

The Meddin Bike-sharing World Map Report

2022 edition

December 2022

This report is made possible by the financial support of [PBSC Urban Solutions](#)



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1. Introduction

This is the second edition of The Meddin Bike-sharing World Map (<https://bikesharingworldmap.com/>) yearly report , inspired by the work of Russell Meddin and his contribution to The Bike-sharing Blog. After Russell's passing in April 2020, a team of curators from different countries came together to keep the Map updated, providing useful information about bike-sharing to everyone with our shared interest. Our team manually scours the Internet to find news articles with information about bike-sharing system plans, openings, closings, and everything in between.

In the [first edition launched in 2021](#), the world was leaving the first big wave of the COVID-19 pandemic, which significantly impacted our cities and lives, including transportation. Bike-sharing was also impacted and 2021 was the first year ever when the number of closures surpassed openings. One year later, bike-sharing regained its strength, and the growth curve was upwards again. This report presents a snapshot of the “Bike-sharing World” on August 31st, 2022. At that moment, there were 8.967.122 bikes in 1.914 systems.

This report presents the evolution of the “Bike-sharing World” since the previous edition. We also talk briefly about what's going on inside our bike kitchen, and the improvements that have been made in the last year to keep The Meddin Bike-sharing World Map updated and user-friendly.

Since 2020, this Report has benefitted from the generous sponsorship from PBSC Urban Solutions.

The Meddin Bike-sharing World Map team

2. The Bike-sharing World: mid-2022

The period between March 2020 and August 2021 represented an unprecedented break in the ascending curve of bike-sharing systems numbers worldwide since 1995 due to COVID-19. We focused on the pandemic’s impact and the resilience of bike-sharing in our 2021 report.

Bike-sharing systems are present in **1.590 cities**, in **92 countries** of every continent (except Antarctica).

In August 2022, there were **1.914 schemes** with **8.967.122 bikes**, including **194.351 pedal-assisted ones (e-bikes)**.

The recovery after COVID-19 shows that bike-sharing is growing stronger again. In August 2022, the world had 1.914¹ systems in operation (*Figure 1*).

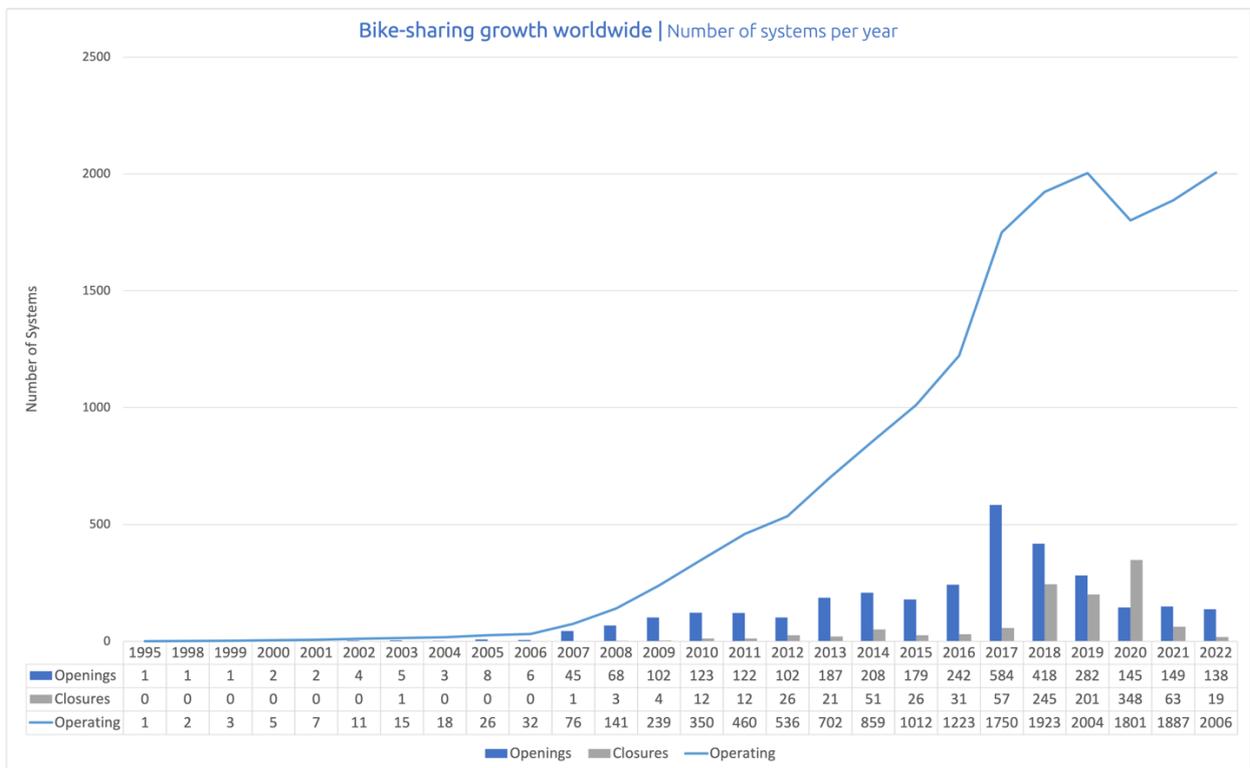


Figure 1: Number of systems per year worldwide: openings, closures, and total operating¹

¹ The chart displays 2006 active systems in 2022, but the number of operational systems is 1.914. As noted in the Acknowledgements and Limitations, our database shows 118 closed systems without a closure date and 51 open systems without a launch date. Plus, our database has 25 systems marked as “Temporarily Closed”. Those systems could not be placed in the chart.

The regional distribution of bike-sharing has Europe and Asia sharing 85% of the active systems (Figure 2). When focusing on the number of bikes, Asia leads by far, with 95% of bikes² (Figure 3).

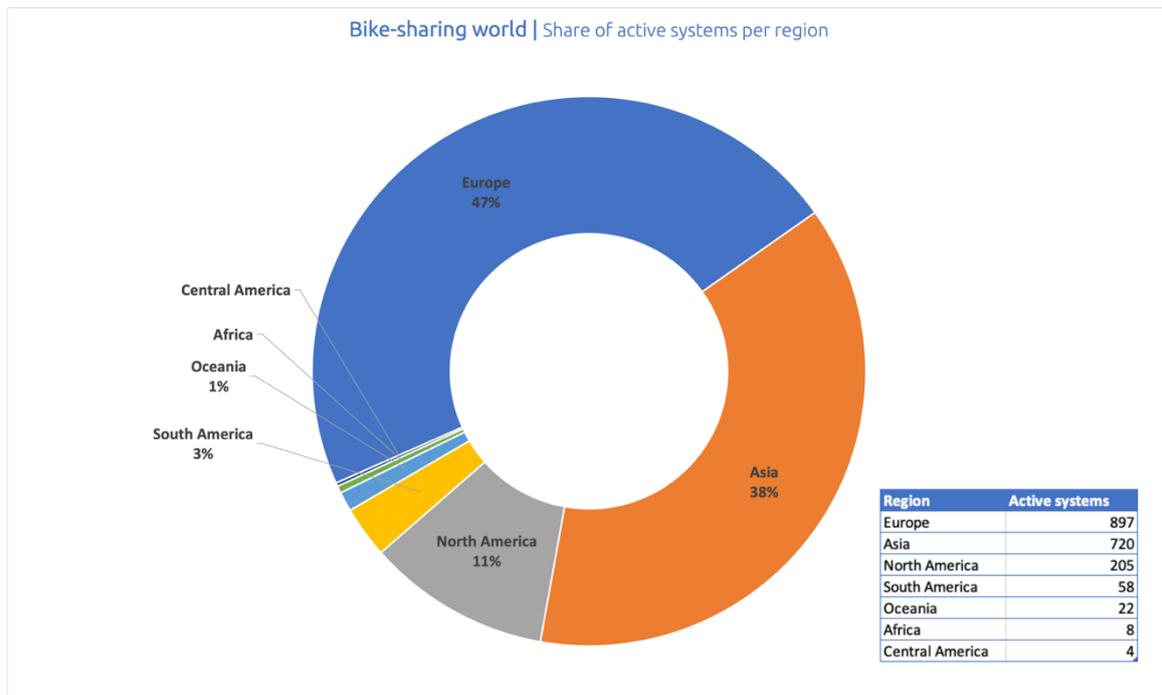


Figure 2: Share of active systems per region in mid-2022

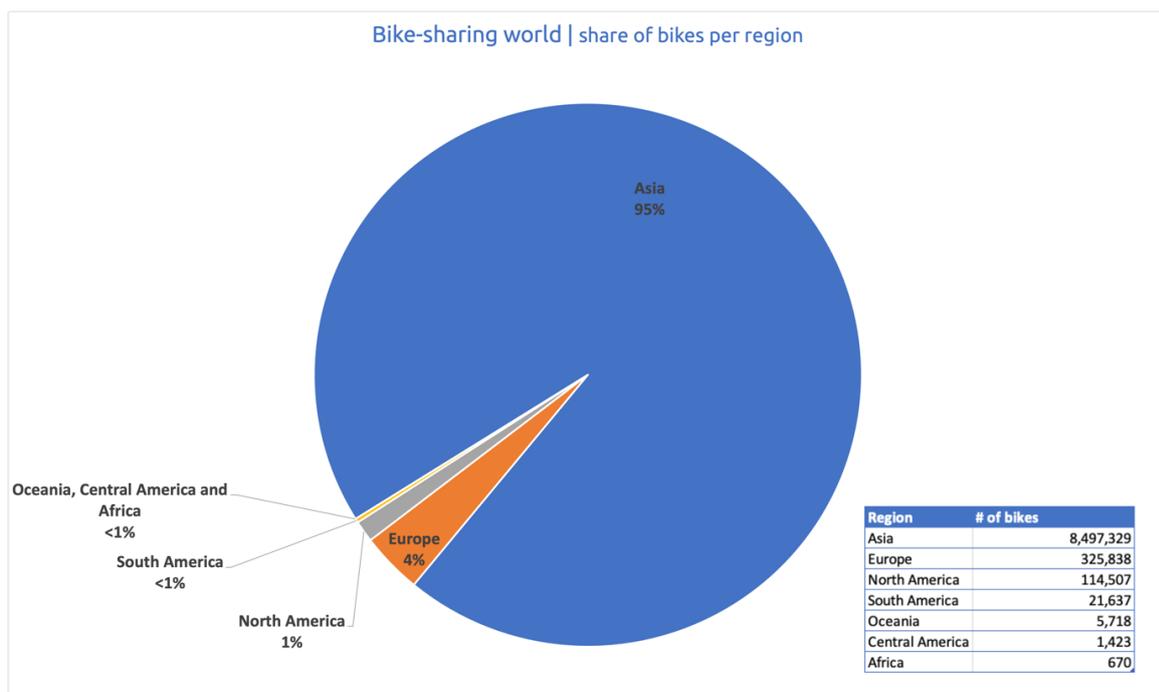


Figure 3: Share of bikes per region in mid-2022

² As noted in the Acknowledgments and Limitations, the number of bikes might be imprecise.

In terms of the number of systems per country, China is still leading the ranking, followed by the United States (Figure 4).

The ranking presented in this report has two innovations from the one presented in the 2021 edition. First, we show the evolution of each country from year to year (represented by arrows). Secondly, we added the total number of bikes to better order countries where two share the same number of systems. For instance: Russia and Brazil have both 25 active systems, but Russia has more bikes, so it ranks higher than Brazil.

Bike-sharing country rank (by # of active systems, mid-2022)							
Rank	Country	Systems	Rank in 2021	Rank	Country	Systems	Rank in 2021
1	China	531	1 →	26	Turkey	16	21 ↓
2	United States	169	2 →	27	Colombia	15	24 ↓
3	Italy	110	4 ↑	28	Taiwan	13	15 ↓
4	Germany	100	3 ↓	29	South Korea	12	28 ↓
5	Poland	85	7 ↑	30	Belgium	11	38 ↑
6	France	81	5 ↓	31	Ireland	11	32 ↑
7	Spain	62	6 ↓	32	Slovakia	11	35 ↑
8	Japan	57	10 ↑	33	Romania	11	37 ↑
9	United Kingdom	48	8 ↓	34	Mexico	10	26 ↓
10	Netherlands	40	17 ↑	35	Argentina	10	33 ↓
11	India	36	9 ↓	36	Slovenia	10	31 ↓
12	Switzerland	32	11 ↓	37	Belarus	9	34 ↓
13	Czech Republic	31	14 ↑	38	Hungary	7	36 ↓
14	Croatia	29	23 ↑	39	Saudi Arabia	7	N/A ↑
15	Greece	28	12 ↓	40	Indonesia	6	42 ↑
16	Canada	26	22 ↑	41	Kazakhstan	5	43 ↑
17	Russia	25	20 ↑	42	United Arab Emirates	5	50 ↑
18	Brazil	25	13 ↓	43	Ukraine	5	39 ↓
19	Austria	23	16 ↓	44	Israel	4	41 ↓
20	Portugal	22	25 ↑	45	Iran	4	53 ↑
21	Finland	21	18 ↓	46	Viet Nam	4	N/A ↑
22	Norway	21	30 ↑	47	Lithuania	4	54 ↑
23	Sweden	20	19 ↓	48	Malaysia	4	44 ↓
24	Denmark	16	29 ↑	49	Chile	3	45 ↓
25	Australia	16	27 ↑	50	Estonia	3	48 ↓

Figure 4: Country ranking by number of active systems in August 2022 and variation from 2021

3. What has happened since the last report?

From August 2021 to August 2022, 187 new systems began operating in 170 cities worldwide (Figure 5). In the same period, only two systems were closed. The United States, Germany, the Netherlands, Japan, and Spain lead the ranking of new systems since our prior report.



Figure 5: Monthly evolution of bike-sharing worldwide from August 2021 to August 2022

The Meddin Bike-sharing World Map currently uses seven categories to designate systems according to their parking technology and regulations: “Dock-based” (bikes are parked in a docking station), “Dockless hubs/bays” (parking in designated areas without a physical station), “Free-floating” (bikes can be parked anywhere), “Secure to street furniture” (parking in regular bike racks), and three kinds of hybrid systems that mix the above technologies and regulations (Figure 6).

Active bike-sharing systems per type (August 2022)	
Type	# of systems
Dock-based	1134
Free-floating	393
Dockless hubs/bays	226
N/A	63
Hybrid (Docks and free-floating)	62
Hybrid (Docks and hubs)	18
Secure to street furniture	13
Hybrid (Docks and park-beside-dock)	5
Grand Total	1914

Figure 6: Active bike-sharing systems in August 2022 by type³

³ N/A means that no information regarding the type of system was found.

These categories were created following new technologies and regulations implemented in different cities and systems. Over time, some of these categories might become obsolete and/or rearranged into others.

For this report, we decided to distribute bike-sharing into only two types: “dock-based” and “dockless”, using the criteria of where the lock mechanism is: on the bike or in a station. Every system except the pure “dock-based” ones was aggregated in the “dockless” type. The following charts display the growth of bike-sharing systems worldwide per region and by type since August 2021.

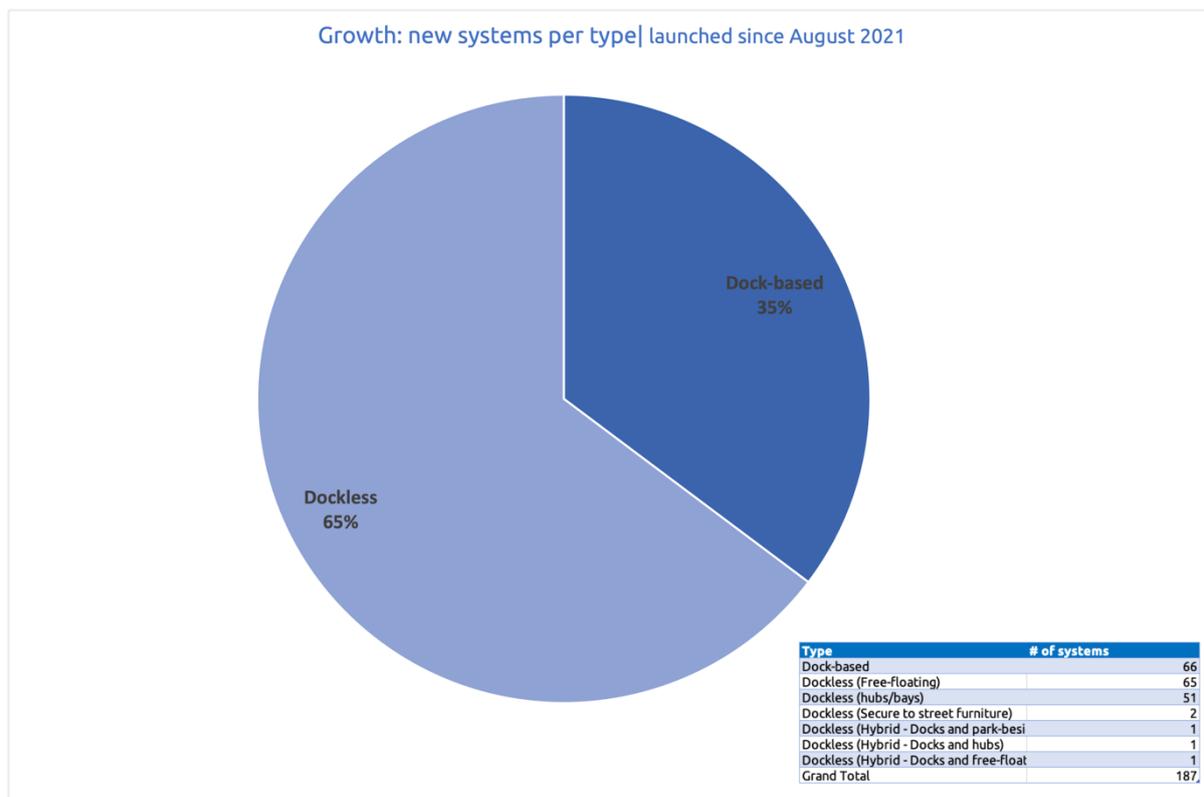


Figure 7: New bike-sharing systems per type, launched since August 2021

In terms of countries that launched the greatest number of bike-sharing systems, the United States and Germany tied in first place with 20 new systems since August 2021. They’re followed by the Netherlands, Japan, Spain, and the United Kingdom (Figure 8).

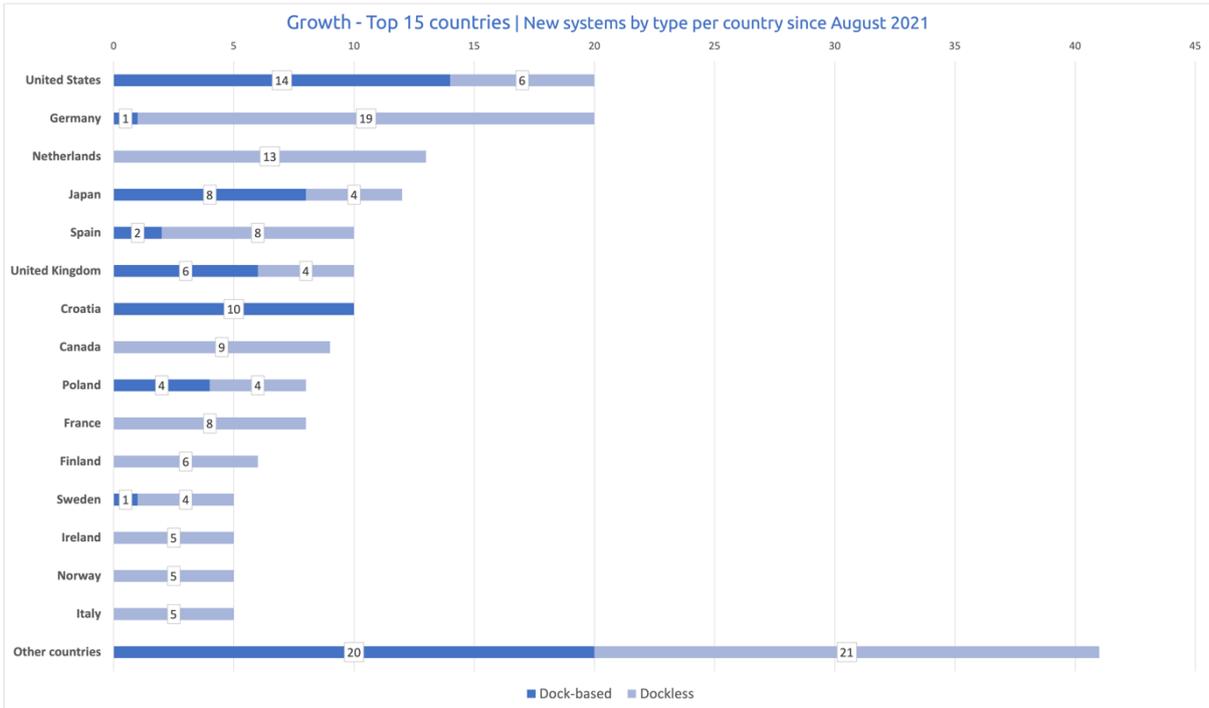


Figure 8: Ranking of countries with most systems opened since August 2021 per type (dock-based and dockless)

Europe leads the ranking of systems launched per region, with 67% of the total, followed by North America and Asia (Figure 9).

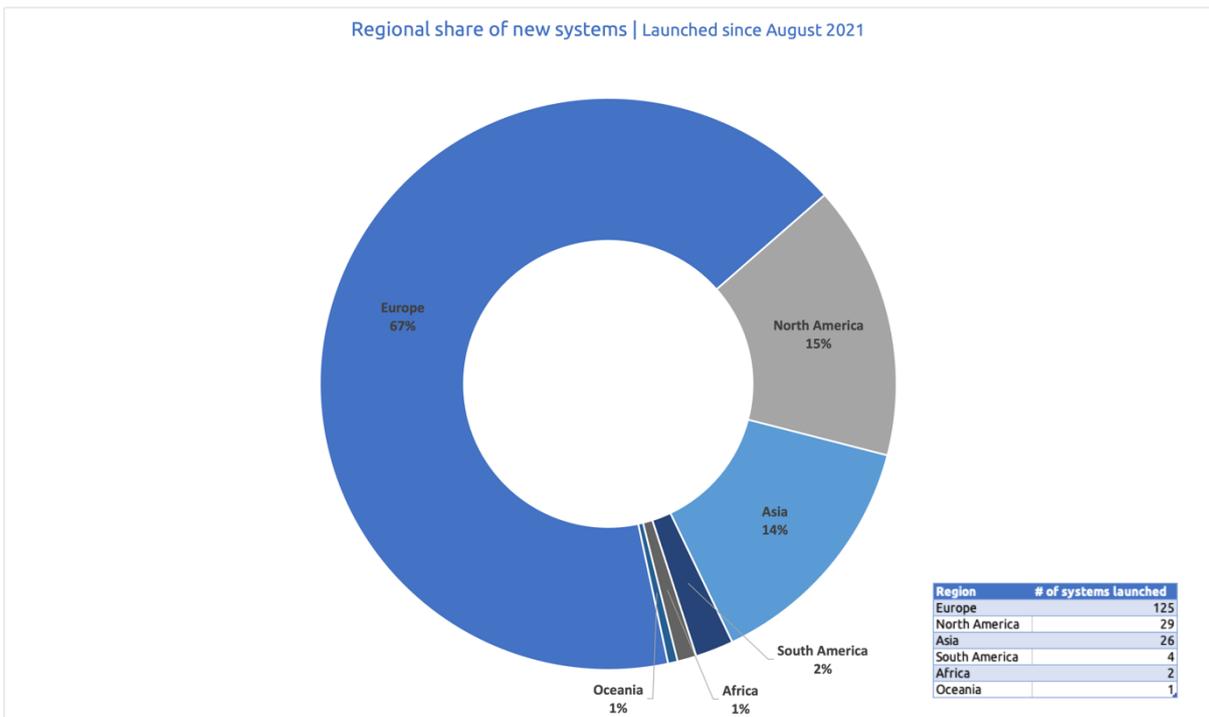


Figure 9: Regional share of systems launched since August 2021

Figures 10 to 13 shows the distribution per country of systems launched in each continent / region.

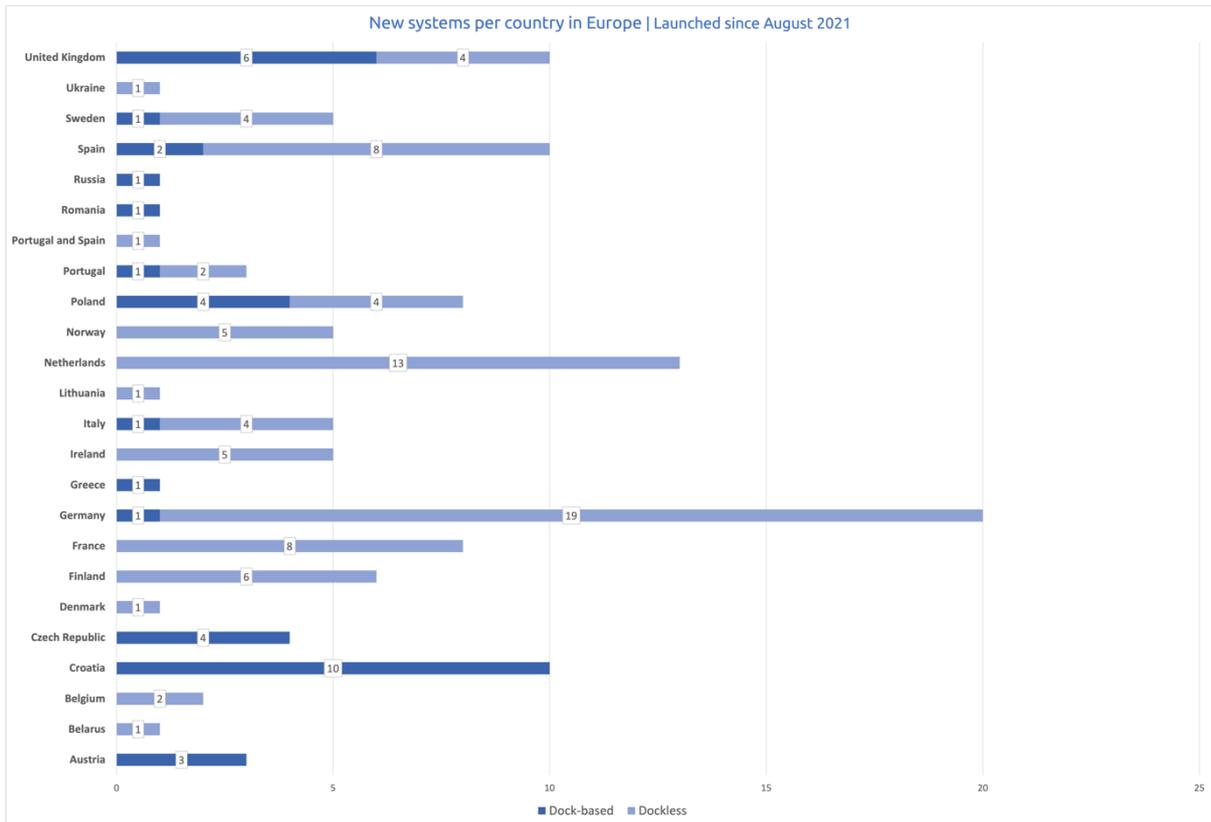


Figure 10: Systems launched in Europe since August 2021 per country

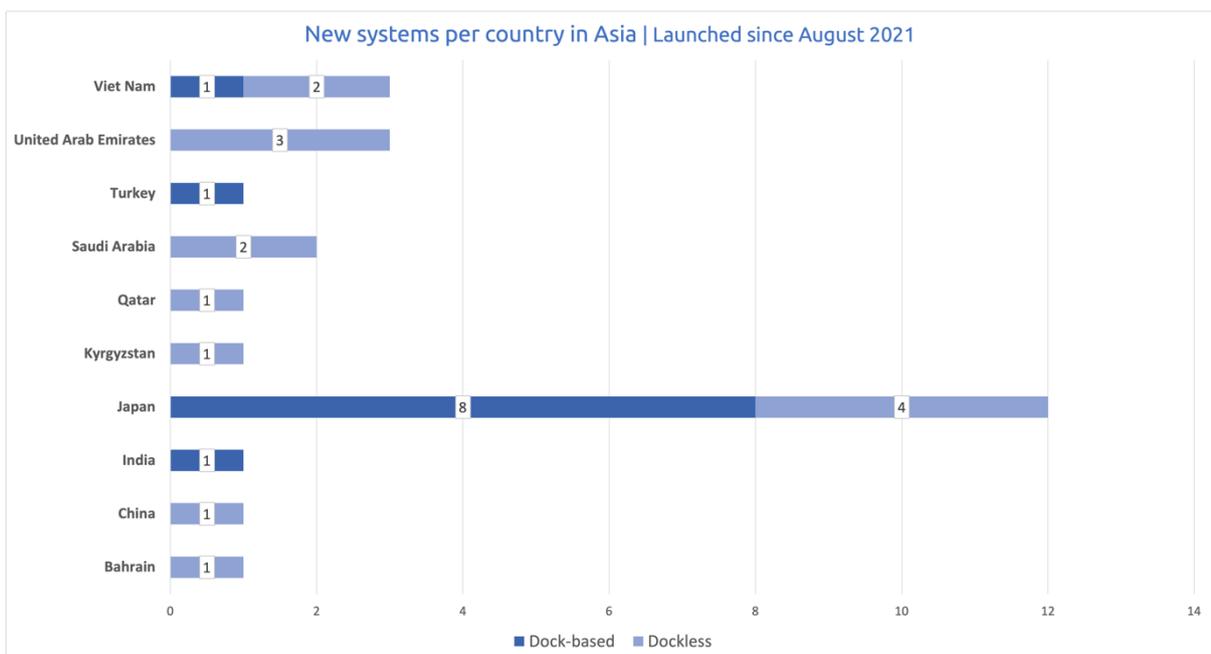


Figure 11: Systems launched in Asia since August 2021 per country

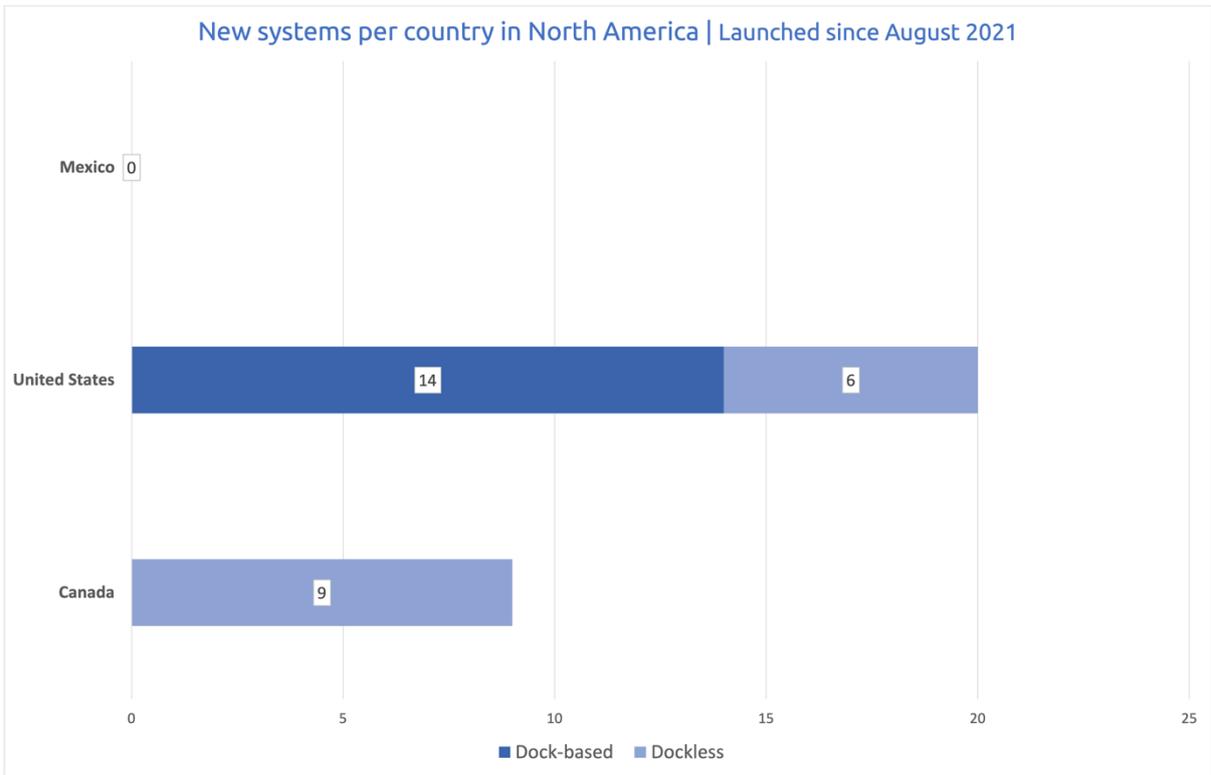


Figure 12: Systems launched in North America since August 2021 per country

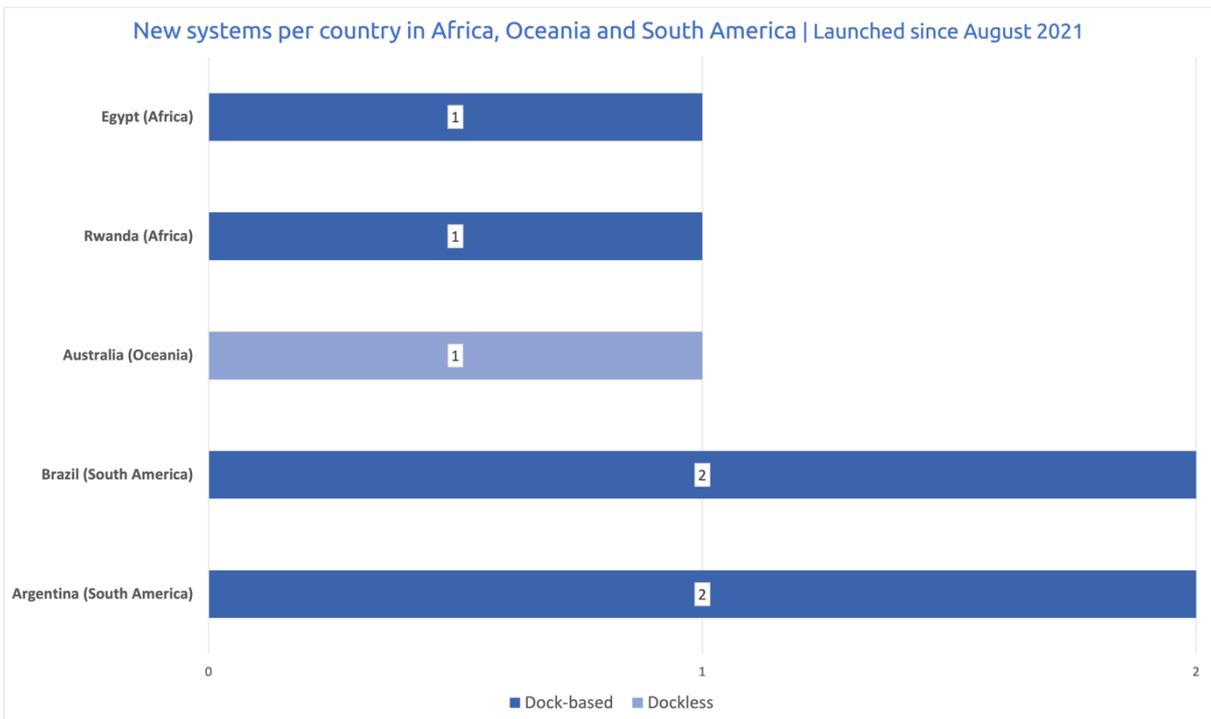


Figure 13: Systems launched in Africa, Oceania, and South America since August 2021 per country

4. Electrification

Pedal-assisted bikes, also known as e-bikes or pedelecs, are expanding quickly worldwide. They provide convenience for hilly cities, have the potential to attract a wider range of citizens to biking, expand the usage of cargo bikes, and allow for reaching longer distances. Bike-sharing systems are following this trend and adding e-bikes to their fleets.

Since August 2021, the number of bike-sharing systems with e-bikes has grown by 62,9% and the number of e-bikes increased by 72,95%.

Growth of systems with e-bikes		
Date	Total # of systems	# of systmes with e-bikes
Aug-21	1.891	348
Aug-22	1.914	567
Growth		62,93%

Figure 14: Growth of systems with e-bikes in its fleets from August 2021 to August 2022

Growth of bike-sharing fleets		
Date	Total # of bikes	# of e-bikes
Aug-21	9.619.158	112.376
Aug-22	8.967.122	194.351
Growth		72,95%

Figure 15: Growth of bike-sharing fleets worldwide from August 2021 to August 2022

5. Map interface and database updates

Keeping updated with the Bike-sharing World is not an easy task. New systems are launched frequently, others are closed from time to time, and the number of bikes and stations changes (sometimes without notice). Having an international team of curators makes the task a little easier, but until last summer, every update was done manually. Plus, the Map has been online for 15 years in a very dynamic market, with 3.549 entries in the database (systems that still exist, that are gone, or that were never opened).

In 2020, the database was migrated from the old Google Maps to a MySQL server, finding a new home that was more powerful and flexible. Since then, our team has been working to fix every hole in it, finding launch dates, the number of bikes,

operator names, and other relevant information. In the recent period, we made a couple of concentrated effort to improve the database that we hadn't reached in depth before due to language or information barriers. It's a permanent task, but we're confident to say that the information presented on the Map is the most accurate possible.

This year we made some aesthetic improvements to the Map's interface, such as adding a photo and graphically tracking fleet size, making it more beautiful without losing its functionality. Also, the Map interface is now mobile-friendly. We hope you like it!

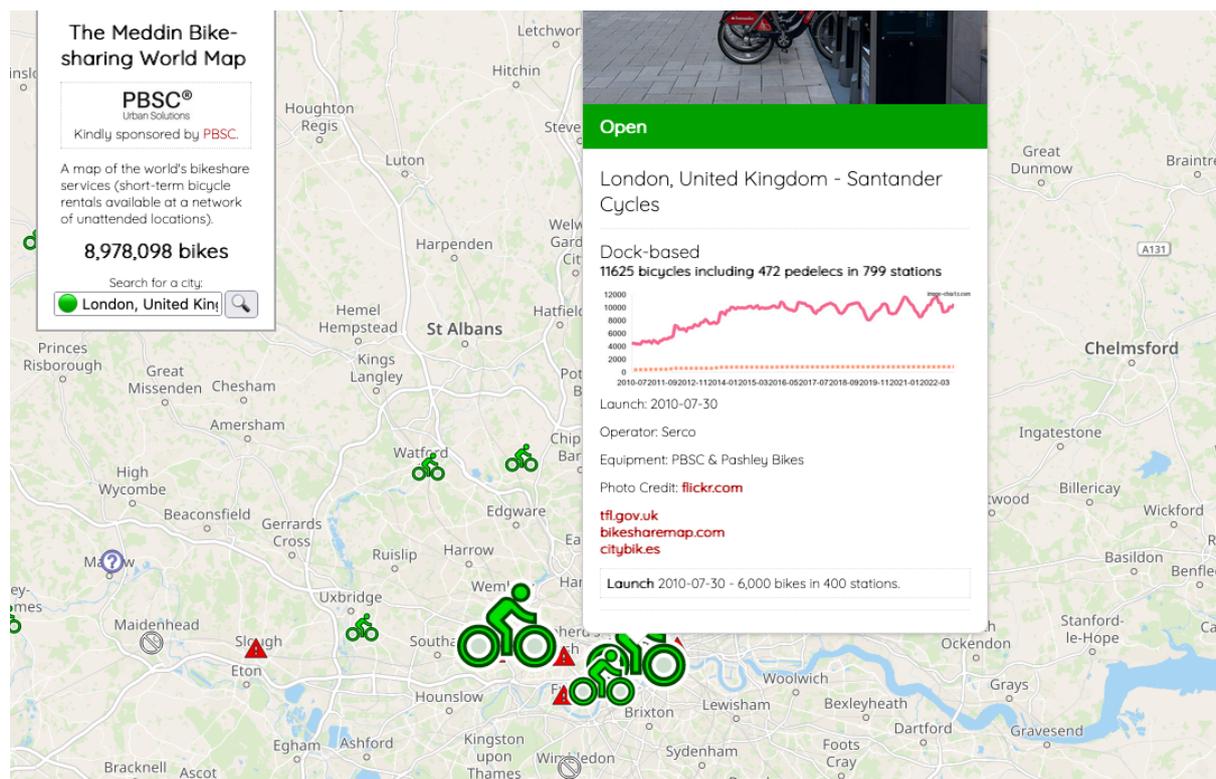


Figure 16. An example of Santander Cycles, in London, with an automated number of bikes, pedelecs, and stations, plus a chart with historical records on the number of bikes since 2010

Besides filling in the blanks of the database and polishing the visuals, a big automatization project was started by European contributor Oliver O'Brien. The project consists of integrating The Meddin Bike-sharing World Map with [The Bike Share Map \(BSM\)](#), allowing live updates and historical trends on the number of bikes, e-bikes, and stations on each system.

Currently, 433 active systems and 64 permanently closed ones are already integrated, showing an accurate number of bikes and stations (Figure 16), plus the historical trend. The project started with large systems (more than 1.000 bikes), and is now updated monthly. Smaller systems are being added gradually.

This integration takes advantage of the increasing adoption of the de-facto standard for real-time bicycle-sharing system data, the [General Bikeshare Feed Specification \(GBFS\)](#), managed by MobilityData on behalf of the [North American Bikeshare & Scootershare Association \(NABSA\)](#) and widely used by Google Maps and other applications. Where open GBFS feeds are available for systems, this allows easy incorporation into BSM and The Meddin Bike-sharing World Map.

There are still significant gaps in both the historic and current numbers, in particular China; however, the project now has increased confidence in the numbers it presents for many of the biggest systems elsewhere across the world.

Some work towards the linking project was carried out with the support of University College London (UCL), which funded a summer internship to research and back-fill historic size estimates for the largest systems in the world. The project is now able to make its database available to bonafide academic researchers interested in examining system coverage and trends across the world, upon application via the [Consumer Data Research Centre's "CDRC Data" service](#). The CDRC is based at UCL.

6. Acknowledgments and Limitations

Working on a global scale with such a dynamic topic as bike-sharing is a challenge, but The Meddin Bike-sharing World Map has been doing that for 15 years. Even with the technological advances facilitated by the Internet and with improvements we've made on the website, finding every bit of information is still not possible.

For this report we acknowledge three limitations:

- The Map might be missing some systems that exist or have existed in the world. If you see something is missing, don't hesitate to contact us at bikesharingworldmap@gmail.com;
- As noted in *Section 2*, there are 118 open systems for which we could not find a start date and 51 closed systems without a closure date. Plus, there are 25 systems "Temporarily Closed", meaning that they shut down, but might return. That impacts the charts presented in *Section 2*, as they're not counted;
- Even with the integration with The Bike Share Map and automatic monthly updates described in section 5, we are aware that the number of bikes might be imprecise, but the numbers presented now are more accurate than the ones mentioned in the 2021 report due to the work we've completed over the past year in updating our database.

7. Our team

Oliver O'Brien (focus: Website and Europe)

Oliver has been studying bike-sharing systems since he built The Bike Share Map to visualise live data from the London Bicycle Sharing System back in August 2010. He has amassed several terabytes of bike-sharing data since then and maps the live status of around 500 of the world's bike-sharing systems. He is Centre Technical Manager at the ESRC Consumer Data Research Centre (CDRC) based at University College London (UCL). He is also a data journalist for Zag Daily, an online magazine specialising in e-bike-sharing and e-scooter-share in UK and Europe.

Paul DeMaio (focus: Map admin and U.S. & Mexico)

Paul founded MetroBike in 2005 to hasten the introduction and growth of bike-share in the Washington, D.C. region and internationally. Fortunately, he found supportive clients regionally and abroad – including being hired by the City of Copenhagen where he originally learned about bike-sharing – that have allowed him to implement some of the best bike-sharing systems around. This includes Arlington County, Virginia, U.S. where he co-authored the first public tender for a service in the U.S. which became Capital Bikeshare in 2010 and he continues to manage the County's portion of the service.

Renata Rabello (focus: South America)

Renata is the head of Urban Planning at Tembici where she coordinates urban planners and engineers responsible for the planning of the bike-sharing systems of Brazilian and many Latin American cities. She has a Master's degree from FAU-USP (2019) in the area of Landscape and Urban Design. Renata is an architect and urban planner who graduated from FAUUSP in 2012 and completed the program of Dual Formation FAU-EPUSP Civil Engineering of the Polytechnic School.

Steve Chou (focus: Canada)

Steve has been working for the City of Vancouver for the past ten years on a range of projects supporting healthy and sustainable transportation and public life in the city. He became involved with bike-sharing as part of the team responsible for advancing the approval and implementation of Vancouver's bike-share system which launched in 2016. The Meddin Bike-sharing World Map proved to be a valuable resource for Steve and he hopes to support the development of the Map so it can continue to be a source of knowledge and insight for others.

Thiago Benicchio (focus: Global curator)

Thiago is a journalist, urban mobility researcher, and consultant based in Sao Paulo, Brazil. He rediscovered bicycles in his adult life while doing his graduation project -- a documentary called "Sociedade do Automóvel" (2004). He published a blog (Apocalypse Motorizado) from 2005 to 2011. At the same time, he engaged in the Critical Mass movement, Carfree-Day organizing, activist initiatives, and policy advocacy in his hometown. In 2009, he was one of the founders and the first Executive Director of Ciclocidade (Sao Paulo Cyclist's Association) until 2014. He worked as Active Transportation Manager of ITDP Brasil (2014-2018), coordinating and developing bicycle-related projects in Brazilian cities. Additionally, Thiago published articles in books and magazines, joined cycling forums, and cycled in diverse world cities. He became a father in 2018 and expanded his interests toward cities and childhood.