

2025-2026 CMF DESIGN TREND REPORT - Short ver.

CMF Design Trend ²⁰²⁵⁻²⁰²⁶

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2025-2026 CMF Design Trend Report - Short ver.
Development of a CMF Design System and Process Framework
to Support SMEs in Manufacturing Industry Innovation

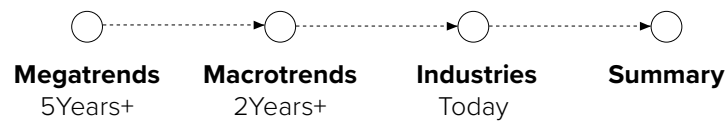
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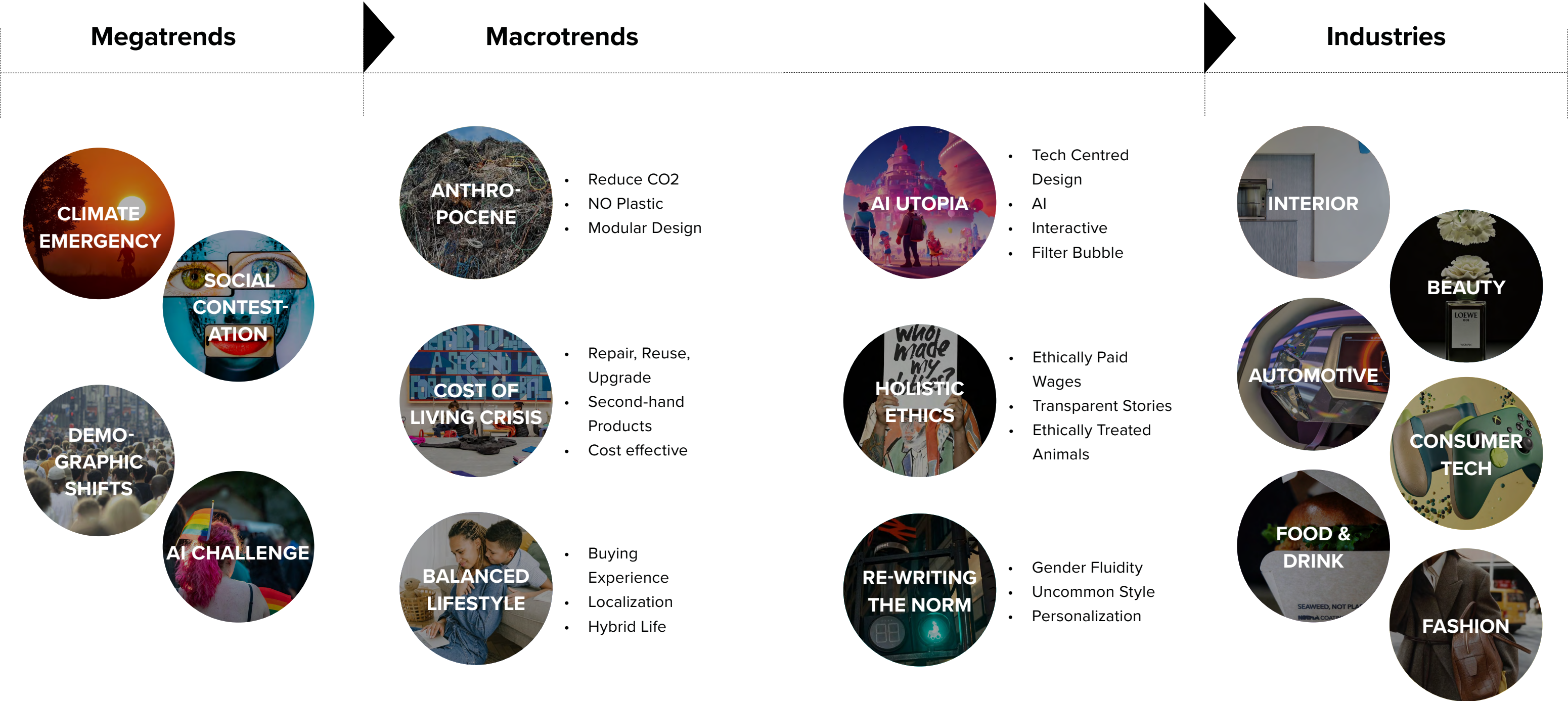
Project developed by
Chris Lefteri **Design**[™]

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Trends map



This report is designed to help tune and develop the design industry’s CMF strategy to adapt to rapidly changing markets and consumer expectations. With a focus on the latest developments in design and an in-depth analysis of the potential of materials and finishes, this report brings a fresh perspective to the latest design trends. To this end, it starts by investigating and analyzing the recent pan-social environment and trends, and cover a wide range of case studies and insights. Based on this, the report derive CMF keywords and predict the direction of design to discover the innovative potential of new materials and processes. It aims to strengthen the manufacturing competitiveness of the design industry by broadening the spectrum of color, material and finish (CMF).



Megatrends 05 YEARS+

This report observes global pan-social environments and megatrends, focusing on shifts shaping the future.

CLIMATE EMERGENCY

17.16°c July 22, 2024,
Global Average Temperature
on the Hottest Day on Record ^[1]


2026 Year Set for Full Implementation of
the EU's Carbon Border Adjustment
Mechanism, Introduced in 2023 ^[2]

37Gt The Amount of CO2 Emissions in
2023, Marking the Highest Recorded
Level ^[3]

On July 22nd, the Earth reached its highest recorded average temperature, highlighting the urgent need for global climate change risk management. In response, the EU introduced the Carbon Border Adjustment Mechanism in 2023, set for full implementation by 2026. This shift, coupled with the expansion of carbon emissions trading markets, signals a move toward making climate crisis mitigation central to global trade.

Due to this structural transformation, the design industry is following suit, with sustainable design evolving. The possibilities for innovation within this space are expanding its scope infinitely.

DEMOGRAPHIC SHIFTS

 **India** The Most Populous Country in the
World, Surpassing China in 2023 ^[4]

▲16% The 65+ Population Share is Rapidly
Increasing, from 10% in 2022 to 16%
in 2050 ^[6]

\$1.8t The Global Health Market Grows
5-10% Annually, Projected to Exceed
\$1.8 Trillion ^[5]


This trend, characterized by slowed population growth and regional disparities, brings critical population issues, such as gender inequality, to the forefront. In early 2023, India surpassed China as the world's most populous country, shifting the center of global demographics and population patterns. While Asia and Africa are poised to drive future growth, Europe's population is projected to decline.

This shift is fueled by various factors, including declining birth rates, rising life expectancy, and an aging population. As the population grows, addressing social inequalities across different demographic groups becomes increasingly urgent.

AI CHALLENGE

▲900% AI Market Projected to Grow from
\$200 Billion in 2023 to Over \$1.8
Trillion by 2030 ^[2]

2022 ChatGPT-3 Launch in Late 2022
Sparks Rapid Entry of Major Com-
panies Like Google, Microsoft ^[2]

 **7/10** 7 in 10 People Unsure About
Distinguishing Between Real and
Cloned Voices ^[3]

At CES 2024, one of the most prominent themes was Artificial Intelligence, which has become a driving force in consumer-focused design. The rise of ChatGPT is not only pushing the boundaries of AI development but also accelerating the competition among advanced industries.

This trend challenges our trust in digital platforms and prompts deeper exploration into how values like responsibility, environmental consciousness, and empathy are shaping the role of cutting-edge technologies in design.

SOCIAL CONTESTATION

43% 43% of Gen Z, vs. 33% of Others, Say
Protesting Governments That Clash
with Personal Beliefs Is Important ^[4]

Trust Growing Trust Issues with Organizations
Failing to Address Economic Turmoil,
Technological, and Societal Changes ^[5]

The mounting pressure from social and economic polarization, coupled with demographic shifts, is leading to a more unstable society. As a result, people are increasingly gravitating toward familiar groups with shared interests and values, seeking comfort and stability within these communities.

However, this heightened sense of cohesion is also giving rise to deeper divides and tensions between polarized communities. The growing divide in consumer culture and services reflects this societal trend, broadening its scope.

[1][National Geographic](#) [2][PwC](#) [3][statista](#) [4][Leverhulme Centre for Demographic Science](#) [5][UN](#) [6][Mckinsey&Company](#)

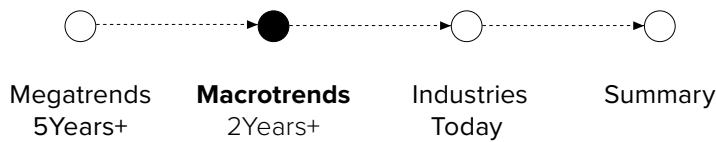
[1][McKinsey&Company](#) [2][statista](#) [3][McAfee](#) [4][National Centre for Social Research](#) [5][Nature](#)



Draga & Aurel

Macrotrends 02 YEARS+

- 6 Key Trends and CMF Analysis



- Anthropocene
- Cost of Living Crisis
- Balanced Lifestyle
- AI Utopia
- Holistic Ethics
- Re-writing the Norm

Macrotrends, derived from megatrends, refer to new attitudes, behaviors and value changes that emerge as consumers respond to global shifts. These evolving issues are categorized and analyzed based on consumer culture and lifestyle perspectives. This report explores and suggests CMF design directions, examining related design case studies and CMF stories in six categories.

Anthropocene

Lionel Jadot at Maison&Objet 2024

As the climate emergency is increasingly impacting all aspects of our lives, the massive efforts that humanity is undertaking to mitigate and adapt to climate change are likely to have significant reconfigure almost everything we do – how we move around, feed ourselves, and produce – continuous research on this issue is being applied in the design industry without exception, prominently through experiments that reuse waste into design. In particular, the intersection between consumers experiencing fatigue from prolonged sustainability efforts and brands striving for energy reduction has led to the evolution of “ugly design”, embracing imperfection and unconventional aesthetics.

For example, at the Maison&Objet in 2024, Belgian designer Lionel Jadot showcased vibrant works reflecting sustainable design ethos, creating durable objects entirely from repurposed and reused materials.



- 1** The DOL LOW chair by AE Office is made from cork, one of the sustainable materials, and finished with wood oil and wax, representing sustainable design through its natural-rough volcanic rock visual language.
- 2** Organic gin brand Ada collaborated with SeriesNemo(Spain) to launch packaging made from PCR glass. The micro bubbles and fine scratches of the material create a tactile experience, offering a unique craft aesthetic.

CMF STORIES

NATURAL FLOWS

Natural flows from Magis chair are achieved recycled polyolefins obtained from the recycling of polylamines and single-use food packaging.



SPECKLES OF SEASONS

Using bio-based materials from waste such as apple residues, this bio textile represents the characteristics of natural speckles that are influenced by the seasons and the nature.

REMNANTS MARBLING

The collection is made from second-hand books set to be throw away, having structural integrity from its marbled spine look.



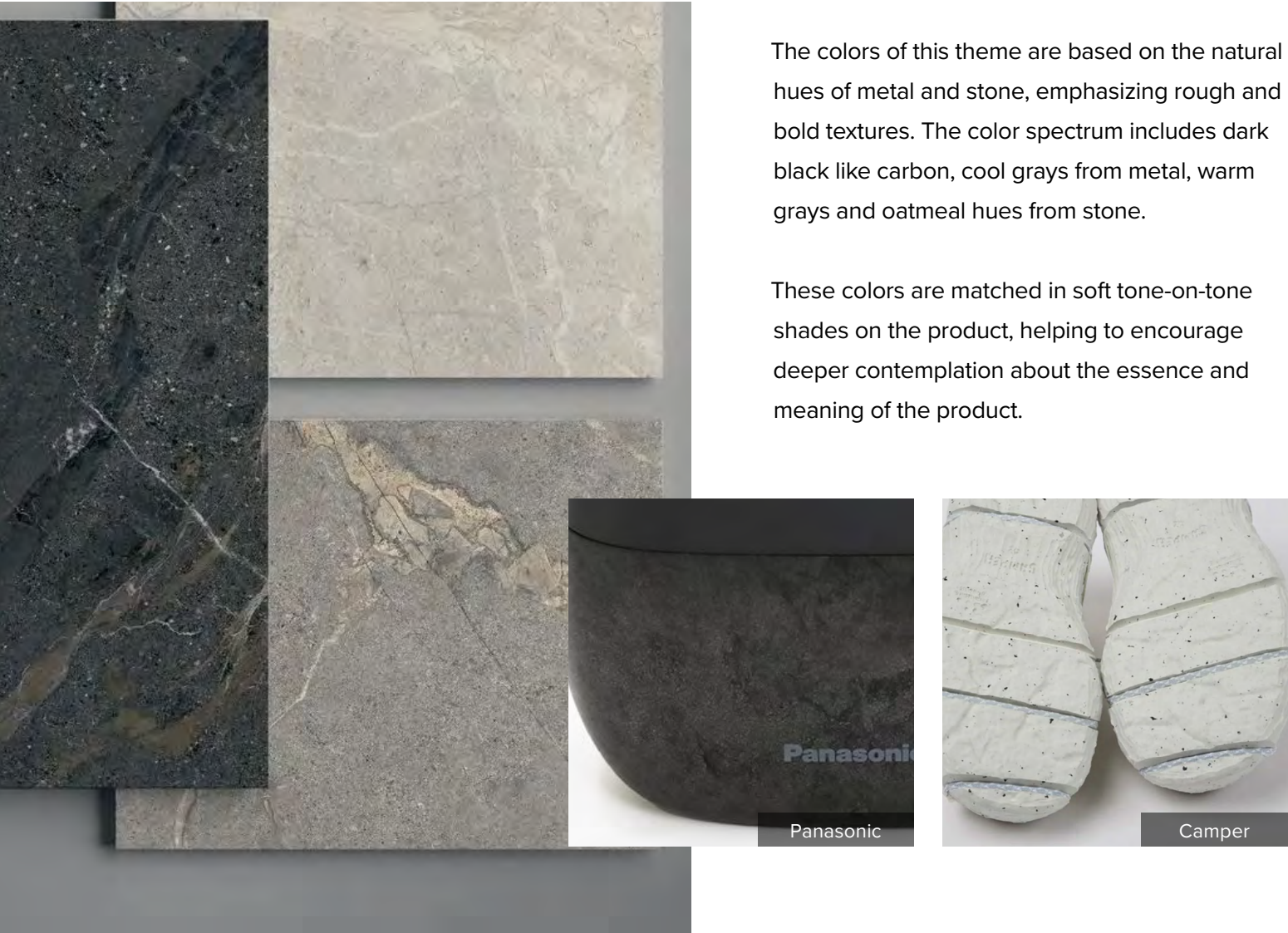
PROCESSING TRACE

Traces from molding processes such as metal casting and plastic injection molding, also called 'Flash', are elevated into a decorative feature rather than being discarded.






COLOR

The colors of this theme are based on the natural hues of metal and stone, emphasizing rough and bold textures. The color spectrum includes dark black like carbon, cool grays from metal, warm grays and oatmeal hues from stone.

These colors are matched in soft tone-on-tone shades on the product, helping to encourage deeper contemplation about the essence and meaning of the product.



COLOR SUGGESTION

	Pantone 19-4203 TPG Moonless night
	Pantone 17-5102 TPG Basalt
	Pantone 14-1108 TPG Blond Wood
	Pantone 14-1208 TPG Oat Milk
	Pantone 10101-C Silver

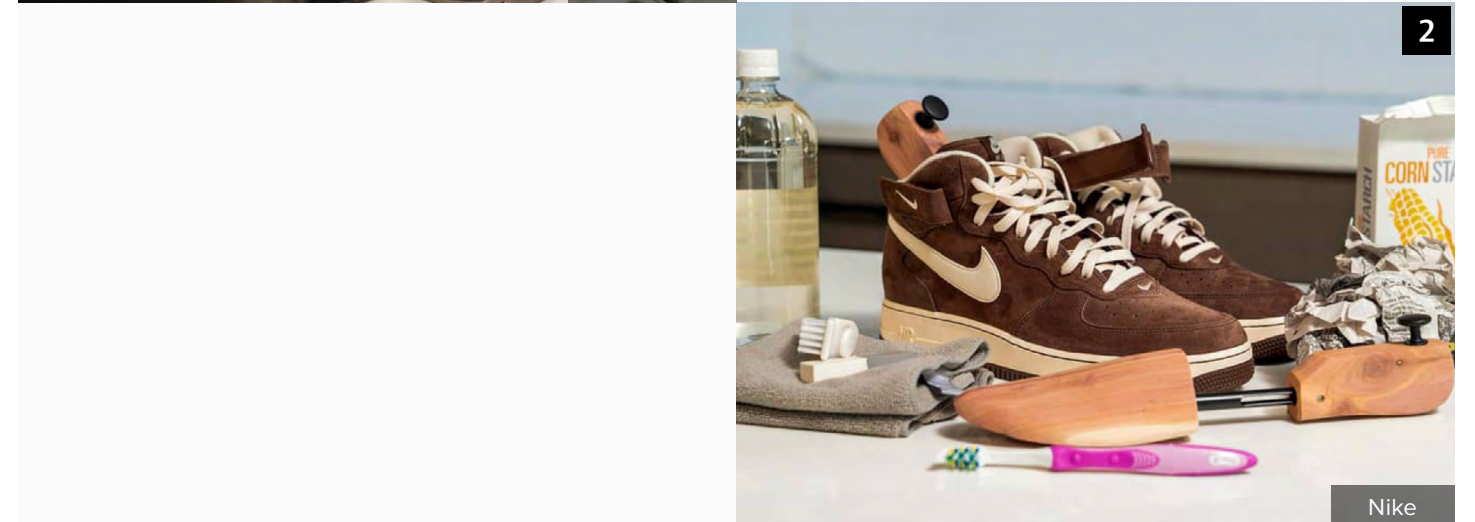
Cost of Living Crisis

London Fashion Week 2024, eBay 'Endless Runway' used second-hand clothes

As the cost of living is increasing considerably, it changes how people find pleasure and experience, affecting design and CMF. The growing popularity of DIY, creative crafting and repair, along with the collaboration between eBay and the British Fashion Council at the 2024 London Fashion Week using second-hand clothing on the runway, stems from the possibility of saving money. In this sense it is clear that more consumers are looking at second-hand or refurbished products to save on living costs. International Data Corporation (IDC) estimates worldwide shipments of used smartphones, including officially refurbished and used smartphones, will reach 309.4 million units in 2023. The unit growth represents a 9.5% increase over the 282.6 million units shipped in 2022. In addition, IDC projects that used smartphone shipments will reach 431.1 million units in 2027, with a compound annual growth rate (CAGR) of 8.8% from 2022 to 2027.



1



2

Nike

- 1** Lululemon offers a program that allows customers to exchange their used products for an e-gift card or new products. More customers are looking at second hand refurbished products such as Patagonia, ZARA and COS.
- 2** Social platforms like YouTube, Tiktok and Instagram facilitate this frugal lifestyle offering a huge variety of how-to videos to help people learn new skills. According to ComfyLiving, 78% of those planning to take on DIY projects do research online first. Brands such as Nike are embracing the movement through product care tutorials that show consumers how to take good care their products.

CMF STORIES

OFFCUTS

Woven from recovered leather, the bag offers artisanal craftsmanship while suggesting repair trends.



MODULAR FINISH

Finishing modular products with unrefined edges proposes confidently a new consumer culture.

JOYFUL REPAIRING

The unexpected deformation occurring in the repair process is reinterpreted as an element of enjoyment for consumers.



RE-GENERATED RESOURCES

Challenging the linear “use-and-throw-away” mentality, waste is viewed as a valuable resource, promoting a new paradigm where materials are reused continuously.

COLOR

This theme’s colors present a dynamic CMF spectrum combined with various materials and colors based on ceramics and wood. Prioritizing practicality and sustainability, the colors offer engaging, captivating aesthetics shaped by continuous experimentation, rather than a traditional luxury image.

The colors, with a contrast between mid-tone vivid colors and neutral monotones, offer a sense of enjoyment through interweaving of color and texture.



COLOR SUGGESTION



Pantone 19-3936 TPG
Future Dusk



Pantone 18-0529 TPG
SeaKelp



Pantone 18-1163 TPG
Ray Flower



Pantone 16-1144 TPG
Tea Stain



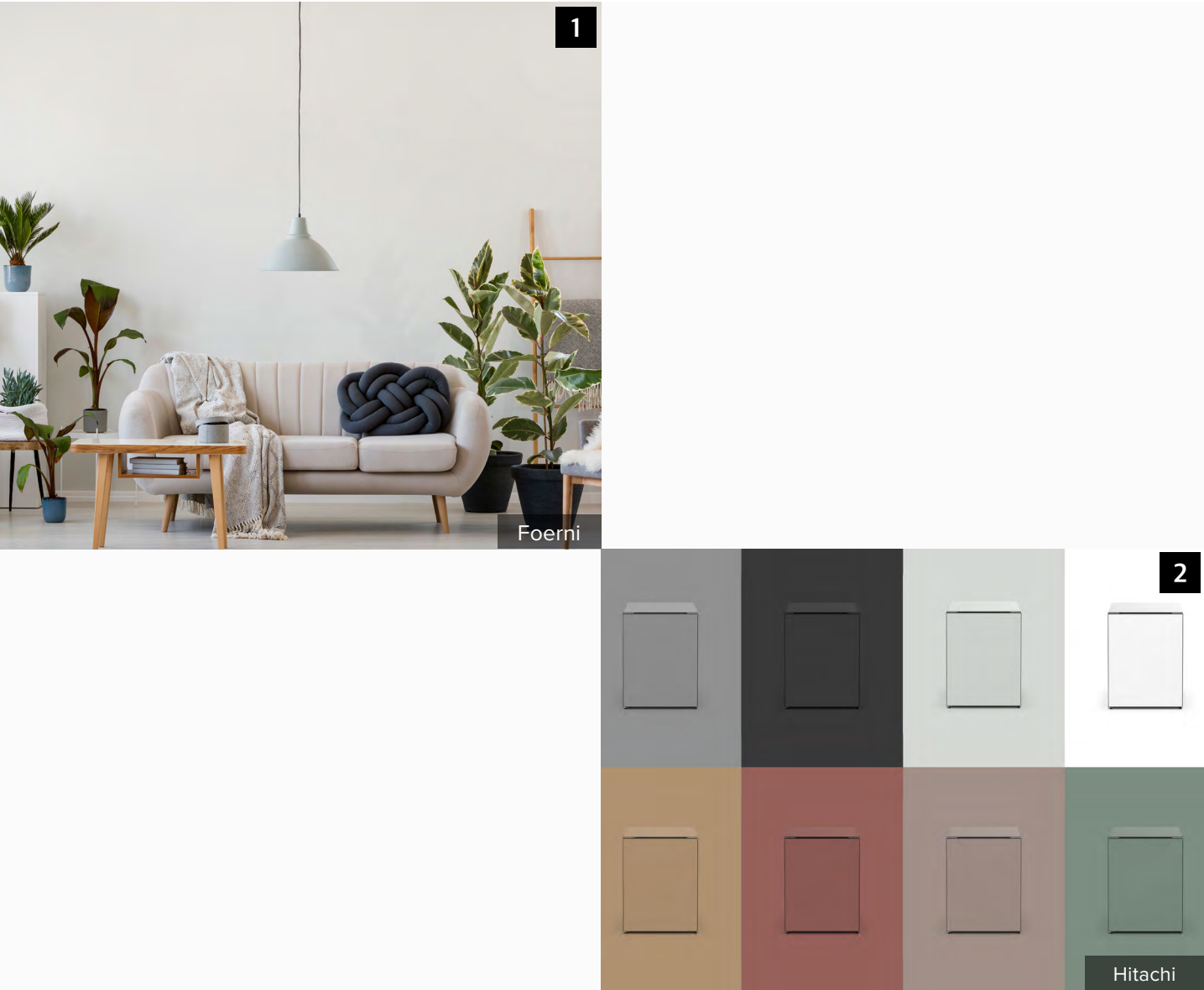
Pantone 16-1451 TPG
Neon Flare

Balanced Lifestyle

FORA flexible coworking space

Rapid changes in work and lifestyle since the COVID pandemic have prompted a re-evaluation of priorities and values. Confusion and uncertainty at the global level have sparked a desire for a flexible and balanced life, with a focus on mental health and well-being over professional success. Color, material and finish enhance the flexible lifestyle through timeless textures and colors, integrating seamlessly with the interior.

Shared office companies such as Fora provides spaces that allow users to work in the most suitable way, with flexibility and freedom in various environments. With a natural tone interior that seems to communicate with nature, the space offers an atmosphere where you can work while having a comfortable time in a welcoming atmosphere.



1 It also comes in the form of prioritizing and consuming products that improve everyday life or meaningful experiences. Services such as online subscription platforms where you can purchase or rent furniture of various sizes from selected high-end and lifestyle brands, such as Foerni’s HAY, Muuto, and Vitra, enable consumers to take a more flexible approach to decorating their space and seeking fluid use.

2 This mindfulness lifestyle has also become a centerpiece in product design. Hitachi’s combined unit refrigerator Chiil introduced a design that naturally integrates into any space with a toned-down color matte finish and a height (75 cm) to fit modern furniture design.

CMF STORIES

EMOTIONAL WARMTH

An interweave of soft textures and light suggests a warm emotional experience.



TRUSTWORTHY FINISHES

A combination of frosted transparent plastic with satin-finished metal in the design offers a sense of trust and a calming experience through its CMF.

SUPER MATTE

Wood particles for 3D printing give beautifully textured parts with a warm, organic look and feel.



PEACEFUL LIGHT

The effect of indirect light, blended with the materials, creates a peaceful atmosphere.

COLOR

This theme primarily consists of dusty pastel tones, including earth tones evolved from warm hues. Warm tones create an emotionally comfortable and serene atmosphere, offering a sense of stability to people.

Featuring a more refined touch, paired with matte-textured natural materials and colors, various patterns and textures are applied to products.



COLOR SUGGESTION



Pantone 19-0516 TPG
Dark Olive



Pantone 18-1163 TPG
Rustic Carmel



Pantone 15-4451 TPG
Retro Blue



Pantone 16-5808 TPG
Sage Green

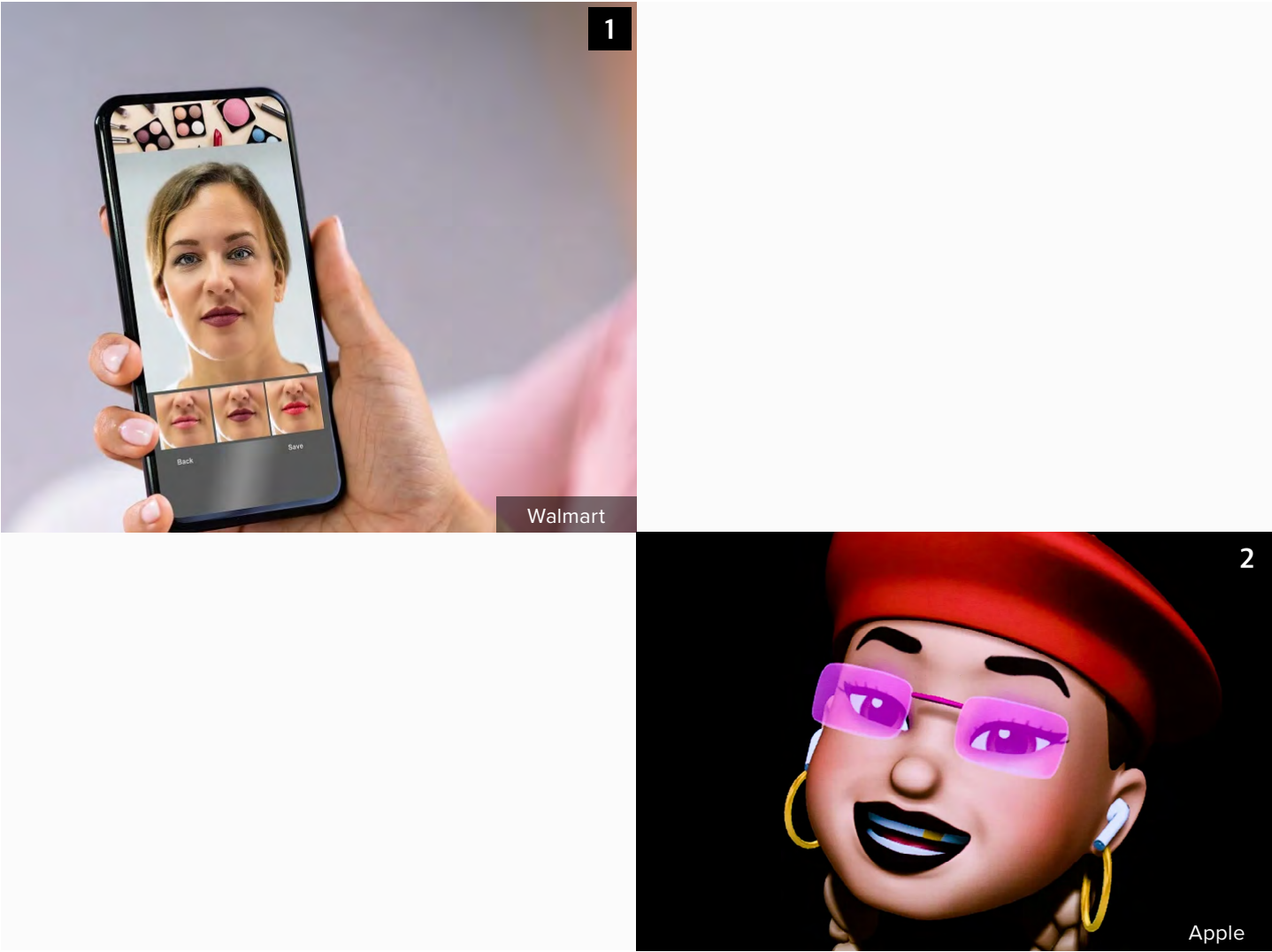


Pantone 19-1220 TPG
Sepia

AI Utopia

AI-generated image

Inspired by utopian visions of a future enhanced by technology, the trend explores the boundaries of real and digital aesthetics, offering playful color and hyper-realistic appeal. This CMF direction is designed with a delightful, fun, and engaging user experience in mind. It captivates the senses, aiming to create products, spaces, and interactions that radiate energy and instill confidence.



- 1 Platforms like Walmart and YouCam use augmented reality (AR) through experiential apps to allow users to virtually test makeup or hairstyles using AI deep learning technology. Platforms such as Apple, Samsung, and Snapchat give their customers the possibility to create avatars, on-line representation of themselves in the digital world, customizing its hairstyle, apparel, accessories, and much more.
- 2 This trend, significantly shaping consumer society by Gen Z through the internet, social media, and the Metaverse, is swiftly advancing in the market thanks to AI and connectivity products, meeting a growing demand for innovative “home-tech” solutions. These products, grounded in scientific research and utilizing cutting-edge technologies like infrared light, high-frequency ultrasound, and Intense Pulsed Light, harness an advanced Colour, Material, and Finish palette.

CMF STORIES

DELIGHTFUL SECRET

A fusion of light and mirror finish enhances synergy of visions and artistic sensibilities.



BORROWING METAVERSE

Inspired by metaverse aesthetics, surreal shapes, materials, and colors are applied to various fields in real life such as products and furniture.

UNEXPECTED CONVERSION

Photochromic materials transform into colorful geometric patterns, creating an unexpected suprising user experience.



HYPER VISUALISATION

By applying high gloss and reflective surfaces, it provides users a delightful experience representing a virtual space.

COLOR

This dreamy and futuristic theme features various colors of lighting and effects. Bold and dark tones ranging from magenta and green to blue communicate information and create aesthetics through color changes, engaging with customers and delivering messages.

Products with matte or glossy black are prominently showcased and applied to a wide range of applications from products and spaces to cars.



COLOR SUGGESTION



Pantone 18-3949 TPG
Electric Indigo



Pantone 18-2027 TPG
Plum Berry



Pantone 19- 1718 TPG
Cherry Lacquer



Pantone 15-5218 C TPG
Aqua Awe



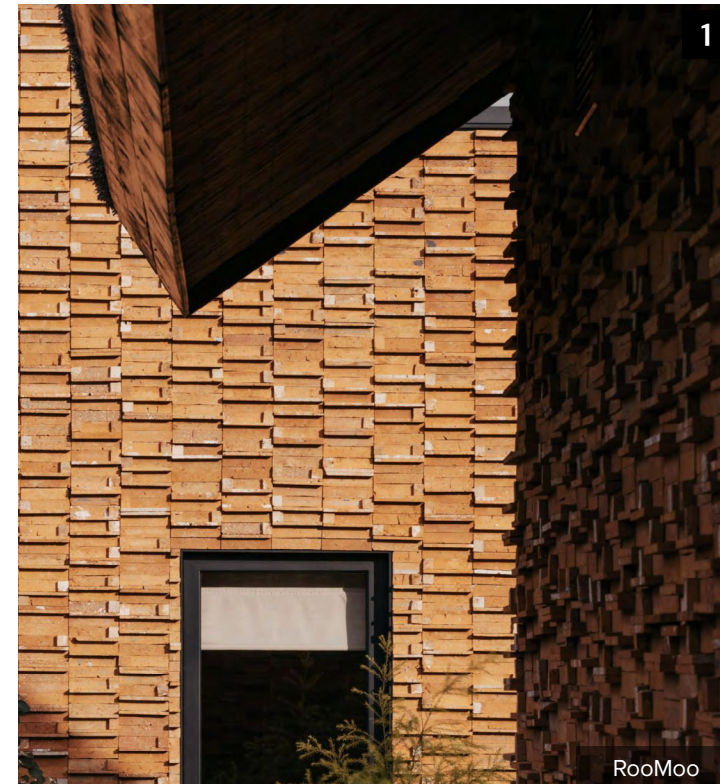
Pantone 19-5232 TPG
Deep Emerald

Holistic Ethics

German pavillion in Venice Architecture Biennale 2023

As moral and ethical stories are emerging, transparency is also one of the key trends, which will cover ethical story across the entire aspect, not just the product itself, but also including packaging, materials, and more. This trend emphasizes a unique aesthetic based on hyper-local narratives around site specificity and how they contribute to existing ecologies and communities.

At the 2023 Venice Architecture Biennale, discarded materials collected from over 40 installations have been recycled, catalogued, and exhibited, intuitively showcasing the stories of materials.



1 China-based studio RooMoo uses thatched roofs and recycled bricks to build a hostel in Shanghai, keeping the characteristics of materials. There is an increasing number of examples where sustainability, cultural heritage preservation, and various ethical aspects are integrated and interpreted in aesthetic design.

2 Similarly, documentaries like Fashion Reimagined unfold the story of transparency in the fashion supply chain, providing consumers with valuable information.

CMF STORIES

CELEBRATING WASTE

Repurposed local waste by upcycling for kitchen interiors, materials are chosen and designed in modular ways to suggest smooth reusability.



ORGANIC FINISH

The collaboration collection between New Balance and a UK-based ethical leather company features leather sourced from ethically treated animals, showcasing a natural appearance without artificial processing.

MATERIAL MARKER

Adopting welfare-traced Nappa leather and welfare-certified wool for automotive interior upholstery, the brand shares ethical stories with consumers.



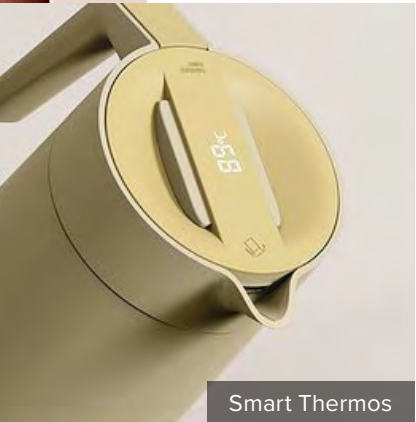
CULTURAL TRACE

Made out of discarded and non-edible seaweed, the installation showcases the culture's history of conservation in times of limited resources.

COLOR

This theme mainly features soft and smooth pastel colors, combining medium-toned pastels to create a calm and relaxed feel.

While the color saturation is not high, various colors and textures are layered to present new effects. Tone-in-tone combinations of similar brightness are mainly used.



COLOR SUGGESTION



Pantone 14-1310 TPG
Transcendent Pink



Pantone 11-0618 TPG
Celestial Yellow



Pantone 15-6114 TPG
Surreal Green



Pantone 13-4304 TPG
Blue Moon



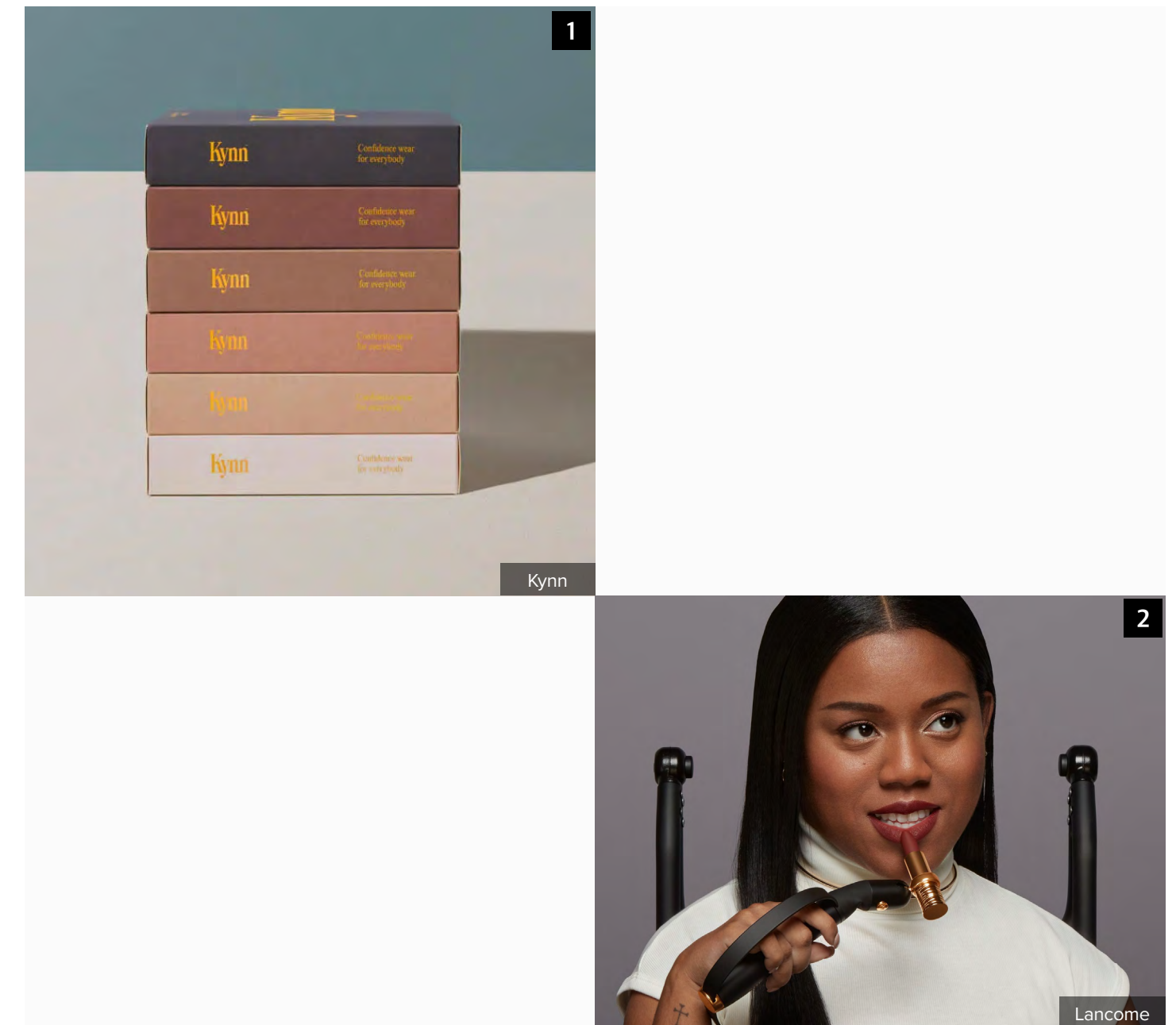
Pantone 14-3907 TPG
Galactic Lilac

Re-writing the Norm

Landor&Fitch toothbrush handles collection

The increasing voices surrounding the polarization and marginalization of social groups due to age and wealth disparities are reflected in design trends. In this social flow, consumers express and reflect their identities by selecting more personalized designs rather than aligning with mass-produced products. As consumer trends shift towards gender affirmation, neutrality, customization, and personalization, design stories that break away from conventional ideas inspire not only consumers but also designers and manufacturers, leading to the advancement of design that breaks stereotypes.

Embracing this trend, Landor&Fitch designed toothbrush handles for people with dexterity challenges, offering a customized and accessible design tailored to the needs of diverse users.

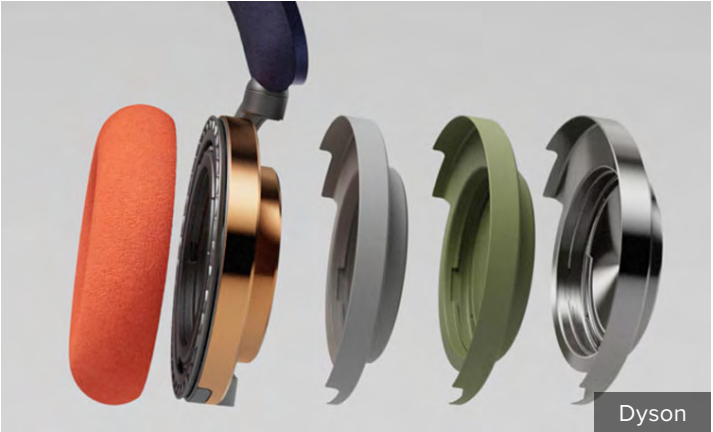


- 1** The underwear packaging designed by Marx Design in collaboration with Kynn represents the brand's core value of inclusivity, offering a soft yet sophisticated visual design that incorporates a segmented skin tone palette.
- 2** Lancôme's HAPTA electric lipstick applicators designed for people with hand-motion disorders reflect inclusivity, enhancing accessibility to makeup application.

CMF STORIES

INDIVIDUAL FINISHES

It offers various color and finish options, allowing users to choose designs and express personality.



TIMELESS MATERIAL

Applying materials and colors that consider gender neutrality embraces a broader range of users.

LIFESTYLE LOOK AND FEEL

A collection of drug delivery devices designed as stylish accessories that patients feel proud to wear, drawing inspiration from the latest wearable trends.



CUSTOMISING TOUCH

The handles, customized differently for each user using 3D printing, feature unique textures with thick grips and ridges.

COLOR

This theme showcases a feast of various colors and materials, actively utilizing effects like vivid colors, bold metals, and gradients. In particular, bold gold centered on orange, pink, and red shows as the key color, enhancing confidence and bringing joy.

Additionally, a wide range of customizable color options is offered to help consumers to actively express personalities.



COLOR SUGGESTION



Pantone 19-4203 TPG
Black



Pantone 16-1359 TPG
Solar Orange



Pantone 16-1735 TPG
Thrift Pink



Pantone 13-4304 TPG
Moonstone Blue



Pantone 10126C
Gold



Samsung's exhibition 'Newfound Equilibrium' at Milan Design Week 2024

Industries TODAY

- CMF Trends & Cases in 6 Industries



- Fashion
- Food & Drink Packaging
- Consumer Tech
- Interior
- Beauty Packaging
- Automotive

In this chapter, this report categorizes and investigates the changes of macrotrends derived from global-scale socio-cultural environmental shifts and phenomena in a broad perspective. Through in-depth research of brands in six industrial sectors, this report analyzes CMF stories and forecasts industry-specific design directions considering case studies of promising small and medium-sized enterprises.

Fashion

The rapid expansion of fast fashion has made clothing more accessible and affordable, significantly influencing consumption trends. We now live in an era where people buy and discard clothes more frequently, leading to an increasing call from both brands and consumers to address the massive issue of textile waste.

Derived from ‘fast fashion’, ‘fast waste’ proposes new aesthetics repurposed from discarded textiles, embracing the unique surfaces of damaged or worn-out clothing.

There is ongoing growth in textile research focused on sustainability, like biofibers made from bio-based materials. Inspired by nature, a natural look and feel dealing with regenerative materials is applied to CMF.

The rising fatigue around waste and

clothing disposal, coupled with the increasing cost of living, is shifting the focus from flaunting wealth through well-known branded items to preferring quiet-luxury aesthetics through the quality of materials and timeless colors.

Fashion has always been a powerful tool for self-expression, allowing people to represent their identity, values, and personality. The rise of gender-neutral or genderless fashion amplifies the potential of expression by liberating people from defined gender roles, which is reflected in gender-neutral and blended CMF.

Meanwhile, brands are increasingly turning to AI beyond the physical world in the process of creating innovative experiences, visualizing ‘Revolutionary fiction’ CMF elements actively.

CMF tips

- **New Manufacturing Process:** Revising manufacturing processes like dyeing to reduce chemical and wastewater discharge can improve waste management and material efficiency.
- **Integrated Virtual and Real CMF:** In industries actively adopting advanced digital design, combining digital interfaces with physical CMF generates positive user responses and real-life experiences.
- **Ethical Voice in CMF:** Visualizing CMF narratives through designs and labels shares brand values with value-driven consumers like Gen Z, fostering long-term rapport between consumers and companies.

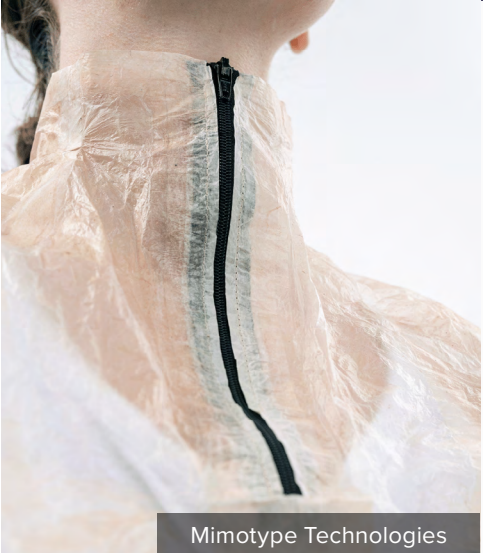


REVOLUTIONARY FICTION

The Etró S/S 24 campaign features images created by generative AI, representing the brand’s envisioned imagination.

BIO-FUTURE

As a sustainable option for the future fashion, this outdoor clothing features a translucency made from collagen.



GENDER NEUTRALITY

Dynamic experiments with fabric, cuts, and silhouettes by Charles Jeffrey show designs that pushes the boundaries of gender.

QUIET LUXURY

The Row is a great example of quiet luxury, featuring refined low-key, calm colors, natural organic materials.

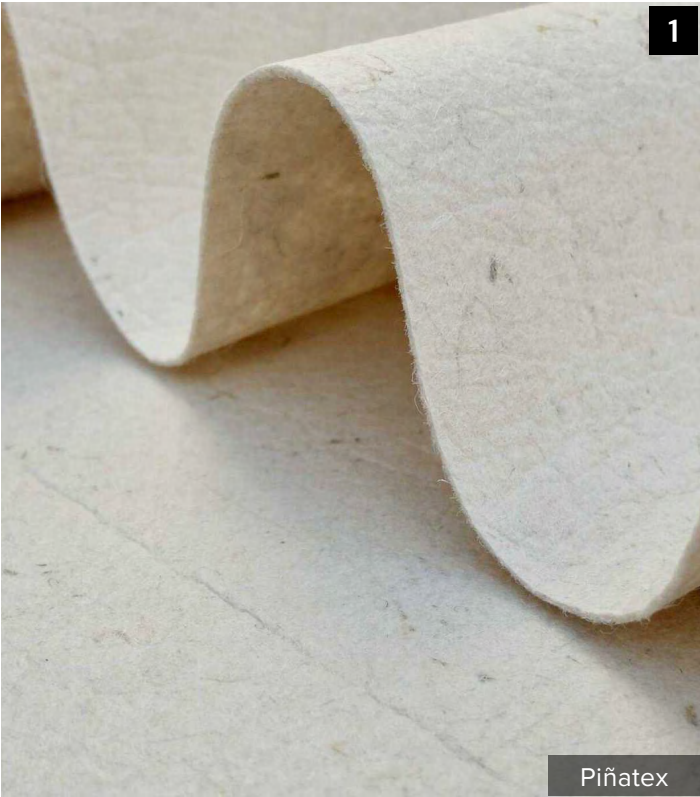


FAST WASTE

Diesel covered the runway with 14 tons of discarded denim at the 2025 S/S Milan Fashion Week collection, visualizing the waste of material.



Materials Library



Piñatex



ChroMorphous fabric



Crafting Plastics! tudio



Pyratex®



Wastea



Apparition

- 1 Piñatex**
Plant-based vegan leather fabric made from pineapple leaf fibers, suitable for a wide range of applications in the footwear, accessories, apparel, and interior industries
store.ananas-anam.com
- 2 ChroMorphous fabric**
A color changing fabric that allows the user to choose from a variety of patterns and colors to suit their need using an app
chromorphous.com
- 3 Wastea**
Alternative leather made out of wasted tea, versatile enough to be used in fashion accessories and many others
wastea.com
- 4 CRAFTING PLASTICS! STUDIO**
UV reactive plastics using 3D printing technology and NUATAN material, applied in interior design and suitable for fashion accessories
craftingplastics.com
- 5 PYRATEX®**
A range of knit fabrics created with vegetable fibres that give to the textiles unique natural properties such as softness and skin-friendly qualities
pyratex.com
- 6 APPARITION**
Translucent leather with a ghost like appearance, can be applied in fashion and footwear, accessories
eccoleather.com/leather-in-lab/apparition

Food & drink Packaging

Food and drink packaging is currently one of the main users of virgin materials with plastics and paper being commonly used in applications. With this in mind, designing for recyclability remains a focus, particularly when it comes to material ‘extras’ such as inks, coatings, and finishes. Efforts and plans to solve this challenge are actively increasing worldwide including in Europe and China.

To reduce the use of plastics that are considered major contributors to environmental pollution, continuous research is being conducted on material alternatives, such as regenerative materials or paper. Designs that simplify materials and avoid secondary processes such as coatings or inks, are embraced as a form

of material minimalism in CMF, reflecting environmental considerations.

Created with consumer interaction in mind, practical functions of active packaging—such as smart inks that respond to their surrounding environment—stimulate the senses and enhance product safety. Not just as simple containers but giving dynamic experience, CMF in packaging provides consumers unforgettable delight. Premium packaging with an artisanal touch enables art-cycling, where the packaging is kept and remembered after purchase, giving brand identities.

Innovative processes and smart CMF that challenge the traditional cycle of packaging disposal have potential in the future.

CMF tips

- **Choose Materials with Intent:** While it is possible to achieve luxury packaging using basic materials through advanced processes, consider materials that communicate the brand’s values along with a compelling story, instead of adopting high-performance materials that may not be sustainable.
- **Apply Materials Strategically:** Paper is a common sustainable material but not always the solution as it works well for dry food packaging. Be strategic in your application to achieve the best results.
- **Explore Next-Generation Solutions:** Alternative materials and processes are being researched to reduce reliance on the forest industry and lower carbon emissions. New-age materials will contain raw materials from a multitude of alternative sources like agricultural residues and waste cotton.



TIPA

PLASTIC REDUCTION

The tray developed by the packaging company TIPA is made from burning agricultural waste, making it compostable.

INTERACTIVE EXPERIENCE

Based in Paris, La Paperfactory’s origami-inspired packaging safely holds the bottle and creates a stunning visual experience with lighting.



La Paperfactory



Domaine des Hautes Glaces

MATERIAL MINIMALISM

The whiskey bottle made from recycled glass showcases a minimal use of material by molding a mountain motif (on the bottom) and a logo (on the front) in the glass forming process.



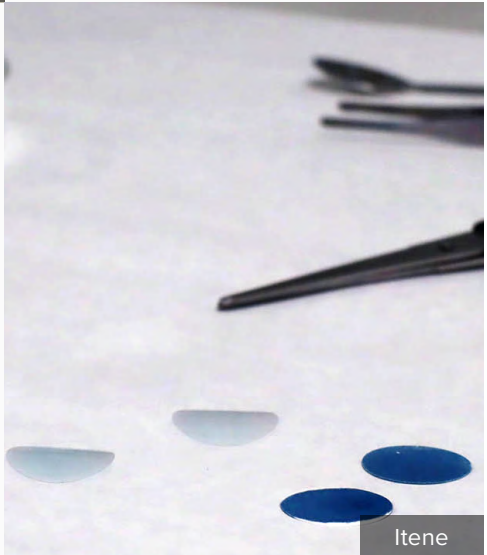
Barajas

ARTISANAL CARE

Inspired by traditional Mexican art, the tequila packaging is crafted by Mexican artisans, offering consumers a premium artisanal design.

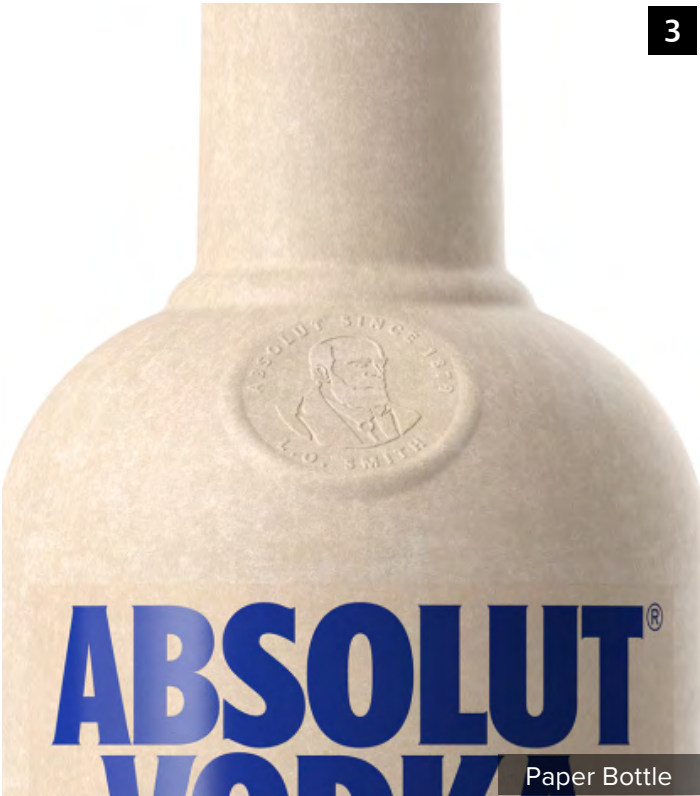
ACTIVE PACKAGING

Using ink that turns transparent when exposed to CO2, the packaging features smart interactive design that detects damage and contamination caused by microbial growth.



Itene

Materials Library



1 BUBBLE GLASS
An industrial process developed by the French glass supplier Saver Glass that mimics the bubbles that can appear in traditional blown glass
saverglass.com

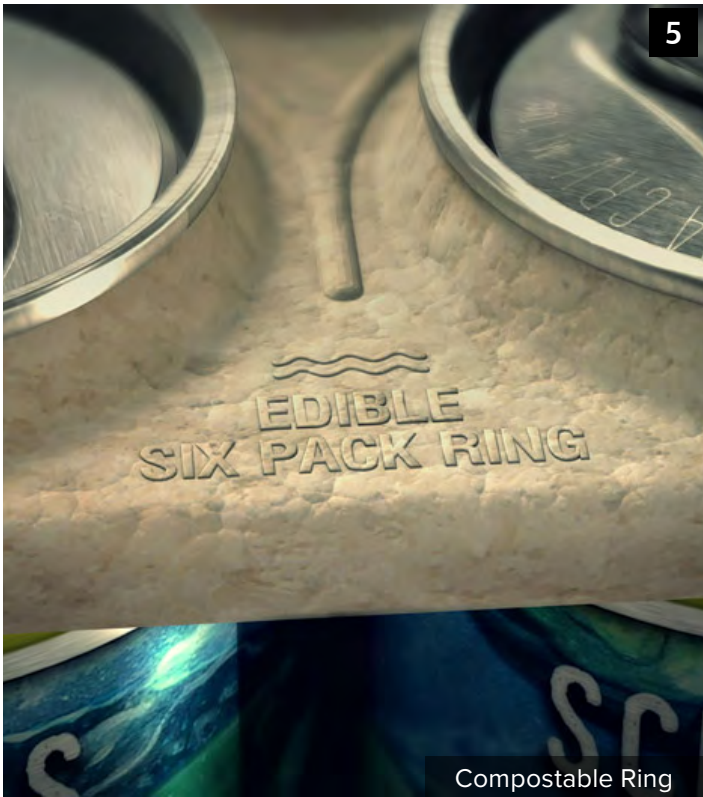
2 TIPA®
Compostable flexible plastic inspired by orange peels
tipa-corp.com

3 PAPER BOTTLE
Paper-based bottle from Paboco, recyclable as paper packaging with superior quality and unique design possibilities
paboco.com

4 AIRX
Recycled coffee ground recycled and mixed with PP to produce sustainable cutlery and reusable cup
airxcarbon.com

5 COMPOSTABLE RING
Saltwater Brewery's compostable six pack rings made with beer brewing by-products

6 INSIGNIA
Insignia technologies develop smart inks, films and pigments that change color over specified times and temperature variations, with the aim of reducing food waste and improving consumer safety
insigniatechnologies.com



Consumer Tech

One of the most important trends in the consumer tech industry is the integration of AI and sustainability. In these trends, introducing new raw materials often brings new challenges related to availability and quality.

The quiet and calm CMF aesthetics in a product’s housing help visualize a harmonious lifestyle for consumers. Additionally, high-performance materials and special finishing processes enhance the durability of portable products, enabling users to experience a high-quality lifestyle in any environment.

Adopting smart materials, combined with advanced technology, offers users a new level of interface, creating unexpected and delightful experiences. The growing demand for personalization in an integrated lifestyle is reflected in unique and customized CMF.

Amid all these trends, environmentally conscious materials are no longer an option but an easily expected aspect, leading to the evolution of CMF.

CMF tips

- **Embrace the Imperfection of Alternatives:** With the growing design trend of alternative materials such as composites, recycled, and renewable materials, embrace their inconsistency and differences to create a unique and visible narrative for circularity.
- **Consider Light as a Material:** Actively apply AI and new technologies in products, and use light as a material to create synergy that offers users surprising moments beyond expectations.
- **Build Trust through CMF:** Applying soft materials, coatings, and translucent that contrasts with the mechanical aspects builds trust between users and products along with the obvious function.



QUIET AESTHETICS

Stainless steel panels used on the exterior of Panasonic washing machine are finished with a crystal effect similar to natural stone and mineral surfaces.

INTEGRATED LIFE

Changing the speaker housings that are made from various materials such as wood and natural fibers, users experience different sounds influenced by the materials.



Tessa Spiering



Xbox

WASTE MATERIALITY

Xbox Remix Controllers are made from PIR (Post-industrial recycled) plastic material.



Bang & Olufsen

ON-THE-GO DURABILITY

Anodized aluminum with scratch-resistant properties enhances durability, making it suitable for outdoor environments.

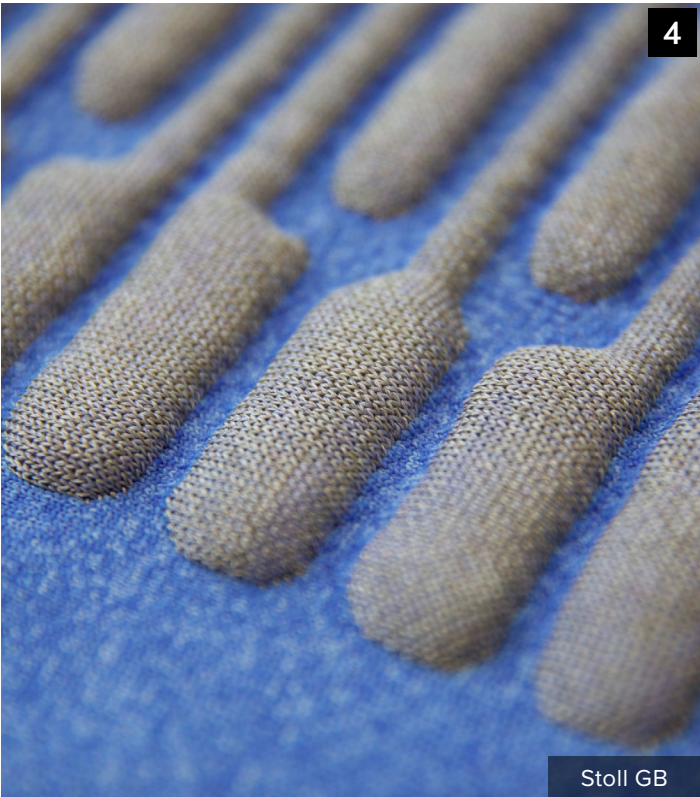
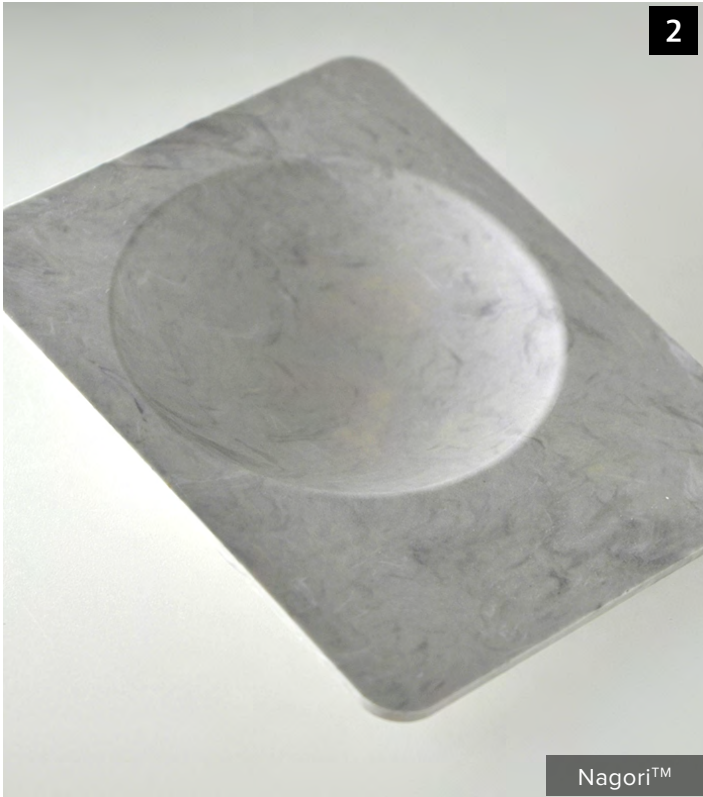
FUTURISTIC EXPERIENCE

LG’s Signature OLED T features a smart material that switches between transparency and opacity, creating an unexpected user interaction.



LG

Materials Library



- 1 Hydro CIRCAL 100R**
Product range of Hydro CIRCAL premium and recycled aluminium, made from 100% recycled post-consumer scrap
[Hydro.com](https://hydro.com)
- 2 Nagori™**
A marble effect polymer with mineral components that has good thermal conductivity and a ceramic-like texture which overturns preconceptions of plastics
jp.mitsuichemicals.com
- 3 De Castelli**
Very high level of control over finishing and processes on metal surface, creating striking exclusive effects
decastelli.com
- 4 Stoll GB**
3D knitting enables the creation of knitted structures with localized zones of softness and rigidity, such as buttons or touch points
stollgb.com
- 5 Plexiglas® Softlight**
Specialty PMMA sheets tailored for LED lighting applications that create a velvety, pleasingly soft light
plexiglass.com
- 6 Elastollan (TPU) Soft Touch**
Bio-based TPU, crafted for wearable applications and designed for skin contact, offers a soft touch sensation along with superior properties such as resistance to abrasion and UV exposure
[BASF.com](https://basf.com)

Interior

As the interior design industry shifts into a space focused not only on physical health but also on emotional recovery, CMF is evolving in a diverse way.

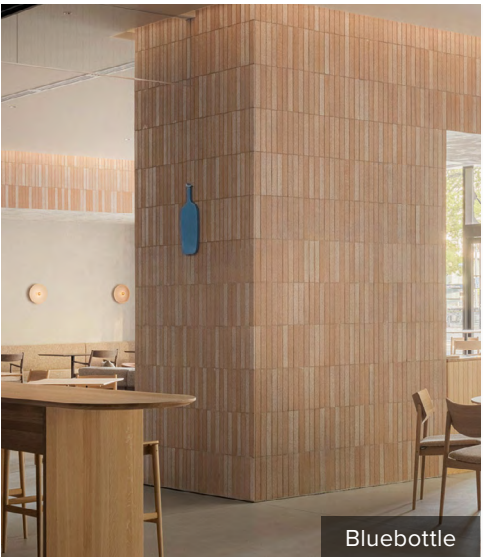
The growth of markets that prefer locally based products with ethical values is further strengthening ethical and social narratives around materials. Materials are often connected to traditional manufacturing processes, preserving heritage techniques while also exploring new sustainable

methods, confidently showcasing material properties through CMF. In the continuously evolving trend of sustainability, it features CMF that boldly adopts materials such as repurposed waste.

As a balanced lifestyle becomes one of the top priorities for consumers, spaces designed as self-care sanctuaries and for coexisting with nature directly influence the interior CMF.

CMF tips

- **Uniqueness and Distinctiveness:** Designs that embody a unique aesthetic and avoid uniformity. Whether it's handcrafted small or mass production, surface imperfections and irregular shapes create a distinctive and unique collection.
- **Imperfect over Perfect:** Recycled materials are likely to differ in appearance from virgin materials. When necessary, by adjusting the design and application and creating a compelling sustainable story around the materials, we embrace the imperfections.
- **Explore New Materials and Processes:** Discover sustainable colors, textures, and finishes such as paper, clay, and recycled plastics, created through innovative manufacturing technologies like robotic printing or heat pressing.



Bluebottle

HYPER LOCAL

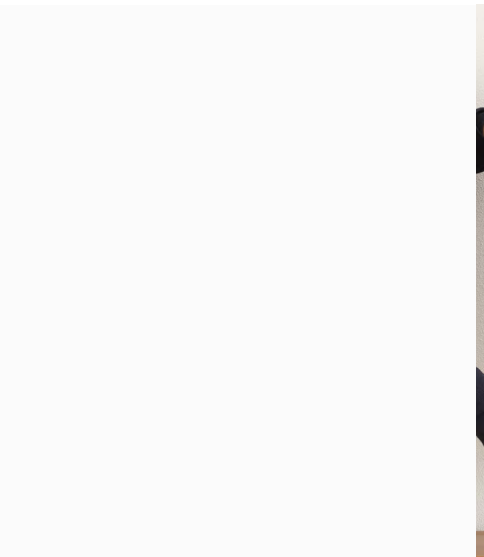
Bluebottle in Nagoya uses local materials, including tiles and ceramic dish lamps for its interior.

OUTSIDE-INSIDE DESIGN

Harmonizing the beauty of nature with the interior design, it offers a serene atmosphere that resonates throughout the entire space.



Galápagos Capital



Tacchini

SELF CARE SANCTUARY

TACCHINI's Lunar lighting combines materials that focus on rustling and the soft texture of bedclothes with lighting and padding, providing a sense of stability and tranquility both visually and tactically.



Mutina ceramica

CRAFTED MAXIMALISM

It embraces creative designs that show the craftsmanship of artisans, showcasing rich details in products and spaces.

SUSTAINABLE AESTHETICS

Exploring the material properties and multidimensional construction, it features the vibrant surface of recycled plastic through the furniture.



KUO DUO

Materials Library



1 EconitWood™
Waste-free production of complex and large-scale wood shapes using 3D printing technology, utilizing previously inferior regional raw wood in industrial manufacturing, bound with minerals
econit.info

2 TERRAFORMÆ Crumbles
A terrazzo process that uses fragments of glass and other ceramic waste set in a terracotta binder
terraformae.it

3 Smile Plastics
Materials made from recyclable and recycled plastic and for use in commercial interiors and product design
smile-plastics.com



4 Kvadrat Sabi collection
Innovative and sustainable materials by Kvadrat that use bright-colored virgin yarn in combination with darker recycled yarns to create rich, layered textures
kvadrat.dk

5 Bolefloor
A process for removing knots from wooden floor planks and matching the edges of individual planks for seamless joining
bole.eu

6 Lava Stone
A wide range of sheet materials and tiles made with lava stone, natural porosity and inconsistencies are a decorative feature in their own right
ranierilavastone.com

Beauty Packaging

From beauty products that seamlessly fit into the daily lives of users as everyday essentials to ritualized indulgent practices, brands are driving material innovation at all levels of beauty packaging.

Emotional connections sought by consumers are neurologically analyzed and reflected in CMF, offering stability and satisfaction. At the same time, materials are selected to create memorable, unique experiences through user-interactive packaging.

Rather than off-the-shelf designs, artisan materials and techniques with intricate details offer exclusive stories through the packaging, while sometimes providing

strong support as marketing tools to foster emotional connections with consumers.

More and more environmentally-conscious packaging is opting for an unprocessed, natural look and feel, completely avoiding the use of additional inks, colors, and coatings. These also tell evocative stories about the environment, waste reuse, and renewable materials to consumers. In this theme, sustainability remains strongly represented.

In a stream of rapidly changing ideas and knowledge, it is increasingly important for brands to establish more transparent and realistic CMF strategies that resonate with consumers' values and the environment.

CMF tips

- **Create a Memorable Experience:** Be it online or offline, consumers are engaging with the unboxing of beauty products in a deeper way. With this in mind make sure to design for a memorable 'experience' that sits in line with your brand ethos.
- **Reduce, Simplify and Eliminate:** Whilst secondary packaging remains essential for many, it is often single-use. Aim to reduce, simplify, or eliminate it whenever possible.
- **Adopt Innovative yet Sustainable Materials:** Considering the recycling challenges in beauty packaging due to small sizes and the blending of materials, apply cutting-edge and sustainable materials to address these challenges.



Neuraé

NEURO-EMOTIONAL CONNECTIONS

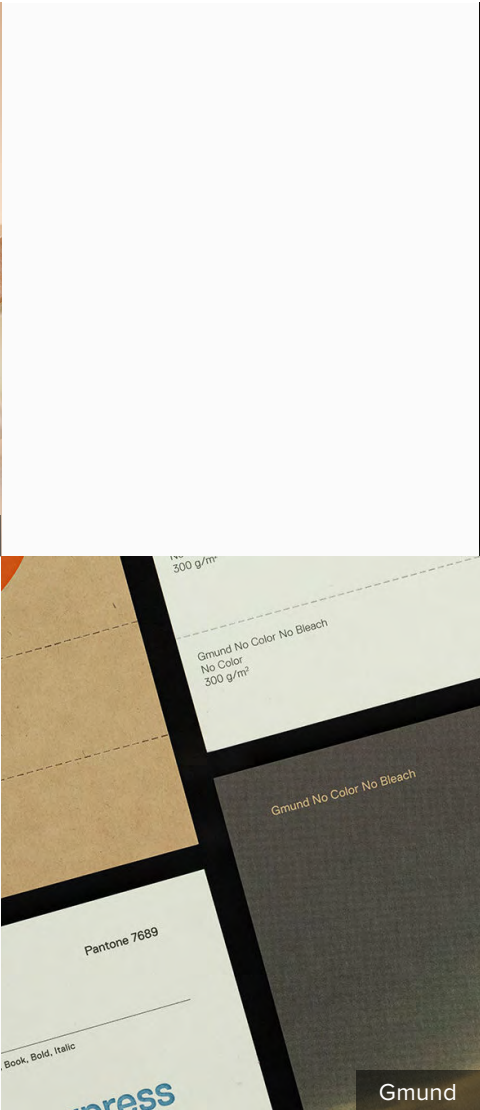
A genuine wood mono-material cap is adopted to create a natural aesthetic and tactile experience.

SURPRISE AND DELIGHT

The dissolving bath bomb packaging offers a unique, refreshing experience while reducing waste..



rhode



Gmund

NAKED MINIMALISM

Gmund's No Color No Bleach embraces the natural and authentic quality of unprocessed paper, presenting a sheet with an imperfect yet unique appearance.



LOEWE

ARTISANAL PREMIUM

The cap features 25 petals that are individually handcrafted in ceramic and hand-painted, showcasing an artisanal and creative approach.

SMART REFILL

The intuitive refill system encourages users to choose sustainable products by providing clear information for environmental participation.



THOME

Materials Library



Revation



Auressens



Sulapac



CIM (Ceramic Injection Moulding)



Mycelium Packaging



Maglastic

- 1 Revation**
Bio based plastic with additives to create natural look and feel and sustainable story
revation.co.kr
- 2 Auressens**
Metal-free metallizing technology designed for use on metals and plastics. based on “smart” dyes that are capable of self-organizing on the surface to produce glitter, mirror, and iridescent effects
auressens.com
- 3 Sulapac**
Marble looking cap of 100% bio base. Bio-based injection using bio-based pigments for easy recycling in existing plastic streams
sulapac.com
- 4 CIM (Ceramic Injection Molding)**
The process of injection molding ceramic powder to create intricate ceramic parts that are incredibly resilient with a high-end, luxurious look and feel
formateurope.com
- 5 Mycelium packaging**
Mycelium packaging that is fully biodegradable in around 45 days. can be added to food waste, broken down and dispersed in the garden, and has a shelf life of up to 30 years when kept in dry conditions
magicalmushroom.com
- 6 Maglastic**
Metal fillers to create plastic that has magnetic potential. gives the ability for materials to snap together in a functional and sensorially satisfying way
maglastic.com

Automotive

The automotive industry’s development has rapidly accelerated in recent years, leading to significant changes in CMF design. These changes are driven by complex factors such as environmental issues, advanced technology, and evolving consumer preferences.

Many brands are applying sustainable materials into various details and embracing the imperfect and rough textures that emerge from the material properties.

Considering the trends in digital development and automation, tactile experiences through CMF allow users to satisfy their thirst for real-world experiences. When it comes to creating

peaceful and safe emotions within the moving space, natural materials are being reinterpreted in new ways within CMF.

The exploration of new materials and finishes in the automotive industry not only brings joy to users but also contributes to the tangible development of the industry. AI, tailored to driver preferences and lifestyles for personalized experiences, and emotion-conveying interfaces offer users an immersive experience by combining light and materials.

These radical changes, driven by automation, autonomy, and connectivity, are leading us into the future and revolutionizing the user’s driving experience.

CMF tips

- **Incorporate Surprise Elements:** Integrate design elements that surprise, keeping a user-centered approach in mind. Consider the functional advantage behind the design as well as creating moments that are enjoyable and enhance user experience.
- **Utilize of Unexpected Material Properties:** Play with unexpected material properties that haven’t been used to create an unusual and surprising CMF experience. Add light and perforation to soften hard materials such as wood, concrete and opaque plastics.
- **Material-Centered Design Process for CMF:** Color, material, and finish are key in designing premium products. Consider examining the future direction of the industry and adopting a material-centered design process that places CMF at the forefront of the design journey.

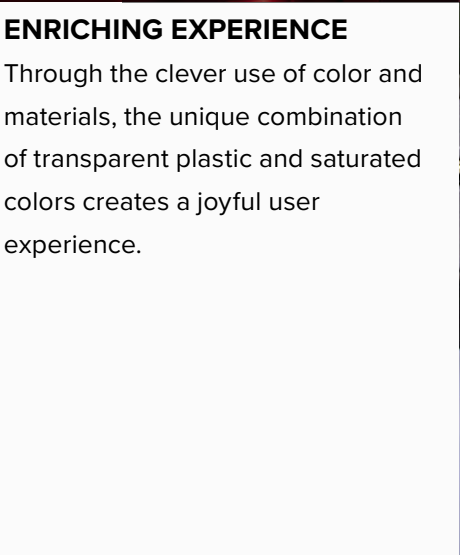
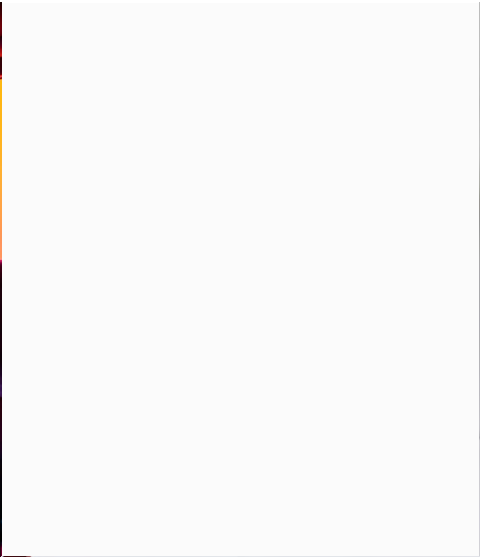


CUSTOMIZED AESTHETIC

Users can select colors and create lighting scenarios to match their desired mood, enriching the driving experience and providing a sense of thoughtful satisfaction.

SEAMLESS PHYSICAL

The combination of the display and soft knit textile, arranged with backlit lighting, creates a tactile and integrated CMF.



ENRICHING EXPERIENCE

Through the clever use of color and materials, the unique combination of transparent plastic and saturated colors creates a joyful user experience.



REFINED GREEN

The Karuun wood material used in NIO’s interior features a unique look, offering not only a fresh aesthetic but also visualizing a new sense of natural stability and calm.

PREMIUM IMPERFECTION

The speckled panels and integrated lighting deliver a distinctive and sustainable CMF story.



Materials Library

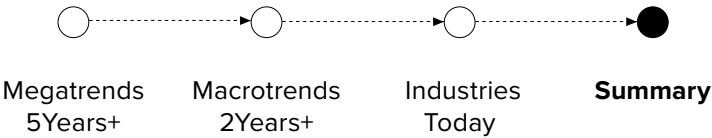


- 1 karuun®**
A composite material uniquely transformed from the natural structure of rattan through an energy-efficient process, featuring a sustainable and commercially profitable appearance
karuun.com
- 2 Stratasys 3D printing**
Advanced 3D printing system to 3D print soft decorative and functional patterns on upholstery
sys-uk.com
- 3 Menorca**
A suede-like textile featuring dye-free, water-based technology and is crafted using ultra-fine colored fibres derived from melted ‘color masterbatches’, versatile enough for various application in automotive
mingxinleather.com



- 4 KURZ IMD film**
IMD film with natural finishes, and gives extreme freedom in design and feel, while protecting against external influences such as scratches, abrasion, sunscreen, and moisture
plastic-decoration.com
- 5 THE ALCOM® MS**
Injection-molded PC featuring low emissions, easy demolding, heat stabilization, and noise reduction. Used for automotive interior and finishes
albis.com
- 6 Ceramic effect PBT**
Ceramic-like modified grade of PBT replicates the touch and feel of real ceramic. can be molded in high wall thickness's and is extremely durable
basf.com

CMF Summary



This report summarizes the four CMFs, based on megatrends with a broad perspective of the pan-social environment and trend shifts, macro trends with related issues, case studies, CMF stories, and in-depth research of brands across six industrial sectors.



1 Ethically Minded

- LOCALISED
- IMPERFECTION
- WASTE-MINDED
- REFORM

As the global shift toward sustainability accelerates, this CMF reevaluates materials once considered waste, challenging traditional completeness while offering new creative and sustainable opportunities. Reflecting the rising demand for designs that consider authenticity, diversity, and the environment, this approach challenges mass production norms while balancing visualizing values, building trust, and creating durable products.

2 Phygital 2.0

- FUTURISTIC AESTHETIC
- HYPER SURREAL
- AI PUZZLE
- POSITIVE FICTION

The intersection of humanity’s fear and curiosity toward AI gives rise to a future-forward and scientific aesthetic, infused with a sense of the unknown. It features materials that create an immersive effect through reflection and depth, with rich textures and dynamic color shifts inspired by the nostalgic appeal of retro elements and the sharp edge of modern digital aesthetics.

3 Emotional Centric Design

- TRUE COMFORT
- NATURAL LOOK AND FEEL
- MEANINGFUL TIME
- SYNESTHESIA

From the warmth of natural wood and leather to the timeless elegance of ceramics, materials are the cornerstone of crafting a CMF experience that is both tactile and enduring. In CMF design, the balance of storytelling, delight, and familiarity leads to a deeper and more meaningful connection between the user and the product, ultimately enriching the emotional experience.

4 Materials are Heroes

- STORYTELLING
- AUTHENTIC
- MATERIALS FIRST
- HIGH PERFORMANCE

Materials sit at the core of every product, playing a pivotal role in creating memorable, sustainable experiences that resonate with consumers. By embracing a new wave of material innovation, defined by sophisticated manufacturing techniques, products can captivate with unique stories and compelling experiences, not only enhancing their appeal but also allowing them to carve out a distinct presence in the market.

This publication is a research report by the Korea Institute of Design Promotion (KIDP) as part of the ‘Development of CMF Design System and Process Framework for Supporting Small and Medium Enterprises in Manufacturing Innovation’, executed by the Ministry of Trade, Industry, and Energy (MOTIE).

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