

Wonderful

Growth Model for Green, Digital, and Resilient
Entrepreneurship for European Young People



Future
Development
Initiative



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Growth Model for Green, Digital, and Resilient
Entrepreneurship for European Young People

PARTNERS



Join the WONDERFUL
Journey!

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Empowering Young Women
through Entrepreneurship in
Handmade Cosmetics



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WE FOCUS ON

Natural & Sustainable Cosmetics

Promoting the use of natural ingredients for health and environmental well-being.

Entrepreneurial Empowerment

Supporting young women to become confident business creators.

Sustainability & Innovation

Encouraging eco-friendly production and digital entrepreneurship.

WHAT WE DO

- 1** Engaging, accessible, and practical resources focused on entrepreneurship and sustainable production.
- 2** Interactive workshops and learning programs based on Non-Formal and Work-Based Learning methodologies.
- 3** Provide Tools for Youth Workers
- 4** Promote Collaboration



WHY WONDERFUL MATTERS

Addresses youth unemployment by building employability and entrepreneurship skills.

Contributes to a green, digital, and inclusive Europe.

Promotes sustainability, self-sufficiency, and innovation in the cosmetics industry.



Case Studies

COUNTRY NAME: Turkey



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Case studies

Relevant statistics on benefits of natural cosmetics:

According to clinical studies and analysis, plant-based and botanical or green products in general can improve skin hydration significantly. They can also reduce melanin levels and erythema as well as exert anti-inflammatory and antioxidant effects (Cheng et al., 2024; Fernandes et al., 2023). Market research estimates natural cosmetics market at ≈USD 52.4 billion in 2025 based on rapidly growing, consumers driven natural cosmetics market (ESW, 2021; Future Market Insights, 2025).

Another main motivation to consume natural cosmetics is the health and environmental concern. Other products generally contain phthalates, microplastics, parabens, substances related with endocrine disruption and ecological persistence. Natural products on the other hand, reduce the exposure to these chemicals and hence mitigating pollution (Bikiaris, 2024). Overall, the evidences from the field suggests that natural cosmetics offer environmental advantages, measurable skin benefits, reinforcing their role in the rapidly expanding sustainable beauty sector (Cheng et al., 2024; Fernandes et al., 2023).

Key national policies, strategies, or legal frameworks that address the sustainability challenges or aspects of the beauty industry.

In Türkiye, there are environmental and product-safety wise regulations: product regulation, national waste/circular- economy programmes and waste/packaging law are among these. Kozmetik Ürünler Yönetmeliği (Kozmetik Ürünler Yönetmeliği) is the governing framework for cosmetic products in local level. It aligns with the EU cosmetic rules, aims to protect human health and establishes labeling and banned/limited substances that are responsible-person obligations. These provisions also affect choices on the formulation and market access for green/natural claims. (Tunca Hukuk; GSO).

Ambalaj Atıklarının Kontrolü Yönetmeliği and related amendments are governing the packaging and post-consumer waste by setting producer responsibility, recycling/recovery targets and collection systems. These also align with the Zero Waste (Sıfır Atık) programme promoted by the Ministry that focuses on to increase recycling and reduce landfill (Ambalaj Yönetmeliği; Zero Waste programme). National waste management strategies embedding recycling targets, circular-economy goals that cover personal-care waste streams and economy goals take place in Türkiye's Eylem Planı as well as in Ulusal Atık Yönetimi. These are influencing municipal collection and industry practices (National Waste Management Plan 2016–2023).

Academic and sector analyses highlight how these regulations—together with green-marketing standards, voluntary eco-certifications and consumer pressures—shape industry transitions toward natural ingredients, sustainable sourcing, and sustainable packaging design in Türkiye (İnal, 2023; Urkut & Cengiz, 2021; İkizoğlu, 2024).



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Case studies

Degree of climate change effects in Türkiye

Türkiye is experiencing climate change effects more and more. Country-wide yearly weather heat increased from 12,9 to 15.1 °C and maximum heat reached from 24,6 to 25,8 °C. (Gümüş, Oruc, Yücel, & Yılmaz, 2023). These increases, also paved the way occurrence of extreme weather events to be more frequently. Likewise, number of extreme weather conditions per city also increased from 0,3 to 8 (Gümüş et al., 2023).

Changes in raining regime, drought and increasing potential evaporation rates especially became more remarkable in the Eastern Anatolia and Aegean sides of Türkiye. (Rustem & Günel, 2022). This situation creates a huge pressure on water resources and effects agricultural profitability in negative way. In certain cities, decrease in grain production has been observed, together with regional differences. (Yükçü, 2024).

Increase in the sea level and shore erosion are also among important risks. To illustrate, in Çukurova Delta, yearly sea level increase in general in between 1992–2012 period was calculated as $3,4 \pm 0,1$ mm/year. (Aykut & Tezcan, 2024). Additionally, 24.7% of the Mersin–İskenderun Gulf coastline is at a very high level of vulnerability, while 27.4% is at a high level of vulnerability, posing a serious threat to infrastructure and living areas (Aykut & Tezcan, 2024).

As a result, climate change in Türkiye threatens the country's ecosystems, agriculture, water resources, and coastal infrastructure through effects such as temperature increases, extreme weather events, drought, water scarcity, and sea level rise. Therefore, the implementation of adaptation and mitigation strategies is of great importance (Gümüş et al., 2023; Rustem & Günel, 2022; Yükçü, 2024; Aykut & Tezcan, 2024).



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Case studies

How handmade cosmetic businesses can help combat climate change and promote digital transformation?

Handmade cosmetics production, consists lower level of carbon footprint comparing the other large-scale industrial cosmetic production. This production style, generally decreases environmental effects via the usage of local and natural ingredients. In Türkiye, there is an increasing demand to natural ingredients which permits local producers to use sustainable products. For example, small businesses that produce natural soap contribute to the protection of water resources by avoiding chemical ingredients (Kurt & Akdur, 2024). Handmade Cosmetic producers may present their products and reach out to wider audience via these digital platforms. In Türkiye context, digital transformation provides important opportunities especially for SMEs. To illustrate, within the scope of “İkiz Dönüşüm” strategy, integration of green and digital transformations processes are promoted (APO, 2025).

Case 1:

İpekyolu Kadın Kooperatifi (Mardin) – natural / Halep / Bittım soaps

Mardin İpekyolu Kadın Kooperatifi is a women-led cooperative located in southeastern Türkiye, dedicated to producing traditional handmade soaps such as Halep (Aleppo), Mardin, and Bittım (wild pistachio) soaps, along with natural olive oil bars. This cooperative combines traditional know-how with a modern entrepreneurship. It is also helpful to preserve regional craftsmanship. The cooperative is composed of mostly from women with a local and rural background. Via this initiative, the cooperation does not only create employment opportunities for women but also serves for preservation of artisanal soap.

Recently, it has developed a significant transformation on developing digital tools and using e-commerce strategies to expand its market reach. By merging traditional production techniques with sales methods and digital marketing, it has become a model for rural women’s economic development.

Its success story demonstrates how small-scale, handmade cosmetic producers can participate in digital transformation while maintaining cultural heritage, promoting sustainability, and empowering women in regional economies.



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Case studies

Relation of the case with promoting digital transformation

In the period 2019–2024 the İpekyolu cooperative moved beyond purely local sales and village bazaars to digital channels. Its products have been featured in online marketplace and national news. They used platforms like Trendyol and other e-commerce channels to reach out customers across Turkey. This shift needed cooperative and adoptive digital skills. Digital transformation mentioned here is not solely related with having an online shop but it is the mixture of taking quality photos for online buyers, formalizing product descriptions and integrating these elements with logistics and marketplace orders.

Relation to combatting climate change

Handmade soap production practiced by İpekyolu leverages locally-sourced, low-processed ingredients (olive oil from local groves, bittim/wild pistachio oil, laurel, etc.) and traditional cold/boiling soap methods that avoid synthetic petrochemical additives and the energy-intensive industrial processes used in mass cosmetics. By prioritizing local inputs and simple formulations, the life-cycle emissions associated with ingredient processing and long supply chains are reduced relative to many industrial cosmetics.

Further climate-positive aspects in the İpekyolu case include:

- (1) Supporting local agriculture (demand for local olive and bittim oil), which helps maintain regional landscapes and reduces transport-intensive sourcing;
- (2) Producing low-packaging or plastic-free bars (many artisanal soaps are sold unboxed or in simple recyclable wrapping), which cuts plastic waste and the embedded emissions in single-use cosmetic packaging; and
- (3) Strengthening local livelihoods so that rural communities have viable alternatives to land-use changes that can increase emissions. When combined with conscious small-batch production (no overproduction, made to order), these practices align with mitigation goals by lowering carbon intensity per unit and reducing waste streams.



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Case studies

CASE 2:

Samandağ Women's Cooperative is a women-led organization based in the Samandağ district of Hatay, Türkiye, known for producing the region's traditional laurel (defne) and olive oil-based handmade soaps. The main target of the establishment of this cooperative was to strengthen local women, preserve traditional soap-making knowledge as well as to strengthen the local economy via sustainable production.

The cooperative was established to empower local women, preserve ancestral soap-making knowledge, and strengthen the local economy through sustainable production. Using locally sourced and entirely natural ingredients such as laurel oil, olive oil, water, and lye, the cooperative maintains an eco-friendly and chemical-free production process. Their soaps are biodegradable, free from artificial fragrances or colorants, and valued for their skin-friendly, natural properties.

Relation to combatting climate change

Defne (laurel) and olive-oil soaps produced by Samandağ cooperatives contribute to climate-sensitive, lower-impact value chains in several ways. Firstly, they rely on locally available botanical inputs (defne oil, olive oil) that require little industrial processing compared with synthetic cosmetic feedstocks derived from petrochemicals. Local sourcing shortens supply chains and reduces transport-related emissions. Secondly, artisanal soap production typically uses simpler formulations and small-batch processes — lowering energy intensity of manufacturing compared with large industrial cosmetic factories that perform multiple chemical processing steps and need specialized facilities. Sources on traditional Turkish soaps and cooperative product descriptions highlight these low-input production modes and the sustainability benefits of natural ingredient use. Thirdly, multiple cooperatives emphasize low-waste packaging and traditional bar formats, which reduces plastic use and the embedded emissions of packaging manufacture and disposal. Finally, cooperatives help keeping land under sustainable management rather than converting it to more carbon-intensive uses. In summary, the Samandağ case demonstrates how regionally-rooted handmade cosmetics can align artisan livelihoods with climate mitigation by shortening supply chains, reducing synthetic inputs, and minimizing packaging as well as production waste.



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Case studies outline & report

Relation of the case with promoting digital transformation

Samandağ's women's cooperatives (Defne / Samandağ Kadın Kooperatifi) present a clear, contemporary example of rural artisanal producers adopting digital tools and platforms. The cooperative runs an online website (samandagkadinkoop.com) and its products appear on regional aggregator marketplaces (HayatHatay, AnatoliaBazaar) and national e-commerce channels (e.g., listings on Hepsiburada), as documented in marketplace pages and local reportage.

These channels enable cooperatives to:

- (a) reach urban and diaspora consumers without costly intermediaries,
- (b) obtain digital payment and shipping logistics, and
- (c) use platform analytics to identify demand for specific soap types (defne ratios, packaging sizes) so production can be adjusted.

The digital transformation also includes capacity building: digital order management, basic e-commerce compliance (distance selling law/KVKK notices shown on sites), and use of third-party logistics and listings on thematic platforms (Hepyerinden) created specifically to bring rural cooperatives into digital marketplaces. This is transformative for small producers: instead of being limited to local bazaars, they can centralize orders, manage inventory, and receive feedback from customers remotely. In crisis contexts (for example post-earthquake recovery in Hatay), having digital channels offered a faster path to re-start revenue flows and re-establish market connections. The Samandağ case therefore shows that digital tools – simple e-shops, marketplace integration, social media storytelling – are practical leverages for scaling handmade cosmetics while retaining community ownership of production.



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Case Studies

COUNTRY NAME: Belgium



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Case studies

Relevant statistics on benefits of natural cosmetics

Belgium's beauty and personal-care market was valued at approximately €2.3 billion in 2023, highlighting its significance within the European cosmetics sector. CBI+2FashionNetwork+2 Within this, the natural skin-care segment is estimated to reach around US\$126.43 million in 2025, which converts to roughly €115 million (assuming an exchange rate near US\$1 = €0.91). Statista Growth in this eco-friendly segment is driven by consumer demand for sustainable, cruelty-free, and transparent products, and the broader cosmetics market in Belgium grew by approximately 6.7% from 2022 to 2023. CBI For youth entrepreneurs and small-batch producers, this creates real opportunity: the rising market size, coupled with consumer preference shifts, means that launching a handmade, sustainable cosmetics line in Belgium taps into a growing eco-market. The data show that ingredients like beeswax are already in strong demand, with Belgium importing about €1.1 million worth of beeswax in 2023. CBI Altogether, these figures emphasise that natural cosmetics are not only consumer-relevant but also economically viable in Belgium, making them especially suitable as a focus for youth entrepreneurial training and green business initiatives.

Key national policies, strategies, or legal frameworks that address the sustainability challenges or aspects of the beauty industry.

Belgium addresses sustainability in the beauty industry through several national and EU-aligned frameworks. The EU Cosmetics Regulation (EC No. 1223/2009), implemented via Belgium's Royal Decree of 17 July 2012, ensures product safety, transparency, and responsible manufacturing. The National Action Plan on Endocrine Disruptors (2022–2026) targets harmful substances in cosmetics to reduce health and environmental risks. Broader initiatives like Belgium Builds Back Circular and the European Green Deal promote circular economy models, sustainable packaging, and waste reduction across industries, including cosmetics. Additionally, strict consumer protection laws prevent false or misleading eco-claims, ensuring marketing integrity. Together, these measures encourage Belgian beauty brands to adopt cleaner ingredients, eco-friendly packaging, and sustainable business models while contributing to national and EU sustainability goals.



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Case studies

Degree of climate change effects in Belgium:

Belgium is increasingly experiencing the tangible effects of climate change, with impacts becoming more visible across environmental, economic, and social dimensions. Average annual temperatures in Belgium have risen by about 2.5°C since the late 19th century, exceeding the global average rate of warming. This trend has led to more frequent heatwaves, such as those recorded in 2019 and 2022, when temperatures surpassed 40°C for the first time. Extreme weather events are also intensifying — including floods, droughts, and heavy rainfall. The devastating floods in Wallonia in July 2021, which claimed 41 lives and caused billions of euros in damages, remain a stark example of climate-related disasters affecting local communities. Sea-level rise poses additional risks for Belgium's coastal regions, particularly in Flanders, where low-lying areas are vulnerable to storm surges and saltwater intrusion. Climate change is also impacting agriculture, biodiversity, and energy systems, altering crop yields, threatening forest health, and increasing energy demand during heatwaves.

In response, Belgium is implementing its National Energy and Climate Plan (NECP 2021–2030), targeting a 55% reduction in greenhouse gas emissions by 2030 and achieving climate neutrality by 2050. Despite these commitments, ongoing adaptation and stronger coordination between federal and regional governments remain crucial to managing the growing effects of climate change.

How handmade cosmetic businesses can help combat climate change and promote digital transformation?

Handmade cosmetic businesses can play a key role in combating climate change while driving digital transformation. By using locally sourced natural ingredients, adopting refillable and biodegradable packaging, and producing in small batches, these businesses reduce emissions, waste, and reliance on mass manufacturing. Many also upcycle raw materials, use renewable energy, and partner with regenerative farms, creating a circular, low-carbon model. On the digital side, e-commerce platforms, online workshops, and QR code traceability tools enhance transparency and minimize physical resource use. Digital inventory systems and data-driven demand forecasting further reduce overproduction, while social media and virtual learning expand access to sustainable entrepreneurship training without high travel emissions. Examples such as online refill subscription models, preordered seasonal products, and QR-linked ingredient stories show how handmade cosmetics can merge sustainability and technology. Together, these eco-friendly and digital practices empower small entrepreneurs—especially women and youth—to build green, resilient businesses that not only reduce carbon footprints but also inspire wider behavioral change toward a more sustainable beauty industry.



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Case studies

CASE 1:

Karikemité: Bridging African Heritage and Belgian Craftsmanship for Sustainable Beauty

Founded in 2017 by Daya Barry, Karikemité is a Belgium-based handmade cosmetics brand that beautifully merges West African natural skincare traditions with European artisanal quality standards. Growing up between Senegal and Mauritania, Daya was immersed in rich beauty rituals where shea butter, locally known as “women’s gold”, held a central place in daily life. This early exposure sparked a lifelong passion for natural ingredients and holistic skincare practices.

As Daya moved to Europe, she noticed a disconnect between the commercial cosmetics industry and the authentic, natural wisdom of African traditions. Many mainstream products relied on synthetic ingredients and industrial processes, stripping away the purity and cultural meaning of natural beauty care. To address this gap, she created Karikemité—a name symbolising the fusion of “Karité” (shea butter) and “Kemité” (Black identity)—as a celebration of authenticity, sustainability, and self-love.

The brand emphasises ethical sourcing, partnering directly with women’s cooperatives in West Africa to obtain high-quality, unrefined shea butter. This approach not only ensures fair income for local producers but also reduces environmental impact through short supply chains. In Belgium, the production process follows artisanal methods, maintaining the ingredients’ natural integrity while meeting European cosmetic safety standards.

Beyond its ecological values, Karikemité embodies cultural empowerment and digital innovation. Through online platforms and storytelling, Daya educates consumers about sustainable skincare and African beauty heritage, promoting inclusivity and conscious consumption. Today, Karikemité stands as an inspiring model of how small, women-led businesses can unite tradition, sustainability, and digital entrepreneurship to create a positive social and environmental impact.

Relation of the case with promoting digital transformation

Karikemité serves as a powerful example of how small, women-led businesses can promote digital transformation while advancing sustainability and cultural authenticity. From its inception, founder Daya Barry strategically embraced digital tools to bridge the gap between African traditional beauty practices and modern European consumers. Operating in Belgium, Karikemité leveraged e-commerce platforms, social media marketing, and digital storytelling to reach a global audience without relying on large-scale retail distribution, thereby minimising the environmental impact associated with physical stores and overproduction.

Through its online shop, customers can learn about the origin of each ingredient, particularly shea butter sourced from women’s cooperatives in West Africa. This digital transparency not only builds trust but also educates consumers on ethical and sustainable production. The brand’s use of visual storytelling on platforms like Instagram and YouTube highlights traditional skincare rituals, artisanal production, and the empowerment of African women producers — transforming cultural heritage into a digital learning experience.

Moreover, digital transformation enabled Karikemité to operate efficiently as a small enterprise: managing orders, tracking inventory, and communicating with suppliers through digital systems.



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Case studies

It also fostered community engagement through virtual workshops and campaigns that raise awareness about natural skincare and sustainability. By integrating tradition with technology, Karikemité demonstrates how handmade cosmetic brands can harness digital innovation to expand impact, ensure traceability, and promote inclusive, low-carbon entrepreneurship in the modern beauty industry.

Relation to combatting climate change

Karikemité directly contributes to combating climate change through its commitment to sustainable sourcing, ethical production, and low-impact business practices. By using natural, minimally processed ingredients such as shea butter, coconut oil, and essential oils, the brand reduces dependence on synthetic chemicals derived from petrochemicals, which have high carbon footprints. Its supply chain prioritizes local, women-led cooperatives in West Africa, ensuring that ingredients are produced using traditional, low-energy methods and harvested from regenerative ecosystems, particularly shea trees that help prevent desertification and support biodiversity in the Sahel region.

In Belgium, Karikemité maintains an artisanal production process, minimizing energy consumption and waste compared to industrial manufacturing. The brand's use of recyclable and refillable packaging, alongside its advocacy for conscious consumption, further reduces plastic waste and lifecycle emissions. By producing in small batches, it prevents overproduction and unsold inventory – a major issue in the commercial cosmetics sector that contributes to waste and excess carbon emissions.

Moreover, Karikemité uses digital tools to sell directly to consumers, cutting out intermediaries and transportation steps that increase the environmental footprint. Through storytelling and education on sustainable beauty, the brand also raises awareness about climate responsibility, encouraging consumers to choose products that respect both people and the planet. Thus, Karikemité exemplifies how eco-conscious entrepreneurship and climate action can coexist within the handmade cosmetics sector.

CASE 2:

StillaOleum: Bridging Medical Expertise, Cultural Heritage, and Natural Cosmetics in Belgium

Founded in 2000 by Luiza Tashbaeva, StillaOleum is a Belgium-based natural cosmetics brand that integrates authenticity, health awareness, and cultural heritage. Luiza, originally from Uzbekistan, built her early career as a pediatrician before relocating to Belgium, where she started over as a professional and eventually became the director of a nursing home in Liège. At the age of 47, with her children grown, she decided to pursue a lifelong passion for natural remedies and cosmetics, inspired by her childhood experiences and traditional knowledge from Uzbekistan. This convergence of personal experience, medical expertise, and commitment to healthy living formed the foundation for StillaOleum.

The business model emphasizes careful product selection and quality assurance. Luiza curates natural cosmetic products made with pure essential and vegetable oils, evaluating their compositions through her medical knowledge to ensure both safety and effectiveness. The products blend traditional remedies with modern natural cosmetic standards, creating a unique niche that appeals to health-conscious consumers seeking authenticity.



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Case studies

Beyond product curation, StillaOleum engages in direct sales through a physical shop, fostering personal interaction with customers and building a community around natural beauty practices. The brand also invests in storytelling and brand identity, highlighting Luiza's heritage and expertise as a differentiator in the competitive Belgian cosmetics market.

In 2020, the company launched StillaBox, a personalized gift box concept offering themed selections for face, body, hygiene, or specific age and gender categories. This initiative simplifies customer choices, enhances the shopping experience, and reflects an innovative approach to combining traditional knowledge, health expertise, and consumer-centered marketing.

Relation to combatting climate change

StillaOleum addresses climate change through sustainable sourcing and eco-friendly production. Its natural cosmetic products use pure essential and vegetable oils, avoiding petrochemical-based ingredients and reducing carbon emissions. Small-batch production and minimal, recyclable packaging limit waste and energy use, while the personalized StillaBox encourages mindful consumption.

The brand also supports ethical and local supply chains, shortening transport distances and lowering the carbon footprint. Through storytelling and consumer education, StillaOleum promotes sustainable, climate-conscious choices in skincare. By combining heritage, artisanal methods, and environmentally responsible practices, the company demonstrates how small, women-led businesses can minimize environmental impact while delivering high-quality natural cosmetics.

Relation of the case with promoting digital transformation

StillaOleum illustrates how a small, heritage-driven cosmetics business can leverage digital transformation to expand reach, improve operations, and enhance customer experience. While rooted in traditional remedies and in-person sales, the brand has embraced digital tools to scale its impact beyond the physical shop in Liège. The launch of StillaBox in 2020 exemplifies this approach: personalized gift boxes can be curated and purchased online, allowing customers to engage with the brand remotely while providing valuable data on preferences and trends. This digital approach streamlines order management, inventory planning, and targeted marketing, reducing waste and improving operational efficiency.



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Case studies

Additionally, StillaOleum uses social media and storytelling to share the founder's journey, cultural heritage, and the benefits of natural ingredients. By creating content for platforms like Instagram, Facebook, and YouTube, the brand educates consumers about sustainable skincare and authentic remedies, attracting a broader audience while reducing the need for physical promotional materials. Digital tools also support customer engagement and loyalty, enabling email marketing, virtual consultations, and personalized recommendations. These tools not only enhance the shopping experience but also allow the brand to operate efficiently as a small enterprise. By integrating traditional knowledge with digital innovation, StillaOleum demonstrates that even artisan, locally rooted businesses can harness technology to scale sustainably, connect globally, and promote environmentally conscious practices.



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Case Studies

COUNTRY NAME: Greece



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Case studies

Relevant statistics on benefits of natural cosmetics:

Despite the scarce data regarding the "benefits" of natural cosmetics in Greece, market research shows that the sector is expanding. The primary drivers of this shift are customers' growing interest in sustainability and health, as well as the health advantages of natural products, with a focus on traditional Mediterranean ingredients like olive oil and lavender.

Greece gains from its robust exports and the growth of natural brands. In 2023, Greek-branded cosmetics exports exceeded €400 million, confirming the demand for Greece's "natural/heritage" narrative around the world. Perfumes and cosmetics account for around 31.4% of duty-free and travel retail sales in 2024, making them a prime outlet for Greek natural brands aimed at visitors.

The Greek cosmetics industry is expected to continue growing, as shown with a 12.5% market growth rate in 2023, while it is expected to generate US \$19.89 million in 2025. This market category is expected to grow at a compound annual growth rate (CAGR) of 3.86% from 2025 to 2030.

By embracing sustainable sourcing, using eco-friendly packaging, implementing digital supply chain management, using AI-powered R&D for effective formulations, creating circular business models, and utilizing e-commerce for lower distribution emissions and improved customer engagement, Greek handmade cosmetic companies can fight climate change and spur digital transformation.

Key national policies, strategies, or legal frameworks that address the sustainability challenges or aspects of the beauty industry

In accordance with more general EU directives, Greece has put into effect a number of national laws and policies to address sustainability issues in the beauty sector:

1. EU Cosmetics Regulation (EC) No 1223/2009

In the EU, including Greece, this rule oversees the labeling, marketing, and safety of cosmetic products. When used under regular or reasonably expected circumstances, it guarantees that items are safe for human health. The law requires that cosmetic products be subject to safety evaluations prior to being released into the market and forbids the use of specific hazardous substances. Accurate product labeling is also necessary to educate customers and enable traceability.

2. Extended Producer Responsibility (EPR) for Packaging

For packaging materials such as plastics, glass, paper, and aluminum, Greece has implemented an EPR system. Under this approach, the cost of collecting, transporting, and recycling packaging waste that is produced or imported lies on producers and importers. By 2030, the nation wants to meet certain recycling goals, like recycling 85% of paper and cardboard and 55% of plastics.



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Case studies

3. Environmental Protection Laws

As a cornerstone of the legal framework of the nation, the Greek Constitution contains clauses that protect the environment. Article 24 of the Constitution requires the state and its inhabitants to conserve the environment and ensures that natural resources are protected. It highlights the significance of biodiversity preservation, natural beauty conservation, and sustainable development. The Constitution also requires the state to enact environmental protection.

- Law 1650/1986: The legal foundation for environmental preservation in Greece is established by this fundamental environmental law, which addresses topics such as waste management, biodiversity conservation, and air and water quality. Additionally, it requires environmental impact assessments, or EIAs, for projects that could have a major environmental impact.
- Law 4819/2021: reuse, recycling, and recovery precedence over disposal, this law transforms waste management. It mandates that manufacturers register with the National Register of Producers of Packaging and Other Products and take part in alternative waste management programs.

4. REACH Regulation (EC) No 1907/2006

- REACH has direct application in Greece even though it is an EU-wide regulation. It focuses on how chemicals are produced and used, particularly in cosmetics, and how they might affect the environment and human health. REACH mandates that businesses register chemicals, assess their hazards, and secure approval for some extremely dangerous substances.
- Furthermore, Greece has ratified a number of international environmental accords that have an impact on its federal laws and regulations, including:
 - É The Paris Agreement on Climate Change
 - É The Convention on Biological Diversity (CBD)
 - É The Convention for the Protection of the Mediterranean Sea (Barcelona Convention)
 - É The Ramsar Convention on Wetlands
 - É The European Union's Emissions Trading System (EU ETS)



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Case studies

Degree of climate change effects in Greece

Greece has a strong legal framework for environmental preservation, however enforcing it raises a number of issues. Biodiversity is seriously threatened by illegal building and development in protected areas, especially along the shore. Because of heavy traffic and industrial pollutants, air pollution is still an issue, especially in cities like Athens. Another issue is garbage management, especially in areas with inadequate trash disposal infrastructure. Greece is still dealing with climate change-related issues like drought, coastal erosion, and wildfires, all of which call for ongoing adaptation and mitigation measures.

Greece experiences mild, rainy winters, comparatively warm, dry summers, and plenty of sunshine throughout the year due to its Mediterranean climate. The months of July and August are the warmest, while January and February are the coldest. Greece's climate is shifting. It has been established that Greece's temperature has been rising since the late 1990s, particularly in the summer. In addition, both seasonal and yearly precipitation have decreased. While winter and annual rainfalls are trending downward, summer rainfalls have increased. The growing global population, economic trends, transportation, energy, household consumption, and agricultural demand are the primary causes of climate change in Greece.

Between 1991 and 2020, Greece's average temperature rose by around 1.5 °C, with northern inland areas warming even more rapidly, in some cases exceeding 2 °C.

This warming trend not only intensifies summer heat but also disrupts ecosystems and puts strain on energy demand, particularly in urban centers.

Heatwaves are one of the most visible and dangerous consequences of climate change in Greece. The summer of 2024 was recorded as the hottest in the country's history, marked by one of the longest and most intense heatwaves. In Athens and other large cities, the rise in dangerously hot days poses serious risks for public health, infrastructure, and productivity.

Climate change is also reshaping precipitation in Greece. Average rainfall is expected to decline by about 12%, with summer precipitation falling by as much as 30% and winters becoming around 10% drier. Recent studies show that storms in Greece are already up to 15% wetter than they would have been without climate change, heightening the risks of floods, landslides, and infrastructure damage.

Wildfires have long been part of Greece's landscape, but their frequency, intensity, and destructiveness have surged. In the summer of 2025, wildfires became 22% more intense than historical averages. Beyond the immediate destruction, fires devastate biodiversity, disrupt tourism, and leave long-term scars on the land. Looking ahead, economically, Greece faces €2–2.2 billion in annual costs, by the end of the century, with some studies warning of losses up to €16 billion equivalent to roughly 1% of GDP. Studies warn of even greater impacts in worst-case scenarios, including job losses in the hundreds of thousands and steep declines in agricultural and tourism revenues.



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Case studies

How handmade cosmetic businesses can help combat climate change and promote digital transformation?

In order to combat climate change and encourage digital transformation in the sector, Greek handcrafted cosmetics companies are embracing digital innovation and sustainability principles. In addition to satisfying contemporary consumer demands for transparent and sustainable products, these programs help firms become more responsible and competitive.

CASE 1: Saphirêve

Saphirêve is a small plant-based cosmetics firm started by a PhD in chemical engineering. Recent UX/UI case studies that focus on the business, which started on Instagram, show how it moved from social sales to a specialized e-commerce presence. The public footprint consists primarily of the Medium case study and an active Instagram account with merchandise and pop-up participation.

Relation to combatting climate change

- **Product positioning:** Compared to mass-produced cosmetics, Saphirêve's emphasis on handcrafted, plant-based cosmetics could decrease the dependency on petrochemical inputs and large-scale industrial processes, both of which have higher carbon footprints. The choice of ingredients and small-batch production may have an environmental effect, but sourcing, formulation, manufacturing energy use, and packaging options will determine the actual environmental impact.
- **Local production & short supply chains:** Compared to global mass brands, handcrafting in Greece and local sales (Pop-ups, Instagram) suggest shorter supply chains and lower transport emissions, which could again reduce CO₂ impacts.
- **Opportunities:** By emphasizing certified sustainable ingredients, low-carbon suppliers, refillable/recyclable packaging, and transparent supply-chain reporting, the brand can further lessen its impact on the climate. These actions turn the brand's modest, organic positioning into quantifiable climate benefits.



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Case studies

Relation of the case with promoting digital transformation

From Instagram-only sales to a structured e-commerce site with better UX, product filtering, and checkout flows—this broadens reach, professionalizes operations, and permits data collection (sales, customer preferences) demonstrating a clear digital transformation trajectory.

- Demand forecasting, digital marketing analytics, inventory management, and possible integration with sustainable logistics (such as low-emission carriers and optimal delivery) are all made possible by e-commerce. Additionally, it enables the company to directly inform consumers of its sustainable credentials (ingredients, carbon claims, certifications).

CASE 2: Panabeau

Panabeau is a Greek e-commerce store showcasing natural and organic beauty & wellness products. Its offerings span a great variety, catering strongly to vegan, handmade, and organic cosmetics enthusiasts. The platform supports international shipping and even provides free samples to online shoppers. Panabeau operates a physical store in Parga, and its website reflects a broader ambition: professional branding, 2-language e-commerce setup, and secure order processing—all crafted with help from a digital agency to enhance its online reach.

Panabeau is a great case study of how a regional company focused on sustainability may interweave offerings that are in line with nature—handmade, organic, locally sourced goods based on Greek biodiversity, opportunities for climate change—by using recyclable packaging and clean ingredients, and digital evolution, utilizing e-commerce, instructional materials, and strategic branding to expand operations and influence.

Relation to combatting climate change

- Support for Local, Biodiverse Ingredients: Support for Local, Biodiverse Ingredients: Panabeau promotes shorter supply chains and biodiversity-friendly practices by procuring from Greece's abundant endemic flora, which can lower emissions associated with transportation and unsustainable sourcing.
- Natural & Organic Formulations: Their focus on certified organic materials, steering clear of parabens, petroleum derivatives, and synthetic additives, promises a lower chemical footprint during manufacture and disposal respectively.
- Recyclable Packaging: the reference to recyclable packaging shows concern for the environment, which helps reduce waste and the carbon footprint of product life cycles.



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Case studies

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Relation of the case with promoting digital transformation

- **Physical to Digital Expansion:** Panabeau, which started out as a physical store in Parga, moved online with a bilingual e-shop that was properly branded. This digital revolution greatly expanded its consumer base and geographic reach.
- **User Experience & Functionality:** The new e-commerce site reflects a modernized, customer-friendly approach by offering safe order processing, international shipping, easy browsing, and sample possibilities.
- **Content-Driven Branding:** Panabeau uses narrative, education, and regional authenticity to engage customers online through its blog
- **Support for Small Companies:** Through their website independent and women-led Greek enterprises are promoted, establishing a digital hub that encourages regional cooperation and entrepreneurship.



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Case studies

CASE 3: Fresh Line

A well-known Greek natural cosmetics company, Fresh Line combines traditional, artisanal manufacturing with a growing online presence. Through the use of recyclable packaging, natural ingredients, and waste-reduction strategies like the Fresh Bar, it exhibits encouraging potential in climate-conscious operations. In the meantime, its digital infrastructure and e-commerce show a strong path toward digital transformation, allowing for global, scalable, and omnichannel operations.

Established in 1992, Fresh Line is a Greek natural cosmetics company with roots in ancient Greek herbal and aromatherapy customs and family recipes. The Athens-based company produces more than 300 natural goods, which it distributes through over 250 retail locations across 12 countries. It has a strong emphasis on natural formulations with active components supported by clinical research, plant butters, herbal extracts, and essential oils. The business leverages its history, contemporary online and retail integration, and handcrafted techniques.

Relation to combatting climate change

- **Natural Materials & Traditional Manufacture:** The use of plant-based and herbal substances likely reduces reliance on synthetic petrochemicals, potentially reducing production-related carbon and environmental impacts.
- **Fresh Bar & On-Demand Production:** The "buy-by-weight" Fresh Bar approach minimizes overproduction and packaging waste, which aligns with the principles of the circular economy. By just getting what they need, customers save resources.
- **Recyclable Packaging:** Packaging methods show a commitment to recyclability while reducing waste and associated lifecycle emissions.
- **Local Production and Distribution:** Given its Athens-based production and substantial domestic presence, the brand most likely benefits from shorter, localized supply chains—a climate-smart alternative to long-distance transportation.

Relation of the case with promoting digital transformation

- **Integrated online and retail approach:** Fresh Line has expanded beyond physical stores by fusing its retail heritage with a cutting-edge e-commerce platform that offers free shipping, safe payment methods, and consumer convenience.
- **Optimized Digital Infrastructure:** Using a reputable e-commerce backend (Vendallion) and a professional digital agency indicates a mature online presence that can support data-driven operations, promotions, and user experience enhancements.



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Case studies

- Omnichannel Sales: Flexibility and enhanced consumer interaction through digital platforms are demonstrated by the smooth transition between in-store events (such as the Fresh Bar) and online sales.
- International Reach: The digital infrastructure of Fresh Line, which operates in twelve countries, facilitates international market penetration and expands access to its natural product line.



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Case Studies

COUNTRY NAME: Sweden



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Relevant statistics on benefits of natural cosmetics:

The Swedish beauty market is undergoing a significant transformation, moving rapidly toward natural and sustainable products. According to the Swedish National Board of Trade (Kommerskollegium, 2021), Sweden stands out within the European Union for its exceptionally high level of consumer environmental awareness. The study shows that 70 percent of Swedish consumers consider eco labels an important factor when purchasing cosmetics, the highest proportion in the EU. The same report notes that natural cosmetics are expected to represent a larger share of the Swedish market compared to the European average, driven by strong public interest in health, transparency, and environmental responsibility. This shift reflects Sweden's broader sustainability culture, where environmental protection and ethical consumption are seen as shared social responsibilities. Regulatory oversight by the Swedish Chemicals Agency (Kemikalieinspektionen) ensures that cosmetics comply with EU frameworks such as the REACH Regulation, which restricts hazardous substances and promotes safer alternatives. Complementing these regulations, certifications like the Nordic Swan Ecolabel and the EU Ecolabel guarantee that products meet strict environmental and health standards, from ingredient sourcing to packaging.

For beauty brands operating in Sweden, sustainability is no longer a niche but an expectation. Consumers increasingly demand full ingredient transparency, recyclable materials, and ethical production methods. As Kommerskollegium (2021) observes, this trend reflects a wider national identity rooted in simplicity, craftsmanship, and respect for nature—values that have positioned Sweden as a leader in Europe's growing market for natural and responsible cosmetics.

Data from the Swedish Meteorological and Hydrological Institute (SMHI, 2023) shows that Sweden's average annual temperature has increased by approximately 1.9 degrees Celsius since the late nineteenth century. This rate of warming is higher than the global average, which has risen by about 1.1 degrees during the same period. SMHI also reports that annual precipitation has risen by around 10 percent since the early twentieth century, with a noticeable shift toward milder, wetter winters and shorter snow seasons. These changes are influencing the country's ecosystems, forestry, agriculture, and industries that depend on natural resources, including the production of handmade cosmetics. The effects of climate change are particularly relevant for Sweden's natural cosmetics sector, which often relies on locally sourced ingredients such as birch, lingonberry, and sea buckthorn. These plants are sensitive to variations in temperature, sunlight, and precipitation, and shifting climate patterns may alter their growing conditions and nutrient profiles.

For Swedish entrepreneurs working in handmade cosmetics, understanding and responding to these environmental shifts has become an integral part of responsible business. Many are adopting renewable energy sources, local ingredient supply chains, and circular production systems to reduce emissions and environmental footprint. This approach aligns with Sweden's broader transition toward a green and resilient economy, in which sustainability and innovation reinforce each other.



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From Local Roots to National Impact

Maria Åkerberg is one of Sweden's leading natural skincare brands, founded in 1995 by Maria Åkerberg in the coastal town of Frillesås, Halland. The company was established with the vision of producing professional-grade skincare made entirely in Sweden using natural and organic ingredients that are safe for both people and the environment. Its product range, spanning skincare, haircare, and bodycare, is formulated with cold-pressed plant oils, beeswax, and botanical extracts from certified organic suppliers. The company's guiding philosophy, Deepskin Organics, emphasizes that what benefits the skin should also benefit the planet.

All production takes place in the company's own facility in Frillesås, powered by renewable energy and designed to operate with minimal environmental impact. Waste reduction, ethical sourcing, and full ingredient transparency have been part of the brand's identity from the beginning. No synthetic fragrances, mineral oils, or parabens are used, and packaging materials are recyclable. According to Allabolag (2024), Maria Åkerberg AB reported revenues exceeding 100 million SEK, reflecting strong consumer trust and the growing demand for sustainable beauty. The company also contributes to professional training programs and educational outreach, teaching both consumers and beauty therapists about the principles of natural skincare and sustainability.

Maria Åkerberg's operations are closely aligned with Sweden's national climate and sustainability goals. By sourcing ingredients from certified organic farms, the company avoids the use of synthetic chemicals that contribute to soil degradation and greenhouse gas emissions. Local manufacturing within Sweden reduces transport emissions compared to outsourced production, while the use of renewable energy in its factory helps minimize its overall carbon footprint.

The brand's circular production model focuses on recyclable materials, minimal waste, and long product durability, echoing the principles of Sweden's Climate Policy Framework, which targets net-zero emissions by 2045. As a woman-founded and led enterprise, Maria Åkerberg also plays a social role by creating local employment opportunities and promoting environmental literacy within the Swedish beauty sector.

Through its combination of ethical production, educational engagement, and climate-aware innovation, Maria Åkerberg demonstrates how small and medium-sized enterprises can be active agents in the transition to a green and circular economy. The company's success shows that sustainability and profitability can coexist, setting an example for responsible entrepreneurship in Europe's natural cosmetics industry.



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Innovation Driven by Nature

L:A Bruket was founded in 2008 in Varberg, on Sweden's west coast, by Mats Johansson and Monica Kylén. Drawing inspiration from the region's spa traditions and the surrounding coastal landscape, the founders set out to create skincare products that combine natural ingredients with functional design. The brand's guiding philosophy, described as innovation driven by nature, emphasizes simplicity, authenticity, and respect for the environment.

All L:A Bruket products are developed and produced in Sweden, using a high proportion of natural and organic ingredients. According to the company, most formulations contain over 90 percent natural components and are vegan and cruelty-free. The brand avoids synthetic fragrances and artificial colorants, relying instead on natural essential oils and plant-based ingredients such as seaweed, oat extract, and lavender. While not all products are certified organic, L:A Bruket follows the COSMOS-standard for natural cosmetics to ensure ingredient traceability and responsible sourcing. Sustainability is embedded in the company's values. Its production prioritizes quality, longevity, and recyclable materials, and packaging is designed to minimize waste and environmental impact. The brand's commitment to craftsmanship and sustainability reflects the Swedish concept of lagom balance and moderation by promoting mindful consumption and long-lasting products.

L:A Bruket has grown from a small local business into an internationally recognized brand through strong digital storytelling and e-commerce development. Its minimalist aesthetic and focus on natural wellness have helped the brand build a distinct identity that resonates with a global audience. Today, L:A Bruket operates both online and through selected retail stores in major cities, including Stockholm, Gothenburg, Paris, Berlin, and Seoul, and its products are available in over 40 countries.

Digital channels are at the core of L:A Bruket's communication strategy. The brand uses its website and social media platforms to share the story behind its products, highlight ingredients, and engage directly with customers. This digital transparency strengthens consumer trust and builds an international community that values sustainability, authenticity, and design.

For entrepreneurs, particularly those entering the natural beauty sector, L:A Bruket represents how digital tools can extend the reach of traditional craftsmanship. By combining local production with modern technology, the company demonstrates that sustainable business models can thrive globally while remaining true to their origins and values.



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Case Studies

COUNTRY NAME: Austria



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From Local Roots to National Impact

Austria is a place where tradition meets innovation in the most unexpected ways. In the quiet valleys of Tyrol, the forests of Styria, and the creative districts of Vienna, small workshops and studios are breathing new life into centuries-old craft culture. What begins at a wooden workbench, in a kitchen-sized lab, or in a tiny mountain atelier often grows into something much bigger. Austrians have a deep appreciation for purity, nature, and quality – values shaped by the country's alpine landscapes and strong environmental identity.

This cultural foundation is now driving a new wave of green entrepreneurship. Handmade cosmetic creators are at the forefront of this shift, transforming local herbs, wildflowers, and even upcycled materials into modern, eco-conscious products. Their work resonates with a national audience that increasingly seeks authenticity over mass production, and sustainability over convenience.

With supportive national funding programs, digital innovation tools, and a rapidly expanding market for clean beauty, these once-local makers are stepping onto the national stage. Their journey reflects a broader Austrian story: the power of small, thoughtful ideas to inspire large-scale change. In Austria, local roots don't just stay local – they grow into a movement that shapes the future of sustainability across the entire country.

In Austria, innovation grows directly from the landscape. The country's mountains, forests, and meadows are not only symbols of national identity – they are engines for new ideas. Austrian businesses often look to nature as both a guide and a resource, creating a unique model where sustainability and innovation evolve together.

Take Tiroler Kräuterdörfer, for example – villages in Tyrol where farmers cultivate alpine herbs using centuries-old traditions. Today, these herbs are transformed into modern natural cosmetics, essential oils, and wellness products sold across Austria and beyond. Or Grüne Erde, a well-known Austrian eco-brand that creates natural cosmetics and home products using regional raw materials, renewable energy, and circular production systems.

In the realm of herbal skincare, SONNENTOR in the Waldviertel region showcases how organic farming and biodiversity-friendly methods can lead to globally successful products. Their teas and botanical extracts are used by many small cosmetic makers across Austria. Innovation also reaches into technology. Austrian companies increasingly use digital product passports, QR codes, and traceability platforms to show where ingredients come from – ensuring transparency from alpine farm to finished product. In Styria, several small cosmetic producers collaborate with local biotech labs to refine plant-based formulations through modern extraction processes. These examples illustrate how Austrian businesses blend natural resources, traditional craftsmanship, and digital innovation. In Austria, nature is not just a backdrop – it is a driving force that inspires new products, smarter technologies, and sustainable solutions that make the country a leader in green entrepreneurship.



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Wonderful

Growth Model for Green, Digital, and Resilient
Entrepreneurship for European Young People



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