

Fiera Milano & Salone del Mobile with Rete Clima

Entry for the UFI Sustainable Development Award 2022

Enabling the realization of a carbon neutral hosted event





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Executive summary



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Background & inspiration	 Fiera Milano strongly believes that the exhibition industry can have a relevant role in the climate change action, by measuring and reducing the carbon footprint of the events and being a platform to spread awareness and spark action As the focus on climate change continues to increase, event organizers all over the world are beginning to address their environmental impact and Fiera Milano, coherently with its commitment to SDGs (in particular 12,13), its support as signatory to the Net Zero Carbon Events, and in line with its 2021-2025 Sustainability Plan, is ready to play a part on it
Project & methodology	 Assessment of the carbon footprint of the Salone del Mobile event (Supersalone) held from 1st to 5th September 2021 at Fiera Milano venue, along all the phases of the event, from the set-up to dismantling The GHG emissions thus calculated have been offset through the cancellation of VCS-Verra carbon credits. This process allowed the Supersalone event to become a carbon neutral event The project, conducted through the LCA - Life Cycle Assessment approach was carried out in accordance with Standard ISO 14064-1
A partnership-focused sustainability effort	 The project was realized thanks to an intense collaboration along the exhibition industry value chain with the following involved parties: Salone del Mobile: global reference event for the furnishing and design sector, was the sponsor of the initiative Fiera Milano: Italian market leader and one of the main integrated operators worldwide in the management and organization of exhibitions and congresses, hosted the Salone del Mobile event and had the crucial role to coordinate all the data collection phases and processes for the carbon footprint measurement and took part to the redesign phase of the new sustainable structures in the common and exhibition areas of the event, enabling thus the successful outcome of the project Rete Clima: nonprofit organization, specialized in environmental impact initiatives, supported Fiera Milano and Salone del Mobile in the methodology, technical aspects and certifications
Highlights & next steps	 Innovative and first project of its kind in EU showing joint commitment between a venue management player and event organizer towards the common purpose of realizing a carbon neutral event Certified methodology with reliable framework which could be a useful insight for the industry related guidelines Scalable and replicable project first across Fiera Milano owned exhibitions (2021-2025 Sustainability Plan already included LCA assessment for owned exhibitions) and then for other events First concrete step of Fiera Milano in its journey to net zero, in line with its commitment to Sustainable Development Goals 12 and 13 and Net Zero Carbon Events initiative



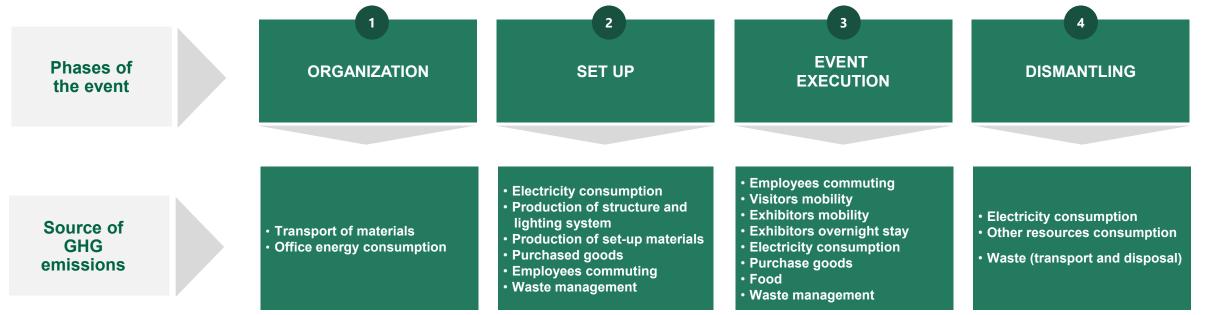


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The project



- Fiera Milano and Salone del Mobile, in partnership with Rete Clima, have chosen to embrace a new challenge to reduce the emissions related to the organization, set-up, execution and dismantling of the Supersalone event (a special edition of Salone del Mobile, hosted by Fiera Milano from 1st to 5th of September 2021): after the eco-design phase, they have developed the assessment and the management of the residual carbon footprint of the event according to a "life cycle analysis" approach (the so called LCA Life Cycle Assessment)
- The analysis showed that the residual emissions of the 2021 edition of Supersalone were 916 tCO₂e, the greenhouse gas emissions thus calculated have been neutralized from Rete Clima through the cancellation of VCS-Verra carbon credits. This process allowed the Supersalone event to become a carbon neutral event
- For the assessment of the emissions the boundaries have been established in order to define the scope of the analysis, then the identified emission sources have been aggregated and associated to the different phases



Eco design: principle and approach



- Eco design is known as an economic model that involves the entire process of conceiving, designing, and disposing of an environmentally friendly product based on the use of LCA (Life Cycle Assessment) principles with the main goal to anticipate and minimize negative environmental impacts
- Eco design was the approach in fact used at the Supersalone in the design phase in cooperation with an architectural firm specialized in biodiversity and sustainable architecture. In addition to the environmental negative effects that were reduced and prevented, this specific process was also aimed to comply with health regulations and to meet the tight deadlines for the construction and installation of the exhibition stands. The main result of the eco-design activity can be summed up in the following areas:
 - 1. Low complexity level: the structure of the common spaces and exhibition areas were created with the aim to secure simplicity and usability, creating a more efficient product which was easier to disassemble, assemble and transport. Bulk and waste of resources were also reduced to the minimum;
 - 2. Reusable Exhibition Stands: the standardization of the exhibition area has led to the creation of simpler and reusable stands that creates a perspective positive environmental impact given to the future reuse of the structures and panels. It also creates a considerable saving both in terms of transport and of the setting up in the location.
 - 3. Bio-based material: Besides the bearing structure composed of aluminum elements, all the exhibition stands were equipped with wooden panels and accessories. It therefore generated an immediate positive impact to the environment thanks to the lower consumption of materials for the structural construction and panels;





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Methodological ISO framework



- The carbon footprint assessment of the Supersalone 2021 was carried out according to the ISO standard UNI EN ISO 14064-1: 2019¹ with validation of the final assessment reporting by ICMQ, a primary Italian certification body
- As of today, the technical methodology to quantify the carbon footprint of an event is not defined by any standard, so ISO 14064-1 standard has been used together with a LCA (Life Cycle Assessment) approach which has been applied with particular reference to:
 - materials
 - waste
 - food and beverage
 - energy

by also internalizing the LCA approach in the 3 phases:

- 1. GHG emissions inventory analysis: phase in which the data relating to all the flows of matter and energy into and out of the product system are collected, carrying out the appropriate procedures for allocating the flows according to specific criteria based on physical relationships, of mass or energy, or economic relationships;
- 2. **Impact assessment:** phase in which the inventory data are grouped according to impact categories;
- 3. Analysis of results: the results are analyzed by formulating considerations and providing any recommendations for improving the life cycle from an eco-sustainable perspective.

1) ISO 14064-1:2019 "Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals".

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GHG emissions measurement - Method



- For the purpose of **quantifying GHG emissions**, the company has decided to adopt the **operational control approach**. With this approach, the organization accounts for the emissions and removals of the installations over which it has operational control.
- Within the reporting boundaries, the GHG emissions associated with their business have been identified and they have been divided into the categories defined by the UNI EN ISO 14064-1 standard. The criteria used to quantify the emissions are:

1—**Magnitude:** indirect emissions or absorptions that are presumed to be quantitatively substantial; a value from 0 to 5 is assigned, where 5 represents an estimated contribution of more than 10% of total emissions. This figure is determined on the basis of estimates and available literature data;

2 – Influence level: the extent to which the organization has the ability to monitor and reduce emissions and removals. A value of 1 is assigned if the company has influence on these emission sources and / or can define plans for the reduction, 0 if the company has no control;

3—Accountability: the extent to which the organization has the ability to provide site-specific data. A value of 2 is assigned if the activity data are available, 1 if they are easily available, 0 if their availability is complex or not possible.

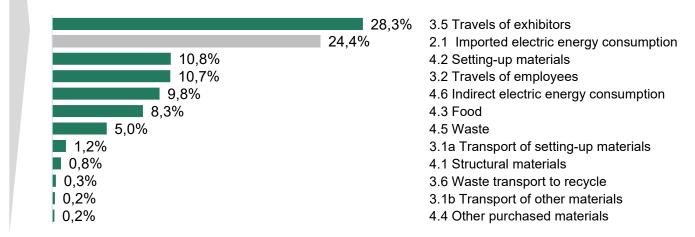
	•	2	3	
Emissions	Magnitude	Influence level	Accountability	Significance
Category 2: indirect GHG emissions from imported energy				
2.1 Imported electric energy consumption	4	1	2	7
Category 3: indirect GHG emissions from transport				
3.1 Transport of materials	1	1	1	3
3.2 Employee commuting	2	0	1	3
3.5 Exhibitors mobility	3	0	1	4
3.6 Waste transport to recycle	1	0	2	3
3.7 Transport of other materials	0	0	0	0
Category 4: indirect GHG emissions from the products used				
4.1 Structure materials	1	1	2	4
4.2 Setting-up materials	2	1	2	5
4.3 Food	2	0	1	3
4.4 Other purchased materials	1	1	1	3
4.5 Waste	1	0	2	3
4.6 Indirect Electricity	2	0	2	4

GHG emissions measurement - Results

- The residual emissions of the 2021 edition of Supersalone were 916 tCO₂e with majority of impact associated to Scope 3 exhibitor travels, followed by Scope 2 consumption of purchased energy
- Visitor travels have been estimated but excluded from the final calculation due to unavailability of accurate data at the moment of the valuation. An improvement of the collection process for this category of data is under development and will be implemented for the next LCA analysis

Emissions	Total tCO ₂ e	%
Category 2: indirect GHG emissions from imported energy	224	24%
2.1 Imported electric energy consumption	223.6	
Category 3: indirect GHG emissions from transport	373	41%
3.1a Transport of setting-up materials	11.4	
3.1b Transport of other materials	2.2	
3.2 Employees commuting	98.4	
3.5 Exhibitors mobility	258.9	
3.6 Waste transport to recycle	3.1	
Category 4: indirect GHG emissions from purchased products	319	35%
4.1 Structure materials	7.3	
4.2 Setting-up materials	98.8	
4.3 Food	75.6	
4.4 Other purchased materials	1.8	
4.5 Waste	45.4	
4.6 Indirect electric energy	89.5	
Total GHG emissions	916	100%

Scope 2	Scope 3
	%
	41%
	35%
	24%





GHG emissions measurement



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Total GHG emissions	916

- The emissions associated with electric energy consumption for the stages of setting up, execute and dismantling the event were equal to 224 tCO₂e (24% of total emissions generated by the event).
- The Ecoinvent emission factor was used to model the Italian energy mix
- The data relating to the transport of materials is calculated as the product of the weight transported and the distance traveled by the specific type of vehicle used. Distances were determined using geographic internet applications. The data for the transport of materials, expressed in tkm, is divided by the types of vehicles used
 - The supporting structure and the lighting system are leased, so the transport (round trip) carried out with trucks from a distance of 15km from the warehouse was considered
 - For the transport of materials for the set-up, an average distance of 200 km was considered for products purchased in Italy. The means of transport considered is a EURO 4 truck. The same means is used for transport from Germany, while for supplies from Brazil it is estimated a transport by sea
- The total emissions associated with transport of materials were equal to 13.6 tCO₂e (1.5% of total emissions generated by the event)

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GHG emissions measurement



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Total GHG emissions	916	

- The emissions related to employees' home-work trips were equal to 98.4 tCO₂e (11% of total emissions generated by the event) and were estimated using the distance traveled daily by employees
- The study data shows that 75% of employees reside in the metropolitan city of Milan.
 Data processing shows that each employee travels an average of 28 km to reach the work site
- The data relating to the daily access of employees who commuted with their own vehicle (81% of the total) for the entire period in which the event was set up and held (from 1 July to 13 September 2021) was processed. The total number of kilometers of commuting with own vehicle (car) is calculated as the product of the number of accesses and the average distance. The other 19% of employees use public transport, the overall distance is calculated as the product of the number of employees and the average distance
- Emissions related to the travels of exhibitors were equal to 258.9 tCO₂e (28% of total emissions generated by the event)
- For exhibitors arriving from areas close to the exhibition center (distance <100km) the round trip is assumed to be done within a day
- For distances >100 km, overnight accommodation for 5 days was also considered, in addition to the round trip. For each brand participating in the event, 4 exhibitors are considered. For car travels, one car per brand is assumed (4 passengers per vehicle)

The waste produced by the company is partly destined for recycling. The transport linked to this emission source is determined considering the quantity of waste destined for recovery (glass, wood and mixed packaging) and the distance from the treatment center, resulting in a total emissions of 3.1 tCO₂e

GHG emissions measurement



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Total GHG emissions	916

- This category accounts for the emissions related to the production of load-bearing structures, lighting system and materials for setting-up. To correctly allocate the emissions deriving from the production of materials, an estimate on the data provided on the number of events in which these materials are reused was considered
- The related emissions were equal to 7.3 tCO₂e (structure materials) and 98.8 tCO2e (setting-up materials) accounting for 0.8% and 11% of total emissions resp.
- Regarding food (Category 4.3), the total emissions related to the food consumption was 75.6 tCO₂e, accounting for 8.3% of total emissions
- For the bar, it was considered that most of the drinks are coffee and water, accounted for as two drinks per receipt. To evaluate the emissions, a bibliographic survey was conducted to find emission factors suitable for the emissive source
- With reference to other purchased materials, cleaning products and drinking water consumption are considered for a total emissions generated of 1.8 tCO₂e
- The waste produced by the company is partly destined for recycling (accounted for in Category 3) and partly sent for disposal. Recycling and disposal percentages are taken from the Eurostat database
- The modeling of fuel production and electricity consumption was carried out starting from the emission factors relating to the various energy sources reported in the GSE Report "Emission factors value relating to the electricity supplied to electric traction road vehicles" and the emission factor for electricity (national production mix) from Ecoinvent database. Total emissions were 89.5 tCO₂e (9.9% of total emissions)

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Forestry conservation project in Brasil, «Maisa REDD+ Project»

Maisa REDD+ Project



- This project promotes the protection and safeguard of the Amazonian Forest, with the aim to contribute to the protection of an area of more than 28k hectares, thanks to the help and engagement of the local population.
- The REDD+ projects Reducing Emissions from Deforestation and forest Degradation are forestry management projects that protect forests from their deforestation and degradation.
- In particular, The Maisa REDD+ Project promotes alternative economic activities that reduce the illegal trees' knocking down and the relative removal of wood from forests, thanks to:
 - Constant monitoring of the forest areas;
 - Education and training of the local population towards more productive and sustainable agricultural procedures, that reduce deforestation to the least;
 - Strengthening of the local cooperatives of agricultural producers;
 - Incentives to the removal of only non-wood products from the forest.
- These are a set of new economic opportunities offered to the local population so that it will no more be necessary to resort to illegal deforestation or carbon production.

Renewable energy in India, «Allain Duhangan Hydropower Plant»

Allain Duhangan Hydropower Plant



Allain Duhangan Hydropower Plant

- This project aims to reduce the dependence of Northern India from fossil fuel and it supports the implementation and management of the hydropower plant Allain Duhangan, that produces energy for the region and safeguards the natural uncontaminated environment of the district of Kullu, in the Indian State of Pradesh
- In particular, the hydropower plant Allain Duhangan has reached the goal to reduce the dependence from fossil fluel in the less invasive way possible for the environment, by using hydroelectric energy as a cleaner and environmentally more efficient alternative source of energy
- The project includes the support to the region's environmental, social, health and safety needs: the project's investments have allowed to improve the local infrastructures and healthcare structures, therefore the level of education has significantly increased, as well as the healthcare services and the overall well-being of the local communities.

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Key takeaways and next steps

- Innovative and first project of its kind in EU showing joint commitment between a venue management player and event organizer towards the common purpose of realizing a carbon neutral event
- ISO 14064-1:2019 certified methodology garantees the accuracy of data and metrics and the reliability of the valuation framework which could be a useful insight for the industry related guidelines
- Scalable and replicable project first across Fiera Milano owned exhibitions (2021-2025 Sustainability Plan already included LCA assessment for the upcoming owned exhibitions) and then for other events
- Areas of improvements identified are the following:
 - Improve the management and collection processes of visitors data
 - Different ISO standard to be used for future events (from ISO 14064-1 to a more suitable ISO 14067)
 - Raising awareness of exhibitors and stand-fitting companies for the construction of stands with a lower environmental impact

This project was the first concrete step of Fiera Milano in its journey to net zero, in line with its commitment to Sustainable Development Goals 12 and 13 and Net Zero Carbon Events initiative

Disclaimer



The uncertainty relating to the study carried out is calculated according to a gualitative approach, analyzing for each category the quality and uncertainty of the data used for reporting. For Category 2, electricity consumption's data are provided directly by the event organizer. The emission factors for modeling are derived from scientific databases (Ecoinvent) and processed through data provided by national organizations. An average degree of uncertainty is therefore attributed. In Category 3, regarding the transport of the structures and the lighting system, the data was provided by the company and for this reason the quality of the data is good and therefore the uncertainty is low. For the transport of materials for construction, the average supply distances have been assumed and therefore there is an uncertainty of the average data. The emission factors used for the transport of goods are extrapolated from specific databases, but they are not completely representative of the means used. The uncertainty of the emission factor is medium. For the movement of exhibitors, average distances were considered according to the Italian city/province of origin. The data is therefore not completely representative of the actual routes traveled and therefore has an average uncertainty. The emission factor used in the modeling derives from specific databases, from which average values have been extrapolated: therefore, they have been attributed an average degree of uncertainty. Overall, the uncertainty attributed to Category 3 appears to be medium. In Category 4 the activity data relating to the production of the structures, the lighting system and the setting-up materials were provided by the company and reworked for modeling using hypotheses based on scientific literature, so the uncertainty is medium. Emission factors deriving from specific databases were used. For the food sector, the activity data was provided by the company on the basis of the drinks made, broken down by the bar, snack and restaurant sector. The quality of the data is therefore good and associated with low uncertainty. The modeling is carried out using emission factors taken from scientific literature, on the basis of hypotheses of different types of average meals consumed. The associated uncertainty is medium. For Category 4, the overall uncertainty was average. In conclusion, the total uncertainty associated with the event is average, as all the categories analyzed have an average level of uncertainty and in particular Category 3 which is the most impacting. All information contained in this presentation has been compiled from sources believed to be reliable. However, no representation or warranty, express or implied, is made with respect to the completeness or accuracy of its contents, and it is not to be relied upon as such. None of Fiera Milano S.p.A., its subsidiaries or any of their respective employees, advisers, representatives or affiliates shall have any liability whatsoever (in negligence or otherwise) for any loss howsoever arising from any use of this document or its contents or otherwise arising in connection with this presentation. This presentation may not be reproduced, distributed or published by any recipient for any purpose.





Fiera Milano Sustainability Report: <u>https://investors.fieramilano.it/content/dam/fieramilano/docume</u> <u>nti/FM_DNF_2021_ENG_web-A.pdf</u>



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