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CASE STUDY

This best practice highlights how “Falegnameria Dotti Guido Corrado S.r.l.” is advancing sustainability by implementing green technologies.

Through innovative, eco-friendly solutions, “Falegnameria Dotti Guido Corrado S.r.l.” reduces environmental impact and sets a precedent for sustainable practices in construction.



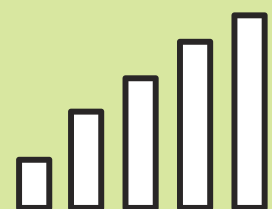
Introduction of the company and
its sustainability- related goals

Green Technology
and Materials Used



Environmental benefits

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Interviews & lessons learnt



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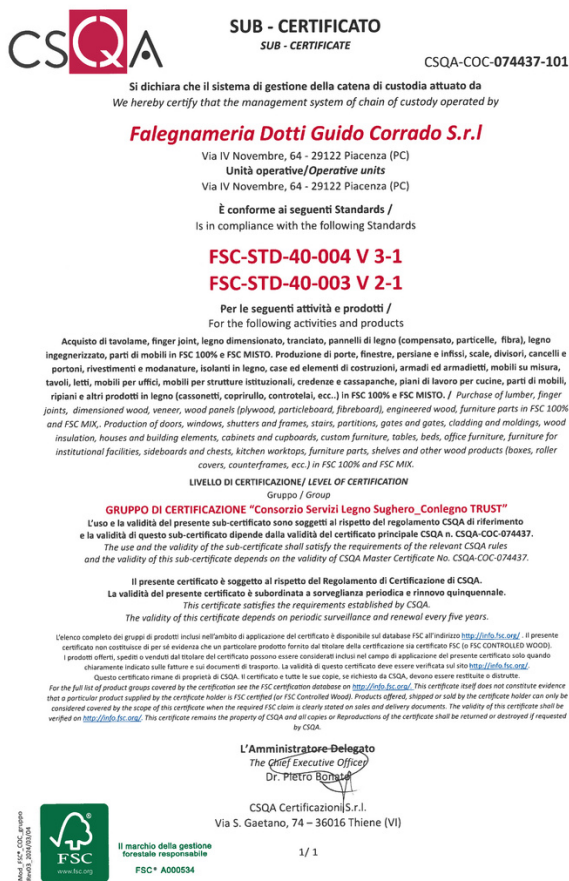
Introduction to Falegnameria Dotti and its sustainability- related goals

Dotti's story began in the 1940s with Guido Dotti, who founded a carpentry workshop dedicated to crafting high-quality furniture and tools. His innovative spirit and attention to quality quickly earned recognition in the industry.

As Italy urbanized, the company evolved, focusing on wooden fixtures and later wooden roller shutters, expanding into its first industrial facility in Piacenza.

In the 1970s, the second generation took over, steering the company toward producing wooden windows and doors known for their performance and innovative design.

Throughout its evolution, **Dotti has remained deeply committed to sustainability**. This is reflected in its **continuous investment in long-lasting, eco-conscious materials and efficient production methods**—ensuring that tradition, innovation, and environmental responsibility go hand in hand.



FSC® Certification: A Milestone in Sustainability

The company obtained FSC® certification in April 2024, which **guarantees the use of wood sourced from responsibly managed forests**. This certification reflects a concrete commitment to environmental protection and ethical supply chain practices.

FSC Certification...What does it means?

The FSC® certification mark on our wood and wood-aluminum window and door frames guarantees that the entire wood supply chain supports **responsible forest management**. This certification promotes environmental sustainability by ensuring that the wood is sourced without harming forests, wildlife, plant life, or the communities that rely on them. Customers who request FSC-certified frames can be confident that the wood used has been carefully traced from the forest to their home. This guarantees not only responsible forestry practices but also that every step of the supply chain adheres to strict environmental and fair trade standards.

FSC Certificate, obtained on 03.04.2024

Sustainability as a Standard in modern construction: why is it so important?

- The FSC® (Forest Stewardship Council) certification obtained by Falegnameria Dotti in April 2024 ensures that **all wood used originates from responsibly managed forests**. This certification guarantees traceability throughout the supply chain, supporting both environmental and ethical standards.
- FSC-certified forests are managed according to strict environmental, social, and economic principles, adapted globally through International Generic Indicators. This aligns with Italy's CAM (Minimum Environmental Criteria) and is also consistent with international standards such as EU Green Public Procurement guidelines, LEED®, and BREAM® certifications.
- Customers who choose FSC-certified frames are assured that the wood has been ethically sourced, processed with transparency, and contributes to forest preservation, biodiversity, and fair labor practices.
- This makes FSC not only a national requirement but also a strategic asset for companies engaging in sustainable construction on a European and international scale.



Two images showing workers during production of wood frames

Introduction to Falegnameria Dotti and its sustainability- related goals

Falegnameria Dotti commits to marketing and producing **FSC-certified products** using FSC-certified raw materials. To ensure traceability and sustainability, the company implements and maintains a Chain of Custody management system aligned with international environmental, social, and economic standards.

Key Commitments:

- Source wood from verified FSC-certified suppliers only.
- Train all relevant staff involved in procurement and FSC procedures.
- Label products as FSC only when fully compliant with certification criteria.
- Support the expansion of responsible forest management practices.
- Provide simple and accessible complaint procedures for customers.
- Analyze and resolve any non-conformities proactively.
- Reject illegal logging, environmental destruction, GMO introduction, and violations of Indigenous or labor rights (as defined by the ILO Declaration, 1998).
- Respect national labor laws and ensure fair, voluntary, and non-discriminatory working conditions.
- The company promotes awareness among staff, clients, and stakeholders on FSC values and designates a responsible person for the continuous improvement of this system.

CERTIFICAZIONE DEL PERSONALE



UNI 11673:2019

Posatore di serramenti

Specializzazione Livello Caposquadra

GUIDO DOTTI

Certificato n° 25-00399

The ICMQ personnel certification for Guido Dotti as an “Installation Team Leader for Windows and Doors” (UNI 11673:2019) underlines the company's dedication not only to material traceability and product sustainability but also to the quality and professionalism of its workforce.

While the FSC policy ensures environmental and ethical integrity in sourcing and production, the ICMQ certification guarantees technical competence, safety, and proper installation practices, which are critical for delivering sustainable products that perform as intended.

Together, these certifications form a holistic approach to responsible craftsmanship—from forest to final installation—demonstrating Falegnameria Dotti's full-spectrum commitment to sustainability, quality, and professional ethics.

Technologies and Materials Used



The company exclusively uses **100% FSC® and FSC® MIX certified wood from verified suppliers**. This ensures that every board, panel, or wooden component comes from forests managed with strict environmental, social, and economic standards.

Production includes doors, windows, shutters, stairs, wall panels, cabinets, office furniture, and more — all under a **certified chain of custody**. Sustainability is further supported by the use of recycled wood panels and natural fiber materials, which reduce waste and improve efficiency.

The company **produces frames** and **assembles all the components** to ensure a product of the highest quality in every aspect.

Falegnameria Dotti purchases selected wood species and keeps them in stock to meet both planned orders and urgent requests.

The first stage of production involves creating laminated wood, which is then used to build the window and door frames. Manufacturing takes place in temperature- and humidity-controlled environments, using the best vinyl glues available.

Wooden windows: painting with water-based products.

The company use this technique for decades because it guarantees high quality standards, durability and low toxicity. But research continues. With the aim of constantly improving the value of the windows, new cycles of **bio paints and vegetable paints with zero toxicity rates have been added**.

All the pale RAL finishes and walnut colors are standard. All other RAL finishes, brushed, scratched, sandblasted and other finishes are available on request.

Wood-aluminum windows: made by specialized laboratories with sublimation technique.

Many RAL and embossed colors are standard. Wood, marble, spatula, rust and many other effects are available on request.



In this chain of production FSC-STD-40-004 V 3-1 / FSC-STD-40-003 V 2-1 are respected.



The production of wooden windows and wood-aluminium windows is completed with standard equipment for

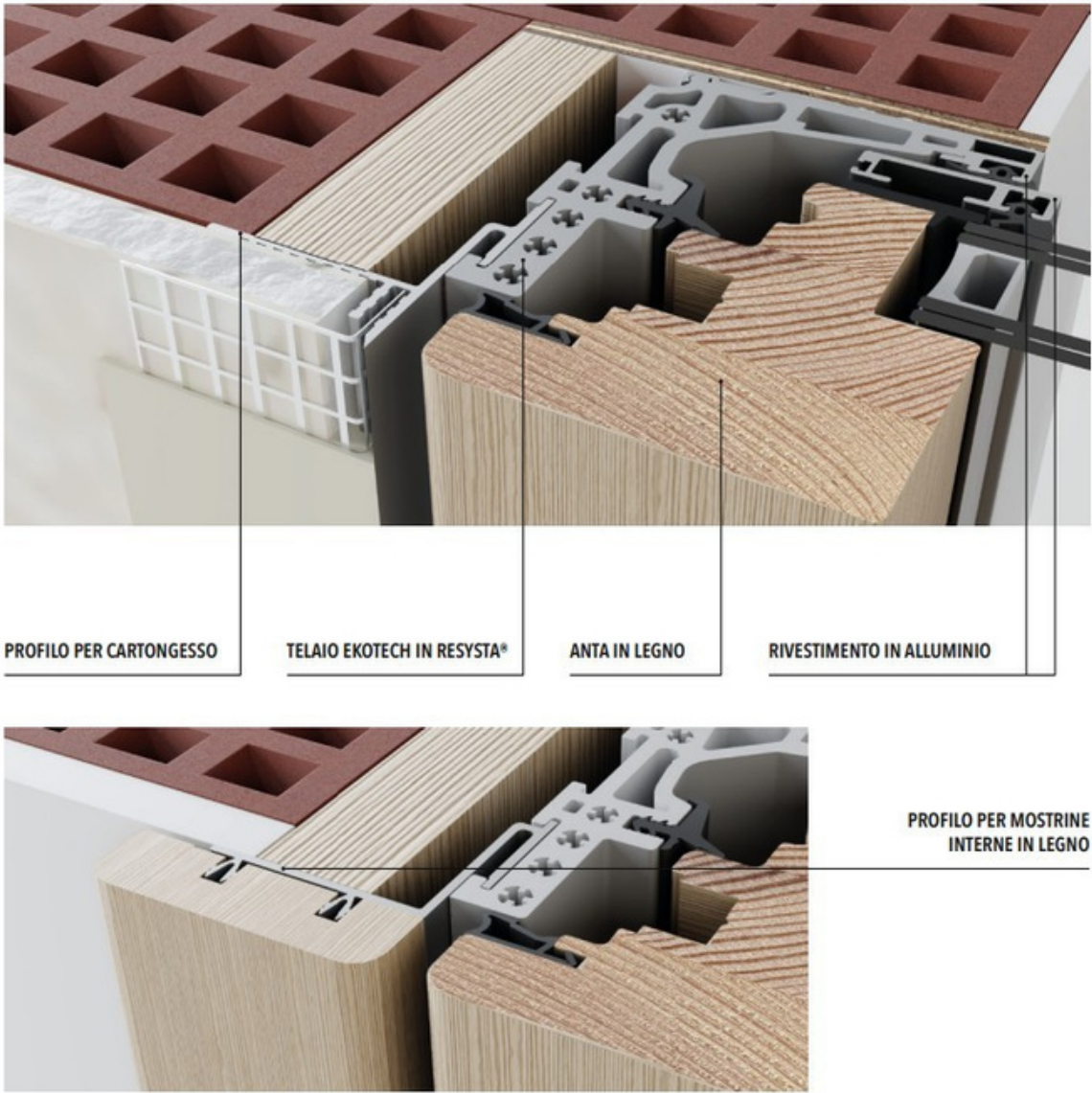
- **safety:** burglar-proof hardware. OPTIONAL: screwed glass retaining strips and shatterproof glass
- **ventilation:** hardware for ventilation for tilt-and-turn windows and micro-ventilation opening. Controlled ventilation keeps the pressure difference between the external and internal environment low, thus allowing for slow and effective air exchange.

Each window is subjected to **laboratory tests** for CE Certification (air, water, wind), thermal certification and acoustic certification. The use of sophisticated instrumentation, such as the software validated by "ift Rosenheim" for calculating thermal transmittance, guarantees the accuracy of the recorded values.

The installation is done personally by the Dotti carpentry shop which boasts the title of **Professional for the installation of CasaClima** quality windows. This phase is equally important because, with the counterframe, it affects the insulation of the wall opening more than the window.

For this reason, Dotti uses elastic **foams, insulators, vapor barriers and self-expanding tapes** with excellent thermal and acoustic insulation.

Technologies and Materials Used

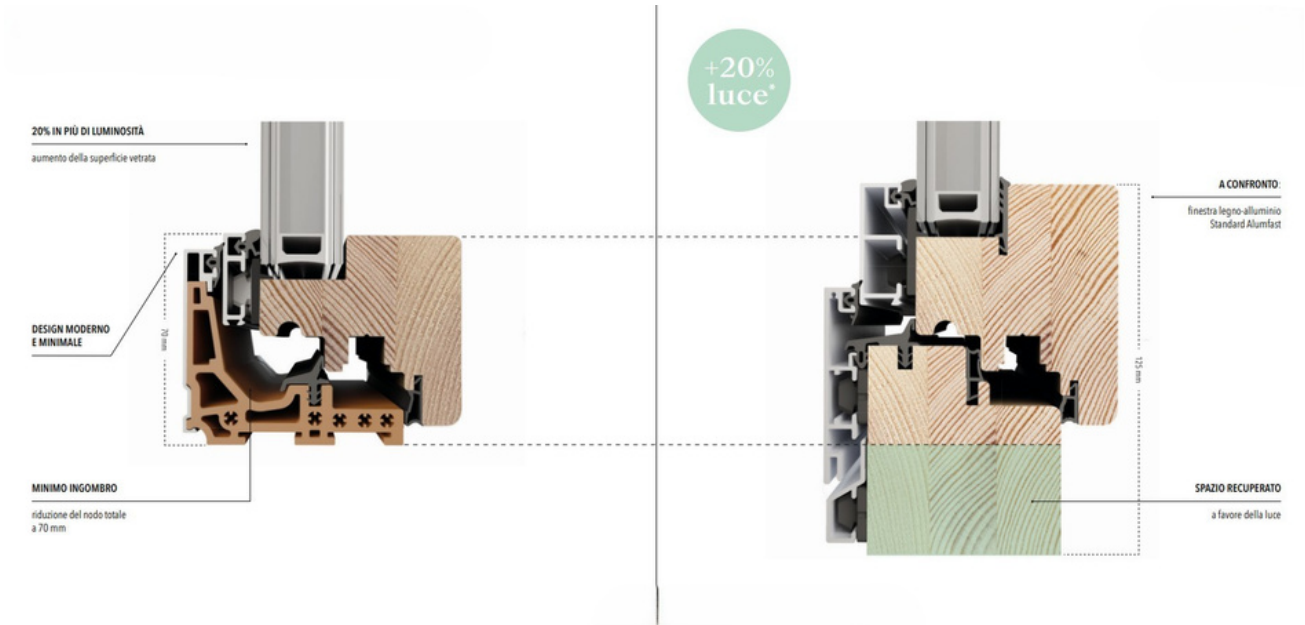


This image compares two frame designs, highlighting the benefits of a modern, slim profile.

Left (Modern/Minimal): Shows a window frame with a slim 70mm "node" (visible frame portion). This design increases the glass surface by 20%, leading to more natural light. It features an aluminum exterior and a wood interior, with a composite material (likely Resysta) in between for insulation.

Right (Standard Comparison): Displays a traditional wood-aluminum frame with a wider 125mm node, resulting in less glass area and light.

Key takeaway: The modern design optimizes light ingress and offers a cleaner aesthetic.



This image provides a detailed cross-section of a window/door frame, showing its integration with the wall and material composition.

Components:

"PROFILO PER CARTONGESSO" (Drywall Profile): Indicates flush integration with drywall.

TELAIO EKOTECH IN RESYSTA®" (Ekotech Resysta® Frame): The core frame, made from Resysta®, suggesting high insulation and durability.

"ANTA IN LEGNO" (Wood Sash): The movable part of the window, made of wood.

"RIVESTIMENTO IN ALLUMINIO" (Aluminum Cladding): The exterior layer, providing weather resistance and low maintenance.

"PROFILO PER MOSTRINE INTERNE IN LEGNO" (Profile for Internal Wood Trims): Details how the internal finish is achieved with wood architraves.

Key takeaway: Illustrates a multi-layered construction combining wood, aluminum, and Resysta® for aesthetics, thermal performance, and seamless wall integration.



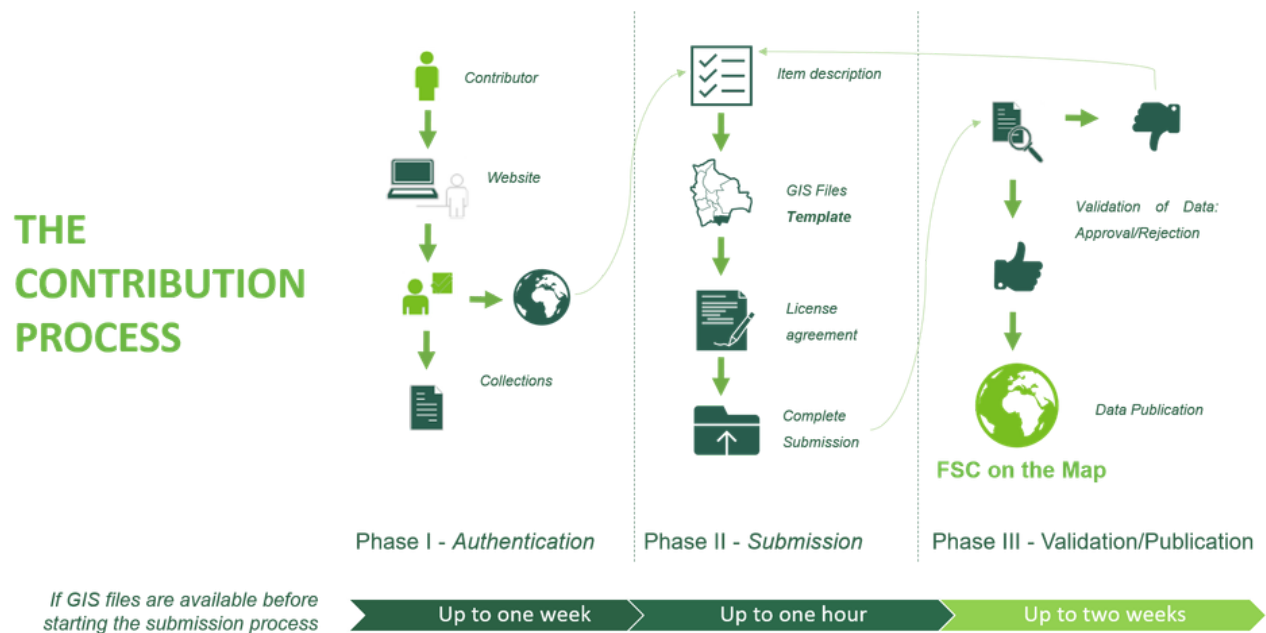
Environmental benefits

Falegnameria Dotti represents a valuable case of sustainable practice in the construction and manufacturing sector. **The company demonstrates a clear commitment to environmental responsibility through the selection of certified eco-friendly materials and ongoing efforts toward energy transition.**

By adhering to FSC standards, Falegnameria Dotti helps reduce the environmental impact of wood-based products.

Key environmental benefits include:

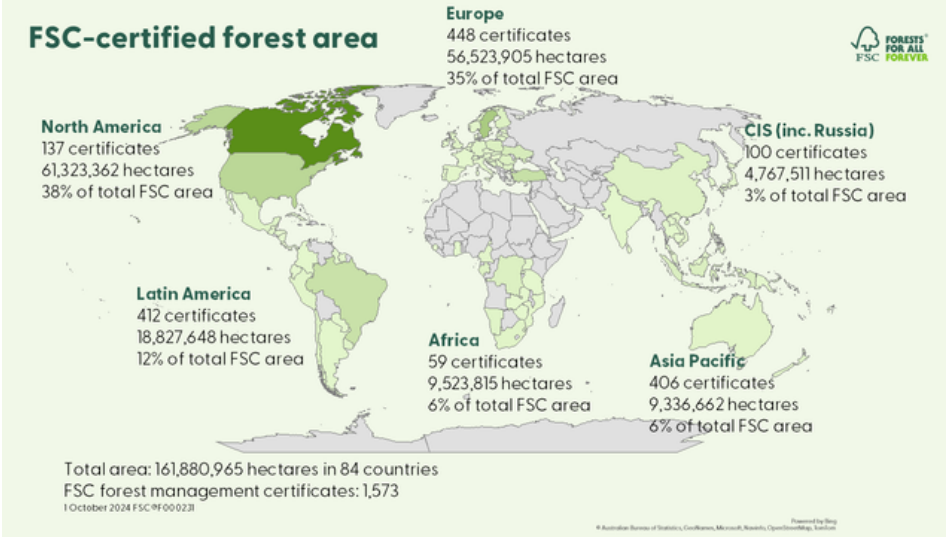
- Preventing illegal logging and protecting biodiversity.
- Reducing carbon emissions by sourcing from forests where harvesting does not exceed regrowth rates.
- Ensuring traceability of materials from forest to consumer – a guarantee of transparency and low environmental impact.



- **1 m³ of FSC-certified wood can prevent up to 1.1 tons of CO₂ compared to non-sustainable alternatives**
- **FSC oversees the management of over 200 million hectares of forest worldwide (source: FSC)**

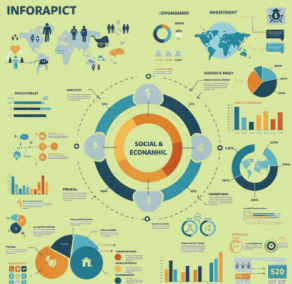
FSC-certified forests are managed to strict environmental, social and economic standards.

More than 160 million hectares of forest are managed to FSC standards around the world.



The **FSC Principles and Criteria** for Forest Stewardship, underpinned by **International Generic Indicators**, provide an internationally recognised standard for responsible forest management.

These requirements are adapted at the national or sub-national level in order to reflect the diverse legal, social and geographical conditions of forests in different parts of the world.



Economic and Social Impact



The FSC certification and environmental compliance of Falegnameria Dotti translate into a wide range of socio-economic benefits:

FSC yields significant socio-economic benefits:



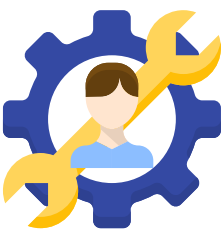
Access to public tenders in Italy through full alignment with CAM standards, particularly for projects funded by the PNRR. International competitiveness, thanks to alignment with global standards such as EU GPP, LEED®, and BREEAM®, where eco-material traceability is a decisive factor.



Stronger positioning in eco-sensitive markets: In a context where sustainability is becoming a decisive factor in private-sector choices—particularly in architecture, interior design, and construction—FSC certification provides a tangible competitive advantage.

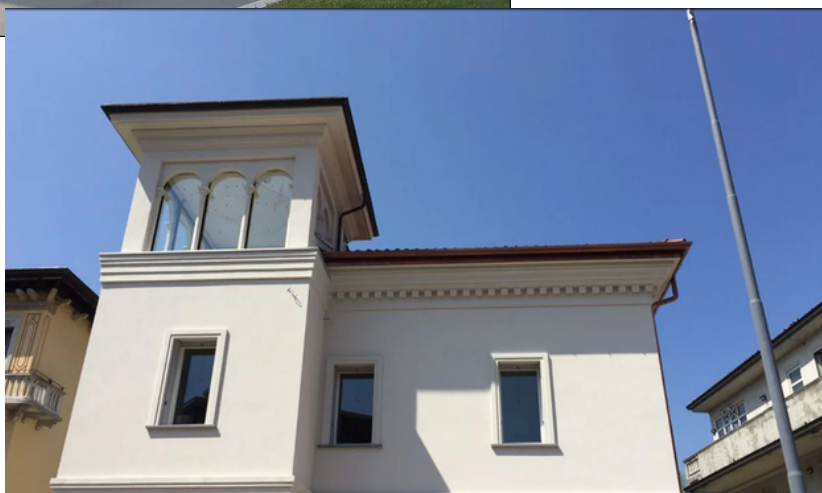
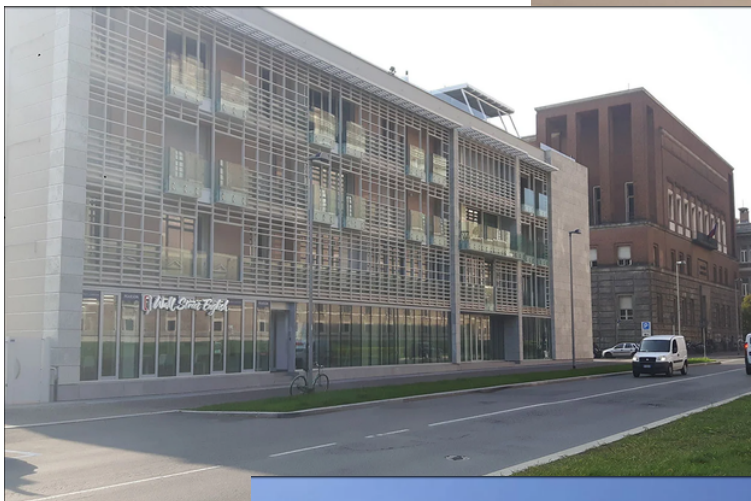


Promotion of ethical and sustainable craftsmanship: FSC certification reinforces the company's commitment to traceable and responsibly sourced wood, fostering consumer trust and supporting ethical production models.



Support for local employment and social value creation: By aligning with environmental and ethical standards, the company contributes to environmental goals and enhances its role in sustaining skilled local jobs, thereby creating shared value for the community.

Following some real installations in public or private projects by Dotti Serramenti:



Future Goals for sustainability

The company’s commitment to sustainability is also reflected in its investment in **renewable energy infrastructure**.

The planned installation of photovoltaic panels on the pitched roofs of its two production buildings marks a decisive step toward energy transition.



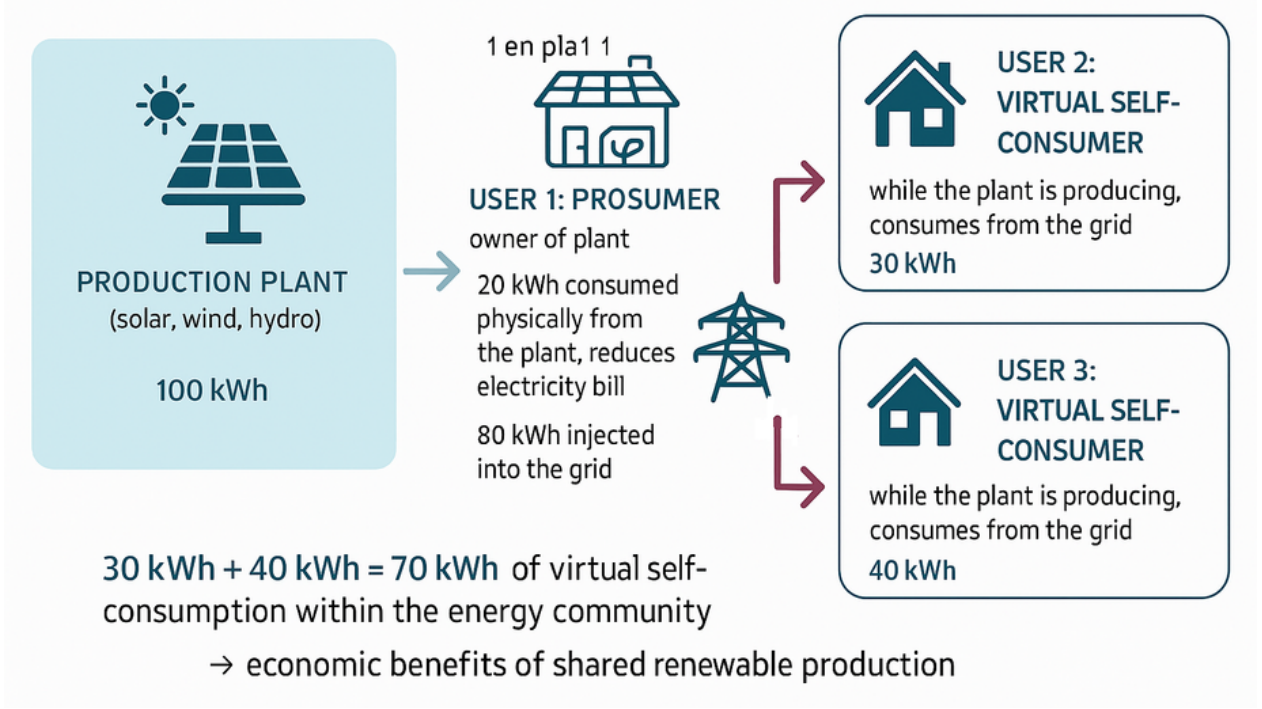
The system is expected to generate approximately **85,544 kWh** of clean energy annually, resulting in a CO₂ emissions reduction of nearly 31 tonnes per year. This move not only decreases the company’s environmental footprint but also aligns with broader climate goals related to decarbonization and the promotion of renewable energy.

BUILDING	MODULES	POWER	CO2 REDUCTION PARTIAL	TOTAL REDUCTION CO2
A	92	50,60 kWp	Kg 18,216	Kg.28,908
B	54	29,70 kWp	Kg 10,692	

Beyond the environmental benefits, the initiative has a strong **social impact** through the planned establishment of an **Energy Community**, with the following features :

- Energy sharing within the community to reduce overall consumption and increase energy self-sufficiency.
- Enhanced energy efficiency and reduced dependence on the national grid.
- Positive environmental impact through the use of renewable sources.
- Economic benefits for participants thanks to lower energy costs and incentives related to self-consumption and shared energy.
- Promotion of social cohesion and local development through cooperative energy use models.

VIRTUAL SELF-CONSUMPTION: THE MODEL BEHIND CACER



This image shows how virtual self-consumption works in an energy community with one renewable plant and three users. The prosumer (User 1) owns the plant, consumes part of the energy directly (20 kWh), and injects the rest (80 kWh) into the grid. Users 2 and 3 are virtual self-consumers who use energy from the grid (30 kWh and 40 kWh) while the plant is producing. This creates 70 kWh of virtual self-consumption, generating shared economic benefits within the community.

Do you want to learn more directly from a DOTTI representative? Watch the [interview](#) here!



Lessons Learned

- Sustainability is a driver for innovation, leading to the creation of efficient, eco-friendly solutions in construction practices.
- Knowledge of environmental certifications, such as FSC®, and integration of these standards into business operations to enhance credibility and marketability.
- The importance of transparency in sourcing and operations, and how it fosters stronger relationships and trust with clients and stakeholders.
- The significance of adopting sustainable practices in shaping a company's brand, attracting eco-conscious clients, and differentiating in a competitive market.
- The application of life cycle assessment principles to evaluate the environmental impact of materials and processes, ensuring long-term sustainability in construction projects.
- Implementation of strategies that minimize waste and promote the reuse and recycling of materials, contributing to a circular economy in construction.



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