tembici

Micromobility in the global south

The performance of Tembici in Latin America

Understanding Tembici is to understand the use of bike sharing in this part of the planet

Team

Tembici

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Summary

Introduction

The first experiences with bike sharing date from the mid-1960s. This popular initiative known as "White Bikes" in Amsterdam, Holland, pioneered offering bicycles that could be used temporarily by an individual within the city. While we can observe some specific proposals since then where bike-sharing projects emerged as pilot projects, it was only in the 2000s that a consolidation of this service began.

Technological development and an increase in the understanding of the circulation of people in cities, allowed the companies to offer safer and more appropriate products to their users. At the same time, cities began to experience urgent problems for which the bicycle could contribute to the solution: climate emergency, traffic congestion, mental health of citizens, and excessive spending on transport - all problems proven to be successfully tackled with greater bicycle use.

Bike-sharing systems are therefore more than just an urban mobility service, and figure as an important instrument in improving the life of individuals. A majority of the cities that are currently considered as models for quality of life, have one or more bike-sharing systems.

Tembici is the largest bike-sharing operator in Latin America in terms of number of systems, quantity of bicycles available, and volume of rides. The material analyzed here, considers data from January 2019 to December 2021. On this latter date, the company was already present in three countries on the continent: Brazil, Argentina, and Chile[1] [2] [3]. The principal objective of this publication is to characterize Tembici within this scenario, demonstrating its operation in the context of Latin America, and furnish numbers related to the operation and use of its systems.

Understanding Tembici is to understand the use of bike sharing in this part of the planet.

1 In February 2022, Tembici formalized its entry into Colombia by beginning operations in Bogota, Colombia. While the data related to this system is not considered in this publication, the company is currently present in four countries in Latin America.
2 At the end of 2021, Tembici also formalized the start of operations in the Las Condes neighborhood in Santiago, Chile. Although the system data does not yet include the usage characteristics of this region, the total number of Bike Santiago bicycles is already included in the study.
3 Also at the end of 2021, the expansion of the iFood Pedal was formalized to 7 cities with 2,500 electric bicycles in total. Regions and usage data are not included in the study, but the total number of bicycles is already being considered.


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Methodology

The production of this publication counted on multiple research methodologies. Below we explain how the data was collected or obtained, and on which pages they were used:

1. **Desk research:** to scale the size of the bike-sharing services in Latin America, detailed research was carried out to verify which cities provided this service in each country on the continent as well as which currently exist. The research considered all systems in operation as of 19/11/2021. This information is presented on pages 9 and 10.

2. **Survey of Tembici's users:** a survey was conducted with users of the systems operated by Tembici. The sample is composed of 5,756 interviews distributed among the systems operated by the company in three countries (Brazil, Argentina, and Chile). The questionnaire contained only closed questions and was sent via internet to the users' app shortly after they had used the bike-share. The data collected was weighed with general registration data to guarantee representativity of information. This design considered a confidence interval of 99% and a general margin error of 2%. The survey data is presented on pages 11, 12, 13, 14, 15 and 18.

3. **Analysis of secondary data:** trip registration data from three consecutive years (2019, 2020 and 2021) were analyzed. This signifies that data related to station origin and destination of the trip, duration, and use recurrence were analyzed. Analysis of this data is presented on pages 14, 15 and 17.

4. **Analysis of administrative data:** with the aim of better measuring the size of Tembici and its performance, an internal survey of company actions promoting the bicycle within the cities where it operates, as well as data related to its employees and partners, was also conducted. Information related to this data is on pages 16, 17, 18, 23, 24 and 25.

5. **Data from research conducted by Itaú Unibanco in partnership with Cebrap:** research data from a representative sample of users in each Bike Itaú system in the cities of Salvador, Rio de Janeiro, São Paulo, Porto Alegre, and Recife, Olinda and Jaboatão as well were analyzed. The survey was applied at the point of flow at the time of returning the bicycle. There were 1,665 questionnaires. The confidence interval is 95% and the margin of error varies from 4.5% to 5.6%. This data are used as references on pages 20 and 21

6. **Estimates of CO_2 emission savings from Tembici:** reference data is used on page 19.

Glossary

System
Infrastructure (composed of bikes and stations) operated in a determined territory.

Project
Full range of operational strategies concerning a determined system. For instance, the system in Rio de Janeiro contains two projects: iFood Pedal (delivery-focused) and Bike Rio (commute-focused).

Users
Full range of individuals who use some of the bike-sharing systems.

Mobility Users
Individuals who use the systems for commuting (e.g. leisure, going to the office etc.)

Delivery Users
Individuals that use the systems for delivery work.

Tembici in Latin America

Mobility, leisure, health, and savings with bike sharing

Latin America

Brazil accounts for 33% of the bike-sharing available on the continent

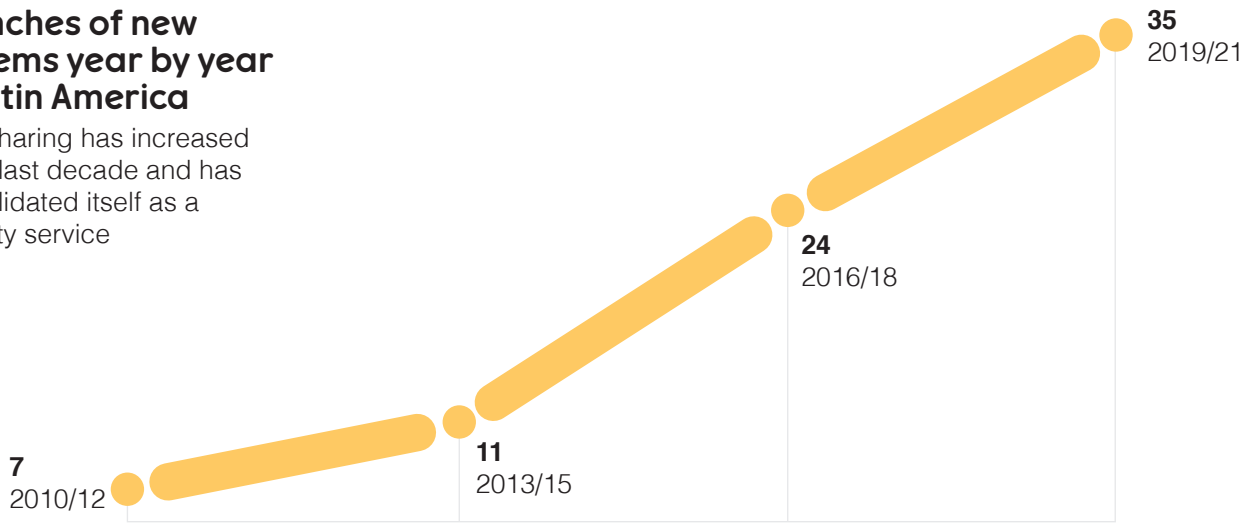
Latin America has 75 systems in 13 countries

The majority of bicycles are dock-based

45.545
total of shared bicycles

Launches of new systems year by year in Latin America

Bike sharing has increased in the last decade and has consolidated itself as a mobility service

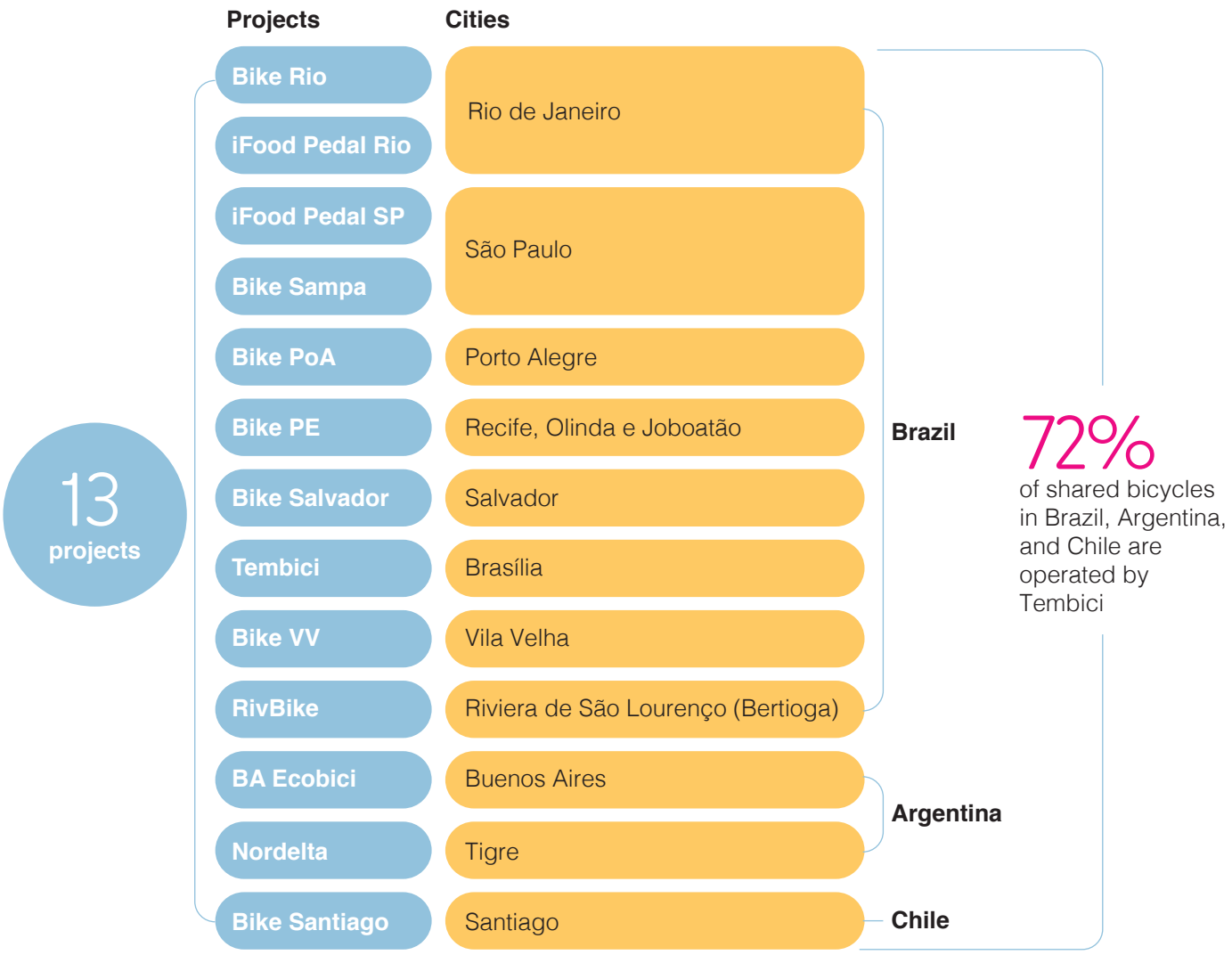


Dimension

Tembici is the largest in Latin America

Among the 50 mapped organizations that operate bike-share systems

18.870 bikes | **3** countries | **13** cities



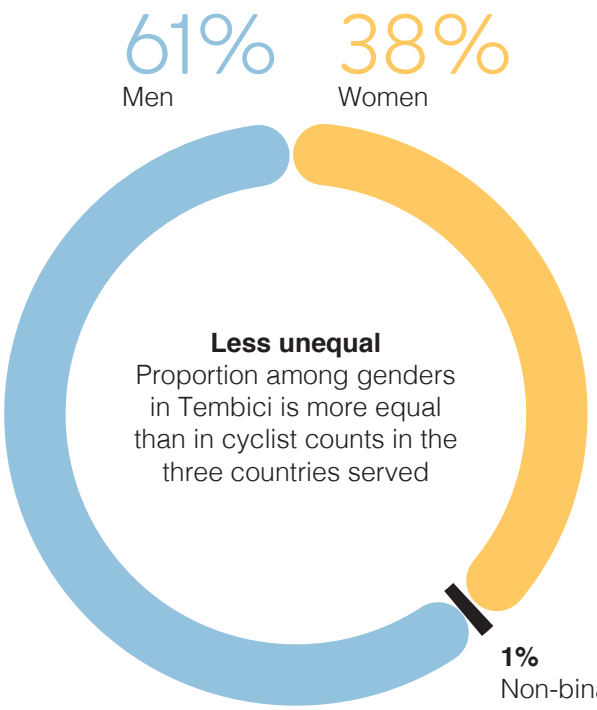
Coverage
Tembici's served areas range from cities with a few thousand inhabitants (such as Riviera and Nordelta) to large metropolises like Rio de Janeiro and São Paulo, where populations surpass 12 million people

Expansion
Latin American cities still have much to advance in terms of bicycle infrastructure. The proportion of streets with bike paths or lanes does not reach 6% in the cities served

Users

Pedaling diversity

Gender



Proportion of women cycling with Tembici is greater than among cyclists in general

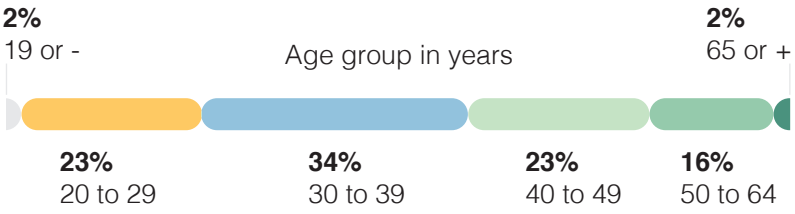
6 times
greater in Brazil

1.5 times
greater in Buenos Aires

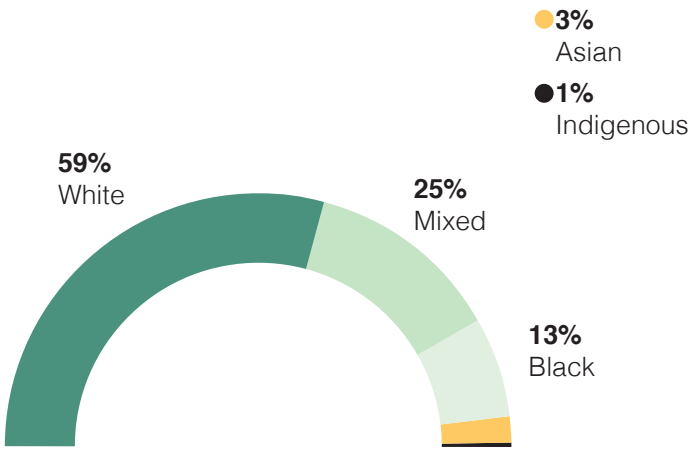
12 times
greater in Santiago do Chile

Age

Age distribution of Tembici users is very similar to the labor market in general



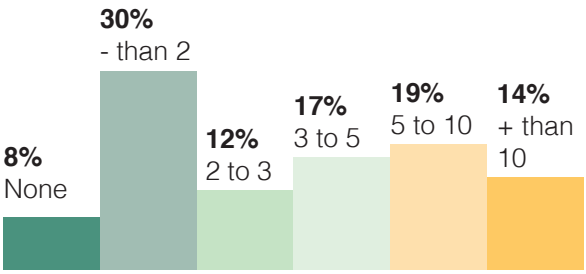
Race



Income

In minimum salaries

All social classes use Tembici systems

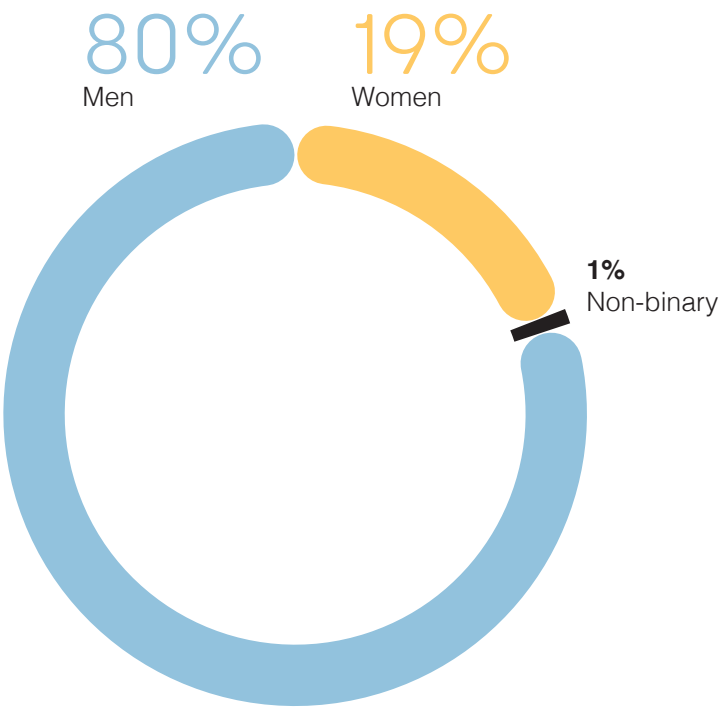


Delivery

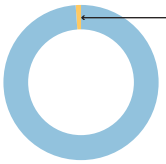
The bicycle as an income generator

This segment of users is composed of a less privileged, economically marginalized public. This public uses the bicycle as a manner to generate income which in turn stimulate the economy. Tembici serves this public with projects specifically designed for their needs

Gender



Women as couriers
Among delivery users using Tembici, the group of women is greater than the total proportion of women delivery couriers in some cities



In a study of delivery couriersin São Paulo, women represented 1% of total cyclists making deliveries in the city (Aliança Bike, 2019)

Age

Delivery users are younger than the general public

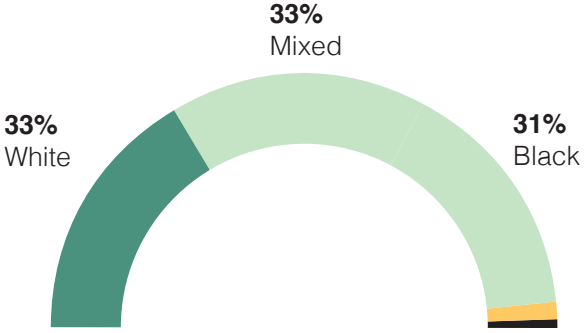
Up to 29 years old

43% of delivery users

25% of mobility and delivery users together

Race

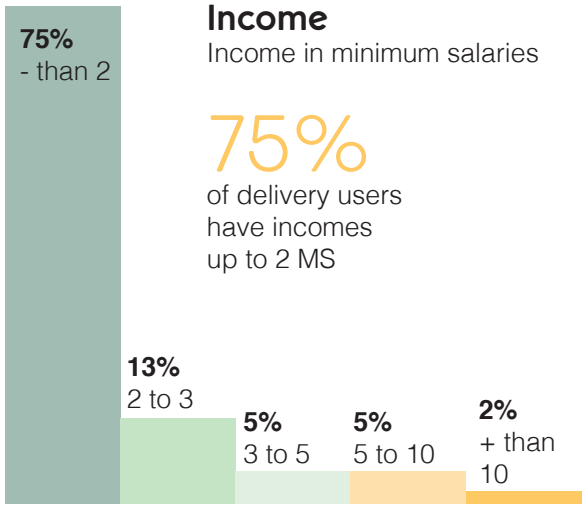
Among those using the bicycle to make deliveries, 64% declared themselves to be Black or Mixed race



Income

Income in minimum salaries

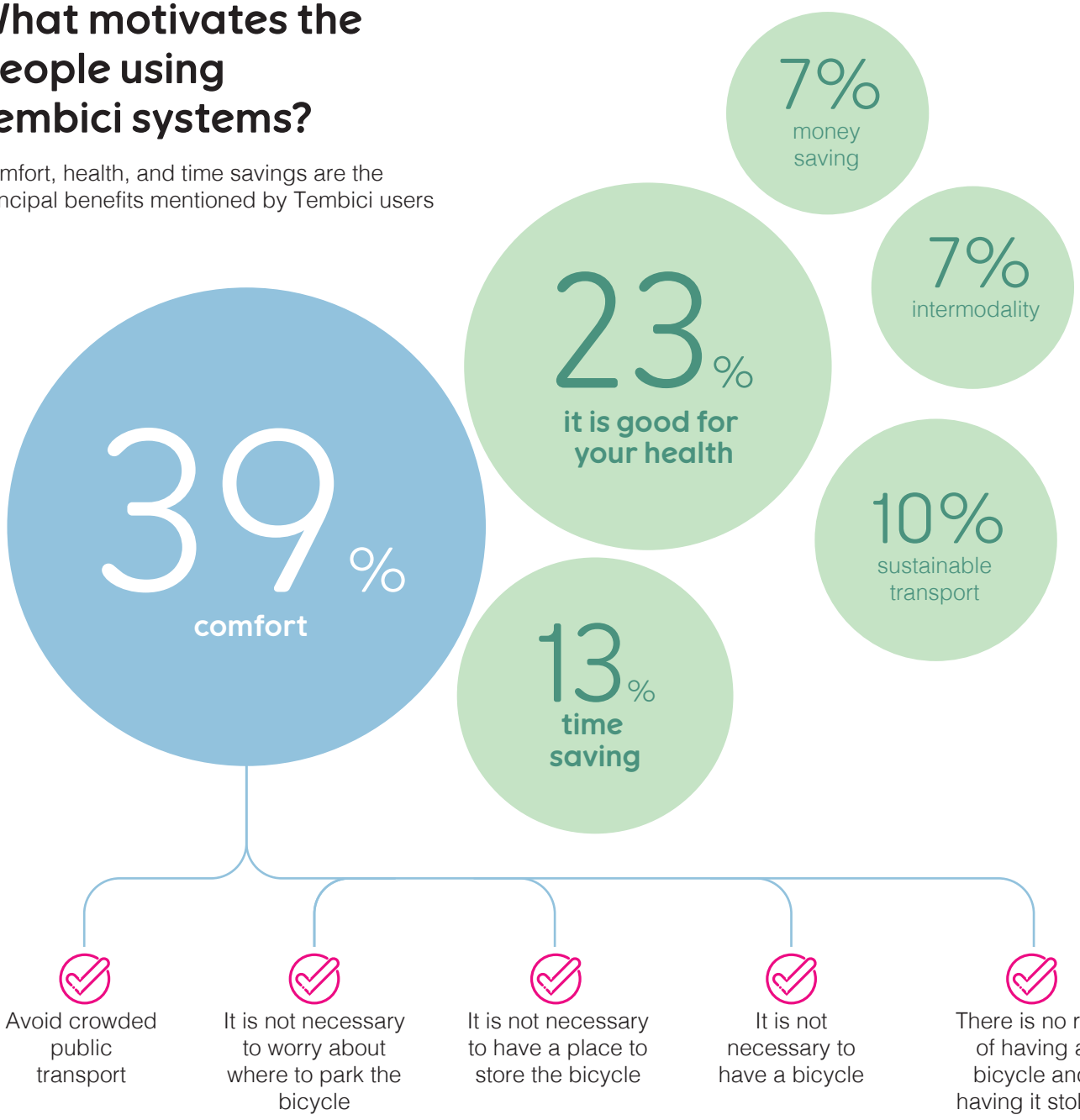
75% of delivery users have incomes up to 2 MS



Benefits

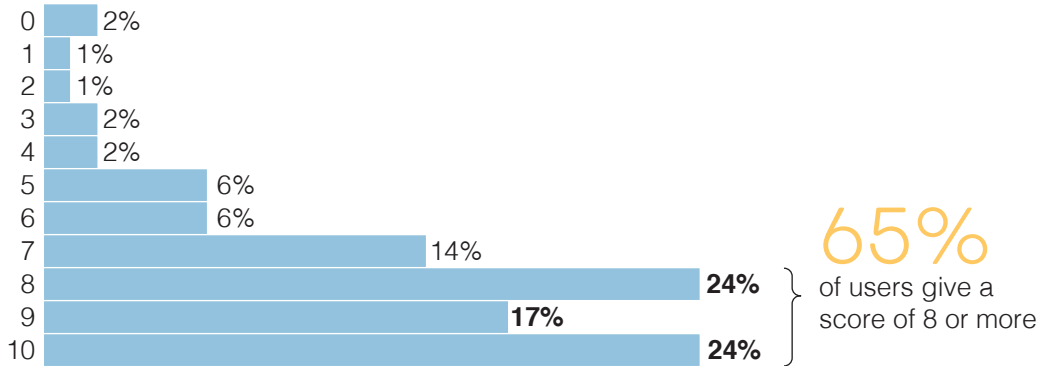
What motivates the people using Tembici systems?

Comfort, health, and time savings are the principal benefits mentioned by Tembici users



Evaluation is positive

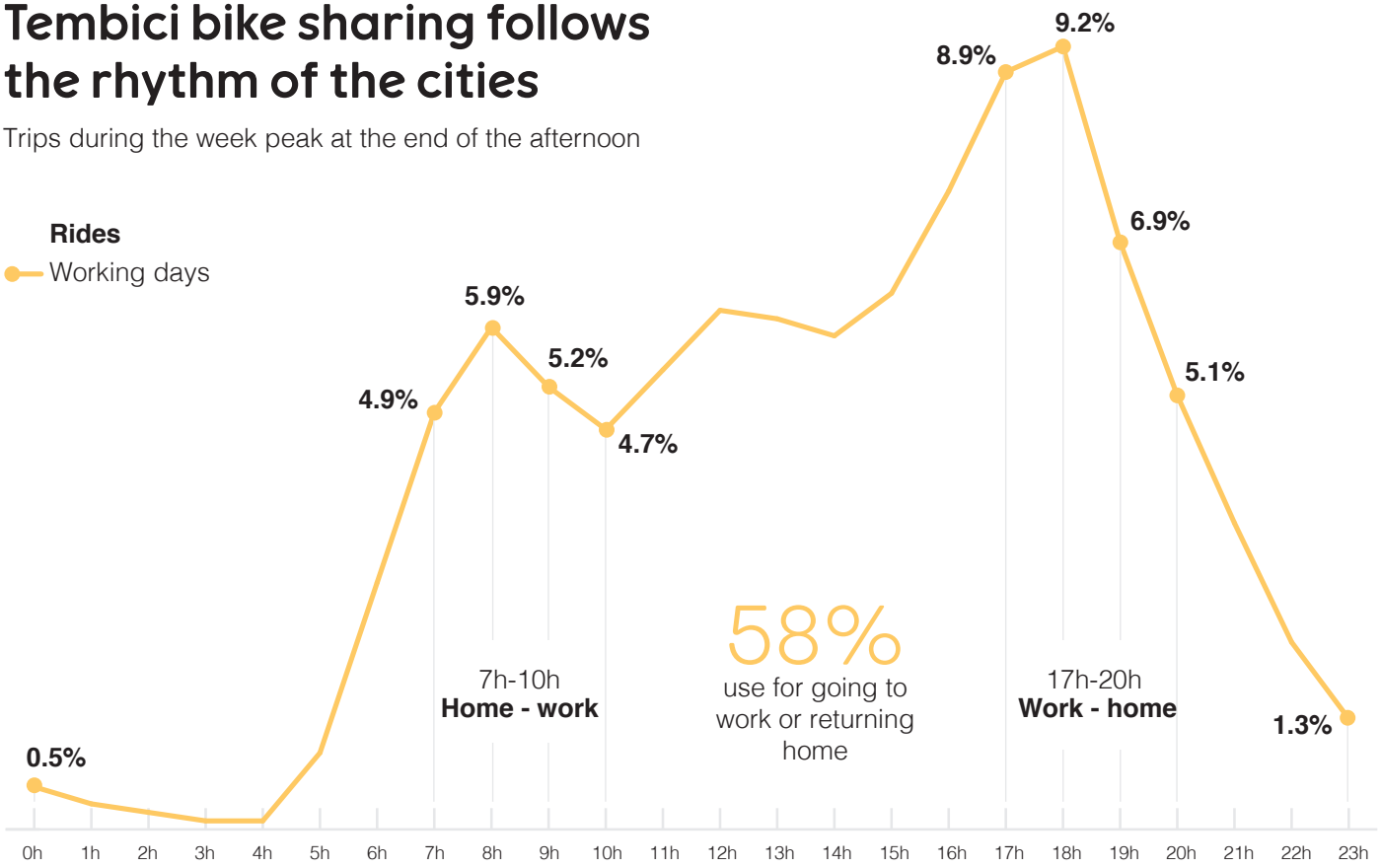
General score from 0 to 10, shows that the systems are very well evaluated

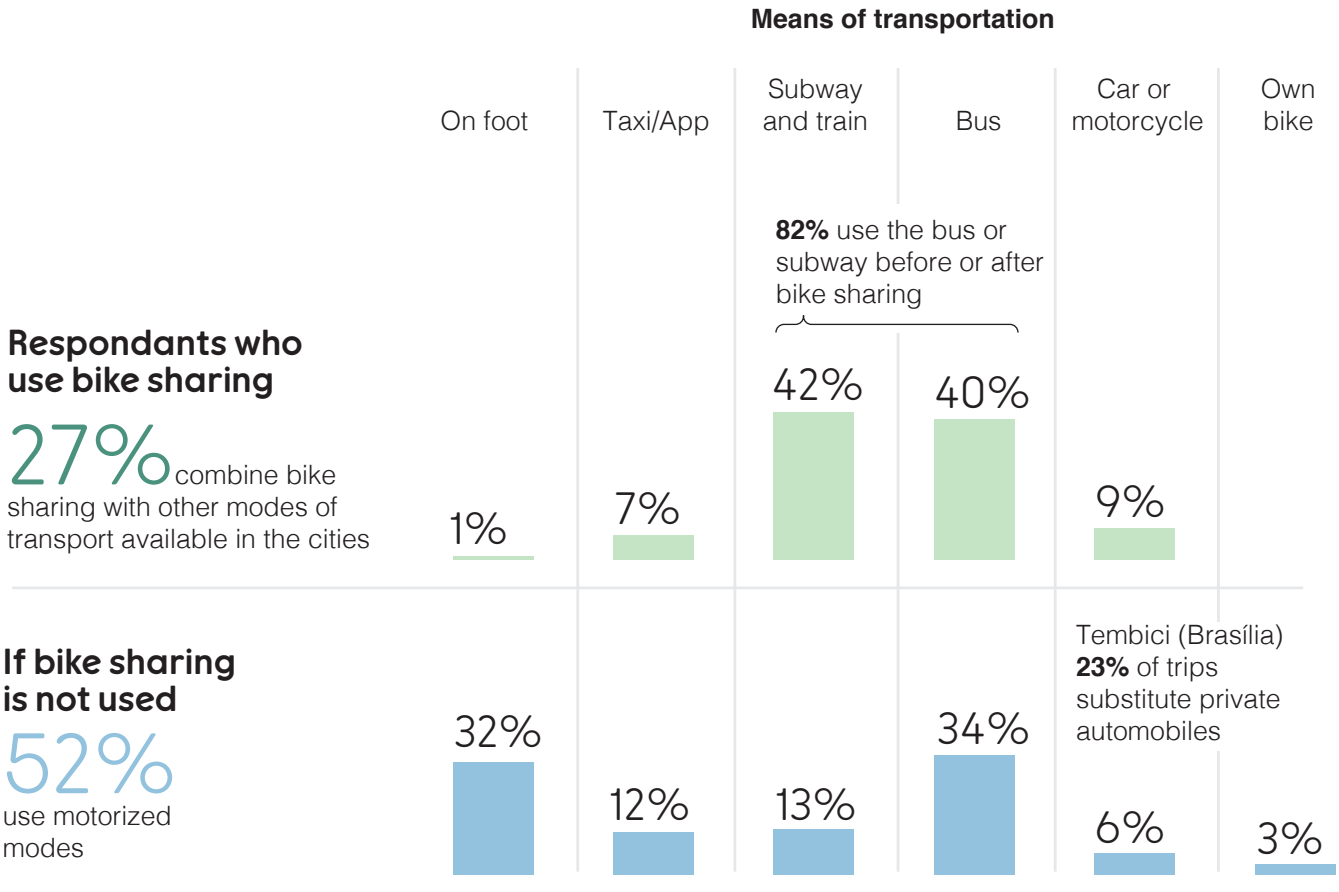


Working days

Tembici bike sharing follows the rhythm of the cities

Trips during the week peak at the end of the afternoon

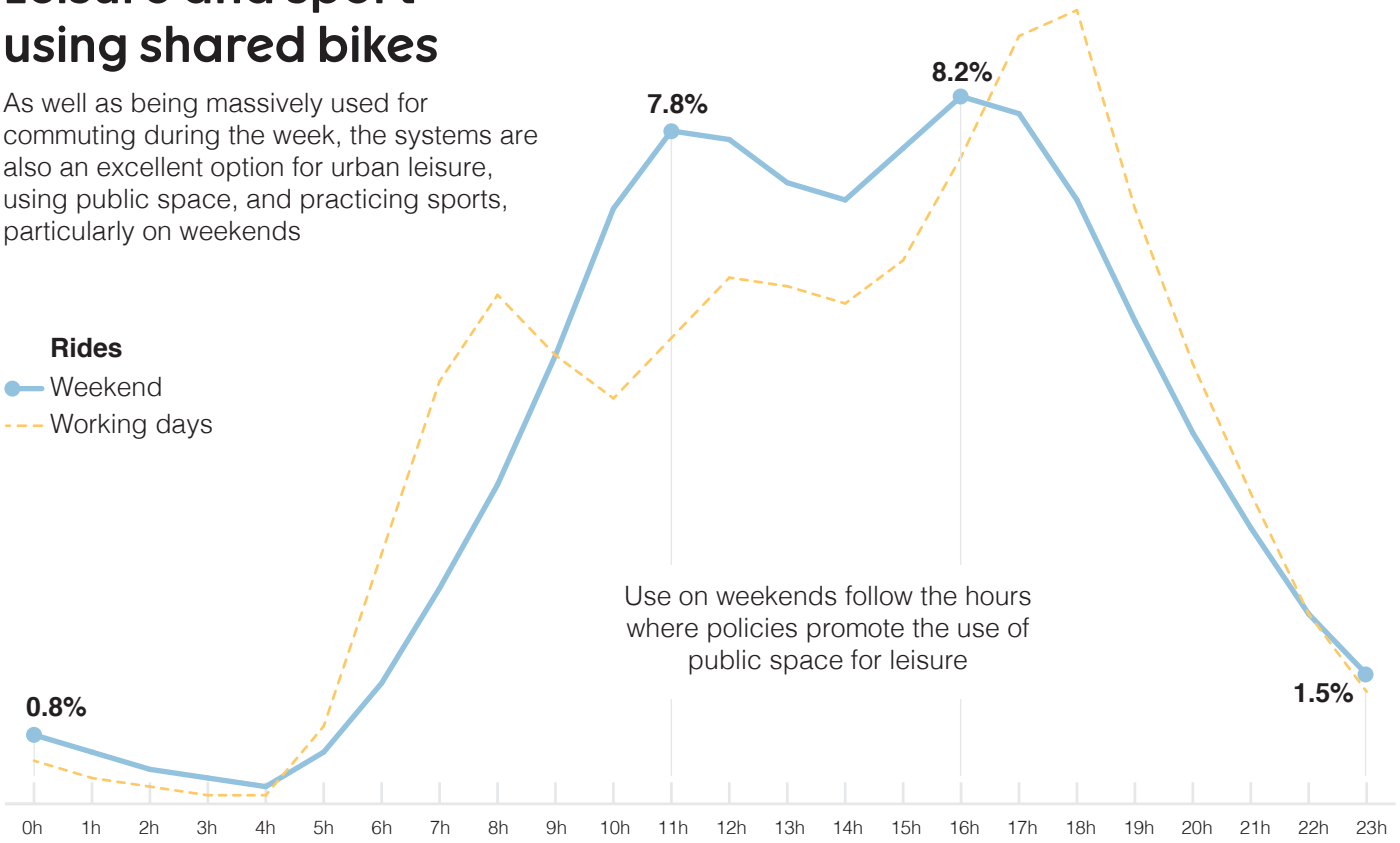




Weekends

Leisure and sport using shared bikes

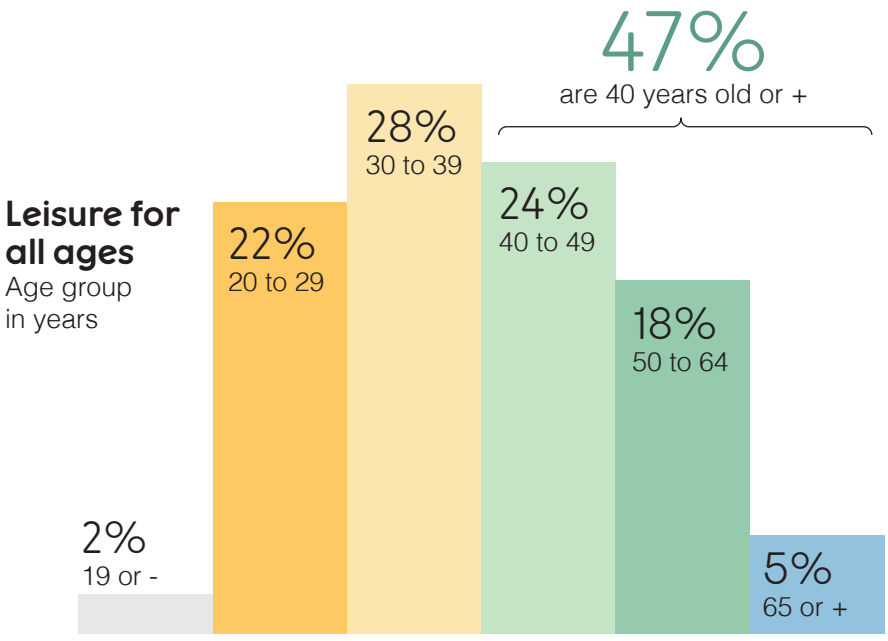
As well as being massively used for commuting during the week, the systems are also an excellent option for urban leisure, using public space, and practicing sports, particularly on weekends



25%
of rides are on weekends

37%
of use is or fun or exercise

45MIN
is the average ride duration



Pandemic

How Tembici reacted to COVID-19

Isolation and social distancing were some of the orientations given by the WHO (World Health Organization) during the pandemic to counter the virus. For those that needed to commute, the institution recommended the bicycle as a safe individual transport with respect to contagion. Only services considered essential were kept open such as hospitals, pharmacies, supermarkets, and delivery services.

Tembici during the pandemic

Following health protocols, bicycle sanitization processes were reinforced, and users were recommended to take personal care measures.

At the most restrictive moment of the pandemic, Tembici launched the campaign "Não Vá de Bike – Don't Go by Bike" to encourage everyone to stay home and reserve the bikes for free use frontline workers, health professionals and for delivery users. With flexibilization, circulation in the cities increased but there were still concerns among the population regarding the use of public transport (due to agglomerations and the possibility of contagion). Some individuals began to use the bicycle as a transport alternative for being an individual and open-air means of transportation.

53 million

trips (approximately) were undertaken with Tembici bicycles between 2019 and 2021

Making a difference

Bikes for Interviews (free translation)

With the return to economic activities, bicycles were made available for free for in-person job interviews with the intention of providing a safe way for candidates to commute.

Get vaccinated, go by bike (free translation)

With the beginning of vaccination in Brazil, the campaign, "Vem vacina, vai de bike – Get vaccinated, go by bike" was launched in partnership with Itaú Unibanco in the cities of Rio de Janeiro, São Paulo, Salvador, Recife, and Vila Velha, offering free trips for those wishing to get vaccinated. With the commitment of Tembici to make bikes available, local public authorities alllowed bikes in vaccination drive-thrus, which had previously been limited to automobiles. More than 25 thousand rides were made, considering the first and second doses.

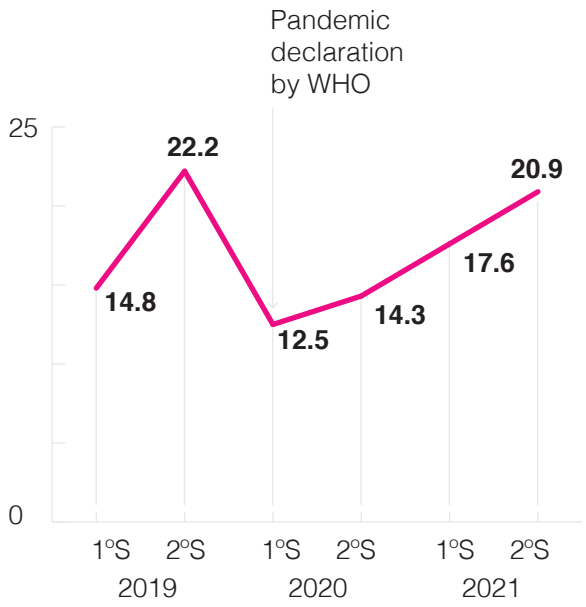
How did Tembici's systems respond to the crisis?

With the heavy restrictions at the beginning of the pandemic, almost all economic sectors experienced a decrease. Many individuals were unemployed or began to work in remotely or work from home. At that moment, with a large part of the population at home, the Tembici systems showed a sharp drop in usage and as the flexibilization begins to take effect, a gradual return in the number of trips is already noticeable.

Despite the difficulty with the pandemic, Tembici closed 2021 year with 34% more trips that were made at the beginning of 2019

Bicycle use levels in 2021 is greater than the level observed before the pandemic

Slots[1], in millions, per semester



Slots increased more than 40% in 2021 compared to 2020; and more than 4% over 2019. Tembici was instrumental in the cities where it operates in helping delivery workers perform their jobs. In this activity, the delivery user can keep the bike for several hours. Tembici offers plans for delivery users that suit their needs.

1 Slots are 15-minute fractions of bicycle use. For example, a 30-minute trip represents 2 slots, one of 40 minutes counts for 2.6 slots.

Tembici became an even more important service

During the most serious period of the pandemic, Tembici's shared bikes were essential in various aspects. Principally for those that needed to make deliveries and maintain an income-generating activity. It was for this reason that the iFood Pedal project between Tembici and iFood was targeted exclusively at delivery couriers. The project was very successful and one year after being launched, more than one million deliveries have been made using these bicycles.

It is important to highlight that iFood Pedal was important not only to delivery workers but also for the expansion of delivery services during the crisis, allowing more people to stay at home.

In terms of a more ample mode of urban mobility, Tembici allowed its users to avoid crowds on public transport at a moment when health recommendations oriented the public to avoid collective transport whenever possible.

Among users

60%

continue using Tembici bicycles with the same or greater frequency than before the health crisis

86%

believe that Tembici provides an essential service for the cities served

84%

believe that the service provided by Tembici helps the population avoid crowds on public transport

Among delivery users

72%

use the Tembici's services with the same or greater frequency than before the pandemic

Environment

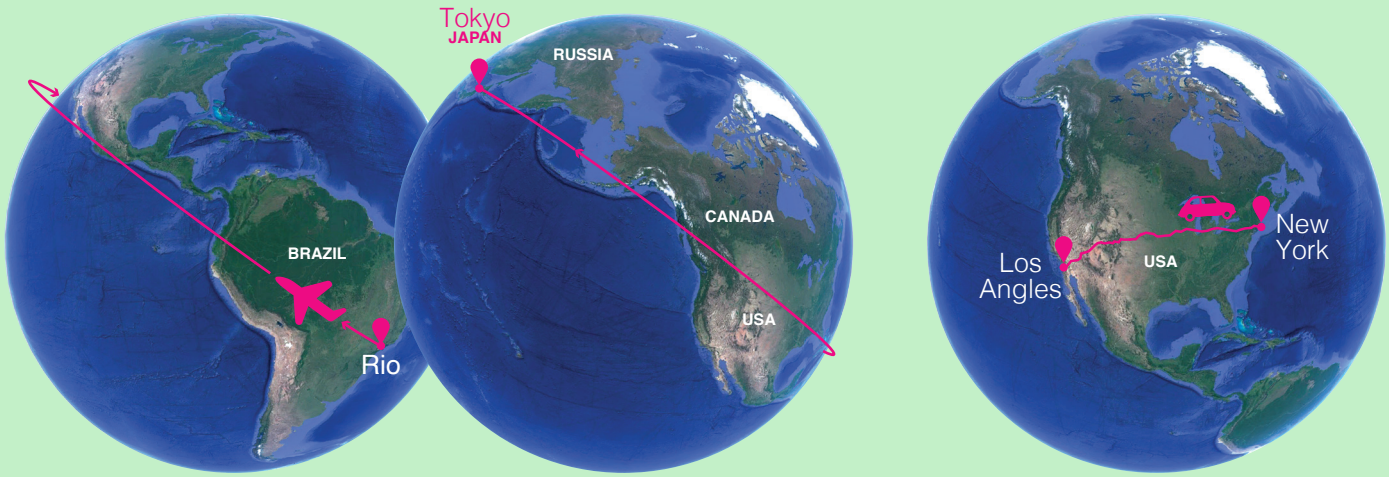
Pedaling for sustainability

It is estimated that more than

7 thousand tons

of carbon dioxide were saved in 2021 by the Tembici's systems

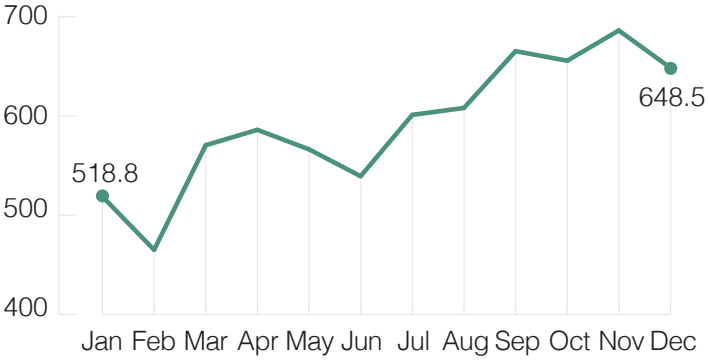
This corresponds to *:



1,564
round trips by plane between Rio de Janeiro and Tokyo

2,160
round trips by car between Los Angeles and New York

CO_2 savings ton/month in 2021



Tembici's projects are responsible for the most CO_2 savings in 2021

3 thousand tons
Rio de Janeiro

2 thousand tons
São Paulo

0.7 thousand tons
Buenos Aires

*Calculation basis: Eccaplan

Health

Contributing to a healthier lifestyle

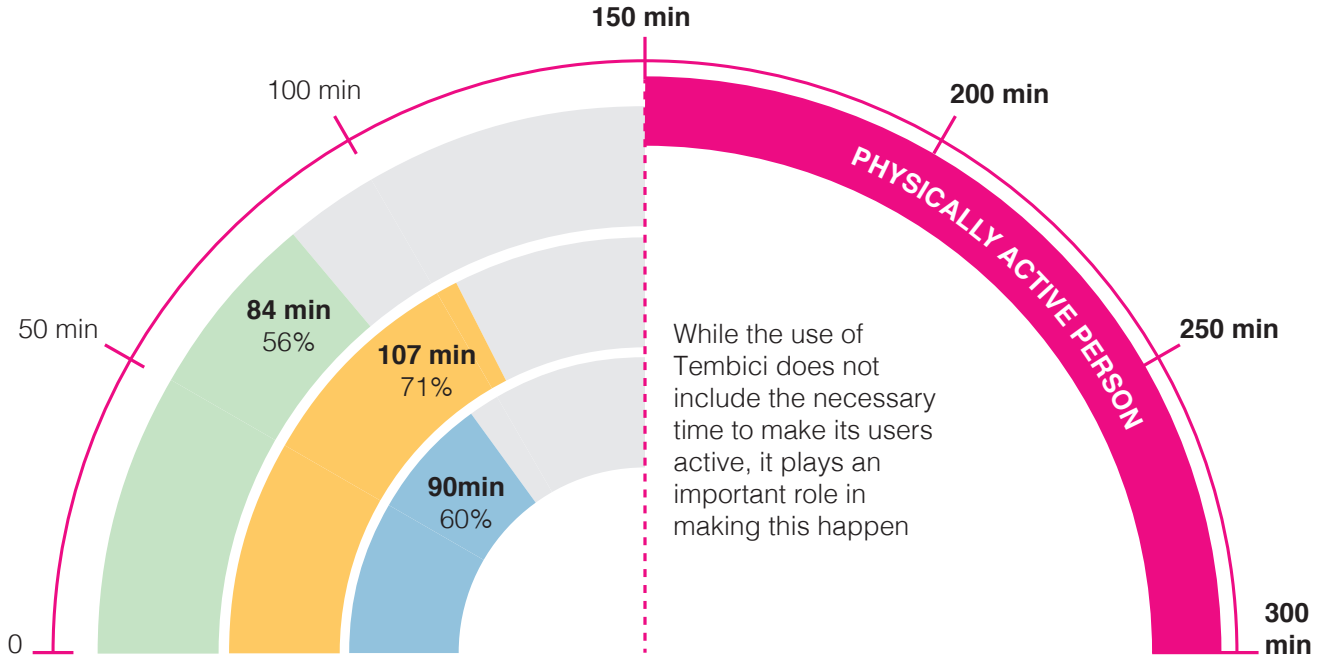
Use of Tembici bikes promotes physical activity and aids in reducing the risk of health diseases associated with sedentariness

To be **considered active**, healthy adults need to practice 150 to 300 minutes a week of moderate physical activity

According to the WHO, regular physical activity in adults reduces the chances of diseases such as diabetes, cancers, and hypertension

Average weekly time that mobility users spent pedaling Tembici bicycles

min Time pedaled
% Percentage to be considered active



While the use of Tembici does not include the necessary time to make its users active, it plays an important role in making this happen

33% among those that use up to three days per week

68% among those that use up to four days per week or more

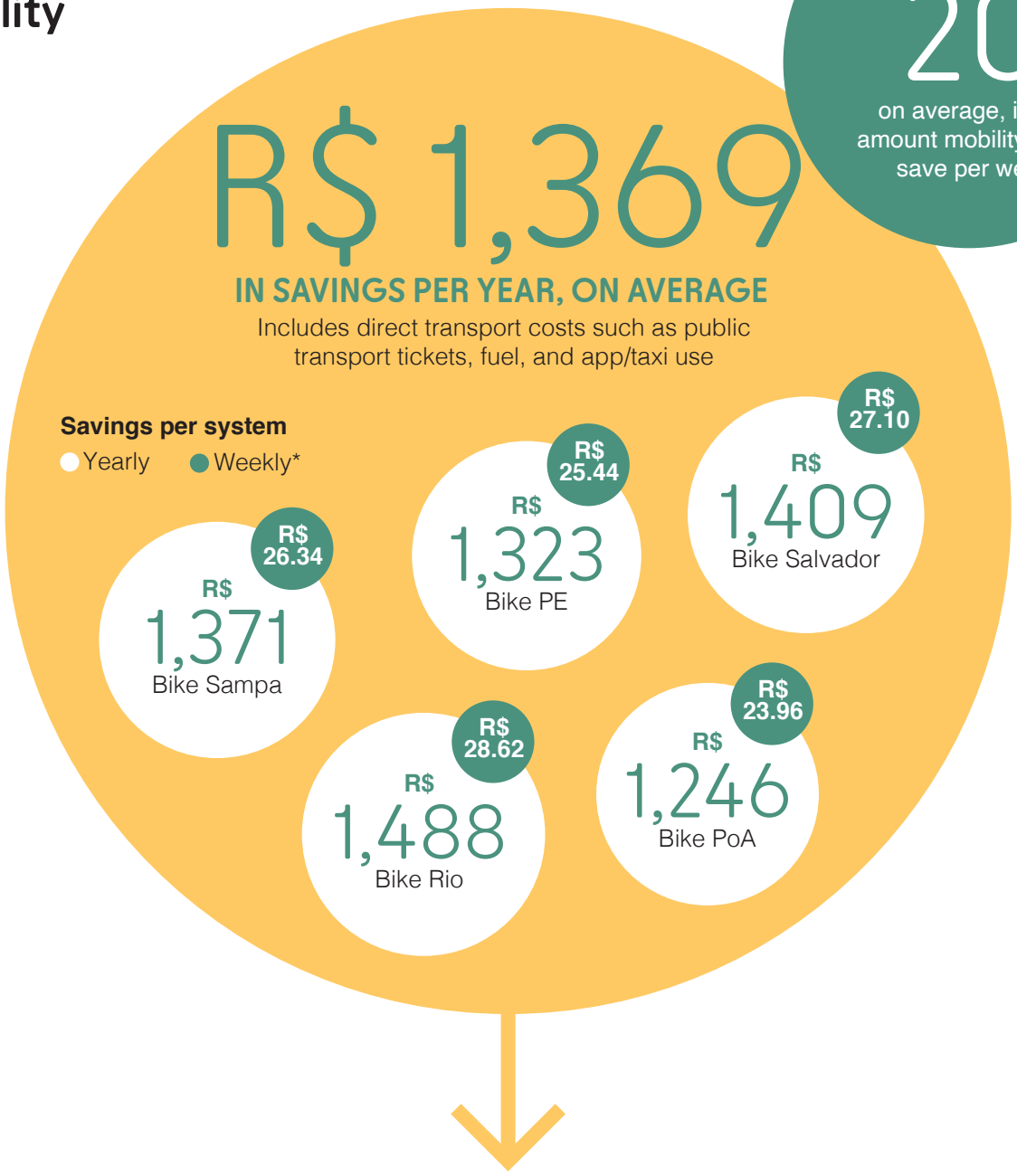
*Analysis restricted to mobility users of the following Brazilian systems: Bike Sampa, Bike Rio, Bike PoA, Bike Salvador and Bike PE.

Savings

Less expensive mobility

R$ 20
on average, is the amount mobility users save per week

R$ 1,369
IN SAVINGS PER YEAR, ON AVERAGE
Includes direct transport costs such as public transport tickets, fuel, and app/taxi use



The money saved could be spent on:

- 12 **food parcel**
- 12 **monthly residential broadband internet subscription**
- 311 **bus/subway trips in São Paulo**
- 12 **monthly gym membership**

*Analysis restricted to mobility users of the following Brazilian systems: Bike Sampa, Bike Rio, Bike PoA, Bike Salvador and Bike PE.

Tembici beyond the systems

Projects

In the community

Tembici's concerns with respect to the positive impacts on society and the environment goes far beyond the results of their bicycles' use. Because of this, there are various fronts that strengthens the influence that the company may have in improving the lives of individuals and in making cities more human and sustainable such as:

LaBICI
Research and development laboratory for innovative solutions and fostering public policy for the construction of more human, sustainable, and intelligent cities.

Doe 1 viagem –
Donate a trip (free translation)
Pay-it-forward program that invites users to donate trips for socially vulnerable individuals and allows the free use of Tembici bicycles through partnerships with some of Brazil's main NGOs. In return, Tembici matches the number of donations so that more and more individuals can cycle.

Bikes for the Planet
Carbon credit generation through substituting polluting modes for bikes.

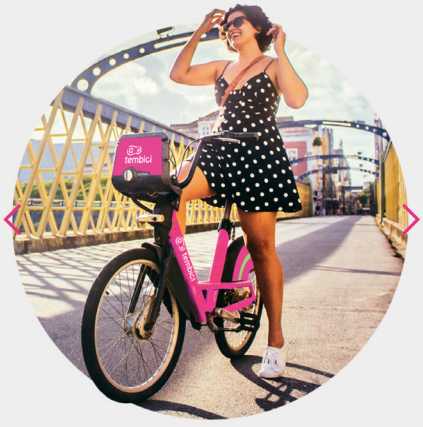
Go Far (free translation)
Acceleration program supporting projects that foster the use of the bicycle as a means of transport.

Pedal Response (iFood Pedal Project)
(free translation)
Free online traffic training and conscientization content available for all delivery couriers registered in the project

SUMMIT Tembici
Annual event focused on fostering discussion related to intelligent cities. The forums bring together public and academic actors and civil society representatives that are constantly searching for solutions for urban mobility.

summit tembici 2021

O futuro é feito de cidades mais tecnológicas ou mais humanas?*

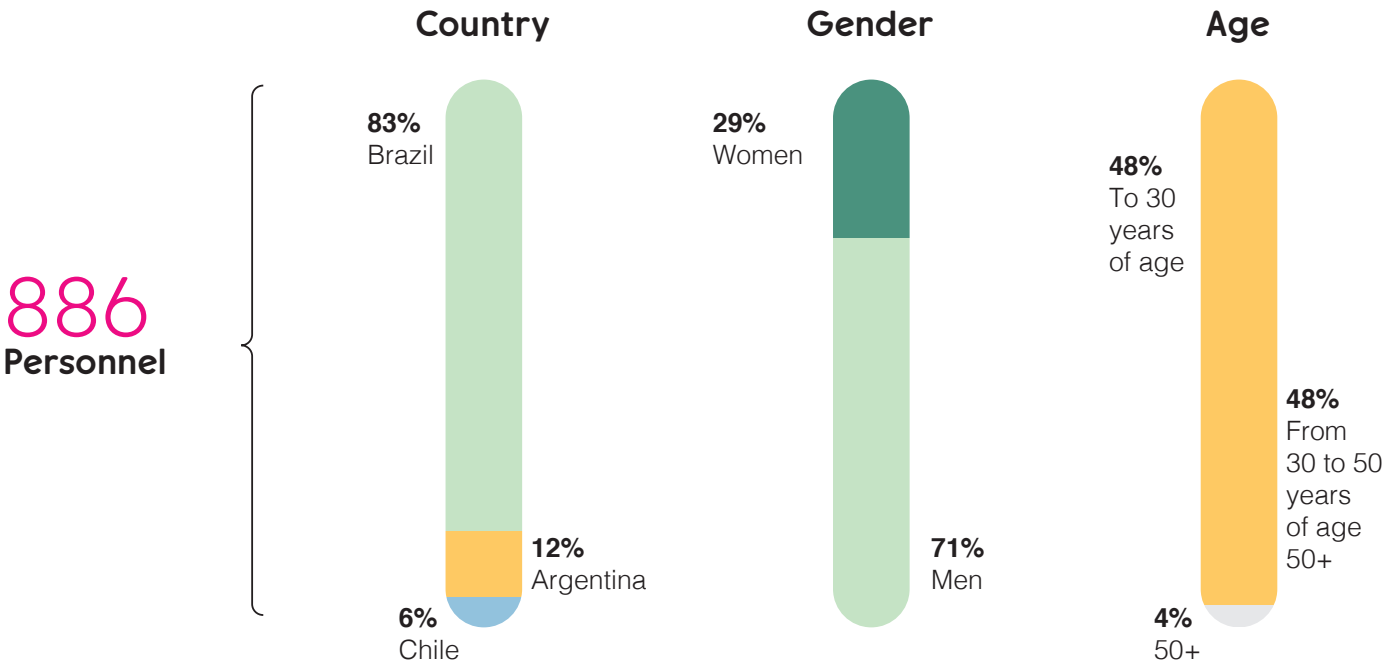


*Is the future made of more technological or more human cities?

Team

Who makes Tembici happen?

All of this pedaling is only possible because of a team of people engaged in administration, planning, and operation of its systems.



Tembici believes that to offer products and services which serve everyone, and which contribute to the transformation of mobility, it is **fundamental to have a representation of society within the company.**

The **Diversity and Inclusion** Survey conducted by the company in 2021 shows some data that reinforces this scenario:

50% of **women** on the **executive board**

50% of **Black leadership** in **customer service**

42% of **Black leadership** in **operations**

14% of **LGBTQIA+** in **leadership roles**

2% of **trans individuals** among **employees**

The building of a diverse and inclusive company is a continuous challenge and therefore the entire company has Diversity and Inclusion targets to advance these themes.

Summary

In the last 3 years many things happened

4 countries

in Latin America. In 2019, in addition to Brazil, operations begun in Argentina and Chile. At the end of 2021, Tembici was the winning bidder for Bogota, Colombia

60 million

rides — the milestone reached since initiating operations, many of which would have previously been made by dangerous and polluting means of transport

22.8 thousand

tons of CO_2 saved with all Tembici systems. Seven thousand tons in 2021 alone

Delivery

Developed and implemented the world's first project totally dedicated to delivery couriers with special plans encompassing mechanical and electric bicycles, availability of support bases, and access to conscientization and educational content

Pandemic

Helped urban mobility in cities to confront the greatest health crisis in the last 100 years, offering an essential means of transport to avoid COVID-19 contagion

Encouraged vaccination against COVID-19, promoting free use of its bicycles and facilitating access for bicyclists in vaccination drive-thrus

- Contributed to the intermodality of cities
- Encouraged individuals to use public spaces
- Helped the financial savings of its users
- Contributed to a healthier urban mobility

This is how Tembici continues firmly on its path...

To inspire an urban mobility revolution one person at a time

References

	Cycling counting	
Pg. 11	Buenos Aires: Government of Buenos Aires	https://www.buenosaires.gob.ar/ecobici/noticias/boom-de-la-bici-se-multiplicaron-los-viajes-y-las-mujeres-ciclistas-que-circulan
	Santiago: Inter-American Development Bank (IDB)	https://downloadapi.paperflite.com/api/2.0/shared_url/5d6485a90b593a2b6eb41122/asset/5d6485a80b593a2b6eb41121/download
	Brazil: Ciclocidade, Transporte Ativo, Ameciclo (average of last counts)	https://www.ciclocidade.org.br/contagem-de-ciclistas/ http://transporteativo.org.br/ta/?page_id=11178 https://plataformadedados.netlify.app/contagens
Pg. 12	Profile of App Delivery Cyclists Survey	https://aliancabike.org.br/pesquisa-de-perfil-dos-entregadores-ciclistas-de-aplicativo/
Pg. 20	Explanation of physical activity/inactivity	https://apps.who.int/iris/bitstream/handle/10665/337001/9789240014886-por.pdf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