

The Sustainable Urban Transport Guide Germany

## Discover Berlin by Sustainable Transport



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#### GIZ – Sustainable Urban Transport Project: More about our work

- "Sustainable Transport: Sourcebook for Policymakers in Developing Cities": http://www.sutp.org
- GIZ Transport and Mobility: www.giz.de/transport
- Extensive SUTP Photo Database: http://www.flickr.com/photos/sustainabletransport
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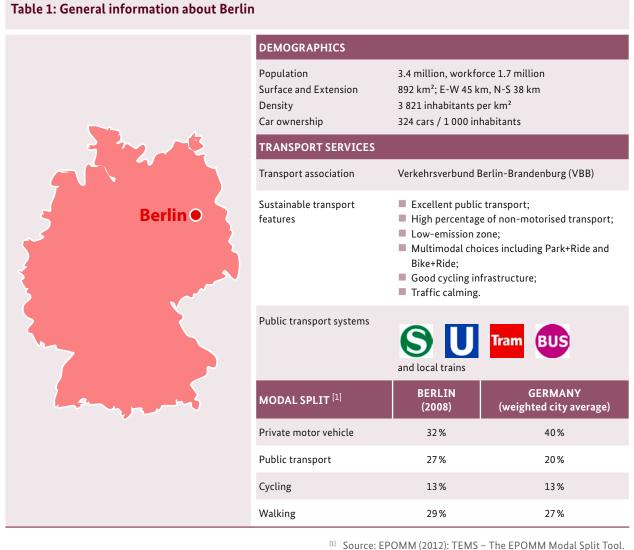
This guide of the intermodal transportation system of the city of Berlin leads you from the new main train station to the transport hub of Alexanderplatz, to the redeveloped Potsdamer Platz with its high quality architecture before ending the tour in the trendy borough of Kreuzberg. Along the way, you will be able to experience different modes of transport, including the bicycle sharing system.

The *detour* sections will describe the transportation system in general, and present the city's bicycle sharing system and the low emission zone system.

### Berlin - the lively capital

Welcome to Berlin, the old and new capital of Germany. With a population of 3.4 million, it is Germany's largest city in terms of population and surface, ahead of Cologne, Hamburg and Munich. It is also one of Germany's three city states. Berlin lies at the centre of the 6 million inhabitants metropolitan region of Berlin-Brandenburg, which takes in both the city and the entire surrounding state of Brandenburg.

Berlin is now once more a world-class metropolis – it is regarded nationally and internationally as a centre for politics, culture, art, media, science and sport. It is a major European transport hub and is continuing to grow in importance. People are drawn to Berlin for all sorts of reasons, from its quirky reputation and vibrant night life to its diverse range of old and new architecture and the high quality of life it offers (Sifton, 2008).



http://www.epomm.eu/tems/index.phtml
System repräsentativer Verkehrsbefragung (SrV), TU Dresden
entrance of subway station



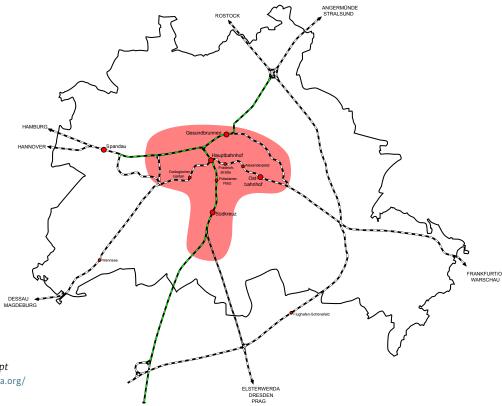
## Tour 1 Berlin Hauptbahnhof – Alexanderplatz

The city's central station (Berlin Hauptbahnhof) located near the government quarter is an ideal place to begin a sustainable mobility tour of Berlin.

Under the divided Germany (divided Berlin 1961–1989), rail transport became largely irrelevant in West Berlin and much of the infrastructure fell into disuse and disrepair. Following reunification, a new main line and regional rail transport concept for the city was needed. However, it was decided that resurrecting the former terminal stations (along the lines of those that still exist in London and Paris) would not meet the operating requirements of modern rail transport. Instead, a new plan known as the 'mushroom concept' was developed (see Figure 2). This completely new approach to main line and regional transport was made possible by the construction of a north-south link (mostly in tunnels), which

crosses the existing east-west rail link near the city centre. This junction is the site of the new central station or Hauptbahnhof. The mushroom concept is a synthesis of two basic design options discussed during planning: the 'axis concept', and the 'ring concept', which included four decentralised main line stations on the circular line, or Ringbahn, around the inner city. The new concept as built comprises the main central station and five other main line stations, some of which already existed and others which are new. They enable the city's inhabitants to access main line rail services with great ease.

Construction of the 3.5 km tunnels and the new Hauptbahnhof started in 1995. They were officially opened in 2006, just in time for the soccer Fifa World Cup.



**Figure 2:** Mushroom concept © http://commons.wikimedia.org/wiki/File:Pilzkonzept.svg

The new Hauptbahnhof is one of Europe's largest 'stack interchanges' and Europe's largest tower train station. Five circulation levels that are flooded with light give access to east-west rail services on Level +2 and north-south services on Level -3. Car and bike parking and a broad range of shops, food outlets and other service providers complete the station's facilities. It is used by over 300 000 customers a day.

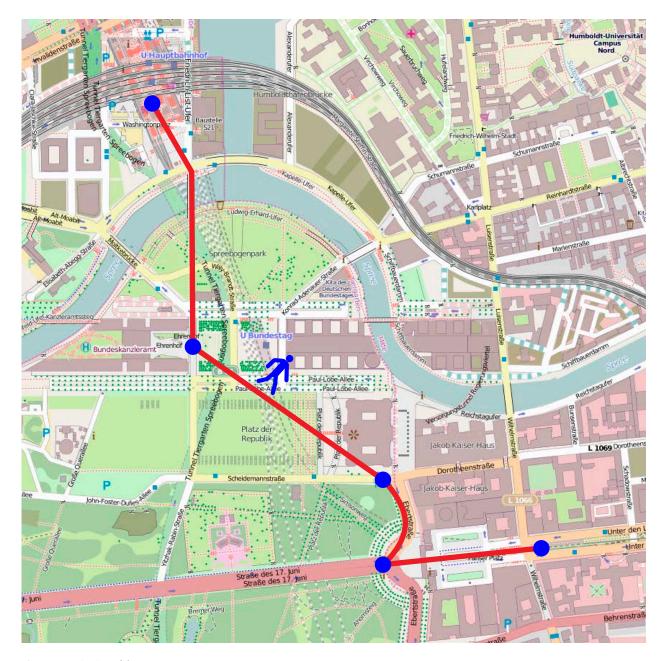
Although the Hauptbahnhof is in a very central location in the city, connections to the inner-city transport system were initially inadequate. A great deal of effort has been put into rectifying this and some of the work is still ongoing. The fact that the area around the Hauptbahnhof is not well connected to the urban transport system dates back to the time when Berlin was a divided city and the area was close to the Wall.



#### More on financing

- More information about financing of urban mobility in Berlin are available in the presentation "Financing Public Transport in Germany Case Study Berlin" http://sustainabletransport.org/?wpdmact=process&did=NDMuaG90bGluaw==
- General information on financing: SUTP-module "Financing Sustainable Urban Transport": http://www.sutp.org/component/phocadownload/category/23-1f?download=23:1f-fsut-en

Ticket information: Berlin has three fare zones: A, B, and C. A and B cover the entire area up to the city limits. A single ticket (EUR 2.60) is valid for two hours, during which time you can change freely between modes of transport (all types of train, buses and trams) and interrupt the journey to your destination as often as you like. Round trips and return journeys are not permitted. You can save money by purchasing a pack of four single tickets. Day tickets are also available for EUR 6.70, or monthly tickets costing EUR 78.00 (for zones A, B; March 2014). More information on fares here: http://www.bvg.de/index.php/en/17181/name/Fares+Overview.html.



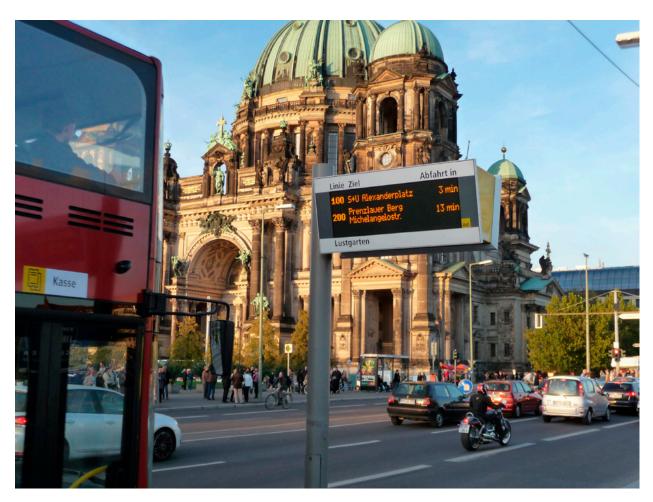
**Figure 4:** Beginning of the Tour Adapted from: Openstreetmap

#### Start of the tour

- Leave the station by the Washingtonplatz exit and walk southwards across this plaza towards the river.
  - → Since completion of the Hauptbahnhof, work has been ongoing to develop the building land in the vicinity of the station. Modern hotels, offices and housing are being built next to Washingtonplatz and the Humboldthafen dock basin. To the north of Hauptbahnhof, on Heidestrasse, the Europaquartier is under construction. This will be a very large new inner-city quarter with over
- 3 500 homes and land earmarked for trade and commerce.
- Cross the River Spree on Gustav-Heinemann-Brücke and continue straight ahead along a path through the Spreebogen Park towards the government quarter. You will walk down the side of the Swiss Embassy on your left. Cross the road and carry on straight ahead until you come to the Federal Chancellery on your right with its sculpture of corten steel by Eduardo Chillida in the courtyard.

- Stop briefly and look around.
  - → With your back to the Chancellery you will see Paul-Löbe-Haus ahead of you, a glass and concrete building which houses conference facilities and offices for the Members of the Bundestag (the German Parliament).
- Carry on straight ahead across Paul-Löbe-Allee and across the large open space in front of the Reichstag building, the Platz der Republik, to Scheidemannstrasse.
  - → On the eastern side of the Platz der Republik is the Reichstag building, which houses the plenary chamber of the Bundestag, Germany's lower house.
  - → Beneath you is an extensive system of tunnels, including those that carry north-south main line and regional trains, the Underground and motorised traffic in the Tiergarten tunnel. These tunnels were built to divert all through traffic away from

- the government district and also to reconnect areas of the Tiergarten Park that had been dissected by roads during the post-war years.
- Turn left onto Scheidemannstrasse and walk past the Reichstag building on your left. Now turn right into Ebertstrasse and walk straight ahead for about 100 metres.
- You will come to Platz des 18. März, which is at the eastern end of Strasse des 17. Juni.
  - → Strasse des 17. Juni is a major east-west axis. The section between the Brandenburg Gate and the Grosser Stern, a traffic roundabout with the Victory Column (memorial of the Prussian victories between 1864 and 1871) in the middle, is regularly closed to traffic because of large-scale public events, such as broadcasts on giant screens during the soccer World Cup and European Championships, other major sporting events, or events



**Figure 5:** Bus stop with real time information © Manfred Breithaupt

celebrating the national holiday to commemorate unification.

- Now walk eastwards through the Brandenburg Gate.
  - → Despite initial public protests, the Brandenburg Gate has been closed to motorised traffic since 1996 when Pariser Platz was remodelled.
- Walk straight ahead across Pariser Platz and continue to Brandenburger Tor S+U-Bahn station. Here you can choose between a number of different forms of public transport.
  - → Work is currently underway to close a 2.3 km gap on the U5 line between Brandenburger Tor and Alexanderplatz S+U-Bahn stations. This will create a through service on the Underground from the large housing estates on the eastern edge of Berlin to the historical city centre and the Hauptbahnhof. The section, with its three new stations including at the Humboldtforum, is scheduled to be operational by 2019.
- To continue the tour, take the  $N^{0}$  100 bus, which runs from here.
  - → This bus, which goes from Zoologischer Garten to Alexanderplatz, was the first to run between East and West Berlin following German reunification. It is an inexpensive alternative to taking a guided tour of the city. Along the route with its 19 stops are a number of the city's key sights. You can get on and off the bus as often as you like to visit these sights as long as your ticket is still within the permitted time limit of two hours. (Berlin Tourismus & Kongress GmbH, 2013) and (Berlin Tourismus, 2013).

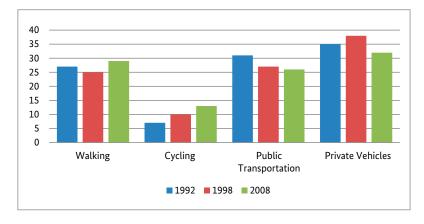
The following sights can be seen along the route (from west to east):

- Maiser Wilhelm Memorial Church
- Elephant Gate (one of the entrances to the zoo)
- Bellevue Palace (official residence of the German President)
- Mouse of World Cultures
- Reichstag (German Bundestag)
- Brandenburg Gate
- Unter den Linden
- Humboldt University
- Berlin Cathedral
- Marx-Engels Forum
- TV Tower
- Alexanderplatz

Take the bus eastwards towards Alexanderplatz. Get off at the S+U Alexanderplatz Bhf/Memhardstrasse stop to continue the tour from there.

### A detour: Mobility in Berlin (integrated and intermodal transport)

As you may have noticed, public transport is of key importance for mobility within this city. It is the backbone of the transport system – and of the city's transport policy. Since motorised traffic contributes to environmental problems like atmospheric pollution, climate change, consumption of public space, congestion and noise, another priority is promoting and integrating cycling and walking as convenient and healthy ways of getting around the city. Two thirds of all trips in Berlin are already made using public transport, by bike or on foot. Private motor vehicles are used for just less than a third of all trips. Almost half of all households in the city do not have a car. Since 2002, Berlin has been implementing its integrated urban transport plan (Stadtentwicklungsplan Verkehr).



**Figure 6:** *Modal share (per cent)*Source: System repräsentativer Verkehrsbefragung (SrV), TU Dresden

#### **Public transport**

Berlin has five different modes of public transport which are all interconnected, both in terms of routes and timetables. Germany's largest transport association, the Berlin-Brandenburg Transport Association ensures that 40 different transport companies throughout the whole fare area charge the same fares (*Verbundbericht 2013*) so that passengers do not need to buy more than one ticket even

if their journey involves using different operators. This is the only way to ensure a service that is easy to understand for tourists and other occasional users, making it a key element of an attractive public transport system.

In Berlin passengers can choose from the following types of public transport:

- 18 regional rail routes on over 200 km of rails, operated by different transport companies, which serve the entire metropolitan region.
- 15 S-Bahn lines on over 250 km of rails linking the city to the surrounding area via 132 stations, operated by S-Bahn Berlin GmbH. Access these red-yellow trains following the green S.
- 10 U-Bahn lines on almost 150 km of rails serving over 170 stations, operated by BVG, which is owned by the city state of Berlin. Access these yellow trains following the blue U.
- BVG also operates:
  - → 22 tram routes (9 of which operate a 24-hour service) on over 190 km of rails;
  - → 149 bus routes (17 of which operate a 24-hour service) on over 100 km of bus lanes;
  - → 5 ferries.

If all the routes in the entire network were laid out in a line it would reach from Berlin to Moscow (1 800 km). They are used by about 3.7 million passengers a day (and the figure is rising).

Some tram and bus lines are designated 'metro' routes. This means they offer a particularly high level of service: they operate 24/7 and run at least every ten minutes except at night. High frequencies – not just during peak travel times – make public transport an attractive and competitive option. There is also an outstanding night service: almost all the S- and U-Bahn lines run round the clock at weekends and on public holidays, and buses and trams provide an attractive night service even during the week.

Fare revenue covers about 60% of the operating costs of Berlin's public transport service, with the rest coming from the public budget. Berlin's transport system covers the largest area of any city in Germany; its ticket prices are roughly in line with the national average.

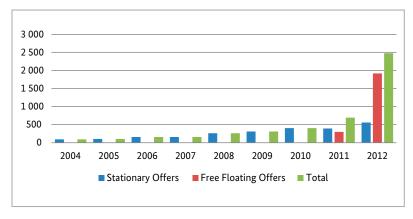
**Figure 7:** CarSharing in Berlin: amount of cars Source: Bundesverband CarSharing e.V. (bcs) However, almost a third of all public transport users are eligible for concessionary fares for low earners, students, senior citizens, etc.

Please respect the smoking ban within all stations, special smoking zones are indicated.

Please refer to http://www.bvg.de/index.php/en/index. html for any further information.

#### Berlin's intermodal transport philosophy

Berlin's transport system goes beyond simply integrating the different classic modes of public transport. To close up any missing links in a journey, coordinated 'onward mobility' options are available. This might involve passengers using a bicycle or car (either their own or one from a car-sharing service). Cars and bikes serve the provision of the more sparsely populated areas on the outskirts of the city, where the provision of quality public transport would be too expensive. Park+Ride and Bike+Ride facilities at railway stations make for easier access to rail services. Passengers who do not want to take their bike on the S- or U-Bahn can use the 'public bikes' available at their destination. People who do not own a car and primarily use public transport, but would occasionally like the use of a car, will find a wide range of car-sharing services (particularly in the densely populated inner-city areas), including electric cars. They can be picked up at car-sharing stations or simply at the roadside, depending on the provider. Dynamic traffic information (i.e. updated every five minutes) available on smartphones and at numerous public information points help travellers decide which mode of transport and which route is best for their particular journey depending on the given situation and traffic conditions.





**Figure 8:** Intermodality at Friedrichstrasse Station: one of numerous public transport interchanges in Berlin where passengers can change between regional trains, S-Bahn, U-Bahn, tram and bus.

© Ledwoch, p. (2012): Intermodality: Bike stand next to S-Bahn on Oranienburger Strasse.

#### Cycling

Berlin is a hugely bike-friendly city: cycling here is easy and enjoyable, even for visitors unfamiliar with the city. There are about 720 bicycles for every 1 000 inhabitants. Around 1.5 million trips a day are already made by bike, and cycle traffic continues to increase. This has a number of reasons:

■ The city's cycling infrastructure is good and is improving constantly: there are now 650 kilometres of bike paths and 175 km of bike lanes on main roads. About 70% of the 5 400 km road network is made

- up of side streets with a 30 km/h speed limit, which makes them ideal for cycling. A grid of cycle routes, superimposed on this road network, has new sign-posts exclusively for cycle traffic.
- Bicycle parking facilities at public transport stops are an important part of public infrastructure: bike parking facilities have been installed at key S- and U-Bahn stations and are continually being expanded. This is designed to make it easier to change between different means of sustainable transport. To take the S-Bahn as an example: since 1999, some 8 800 parking spaces for bikes have been created at 70 stations. The stations have racks to enable passengers to lock their



**Figure 9:** Car sharing vehicles in Berlin © Daniel Bongardt, via GIZ SUTP Flickr

bikes and most of them are covered. For new-build housing there is also a statutory requirement to provide safe parking for bicycles (two spaces per apartment or one per 100 m<sup>2</sup> of commercial surface).

- There are virtually no legal restrictions on taking bikes on the various kinds of rail services. People can take their own bike with them on trams, regional trains and the S-Bahn and U-Bahn at any time. Restrictions that used to apply at certain times of day have been lifted.
- There is also a range of public bicycles on offer: people who have left their bike at a Bike+Ride Station before boarding public transport or tourists who do not have their own bicycle will find a range of private bike hire companies and public providers offering inexpensive rates on 1 700 bikes at 140 stations around the centre (see on page 13 "A detour: Call a Bike").

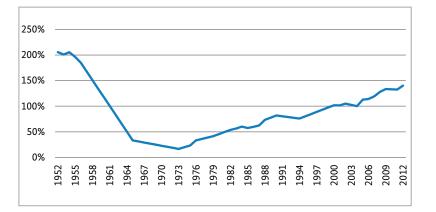


Figure 10: Trend of bicycle traffic since 1951
Source: Senatsverwaltung für Stadtentwicklung und Umwelt Berlin;
Ingenieurbüro für Verkehrserhebungen, -statistik und -planung Stadtplan:
Fahrradverkehr-Pegelzählungen Jahresbericht 2012 im Auftrag der
Verkehrslenkung Berlin

#### Private motor transport

There are currently 1.3 million motor vehicles registered in Berlin. At about 324 cars per 1 000 inhabitants, motor vehicle ownership is lower here than in any other German city (German average = 517). In recent years, motor traffic within the S-Bahn ring has fallen by about one percent per year. Nevertheless, motor transport, especially in the commercial sector, will continue to be important in the future. However, due to the multiple problems induced by motor traffic, transport policy-makers have set a target of reducing its share in the modal split to about 25 % by 2025 and shifting some of today's motor transport to modes that are less damaging to the city, the population and the environment. The plan is for the remaining motor transport to be as low-noise and emission-free as possible in the future. To trial and demonstrate new technologies and concepts, Berlin is taking part in the Federal Government's major Electromobility Showcase initiative. Part of this initiative involves promoting car-sharing. For many people living in cities, access to a car is more important than owning one - all too often private cars simply take up valuable space. Experience in Berlin has shown that each car-sharing vehicle in use results in between five and eight fewer private cars.

As you continue your tour of the city, take the opportunity to observe the transport system with your own eyes. Experience in practice how transport in Berlin works, what is special about it and how these successes have been achieved.

#### More about cycling

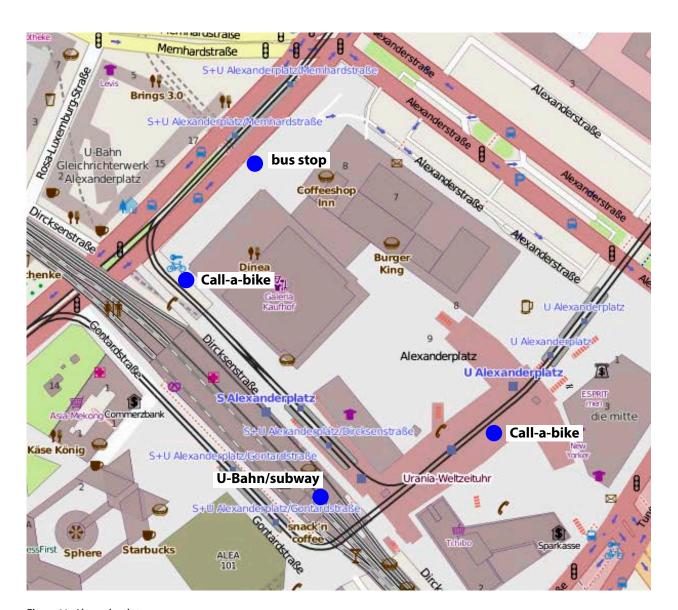
- Cycling in Germany: http://www.nationaler-radverkehrsplan.de/en/transferstelle
- Cycling-Inclusive Policy Development: A Handbook: http://www.sutp. org/component/phocadownload/ category/61-tc-cycling?download=126:tc-cyc-en
- Planning for Cycling in Germany: Cycling Coordinators and Officers: http://www. sutp.org/component/phocadownload/ category/72-cs4?download=141:cs-cp-en

#### **Further reading**

- CYCLING STRATEGY FOR BERLIN 2011: The cycling strategy for Berlin is an integral part of the city's overall transport development plan for sustainable mobility that is both socially fair and city-friendly. http://www.stadtentwicklung.berlin.de/verkehr/politik\_planung/rad/strategie/download/radverkehrsstrategie\_senatsbeschluss\_en.pdf
- You have now almost arrived at Alexanderplatz. As you get off the bus, you will see the side of the Galeria Kaufhof department store ahead of you. Facing this building, walk to the left and then at the corner of the building turn right to enter Alexanderplatz. Pass the Brunnen der Völkerfreundschaft (friendship of the nations) fountain on your right and continue to the World Time Clock.
  - Stop a moment here and look around. Alexanderplatz is steeped in history. For the East German government it was an important space in East Berlin, the country's capital, providing a venue for mass public events. For this reason Alexanderplatz was kept free of traffic (cars and trams) after the Second World War.
  - You are standing in front of the World Time Clock, erected in 1971.
  - To the south of the square you can see the TV Tower, which at 368 metres is the tallest structure in Germany.
  - After the fall of the Berlin Wall, extensive plans for redesigning Alexanderplatz and the buildings around it were developed and included proposals

for new high-rise developments. The model of the city on display at the address Am Köllnischen Park 3 shows these urban design plans and the progress made towards implementing them. The square itself and Alexanderstrasse, the road on the southeast side of the square, have already been remodelled. Trams now run across the square again and

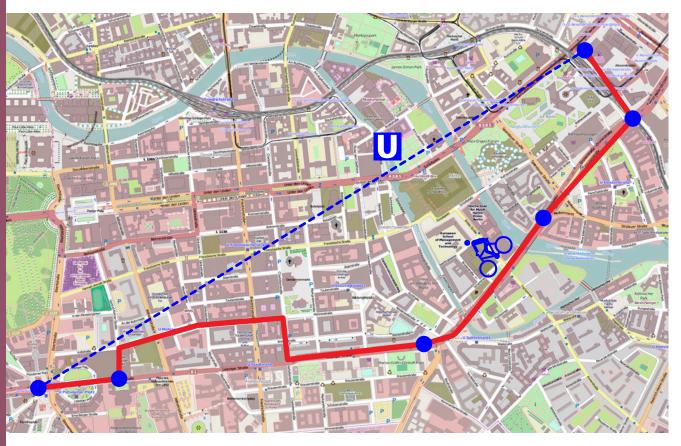
- it still serves as one of the city's important meeting places and a venue for public events in the city.
- → Today, the area around Alexanderplatz is one of Berlin's most important transport hubs, with over half a million people passing through every day. It serves as a station for main line trains and all types of local transport.



**Figure 11:** Alexanderplatz Adapted from: Openstreetmap

You can now decide how you would like to proceed to the next stop on the tour (Potsdamer Platz). You can choose between taking the U-Bahn or renting a bicycle (Call a Bike).

## Tour 2 Alexanderplatz – Potsdamer Platz



**Figure 12:** From Alexanderplatz to Potsdamer Platz Adapted from: Openstreetmap

- If you would like to take the *U-Bahn*, walk from the World Time Clock to any of the entrances to Alexanderplatz station that have a blue U-Bahn sign. Make sure you have a valid ticket and take the U2 line towards Ruhleben, which runs every four or five minutes. Alight at the fifth stop, Potsdamer Platz station.
- To continue the tour by *rental bike*, walk from the World Time Clock back across Alexanderplatz to Karl-Liebknecht-Strasse, where there is a Call a Bike docking station (Nº. 1162) (see "A detour: Call a Bike"). Once you have your bike, cycle back past the World Time clock again, towards the large pink shopping centre called Alexa until you come to Grunerstrasse. *Attention*: If not indicated otherwise, respect the priority to the right!
- Turn right into Grunerstrasse and continue along it.
  - Straight ahead of you between the Rotes
    Rathaus, Berlin's City Hall, on the right and the
    Altes and Neues Stadthaus on the left is a rather
    inhospitable urban space, dominated by a wide
    road breaking through the historic structure of
    the city. This 6- to 8-lane road is the result of the
    destruction wreaked during the Second World
    War and the post-war reconstruction which –
    both in East and West Berlin was based on the
    paradigm of the car-centric city. An important
    project within the 'critical reconstruction' of Berlin's historical centre is to remodel Molkenmarkt,
    which is at the end of Grunerstrasse on the edge of
    Nikolaiviertel. The plan is to change the layout of

Grunerstrasse so that it follows its original routing, reduce the width of the road by reinstating tramlines (from Spandauer Strasse) and use the land gained to build housing, offices and shops.

- On the western side of Molkenmarkt is the historical Nikolaikirche church in the Nikolaiviertel. You are now in one of the oldest settled areas of the city, although its buildings − with the exception of the church − date back to the last phase of East German urban design. The Nikolaiviertel is loosely based on historical urban structures and was built using prefabricated concrete panels to create replicas of historical buildings that show how the old quarter might have looked.
- Now cross the river Spree on the Mühlendammbrücke and continue along Mühlendamm.
  - → This road is also scheduled to be remodelled.

    There will be fewer lanes, tramlines will be laid
    (running initially to the Kulturforum) and wide
    pavements and cycle lanes will be added. On the
    northern edge of Mühlendamm you can see excavations of remains of the old city.
- Cross the river Spree on Mühlendammbrücke and continue along the road as it turns into Gertraudenstrasse. You will now cross a branch of the river Spree. The road is now called Spittelmarkt and after a few hundred metres becomes Leipziger Strasse.
- Continue along this road which runs through the Berlin Mitte district until you come to Potsdamer Platz.
  - On your left, just before the octagonal Leipziger Platz, the square next to Potsdamer Platz, you will see the building that was formerly the Prussian House of Lords and now houses the German Bundesrat (Upper House).
  - Where you can see the tram lines that run through to Potsdamer Platz. They were laid back in the 1990s during the remodelling of Leipziger Strasse in preparation for the tram that will run to the Kulturforum.
- Park and lock your bicycle (see on this page "A detour: Call a Bike").

#### A detour: Call a Bike

If you don't have access to a bicycle, hiring one (or two) is a good option. In addition to a number of smaller private companies, Berlin, like many other cities, also has a range of bicycle renting systems provided by various private operators. The largest operator in Berlin (and

indeed the country as a whole) is DB Rent, a subsidiary of Deutsche Bahn, which runs Call a Bike. In most cases, complementary funding is necessary because a system that provides such widespread coverage cannot be financed by user charges alone; the cost of rentals would deter people from using the service. The funding is justifiable because the bike rental system is designed to complement the public transport system.

In central Berlin all registered Call a Bike customers can take their pick from 1 700 bicycles which can be hired and returned 24/7 at 140 docking stations. The service is currently being expanded further. The aim is to cover the whole of central Berlin within the S-Bahn ring.

The modern bicycles can be rented calling a number by mobile phone and after registration can be used in central areas of German cities. 2.2 million trips were made throughout Germany using DB Rent bikes in 2012. 8 500 bikes are available for hire in eight German cities (Berlin, Cologne, Frankfurt am Main, Hamburg, Karlsruhe, Kassel, Munich and Stuttgart) and at 40 ICE railway stations (Ahrens, 2012).

### There are two rental and two payment systems for DB Rent in Germany

*Rental systems*: The first system for hiring and returning a bicycle is called the 'Flex-System'. Here, you can borrow and return a bike wherever it is parked, not just at docking stations. The second is known as the 'Fix-System', under which bikes are borrowed from and returned to a docking station. The latter is used in Berlin.

Payment systems: There are also two pricing systems: the standard rate, which costs 8 cents a minute and a maximum of EUR 9.00 or 15.00 a day (see Table 2), and the flat rate, where users pay an annual fee that allows them to cycle for up to 30 minutes free of charge. There is a charge after 30 minutes (see Table 3). This rate is a good deal for people who use the system a lot.

Prices vary for holders of a BahnCard<sup>[1]</sup>.

<sup>[1]</sup> The BahnCard is a discount subscription of the Deutsche Bahn AG entitling the holder to reductions on ticket prices.

#### Table 2: Rate 1 (standard rate [in Euro], as at March 2014)

Standard rate	Without BahnCard	With BahnCard	Students
Minute	0.08	0.08	0.08
Day (24 hours)	15.00	9.00	9.00

#### Table 3: Rate 2 (flat rate [in Euro])

Flat rate	Without BahnCard	With BahnCard	Students
1 to 30 minutes	free	free	free
From the 31st minute	0.08	0.08	0.08
Day (24 hours)	15.00	9.00	9.00
Annual fee	48.00	36.00	24.00

#### How does Call a Bike work (in Berlin)?

- 1. One-off online *registration* free of charge at http://www.callabike-interaktiv.de/index.php?id=389, at a terminal or using the Call a Bike app.
- Once you have registered, look for a Call a Bike. You
  can download a map of docking stations for Berlin's
  Call a Bike system at
  http://www.callabike-interaktiv.de/fileadmin/www.
  callabike-interaktiv.de/redaktion/pdf/20110504\_
- 3. Hiring a bike using a terminal or a mobile phone

Call\_a\_Bike\_Kerngebiet\_Berlin.pdf.

- I. Using a terminal
  - a) Touch the screen to activate it. Confirm your identity using a maestro or credit card or Call a Bike customer card.
  - b) Select bikes (max 2 per customer) using the bike numbers displayed.
  - c) Touch the display of the bike selected and remove the lock.
- II. Using a phone
  - a) Call the phone number in the red box on the cover of the lock.
- 4. If you would like to take a *break* while using your Call a Bike, close the lock and press the lock button. Your personal opening code will appear on the display. You can use this to unlock the bike later (you can also access it online). Note: you will be charged for the time your bike is parked, even though you are not using it.



**Figure 13:** Call-a-Bike rent station in Berlin

© Rudolf Simon,

http://commons.wikimedia.org/wiki/File:Call-a-Bike\_Berlin.JPG?uselang=de

5. You can **return** the bike to any docking station.
Simply place it in a free slot and secure it using the lock provided. If all the slots are taken, leave the bike near a docking station. The system will recognise it as having been returned. Finally, press the button on the right of the lock and note the receipt code on the lock display.

(DB Rent GmbH, 2012) (Deutsche Bahn AG, 2012)

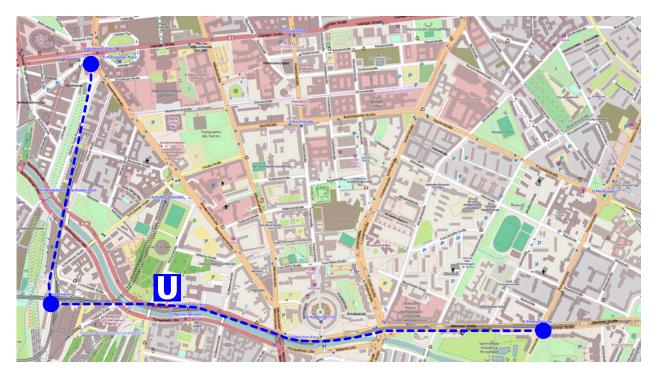
#### **Further reading**

- Call a Bike das Stadtrad für Berlin http://www.callabike-interaktiv.de/index. php?id=389&key=18db52aee557023f2b-77d32c660c90f4...00000 (German only)
- Call a Bike brochure in English https://www.callabike-interaktiv.de/kundenbuchung/download/500/200903\_Call\_a\_Bike\_Z-Card\_GB\_oP.pdf
- Map of docking stations for the Berlin Call a Bike system

http://www.callabike-interaktiv.de/filead-min/www.callabike-interaktiv.de/redaktion/pdf/20110504\_Call\_a\_Bike\_Kerngebiet\_Berlin.pdf

## Tour 3 Potsdamer Platz

■ Leave Potsdamer Platz station by the Stresemannstrasse exit and take a look around.



**Figure 14:** From Potsdamer Platz to Kreuzberg Adapted from: Openstreetmap

Potsdamer Platz and the adjacent Leipziger Platz have once more become prominent elements in the city's polycentric structure and form a major transport hub where regional rail, S-Bahn, U-Bahn and a number of bus routes converge (a tram line is also planned). Potsdamer Platz is also directly connected to the Tiergarten tunnel carrying the north-south rail link.

History has repeatedly left its mark on Potsdamer Platz. Before the Second World War, it was one of the most vibrant squares in Europe. Traffic was so congested and the junction so complex that traffic control technology had to be used for the first time ever: traffic lights were invented. A model of these first traffic lights can be seen at Potsdamer Platz today. During the war, Allied bombing caused large-scale destruction. In the aftermath, the



**Figure 15:** Potsdamer Platz today

© No credit or date available, http://upload.wikimedia.org/wikipedia/commons/1/1c/PotsdamerPlatz\_Vogelperspektive\_2004\_1.jpg

Tour 3: Potsdamer Platz 15

city was carved up into four sectors by the Allies, with Potsdamer Platz forming the border between the Soviet sector in the East and the American and British sectors in the West. The Berlin Wall, built in 1961, ran through the middle of the square. The remaining buildings were demolished to make room for the 'death strip' (mined land between the concrete barrier on the Western border and another further into the East). For decades, streams of visitors from the West used a viewing platform to witness the division of Berlin and Germany with their own eyes. Following reunification and the Bundestag's decision that Berlin should once again become Germany's capital (the capital of Western Germany was in Bonn nearby Cologne), parliament, government and business associations started to move to Berlin and the city began to regain its international significance. Potsdamer Platz, at the very heart of the reunited city, became the first major urban design project to be planned and built in Berlin. The aim was to develop a ground-breaking, modern, mixed-use central urban quarter that nevertheless respects the underlying historical street pattern. Between 1993 and 1998, a new urban quarter was created with a range of diverse uses and striking buildings that are defining features of the cityscape. It attracts thousands of visitors each day. The access roads in the quarter have been designed as high-quality public spaces;

parking is mainly in underground car parks. Over 10 000 new jobs have been created in the quarter, which has excellent public transport services so that people do not need a car to get to work.

#### (Berlin.de, 2013)

- Go back into Potsdamer Platz station and take the U2 line towards Theodor-Heuss-Platz or Ruhleben, which runs every 5 minutes. Make sure you have a valid ticket.
- Get off two stops later at Gleisdreieck and take the U1 towards Warschauer Strasse, which also runs every 5 minutes
- Go three stops to Prinzenstrasse station and leave by the Prinzenstrasse/Gitschiner Strasse exit.

#### More about mobility management

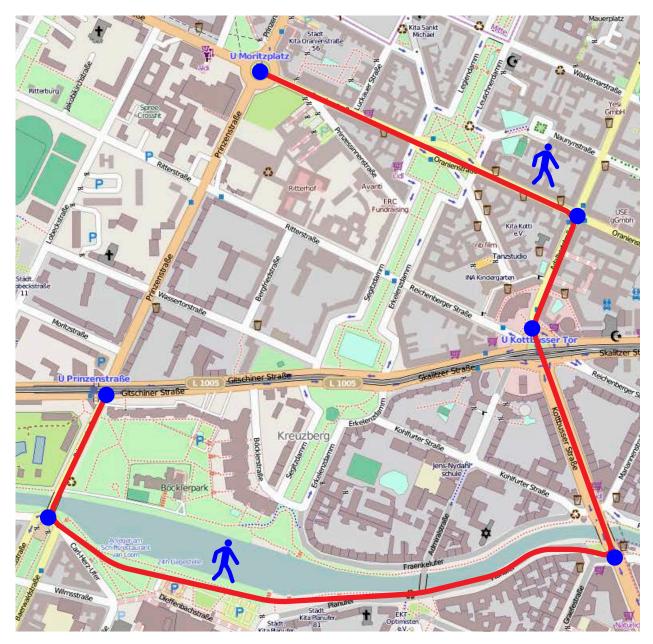
"Mobility Management & Commuting: Inputs and Examples of Best Practice in German Firms": http://www.sutp.org/component/phocadown-load/category/73-cs5?download=142:cs-mmc-en

**Figure 16:** *Mobility Scenes from Berlin* © M.Köller, M. Breithaupt, S. Ledwoch



Tour 3: Potsdamer Platz

# Tour 4 Kreuzberg



**Figure 17:** From Kreuzberg to Moritzplatz Adapted from: Openstreetmap

You are now in Kreuzberg, a district that belongs to the borough of Friedrichshain-Kreuzberg. Until the administrative reform of 2001 it was a borough in its own right. Alongside Friedrichshain and Prenzlauer Berg, Kreuzberg is seen as one of Berlin's trendiest areas. Unlike the first two districts, however, Kreuzberg was in West Berlin, right next to the Wall, which meant it had in effect been pushed out to the edge of the western part of the city. Despite severe war

- damage, the typical structure of the 'tenement city' dating back to the late 19<sup>th</sup> century remains intact in many parts of Kreuzberg. In West Berlin days, the district provided a refuge for people looking for alternative lifestyles and the opportunity to protest against the establishment.
- → Militant conflicts were sparked off by disagreements over urban planning and transport policy, which in the post-war years followed the paradigm of the car-centric city. Radical urban redevelopment schemes involving bulldozing vast areas to make way for roads would have virtually destroyed what was left of the historical structure of the area. Kottbusser Tor is a shining example of urban design in the 1960s and 1970s, giving an idea of what was planned for vast areas of Kreuzberg. Squatter movements and militant protests in the late 1970s led to a U-turn in redevelopment and transport policy. The road schemes were abandoned, a 'careful urban renewal' model was developed, and put into action with the result that rents were lowered ('Internationale Bauausstellung 1984-87'). Today, the mixed-use buildings built around courtyards, which date back to the Gründerzeit - Germany's period of rapid industrial expansion in the late 19<sup>th</sup> century – are highly sought after in creative circles.
- As you leave the U-Bahn station you will see Böcklerpark on your left and the Urbanhafen ahead, which can be reached by crossing Baerwaldbrücke Bridge.



Figure 18: "Kreuzberger Bügel"

© http://commons.wikimedia.org/wiki/File:Kreuzberger\_Buegel.JPG?uselang=de

- This open space has a wonderful Mediterranean ambiance and is ideal for relaxing in the summer.
- After crossing the Baerwaldbrücke Bridge, turn left and walk eastwards along the Landwehr canal to Kottbusser Strasse.
- Turn left over the bridge and walk northwards on Kottbusser Strasse to Kottbusser Tor.
  - → Kottbusser Tor, known to locals as Kotti, is a socially deprived area in the middle of trendy Kreuzberg.
- Turn either right or left and take the third exit off the roundabout into Adalbertstrasse and continue to the junction with Oranienstrasse.
  - → Since reunification, the arts and creative industry<sup>[2]</sup> in Kreuzberg and in Berlin in general has become one of the mainstays of the city's economy. About 20 000 artists now live and work in the city. Creative and immigrant communities developed in Kreuzberg long before the fall of the Berlin Wall, since rents for studios, workshops and apartments were cheap. Today, the population of Kreuzberg is still very different from that in other neighbourhoods of the city, and this is also reflected in voting behaviour for elections to the federal and state parliaments and to the borough council, where the Green Party is regularly in the majority. However, since Kreuzberg is a sought-after district to live in, rents have also been rising here for many years, forcing the original inhabitants to leave. The battle against this gentrification process is increasingly becoming a key political issue both in Kreuzberg and in the other neighbourhoods mentioned.
  - You are now on Oranienstrasse, the centre of Kreuzberg's alternative scene. Most striking are the bars and small shops in buildings that are either somewhat run down (but have cheap rents) or have already been elaborately refurbished to a very high standard. Turn left and walk westwards towards Moritzplatz.
  - → The district's unique demographic structure is also reflected in transport behaviour: people in Kreuzberg travel by bike more often and use private cars less frequently than anywhere else in Berlin. Even a quite well-known bicycle parking rack called "Kreuzberger Bügel" (see Figure 18)

<sup>[2]</sup> Businesses producing artistic and cultural goods and ideas based on technological, innovative and scientific creativity.

was first installed in this district and therefore named after it. From old boneshakers and classical sit-up-and-beg Dutch bikes through to electric cycles and cargo bikes, when it comes to bicycle culture it's all here in Kreuzberg. Look closely and you might also spot a fashionable local on a 'fixie' – a fixed-wheel bike with only one gear that seems to express a particular philosophy of life. (Berlin – Bezirksamt Friedrichshain-Kreuzberg, 2008) (Sightseeing Point GmbH) (Berlin Tourismus & Kongress GmbH).

#### A detour: Low emission zone

So far you have been able to enjoy the excellent public transport services in Berlin in all their diversity. However, you have no doubt noticed as you have been touring the city that Berlin's roads are often full of cars, despite the fact that the percentage of private motor vehicles is far lower in Berlin than in any other German city. Driving a car produces emissions: air pollutants, climate-damaging gases and noise. Of course, modern cars produce fewer emissions than older ones, so thankfully the days of Berlin smog alarms are long gone – the last alarm in West Berlin was in 1985. The modernisation of Berlin's industry and household heating systems has also made a major contribution to reducing atmospheric pollution. Take a deep breath. Do you notice anything? Unfortunately, the fact that you can't smell any pollutants in the atmosphere does not mean the problem has been completely solved. Particulates (PM<sub>10</sub>, 2, 5) and nitrogen dioxide (NO<sub>2</sub>) still pollute the atmosphere, yet we scarcely notice them. The EU has set stringent limit values for these pollutants and threatens countries with and financial fines for breaching them. However, these are still being exceeded in Berlin, which is why the city has introduced a 'low emission zone'.

A low emission zone is a defined urban area in which limit values are often exceeded and where only low-emission vehicles can be driven. In Berlin this is the area within the S-Bahn ring, home to just over a million people. Contraventions incur a fine, currently set at EUR 40. Federal law defines four categories ranging from slightly lower emission to ultra-low emission vehicle. Vehicles receive a windscreen sticker in different colours to show which category they belong to. It is at the discretion of the local authorities to decide, on the basis of local pollution conditions, which category of vehicle should be prohibited from entering the low emission zone and which exemptions may be granted.

Berlin's low emission zone was introduced on 1 January 2008, as there was no other obvious way of quickly achieving a sufficient reduction in air pollution levels. Motor vehicles in Berlin are still major contributors to particulate pollution and are almost solely responsible for nitrogen oxide pollution. The low emission zone was



**Figure 19:** Low emission zone inside the S-Bahn ring in Berlin Source: Senate Department for Urban Development and the Environment (2013): http://www.stadtentwicklung.berlin.de/umwelt/luftqualitaet/umweltzone/de/gebiet.shtml

#### **Further reading**

- The low emission zone in Berlin results of a first impact assessment http://www.stadtentwicklung.berlin.de/umwelt/luftqualitaet/de/luftreinhalteplan/download/ paper\_lez\_berlin\_en.pdf
- Berlin's Environmental Zone Information for Foreign Tourists http://www.lowemissionzones. eu/images/stories/dpf\_files/berlin%20lez%20 english.pdf
- The Low Emission Zone (Umweltzone) in Berlin http://www.unece.org/fileadmin/DAM/thepep/ en/workplan/urban/documents/Skopje/presentations/session4/1.low.emission.zone.pdf

introduced in two phases to give owners time to retrofit their vehicles or buy new ones. Initially vehicles with the highest emissions were prohibited, and the other three categories – red, yellow and green – were still allowed to enter the low emission zone. The second phase began on 1 January 2010. Since then, only vehicles that have a green sticker, i.e. the cleanest category of vehicles at present, are allowed within the zone.

Continual monitoring of air quality has shown that the introduction of the low emission zone has been effective: it has significantly speeded up the replacement of old vehicles by low-emission ones. This has meant that particulate emissions are 50% lower than the predicted trend and nitrogen dioxide emissions are 20% lower.

Despite this success, low emission zones, which have now also been introduced in over 300 other European cities and agglomerations, are the subject of heated public debate. Nevertheless, the fact that limit values are still being exceeded means that low emission zones remain a necessity. Other transport policies designed to further lower the percentage of motor traffic in the city's overall traffic volume promise to reduce pollution further.

#### More about Transportation Demand Management

■ SUTP-Publication "Transportation Demand Management": http://www. sutp.org/component/phocadownload/ category/60-tc-tdm?download=41:tc-tdm-en

#### End of the tour

- You are now at Moritzplatz and can go into the U-Bahn station of the same name. Don't forget to make sure you have a valid ticket!
- To get back to Main Station, take the U8 towards Wittenau, which runs every 5 minutes and change at Jannowitzbrücke onto the S7 S-Bahn line towards Potsdam Hbf, which runs every 2–5 minutes. Alight at Hauptbahnhof.
- You have reached the end of the tour.

### GIZ – Sustainable Urban Transport Project: More about our work

- "Sustainable Transport: Sourcebook for Policymakers in Developing Cities":
  - http://www.sutp.org
- GIZ Transport and Mobility: www.giz.de/transport
- Extensive SUTP Photo Database:

  http://www.flickr.com/photos/sustainabletransport
- Capacity Building on Sustainable Urban Transport (CAPSUT): http://www.capsut.org
- Follow us on Twitter:
  https://twitter.com/\_SUTP

#### Further information on mobility in Berlin

- *General traveller's information* is available at the following sites:
  - → http://wikitravel.org/en/Berlin
  - → http://en.wikivoyage.org/wiki/Berlin
- Berlin Tourismus & Kongress GmbH enterprise with apps, blogs and websites: http://www.visitberlin.de/en/article/berlin-online-and-apps-for-berlin
- For information on *Berlin's transport policy and*integrated urban transport plan (Stadtentwicklungsplan Verkehr) please visit:

  http://www.stadtentwicklung.berlin.de/yerkehr/
  - http://www.stadtentwicklung.berlin.de/verkehr/index\_en.shtml
- Information on using *public transport* in Berlin is available at:
  - → Berliner Verkehrsbetriebe: http://www.bvg.de
  - → S-Bahn Berlin: http://www.s-bahn-berlin.de
  - → Berlin-Brandenburg Transport Association: http://www.vbb.de/de/index.html
- Current *traffic information* for Berlin is available at:
  - → Verkehrsinformationszentrale: http://www.vizinfo.de
- If you would like to get around by *bike* in Berlin, there are a number of possibilities. You have the option of finding your own way around the city on a *rental bike* or of joining a *guided tour*. This offers you different ways of getting to know Berlin.
  - → Call a Bike Berlin: http://www.callabike-interaktiv.de/index.php?id=389
  - → Nextbike Berlin: http://www.nextbike.de/en/berlin

- → Fahrradstation Berlin: http://www.fahrradstation.com
- → ADFC<sup>[3]</sup> Berlin: http://www.adfc-berlin.de
- → Rad und Touren (in conjunction with ADFC): http://www.radundtouren.de
- → BBBike: http://bbbike.de/cgi-bin/bbbike.en.cgi.
  This is an online tool that will work out the best bike route based on the criteria you specify (such as avoid main roads without a cycle lane, side streets wherever possible or no cobblestones)!
- The Wall Trail: This is a hiking and bike trail that follows the 165-kilometre route of the Wall that not only divided Berlin into East and West but also ran along the edge of West Berlin, separating it from East Germany from 1961 to 1989. There are historically interesting sites along the route where remnants of the Wall or clues to what used to be there can still be seen. They are interspersed with areas of natural beauty. https://www.berlin.de/mauer/mauerweg/index/index.en.php
- *Electromobility* in and around Berlin
  - → Berlin Agency for Electromobility eMO: http://www.emo-berlin.de
  - → Modellregion Elektromobilität Berlin/Potsdam: http://www.e-mobil-bb.de (German only)
  - → BeMobility: http://www.bemobility.de/bemobility-de/start (German only)
- *Guided tours* of Berlin:
  - → Organised tours of the city, including walking tours:
    - http://www.berlin-stadtfuehrung.de/index.html
  - → Mit den Ohren unterwegs in Berlin Geophon: http://shop.geophon.de/spaziergang-durch-berlin-download.html (An audio guide to Berlin – German only)

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<sup>[3]</sup> Allgemeiner Deutscher Fahrrad-Club Berlin e. V., Germany's national cycling organisation

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