

Flows and Urban Mobility

Department of Design – Politecnico di Milano

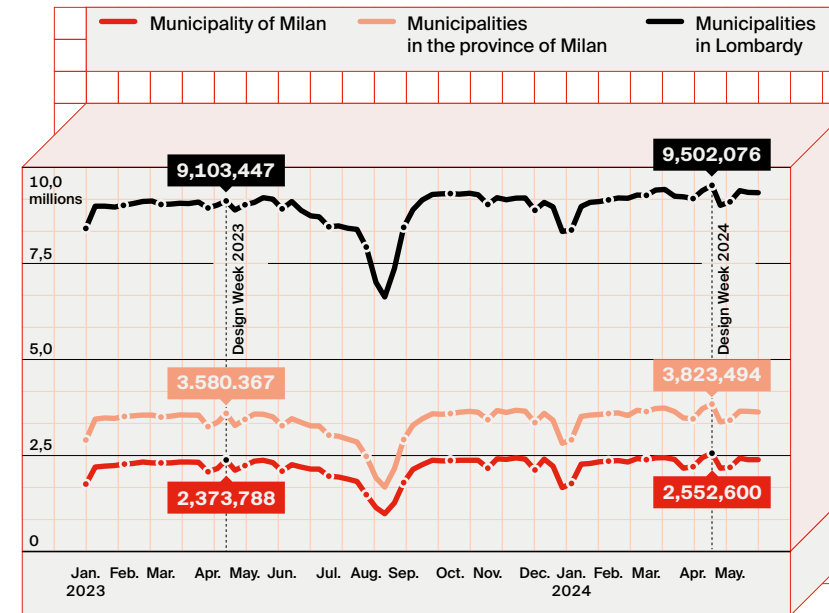
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A major event like the Salone del Mobile.Milano and the Design Week has a two-fold impact on urban mobility: travels to and from the exhibition district (Ch. 2, Section 2a), and within the city. Our analysis of these flows is based on data by the Istituto regionale per il supporto alle politiche della Lombardia (from now on PoliS-Lombardia), which tracks people flows in Milan and the province through Vodafone mobile network¹, as well in other parts of Lombardy. By mapping the georeferenced position of users' SIM cards within 85 territorial units of Milan defined as *Aree di Censimento*, or census areas (ACE)², this analysis reveals variations in the flow of people passing through the event's points of interest. More precisely, this data analyses people's transit and stays³ at places in Milan where Design Week events were located during the 2023 and 2024 editions. It was not, however, possible to access data for the ACE corresponding to the Fiera Milano exhibition district in Rho (Figure 5.12).

The analysis of this data reveals Design Week hot spots in the city, with higher transit rates and numbers of people spending time in them. Researchers identified a correspondence between 15 ACEs that overlap with some of the most significant areas of the Design Week, covering about 17% of Milan's territory. This method, however, has its limitations, including unavoidable inaccuracies in the juxtaposition of ACEs and significant event areas in the city and the double counting of individuals who transit multiple times within the same ACE (within the minimum time unit for detection, i.e. four hour). This data tracing also requires further methodological considerations pertaining to the representativeness of foreign visitors⁴.

Data from the most recent event (from the 15th to the 21th of April 2024) shows that, overall, Milan's territory registered a daily average of 2,552,660 people's transit on a weekly basis. This figure is 7.5% higher than the average for the 2023 event week (recorded as 2,373,788). In 2024, the same trend was observable for the province of Milan and the region of Lombardy, which recorded 3,823,494 transits (up 6.8% over the 2023 average) and 9,502,076 transits (up 4.4% over the 2023 average) respectively.

Another data point for the same year and period (until the 26th of May) shows that the weekly average number of transits recorded during Salone del Mobile.Milano and the Design Week was the highest during 2024 for Milan (2,552,600), its province (3,823,494), and the region of Lombardy (9,502,076).



5.12 Presences of mobile users in Milan, its province and the provinces of Lombardy

Number of users recorded in the Vodafone mobile network (average weekly variation) in the Municipality of Milan, the municipalities of its province and provinces of Lombardy region. Data regards the period from the 1st of January 2023 to the 26th of May 2024 (73 weeks total). Analysis by Politecnico di Milano based on data provided by the Istituto regionale per il supporto alle politiche della Lombardia (PoliS-Lombardia).

We applied the same analysis method to compare the tracking of transits in locations of strategic interest for Design Week⁵, from January to May 2024. This revealed significant peaks in transit flows corresponding to event days within the following areas (Figure 5.13a, p. 196 and Figure 5.13b, p. 197): Brera/Moscova/Sempione (232,485; up 71.9%), Tortona/Savona (75,555; up 47.4%), and Duomo/San Babila/Missori (397,664; up 44.4%). The Municipality of Varedo ACE was taken into consideration because it hosted the “Alcova Milano/2024” event⁶. During the Salone del Mobile.Milano and Milan Design Week 2024, the ar-

areas where Milan's railway hubs (and related underground stations) are located also recorded peak usage: Stazione Centrale (Centrale/Repubblica) ACE up 16.6% (140,527); Stazione Cadorna (Cadorna/S.Ambrogio) ACE up 22.4% (95,816); Stazione Porta Garibaldi (Isola/Porta Garibaldi) ACE up 25.7% (109,245); and Stazione di Rogoredo ACE up 6.1% (68,971). This data describes not only medium-to long-range mobility patterns, but it is also telling of the attractiveness of initiatives hosted in these areas during the event⁷.

The increase in transits recorded in ACEs corresponding to Milan's main railway stations aligns with data provided by Salone del Mobile.Milano that specifically reported the large-scale daily presence of visitors and local operators arriving from regions bordering Lombardy (50,064); 8,395 people from Piedmont, 9,418 from Emilia Romagna, and 15,310 from the Veneto.

5.13a
Presences of mobile users in the Census Areas (ACE) during the Design Week

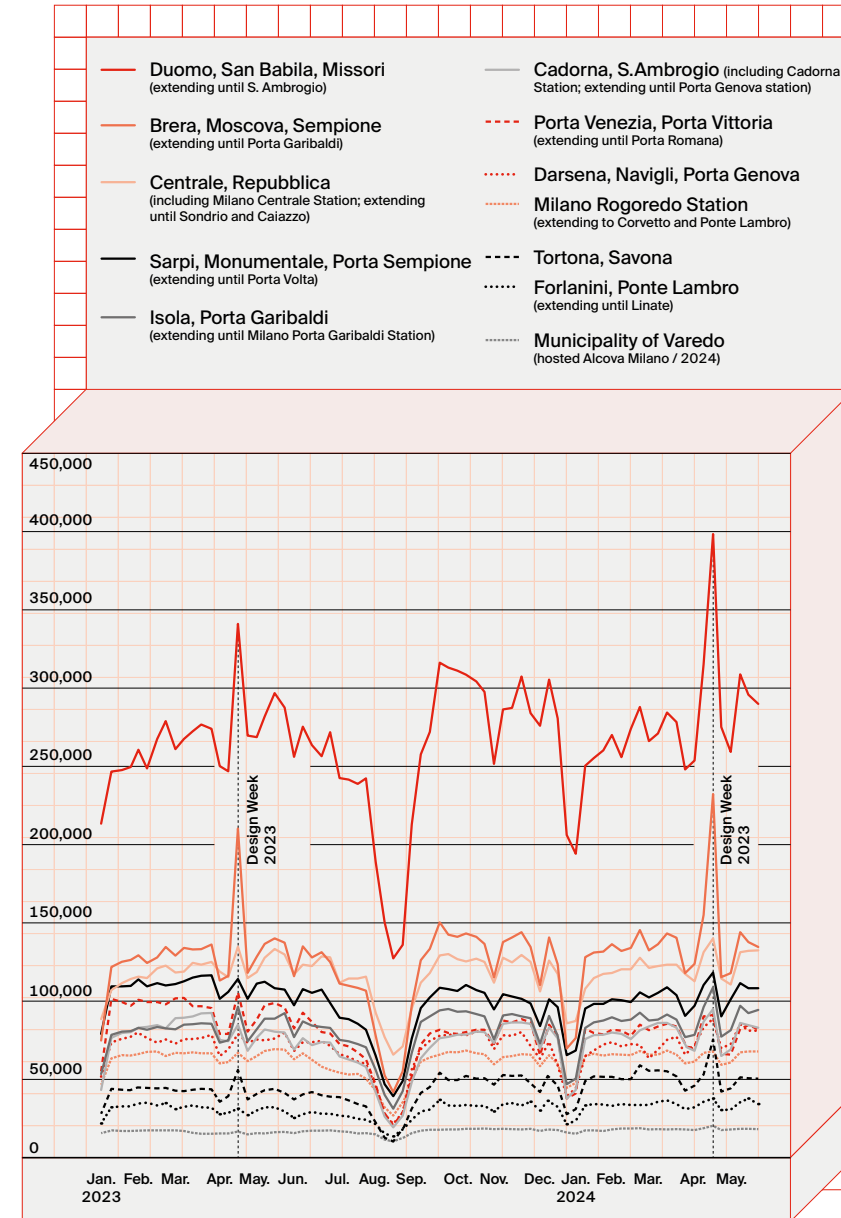
Percentage difference in the number of users recorded in the Vodafone mobile network in Milan (weekly average) within the city and extra-city areas hosting Design week events. Comparison with the 2023 weekly average and the average value of the first 21 weeks of 2024. Analysis by Politecnico di Milano based on data provided by PoliS-Lombardia.

Census Areas (ACE)	Design week areas of interest associated with ACE	Comparison between average weekly value of year 2023 and Design Week 2023 - % change	Comparison between average weekly value during the first 21 weeks of 2024 and the Design Week 2024 - % change
1	Duomo, San Babila, Missori (extending until S. Ambrogio)	30.5%	44.4%
2	Brera, Moscova, Sempione (extending until Porta Garibaldi)	72.3%	71.9%
3	Isola, Porta Garibaldi (extending until Milano Porta Garibaldi Station)	21.9%	25.7%
5	Centrale, Repubblica (including Milano Centrale Station; extending until Sondrio and Caiazzo)	17.8%	16.6%
6	Porta Venezia, Porta Vittoria (extending until Porta Romana)	31.8%	17.8%
10	Cadorna, S.Ambrogio (including Cadorna St.; extending until Porta Genova station)	17.5%	22.4%
36, 37	Milano Rogoredo Station (extending until Corvetto and Ponte Lambro)	11%	6.1%
38	Forlanini, Ponte Lambro (extending until Liniate)	6.2%	12.9%
60	Tortona, Savona	35.8%	47.4%
61	Darsena, Navigli, Porta Genova	14.6%	22.3%
85, 11	Sarpi, Monumentale, Porta Sempione (extending until Porta Volta)	16.4%	18.1%
Municipality of Varedo	Municipality of Varedo	No Design Week-related events took place in Varedo in 2023	13.9% (The event Alcovia Milano / 2024 took place in Varedo in 2024)

Data provided by the Mobility, Environment and Territory Agency of the Municipality of Milan (AMAT) allowed us to investigate the mobility choices made by people in Milan on the event days (Figure 5.14, p. 198). The daily average (on a weekly basis) of entrances to the Milan underground during the Salone 2024 week was 1,260,428, that is the highest compared to all weeks in 2024 and 2023 taken into consideration. More in detail, the percentage of growth in the average number of underground

5.13b
Variance of mobile users' presences in city areas during the Design Week

Percentage variance in the number of users recorded in the Vodafone mobile network in Milan (weekly average) within the urban and extra-city areas hosting Design Week events from 1st January 2023 to 26th May 2024 (73 weeks total). Analysis by Politecnico di Milano based on data provided by PoliS-Lombardia



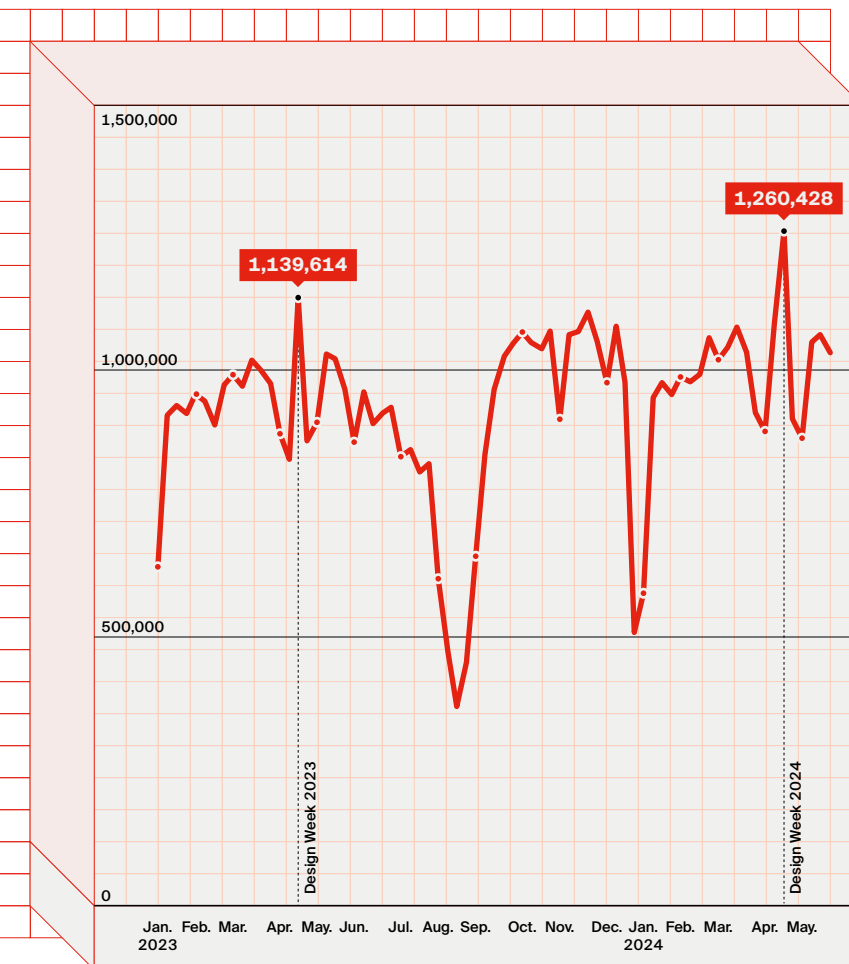
turnstile accesses in 2024 rose by 27.3% (this number is calculated over 22 weeks from January to May 2024, a partial period of the year when the average number of daily entries was 990,022). Passenger travel through the underground during Design Week 2024 increased by 10.6% compared to 2023 (totaling 8,822,993), with a peak of 16% during Friday and Saturday. Data from Salone del Mobile.Milano on participants' mobility choices for reaching the exhibition district (Fiera Milano in Rho) confirm that the majority of visitors used public transport⁸. The usage rate of shared mobility services (calculated weekly, Figure 5.15), described by AMAT data, indicates a clear preference for one service, bike sharing, which saw a significant increase in 2024 (285,088 rentals from January to May 2024) and in 2023 (797,299 rentals). Greater service offerings and fleets available may explain this success⁹. During the week from the 15th to 21st of April 2024, bike sharing totalled 24,250 rentals,

78.6% higher on the weekly daily average during the period from January to May (13,576 rentals). Weekly bike rentals increased by 25.4% in 2024 compared to the 2023 event edition. Temporary pedestrianization of several portions of the city¹⁰, such as Brera and Via Tortona, may have led to this increase. Scooter and e-scooter rentals show similar dynamics to bike sharing, albeit with much lower values.

Analysis of car usage during the event focused on transit data for Area B¹¹ and Area C¹², Milan's two Limited Traffic Zones (ZTL) (Figure 5.16, p. 200). During the Design Week 2024, Area C – the city's historic centre, that has the majority of paid access restrictions – registered a daily average of 80,563 transits, 2.4% lower than in 2023 (82,580). In contrast, Area B – the larger limited traffic zone – registered a daily average of 641,828 transits, thus showing a slight increase (+1.2%) on 2023 (634,052 transits)¹³. In relation to these figures, it is interesting to under-

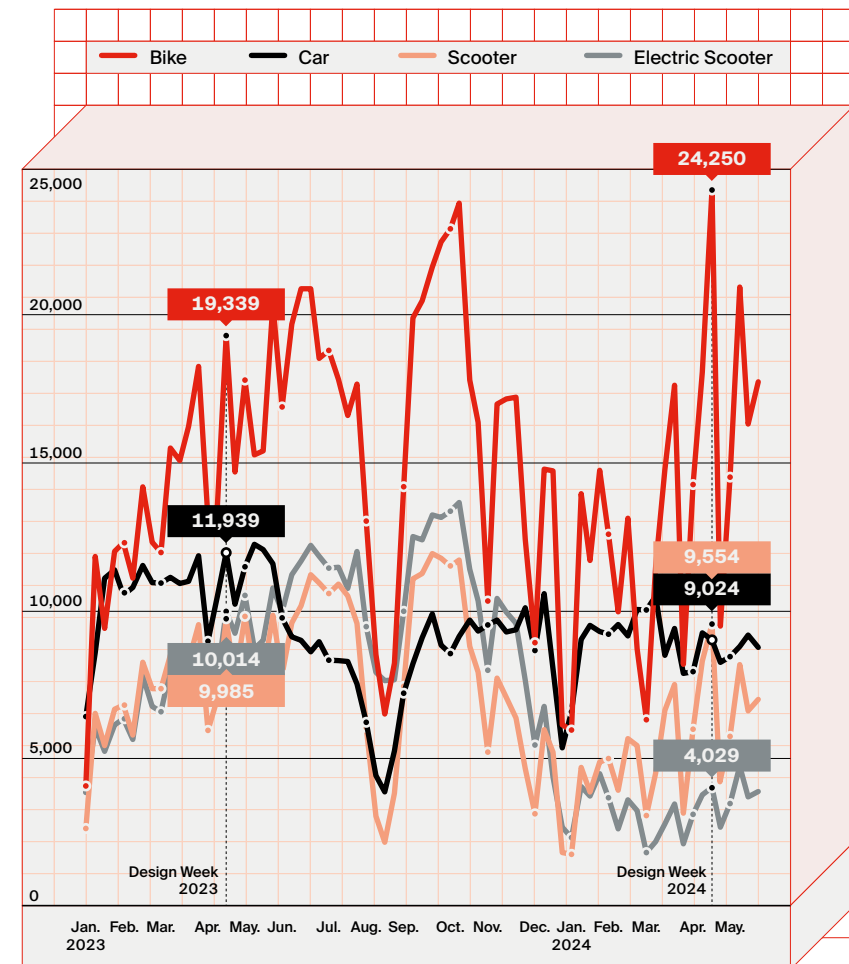
5.14 Accesses to Milan under- ground

Variance in accesses to Milan underground (daily average on a weekly basis). Data regards the period from the 1st of January 2023 to the 26th of May 2024 (73 weeks total). Analysis by Politecnico di Milano based on data provided by Mobility, Environment and Territory Agency of the Municipality of Milan (AMAT).



5.15 Shared mobility services

Variation in the number of rentals in Milan by type of shared vehicle (daily average on a weekly basis). Data regards the period from the 1st of January 2023 to the 26th of May 2024 (73 weeks total). Analysis by Politecnico di Milano based on data provided by Mobility, Environment and Territory Agency of the Municipality of Milan (AMAT).



line that car sharing data (Figure 5.15, p. 199) showed a steady decline in April 2024, consistently below 10,000 weekly rentals. Parallel to this, the number of exhibitor cars entering the Salone del Mobile.Milano 2024 was consistent with the previous edition.

So far, the analysis presented here highlights the need, in future, to research mobility choices connected with both arrivals and overnight stays, as well as with urban and extra-urban mobility toward event areas, during the event days. This type of research would allow a more precise understanding of the interaction between business tourists visiting Milan to attend Salone del Mobile.Milano and the flow of visitors coming to the city to participate in Design Week events – the latter being a group yet to be identified and measured. Finding out about the daily temporal dynamics of mobility flows within the city (for fair visitors and daily city users) can help to better understand city pulses, thus addressing issues connected to overcrowding, peak in ser-

vices demand, and more innovative event distribution. Such responses can help create a Design Week that moves at its own pace, offering more opportunities and less inconvenience for all.

Drawing on these data sets and the useful overview they provide for future mobility planning during the event, we may envision actions conceived to improve access to city locations, as well as initiatives to reduce traffic congestion caused by private transport. This may be achieved by promoting and extending shared mobility, temporarily increasing the offering of services such as taxis and chauffeur-driven car rental, and reinforcing public transport options, for example, by increasing the underground's frequency of trains and extending its operating hours.

**5.16
Vehicle
transits in Area
B and Area C
(Limited Traffic
Zones)**

Number of vehicle transits (daily average on a weekly basis) in Area B and Area C (Limited Traffic Zones gates) from 7:30 to 19:30, including Saturdays and Sundays. Data regards the period from the 1st of January 2023 to the 26th of May 2024 (73 weeks total). Analysis by Politecnico di Milano based on data provided by Mobility, Environment and Territory Agency of the Municipality of Milan (AMAT).

