



Case Analysis

Corporate Entrepreneurship
Design Report
Professor Peter McGroarty

WOODIO & DURAT

Introduction

The Case Analysis: Woodio & Durat report has been completed as part of the International Design Business Management study program's Corporate Entrepreneurship & Design course led by professor Peter McGrory at Aalto University. The analysis compares two companies – one established company and one start-up - in the sanitary ware industry and provides an in-depth comparison of both ventures through the lens of effectuation, each company's respective approach to design, sustainability and its overarching role and what could be suggested as future paths for Woodio and Durat.

The goal of this report is to give insight into how both companies approach design and entrepreneurship and whether any similarities or differences can be identified.

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Ceramic Sanitary Ware Market

- *The global market size for ceramic sanitary ware was around USD 30-40 billion in 2018, and it is projected to reach USD 45-80 billion, according to a few different market research reports. (Grand View Research, 2019; Markets and Markets, 2020; Zion Market Research, 2019).*

The popularity of ceramics can be accounted for its cost-effectiveness, easiness to keep clean and hygienic, durability, and its resistance to chemicals.

- *Growth in population and urbanization in countries like China and India are major drivers for the industry.* For example, in 2018 India announced that it will spend USD 20 billion to construct 111 million toilets to increase the standard of living for millions of people. (Sanjai, 2018).

- Key players in the market are companies such as Geberit Group, Kohler Co., TOTO Ltd., Roca Sanitario SA, Villeroy & Boch AG, RAK Ceramics, Duravit AG, Duratex SA, and HSIL. (Markets and Markets, 2020).

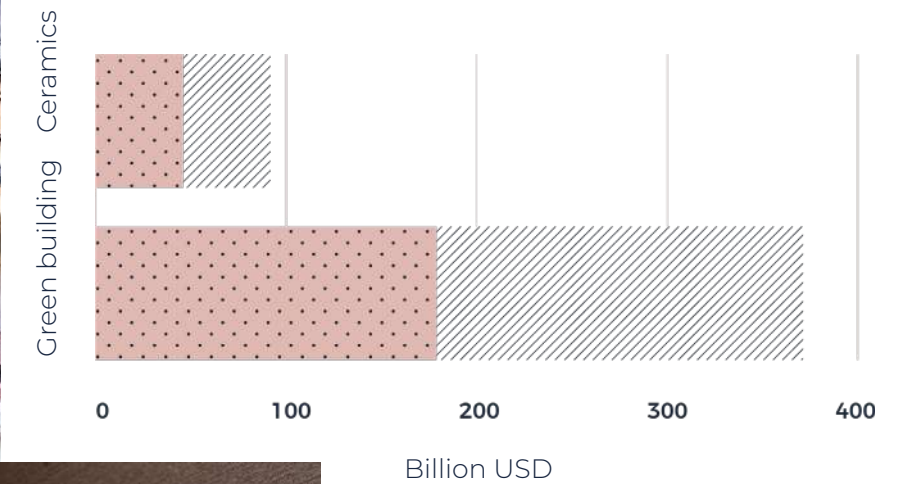
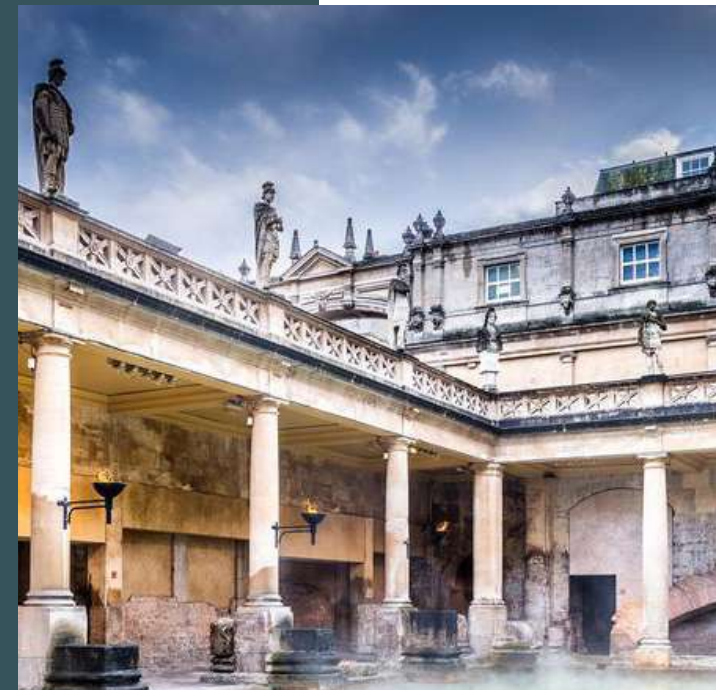
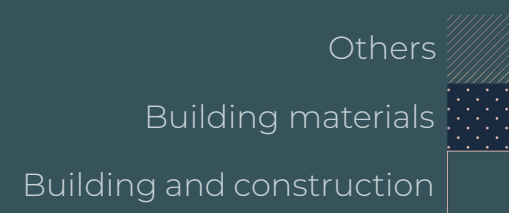
Industry Overview

The companies presented in this case analysis, Durat and Woodio, are manufacturing products such as sinks using innovative sustainable materials, even though the products are not limited just to sanitary wares. Therefore we will have brief industry overviews on the ceramic sanitary ware market and green building material market.



Green Building Material Market

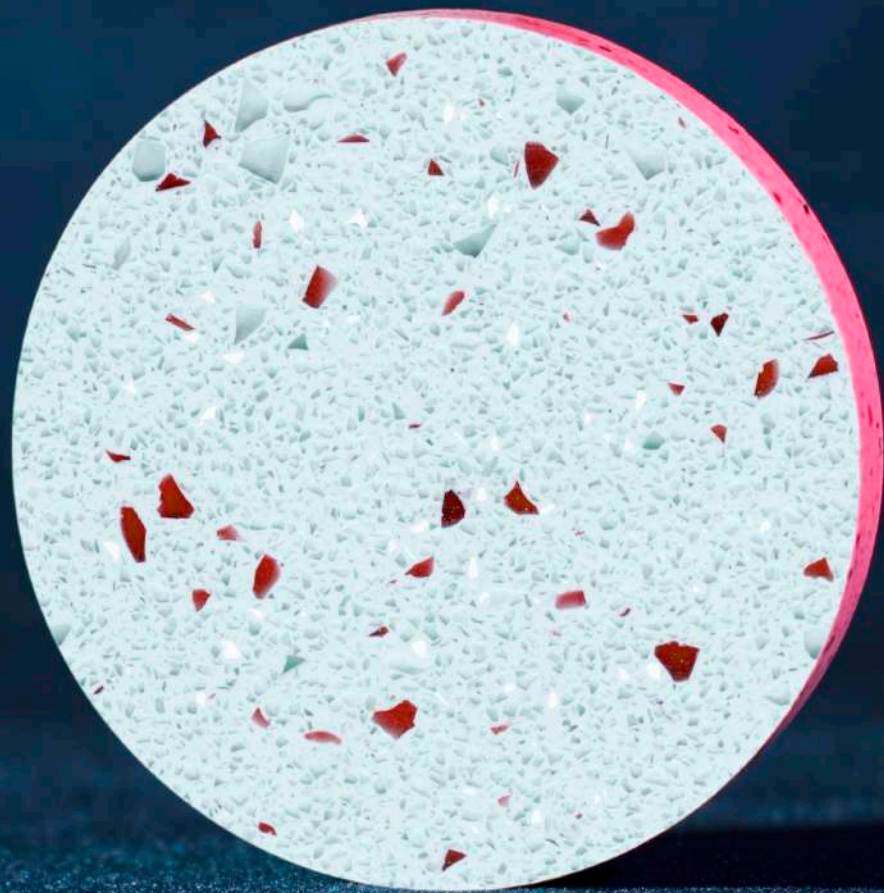
- *The Green building material* market is expected to reach approximately USD 380 billion in 2022 from USD 170 billion in 2015.
- *Increasing environmental awareness* is one of the driving factors for the green building material market. According to the International Energy Agency IEA (2019.) building and construction industry accounted for 39% of energy and process-related CO2 emissions in 2018, from which 11% resulted from manufacturing building materials and products.
- *Governments in developed countries* can encourage green construction and rating systems like Leadership in Energy and Environmental Design (LEED) and Building Research Establishment Environmental Assessment Method (BREEAM) are a means to encourage this further.



Industry Trends

- *The history of the bathroom is as old as the beginning of the Roman Empire.* Earlier it was the smallest room in the house, now experienced as living space inquiring excellence. (Polatova J, 2017)

- From a design point of view, there is also a **market for more luxurious and aesthetically pleasing products** because of the growing middle class with more disposable income
- Notable industry trends in 2020 (McGuickin, n.d.):
 - Sustainability
 - Innovative technology
 - Combining technology and design
 - Simplicity
 - Mixing different shapes: rounds and squares



DURAT®

Recycled to last

Durat is a unique, sustainable solid surface material that contains recycled post-industrial plastics and is 100% recyclable. Durat is not the name of the company, albeit that is the name they are using as their brand. The company manufacturing Durat is called Tonester Oy Ltd and it was established in the early 1990's making them one of the oldest manufacturers of solid surface materials in Europe.

They have manufacturing facilities in Rymättylä, a town in southwestern part of Finland near Turku. Durat has production also in the USA and China, and distributors in Netherlands, Norway, Sweden and UK.

Durat is a pioneer of the circular economy in Finland. For thirty years, they have operated in accordance with the principles of the circular economy. *Durat's goal is to have a closed material cycle so that its production will not generate any landfill waste at all.* Every year, they spend approximately 20–25 tonnes of industrial surplus plastic as the raw material for composite plastic which is equivalent to the volume of plastic waste generated by approximately 800 Finns per year.

The use of surplus plastic replaces the use of an equivalent quantity of virgin raw materials in the manufacturing of the material. Thus, *Durat can save considerably more resources in comparison with other conventional composite materials.* Their goal is to continuously increase the use of recycled material and shift from manufacturing products to restoring and up-cycling them.



Reinventing wood

Woodio is an eco-design and material technology company, founded by Petro Laaksonen in 2016. The start-up manufactures bold and stylish bathroom appliances from an entirely new and innovative wood material. ***Their signature material is the world's first 100% waterproof solid wood composite that consists of real wood chips.***

Woodio has a factory in Helsinki, where they produce all their products both for the local as well as the growing international market. At the moment they are present in Finland, Sweden and Germany, but they also have resellers in Australia, Japan, Italy, Spain, Norway and the Netherlands (Retailers, 2020).

The start-up is on a mission to make a revolution in the bathroom by changing the traditional bathroom material norms into more ecological and inspiring (Our Story, 2020). The current collection includes 16 different wooden washbasins and a bathtub. Future product launches will include decorative wall panels and a toilet seat.

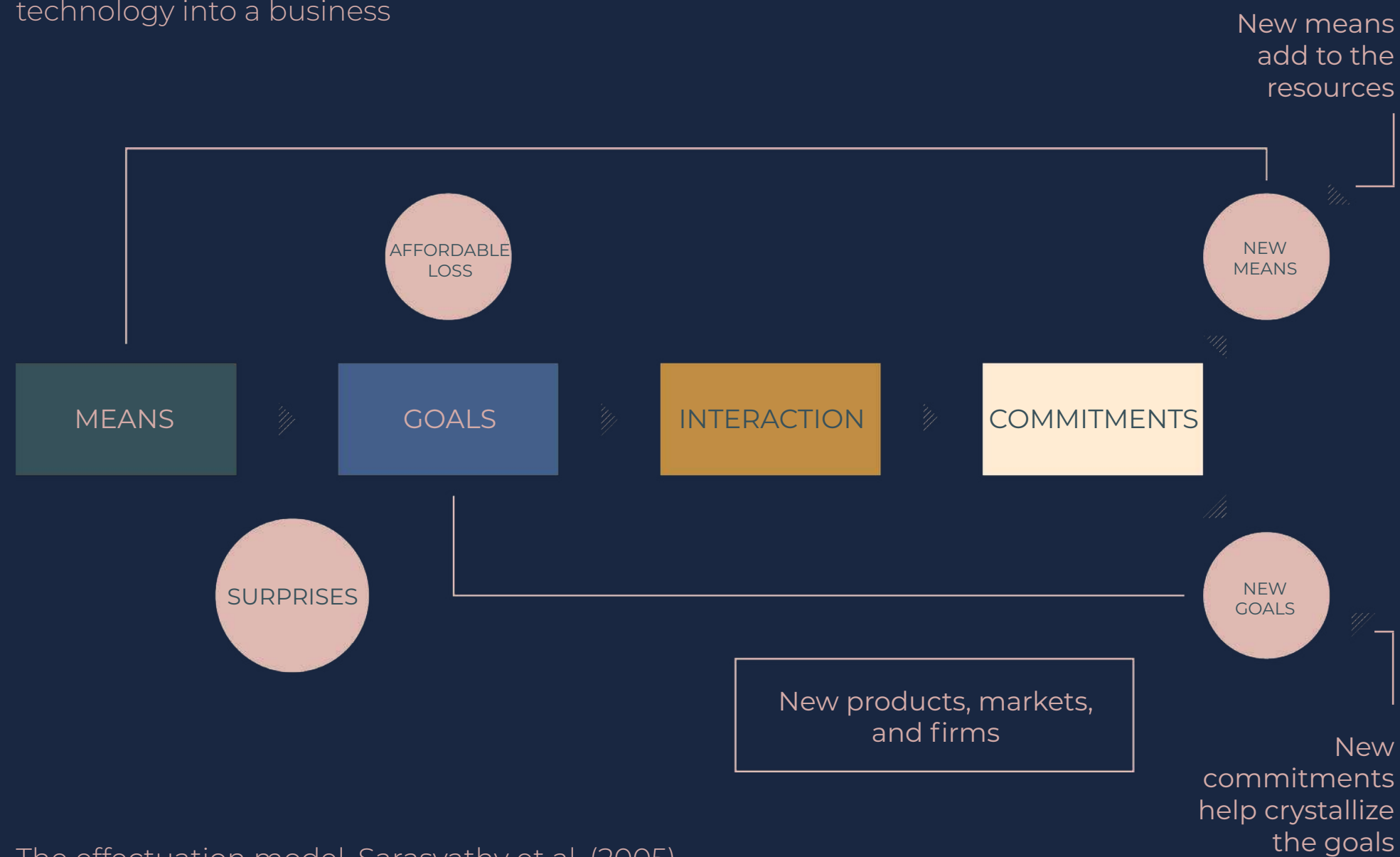
In 2019 Metsä Group's innovation company Metsä Spring joined the group of investors with a ***4 million equity investment***. Earlier investors include Ardent Venture BV, Finow Ltd, NextStone Ltd, and Valve Ventures Ltd.

The series A investment round allowed Woodio to develop their in-house manufacturing and expand their product portfolio (Investment, 2019). The start-up is still heavily in the investment phase. In 2019, its revenue was 216 000 €, and the operating result was -1 619 000 €.



Effectuation

How Durat and Woodio have turned promising research and new material technology into a business



The effectuation model, Sarasvathy et al. (2005)

Dr. Saras Sarasvathy proposed the theory of effectuation in 2005 after studying 27 expert entrepreneurs with diverse backgrounds. The theory stems from the way that expert entrepreneurs think about problems and how they approach them.

Effectuation logic contrasts with what Sarasvathy calls "causation theories" of entrepreneurship, where it is proposed that entrepreneurs start with a goal and then acquire the resources needed to achieve the goal, in a linear fashion. In effectuation, the focus is on using a set of evolving means to achieve new and different goals. (Sarasvathy et al, 2005)

In this report, we will analyze how effectuation has been visible in both case companies even though they haven't always gone 'By the book'.

Awakening to the amount of plastic waste and the environmental impact it has.

Durat (originally Tonester Oy Ltd) was established in 1990 to develop a new sustainable material, which would combine recycling and design. The company has been a flag-bearer of the circular design mindset and a highlight in the material/surface production industry for over 30 years. Durat has primarily been a B2B company, but has been able to develop a lot of contacts with designers and other relevant businesses.

Zero waste to the landfill. Driven by the goal of a closed material cycle, Durat is determined to build its business sustainably.

To drive home this point, they designed a service concept called 'Durat Circular'. They redeem old Durat pieces by paying the users 5% of the purchase price and restore the value in old products to get them into a new cycle.

The affordable loss has been a limited production capacity which was a setback for their international expansion, (Inability to provide samples to distributors and other brands) but they continued to grow in local markets.

This limited production capacity is also one of the reasons why Durat has not expanded to consumer market. According to Karppinen (2020) this is something they are planning to do in the future, but something they do not want to pursue unprepared.

View of the future

Opportunity alerts with entrepreneurial mindsets

Means



Goals



Affordable loss



Petro Lahtinen, the founder of Woodio, identified an opportunity for a new product in a very traditional market. In his visions wood could replace ceramics in the bathroom.

Lahtinen is a chemist and research scientist turned serial entrepreneur. Therefore Woodio started on a solid knowledge and expertise of innovative material technology and research. He already had the material technology, and it was used in his previous successful start-up focusing on medical devices.

Looking for new application opportunities for the material technology, Lahtinen came up with the idea of bathroom tiles made out of wood.

After the initial product idea, he started working on the technology and the material innovation.

Through numerous rounds of testing and prototyping, they came up with their signature material – the world's first 100% waterproof solid wood composite.

In this case, the affordable loss was the time and money spent on research and development at the beginning of the venture. CEO Petro Lahtinen has emphasized that it took an enormous amount of trial and error to develop the waterproof solid wood composite and also find a way to mold it as there were no applicable solutions in the market (Kemia 100).

Perfecting the waterproof solid wood composite was seen as integral in the success of Woodio (P. Lahtinen, personal interview, November 6, 2020).

DURAT®

Durat is a natural choice for local brands, public spaces, schools in Finland and Sweden. They create custom surfaces, colours, textures and designs for brands they collaborate with.

They also work with a lot of designers to create meaningful modern collections. One such feature is the recently introduced colour 'Baltic Sea' (Marine) in collaboration with the John Nurminen Foundation and their 'Clean Baltic Sea Project', and another one with 'Most collective' for their collection Durat Palace which was featured as 'the zero-waste bistro' at 'Wanted design' in New York and won 'Frame's Sustainability Award 2019'.

Durat also interacts with a distributors in local and international markets.

Brands like Dior, Balenciaga and Selfridges are increasingly contacting Durat for their in-store surfaces. It is an urgent requirement for Durat to synergize its brand presence to confidently being able to associate with these top-rated brands.

The company is also on the hunt for new distributors to enter the French and Spanish markets. So far, it has distributors in Finland, the Netherlands, UK, and CaraGreen in USA has exclusive rights for Durat.

Another aspiration is to gradually enter the consumer market, build a web store and automate the engineering and design process for small scale consumer projects.

Possible collaborations with brands like Dior, Balenciaga, and Selfridges will increase Durat's visibility and help it get recognized as a user-friendly brand rather than just an industrial one.

Collaborations with designers who stand for sustainable initiatives will boost cultural relevance.

Interaction



Commitments



New Means



woodio

Considering the complexity involved, in the beginning the production process and mold technologies were outsourced using subcontractors.

To design the products, Woodio collaborated with Pentagon Design, a strategic design agency. The first set of products designed was a series of washbasins targeted for consumers and interior design professionals, covering the needs of both private homes and public spaces.

In 2019, Metsä Group's innovation company Metsä Spring joined the group of investors with a 4 million equity investment. Earlier investors include Ardent Venture BV, Finow Ltd, NextStone Ltd, and Valve Ventures Ltd.

Finding funding in the first place was relatively easy as Lahtinen had a good track record and a business plan that investors believed and could even participate in.

The new partnership with Metsä Group significantly increased Woodio's production capacity as they were able to set up in-house manufacturing beside the subcontractors. The collaboration also opened doors to Metsä Group's under-utilized side-streams such as wood chips (Metsä Group, Media, 2019) .

Though still very much in a start-up phase, Woodio now have substantial support from investors, more access to resources for production and a much more solidified design and production process compared to just one year ago.

DURAT®

Entering the consumer market with an automatised production strategy. Finding new distributors with sustainable ideologies to increase reach in relevant international markets.

Focusing on sustainability beyond their product and reducing carbon emissions on all fronts. (Energy, logistics, distribution)

In all its commitments, the primary drawback Durat faces today, is it's fragmented brand presence and lack of a strategy while choosing designers, brands and collaborators.

They also have a difficulty in tracing back to their users, and hence, in identifying old products that could be restored and up-cycled, which is at the heart of their philosophy.

New Goals



Struggles



woodio

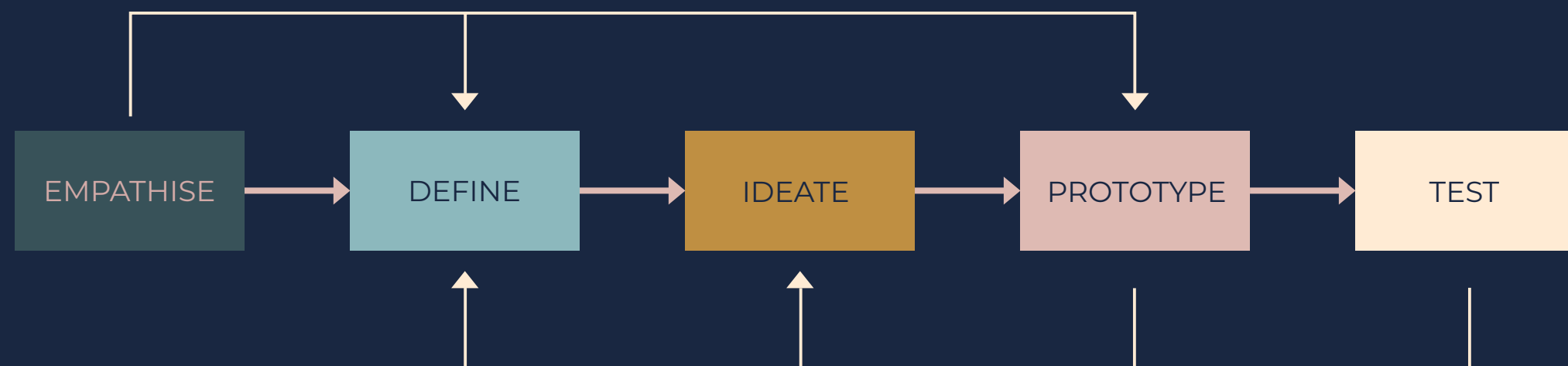
The series A funding round in 2019 allowed Woodio to set their sights on expanding their product portfolio and increasing their R&D. Now, Woodio are primarily focused on growth through identifying new markets.

Another goal for Woodio is to license their wood composite material (P. Lahtinen, personal interview, November 6, 2020).

One of the main struggles and primary commitments Woodio faces is scaling at a rapid pace and demonstrating sales for their investors (P. Lahtinen, personal interview, November 6, 2020)



Design process



(5 Stages in the Design Thinking Process, 2020)

Design thinking is a solution-based design methodology consisting of five stages: Empathise, Define, Ideate, Prototype, and Test. The approach is commonly used to tackle poorly-defined challenges with an aim to find human-centric solutions.

This model, conceptualized by the Hasso-Plattner Institute of Design at Stanford, summarizes these five steps as an iterative process.

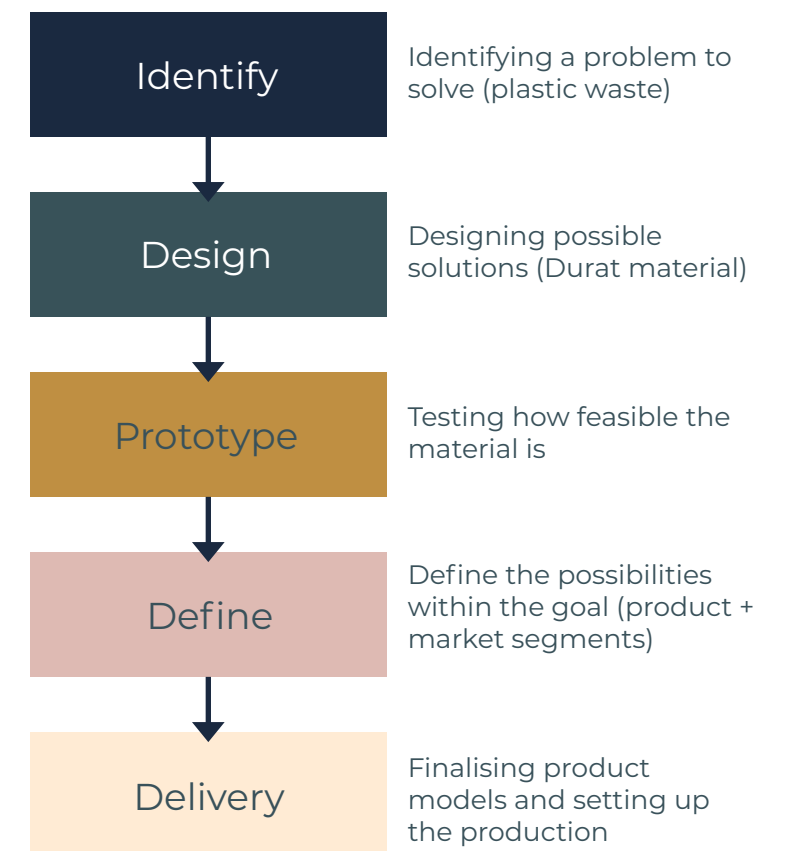
DURAT®

Durat's design process has been a rather organic one since the inception of its unique material back in 1990. Durat did not start out with an intention of replacing the ceramic or any other industry, ***their focus was on solving the problem of industrial plastic waste and the material they developed was the design solution.***

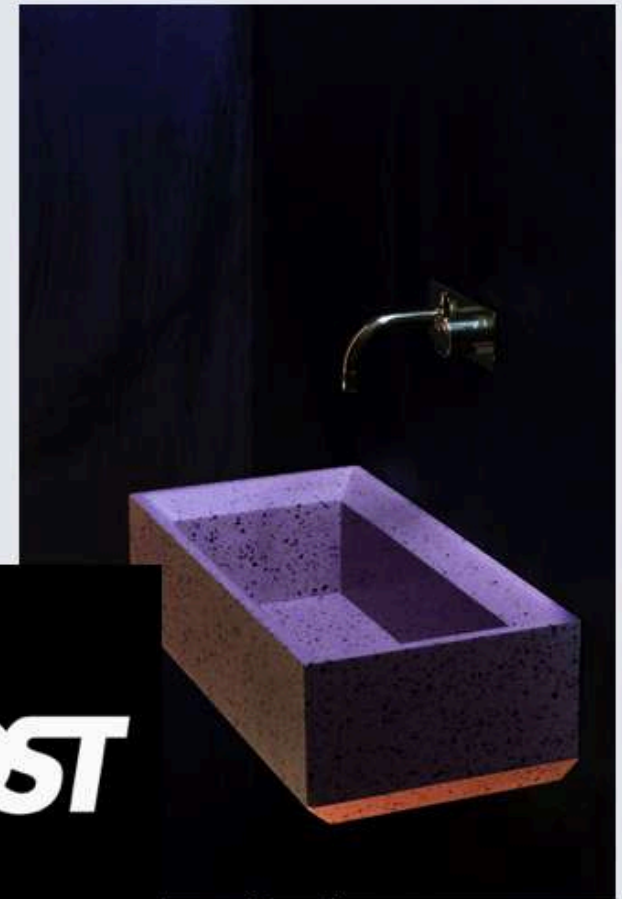
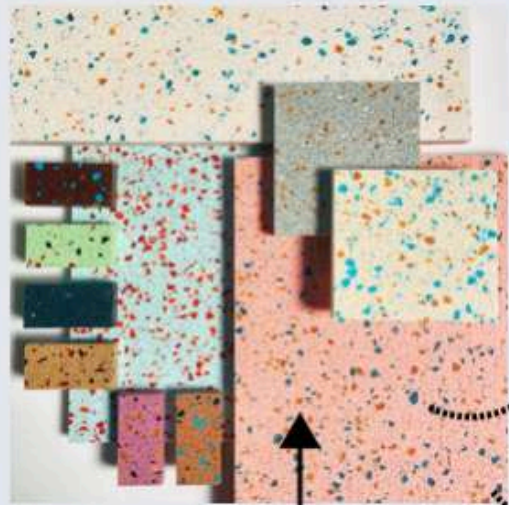
The notable similarity between Woodio and Durat is that their materials are at the heart of their design process. To move away from the traditional ceramic and marble surfaces and their limited scope in design, Durat created a range of signature colors, RAL Colours, and textures that are a lot more fun and versatile, extremely adaptable, and easily customizable. ***Durat defines their design as 'Bold and Scandinavian'.***

Post this, Durat created their design collection in collaboration with Ulla Koskinen, Ulla Tuominen, and Eeva Lithovius. And most of their projects are collaborations with various designers and design houses. ***Durat has never planned their collaborations strategically.*** Instead, many designers come to them with ideas and vice versa. As a result of this, Durat has established extensive contacts within the design industry over the years.

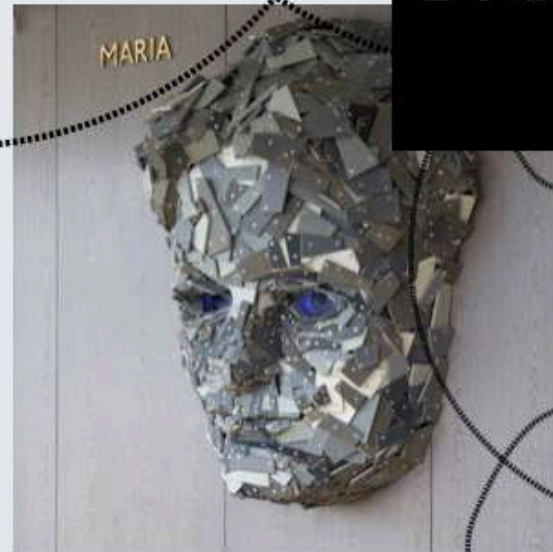
In the future, Durat expresses their wish to continue collaborating with various interesting designers building upon their existing contacts.



[WANTED
DESIGN]



MOST



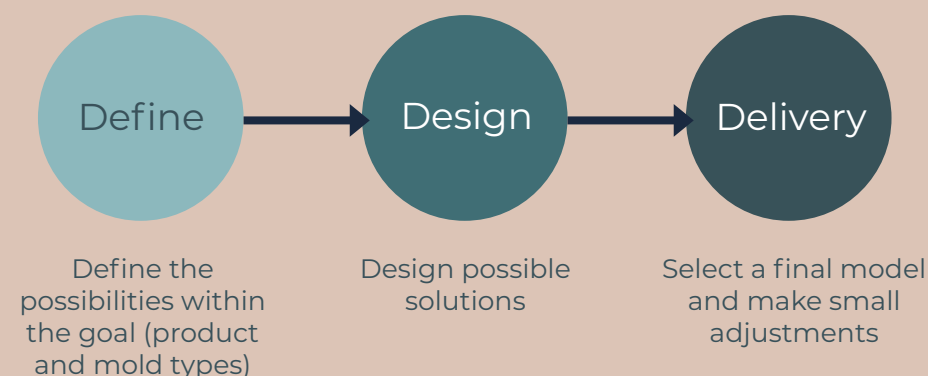


According to Woodio, their design process came to fruition in a **somewhat backward manner**. Instead of gathering insights and empathizing with customers in a problem exploration phase, they began by trying to find a few products they could make out of their material so that they could start a new business (P. Lahtinen, personal interview, October 6, 2020).

However, design remains an incredibly important concept to them. Woodio's Brand Manager Mervi Laakso noted that **"material is very much in the heart of the design"**. You have to see the material in all shapes and forms so that it highlights the wooden texture of the material. We don't make exotic forms or shapes with products because the material itself is really interesting" (P. Lahtinen, personal interview, October 6, 2020.)

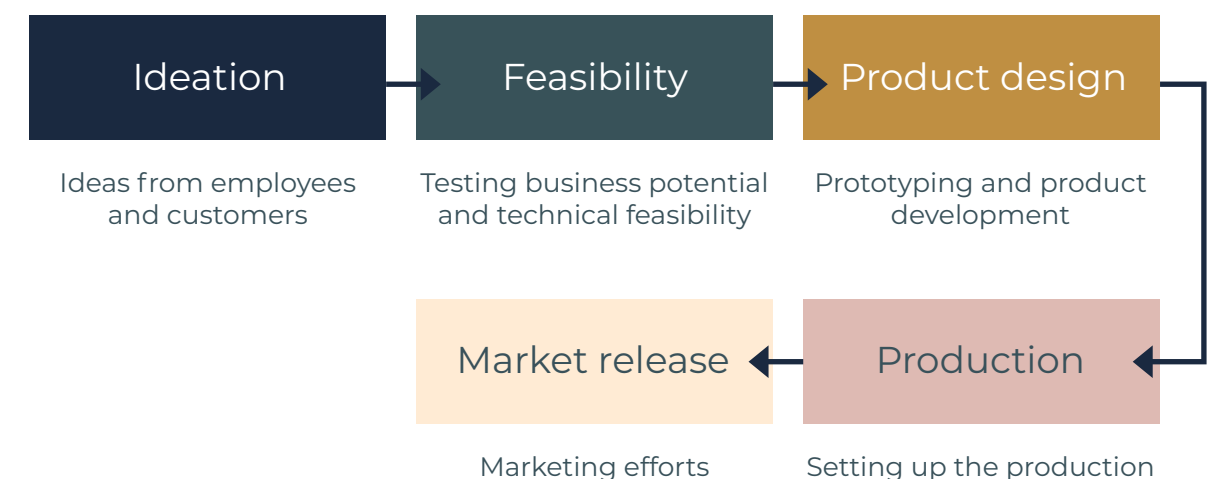
Seeing as design was so foundational to Woodio, they sought out the **best industrial designers they could find in Finland**. One of the key strategic partnerships they formed to develop their products is with Pentagon Design.

Jari-Petri Voutilainen from Pentagon Design outlined the **3 steps in the design process** in collaboration with Woodio (Jari-Petri Voutilainen, personal interview, October 14, 2020):

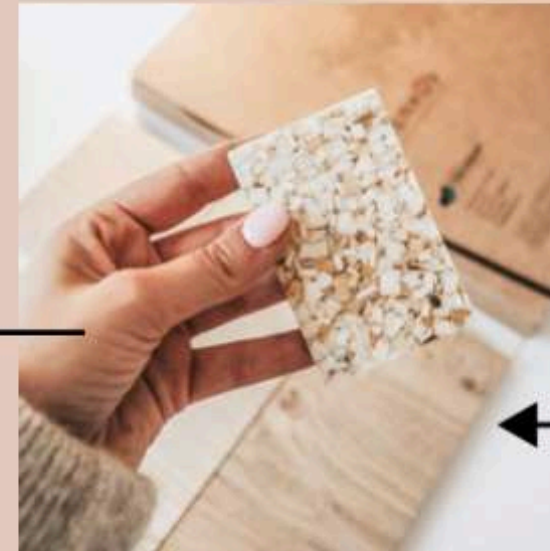


Considering Woodio are still a very young company, Pentagon currently takes more of a lead role and guide in the design process. It is important to note that in relation to design thinking steps, Woodio currently have limited resources and as any other start-up would find, properly following these steps is not necessarily possible under such circumstances. When beginning in design and production, Petro admitted that as a company, they were very much learning at the same time as working. That's why **instead of focusing resources on market insights, Woodio prioritized prototyping and creating the molding technology to prove the overall viability of the solution to investors** (J. Voutilainen, personal interview, October 14, 2020).

In the long run, Woodio could potentially **invest more towards the 'Empathise' step in the future** and adopt more of a design thinking approach. Nevertheless, they are already building standardized processes and taking the ISO 9001 approach for improving and monitoring their business. As an example, **they are now implementing a more concrete design & production process, consisting of five key steps** (P. Lahtinen, personal interview, October 6, 2020.).

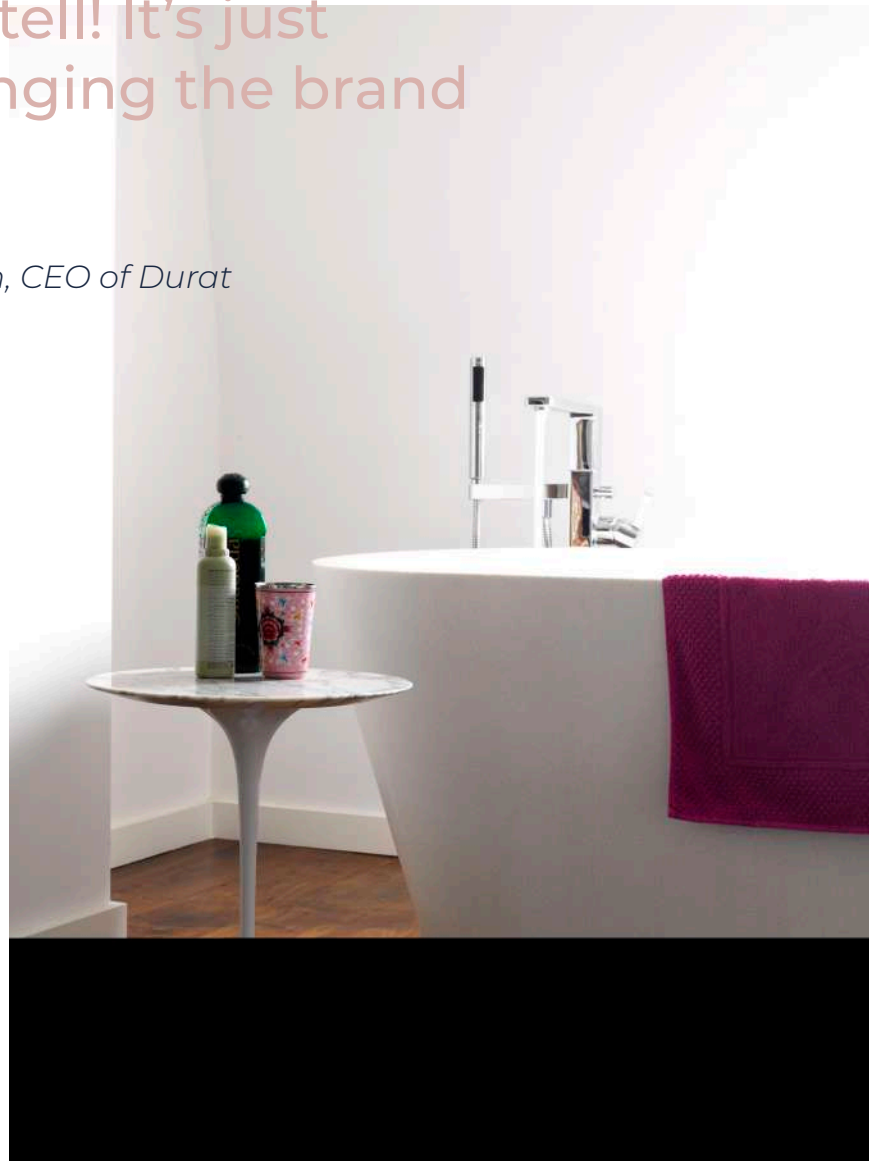


PENTAGON DESIGN



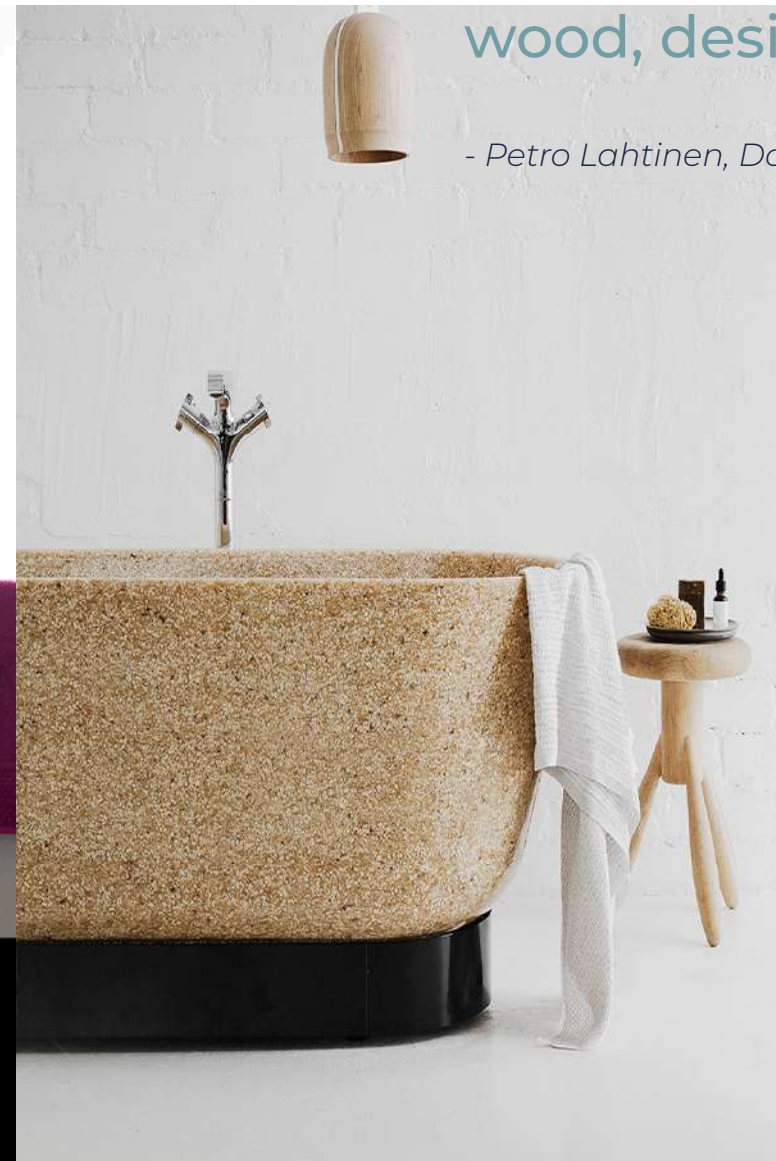
“Today, we have so many stories to tell! It’s just about bringing the brand together”

- Heikki Karppinen, CEO of Durat



“It has been wonderful to be able to use Woodio to combine the Finnish export assets: wood, design and technology”

- Petro Lahtinen, Doctor of Chemistry and CEO of Woodio





woodio

At the moment, one of the most important things for Woodio when addressing the consumer market is **establishing the brand so that people can familiarize themselves with the product and material**. That's why, for example, Woodio's Instagram title is "Woodio/ Yes, it's wood". It's a point they would like to drive home from the beginning. Yet, when it comes to such a unique company, Woodio needs to expand their options to successfully engage with their audience.

In fact, not only does Woodio's Instagram have sections about events, colors, retailers, products, materials, and their factory, but **it also offers end consumers the opportunity to become a brand ambassador**. Brand ambassadors can be a useful way of making the leap from early adopters to mainstream users when it comes to innovative products. End-consumer information, however, is not particularly used in their design process at the moment and instead **Interacting and engaging with interior designers is one of the ways they gather insights about their products**.

Educating the end consumer may be a top priority for Woodio at this stage, but the B2B market has also been a priority since day 1. **Currently the biggest customer group is B2B customers and several interviews have pointed out the eagerness of collaboration Woodio offers its clients**.

Finally, when it comes to engaging with the B2B and B2C markets, Woodio are active in fairs like Habitare, Finland's largest furniture, design and decoration event (Habitare, 2020). Also, Woodio have a showroom in Helsinki where they offer tours for any interested customers.

Customer Engagement

The user-centric approach is at the very heart of Design Thinking. Identifying the underlying problems and finding the right solution in a way that makes the customers tick is something to strive for. Regarding our case companies, both are operating more in the business-to-business market. At least that is where most of their profits come. Therefore their customer engagement efforts have also been focusing on this area. However, in the future, **both Woodio and Durat are making efforts to win over the private consumer market**.

DURAT®

Durat has been growing rather organically. In the beginning they did commissions for a few different designers, which led to more collaborations with other designers both in Finland and abroad. **Design and furniture fairs have also played a major role in Durat's success.** They have garnered a lot of positive attention from these fairs and magazines like Wallpaper, Elle Decor and Dwell have covered Durat on their pages. Now there are freelancers and companies contacting Durat and wanting to collaborate with them. For example **high-end luxury brands like Dior and Balenciaga are interested in using Durat in their retail spaces.** This has come as a little surprise to Durat because they haven't thought of the retail industry as a viable market for them. (Karppinen, H. 2020.)

Most of the marketing efforts are focused on designers and distributors. According to Karppinen (2020.) **they are big believers in getting the snowball effect going on:** When they start collaborating with one distributor, another one soon follows. This benefits Durat a lot because these distributors all have their own contacts and they do their own marketing.

Durat is currently operating in the B2B market, but their future vision is to expand also to the consumer market. In order to do so, they need to focus on a few different things first. Mainly they need rebranding and after that they need to increase their production capacity and implement some automation to their production processes. According to Karppinen (2020) they want to expand, but not before they are ready for it.

Durat also has two showrooms, one in Helsinki and one in Turku, for engaging more customers.



When it comes to promoting their ideology, Durat goes way beyond just the B2B market. They are extremely passionate about sustainability and are constantly on the look-out for like-minded individuals. **Durat hosts an event called 'Durat Talks'** where they address topics like circular design and the climate crisis.

Even if the individual consumer market is not at the forefront of Durat's business, they try and converse with these audiences without letting their product be the only focus. **They also actively highlight local traditions in all their communication in order to better engage with the Finnish community.** Be it exhibiting portraits of 'Maria Jotuni' and 'Minna Canth' (very famous Finnish authors) made from the Durat material or documenting and showcasing the experiences Finns have had with the Baltic sea while drawing attention to the 'Save the Baltic Sea project', **Durat does a lot more than sell bathroom materials.**

Innovative materials

Designing Towards Sustainable Future

Both of the case companies are innovative and game-changers in their industry due to their signature materials. **Durat** uses reused plastics in its material and aims towards a circular economy and a closed material cycle. **Woodio**, on the other hand, has invented an ecological material – water-resistant wood. With these materials and creative use of design, both ***Durat and Woodio are trying to create a more sustainable future.***

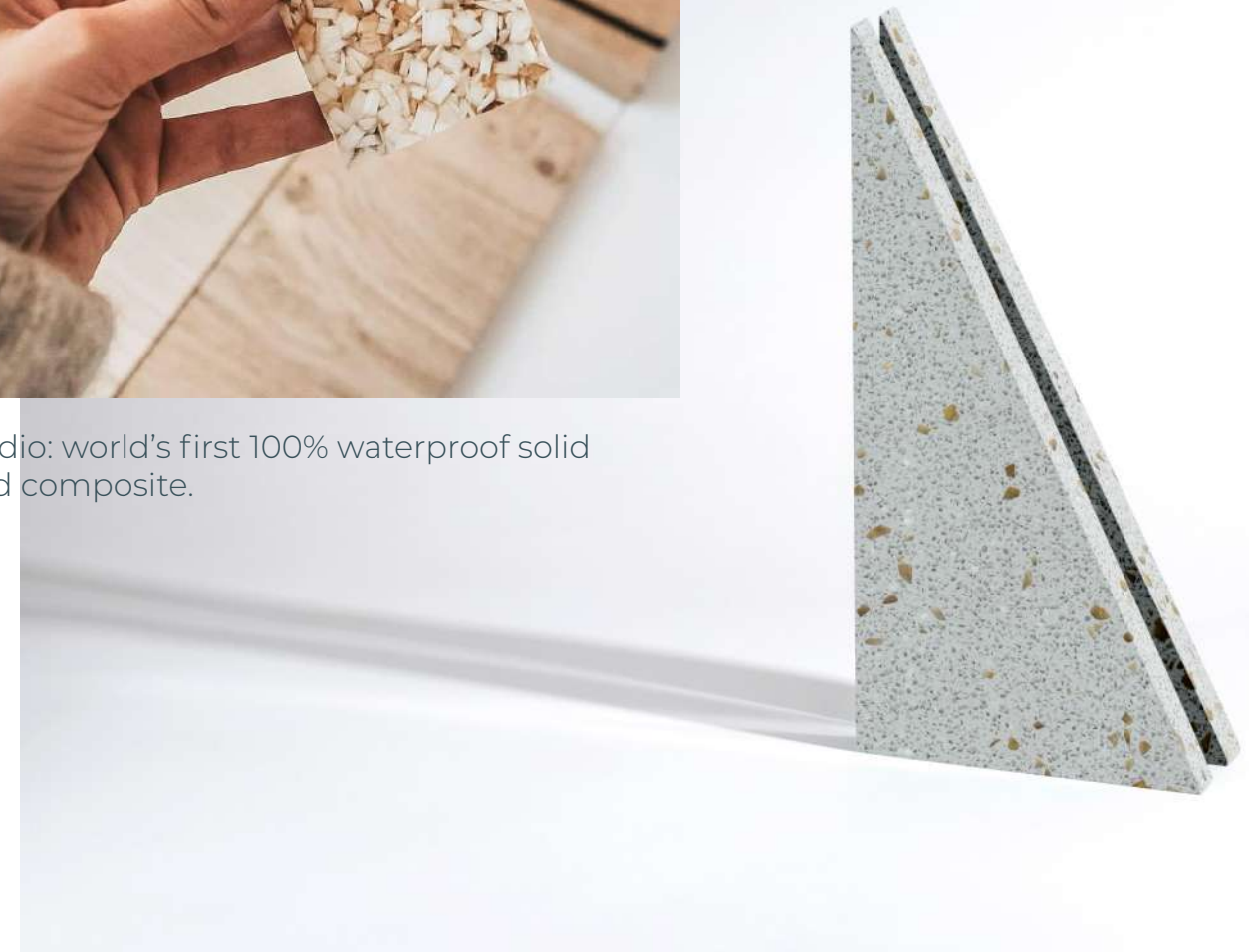
Sustainable Development Goals

In 2015, United Nations designed the Sustainable Development Goals (SDGs) as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030 (United Nations, 2015). These 17 goals were explicitly designed to engage the private sector in addressing the world's most pressing challenges. ***No longer can we continue business as usual, and that is what both Durat and Woodio are about.***

In the following, we will analyze how the case companies manufacture their materials and products and what impacts they have. We will walk through their product life cycle step by step, and as a framework, we use the raw material scoreboard of the European Union (Mancini et al, 2019).



Woodio: world's first 100% waterproof solid wood composite.



Durat: A solid surface material made of recycled plastics, 100% recyclable.

- SDG Goals:**
- Sustainability
 - Responsible manufacturing
 - Climate action

Durat uses new and reused plastics in a 70-30 % ratio. The product has the potential to be 100% recycled, and therefore the material itself can be 100 % recycled plastic.

Domestic production, creation of jobs in Finland, 17 years of knowledge about the circular economy.

Durat uses plastic waste collected from waste management companies in Finland and Sweden(Surfacematter, n.d.). The recycled plastic is transformable into granulates, and therefore reusable in plastic molding (H. Karppinen, personal interview, October 6, 2020).

Possibilities to recycle all the plastic they have produced.

Durat is planning to expand its recycling units internationally. The idea is to have small facilities close to both the sources of industrial waste and the end-customers. In the future, everyone could have a product manufactured locally from their local waste (H. Karppinen, personal interview, October 6, 2020).

Locally sourced waste improving recycling rates in new markets. Also cuts down CO2 emissions during transportation.

Raw materials

Approximately 80% of the raw materials are locally sourced wood, such as aspen and birch. Since collaborating with Metsä Group, Woodio has been able to use an under-utilized sidestream from their factory.

The adhesive (binding) material is polyester, and together with the wood chips, they form a waterproof composite material (Vähä-Ojala, 2019). As a heterogeneous material, it is harder to reuse in the future.

Value added

Domestic production, creation of jobs in Finland, development of green tech for the future.

Basic Manufacturing

Compared to the high temperatures in ceramic manufacturing, Woodios patent-pending cast molding technology does not require high amounts of water and energy, or high-temperature ovens to make the final product (Vähä-Ojala, 2019). Therefore the carbon footprint is close to zero.

Value added

Sustainable wood supply, decreased air emissions

Final products and distribution

In some cases Woodio uses ecological retailers. One example is Ekohunters which core idea is to resell brands which are good for the planet. Ekohunter's goal is to educate people to be aware of the products people buy and how sustainable they actually are.

Value added

Users are being educated about sustainable choices.

- SDG Goals:**
- Sustainability
 - Responsible manufacturing
 - Climate action

Durat has great potential both in residential and commercial markets, with its durable solid surface material. The customer can choose a product made from sustainable material and can feel safe when using it since the material does not emit harmful chemical emissions. The material is transformable to toilets, sinks, desks, wall panels – you name it. (Surfacematter, n.d.)

The customer can choose a product made from recyclable material.

As a step towards a circular economy and a closed material cycle, Durat has launched the “Durat Circular”-concept. They redeem used Durat products, restore them to as good as new, and even resell them. (H. Karppinen, personal interview, October 6, 2020)

Longer product life cycle, with a goal that no Durat product ends up in a landfill.

The plastic industry has always had a use-once-and-discard mindset. This will have to change. What if, in the future, Durat’s base material could be 100% recycled instead of the current 30%?

Consumption and use

Value added

End-of-life cycle

Value added

Future visions

With its timeless yet stylish design, Woodio aims to become a well-known design brand. Their material is durable, maintenance-free and designed to last for 20 or more years (P. Lahtinen, personal interview, October 6, 2020).

The products are used both in private homes as well as public places such as high-end hotels and restaurants.

The customer can choose a product made from renewable materials.

Woodio products serve as a CO2 storage, and they can be burned and used as energy when they have come to the end of their lifecycle.

Zero landfill waste.

A burning question: what is the role of a ‘waste-to-energy’ concept in the future? What if, there is no such thing as waste – just materials in the wrong place?

From a *linear* to a *circular* economy

Moving towards the future, we look at the business model and material flow in our case companies. While 100 percent circularity might not be possible, we should still aim for it. We need to design for resource efficiency, creating more with fewer resources across their entire lifespans. We need to minimize the waste we produce and design for circularity. At the same time, we need to satisfy the human needs associated with 21st-century lifestyles.

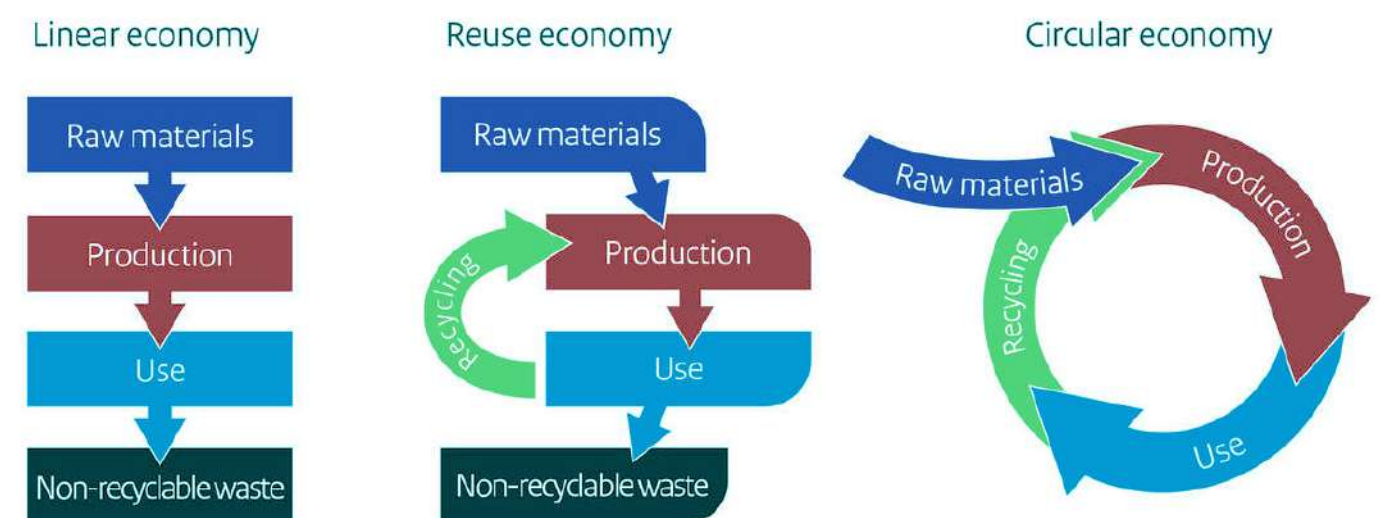


Figure describing three different possible economies in the production process. In a linear economy, raw material is utilized as non-recyclable waste. In a circular economy, raw material is fully recycled. (Government of The Netherlands, 2017)

DURAT®

Since day one has Durat's operations been developed following the principles of circular economy (Environment, 2020). ***From inventing the material to upcycling their old products – sustainability is at the heart of everything they do.*** According to Durat, design is how they make green behavior easy, desirable and cool (H. Karppinen, personal interview, Oct 6, 2020).

Regarding materials, their goal is continuously to increase the use of recycled material. ***At the moment, they focus on raising the ratio of recycled plastics in their material from 30% to 50%.*** Another development target linked to their Durat Circular -service concept is tracking all their material and products (H. Karppinen, personal interview, October 6, 2020). Succeeding in these goals would further improve the product lifecycle and take the company closer to its goal of being a zero-waste company.

At the moment, Durat has not been able to adopt the full circular economy, but it is on a well-planned path towards it. In the future, Durat could maybe even ***help other companies turn their business into the circular model by collaboration and sharing their learnings.***

woodio

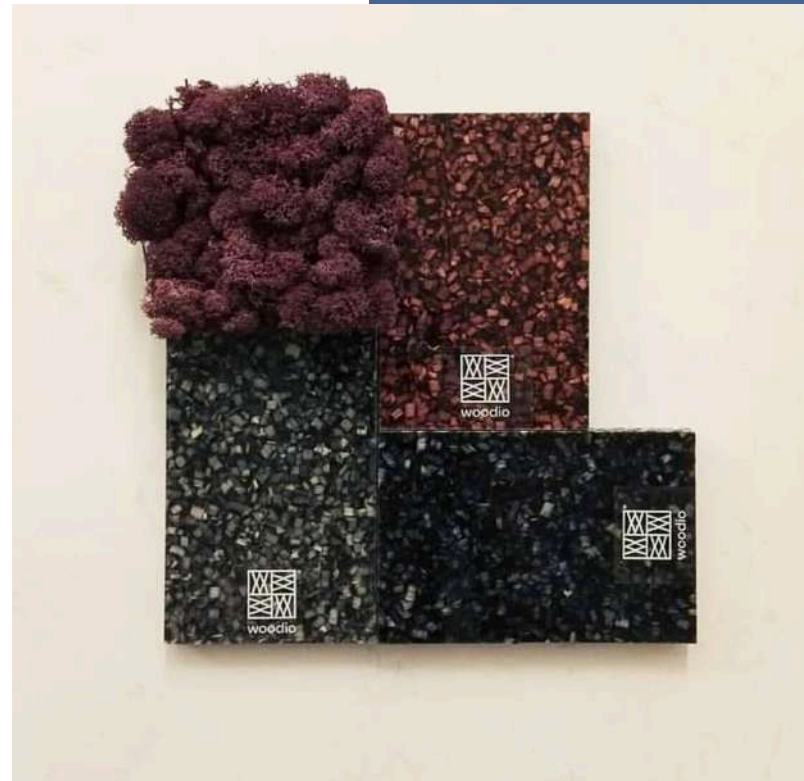
Woodio's signature material focuses on wood, a renewable material. Since partnering up with Metsä Group, ***Woodio has also been able to use the previously under-utilized sidestreams of Metsä Group's production.***

The adhesive (binding) material is polyester, but Woodio is continuously seeking new raw materials to improve the features of their material and make it even more environmentally-friendly. At the moment, their development efforts focus on bio-based and recycled materials (Woodio, 2020).

Regarding the process, Woodio is still in a linear economy, even though they are using more sustainable materials and manufacturing processes than the ceramic industry. ***At the moment, the recommended disposal is as energy waste, but the company is determined to seek other solutions.***

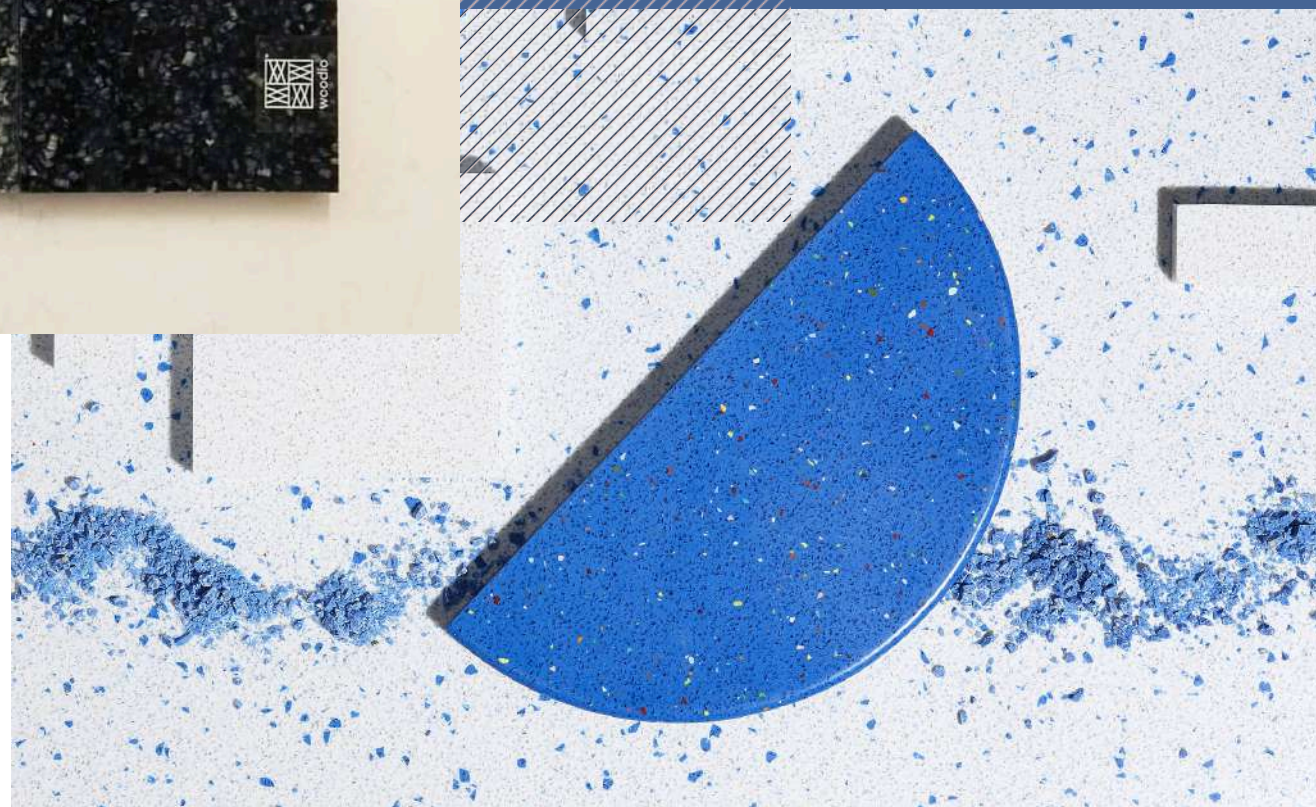
“We look at circularity not only at the product level, but also at the system level. We have been doing it before most people knew the term existed.”

- Heikki Karppinen, CEO of Durat



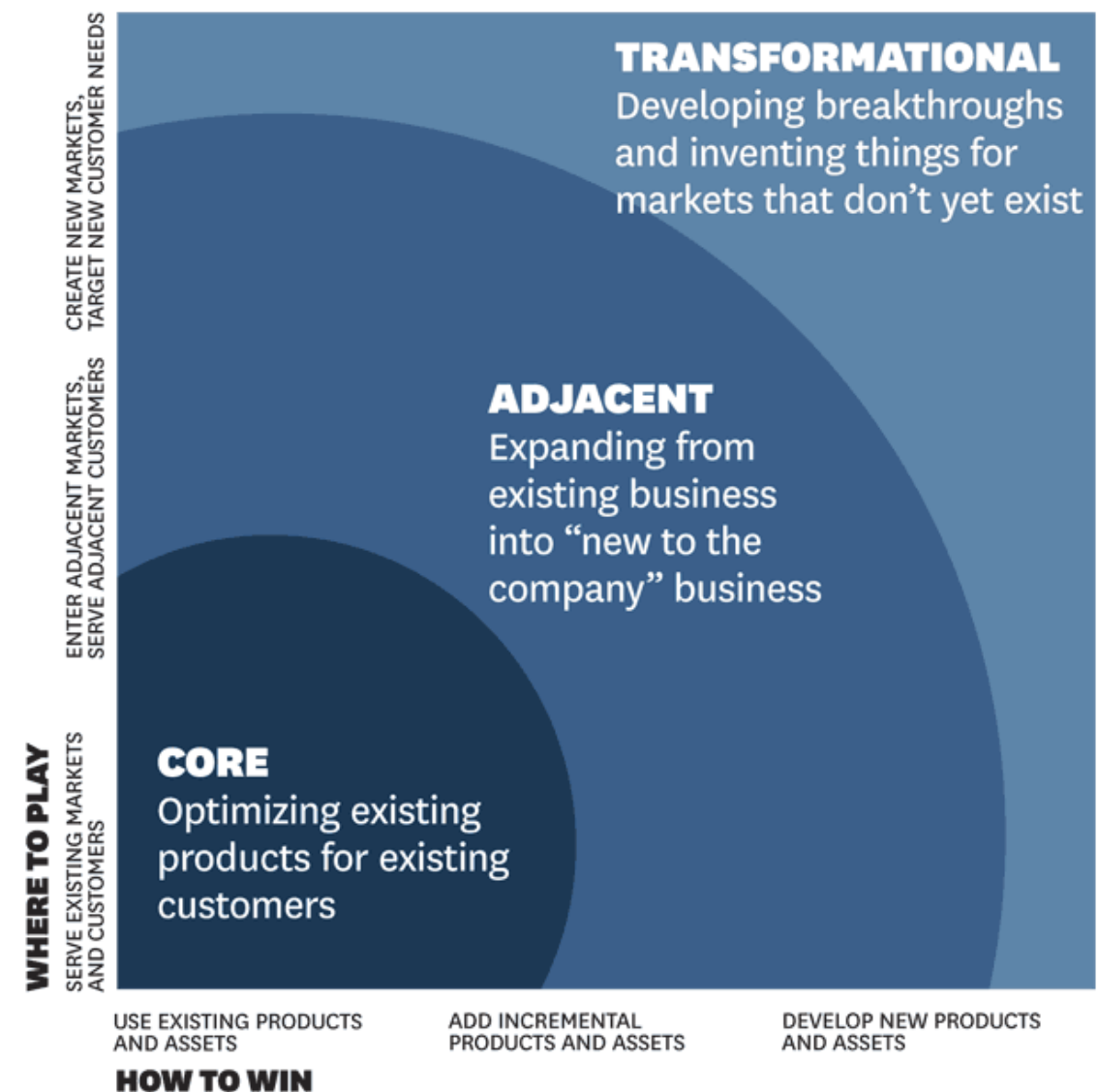
“We are now faced with the challenge to research and reinvent materials and also investigate how we can reuse them several times over, while making them long-lasting and creating minimal waste.”

- Petro Lahtinen, Doctor of Chemistry and CEO of Woodio



Future Visions

Both of these companies hold great potential for the future. *But how could they take the next step with the creative use of design?* During the process, our team came up with some ideas for both Durat and Woodio. *As a framework, we used the Innovation Ambition Matrix by Bansi Nagji and Geoff* (Managing your innovation portfolio, Harvard Business Review, 2012). Starting from the bottom-left, we will cover opportunities from the companies current reality. What efforts could the companies make regarding existing products and customers? Moving to the middle, we cover what they could conquer with their current knowledge and technology. Last but not least, we will share our future visions, a scenario our case companies could develop toward.





Woodio

Create new markets, target new customer needs

Enter adjacent markets, serve adjacent customers

Serve existing markets and customers

Woodio goes circular

Driven by sustainability and innovativeness, we believe Woodio will be able to reinvent its material or at least find new ways to lengthen the products lifecycle by reusing them.

A collection of bathroom accessories

Potential customers might feel insecure about the new material. Some are excited but are not ready to renovate the whole bathroom. As a way to get them engaged with the brand and to drive sales, Woodio could design a collection of bathroom accessories. Imagine a toothbrush holder, bathroom shelf, or a soap dispenser made of the Woodio material - how cool would that be! Sold through a webshop and retailer network, Woodio would be able to engage a bigger audience and gain insightful feedback for future development.

Standardisation of processes

Before transitioning into the next period of growth - or scaling the business - Woodio needs to standardize its processes. They have started this with the ISO 9001 approach. Successful implementation will bring clarity, further improve product quality, and cut ineffective use of resources. Most importantly, it will lay the proper foundations for growth.

Use existing products and assets

Add incremental products and assets

Develop new products and assets

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