



COPENHAGENIZE DESIGN CO.

**EVALUATING CYCLING POLICY AND PROGRESS BASED
ON THE COPENHAGENIZE INDEX PARAMETERS**

FOR THE CITY OF BERN

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Copenhagenize Design Company is a leading urban design & communications consultancy specialising in all matters relating to bicycle culture: planning, infrastructure, design and communications. When it comes to urban cycling and life-sized cities, we approach every job from a human perspective - using design, anthropology, sociology and rationality as our points of departure.



COPENHAGENIZE

BICYCLE-FRIENDLY CITIES INDEX

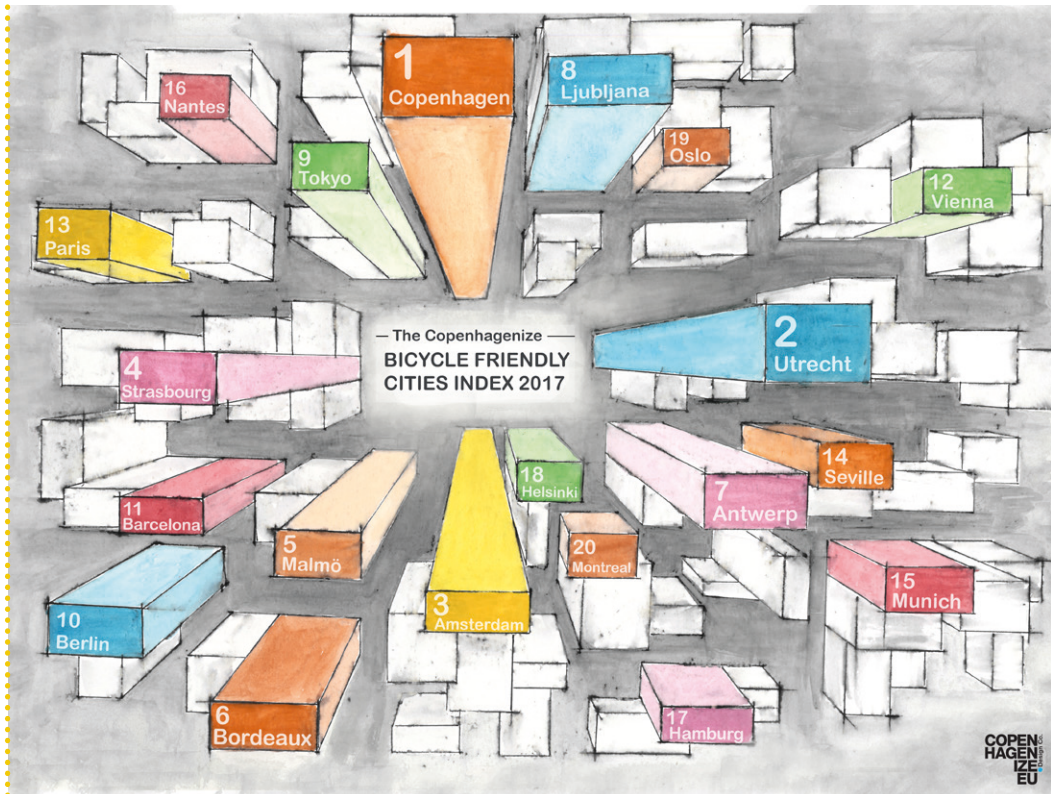
The Copenhagenize Bicycle Friendly Index is the world's most comprehensive inventory and ranking of bicycle-friendly cities. Our company has published four Indices since we started the bi-annual ranking in 2011.

Copenhagen and Amsterdam have been leading in the past rankings, yet each year, new cities appear in the Top 20 as cycling policies become increasingly ambitious, particularly in Europe, with cities in North and South America still working their way up. This can often be attributed to the joint work of the politicians, and the inhabitants. Each publication of the Index is an opportunity for cities to evaluate their efforts and prompt healthy competition between the leaders to remain in the worldwide Top 20. In the 2017 ranking, 136 cities - primarily with populations of over 600,000 - were evaluated.

The evaluation is based on 14 parameters, both qualitative and quantitative, making the Copenhagenize Bicycle-Friendly Index the only ranking to focus on more parameters than the two typically assessed: number of kilometres of bicycle infrastructure and modal share. Indeed, the parameters range across a variety of topics, such as the level of investment of politicians, advocates of cargo bike use, and, of course the quality of cycling conditions (bicycle infrastructure and traffic calming).

Why Bern is not included in the Index?

As the Swiss capital does not have enough inhabitants to be ranked in the Index, we are therefore thrilled to reveal the results of our evaluation of Bern's current cycling policy in this report.



A. OVERVIEW OF THE CYCLING POLICY & METHODOLOGY

1. Bern in pictures - Overview
2. Bern in figures - Data
3. Bern in maps - Velostation & Cycling network
4. Bern in review - Methodology
5. Bern in context - Comparison
6. Bern in grades - Copenhagenize Index
7. Bern in the making - Velohauptstadt



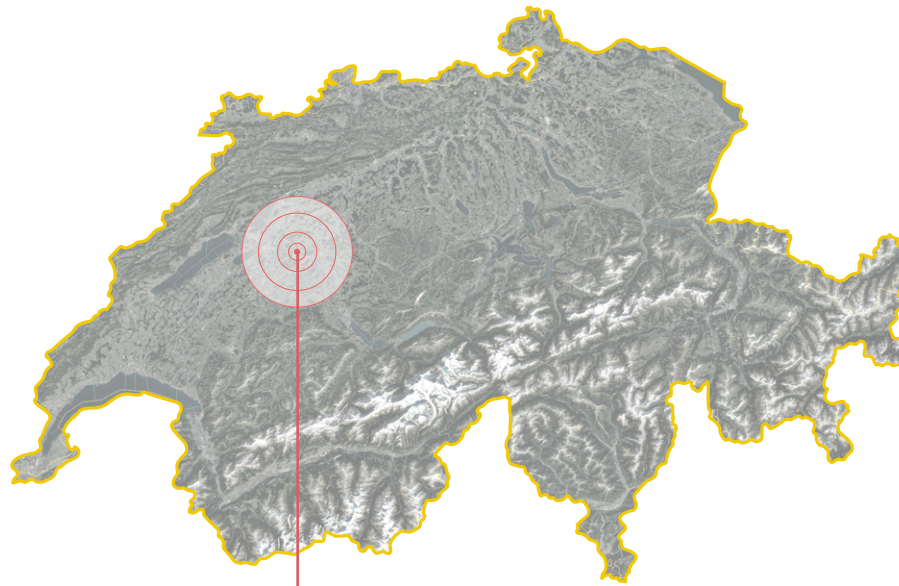
1. BERN IN PICTURES

OVERVIEW



The City of Bern, the capital of Switzerland, is located in the Northwestern part of the country, on the Swiss plateau, called Mittelland, between the Alps and the Jura. Both the Federal government and the Swiss Parliament meet there. It is also the capital of the vast canton of Bern, with the second largest population in the Helvetic country.

Since 1983, the preserved old town of Bern, located in one of the river Aar's meanders, is listed as an UNESCO World Heritage Site.



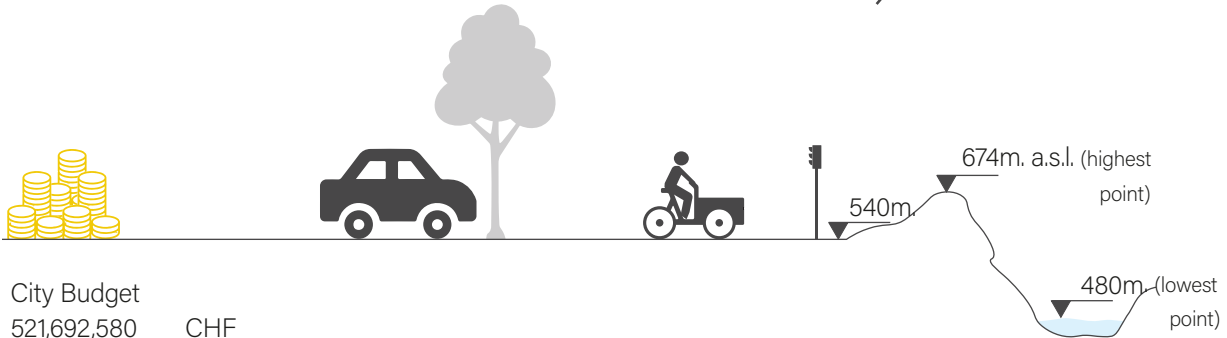
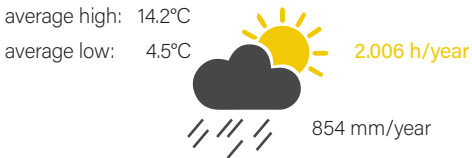
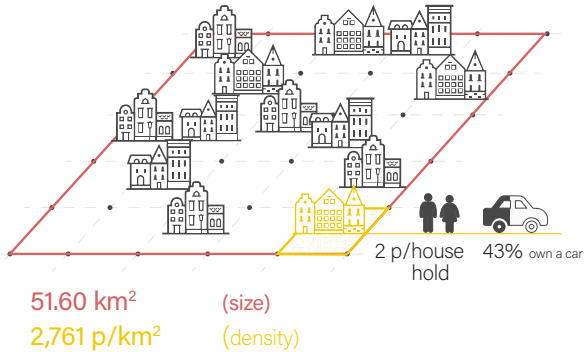
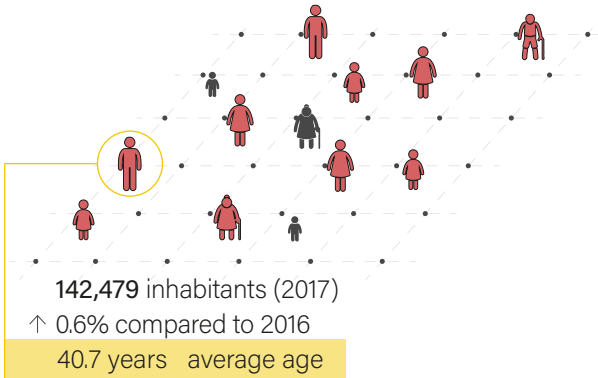
2. BERN IN FIGURES

DATA

Bern is the fourth biggest city in Switzerland, with a population of 142,479 inhabitants, and a size of 51.6 km². The city is rather dense, with a population density of 2,761 people per km² and in large part due to a compact old town.

With an average altitude of 540 meters above sea level, and a high point at 674 meters, the city counts relatively moderate, yet non-negligible slopes.

The climate is semi-continental, with cold and snowy winters, and relatively hot and humid summers. With 182 days of rain per year, Bern is a city characterized by regular rainfall.




City Budget	521,692,580	CHF		
	115,638,001	CHF	22.7% for TVS	cycling and pedestrian policy
			(Tiefbau, Verkehrsplanung & Stadtgrün - Civil Engineering, Traffic Planning & Greenery)	2,450,090 CHF* 34% of the traffic budget (V) ↑ 96% compared to 2017 for 2019

* Budget for general investment only. Additional budget for each specific project.

3. BERN IN MAPS

VELOSTATION & CYCLING NETWORK

— legend: —

 Main cycling routes



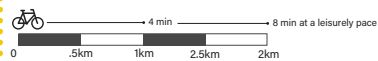
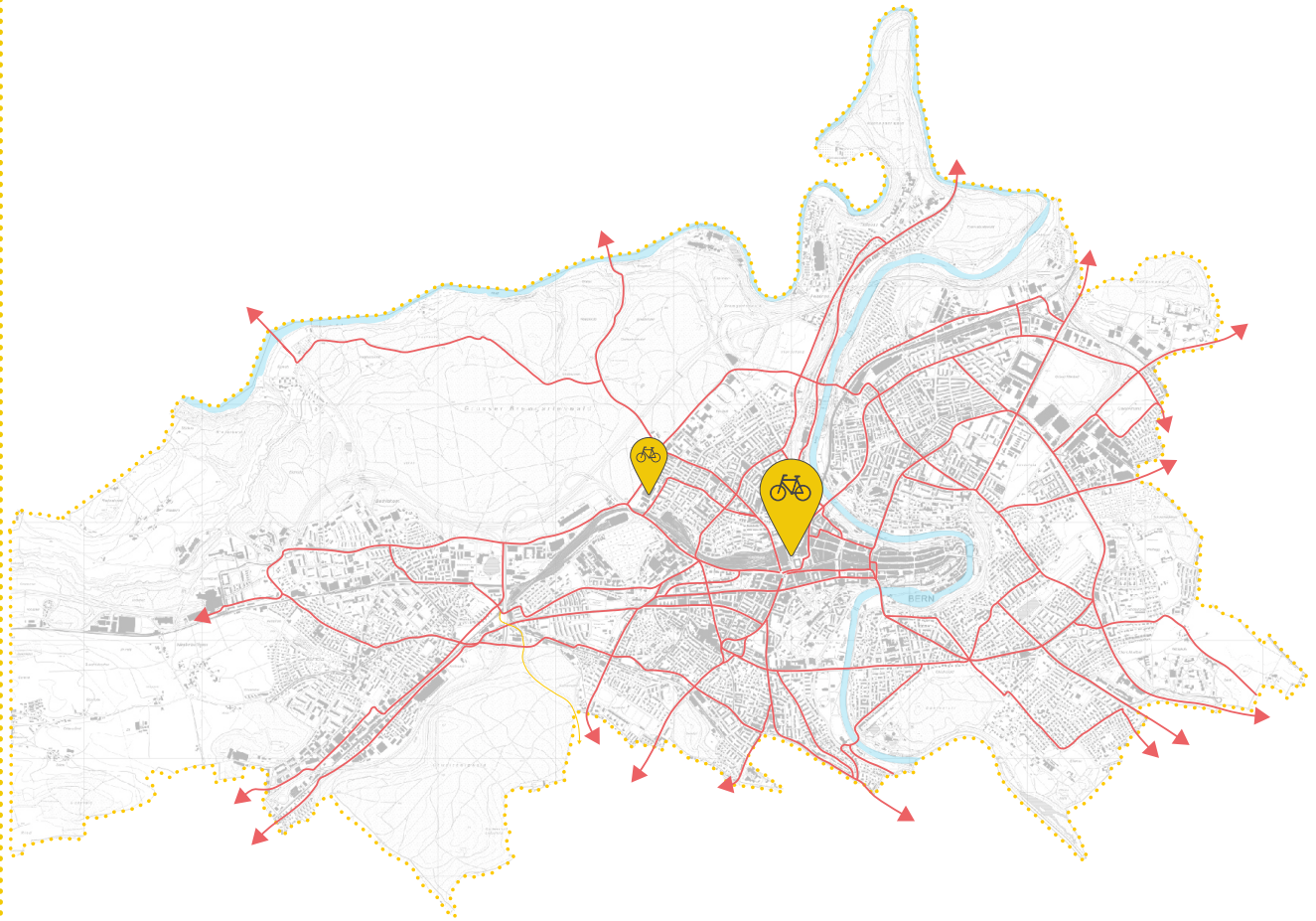
Velostation at the University

- vonRoll Hochschulzentrum



Velostations surrounding the train station

- Milchgässli
- PostParc
- Schanzenbrücke
- Bollwerk



4. BERN IN REVIEW

METHODOLOGY

In order to assess the cycling policy of Bern, the Copenhagenize Design Co. team tested the streets of the city by bicycle for several days from 17 to 19 October 2018.

During our time in Bern, we not only assessed the situation with our own personal cycling experience, but also met with local stakeholders, who provided us with interesting insights on their perceptions of the city.

Furthermore, we read all the documents provided by the city about their Velo-Offensive program, as well as a range of news articles, and blog posts about cycling-related topics. We also studied their Masterplan in detail, as well as reports on the city's recently completed projects.

INTERVIEWS WITH LOCAL STAKEHOLDERS

Jonas Schmid

co-founder of
carvelo2go together
with Jörg Beckmann
at the TCS



Velo Kurier Bern

bicycle courier,
company operating
since 30 years

Michael Liebi

head of the "Fachstelle
Fuss- & Veloverkehr",
part of the TVS



Ursula Wyss

director for Civil Engineering,
Transport and City
Greenspace (TVS)

Pro Velo Bern

advocate group at local level.
Interviewee was its President
Michael Sutter



5. BERN IN CONTEXT COMPARISON

In order to help the City of Bern evaluate their recent efforts to strengthen their cycling policy, we compared them to the following cities (depicted in the map to the right). These cities were chosen because they are similar in size to Bern or have a comparable cycling modal share. Furthermore, we added the less populated cities of the Copenhagenize Index Top 20 to offer an even better insight of how Bern would rank in comparison.

Legend

- Bern
- Cities with a similar size or a rather similar cycling modal share
- Less populated cities of the Copenhagenize Index Top 20

[3] Ranking in the Copenhagenize Index



6. BERN IN GRADES

COPENHAGENIZE INDEX

Here we reveal the scores of Bern, based on data gathered by the city and our trip. According to the Copenhagenize Index methodology, the city was given a score between 0 and 4 points in the 14 different categories. In addition, a maximum of 12 bonus points could be awarded for particularly impressive efforts or results.

Each parameter of the index and the corresponding grade is then explained in detail on the following pages.

Based on our methodology, Bern received the following grade:

40/68

1. ADVOCACY	0	1	2	3	4	
2. POLITICS	0	1	2	3	4	+2
3. FACILITIES	0	1	2	3	4	+1
4. TRAFFIC CALMING	0	1	2	3	4	+1
5. BIKE SHARE	0	1	2	3	4	
6. GENDER SPLIT	0	1	2	3	4	
7. MODAL SHARE	0	1	2	3	4	
8. MODAL SHARE SINCE 2006	0	1	2	3	4	
9. PERCEPTION OF SAFETY	0	1	2	3	4	
10. INFRASTRUCUTRE	0	1	2	3	4	
11. CULTURE	0	1	2	3	4	
12. SOCIAL ACCEPTANCE	0	1	2	3	4	
13. URBAN PLANNING	0	1	2	3	4	+1
14. CYCLELOGISTICS	0	1	2	3	4	

7. BERN IN THE MAKING

VELOHAUPTSTADT

Since the city has pursued rather radical changes in their cycling policy over the past few years, especially with the launch of the Velo-Offensive plan, this report will allow Bern to evaluate the results of its recent efforts and compare them to the current cycling situation of the most bicycle-friendly cities of the world.

With 45% of car trips under 5 km in 2010, it was important for Bern to quickly promote alternative modes of transportation and, among others, to strengthen its cycling policy.

In 2015, the Bern City Council voted in favor of the Velo-Offensive, a comprehensive cycling strategy. Its objective is to improve cycling conditions, while considering the most vulnerable users and increasing the cycling modal share. With this plan, the city shows a clear will to innovate in terms of infrastructure, developing cycle tracks and bicycle streets, increase parking facilities, introduce a reliable bike share program, as well as raise awareness and engage inhabitants in the process. All things considered, the goal is to become the “bicycle capital of Switzerland”. After several phases of co-creation and studies, the implementation of the plan began in 2016.



VELO HAUPTSTADT

According to our observations, the situation in Bern is definitely encouraging. The number of cyclists is growing with an increasing diversity in the profile of users, showing that the bicycle is a mobility solution being considered by a variety of inhabitants. The scores for most of the parameters of the Index range from average to moderately high, with no major outlying low and high scores for any of the parameters, apart from the evolution of the cycling modal share.

Creating lively residential streets, where active modes of transportation and urban life dominate, seems to be a trademark of the city. This policy should be preserved as a guiding force for their efforts. Quality services for cyclists are present, but almost all of the parking facilities have already reached full capacity. In terms of dedicated cycling infrastructure, since bicycle lanes are insufficient to guarantee safety along major corridors, the newly designed cycle track implemented on Velo-Hauptroute Wankdorf should become the new Swiss standard. Regarding cargo-bikes, local programs are efficiently launching a new mobility trend. A more comprehensive strategy (including financial incentives, dedicated parking spaces, limitation of delivery trucks, etc.), however could help promote the use of this useful bicycle even faster.

In general, with an improvement of cycling infrastructure, more effective communication around bicycle use, as well as public events to engage both cyclists and non-cyclists, Bern should see the number of bicycle users continue to grow in the coming years.

B. PARAMETERS OF THE COPENHAGENIZE INDEX

1. Advocacy
2. Politics
3. Facilities
4. Traffic calming
5. Bike share
6. Gender split
7. Modal share
8. Modal share since 2006
9. Perception of safety
10. Infrastructure
11. Culture
12. Social acceptance
13. Urban planning
14. Cycle-logistics




1. ADVOCACY


How is the city's advocacy NGO(s) regarded and what level of influence does it have?


Rated from no organised advocacy to strong advocacy with political influence.



Cycling advocates, as well as general supporters of urban bicycle use, play an important role in accelerating change in the city. The stronger their influence, the more ambitious and effective the city's cycling policy and its outcomes will be.

 *Pro Velo Bern is the main actor, with 4,700 members in 2017 in the local office.*

 *Carvelo2go is a project supported by the Touring-Club Switzerland and its Mobility Academy.*

 *The VCS is a national sustainable mobility association of 100,000 members.*

**PRO VELO
BERN**



IN A NUTSHELL

Main cycling-related advocacy groups:

- Cycling advocates, part of a national network: Pro Vélo Bern
- Sustainable mobility association: VCS Swiss association for Transport and Environment
- The Mobility Academy of the Touring-Club Switzerland

OBSERVATIONS & RECOMMENDATIONS

When it comes to advocating for cycling, there are several structured groups in Bern, that have a relatively close relationship with the city. This is enabled through workshops, implemented since the launching of Velo-Offensive. They are a chance for local groups to be heard by the city; they can provide inputs on users' needs, and even join discussions on certain cycling-related projects. In addition to local cycling advocates, invitees to these workshops encompass environmental, pedestrian & transportation associations, bicycle-related businesses (bicycle shops, providers, couriers, bicycle parking management staff, etc.), sport clubs, architects, taxi drivers and public transport companies. These exchanges between differing viewpoints are crucial to strengthen local projects and should enable the city to meet cyclists' expectations and understand the barriers faced by non-cyclists.

One of the main cycling advocacy groups is Pro Velo, a national association composed of a network of local offices. In addition to being the main local voice on cycling related projects, Pro Velo Bern offers various activities to reintroduce the bicycle as a means of transportation, such as lessons for children, elderly, and immigrants on how to ride to school or work. They also organise events such as second-hand bicycle markets, bicycle counts, a bicycle challenge for teenagers, and produce communication campaigns. Compared to other local organisations, the number of their activities could still increase if their budget could allow them to expand their employee base.

The city could offer grants based on specific needs of local animations to well-structured associations to offer more courses, bicycle repair classes, or other events, bringing together cycling professionals, inhabitants and employees of Bern.

COMPARISON



Fietsersbond



Nowadays, most of the major cycling advocacy groups operate nationwide with sometimes local representatives. In Denmark, the Danish Federation of Cyclists; in Flanders, the Fietsersbond; in the Netherlands, the Dutch Fietsersbond efficiently share projects, ideas and resources across the whole country. Thus, their voice can be heard and their impact strengthened. Nonetheless, events, activities, and meetings must remain dynamic at the city level, making sure that the local teams remain in direct contact with the inhabitants.

Some local associations are able to contribute considerably to the conversation on cycling when they are respected by the local authorities and have a sufficient budget to organise successful events. A city like Strasbourg has several local associations of cyclists, which attract different communities of users, with different interests and organise a variety of activities. CADR67, one of the main associations, has four employees, earns revenue by providing services, and receives public subsidies covering around 40% of their budget. This allows them to organise many events and to run La Maison des Cyclistes, which is open five days a week in the city centre. Associations collaborate with the city when organising events, enhancing their success.

2. POLITICS


What is the political climate regarding urban cycling?


Rated from the bicycle being non-existent on a political level to active and passionate political involvement.

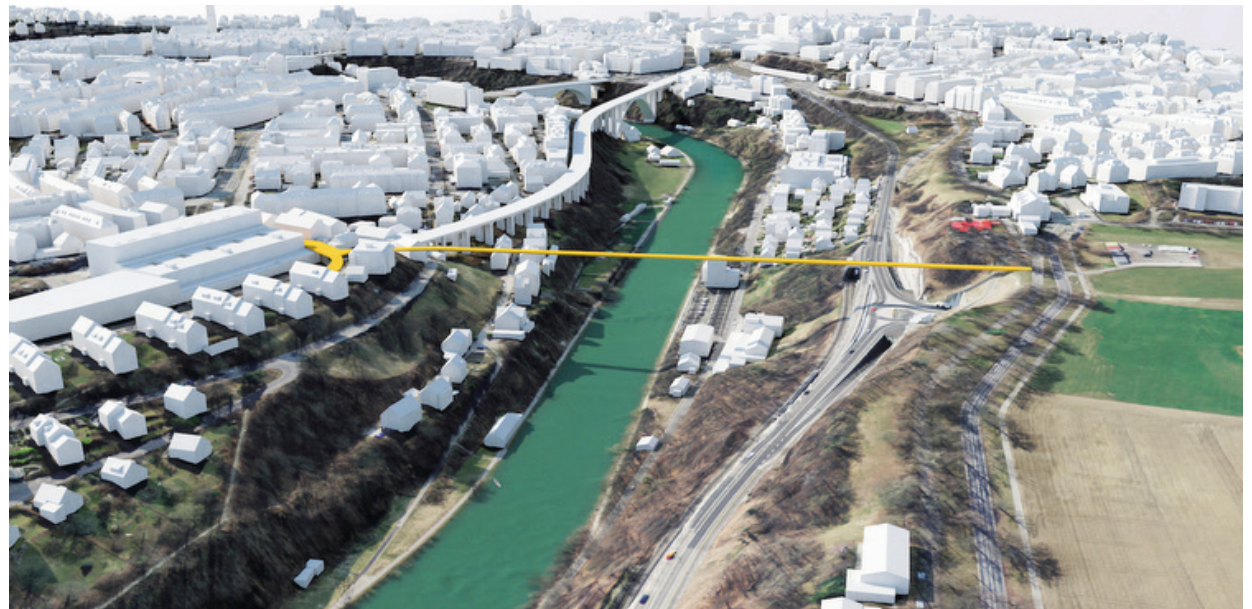


+2 *for the ambitious bicycle plan. Waiting for the full implementation.*

The role of politicians in establishing cycling policies is crucial. In addition to approving an ambitious cycling plan, they can also act as role models for both other politicians and inhabitants.

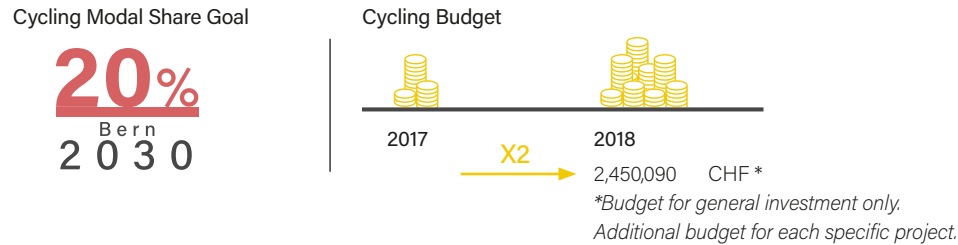
 *To get more people cycling, it must be prioritised in the local mobility policy.*

 *Since 2007, the plan for construction of a new cyclist and pedestrian bridge, potentially including public transport, over the river is highly debated.*



IN A NUTSHELL

Velo-Offensive: a comprehensive cycling plan



OBSERVATIONS & RECOMMENDATIONS

In 2015, the vote in favour of Velo-Offensive was proof of a radical change in how cycling is considered in Bern. It is an ambitious and comprehensive plan that can be considered as a turning point in the local - or even national - cycling policy. With more politicians in favour of bicycles shaping the cityscape, the first quick-fix solutions of the Velo-Offensive are being implemented to dedicate more space to cyclists on the street. However, the ultimate goal must remain to build more separated bicycle infrastructure.

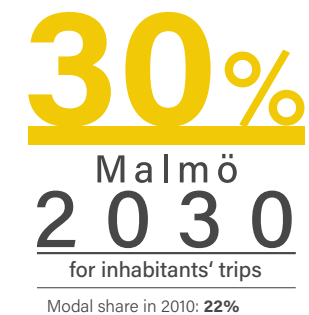
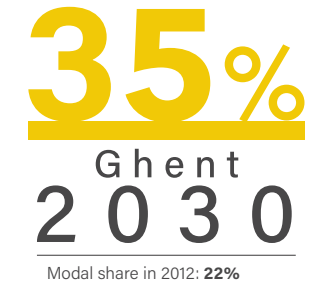
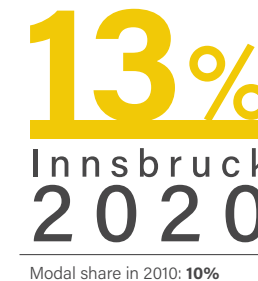
With an increase in the cycling modal share from 11 to 15% during the last four years, the goal of 20% in 2030 could even be increased.

However, the bicycle is still not always prioritised. Without reducing the attention given to improving the already punctual and reliable public transport network, **the city should strengthen its approach to improve cycling conditions in the city and rapidly vote on concrete projects to transform the streets.** Indeed, Bern needs more than an increase in the width of the bicycle lanes, but an investment in concrete cycle tracks along all major boulevards.

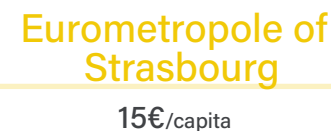
Finally, as some federal restrictions do not always allow Bern to innovate, the city must keep on investing in pilot projects and studies. These can be leveraged to induce positive changes to unnecessarily rigid national rules and enable them to meet cyclists' expectations.

COMPARISON

Cycling Modal Share Goal



Cycling Budget per capita



3. FACILITIES

Are there readily accessible bike racks, ramps on stairs, space allocated on trains and buses and well-designed wayfinding, etc?

Rated from no bicycle facilities available to widespread and innovative facilities.



+1 for the quality of the velostations and the project of building a new bicycle parking.

Bicycle infrastructure is nothing without facilities for cyclists. Incorporating their needs with reliant amenities (such as adequate parking) into a comprehensive mobility plan deters weather and physical strength from limiting the use of the bicycle.

PostParc Velo station, well-utilised, equipped with lockers and a workshop.

Overcrowded public bicycle parking at Hirschengraben - soon to be replaced.

Air pump next to a small bicycle public parking location.



IN A NUTSHELL

Velostations

• Milchgässli	capacity: 420	
• Bollwerk	capacity: 200	
• Schanzenbrücke	capacity: 300	
• vonRoll Hochschulzentrum	capacity: 1.000	
• PostParc	capacity: 1.000	



3

OBSERVATIONS & RECOMMENDATIONS

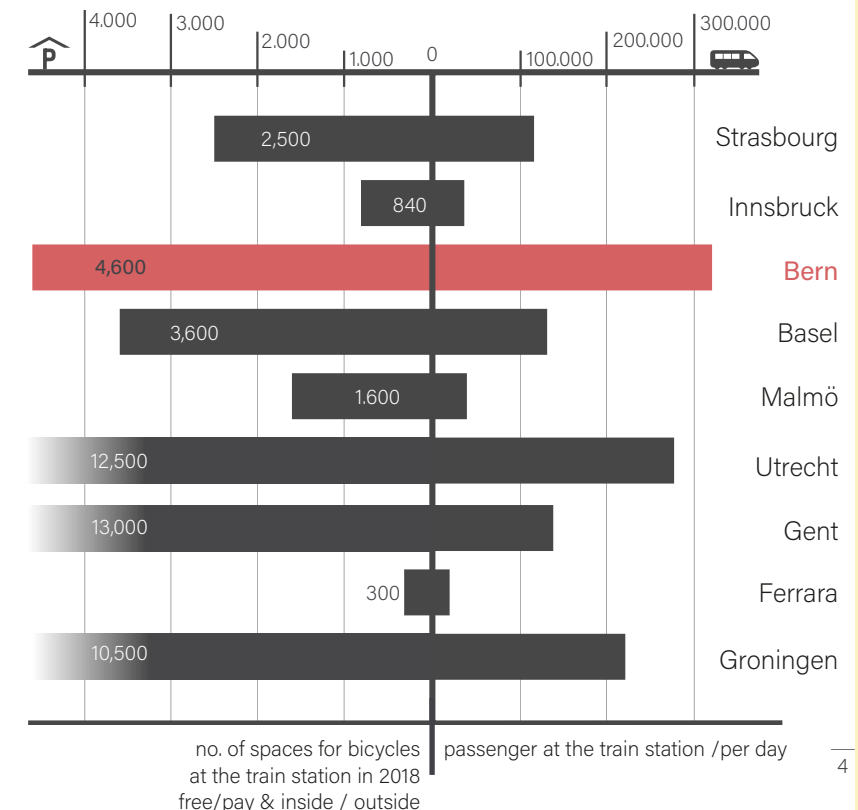
At first glance, Bern adequately responds to cyclists' needs regarding facilities. In the residential districts, the density of bicycle racks is rather high and nine strategically-located parking zones are equipped with outdoor air pumps. Nonetheless, in the old town and the city centre, despite relatively consistent on-street parking, they are all over-capacity and a park at Hirschengraben was even recently turned into an outdoor bicycle parking zone to accommodate this demand in anticipation of the construction of the underground project. Four velostations at the main train station offer 1,920 indoor spaces to passengers coming from different parts of the city. In addition, 2,688 outdoor parking spots are available. Moreover, some of the velostations are even equipped with various services (lockers, plugs for e-bikes, etc.). Nonetheless, while the paid-access velostations have still some capacity left, the free-to-park outdoor areas are incredibly overcrowded and many bicycles are parked along the walls of the train station. **To further promote intermodality between bicycle and train use, in particular as an efficient alternative to cars, the goal to reach 10,000 parking spaces must be met and some adjustments could be made, such as providing more free indoor parking, more spaces for e-bikes and cargo bikes. The new underground bicycle parking built under Hirschengraben could include a section for free use, and one for exclusive member use.** To address the saturated parking conditions around the train station, in the upper old town, and in proximity to the university, the city has conducted studies and collected thorough data on the current situation. This has enabled them to develop a strategy and therefore improvement is expected in the coming years.

COMPARISON

Malmö



The bicycle parking at the main train station offers three safety options: free access to outdoor racks, free access to a 800-space indoor parking garage, patrolled by station guards throughout the day and an extra-secure parking area for 700 bicycles based on a subscription service.



4

4. TRAFFIC CALMING


What efforts have been made to lower speed limits - for example 30 km/h zones - and generally calm traffic in order to provide greater safety to pedestrians and cyclists?


Rated from none at all to extensive traffic-calming measures prioritising cyclists and pedestrians in the traffic hierarchy.




+1 *for implementation of traffic calming features, effectively reducing car speed.*

Just like separated bicycle infrastructure is adapted to major boulevards, traffic calming is the main way to turn residential streets into safe and vibrant places for pedestrians and cyclists, while stimulating urban life and strengthening the sense of community.

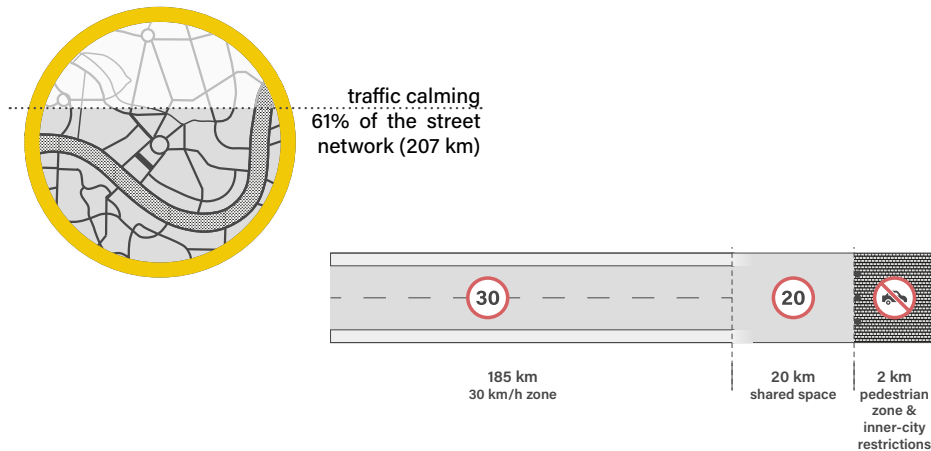
 *Creative road markings and urban furniture in front of a kindergarten: proof of vibrant street life.*

 *Bollards constrain the circulation of motorised-vehicles, while preserving access for cyclists.*

 *No physical elements reduce the speed of vehicles on this 30 km/h street.*



IN A NUTSHELL



5

OBSERVATIONS & RECOMMENDATIONS

The City of Bern started years ago to slow down car traffic in residential streets. The city centre is already almost car-free and speed limits have been largely reduced in residential districts to 20 and 30 km/h, allowing inhabitants to live in quiet areas where pedestrians and cyclists can safely use the streets. Furthermore, some neighborhoods feature creative road markings or urban furniture decorated by the inhabitants, showing that local communities have clearly reclaimed the streets. Moreover, in some residential streets, bollards prevent car traffic, while preserving the freedom of cyclists and pedestrians to get around as they wish.

The goal of the city is to increase the number of streets with reduced speed limits for motorised-vehicles. They are even considering extending the concept to major roads. Moreover, a project that aims to redesign the public space in front of the train station will reduce motorised traffic on the main boulevard to prioritise active modes of mobility and public transport.

All these measures contribute to promoting sustainable and active mobility. The city must continue implementing these traffic calming policies and developing projects with inhabitants to make their streets more life-sized.

COMPARISON

School Streets & Summer Streets | Ghent

The City of Ghent helps its citizens reclaim the public space dominated by motorised vehicles. Through the "schoolstraatproject", streets in front of schools are temporarily closed to car traffic. This was implemented in front of two schools, where they were closed to car traffic for half an hour at the beginning and the end of classes to allow students to arrive and leave school safely by bicycle or on foot. Moreover, during the summer, thanks to the Living Streets program, residential streets can be closed to motorised traffic, allowing people to reclaim the public space. The initial desire must come from the inhabitants themselves and a request must be made to this effect.

Circulation Plan | Groningen

In the 1970's, in Groningen, the Van Der Berg traffic circulation plan was implemented to reduce motorised traffic in the city centre. The plan divided the city centre into four sections, forcing car drivers to avoid the local streets and take the city's inner ring-road when traveling between sections. This measure aimed to make motorists' circulation more complicated, while promoting other modes of transportation, like cycling.

Local Community Project to Transform a Street | Strasbourg

In Strasbourg, the Jeu-des-Enfants street has been turned into a liveable space hosting many urban activities. The project was initiated by a group of inhabitants, who were supported by an association of architects and the local authorities. The street is reserved for pedestrians; the pavement was painted in colors by the inhabitants, and greenery and terraces of cafés shape the new urban landscape. This creative and low-cost initiative has transformed the street, as both a mobility and social project.


5. BIKE SHARE


Does the city have a comprehensive and well-used bike-sharing programme?


Rated from no bike share programme to comprehensive, high-usage programme.



In order to integrate the bicycle into the panel of mobility options, shared bicycles offer a solution to the first and last mile problem, for city visitors and even daily commuters.

 A bike share station replaces on-street car parking spaces.

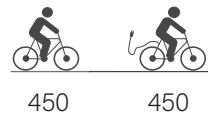
 Stations are dockless and bicycles must be parked within the purple lines.

 As smart-bicycles, they can be locked and unlocked by swiping a card using the on-bike electronic system.



IN A NUTSHELL

Key data of the bike share scheme in October 2018



- Bicycles: 900 (2,400 by 2019-2020)
- Number of stations: 118 (200 by 2019-2020)

6

OBSERVATIONS & RECOMMENDATIONS

The bike share scheme in Bern, operated by PubliBike, launched in 2018 and has already been quite successful. With a final goal of 200 stations, within 300-500 m of each other, by 2019-2020, the program should allow most of the inhabitants to consider this option as an easy mobility solution.

The project benefited from a rather unique funding scheme, partly sponsored by companies. Employees from these companies benefit from a special deal when renting a bicycle and represent half of the user population at the moment.

The public bicycles are accessible through a mobile application, and a card covering other public transport services. The process of renting and returning a bicycle is easy and intuitive.

COMPARISON



Strasbourg & Ghent

As an alternative to an expensive bike share program, some medium-size cities offer short and long-term rentals of branded local bicycles, such as Vélohop in Strasbourg or bicycles for a specific audience, such as the Yellow-bikes for the students living in Ghent, or the Blue-bikes for train passengers, arriving in this city.

	Scheme	National bike scheme at train station	Long-term rental bikes	Short-term rental bikes	Bikes	Stations
Strasbourg	Vélohop	e	●		6,000	
Innsbruck	Stadtrad			●	350	41
Bern	PubliBike	e		●	900	118
Basel	Pickebike	e	●	●	250	zone
Malmö	MalmöbyBike	e		●	500	50
Utrecht	OV-fiets	●	●		14,500	
Odense	CiBi			●	N/A	6
Ghent	Blue-bike	●	●		7,637	
Ferrara	Bike Bus Key			●	70	5
Groningen	OV-fiets	●	●		14,500	
Ljubljana	Bicikelj			●	580	58
	e-bike	e				

7

6. GENDER SPLIT


What percentage of the city's cyclists are male and female?


Rated from overwhelming male to an even gender split or more women than men cycling.



One of the sure signs of a healthy cycling culture is the so-called equal "gender split", where the ratio of female to male cyclists is 50-50. A high rate of women on bicycles in a city is highly correlated with improved cycling conditions to make them safer and more comfortable.

 *Young women riding in the city centre.*

 *Woman on a utilitarian trip.*

 *Woman casually riding an e-bike.*



IN A NUTSHELL

Lack of reliable data on the gender split.

2 points: 30-40% of women

3 points: 40-50% of women

The current status of Bern is in between these numbers.

OBSERVATIONS & RECOMMENDATIONS

In any country, cycling is a way to empower women with freedom to travel in the city as they wish and give them access to active mobility. Research has shown that women want safer streets to expand their opportunities to cycle where they want to daily.

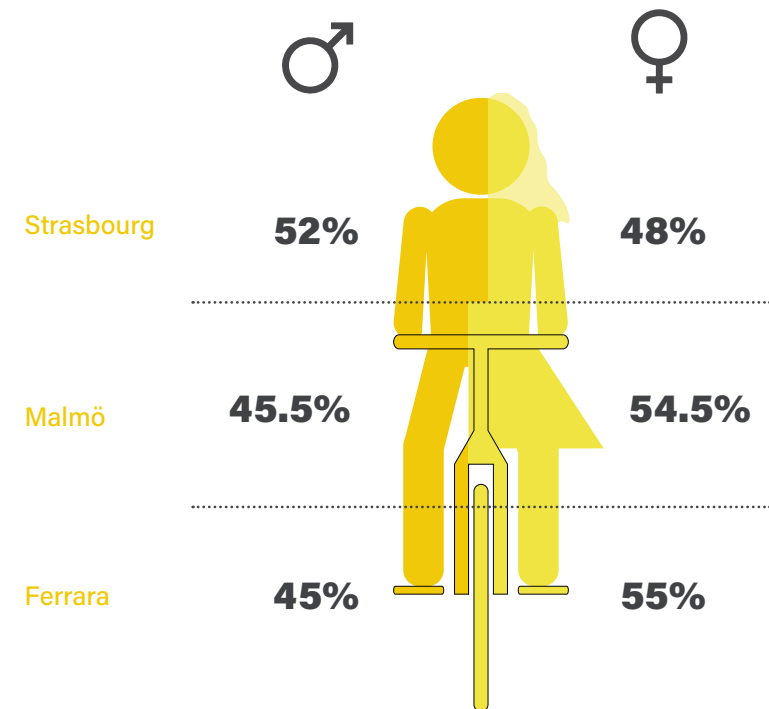
Unfortunately, there is a lack of data on the gender split in Bern. The micro-censuses carried out in 2005 and 2015 included data on the gender split, but were based on a limited sample size. Therefore, we cannot consider these numbers as fully accurate.

According to the data on the gender split from the micro-censuses, to Carvélo2go, as well as the information gathered during our interviews, cycling is not a form of mobility restricted to men, and the number of women cycling has been on the rise over these past few years. The gender gap appears to be shrinking towards a balanced gender split.

In addition to bicycle counts on the main corridors, the City of Bern should set up a full data collection strategy. This should include manual counts and observation of users in order to get a clear idea of cyclist profiles and how these might evolve. The increase of the number of women, children, and cargo bike users is objective proof of the transformation of Bern into a more bicycle-friendly city.

COMPARISON

In Denmark and the Netherlands, it's common to hear that the gender split is around 50-50. Notably, in both of them, the number of women cycling is even slightly higher than men.



7. MODAL SHARE

What percentage of modal share is made up by cyclists?

Rated from under 1% to over 25%.



A percentage, the cycling modal share shows more than the proportion of people who cycle, but also serves as an indicator of sustainable mobility.

A diverse group of cyclist riding in the city centre.

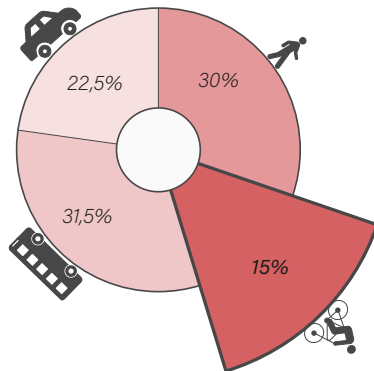
Teenagers riding over a bridge, a key age group to assess the modal split.

A diverse group of cyclists in gender, age, and choice of bicycles.



IN A NUTSHELL

Modal share Bern (2015)



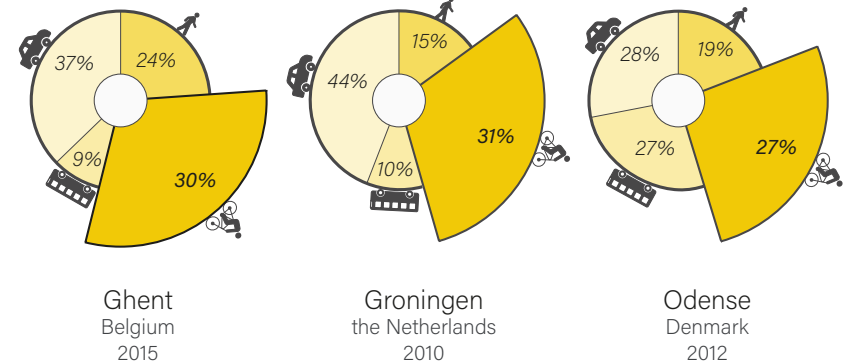
OBSERVATIONS & RECOMMENDATIONS

The modal share of Bern presents a clear trend towards sustainable mobility, with only 22.5% of inhabitants traveling by car. Walking and public transport represent almost a third of the modal share each, and 15% can be attributed to cycling. This can already be considered as rather high, but there is potential to increase it even more. Danish and Dutch cities, as well as cities like Ferrara, Ghent, or Malmö have reached levels between 20 and 30%.

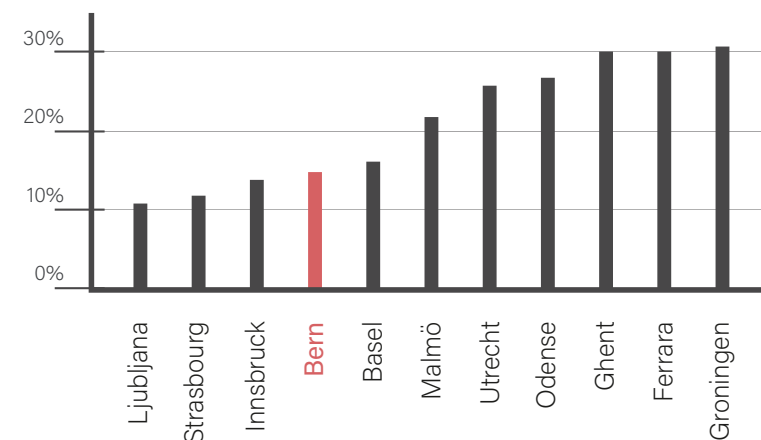
Compared to Ghent, Odense, and Groningen, Bern has the lowest percentage of car users, and the highest walking modal share.

The challenge for Bern is to increase its cycling modal share, by decreasing the number of motorists, and attracting some users from the congested public transport system during peak hours. For instance, campaigns could target specific audience as young people who should rather use their bicycles than the tramways and thus leave space for the ones who don't have other alternative as the public transports.

COMPARISON



9



10

8. MODAL SHARE INCREASE SINCE 2006

What has the increase in modal share been since 2006 - the year that urban cycling started to kick off?

Rated from under 1% to 5%+.



Evaluating the evolution of the cycling modal share over the past years allows us to measure the changes in the city and how fast the population is shifting between mobility solutions.

A variety of genders and ages in profiles of cyclists riding together.

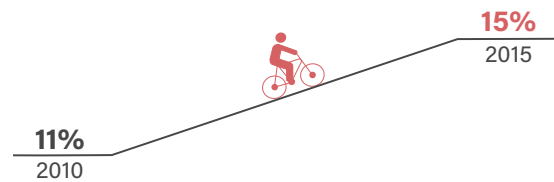
A bicycle counter with already more than 1,300 cyclists at the end of the morning.

A family riding together, showing a changing cyclist typology.



IN A NUTSHELL

Cycling modal share increased

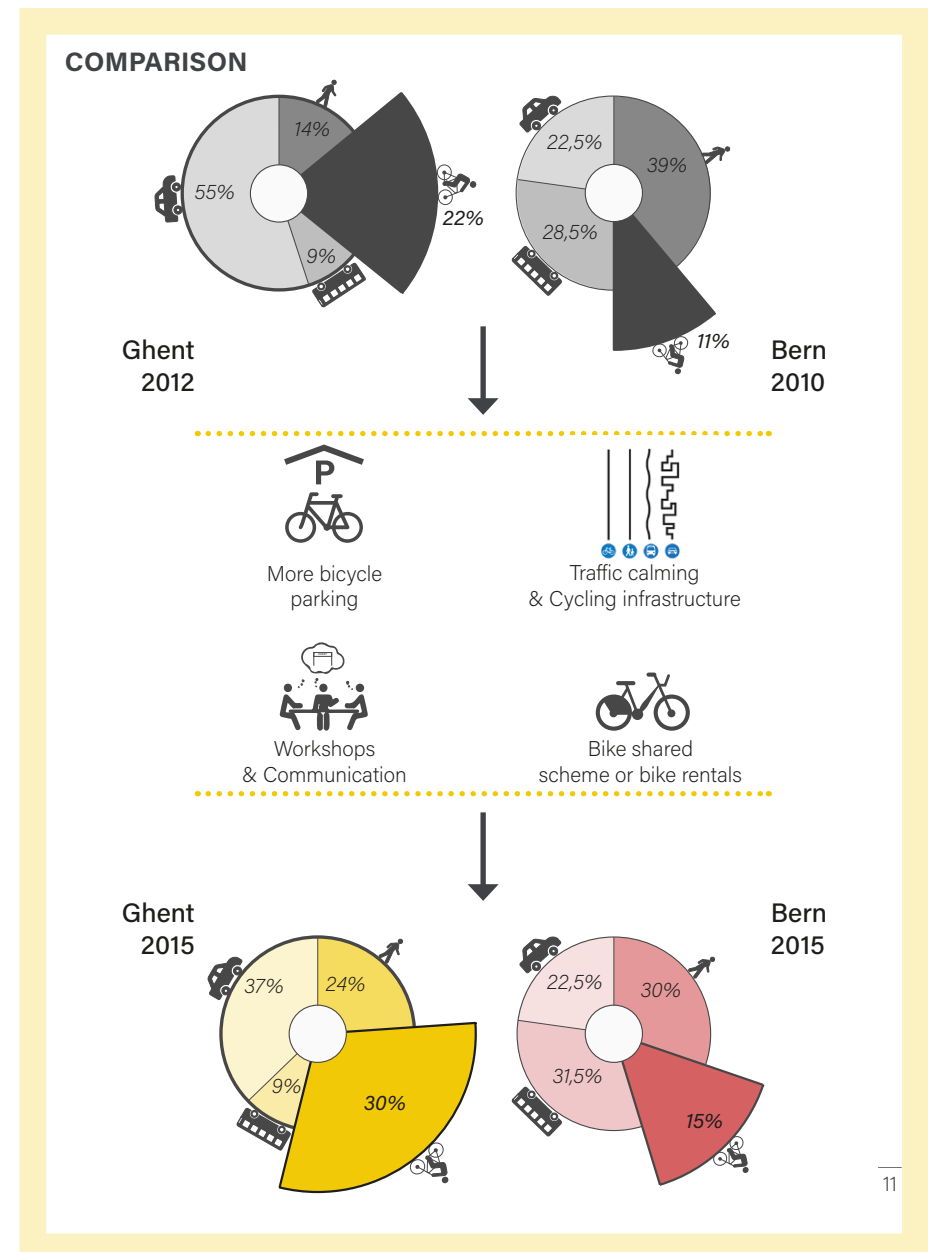


OBSERVATIONS & RECOMMENDATIONS

In Bern, the cycling modal share has obviously increased during the past years. From 11% in 2010, it reached 15% in 2015. While the car modal share has remained stable, the number of pedestrians has decreased and public transport users have slightly increased.

Three factors can explain the rise in cycling in Bern. First, a global increase in cycling, which has also reached the Swiss cities. Second, the cyclist population is becoming more diverse. Instead of mostly male and hardcore riders, the bicycle infrastructure is now used by a mix of people of all ages and the gender split is more equal. Third, the launch of Velo-Offensive in 2015 made a new place for cycling in local policy. Bern started introducing safer infrastructure, making cycling more accessible to the most vulnerable users, such as the young, the elderly, women, and people riding with children. Moreover, the recent introduction of e-bikes (90,000 e-bikes sold in Switzerland in 2017) has considerably reduced the topography barrier and allowed new users to consider the bicycle as a daily means of transportation.

With the goal of transforming the city to be more bicycle-friendly for users from 8 to 80 years old, the cycling modal share should keep on increasing in the coming years. Moreover, as the average distance completed by bicycle per day is rather low (1.2 km in 2010), the improvement of the conditions of bicycle routes throughout the city and a more attractive wayfinding strategy can encourage people to use the bicycle for longer trips, instead of shifting to public transport.




9. PERCEPTION OF SAFETY


Is the perception of safety of the cyclists in the city, reflected in helmet-wearing rates, positive or are cyclists riding scared due to helmet promotion and scare campaigns?


Rated from mandatory helmet laws with constant promotion of helmets to low helmet-usage rate.



To promote daily cycling, streets must be perceived as safe by all users. If a majority of cyclists do not wear a helmet for utilitarian trips, it can be considered a sign that they feel safe and comfortable on the streets.

 Boys cycling and skating freely in a residential street.

 A cyclist not wearing a helmet, but carrying one with her, indicating a need in some areas.

 Cycling with a helmet, yet hands-free.



IN A NUTSHELL

% of cyclists wearing a helmet



46% (2017 bfu)
 49% (2016 bfu)
 38% (2008 bfu)

Pro Velo advocates the voluntary wearing of a bicycle helmet.

The velostation Facebook page features very few pictures of cyclists wearing helmets.

Helmets are mandatory for speed-pedelec riders.

OBSERVATIONS & RECOMMENDATIONS

In terms of cyclists wearing helmets, our observations of cyclists in Bern agree with the counts carried out by the company bfu in 2017, and by Pro Velo in 2016 in several streets during the morning and evening rush hours, and is just under 50% of users. In the Pro Velo counts, this number does not consider e-bike riders, however their number is growing rapidly on the cycle tracks. According to bfu, e-bikes represented 1.5% of bicycles in 2010; 9% in 2017, with 34% of them being speed-pedelecs.

Even though there is no helmet law - even for children - in Switzerland, ProVelo promotes wearing one for safety reasons. However, cities do not increase the safety of users by forcing them to wear a helmet, but they should instead redesign their streets.

Without any data to prove it, it seems that the use of high-visibility vests is rather low, at least in autumn.

A user survey (Prix Velostädte 2018, Schlussbericht, Stadt Bern) reported a grade for safety considered average. But it also revealed that people who consider cycling as unsafe are mostly the ones who do not cycle. **This means that awareness around cycling must be reinforced and that the city must support all kinds of opportunities to invite inhabitants to try cycling.**

COMPARISON

Dutch cyclists do not wear helmets

In the Netherlands, cyclists usually do not wear helmets. Why? That is because the authorities focus on safe infrastructure to increase safety and prevent accidents. Children grow up on two wheels and car drivers are used to sharing the streets with them. Making the helmet mandatory would reinforce the perception of cycling as dangerous, potentially dissuading hesitant users, and thus be counterproductive.



In Amsterdam, the streets surrounding a school and a kindergarten are only open to cyclists and pedestrians, allowing many children to cycle to school safely with their family or their friends. Even in autumn, on a rainy day, the number of people wearing a helmet is close to zero.




10. INFRA - STRUCTURE

How does the city's bicycle infrastructure rate?

Rated from no infrastructure/cyclists relegated to using car lanes to high level of safe, separated cycle tracks.



Infrastructure is a crucial part of the foundation of a bicycle-friendly city. Without it, cycling cannot be considered a serious means of transportation. The infrastructure must also be built for all users, from 8 to 80 years old.

-  *Curb-separated cycle track: Bern sets a new high standard in Switzerland.*
-  *Bicycle lane only accommodating fearless cyclists. Not considered safe enough by others.*
-  *Two-step left turn and bicycle box to accommodate different kinds of cyclists.*





As much as possible, cyclists should not share the lane with buses, especially when the frequency of buses is high.



Light-segregation is a way to offer physical protections to cyclists. Nonetheless, to be efficient the segregation must be well visible to protect cyclists and entail a behavior change from the car drivers making sure they do not use the bicycle lane. This fast to implement solution should remain temporary until the planification of an higher standard of cycle track on main corridors.



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Cycling should be considered as a mobility allowing social interactions between users. Therefore cycling side by side should be allowed on cycling infrastructure and streets with traffic calming features.





An evaluation should be carried out on the two ways to turn left, in order to get a better understanding of the profile of users proceeding with a direct or indirect left-turn. This study should also pay attention to car drivers' behaviors as they should know where cyclists are expected when they arrive at an intersection.



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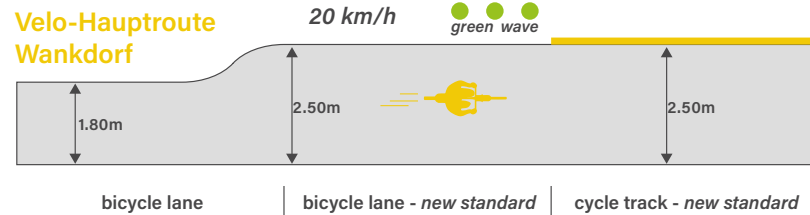
Bicycle lanes should not be placed between the car parking and the moving vehicles to avoid conflicts and accidents due to dooring.



Left-turn lane facilitates the crossing of the intersection while leaving space to cyclists heading straight.



IN A NUTSHELL



OBSERVATIONS & RECOMMENDATIONS

Bern does not have a well-established network of bicycle infrastructure yet. Some main axes do not have infrastructure at all. Several kilometres of bicycle lanes and lanes shared with buses are only suitable for cyclists, who are already used to riding in the city. This current standard of Swiss bicycle infrastructure is insufficient to get 8-80 users traveling by bicycle. That said, the city is well aware of the situation and with Velo-Offensive wants to change the old standards and increase the quality of the cycling infrastructure to allow children and the elderly to feel safe on the streets. This rather radical shift in this context, could allow Bern to become the Swiss capital of cycling. So far, a cycle track has been built on a section of the Wankdorf Velo-Hauptroute. With a curb separation and a width of 2.5 metres, its best-practice design responds to the comfort and safety needs of cyclists. It should be considered as the new standard for bicycle infrastructure on main axes.

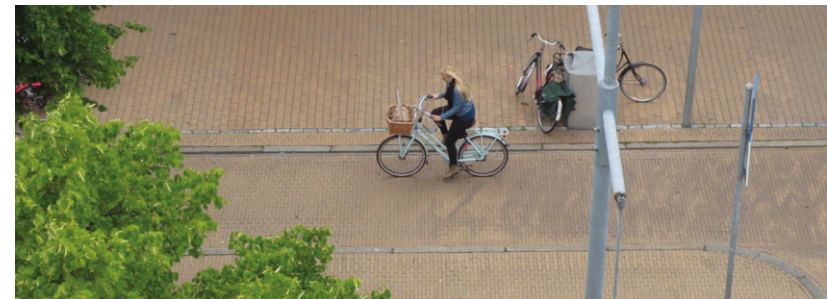
In order to move forward quickly on the improvement of cycling infrastructure, the city has decided to increase the width of some bicycle lanes and to test light protection. This approach is reasonable, as long as it remains considered as a short-term, transition solution, before turning the lane into a proper cycle track.

The technical features to design the left-turn for cyclists must be considered carefully to increase user safety. Bern offers a bicycle box in front of cars for fearless cyclists and for the less experienced a waiting area to turn in two steps.

With the Master Plan Bicycle Infrastructure 2018 prescribing new norms for cycling infrastructure, Bern has in its hands a strong tool to improve cycling conditions and to attract more people to cycling.

COMPARISON

High-standard bicycle infrastructure in various urban settings in Groningen, Ljubljana, and Ghent.




11. CULTURE


Has the bicycle reestablished itself as transport among regular citizens or only sub-cultures?


Rated from no bicycles on the urban landscape/only sporty cyclists to mainstream acceptance of the bicycle.



Paradoxically, a true bicycle-friendly city does not have a "bicycle culture". Bicycles are considered as a practical tool to get around town, accessible to everyone.

 Bright pink bicycles as advertisement for a film festival.

 "Space for bicycle culture" on a banner from a public building hosting community groups.

 Hallo Velo and Car Free Sunday are annual events celebrating bicycle culture.



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IN A NUTSHELL

Examples of events or media: building blocks of the local bicycle culture

- Publication in print: Velo Fashion Magazine
- Event: Hallo Velo festival, Car Free Sunday
- Blog: velostadtbern.ch
- Bicycle shops contributing to the local culture such as copin-velos.ch

OBSERVATIONS & RECOMMENDATIONS

In Bern, the bicycle is now a part of the urban landscape, and the cycling population has accordingly become more diverse. Nonetheless, events to promote bicycle use and increase the visibility of cycling on the streets must continue to support this transition to a city where the bicycle is a mainstream daily tool.

Hallo Velo, organised in Bern, is an important local bicycle festival. This event celebrates cycling in all forms and targets families, sport cyclists, tourists, and aficionados. Started in 2017, it has become a yearly event to celebrate the local bicycle culture, but has yet to recognize the importance of transportation cycling and encourage discussion on shifting mobility trends in the city in the coming years. The Car Free Sunday is the other local event celebrating urban life and normalising cycling as a means of transportation.

While the seasonal effect remains high, according to some bicycle repair shops, the winter period is usually calm, it is becoming more active, as more people cycle the entire year or almost all year long. However, to support this trend, snow-clearance must be improved on Velohauptrouuten.

Moreover, with bicycles being used for advertisement for non-bicycle related events, the bicycle is more clearly a part of the mainstream local culture.

COMPARISON

The following pictures of daily life in Denmark and the Netherlands show how the bicycle can become fully incorporated into people's lifestyle. Some may make us laugh; however, they should also inspire us with ideas about how the bicycle can be used in all kind of circumstances.




12. SOCIAL ACCEPTANCE


How do drivers and the community at large regard urban cyclists?


Rated from no social acceptance to widespread social acceptance.





Seeing people on bicycles in the streets of a city does not mean that the city is bicycle-friendly. It is only when all users, whether they are pedestrians, cyclists or car drivers respect each other that a place that welcomes bicycle users is created.


 Cyclists riding on the pavement. Even though it is not prohibited here, it may create conflicts with pedestrians.



 Encounter between cyclists and pedestrians.



 Cyclists sharing the lane with buses, but separated from cars.





IN A NUTSHELL

- + **Traffic calming** measures have been developed for many years in Bern and bicycle streets are being tested.
- ~ A user survey carried out by Pro Velo revealed that the satisfaction with **safety** is average, 3.7 out of 6.
- In Switzerland, cars must **overtake cyclists** by leaving a reasonable distance between them, but no minimal space is required. The Federal government refused to modify the law in 2018 when a proposal of leaving 1.5 meters between the users was initiated. 2/3 of cyclists considered that car drivers do not leave enough space while overtaking them (Link, 2016) and 10% of accidents happen while being overtaken.

OBSERVATIONS & RECOMMENDATIONS

Social acceptance of cyclists on the streets is a matter of perception and we came across different opinions. Some local cyclists mentioned that car drivers must still improve their behaviour to fully respect cyclists. However, when cycling through Bern ourselves, we experienced a far from hostile environment. This discrepancy can be explained by the short trip we took in the city and our prior experience with cycling in more hostile environments.

Some tensions were perceived between cyclists and pedestrians when bicycle users road on the pavement. However, on some streets, the lack of clear infrastructure or the shift from a bicycle lane on the road to one on the pavement entails a lack of consistency for cyclists, explaining this behavior.

With the increase of cargo bikes, taking up more space on the street, new conflicts could arise with car drivers or even with other cyclists when the bicycle infrastructure is not wide enough.

COMPARISON

The redesign of streets to make space for active modes is a source of tension in most cities, even the most bicycle-friendly ones. Coherency and consistency in the design of bicycle infrastructure and the reduction of shared-space zones between pedestrians and cyclists where the traffic is really dense are important principles to keep in mind to reduce conflicts. Moreover, raising awareness among inhabitants about the importance of these values is necessary to accompany urban space modifications.

Ferrara

Ferrara has a high active modes modal share, partly due to a strong reduction of the motorised traffic and the creation of a Limited Traffic Zone where some streets are reserved for cyclists and pedestrians. This medieval city, where two-thirds of its population live in the centre, started restricting car traffic back in the late 1960's. The old town was closed to cars and motorcycles, in favour of pedestrians and cyclists. Car traffic was allowed outside of this zone, but with many restrictions, throughout a limited 50-hectare area. In the mid-1990s, the Limited Traffic Zone (LTZ) was extended and access rules were made more stringent in favour of cleaner vehicles. This historical culture of shared space promotes the use of active transport and makes users more aware of each other.



13. URBAN PLANNING




How much emphasis do the city's planners place on bicycle infrastructure - and are they well-informed about international best practice?

Rated from car-centric urban planners to planners who think bicycle - and pedestrian - first.



+1 for quickly implementing best-practices studied abroad.

Urban planning plays a crucial role in encouraging people to change their habits when it comes to cycling. Urban planners must redesign the streets of their city to take cyclists into account, which often entails innovative solutions and pilot projects.

-  Positioning cyclists at intersections a few meters before the cars makes them more visible and thus enables a safer crossing.
-  A bus stop with enough space for passengers to get off of the bus, onto an island, and wait for cyclists to pass before crossing the cycle track.
-  Split lane for cyclists wanting to turn left or go straight, preventing cyclist congestion.



IN A NUTSHELL

Use of international best practices: green wave for cyclists (20 km/h.), car stop pushed back a few meters, traffic lights for cyclists only, split of the bicycle lane before the traffic light, safe velostation, bus stop island next to the cycle track.

Study trips in cities leading the way in bicycle urbanism (Strasbourg, Rotterdam, etc.) with a whole team of civil servants from different departments.

Pilot projects: introduction of the cycle track instead of the classic bicycle lane, acceptance of cycling side by side.

OBSERVATIONS & RECOMMENDATIONS

Cycling through Bern, best practices from countries like Denmark or the Netherlands and adapted to the Swiss city can be spotted. After all, one does not have to reinvent the wheel. Trips to the places of origin of these practices, for all of the city departments involved in planning, to learn and experience them first hand are an efficient approach to improve cycling conditions.

Whatever the size of the city, the ones leading the way in bicycle urbanism are keen to test new infrastructure and services to keep on improving the safety and comfort of cyclists. Bern should continue pursuing this type of approach through pilot projects and constant re-evaluation, and share their positive results.

When innovative solutions are successful, but are however not yet accessible from an institutional standpoint, these projects and evaluations can lead to legal adjustments by the road authorities to accommodate these new practices.

The City of Bern is using their new bicycle street to promote cycling side by side, despite federal restrictions. With this pilot project, the city will not only pave the way for cycling conditions similar to Denmark's, but also open the debate on its legal status. Urban conditions should allow people to consider cycling as a means of transportation but also a social activity. If this works well, other countries may soon look to Bern for inspiration on best practices for cyclists!

COMPARISON

Bicycle Street | Ghent

In the Summer of 2011, the City of Ghent established the very first Bicycle Street in Belgium. It has led to a noticeable increase in the number of cyclists and a decrease in cars. According to this success, in 2012, the concept was included in the official Belgian road code. It now defines a Bicycle Street as a street considered a bicycle route. Motor vehicles are allowed, but they cannot overtake cyclists. Traffic signs delimit the beginning and end of a bicycle street and indicate speed limits of maximum 30km/h.

Study Trip | Ljubljana

In Ljubljana, inhabitants have cycled on curb-separated cycle tracks since the 60's. Decades ago, following the lead of an architect fan of Scandinavian design, a team of planners and engineers went to Copenhagen for a study trip. In particular, they studied their bicycle infrastructure and returned to their town and implemented 40 kilometres of Copenhagen-quality cycle tracks. The cycling modal share skyrocketed from 2 to 10% in a year.

Innovative Wayfinding | Strasbourg



In France, even though it is only legal to use white paint and the pictogram of a cyclist for marking cycling infrastructure, Strasbourg is working on an innovative wayfinding framework for its superhighway network. Being a colourful one, thus out of the legal standard, it has been approved as a pilot project by the national authorities. If successful, Strasbourg may lead the way with a revaluation of signage and wayfinding, more intuitive for cyclists. While the previous design was inspired by motorised-traffic legislation and applied to bicycle infrastructure with a lack of consideration for cyclists' behaviour, the new one is designed keeping their needs in mind.


14. CYCLE-LOGISTICS


Is the city embracing the potential of cargo bikes - both for private citizens and businesses?


Rated from no focus on cargo bikes to a strong cargo bike and logistics culture



The presence of cargo bikes in a city is a sign of the evolution of mobility habits. Cargo bikes help reduce the use of motorised vehicles by replacing both family cars and delivery trucks.

 A family on a carvelo2go cargo bike rented for a couple of hours or days.

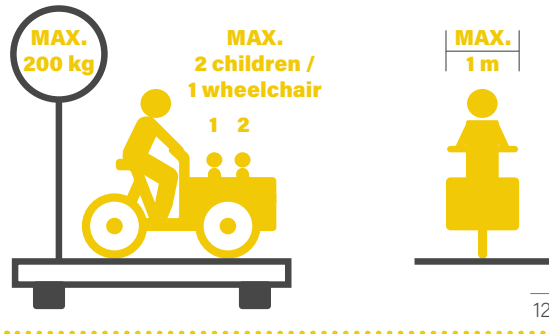
 Area dedicated to cargo bikes and trailers in a velostation at the train station.

 Family on a personal cargo bike.



IN A NUTSHELL

Cargo bikes norms & restrictions from the national government



OBSERVATIONS & RECOMMENDATIONS

With the availability of e-cargo bikes, this bicycle entered the scene in Bern a few years ago. Despite the interest in these cargo bikes being recent, through the committed work of several local programs, the use of these useful bicycles could increase rapidly. Nonetheless, cargo bikes, especially electric ones, can be prohibitively expensive. Solving this problem, the TCS launched carvelo2go, an innovative rental program. 23 hosts offering cargo bikes in different locations provide easy access to this form of delivery vehicle all over the city and especially in residential districts. Anyone, from local businesses to private users, can rent one of these bicycles for 1 CHF per hour.

Moreover, the city promotes the use of these bicycles to local businesses through a program offering them the opportunity to try them out for deliveries. During this project called "Mir sattlä um!", nine companies, from bakeries to plumbers, tested them during six months for free. It was a success, with five businesses buying the cargo bike for a more affordable price at the end of the rental period. The city, in collaboration with carvelo2go, even went into a second round with 10 companies. Nevertheless, because of Swiss restrictions on cargo bikes (one meter maximum width and 200 kg weight, etc.), the development of these bicycles is a bit limited. **To finish, to make cargo bikes visible the city should create more dedicated parking spaces for them, especially next to schools, kindergartens and recreational places.**

COMPARISON

Number of manufacturers of cargo bikes

Denmark

20 brands

the Netherlands

17 brands

Switzerland

1 brand



Bike-Innovation GmbH

Bern

3 stores

Triobike Taxi to transport children & elderly
width: 106 cm max. payload: 250 kg

2 brands to choose from
Denmark and the Netherlands.

13



Delivery by cargo bike | Strasbourg

In September 2018, Strasbourg reduced the access of delivery trucks to the city centre to reduce their disruptive nature in the narrow streets and to promote the development of cargo bike companies. While 7.5-tonne trucks have access to the Grande Île until 10:30 am and "clean-fuel" trucks until 11:30 am, cargo bikes can deliver goods all day long.



S`Cool bus | Rouen

This unique vehicle allows children to cycle to school all together and benefits both to their physical and social activities. It is probably forbidden in Switzerland due to the federal regulation.

THE REPORT **IN SOURCES**

No.	page	source																																				
1	p. 16	see no. 9 & 10																																				
2	p. 16	provided by the respective City officials																																				
3	p. 18	verlostationbern.ch																																				
4	p. 18	provided by the respective train station, and bicycle park operators																																				
5	p. 20	Städtevergleich Mobilität 2012																																				
6	p. 22	provided by the city of Bern and Publibike.ch																																				
7	p. 22	provided by the respective websites of the companies providing the bicycle sharing																																				
8	p. 24	provided by the respective City officials from Malmö (data from 2013) and Strasbourg; Ferrara : Cycle Chic, 2011																																				
9 & 10	p. 26	<table border="1"> <thead> <tr> <th>City</th> <th>Source</th> <th>Year</th> </tr> </thead> <tbody> <tr> <td>Ljubljana</td> <td>Socialcar-project.eu</td> <td>2016</td> </tr> <tr> <td>Strasbourg</td> <td>Mobility survey (Enquête Ménage Déplacement)</td> <td>2009</td> </tr> <tr> <td>Innsbruck</td> <td>Mobilitätsprogramm 2013-2020</td> <td>2011</td> </tr> <tr> <td>Bern</td> <td>Städtevergleich Mobilität 2017</td> <td>2015</td> </tr> <tr> <td>Basel</td> <td>Städtevergleich Mobilität 2017</td> <td>2015</td> </tr> <tr> <td>Malmö</td> <td>Sustainable Urban Mobility Plan</td> <td>2013</td> </tr> <tr> <td>Utrecht</td> <td>City officials contacted by mail</td> <td>2015</td> </tr> <tr> <td>Odense</td> <td>Mobility plan of 2014-15</td> <td>2012</td> </tr> <tr> <td>Ghent</td> <td>Mobiliteit.stad.gent</td> <td>2015</td> </tr> <tr> <td>Ferrara</td> <td>CIVITAS 2020</td> <td>2009</td> </tr> <tr> <td>Groningen</td> <td>EPOMM</td> <td>2010</td> </tr> </tbody> </table>	City	Source	Year	Ljubljana	Socialcar-project.eu	2016	Strasbourg	Mobility survey (Enquête Ménage Déplacement)	2009	Innsbruck	Mobilitätsprogramm 2013-2020	2011	Bern	Städtevergleich Mobilität 2017	2015	Basel	Städtevergleich Mobilität 2017	2015	Malmö	Sustainable Urban Mobility Plan	2013	Utrecht	City officials contacted by mail	2015	Odense	Mobility plan of 2014-15	2012	Ghent	Mobiliteit.stad.gent	2015	Ferrara	CIVITAS 2020	2009	Groningen	EPOMM	2010
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