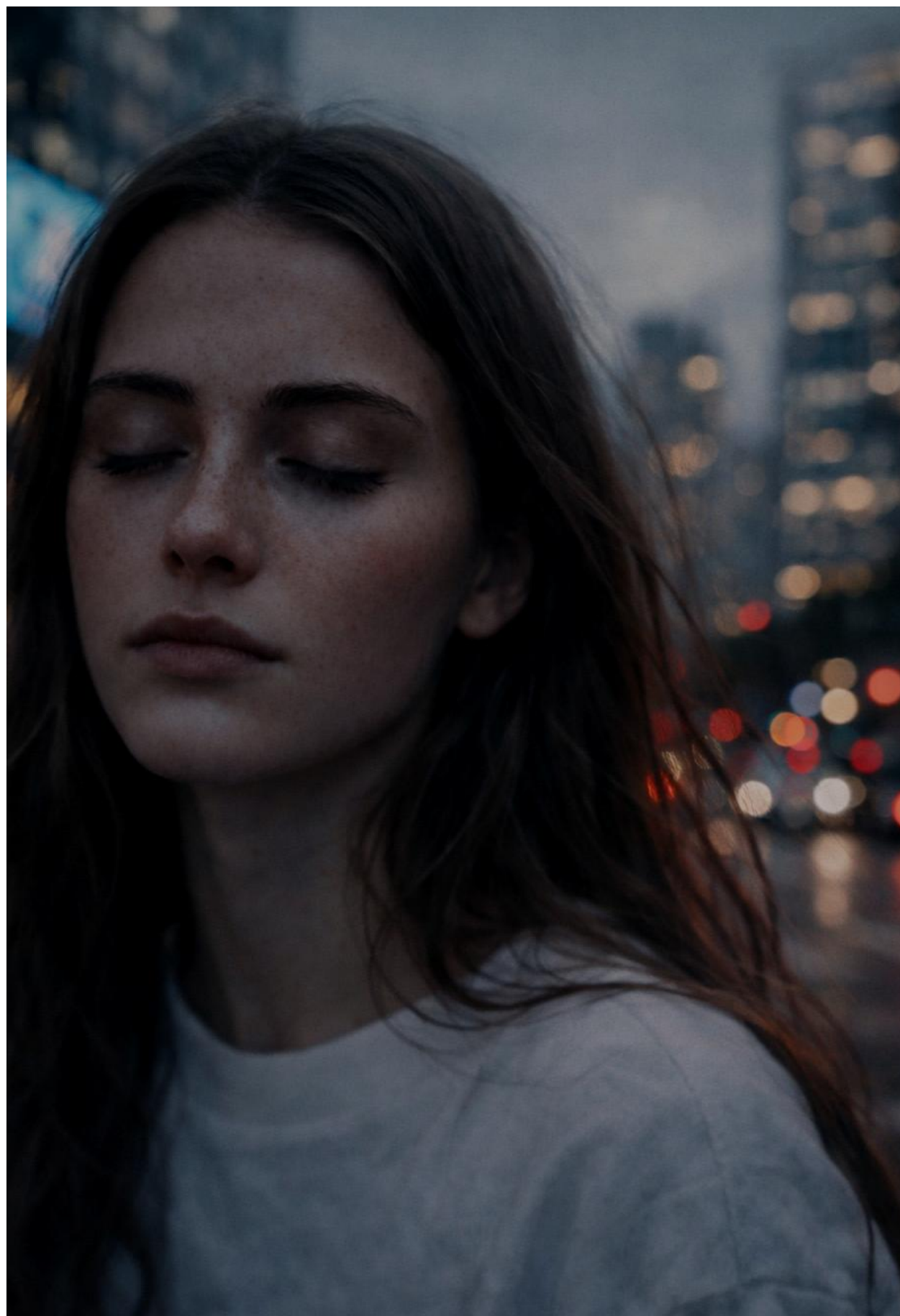


Givaudan

Exposome Protection & Repair for Young Adults

Active Beauty Recommendation for L'Oréal Paris

April 2026



"2026 will be defined by the great exhaustion, with workplace and digital stressors creating a pervasive sense of burnout and overwhelm."

"..emotion became the central driver of all consumer behaviour. "

Young Adults' Three Key Skin Challenges



Environmental

Daily exposure to urban pollution and photo-pollution

"There are still opportunities for growth if brands offer a personal approach by addressing lifestyle and environmental factors, such as stress, pollution and hard water in product claims and marketing."
— — — Mintel, UK Facial Skincare Market Report, 2025



Emotional

Pressure linked to study, work and social life

"Skincare brands in Germany can drive growth by offering simple, high-performing routines that target stress, signs of ageing, and blemishes."
— Mintel, Germany Skincare Industry Report, 2025



Digital

Prolonged screen exposure and lifestyle habits that can interfere with healthy skin recovery

"The excessive exposure of blue light, originated from electronic gadgets like smartphones, laptops, and tablets, may contribute to sleep problems. Long exposure to blue-wavelength light from these devices affects sleep by suppressing melatonin hormone."
— Alam et al., Chronobiology Medicine, 2024

Active Beauty Response: Three Key Ingredients



Silybiol™

For daily exposure to urban pollution and photo-pollution



Neurophroline®

For daily pressure linked to study, work and social life



Synchronight™

For prolonged screen exposure and lifestyle habits that can interfere with healthy skin recovery

Silybidiol™

For urban pollution and photo-pollution stress

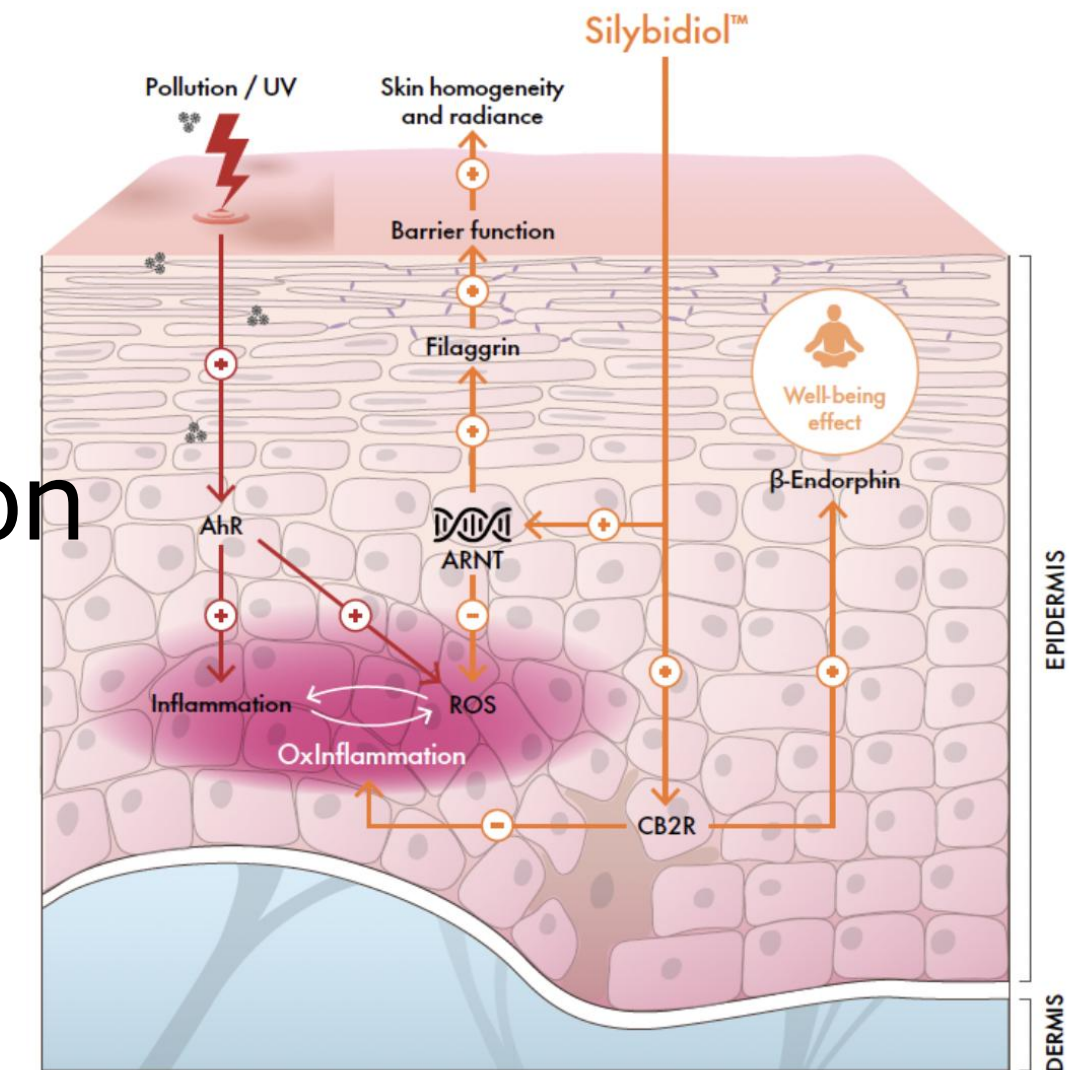


Derived from the fruit of milk thistle through Givaudan's Green Fractionation technology, Silybidiol™ is positioned as the first globally compliant alternative to CBD. It was developed for urban photo-pollution defense and to help maintain skin health under exposome stress.

Fonction claims

Anti-pollution protection

Silybidiol™ is designed for urban photo-pollution defense and targets OxInflammation, the cycle linking oxidative stress and inflammation under environmental exposure. Its CB2-related activity helps activate the skin's defense and detoxification systems against pollution-induced damage.



Supports skin defense and detoxification

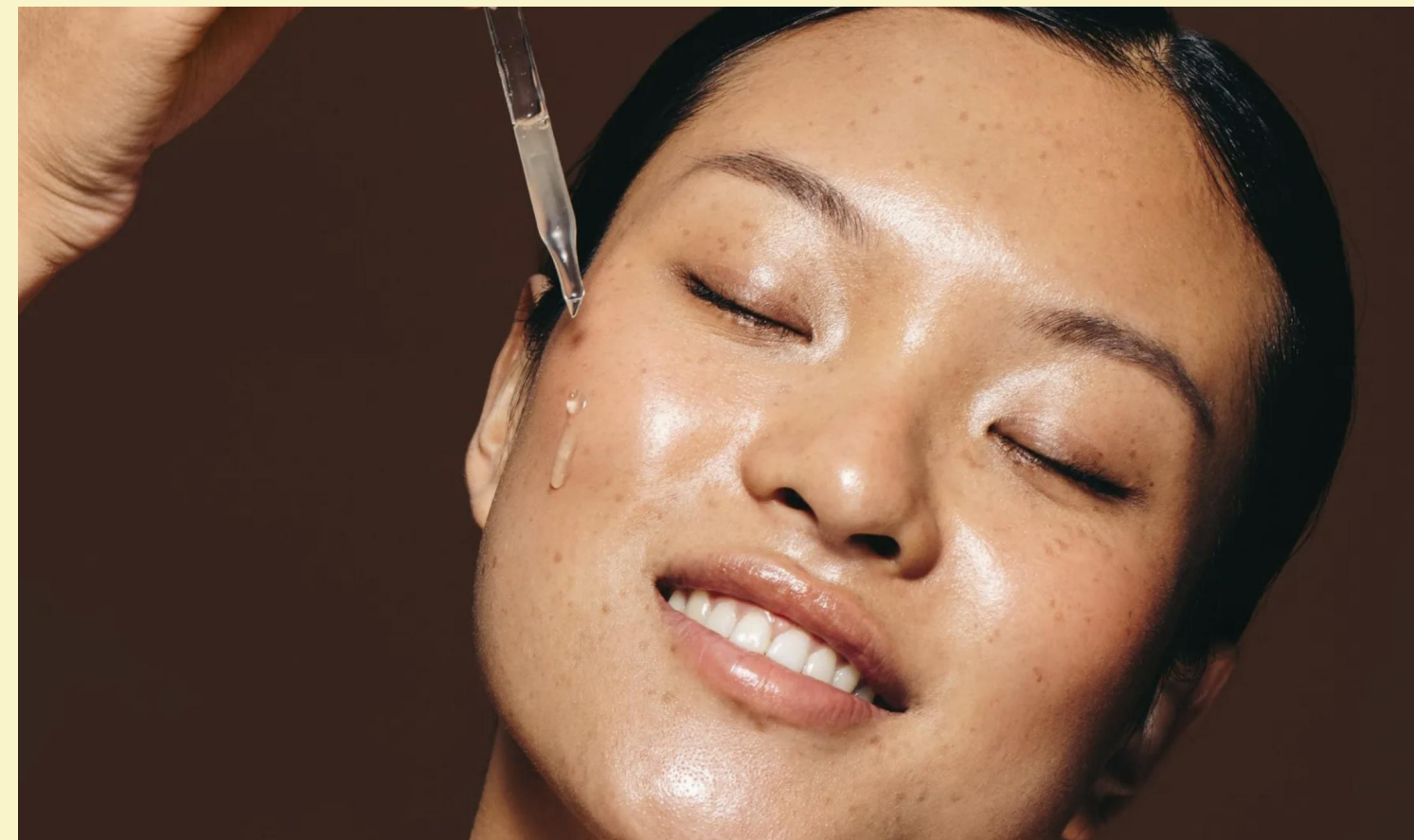
Silybidiol™ interacts with the skin's CB2 cannabinoid receptors, triggering intercellular cross-signaling pathways that activate the skin's defense and detoxification systems. This provides the mechanistic basis for positioning it as a daily environmental defense active.

Boosts radiance and skin tone evenness

Silybidiol™ improved skin tone homogeneity 2.7 times better than CBD and skin radiance 1.6 times better than CBD, while also delivering equivalent wellbeing benefits.

Silybidiol™

*Developed through Green Fractionation technology using Natural Deep Eutectic Solvents (**NaDES**), Silybidiol™ is produced via a process that, according to published formulation science, allows NaDES-based extracts to be incorporated into a wide range of topical textures without significant changes to rheological properties or sensorial profile.*



This broad formulation compatibility supports its use across multiple product types within a single collection.



Potential applications

- Day cream
- Urban defense serum
- CC cream / foundation
- Primer

Neurophroline®

For pressure, fatigue and stress-marked skin



Neurophroline® was discovered in wild indigo (Tephrosia purpurea), a native Indian plant traditionally used in Ayurvedic skincare for its skin benefits. Givaudan positions it as an overall skin stress-control active with fast visible action on stress-marked skin.

Function claims

Anti-stress skincare

Neurophroline® directly targets one of the key biological pathways of stressed skin: cortisol overproduction. It reduced cortisol production by 70% within 2 hours in vitro, supporting its relevance for skin stress control.

Helps reduce signs of fatigue

Neurophroline® focuses on anti-stress and anti-fatigue. Its anti-fatigue relevance is supported by visible efficacy data: in vivo, skin radiance improved after 2 weeks, which is consistent with a less tired-looking complexion under daily stress.

Helps skin look fresher and more balanced

Neurophroline® was shown to stimulate the production of β -endorphin and dopamine, while gene expression studies suggested upregulation of pathways involved in antioxidant response and skin renewal. In vivo, this was further supported by a significant reduction in skin redness after 28 days.

Neurophroline®

*Neurophroline® is positioned for leave-on skincare applications, including day creams, serums, eye contour care, and complexion-enhancing formats such as primers — product types designed to continuously address psychological and environmental stress throughout the day. Engineered through a low-energy, **eco-friendly extraction process**, the ingredient is supplied as a water-based extract with high formulation compatibility, enabling its integration into a wide range of cosmetic textures without significantly affecting stability, rheology or sensorial properties.*



Potential applications

- Anti-stress serum
- Daily cream
- Night cream
- Eye contour care
- Dermocosmetic soothing care

This versatility, combined with its well-documented neurocosmetic mechanism, supports its use across multiple product formats within a single collection targeting stress-related skin concerns.



Synchronight™

For screen-time fatigue and reduced night recovery



Synchronight™ is an active cosmetic ingredient made from gardenia fruit extract and designed by Givaudan as a microbiome-activated digital stress defender. Its origin and concept are closely tied to protecting the skin's natural melatonin cycle from modern lifestyle stressors.

Function claims

Night recovery for screen-exposed skin

Synchronight™'s active compound crocin physically absorbs blue light wavelengths emitted by digital devices, protecting the skin's natural melatonin cycle from disruption. By shielding melatonin production, it preserves the skin's ability to enter its natural overnight repair mode.

Supports overnight skin recovery

Once on the skin, crocin is converted by the skin microbiota into crocetin, a molecule that binds to the MT1 melatonin receptor and mimics melatonin's biological activity from within. In vitro, this mechanism was associated with an 86% reduction in oxidised proteins in skin explants — a direct marker of cellular repair capacity.

Wake up to fresher-looking skin

In a double-blind clinical study over 56 days, Synchronight™ delivered a 21% reduction in wrinkle count versus placebo, with 80% of participants reporting improved hydration and 75% smoother skin. Nighttime awakenings were reduced by 87%, confirming that skin recovery starts with restored sleep quality.

Synchronight™

*Synchronight™ utilizes advanced **Microbiome-mediated technology** to synchronize the skin's circadian rhythm. It is positioned for leave-on skincare applications, particularly night creams, serums and overnight masks — formats designed to support the skin's natural nocturnal regeneration processes. Its water-soluble profile and formulation-friendly characteristics allow it to be incorporated into a wide range of cosmetic textures without significantly affecting stability or sensorial properties.*



Potential applications

- Night cream
- Overnight serum
- Sleeping mask
- Evening recovery treatment

This compatibility, combined with its chrono-cosmetic positioning, supports its integration across multiple night-oriented product formats within a coherent skincare collection.

1 MORNING RITUAL
— PROTECTION& STRENGTHEN

Urban Shield Day Cream — Silybidiol™ + Neurophroline®



“Daily defense for skin in urban life.”

*FROM CITY DAYS TO
RESTFUL NIGHTS:*

A SKINCARE ROUTINE FOR YOUNG ADULTS,
COMBINING DAILY PROTECTION, STRESS
RESILIENCE AND OVERNIGHT RECOVERY.

A concentrated leave-on
serum designed as the
centrepiece of the
collection,

bringing together the
three key dimensions of
the exposome:

**Environmental Defence,
Stress Resilience and
Night-Time Recovery,**

within one targeted
treatment step



2 A SERUM FOR DAY & NIGHT

“Complete exposome defense. Protect by day, repair by night.”

3

EVENING RITUAL —REPAIR & RESET

Digital Recovery Night Cream — Synchronight™



“Night-time recovery for screen-exposed skin.”

THREE INGREDIENTS APPROACH in ONE COLLECTION FOR L'ORÉAL

Reflecting Real Lifestyle Stressors

Addresses the combined impact of pollution, stress and digital lifestyle on young adult skin. Reflects how multiple, interconnected factors shape skin quality across the day and night.

Creating a Simple Routine Story

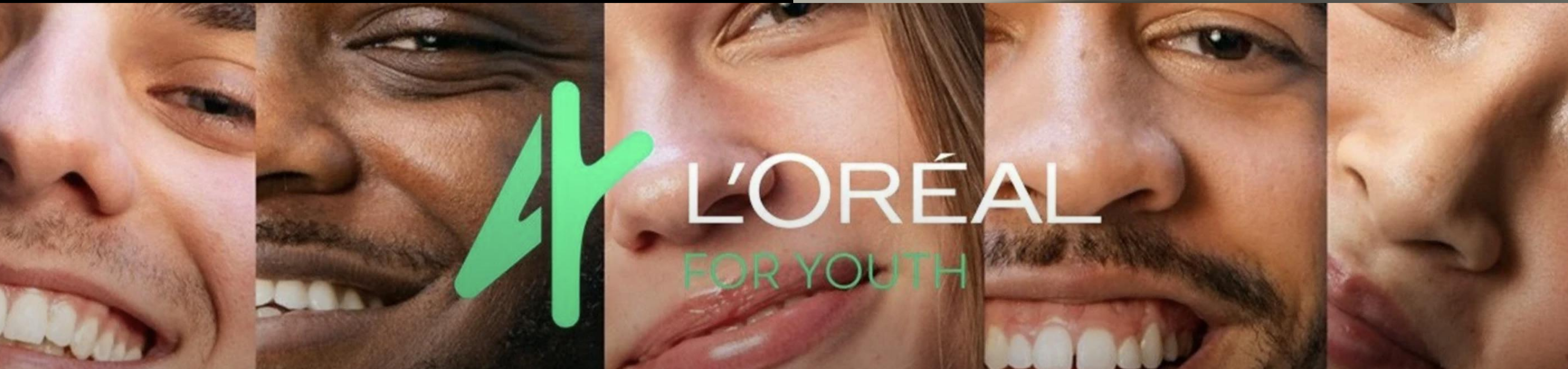
Structures skincare into a clear day-to-night routine: protect, strengthen and recover. Makes the concept easy to understand, use and communicate across product touchpoints.

Bridging Science & Tech with Consumer Accessibility

Translates advanced science into a simple and actionable skincare message. Connects technical mechanisms with clear, visible consumer benefits.

Effective Skincare, Designed with The Planet in Mind

By combining advanced biotech actives, this collection delivers visible skin benefits while reducing environmental impact.



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