEGO is to use an entirely different material for their products. One example of those materials is made from sugarcane plants and exhibits the same properties as the plastic they have used before (Frangoul, 2018). LEGO utilizes this material in multiple of their more recent products. By doing this, they display their continuing commitment to sustainability. As a result, they are able to push this idea to their consumers. While some of these solutions were not successful, they do show that LEGO is continuously promoting their products as environmentally friendly and keep trying to improve on that to show their consumers that they are committed.

### ***Climate Action***

LEGO has collaborated with other companies that align with their sustainability goals. Recently, LEGO agreed to buy large quantities of e-methanol from European Energy (Rasmussen, 2023). This will help make their products more sustainable because the production process will emit less carbon. By working with European Energy, LEGO communicates to their consumers that they are still seeking sustainable alternatives to their products. They show how important it is to them and promote the use of e-methanol to other companies, resulting in more awareness. Overall, this collaboration indirectly displays LEGO's sustainability ideals to their consumers.

LEGO has also promoted many products that have gone against their idea of sustainability. One example of this can be seen in their previous collaboration with Shell. Shell is a large petrochemical corporation that makes and sells gas and oil fuel. For about 50 years, LEGO used to make Shell-sponsored products for them to sell at their gas stations (Vaughan, 2014). This partnership was innocuous at first, something that was only meant to boost sales for

both companies. However, it would not last forever, as consumers grew wary of the two companies working together. In 2014, Greenpeace released a campaign called “LEGO: Everything is NOT Awesome”, which attacked LEGO’s partnership with Shell because they were drilling for oil in the Arctic (Vaughan, 2014). In this campaign, Greenpeace states that these Shell-branded LEGO sets normalized Shell as a company and took attention away from their actions (Reestorff, 2015). This is an example of corporate social responsibility. While LEGO did not directly contribute to any unsustainable actions, it did support a company that actively participated in harming the environment. By doing so, they hurt their vision of being sustainable, as they supported and promoted a company that did not align with their values (Hansen & Lundholt, 2021). LEGO eventually caved into the pressure from Greenpeace and ended its partnership with Shell in 2014 (Stockmann & Graf, 2020). This shows that LEGO recognizes the opinion that its partnership with Shell was detrimental and did not align with their vision of sustainability.

### **Case Analysis:**

LEGO’s advertising, collaborations, and policies have a different effect on their sustainability goals and either directly or indirectly influence their consumers’ ideals. In terms of sustainability, their direct actions include their advertising. There are two main parts to their advertising. First, LEGO uses public campaigns such as *Replay*. Upon seeing the *Replay* campaign, consumers think about how they can be more sustainable. They are reminded that this is one of the core ideals that LEGO holds. It also indicates to them how charitable LEGO is, which gives them a reason to support the company. Because of this, they are more inclined to be influenced by LEGO. This campaign also helps support their sustainability goals. Specifically, it targets their goal of circularity. By providing a platform for them to reuse their old products,



LEGO is able to increase their lifecycle and reduce the need to create new products. As a result, they are able to positively contribute to their sustainability. Second, LEGO sells products that contain sustainable materials. These products are often advertised to their consumers as an alternative to plastic. As a result, they feel like they are not contributing to the plastic waste problem. Because of this, they trust LEGO as a company more and are willing to support this sustainable agenda. These products also help LEGO achieve their goal of sustainable materials and packaging. Certain products, like the ones made out of sugarcane, are successful and are distributed to a large number of consumers. These products help support the idea that alternatives to plastic are possible and that they should be used more often. Other products, like the ones made out of recycled plastic, do not work as well. As a result, the idea of recycling old materials becomes more unattractive, making it harder for LEGO to achieve their goals. Both efforts show LEGO's commitment and help spread their sustainability to all of their consumers. Overall, LEGO's direct methods of promotion are able to show many consumers their vision of the future and help influence them to adopt it.

LEGO's indirect actions include their company policies. Their company policies related to the environment (circularity, sustainable materials and packaging, and climate action) are outlined in their sustainability report. The targets associated with these policies help encompass what LEGO aims to do. This creates a solidified vision of LEGO's future, what their ideals are, and how they will accomplish their goals. Because of this, consumers are able to recognize why LEGO is doing something and understand what they are supporting. It allows LEGO to easily influence their consumers to support this sustainable lifestyle.

Another one of LEGO's indirect actions is their partnership with other companies. As stated before, LEGO collaborates with many other companies. Some partnerships positively

promote LEGO as a sustainability leader, such as their collaboration with European Energy. They provide LEGO with a way to solve certain problems that prevent them from reaching their sustainability goals. In the case of European Energy, they are able to use a different plastic alternative when they are unable to accomplish waste reduction through recycling. European Energy is also a company committed to sustainability. For both of these reasons, the collaboration contributes to LEGO's sustainability vision. Consumers become aware of alternative raw materials through this collaboration. Because LEGO uses it, consumers will also support the use of e-methanol. As a result, the use of fossil fuel alternatives will become a major part of their ideals. Some partnerships negatively affect LEGO's sustainability, such as their collaboration with Shell. LEGO's promotion of Shell in their products goes against one of their main environment goals, climate action. This collaboration was a source of indirect emissions for LEGO, meaning that whatever Shell emitted contributes to what LEGO emitted. Shell is a fuel company, which are some of the biggest contributors towards climate degradation. As a result, LEGO working with Shell meant that they were becoming more unsustainable, which conflicted with their vision. Originally, consumers who supported LEGO also supported Shell because of this collaboration. They thought that Shell was a good company and indirectly normalized Shell's values. However, after the 2014 Greenpeace campaign, consumers became aware of the discrepancy and forced LEGO to end the collaboration. As shown by both of these examples, the companies that LEGO works with affect their sustainability goals and consumer ideals.

LEGO's actions to reduce plastic waste have some similarities and differences when compared to other large plastic companies. As discussed in the literature review, the most popular strategies of waste reduction are recycling and reducing the amount of plastic packaging used. LEGO has tried to incorporate recycling but they were unable to do so in an economical

manner. LEGO has also been adopting more sustainable packing for all of their products. This shows that they were trying solutions that many other companies had adopted. LEGO has also performed some unique actions. For example, LEGO utilizes the method of reusing as part of their sustainability policies. Another method that LEGO uses is the adoption of sustainable alternatives to plastic. Both of these methods are not commonly used by plastic companies, but LEGO makes it a core part of their goals. Overall, LEGO uses a variety of common and rare methods to reduce their plastic waste.

### **Conclusion:**

This paper shows how influential LEGO is, the methods it uses to exert this influence, and how consumers respond to this exertion. LEGO's company policies and advertising both promote and contribute to their vision of sustainability and influence consumers' perceptions of LEGO. They can show their consumers that they are committed to reducing their environmental waste and are accountable for their decisions. Their consumers generally favor LEGO's actions with regards to sustainability. Future research on this subject should aim to examine different companies. This will provide more perspective on popular promotion methods and how influential a company can be. More research should also be done identifying consumer reactions. Expanding on this will help determine which methods work the best and what factors influence their success.

## **References:**

- Cooban, A. (2023, September 25). *Lego drops plans to make bricks from recycled plastic bottles*. CNN Business. <https://www.cnn.com/2023/09/25/business/lego-abandons-recycled-plastic-bottle-bricks/index.html>
- Diana, Z., Reilly, K., Karasik, R., Vegh, T., Wang, Y., Wong, Z., Dunn, L., Blasiak, R., Dunphy-Daly, M. M., Rittschof, D., Vermeer, D., Pickle, A., & Virdin, J. (2022). Voluntary commitments made by the world's largest companies focus on recycling and packaging over other actions to address the plastics crisis. *One Earth*, 5(11), 1286–1306. <https://doi.org/10.1016/j.oneear.2022.10.008>
- Frangoul, A. (2018, March 3). *Lego to launch sustainable, plant-based plastic pieces*. CNBC. <https://www.cnbc.com/2018/03/01/lego-to-launch-sustainable-plant-based-plastic-pieces.html>
- Hansen, P. K., & Lundholt, M. W. (2021). “I thought Shell was the bad guy”: Narrative and fictionality in Greenpeace's campaign against the Lego-Shell Partnership. *Narrative*, 29(1), 29–46. <https://doi.org/10.1353/nar.2021.0001>
- Hughes, M. (2022, June 17). *How long it takes everyday items to decompose*. The Waste Management Recycling Blog. <https://www.forgerecycling.co.uk/blog/how-long-it-takes-everyday-items-to-decompose/>
- LEGO. (2024). *Replay - Sustainability*. <https://www.lego.com/en-us/sustainability/environment/replay>
- LEGO. (2024). *Sustainability*. <https://www.lego.com/en-us/sustainability>
- LEGO. (2024). *The LEGO® brand - about us*. <https://www.lego.com/en-us/aboutus/lego-group/the-lego-brand>

- LEGO. (2024). *The LEGO Group 2023 Sustainability Progress Report*. Retrieved from [https://www.lego.com/cdn/cs/aboutus/assets/blt676420bf6471c2f5/The\\_LEGO\\_Group\\_Sustainability\\_Progress\\_Report\\_2023\\_Final.pdf](https://www.lego.com/cdn/cs/aboutus/assets/blt676420bf6471c2f5/The_LEGO_Group_Sustainability_Progress_Report_2023_Final.pdf)
- Meredith, S. (2021, May 19). *Just 20 companies are responsible for over half of “throwaway” plastic waste, study says*. CNBC. <https://www.cnbc.com/2021/05/18/20-companies-responsible-for-55percent-of-single-use-plastic-waste-study.html>
- Milne, R. (2023, September 25). *Lego ditches oil-free brick in sustainability setback*. Financial Times. <https://www.ft.com/content/6cad1883-f87a-471d-9688-c1a3c5a0b7dc>
- Okafor, J. (2023, May 2). *Environmental impact of microplastics*. TRVST. <https://www.trvst.world/waste-recycling/plastic-pollution/environmental-impact-of-microplastics/>
- Rasmussen, L. (2023, April 20). *Lego, Novo Nordisk agree to buy green methanol for plastic production*. Reuters. <https://www.reuters.com/business/sustainable-business/lego-novo-nordisk-agree-buy-green-methanol-plastic-production-2023-04-20/>
- Reestorff, C. M. (2015). ‘LEGO: Everything is not awesome!’ *Conjunctions*, 2(1), 21–43. <https://doi.org/10.7146/tjcp.v2i1.22269>
- Ritchie, H., Samborska, V., & Roser, M. (2018, September 1). *Plastic pollution*. Our World in Data. <https://ourworldindata.org/plastic-pollution>
- Sadowski, J., & Bendor, R. (2019). Selling Smartness: Corporate Narratives and the Smart City as a Sociotechnical Imaginary. *Science, Technology, & Human Values*, 44(3), 540-563. <https://doi.org/10.1177/0162243918806061>

- Stockmann, N., & Graf, A. (2020). “Polluting our kids’ imagination”? exploring the power of Lego in the discourse on Sustainable Mobility. *Sustainability: Science, Practice and Policy*, 16(1), 231–246. <https://doi.org/10.1080/15487733.2020.1802142>
- Vaughan, A. (2014, October 9). *Lego Ends Shell Partnership following Greenpeace campaign*. The Guardian. <https://www.theguardian.com/environment/2014/oct/09/lego-ends-shell-partnership-following-greenpeace-campaign>
- Verdon, J. (2019, October 8). *Lego’s latest Green Initiative wants to put old bricks to new use*. Forbes. <https://www.forbes.com/sites/joanverdon/2019/10/08/legos-latest-green-initiative-wants-to-put-old-bricks-to-new-use/?sh=49a351284c84>
- Welden, N. A. (2020). The environmental impacts of plastic pollution. *Plastic Waste and Recycling*, 195–222. <https://doi.org/10.1016/b978-0-12-817880-5.00008-6>