

CIRCULAR DESIGN

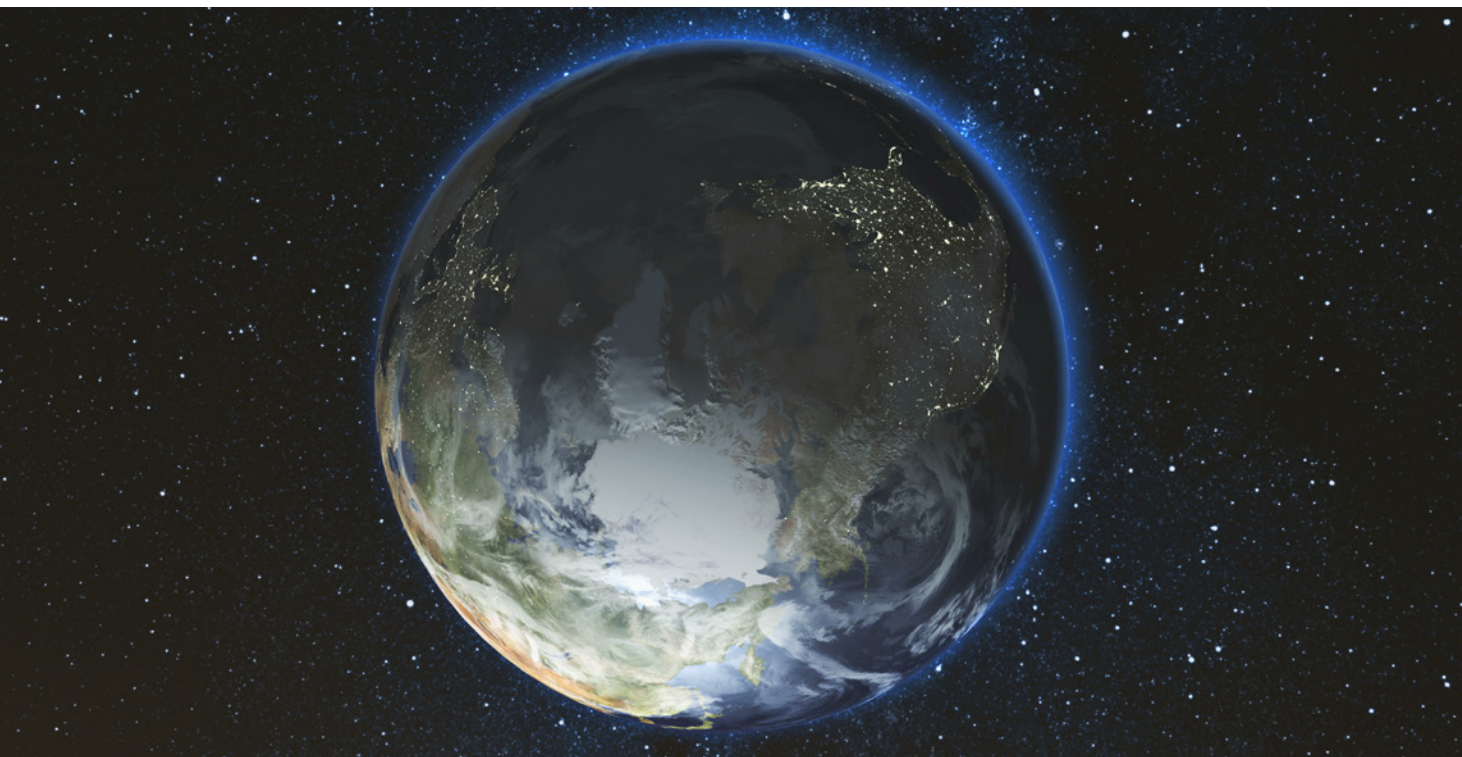
ANIDRIDE DESIGN SUSTAINABILITY VISION



Sustainability matters:

It saves resources, reduces GHG emissions, conserves water, improves health, increases productivity, costs less to operate and maintain, increasingly costs no more to build and produce, and most importantly...

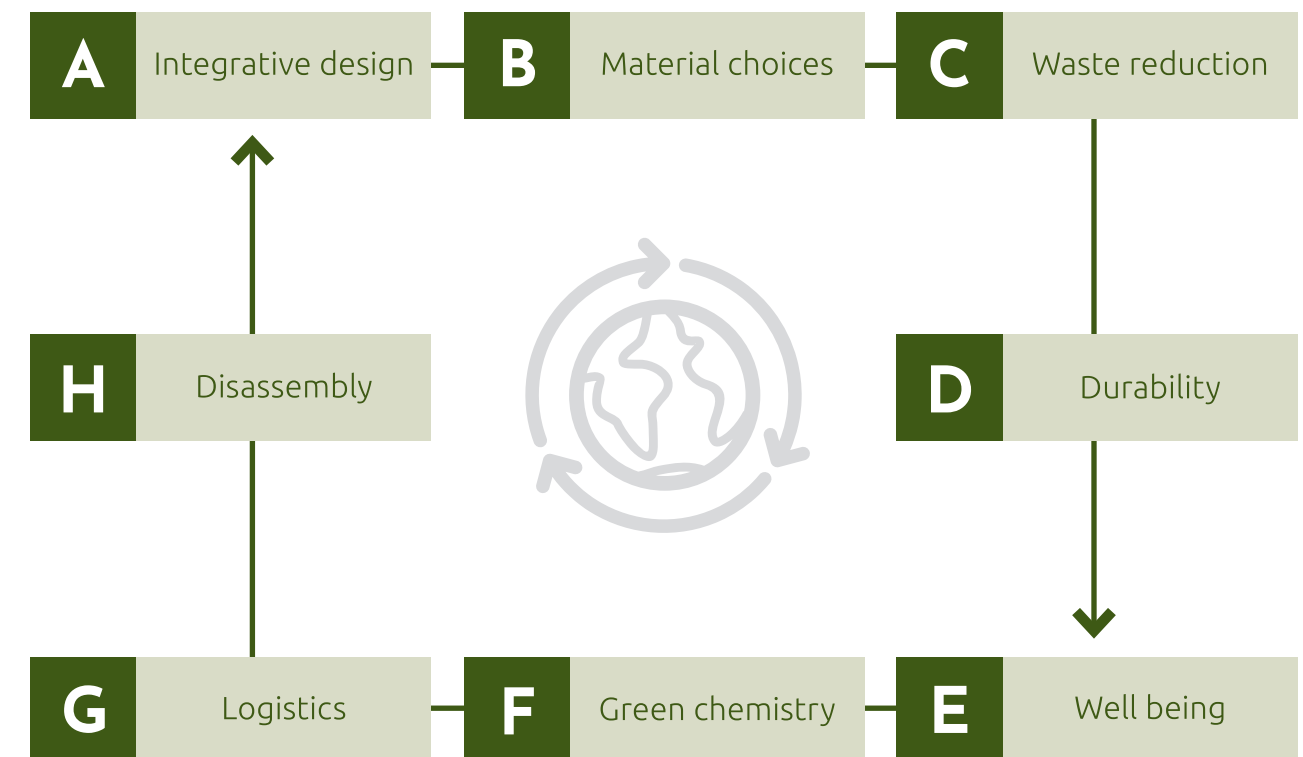
leaves us a healthy planet.



GV's sustainability vision is a fusion between **Italian ecodesign** and **hightech** that does more with less. Less resources, less energy, less hazardous materials, and less impact on the environment.

8 PRINCIPLES for a circular design:

We are transitioning from a linear to a circular world, and creativity has never been this important.

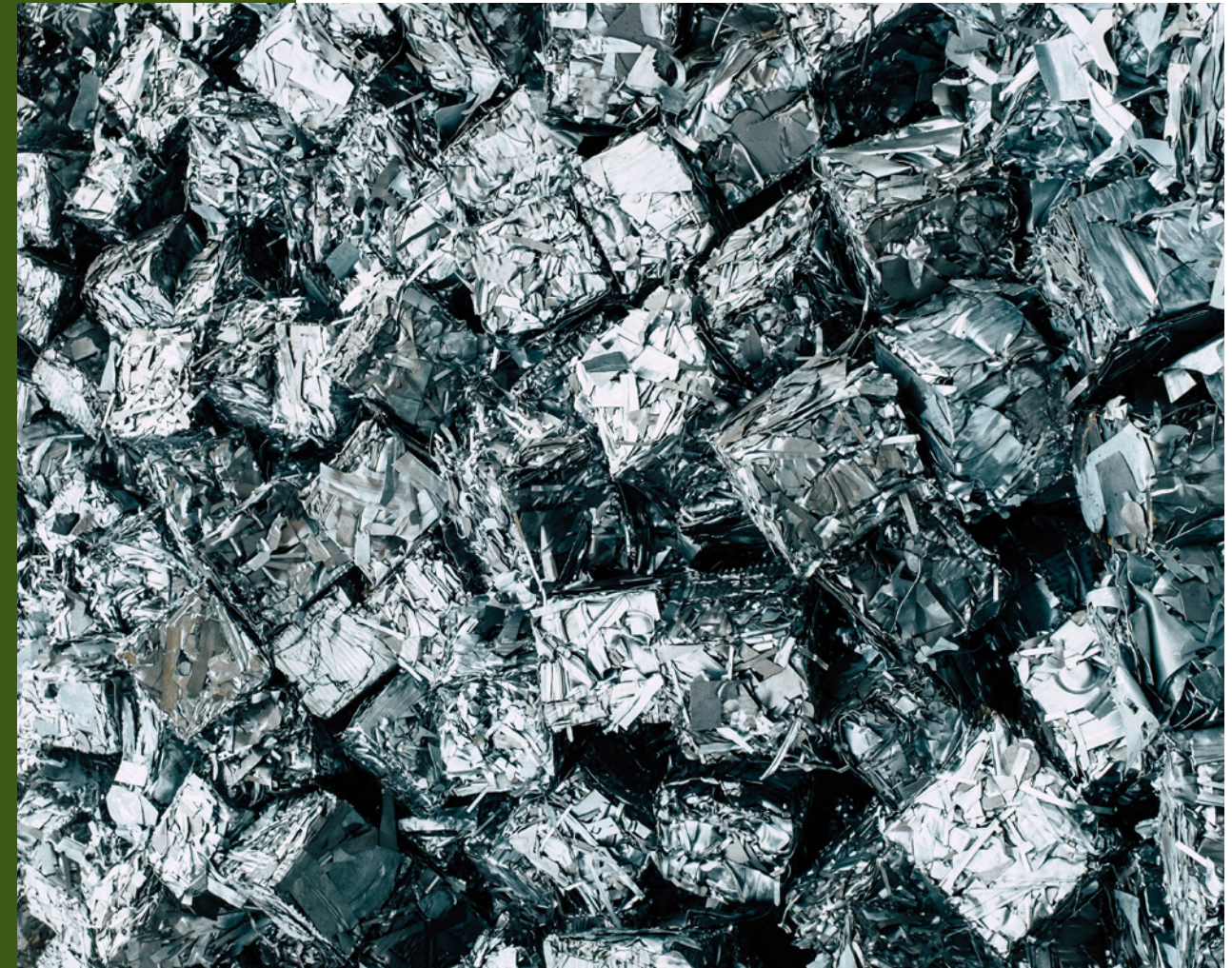
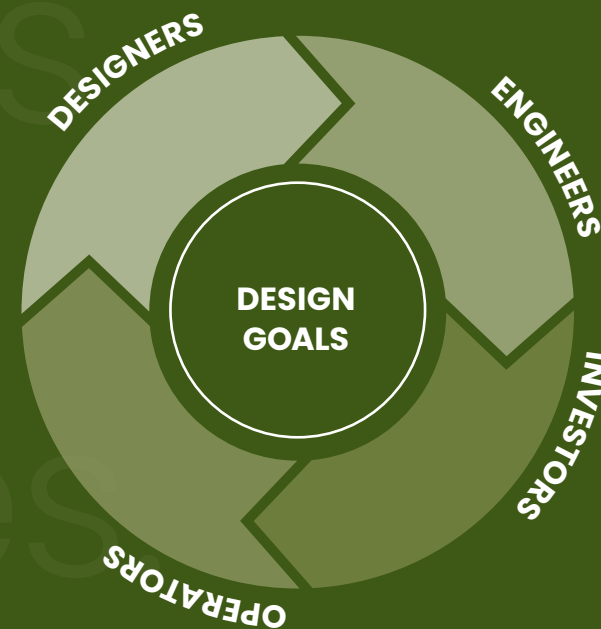


The key to this circular world is a circular design that creates elegant, effective, creative solutions for the circular economy and provides solutions that are invaluable for people, advantageous for the businesses in a competitive market, and are regenerative for a world that has been degrading.

A _ Integrative design

A comprehensive holistic approach for a sustainable project.

Finding solutions that meet all sustainability goals at once requires creating **synergies across all elements** and entities associated with the project. To do so, we involve all the team members from the pre-design phase throughout the entire project and create the conditions for a fruitful collaboration. Preliminary analysis including the collection of all available data, from client's needs and budget to 3D survey and sustainability goals is how we start this process.



B _ Material choices

Specifying the right products contributes significantly towards sustainability. We need to be more conscious about that.

Materials are what make the product. Our materials are chosen with great attention to support a life-cycle approach that minimizes the embodied impact related to the extraction, processing, transportation, maintenance and disposal of materials.

C _ Waste reduction



Less waste, smarter design!
Using materials more efficiently is a highly effective sustainability strategy that involves each stage of design and construction.

Waste is a valuable resource not being used and it comes with an environmental and economical cost. We minimize waste on the product creation process with the help of innovative technologies like **3D scanning and BIM modeling**. High precision engineering and production helps us not only to reduce waste, but to **lower costs** while speeding up the installation on site.

D _ Durability








Design for longevity: durability, easy maintenance and reparability.

Materials and products that last in time have a smaller impact on the environment. This is the reason why we choose durable materials and deliver high quality and strong products that offer a **longer life cycle**.

E _ Well being

We all have a genetic connection to the natural world. Biophilia is of ever increasing importance to our health and well-being in the built environment.

	+8%	OFFICES: Productivity can be increased by 8%, rates of well-being up by 13%, increases in creativity, with reduced absenteeism and presenteeism.
	+23%	HOSPITALITY: Guests willing to pay 23% more for rooms with views of Biophilic elements.
	-22%	HEALTH CARE: Post-operative recovery times decreased by 8.5%, reduced pain medication by 22%.
	+8%	RETAIL: The presence of vegetation & landscaping has been found to increase average rental rates on retail spaces with customers indicating they were willing to pay 8-12 % more for goods and services.
	+7%	HOME: can become more calming & restorative, with 7-8 % less crime attributed to areas with access to nature and can command an increase of 4-5% in property price.

For a **human focused design** approach, improving people's well being and making them feel physically and psychologically good within the built environment is one of the highest priorities. Choosing materials and products that contribute to a **good indoor air quality**, or applying **biophilic design principles** to lower the stress and improve emotional well being are some of our strategies.



F _ Green chemistry

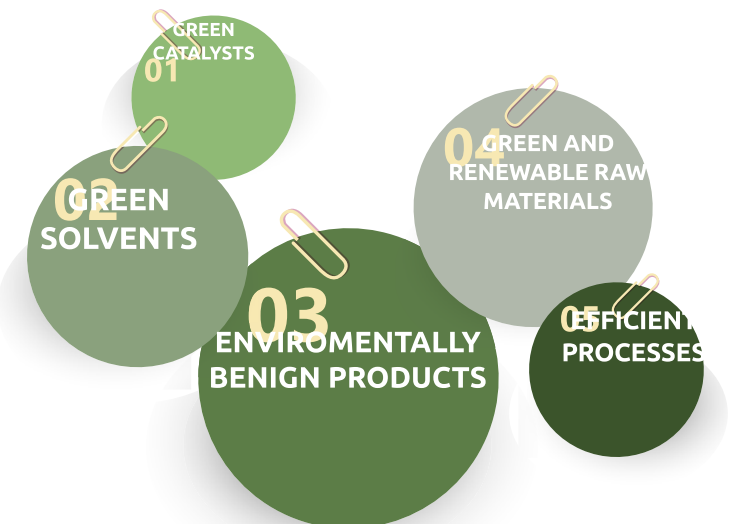
"So green chemistry is really a way of keeping all of those technological miracles, those innovations, without all of those unintended consequences."

Paul Anastas, director of Yale University's Center for Green Chemistry and Green Engineering.

Used in everything every day, chemicals play an integral role in society. A responsible use is necessary.



What goes in the product gets out in the environment and eventually into our bodies. We use green chemical products and processes to reduce or eliminate the use of hazardous substances for the environment and for our health.



G _ Logistics

Sustainable logistics is a priority for us!
A logistics system that promotes the optimal design of routes and shorter trips to lower the emissions that pollute the environment.

In a globalized world logistics has an important impact on GHG emissions and waste production through packaging. We optimize our logistics and **maximize the capacity** of each transportation with the help of **compact packaging** to reduce the distance traveled and therefore the environmental impact of each project.



H _ Disassembly

Disassembly can ease and support re-use of materials.

For the **recyclability and reuse** of the products disassembly is the key. The more the products can be disassembled and sorted according to the materials, the more they can be recycled. When we design our products, we design with the end in mind.

SMARTER DESIGN:

- ▶ Reducing the number of different materials
- ▶ Enabling an efficient disassembly process
- ▶ Making disassembly an intuitive and compelling process



Sustainable INTERIOR DESIGN

Interior design choices might come with a tremendous environmental impact. We need to avoid it by consciously selecting materials and products to use.

People, on average, spend approximately 90 percent of their time indoors and are directly affected by its quality. With this awareness, we create highly curated interiors that leave the occupants with a sense of pleasure and **comfort**. Our design approach is based on Italian design aesthetics, cost optimization, durability, resource efficiency, well being and **low embodied environmental impact**.

① TILES

② CASE GOODS

③ FABRICS

④ RESILIENT FLOOR



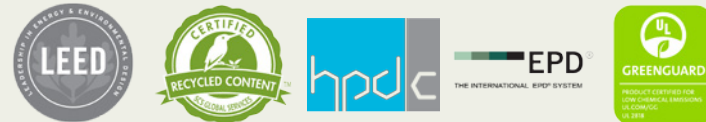
1 _ Tiles

Durable, resistant, healthy and hygienic. We use the highest quality tiles in the market.

All our tiles are produced with innovative technologies using recycled content and with a great attention to energy and water efficiency during production. They are free from the dangerous substances sometimes present on ceramic products of lower quality or made with alternative materials, and therefore contribute to better indoor air quality. With various documentation like EPD and HPD, our tiles contribute to up to 10 LEED credits.

CERTIFICATIONS:

We select products with certifications that are widely recognised and accepted by sustainable building programmes regulations worldwide.



2 _ MFC

Our made in Italy Melamine Faced Chipboards.

Environmentally friendly

Our MFC is produced from **recovered wood** from Italian and European waste collection and transformed into sustainable panels for wardrobes, beds, kitchens, tables and other furnishings of life. During this process the wood is cleaned from iron, aluminum, stones, glass, sand and fabrics and is brought back to life. All our products contain glue with low emission and are certified **100% quality from Italian origin**.

Certifications such as LEED® Sustainable High Quality Material, CARB ATCM PHASE II, and F4-STARS Panels that correspond to JIS 1460, the Japanese regulation that is the most strict in the world, are a demonstration of our quality and commitment to sustainability.



3 _ Carpets

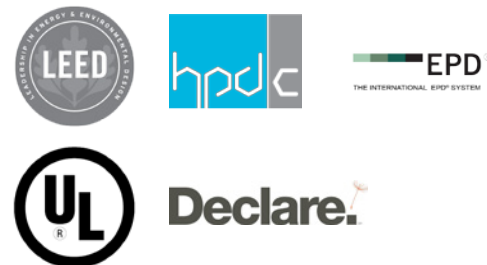
Smart choices to live better.

Our carpet and rug varieties offer selections from bio-based to recycled contents. Moreover, fractals, the repetitive patterns from nature are proven to reduce stress by as much as 60%. With our biophilic design approach, we carefully select patterns that replicate the colors, textures and patterns found in the natural landscape, to create pleasurable spaces.

CERTIFICATIONS:



biobased %



4 _ Resilient Floor

GV's product portfolio covers the highest quality resilient flooring in the market with a wide variety of selections from wood to fabric patterns, and from tiles to planks.

Our products include resilient flooring from bio-based materials which eliminate the necessity of orthophthalate plasticizers and solvents. Bio-based resilient is Cradle to Cradle Certified™ Silver, has a LEED v4-contributing HPD and a LBC compliant Declare Label.



Sustainable ARCHITECTURE

An eco-friendly approach to modern day building that encompasses every aspect of the planning and construction process.

We live, work, eat and stay in buildings, and they directly affect our quality of life and health. They are also responsible for 40% of the global GHG emissions for building operations, building materials and construction. Designing great buildings that are **beautiful, functional and healthy**, while reducing their environmental impact with a life-cycle approach is a complex process that our specialized and multidisciplinary team manages with success.

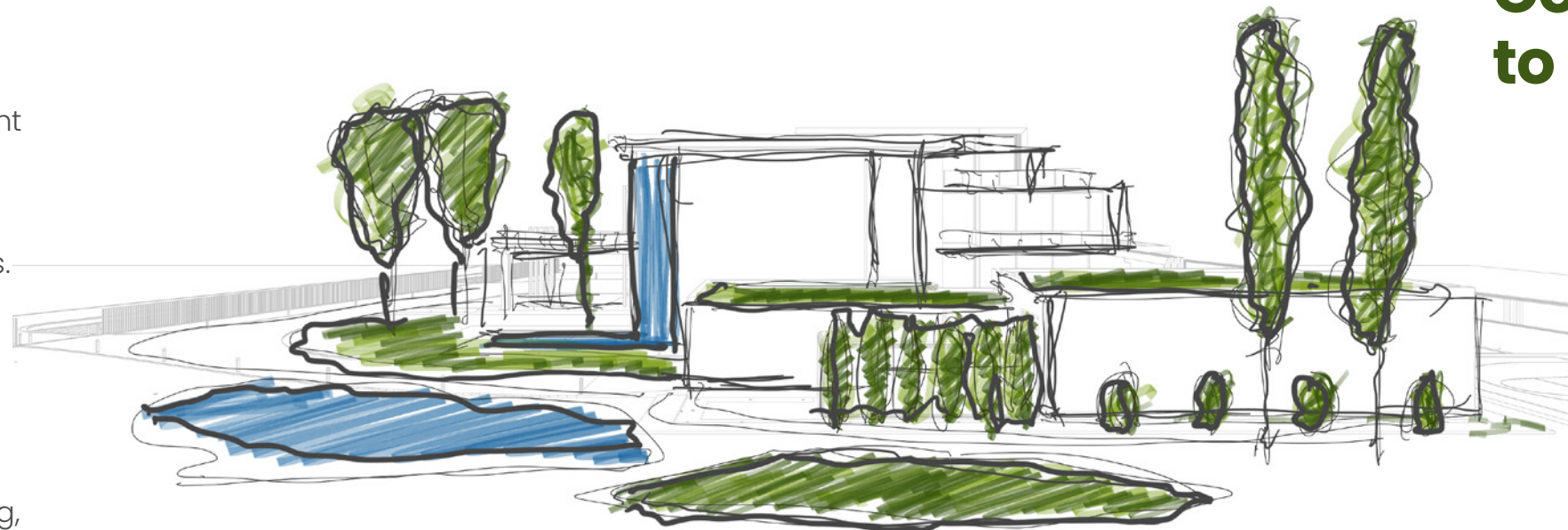


- ① INTEGRATIVE DESIGN
- ② LANDSCAPE
- ③ ENERGY EFFICIENCY
- ④ RENEWABLE ENERGY
- ⑤ WATER EFFICIENCY
- ⑥ MATERIAL RESOURCE
- ⑦ GREEN CHEMISTRY
- ⑧ WELL BEING

1 _ Integrative design

A building may change from a voracious consumer of energy into a self-sufficient unit.

Building is not an independent and singular element but a system of complex interrelations between interior and exterior elements. Thanks to our integrative design process we maximize cost and resource effective opportunities to meet all sustainability goals within a **life-cycle approach**. Site analysis, simple box modeling, climate-based design are some of the studies we do to create an optimized building form and systems to reduce water and energy loads.



2 _ Landscape

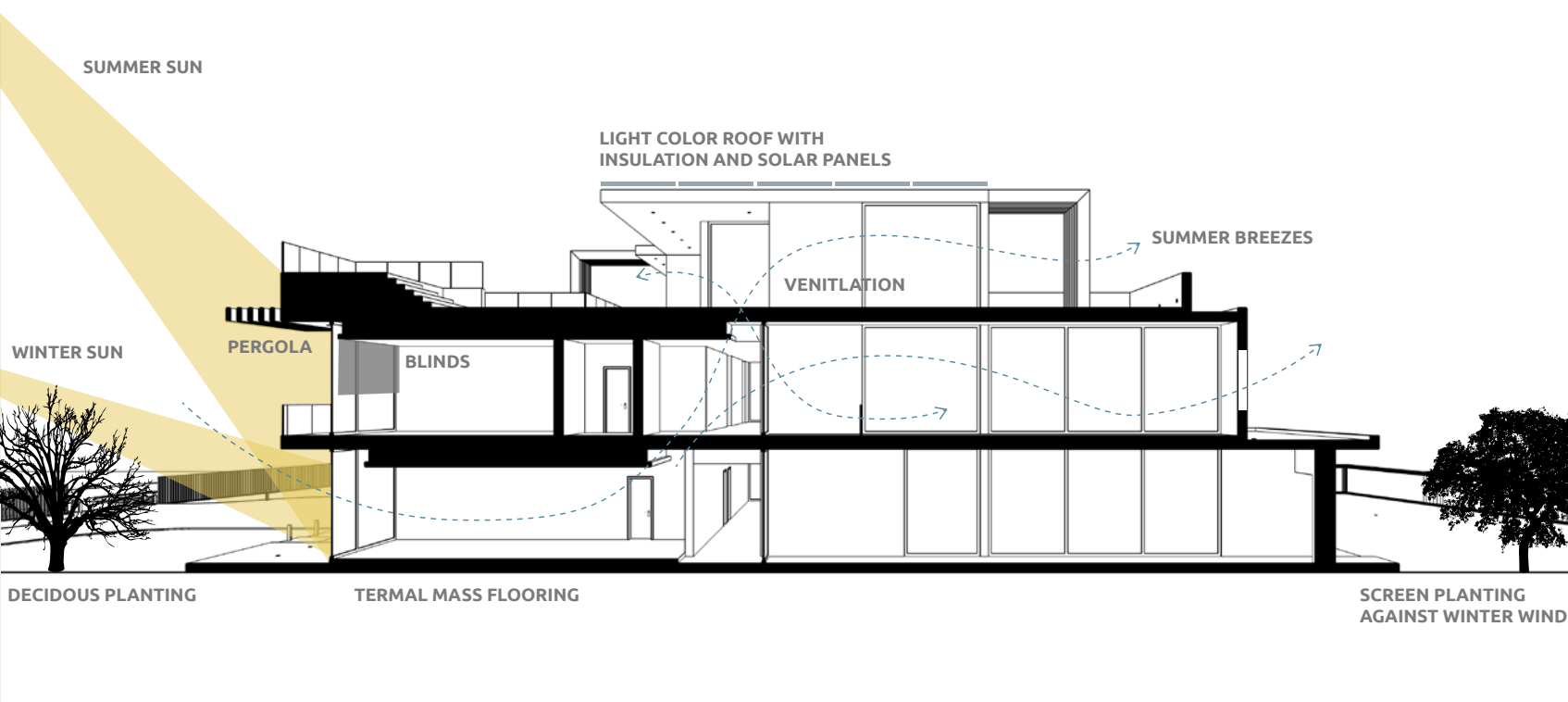
Connect buildings to nature.

Landscape design has great importance at creating **enjoyable outdoors** while contributing in stormwater management, heat island reduction and local habitat. We choose native or adapted vegetation with high variety that requires less water and promotes **biodiversity**.

3 _ Energy efficiency

Energy efficiency over the entire life cycle of a building is one of the most important goals of sustainable architecture.

Maximized energy efficiency can be achieved by optimized building design when it includes load reduction, improved mechanical system efficiency, and smart operational strategies. Our approach lowers operating and maintenance costs while improving thermal comfort, indoor air quality, and access to daylight.



4 _ Renewable energy

Renewable power is the cheapest!

It delivers on the promise of a clean energy future and now it is cheaper than fossil fuels.






Use of renewable energy avoids environmental harms like GHG emissions and air pollution while offering **economic benefits**. Therefore, integration of renewable energy production within the project is one of our priorities.



5 _ Water efficiency

Water efficiency is one of the seven key principles of Green Architecture. The climatic changes are reaching their extremes and we need to do something.

WHERE WE USE WATER AT HOME

	1% COOLER
	7% BATH
	19% TOILET
	31% SHOWER
	9% WASHING MACHINE
	2% DISHWASHER
	12% TAP
	15% OUTDOOR USE
	4% OTHER AND LEAKS

Only 3% of Earth’s water is freshwater, and of that, over two-thirds is trapped in glaciers. In a world where the water will get more and more scarce, **saving water** gets to be one of the most important actions. We adopt an **“efficiency first” strategy** to minimize water use for both indoor and outdoor needs with adequate fixtures and fittings, and a curated landscape design.

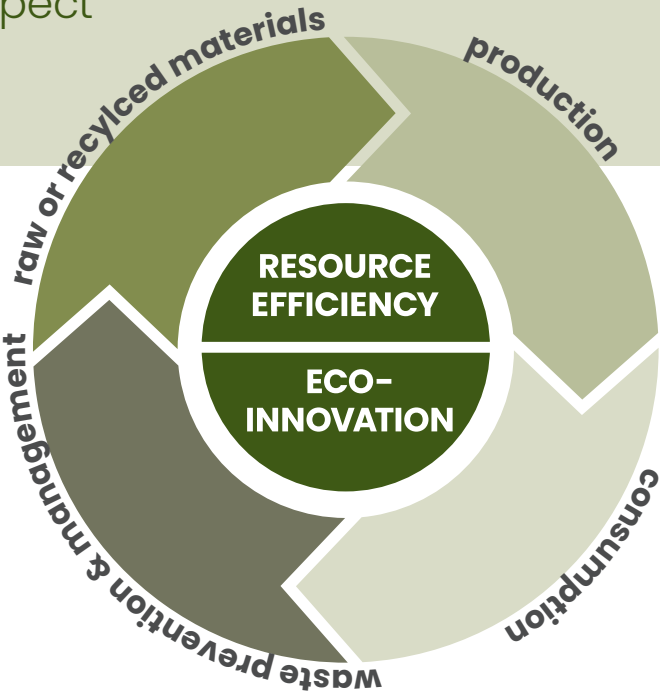


6 _ Material resource efficiency

Construction sector is one of the biggest contributors to the total solid waste stream. Correct selection of the **materials and processes** within the project with a **life-cycle approach** helps to diminish a considerable amount of waste. With this awareness we not only use low impact materials, but also design to dimensional construction materials and use prefabrication where possible.

Resource efficiency makes economic sense.

Using natural resources more efficiently, we can live healthier lives, save money, create jobs, boost our economy and respect the limits of the planet.



7 _ Green Chemistry



Use of green chemistry in materials helps diminish negative human health effects and ecological effects while improving chemical efficiency, waste preventions, and social responsibility.

”
It’s a social responsibility

8 _ Well being

Buildings have an impact on our physical and psychological health. We design **healthy buildings** by curating every detail from air quality, acoustic control, thermal and visual comfort to material and color choice for a psychological well being.

♥ **Architecture can contribute to health and happiness.**

90%
OF OUR TIME IS INDOOR

65%
OF THIS IS AT HOME

- FACTORS THAT AFFECTS WELL BEING IN A BUILDING**
- DESIGN
 - SPACE PLANNING
 - QUALITY VIEWS
 - DAYLIGHT & INTERIOR LIGHTING
 - THERMAL COMFORT
 - ACOUSTIC PERFORMANCE
 - INDOOR AIR QUALITY
 - SOCIAL INTERACTION

Sustainable FACADES

Ventilated façade: sustainable, attractive and long-lasting.

The use of ventilated façades has various advantages such as energy efficiency up to 30% during winter, 80% reduction of heat flow in the building during summer, acoustic isolation and improved aesthetics. We are experts of optimizing the entire process thanks to the **high tech solutions** we have adopted and our highly specialized multidisciplinary team.

- ① INTEGRATIVE DESIGN
- ② THERMAL INSULATION
- ③ ACOUSTIC INSULATION
- ④ EFFICIENT LIGHTING
- ⑤ MATERIAL RESOURCE
- ⑥ GREEN CHEMISTRY
- ⑦ IMPROVED AESTHETICS



1 _ Integrative design

From design to completion.

We follow an integrative design process from the pre-design phase to increase the efficiency of our ventilated façades from energy to material resources, tackling many issues at once.



2 _ Thermal performance

Ventilated façades act as a barrier between the building and the outside environment, protecting it from atmospheric agents. Passive ventilation that occurs within the façade system cools the building during summer, while acting as an insulating shield during the winter.



Ventilated façades allow for the circulation of air between the supporting wall and the cladding material.

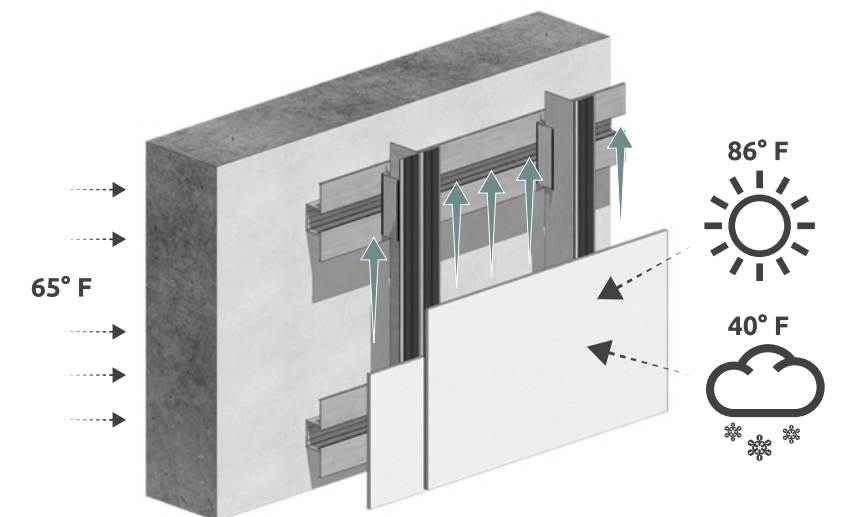
In this manner, the supporting wall is protected from both the cold and heat resulting in energy savings.

REDUCED THERMAL TRANSFER AND CONDENSATION WITH ENERGY SAVING

-30%

Air conditioning and heating consumption

in the coldest and hottest times of the year.



3 _ Acoustic insulation

The noise reduction in living spaces are one of the most important goals of the modern building technology.

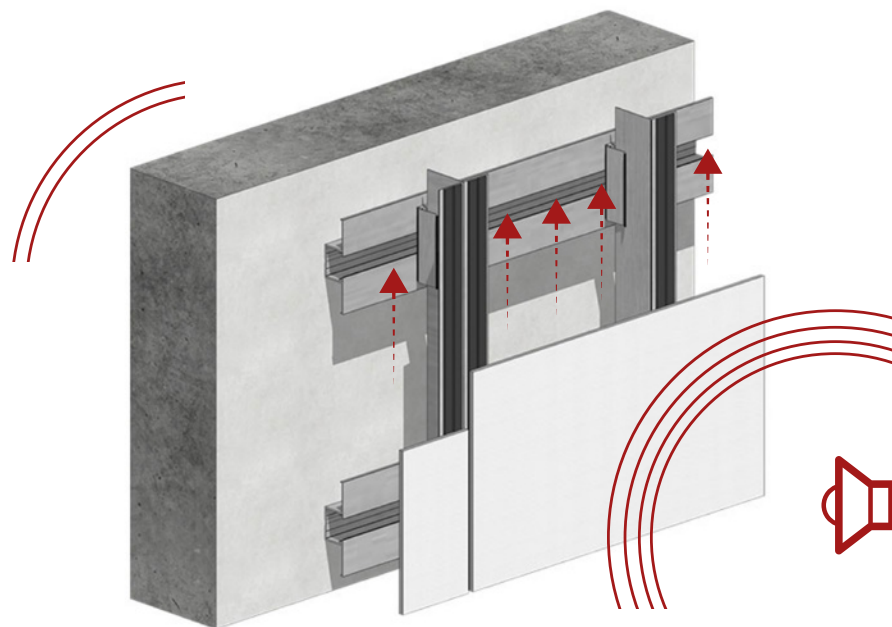
The ventilated façade is a **multi-layer system** with a high noise absorption effect. This creates a continuous and uninterrupted insulation that eliminates acoustic bridges. We are specialized in choosing the correct ventilated façade system and design for your project, making it possible to comply effectively with sound insulation regulations.

Noise reduction



+20 %

The cavity air acts as a further acoustic insulation from outside and all the system can contribute to noise reduction.



4 _ Efficient lighting

Lighting solutions for building façades need to create added value for the nightscape. Nowadays, however, lighting solutions also need to be sustainable.

Integrated LED lighting within our ventilated façade systems are designed with great attention to illuminate where necessary and to elevate the aesthetical aspect of the building while reducing light pollution and energy consumption.



5 _ Material resource efficiency

For Life: Great Strength and durability!



3D built-in site survey with **drone technology and BIM modeling** helps us to produce the entire system with great precision right at our factory and to reduce a considerable amount of waste. All the elements of the façade system are highly **durable materials** and they can easily be disassembled and recycled at the end of life.

6 _ Green chemistry

Our porcelain tiles offer the highest definition while reducing the emissions of organic volatile compounds thanks to use of water based inks and glazes.

7 _ Improved aesthetics



Installing a ventilated façade system elevates the aesthetics of the buildings without necessitating any demolitions or radical interventions. It's a simple way that brings only benefits in many fields.

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