



Sustainability eBook 2023

Electrolux

The evolving landscape of sustainability

It is a fact that society's understanding of sustainability has broadened, leading to innovative design approaches and systemic shifts in behaviour.

Building design plays a pivotal role in shaping the sustainability of our urban environments. It is a powerful tool that can either exacerbate or mitigate environmental impacts. Firstly, orientation and layout significantly impact a building's energy consumption. Properly aligning structures with the sun's path allows for natural lighting and heating, reducing the need for artificial lighting and climate control systems.

Furthermore, material selection is crucial. Opting for locally sourced, recycled, or renewable materials not only reduces transportation emissions but also lessens the environmental footprint associated with extraction and production. Moreover, incorporating insulation and high-quality

windows enhances a building's energy efficiency, leading to decreased energy demands and lower emissions. Architects and engineers are increasingly integrating renewable energy systems into their designs. Solar panels, wind turbines, and geothermal systems can transform buildings into net energy producers, contributing surplus energy back to the grid. This not only reduces reliance on fossil fuels but also promotes a more decentralized and resilient energy infrastructure.

Water conservation is another critical aspect of sustainable building design. Implementing rainwater harvesting and greywater reuse systems minimizes strain on municipal water supplies and lowers the energy required for

water treatment. Additionally, green roofs and permeable pavements can mitigate stormwater runoff, reducing the burden on drainage systems.

In conclusion, building design is a linchpin in the pursuit of sustainability. Through thoughtful consideration of orientation, materials, energy systems, and water management, architects and engineers hold the power to create structures that harmonize with the environment rather than deplete it.

By prioritizing sustainability in design, we pave the way for a more ecologically balanced and resilient future.

BRANKO MILETIC, EDITOR



The Awards Jury



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Cooking up a greener future with Monica Mazioun, Electrolux Group's Design Lead for Sustainability

Electrolux Group has been a leader in sustainability since releasing their first environmental policy back in 1991, when the concept of sustainability in construction was still in its infancy. Here, Monica Mazioun, Electrolux Group's Design Lead for Sustainability talks about the high-impact side of sustainable product development, the way appliances are changing to prioritise end-of-life recyclability – and Electrolux Group's North Star in sustainable product innovation.

A&D: Tell us about your background.

MONICA MAZIOUN: I am an industrial designer by training, and I started out as a furniture designer and maker. I then worked in product design and colour theory education, and – probably because of my short attention span – I have always had the need to move around and change things up quite a lot! Even after I started with Electrolux Group, I had a wide range of many different roles. I do think that, in a poetic way, they have all pointed to my current role as Design Lead for Sustainability – because sustainability is complex, and you need to have good relationships with people around you to navigate it, and get through different obstacles and hurdles.

A&D: Sustainability is the main focus of your role now. Has it always defined your career path?

MM: It certainly has always been a very strong interest of mine. Even back at university, my thesis centred around EPS and its environmental impacts. And today, almost 25 years later, I am working on reducing EPS and increasing the environmental profile of our packaging. My interest in sustainability has definitely always been there – and clearly has gone a full circle.

A&D: Tell us about your current role with the business, and what have been some of the key focal points for you recently.

MM: At Electrolux Group, we strive to think globally and act locally. We're a Swedish company, so we're plugged into that market as well as the global design team, but we ensure that the solutions can be applied here, in Australia, and in APAC. My role is regional, and spans the whole of Asia-Pacific.

One of the exciting things I have been focusing on is the recycled plastic in refrigerators. The plastic that is on the inside of the refrigerator, the liner is what we call it, is made out of a plastic called HIPS – High Impact Polystyrene. And so we have been working with some suppliers for recycled HIPS to increase the recycled material in our products. We've actually successfully launched that in Europe and a part of my role now is to bring that to Asia Pacific, and specifically to Australia. It's a big focus for us because out of all of our products, the refrigerator uses the most plastic, so if we can improve that, we can really have the biggest impact. And it's a long-term commitment. For instance, replacing virgin plastic with recycled plastic is a fantastic idea but it's actually very difficult to achieve because you need to make sure that the quality and the longevity of the products are maintained. Otherwise, it's not a sustainable solution.

Another part of my role is ensuring that we partner with the right suppliers and foster a strong value supply chain. In addition, I work with the digital team, the user interface team as well as the engineers to collectively work out how we can keep on increasing the sustainable profile of our products, and encourage customers to use the more sustainable programmes.

A&D: What does sustainable design mean to you?

MM: As an industrial designer by training it is natural for me to put the user at the centre. And that aligns with Electrolux Group's design philosophy - always remembering to keep the user at the centre. From a sustainability point of view, it's about looking at the product holistically, and considering where we can have the highest impact. Often it is not the most glamorous option that has the highest impact, but it's the right thing to do – and more often than not we make the decision to go with that option, even if it's not as marketable.

Diving a little deeper into it, from our own lifecycle assessment, we know that approximately 85% of the environmental impact of our products happens in use. So the actual material is one portion - which is why we focus a lot on recycled materials, because that helps with the resource limitation, and lessening our impact on the earth - but then the bulk of it is in use so our focus has to be on nudging the user to use the ECO mode on the appliances, even though the programme might take longer. What the users might not know, for instance, is that our products – like washing machines – have sensors that allow them to monitor and adjust the duration of the programme.

A&D: And what are some of the most interesting product innovations aimed at creating more sustainable households that architects and designers should be aware of?

MM: First and foremost, if architects and designers want to create more sustainable spaces, they should specify products from companies that are actually doing something about sustainability. Of course, that takes a lot of effort because it's not always easy to tell the difference between greenwashing and genuine

environmental commitment. Electrolux Group, for instance, released an environmental policy in 1991. We were one of the first ones to set sustainability targets, and we're one of the first ones to achieve them, too.

But in terms of specific products, while it might seem obvious, I think it's pivotal to specify products with a high energy and water rating. In addition, there are also other considerations and factors. For instance, one of our vacuums uses up to 70% recycled plastic, and another is a cleaning product that has no paint, which reduces the amount of chemicals used, and – as a result – increases recyclability. So at the end of its life, when you actually extract this material, it can be used again. It's really important to not only make sure that the products use recycled content, but are still recyclable at the end of life.

A&D: Now, perhaps a little bit more far-fetched is the concept of the GRO Kitchen. 'Gro', which is Swedish for 'sprout' symbolises a new direction for kitchen design. Can you tell us a little bit about that?

MM: It's definitely our North Star in terms of product innovation. It's a concept for a modular kitchen we have just launched at the EuroCucina fair in Milan, Italy, which essentially reimagines the way people use appliances, and how the appliances can adapt to their evolving needs. It's based on an idea of components, and you can have as many as you need, but you can also add or remove. For instance, if you are furnishing a single occupancy one bedroom apartment, you might need one or two. But then perhaps another party moves in – you can add another compartment to expand the capabilities of the adaptable kitchen.

But this concept also deals with the idea of food waste as well as creating healthier, more sustainable eating habits. The idea of food waste has been powering Electrolux Group's innovation in the kitchen appliances and fridge space, and this is a concept that advances these efforts. GRO is based on data from the EAT-Lancet planetary health diet, and aims to help users create more sustainable, greener eating habits by showcasing certain foods – like grains or veggies – on display. We're all too familiar with the idea of food getting rotten,

and wasted, at the back of the fridge – this concept strives to minimise that, and make better choices for the health of the individual, and the planet.

A&D: Another interesting concept Electrolux Group has been involved with in HyHome. It's a result of a partnership with AGIG, and explores the use of hydrogen gas in kitchen appliances.

MM: The HyHome concept explores the idea of what happens if we use hydrogen gas. Hydrogen gas is pretty exciting, because the cooktops can give you efficiency as well as producing zero greenhouse gases if the gas comes from a renewable source. So you can combine this culinary experience and this emotional experience of cooking with gas with the environmental considerations.

But what I think is really exciting for us about this partnership, is this meeting of infrastructure and business; the city supply and the creative development. It's an incredibly interesting junction that keeps the door open to new business models and solutions. And it's really important that we do that – when you bring together two worlds that don't usually interact, the results can be genuinely exciting.



Multi-Residential Dwelling Award Shortlist



proudly partnered by Electrolux

The design of a new townhouse, duplex or residential complex that contains multiple residential dwellings. Projects nominated under this category are classifiable as Class 2 or Class 3 buildings.



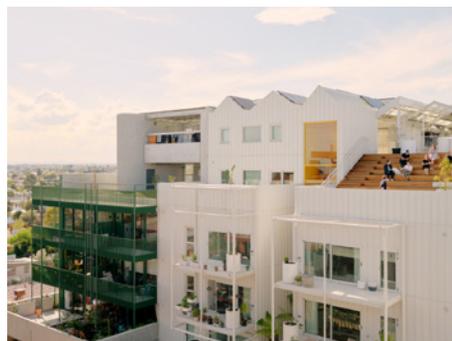
ABORIGINAL HOUSING VICTORIA
BREATHE ARCHITECTURE



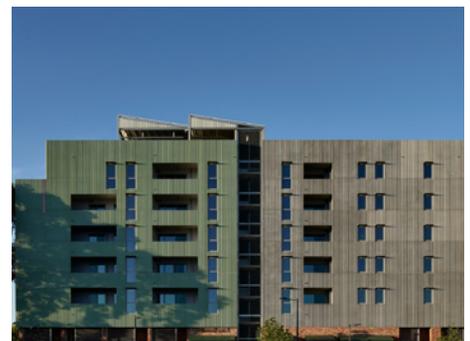
FERRARS & YORK
HIP V. HYPE



LIV MUNRO
MIRVAC WITH BATES SMART
AND SIX DEGREES



NIGHTINGALE BOWDEN
BREATHE ARCHITECTURE



NIGHTINGALE VILLAGE
NIGHTINGALE HOUSING



Award Winner

PROJECT PHOTOGRAPHY Tess Kelly, Joel Taylor & Christian Woodmansey.



SUSTAINABILITY AWARDS 2023 / ELECTROLUX / SUSTAINABILITY eBOOK 2023



 WINNER

FERRARS & YORK

HIP V. HYPE, DESIGNED IN COLLABORATION WITH SIX DEGREES ARCHITECTS

Ferrars & York comprises twenty-two 1-, 2- and 3-bedroom apartments with an average energy rating of 8.6-stars and the highest performing apartment achieving 9.3-stars (out of 10). At ground level, a retail space is jointly occupied by HIP V. HYPE's Ferrars & York Collective; a workshare space for sustainably minded businesses and Bike Gallery; a specialty bike store.

Embodied carbon neutral and setup to be

carbon neutral in operation, apartments at Ferrars & York represent more comfort for residents due to consistent air temperatures, better acoustic performance, lower energy bills and a lower carbon footprint.

In an established suburb where families are increasingly priced out of standalone dwellings and supply is considerably short of demand, Ferrars & York provides families with housing choice.

Why sustainability and business are one and the same at Electrolux Group

It's widely accepted that although each one of us bears responsibility to make more sustainable decisions and minimise the impacts of climate change however we can, a far greater contribution can be made by companies. Businesses – and larger businesses in particular – have the ability to drive sustainability through their own operations, their supply chains, their products and, in turn, their customers. Electrolux Group's take on ESG responsibility certainly reflects this layered sense of accountability, and their sustainability framework – aptly titled 'For the Better 2030' – is already driving results.

Electrolux Group is all too aware that the evolving global megatrends shaping the world at large create both challenges and opportunities for sustainability in their business. For the Better 2030 helps them manage these shifting sands across a number of key areas:

DEMOGRAPHICS

Global demographic trends such as population growth, the growing middle class, an ageing population and urbanisation, are increasing the demand for home appliances, which puts more pressure on energy and natural resources. Electrolux Group is meeting this challenge with strong innovation targeted at improving the environmental performance of their products.

RESOURCE AND PLANETARY BOUNDARIES

With ongoing and irreversible damage to the planet's fragile ecosystems now a reality, Electrolux Group is focusing on the ability to work within planetary boundaries by developing

circular business models that promote resource efficiency, such as product subscription (which positions an appliance as a service), repair or take-back services.

"We see planetary boundaries as a tool, not a hindrance," explains Monica Mazioun, Electrolux Group's Design Lead for Sustainability. "With a megatrend towards a more transient lifestyle, one of the business models we're looking at is appliance-as-a-service. So essentially enabling people to rent appliances so that when they need to leave a place rather than just getting rid of stuff, we can come in, get the appliance, refurbish and repurpose it appropriately. It makes it easier for consumers, and ultimately means fewer appliances produced, and less waste."

TECHNOLOGY AND DIGITALISATION

With new technologies scaling rapidly and globally, and innovations like the Internet of Things (IoT) enabling new business models and functionality through connected appliances, Electrolux Group is looking to

stronger consumer empowerment, closer supplier integration and circular business models to capitalise on the opportunities for environmental impact presented by technology.

Always a strong global leader in the sustainability space, the company has evolved the way they think about sustainability, now a defining characteristic that makes financial, social, and environmental sense. And it's certainly showing results, with the Group's most energy and water efficient products accounting for 24% of total units sold and 39% of gross profit in 2022. "We're actively working towards a science-based target that has been approved by the Science Based Targets initiative, and are committed to contributing to the United Nations Global Compact Business ambition to limit global warming to 1.5 C° by achieving a climate neutral value chain by 2050," says Monica. In addition, the company also takes its responsibility as a corporate citizen very seriously, and to that end the Electrolux Food Foundation that has engaged with more than 124,000 people since 2016 to inspire more sustainable eating and support those in need.



But all of this strategy is nothing without action and impact, and Electrolux Group is already making waves. “We’re incredibly proud of the fact that we’ve been able to meet our 2025 science-based climate target three years early,” says Monica. “We managed to reduce Scope 1 and 2 emissions by 82% and Scope 3 emissions by more than 25%, compared with 2015.” They continue to work towards efficiency and climate neutrality in their operations by transitioning towards renewables (98% of the electricity used in global operations came from renewable sources in 2022), and implementing self-made frameworks, such as the Zero Waste to Landfill program, to which 55% of their factories are now certified.

The company continues to drive sustainability across products too, through innovations like a built-in refrigerator range with an Ecometer that helps consumers to make more energy efficient choices. They have introduced refrigerator solutions such as Cooling 360 and ColdSense to help foods last longer and help reduce food waste. Front-load washers now save 450 litres of water per year

compared with a top-load washer. They also launched a vacuum cleaner without paint to reduce chemical use, energy and material impact, and end-of-life recyclability. In addition, they launched the consumer focused Break the Pattern campaign, which raised awareness among millions of consumers on the environmental impacts of “throw-away fashion” and how to make clothes last longer, using Electrolux products.

But perhaps one of their most exciting innovations is within the demo HyHome, launched in partnership with the Australian Gas Infrastructure Group (AGIG). The conceptual HyHome features hydrogen gas-powered appliances, and is an exploratory look into a possible future where hydrogen gas (which produces only heat and water vapour when burned). Electrolux Group’s concept UltimateTaste 900 Hydrogen Gas harnesses the full power of hydrogen gas to offer unparalleled efficiency and sustainability, and zero greenhouse gas emissions when burned from renewable hydrogen gas while delivering swift and

precise heat. And while the cooktop is still currently in prototype, it’s testament to Electrolux Group’s commitment to enabling better and more sustainable living in the future (enshrined in their Better Living 2030 program).

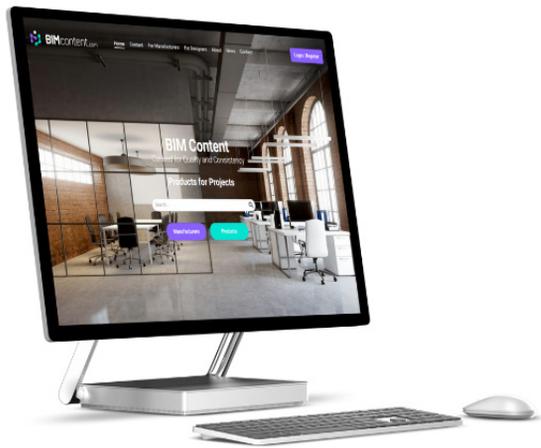
Electrolux Group is all set to keep the proverbial pedal to the metal where sustainability is concerned, with a laser focus on achieving the goals set out in the For the Better framework, as well as a long-term incentive program for senior management that is directly connected to those sustainability targets. But, as Monica says, the real success is driven by the understanding that sustainability and business are now one and the same. “Sustainability is fundamental to our purpose to shape living for the better by promoting more sustainable living for millions of people around the world,” she sums up. “And we truly believe that by focusing on that purpose and sustainable strategy we’re making a pivotal contribution towards the long-term success of our business – and the future of the planet.”



Created by  IGS group

Electrolux Group empowers design professionals with a cutting-edge BIM content library

In an era marked by environmental challenges, the architecture and design industry holds a pivotal role in shaping a sustainable future. The significance of incorporating sustainable practices into industry processes cannot be underestimated, and there is a growing need for tools that empower and enable architects, designers and specifiers to improve design and construction procedures in the pursuit of a greener future. An exciting collaboration between Electrolux Group and IGS Group certainly shifts the needle on how carefully curated, high-quality resources foster better architecture and design outcomes.



The renowned global leader in home appliances has teamed up with a specialist in Building Information Modeling (BIM) Content to create a comprehensive BIM content library for design professionals. The partnership aims to equip architects, designers and specifiers with reliable, high-quality resources they need for seamless product selection, efficient documentation processes, and captivating visual representation, significantly elevating the benchmark for project stakeholder engagement.

The newly launched BIM content library, developed natively in the extensively used Revit software and crafted in adherence to industry best practices, encompasses the four influential brands under the Electrolux Group umbrella: Electrolux, Vintec, AEG, and Westinghouse. With over 200 sought-after products across multiple appliance categories, from kitchen marvels to cutting-edge washing machines, vacuum sealer drawers, and wine cabinets, this comprehensive BIM content library offers all the essentials for a contemporary home fit-out.

One of the library's standout features lies in its incorporation of spatial planning guides. These invaluable tools assist designers in seamlessly integrating products within their project designs by visually presenting the required space in immersive 3D and precise 2D formats. With just a glance, users can get a clear understanding of door swings, ventilation or clearance zone requirements, resulting in superior project design and coordination outcomes, and significantly streamlining the design process along the way.

Notably, all Revit families within the Electrolux Group catalogue incorporate 'Advanced' PBR (Physically Based Rendering) Materials. This enhancement allows designers to generate stunning, high-quality renders of Electrolux Group products, providing clients and stakeholders with a highly realistic visual reference during the design phase. By offering advanced visualisations, design professionals

gain the freedom to explore a myriad of options and present them to project stakeholders with confidence, fostering communication, shared vision and innovation.

To ensure seamless access to the extensive BIM content library, Electrolux Group has chosen to leverage the power of IGS Group's BIM content hosting platform, BIMcontent.com. This carefully curated digital destination delivers an optimised user experience for designers, offering efficient search, preview, and download workflows. Designers can effortlessly view 3D Revit geometry directly through their web browsers, meticulously review parameter data, and select the download format that best caters to their individual needs.

Beyond the realm of convenience and efficiency, the widespread adoption of BIM processes and technology throughout the entire asset lifecycle champions sustainable construction practices. BIM offers a powerful toolset for optimising water efficiency, analysing building performance, and evaluating environmental impacts – an undeniable advantage for architects, designers, and specifiers seeking to build a greener future.

Furthermore, BIM plays a pivotal role in addressing the United Nations' Sustainable Development Goals (SDGs). From city planning and disaster risk management to sustainable resource management, waste reduction, and efficient energy use, BIM enables simulations that assess the life-cycle energy and sustainability performance of products well before procurement. By incorporating BIM models into their decision-making process, project teams can significantly reduce energy consumption and waste generation, aligning with the sustainability-focused Target 12.2. Additionally, BIM empowers teams to accurately calculate product quantities prior to construction – and help minimise waste in line with Target 12.5. Furthermore, BIM's rich information repository provides essential

insights for demolition teams, ensuring appropriate disposal and even exploring recycling and reuse opportunities for relevant building components.

However, the advantages of this holistic resource extend beyond sustainability. The cutting-edge tech can contribute to increased productivity and cost savings within the construction industry. For example, Malaysia's adoption of BIM, resulted in a remarkable 60% surge in productivity over just five years. By leveraging BIM's capabilities, stakeholders gain access to complete project information, enhance collaboration, and efficiently manage the design, construction, and lifecycle of assets. This holistic approach establishes a more effective and sustainable workflow, revolutionising the way architects and designers shape the built environment.

The partnership between Electrolux Group and IGS Group represents a monumental stride towards the seamless integration of BIM technology into the architecture and design industry. With the vast array of resources available within this impressive BIM content library, design professionals can streamline their product selection process, elevate documentation procedures, and present captivating visual representations – all while actively contributing to sustainable construction practices.

Design professionals can access Electrolux Group's BIM library at BIMcontent.com, where they can download individual families, explore product category collections, and immerse themselves in virtual showrooms that showcase extensive collections from each brand. The new resource certainly serves as a testament to Electrolux Group's commitment to empowering design professionals with the finest resources, fostering innovation, efficiency, and environmental accountability within the dynamic architecture and design industry.

