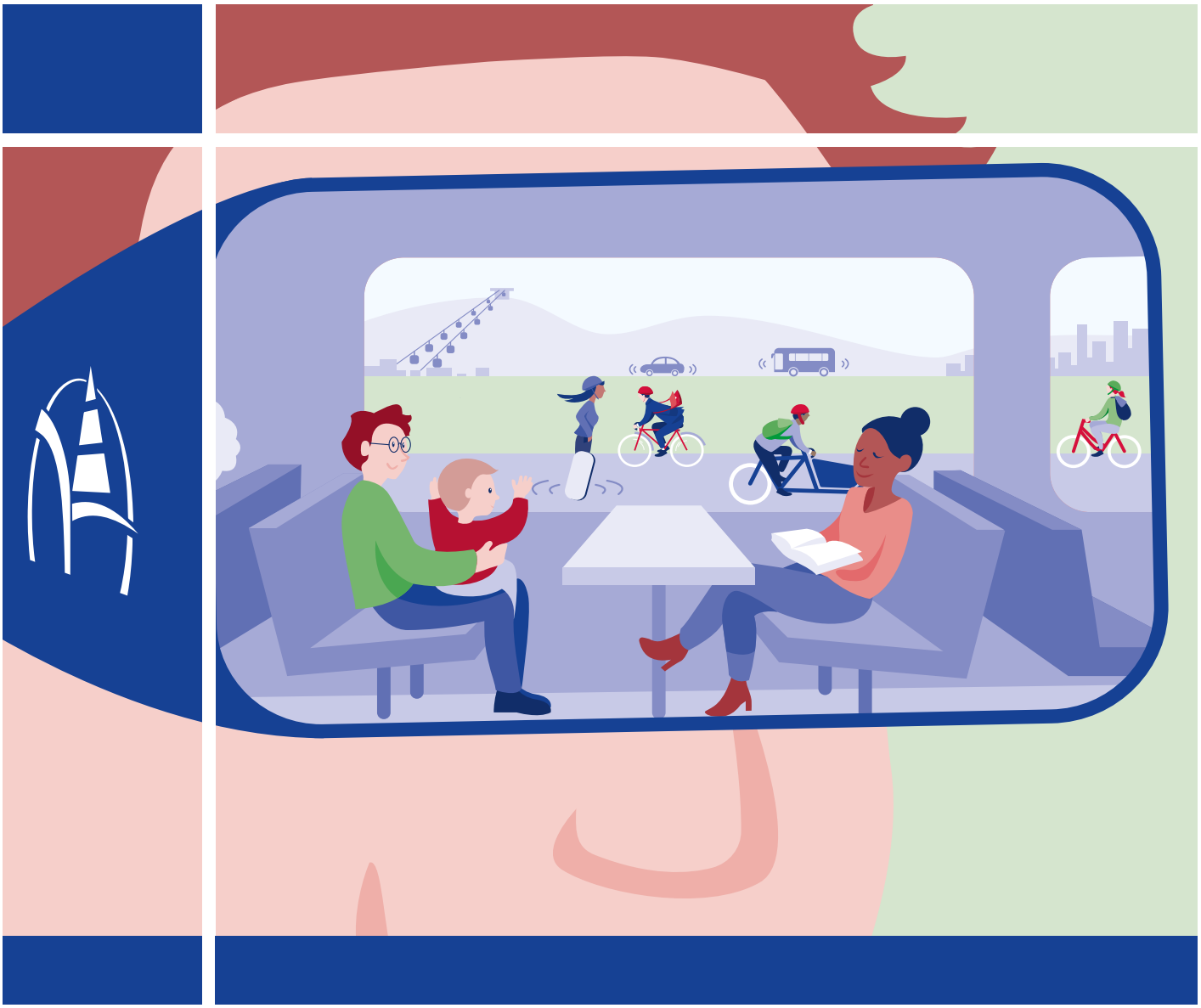


FrankfurtRheinMain on the move

A Sustainable Urban Mobility Plan (SUMP) for the Region

Regional Authority
FrankfurtRheinMain

Contents

High-quality mobility for our region

Our region is polycentric and constantly on the move. However, delays and slow moving traffic is common – in road congestion, on crowded trains and due to large-scale construction projects.

A Sustainable Urban Mobility Plan (SUMP) for the region developed over the past two years by dedicated staff from the Regional Authority FrankfurtRheinMain cannot do a lot about this. The Authority can neither build a rail ring around nor a long-distance rail tunnel underneath Frankfurt. It cannot speed up the S-Bahn expansion project and cannot use its own funds to finance public transport.

But the Regional Authority can do one very important thing: the task mandated to it by the 75 municipalities who belong to it. The towns and cities of the FrankfurtRheinMain conurbation have unanimously called for a regional SUMP, because they want to act now rather than wait any longer.

Taking action! This is how we perceive our mandate. The regional SUMP is not a theoretical treatise of endless research on transport and mobility. Nor is it a catalogue of all the things that should have been done and still need to be done.

This document sets out a clear vision of what we can, want and will implement together with our municipalities in the coming years. We want to achieve high-quality mobility, from anywhere in the region and along every road and route. This regional SUMP therefore identifies specific measures to achieve mobility for all, to avoid unnecessary traffic and to improve management of necessary traffic.

As soon as this regional SUMP has been adopted by the Regional Authority's main decision-making body (*Verbandskammer*), we will work with our municipalities on implementing the vision. To succeed means applying the right tools in the right locations rather than imposing a general one-size-fits-all mobility solution on all municipalities. Our towns and cities are highly diverse and need tailor-made solutions embedded within a regional context. We will then be able to create effective, forward-looking services for the people of FrankfurtRheinMain.

The regional SUMP has three dimensions:

- It sets out the vision we want to achieve together.
- It presents tried and tested tools and methods that can be used to achieve this vision.
- It represents the beginning rather than the end of a process. Working together with the region's municipalities, tailor-made solutions are to be developed and implemented using tried and tested tools so that a common vision can be achieved for the entire region.

What the region doesn't need is another paper tiger gathering dust on the bookshelves of experts. Political will is needed to work together to shape transport and mobility, and to do everything possible to swiftly implement good ideas and measures.

The regional SUMP thereby pursues a clear course and sets three fundamental conditions for the planning of space and mobility:

Mobility for all

Mobility must not be exclusive. Mobility should therefore be:

- **Affordable:** Access must be available to all, regardless of income and wealth. This does not necessarily mean free, but it does mean affordable prices.
- **Accessible:** People should not be in any way hindered in using transport, regardless of their physical or sensory abilities.
- **Available:** Suitable mobility infrastructures and services must be made available to everyone within reasonable proximity to their homes. It must be available at the times needed and with all the information needed. This availability is to be integrated appropriately into a mobility network.

Avoiding unnecessary traffic

Although this condition was already part of our draft regional SUMP prior to the COVID-19 pandemic, developments in this area have significantly accelerated and been brought into focus in 2020: unnecessary journeys must be avoided. The regional SUMP accomplishes this by applying the following principles:

- **Direct routing:** Many emissions are caused by indirect routes, especially by motorised vehicle traffic. Transport networks can be optimised by bridging gaps and avoiding indirect routes. This applies equally to car traffic, public transport, cycling and walking.
- **Compact:** The more compact and the more mixed structures of towns and cities are, the less need there is to travel longer distances by private car.
- **Greater awareness:** Greater awareness about whether a journey is necessary or about using alternative routes is needed. This is more than just people's choices about transport modes. For example, employers can also help to improve and reduce the job-related mobility of their employees.

Planning necessary traffic

Successfully avoiding unnecessary traffic will create space to plan for the necessary traffic which can then be managed in a way that conserves resources, saves space and has as little impact as possible on the immediate environment:

- **Environmentally friendly:** The aim is to save on the space needed for traffic and to reduce emissions at the source, as well as for a particular location.
- **Compatible to surroundings:** Almost every area has traffic passing through it. Regardless of the mode of transport, traffic routing is to be planned in such a way as to be compatible to the surroundings and to existing uses. The aim is to create attractive spaces where people want to live.
- **Safe and reliable:** Safety and reliability in traffic are interdependent, ensuring people can travel without any concerns or misgivings. This applies equally to all modes and means of transport.
- **Economical:** In any endeavour to bring about a mobility transition, the use of primarily public funds must be cost-effective. The cost-benefit ratios used to show such cost effectiveness are to include all relevant non-monetary aspects.

Much of the above can be achieved by providing publicly accessible mobility within a 5-minute walk from every front door of a populated, interconnected region. The attractiveness of mobility options strongly depends on them being within walking distance. Being within a 5-minute walk to a bus or train stop with regular services, mobility hubs or any other transport point increases the acceptance of the service as a real alternative to using a private car. This goal is particularly important in the region's rural locations. However, urban residential locations in the region also have areas where this is not yet the case, as shown by the Regional Authority's research. Lots needs to be done – in cities, in the countryside, and along every route.

Our vision for mobility in FrankfurtRheinMain:

High-quality mobility for all in FrankfurtRhein-Main. A transport and mobility option can be reached within a 5-minute walk from any populated location in the region.

Unnecessary traffic is avoided and necessary traffic is environmentally friendly and compatible with its surroundings.

In short:
FrankfurtRheinMain is to become a 5-minute region.

Working together can make this vision a reality.

The real work is only just beginning. We are looking forward to the challenge!

Rouven Kötter
First Deputy Director and Head of Mobility
Regional Authority FrankfurtRheinMain

1. A major project: FrankfurtRheinMain Regional SUMP

1.1 Joint proposal, unanimous decision: Regional politics in action

April 2018: The main decision-making body (*Verbandskammer*) of the Regional Authority FrankfurtRheinMain unanimously decides that the Authority is to draw up a mobility master plan for the region. The explanatory memorandum states:

> *The FrankfurtRheinMain Region is a growth region. Such growth refers not only to population, jobs and economic performance, but also, and above all, to traffic. This applies to both domestic as well as transit traffic. However, transport infrastructure in many places is already stretched to its limits on both road and rail.* […]
>
> *The Regional Authority is currently preparing a new Regional Land Use Plan with Southern Hessen's Regional Assembly. The plan indicates where new residential and commercial areas can be built. The planning must not only consider the importance of nature conservation and landscape protection, but good connections to the road and transport network.*

As part of the update to the law on the metropolitan region, the following statement has also been made:

> *"Therefore, the Regional Authority [...] should also be given the task of drawing up and amending the general transport plan for the area of the FrankfurtRheinMain conurbation as a further core statutory task in accordance with Section 8 of the metropolitan law."*

Unfortunately, the legislator has not yet followed through with the above. The Regional Authority has no authority to implement a general transport plan / master plan that specifies the relevant infrastructure measures for both road and rail construction, so the Regional Executive Board has opted for a different, pragmatic approach. A Sustainable Urban Mobility Plan (SUMP) for FrankfurtRheinMain that defines quantifiable transport and climate targets for the region and shows how these targets can be achieved using an exemplary, specific set of measures is to be drawn up.

1.2 Mobility forum kick-off event sends a strong signal for the region

> *We need a common and overarching approach to integrated transport and mobility development in FrankfurtRheinMain.*
>
> Excerpt from the report on the mobility forum

August 2018: The Regional Authority along with transport stakeholders and political decision-makers from the region establish a mobility forum. One of the outcomes is to improve local public transport and to promote new mobility concepts. Smart networking of existing modes of transport is to be pursued, as is better dovetailing of land use and transport planning.

Simply scan the QR code!

1.3 Resources provided: New mobility team takes up the challenge

> *It is our declared goal to create the conditions for a regional SUMP and to provide the resources needed to implement it.*
>
> Rouven Kötter in January 2019

January 2019: The regional executive board (*Regionalvorstand*) sets up the mobility unit with in-house staff and provides financial resources.

Rouven Kötter, the First Deputy Director and Head of Mobility, sets three conditions for the newly formed team:

1. The project must be completed and agreed internally and externally within two years so that it can be submitted to political bodies for adoption.
2. It must not become a paper tiger gathering dust with no road or rail improvements taking place.
3. Key components are citizen participation and expert input.

The mobility unit at work

2. Every project needs a foundation

2.1. FrankfurtRheinMain regional SUMP

The beginning of any transition process requires thorough analysis of the current situation, together with the gathering and evaluation of appropriate data. The question was therefore raised whether a mobility study for the region should be commissioned before the mobility unit began its work.

Three arguments militated against such commissioning:

- Many, technically excellent analyses with corresponding ideas and proposals in the field of mobility for the region were already available. Consulted experts also confirmed that sufficient knowledge and experience about the how and where of mobility already existed. The likelihood that a new study would generate ground-breaking new findings was therefore extremely low.
- Tendering and waiting for the study's findings would have taken up a considerable part of the two-year preparation time.
- The costs involved would also have consumed a large share of the project budget.

A longer project duration and a larger budget would, of course, have invalidated the latter two arguments.

But after evaluating more than 20 regional publications on mobility and transport since 2011 (including future studies, analyses, reports, concepts, recommendations for action and guidelines), it was again clear that there was no shortage of good ideas and recommendations for forward-looking mobility developments in FrankfurtRheinMain, so the question to be answered was simply:

What will really make our region mobile and how can it be implemented quickly?

Approach

The FrankfurtRheinMain regional SUMP is a roadmap with cross-municipality significance, aimed at initiating a mobility and transport transition in the region. It has not been developed in isolation, but together with many competent actors and with constant, transparent public communication on its ongoing status. The regional SUMP sees itself as a process that does not end with its adoption. This is when it really starts.

Taking action now

One maxim of the regional SUMP was and is "taking action now". This means taking action yourself, as well as encouraging others to act now. There has been enough research and analysis, and there are always new demands being made. Effective measures also depend on other factors: How long did it take before a measure was approved? Has a measure been started or is it still theoretical? How much has already been achieved? How long did it take to complete? Such questions determine how successful a plan has been.

Accordingly, several strategies and projects have not waited until the final adoption of the regional SUMP but are already being implemented in parallel during the preparation phase. After all, it's vital not to waste time.

Not fearing gaps

A regional SUMP that wants to include every item of information, every worthwhile objective and every necessary action is doomed to failure. No claim is therefore made to the plan being complete. The idea that one institution alone can achieve a regional transport transition is an illusion. Not being afraid of having gaps in a strategy therefore opens up opportunities. Gaps give opportunities within the region's stakeholder network, of which the Regional Authority is a part. The more partners take on and fill these gaps with their experience and skills, the greater the chance of experiencing our vision of high-quality mobility.

"Taking action now" and "not fearing gaps" also mean assuming responsibility for measures and projects that have not yet been implemented. Of course, agreement between all relevant stakeholders beforehand is impor-

tant, not only to address possible concerns, but also to share experiences and discuss stakeholder involvement. All are struggling with insufficient resources.

Changing or sharing roles is therefore a good way to make progress.

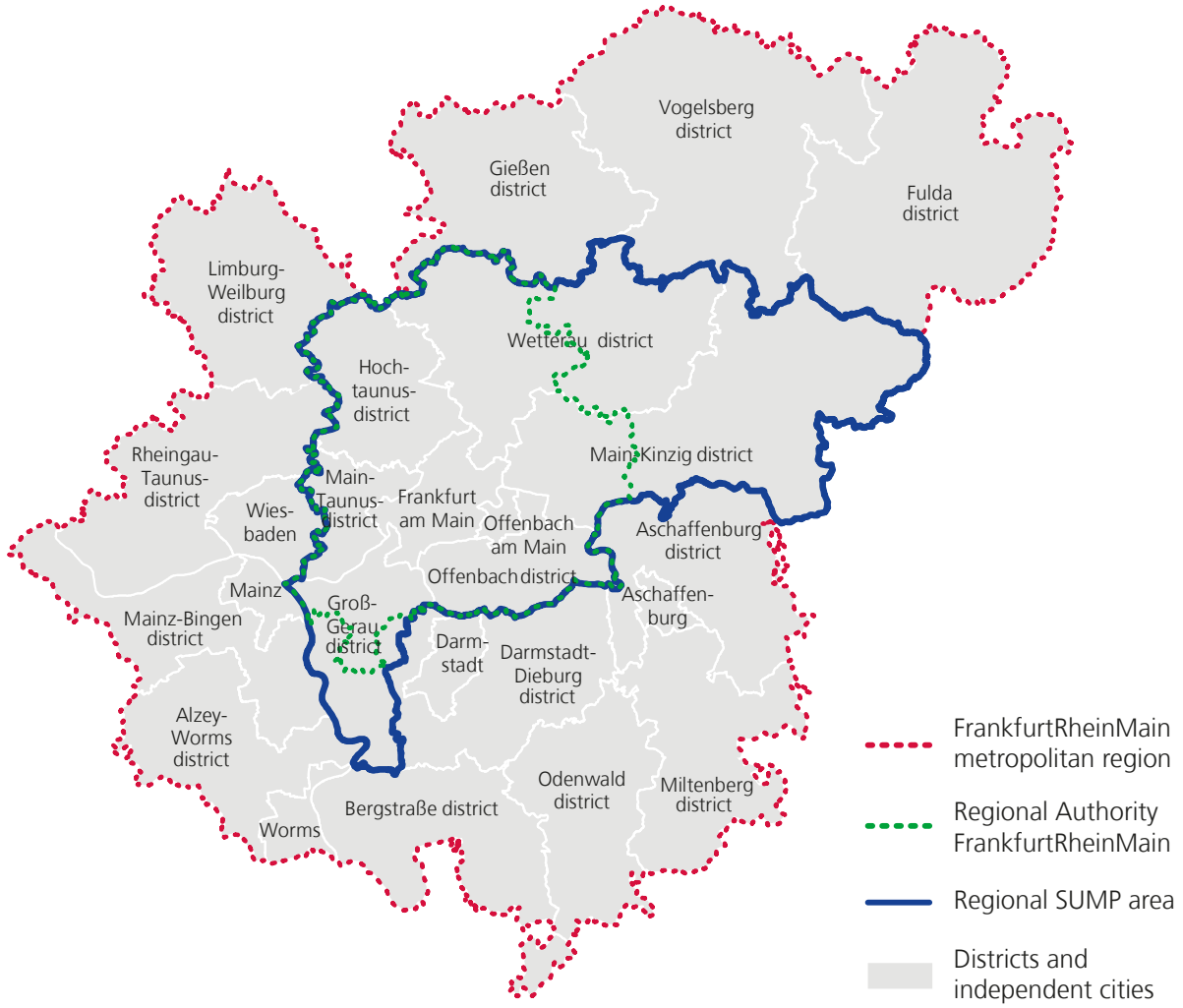
2.2. Role of the districts and the geographical coverage of the regional SUMP

The districts are strong partners in FrankfurtRheinMain's mobility and transport transition. They are not only important bodies responsible for transport, but also have a strong and multiplying effect on their district municipalities through their transport policies and their role model function, for example, with decisions on district mobility concepts.

To avoid duplicating work, to use existing networks and to learn from activities already underway, the regional SUMP has gone beyond the administrative boundaries of the Authority's territory. This means that the 75 municipalities that are members of the Authority have been extended by a total of 33 non-member municipalities in the districts of Groß-Gerau, Main-Kinzig and Wetterau, which are also included when developing measures.

Shortly before completion of this regional SUMP, the Regional Authority has grown from 75 up to 80 members. Five municipalities in the Wetterau district will become formal members and join the Authority on April 1st 2021.

Geographical coverage of the FrankfurtRheinMain regional SUMP



Wetterau district

- Altenstadt
- Bad Nauheim
- Bad Vilbel
- Büdingen
- Butzbach
- Echzell
- Florstadt
- Friedberg (Hessen)
- Gedern
- Glauburg
- Hirzenhain
- Karben
- Kefenrod
- Limeshain
- Münzenberg
- Nidda
- Niddatal
- Ober-Mörlen
- Ortenberg
- Ranstadt
- Reichelsheim (Wetterau)
- Rockenberg
- Rosbach vor der Höhe
- Wölfersheim
- Wöllstadt

Main-Kinzig district

- Bad Orb
- Bad Soden-Salmünster
- Biebergemünd
- Birstein
- Brachttal
- Bruchköbel
- Erlensee
- Flörsbachtal
- Freigericht
- Gelnhausen
- Großkrotzenburg
- Gründau
- Hammersbach
- Hanau
- Hasselroth
- Jossgrund
- Langenselbold
- Linsengericht
- Maintal
- Neuberg
- Nidderau
- Niederdorfelden
- Rodenbach
- Ronneburg
- Schlüchtern
- Schöneck
- Sinntal
- Steinau an der Straße
- Wächtersbach

Offenbach district

- Dietzenbach
- Dreieich
- Egelsbach
- Hainburg
- Heusenstamm
- Langen (Hessen)
- Mainhausen
- Mühlheim am Main
- Neu-Isenburg
- Obertshausen
- Rödermark
- Rodgau
- Seligenstadt

Groß-Gerau district

- Biebesheim am Rhein
- Bischofsheim
- Büttelborn
- Gernsheim
- Ginsheim-Gustavsburg
- Groß-Gerau
- Kelsterbach
- Mörfelden-Walldorf
- Nauheim
- Raunheim
- Riedstadt
- Rüsselsheim am Main
- Stockstadt am Rhein
- Trebur

Main-Taunus district

- Bad Soden am Taunus
- Eppstein
- Eschborn
- Flörsheim am Main
- Hattersheim am Main
- Hochheim am Main
- Hofheim am Taunus
- Kelkheim (Taunus)
- Kriftel
- Liederbach am Taunus
- Schwalbach am Taunus
- Sulzbach (Taunus)

Hochtaunus district

- Bad Homburg vor der Höhe
- Friedrichsdorf
- Glashütten
- Grävenwiesbach
- Königstein im Taunus
- Kronberg im Taunus
- Neu-Anspach
- Oberursel (Taunus)
- Schmitten
- Steinbach (Taunus)
- Usingen
- Wehrheim
- Weilrod

Independent cities

- Frankfurt am Main
- Offenbach am Main

2.3. Taking stock of mobility in FrankfurtRheinMain

Key figures

Using specific indicators to compare the Regional Authority area with the regional SUMP coverage area, the following can be concluded:

- While the overall area has almost doubled, the proportion of populated and traffic areas has decreased.
- Increasing the number of municipalities from 75 to 108 has resulted in a moderate increase in the number of inhabitants by about 334,000, while population density has decreased significantly by about one third. The trend in recent years of positive population growth in the region as a whole is continuing. Growth is stronger in the cities of Frankfurt am Main and Offenbach am Main and in the districts of Main-Taunus, Groß-Gerau and Offenbach than in the districts of Hochtaunus, Wetterau and Main-Kinzig.
- The number of people in regular employment (subject to social insurance contributions) has risen by just under 100,000, leading to a lower unemployment rate overall.
- The regional SUMP area is less densely populated overall, has rural characteristics and is on a par with the FrankfurtRheinMain conurbation in terms of economic strength.

Indicator	Year	FrankfurtRheinMain metropolitan region	Regional Authority FrankfurtRheinMain	Regional SUMP area
Municipalities		463	75	108
Area (in square kilometres)	2018	14,753	2,458	4,305
Percentage of populated and transport land	2018	17.8	28.8	22.0
Residents	2019	5,808,518	2,394,941	2,729,562
Population density (inhabitants per square kilometre)	2018	392	967	630
Employed (subject to social security contributions)	2019	2,438,254	1,210,248	1,306,029
- of whom in the service sector	2019	1,881,307	1,001,382	1,064,867
Unemployed (average for the year)	2019	137,472	59,467	65,445
- Rate (percent)	2019	4.3	>4.7	4.5
Gross domestic product (billions of euros)	2016	261	132	144
- Per resident (in euro)	2016	45,591	56,424	53,885
Purchasing power index (Germany = 100)	2016	110	115	112

Source:
State Statistical Offices of Hessen, Rhineland-Palatinate and Bavaria; Federal Employment Agency; GfK; Regional monitoring by the Regional Authority

Commuting in the FrankfurtRheinMain Region

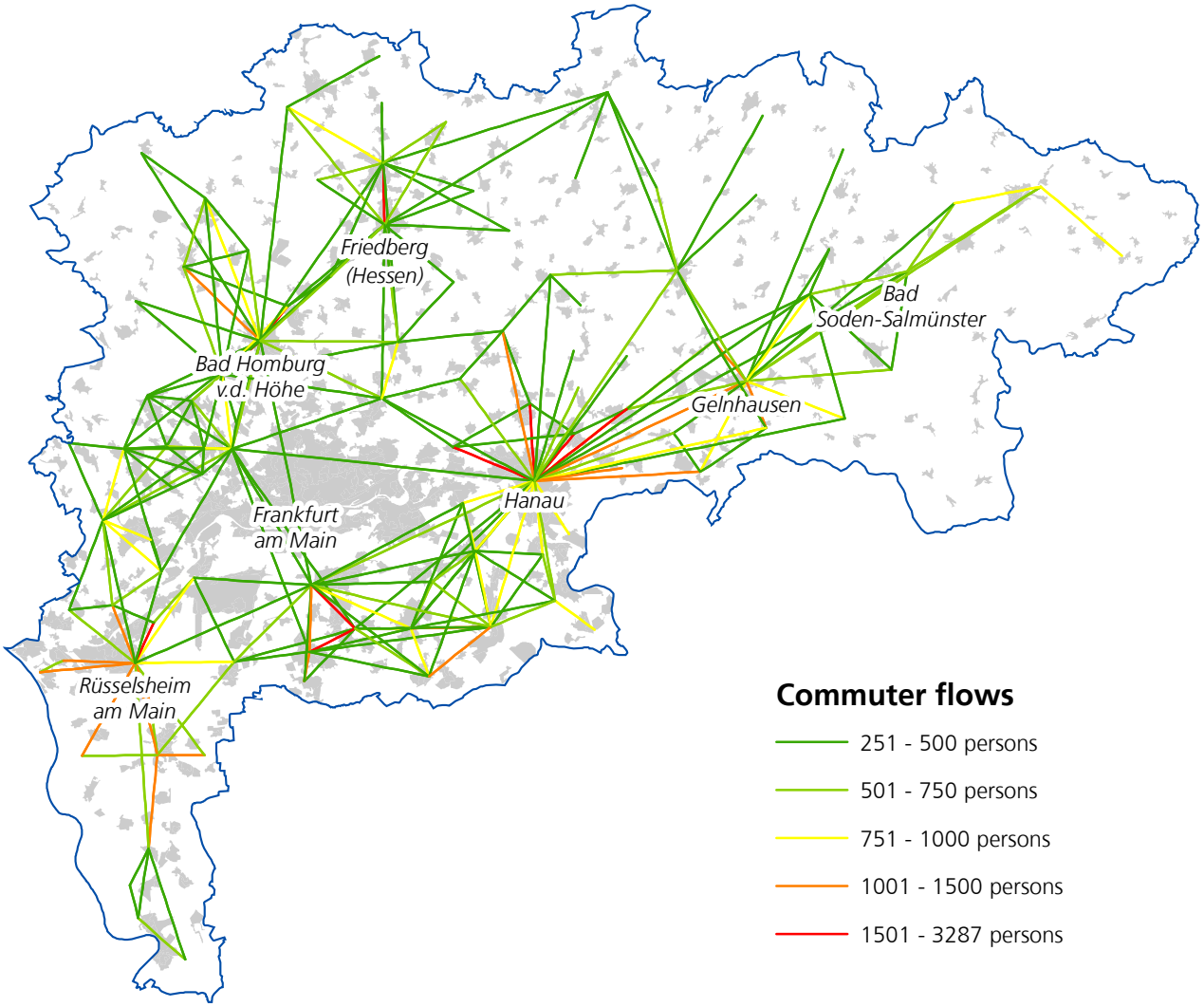
For the purposes of employment statistics, commuters are all those employees subject to social security contributions whose place of work is different from their place of residence. The city of Frankfurt am Main remains the strongest driver of commuter flows in the region. However, Frankfurt is not always the destination. Frankfurt's main train station is only a place of transit for many of the people arriving there every day.

Daily journeys are not only making demands on the transport infrastructures heading to or through the metropolis on the Main. Routes between the smaller and medium-sized towns and municipalities are also congested due to workplaces there, facilities of cross-municipality importance such as schools and hospitals, and popular destinations for recreation and other leisure activities in the region.

! Note

The choice of transport mode is not reflected in the analyses presented here. However, it is a fact that the more small-town and village-like a location is, the more privately used cars come to the fore as the most frequently used means of transport.

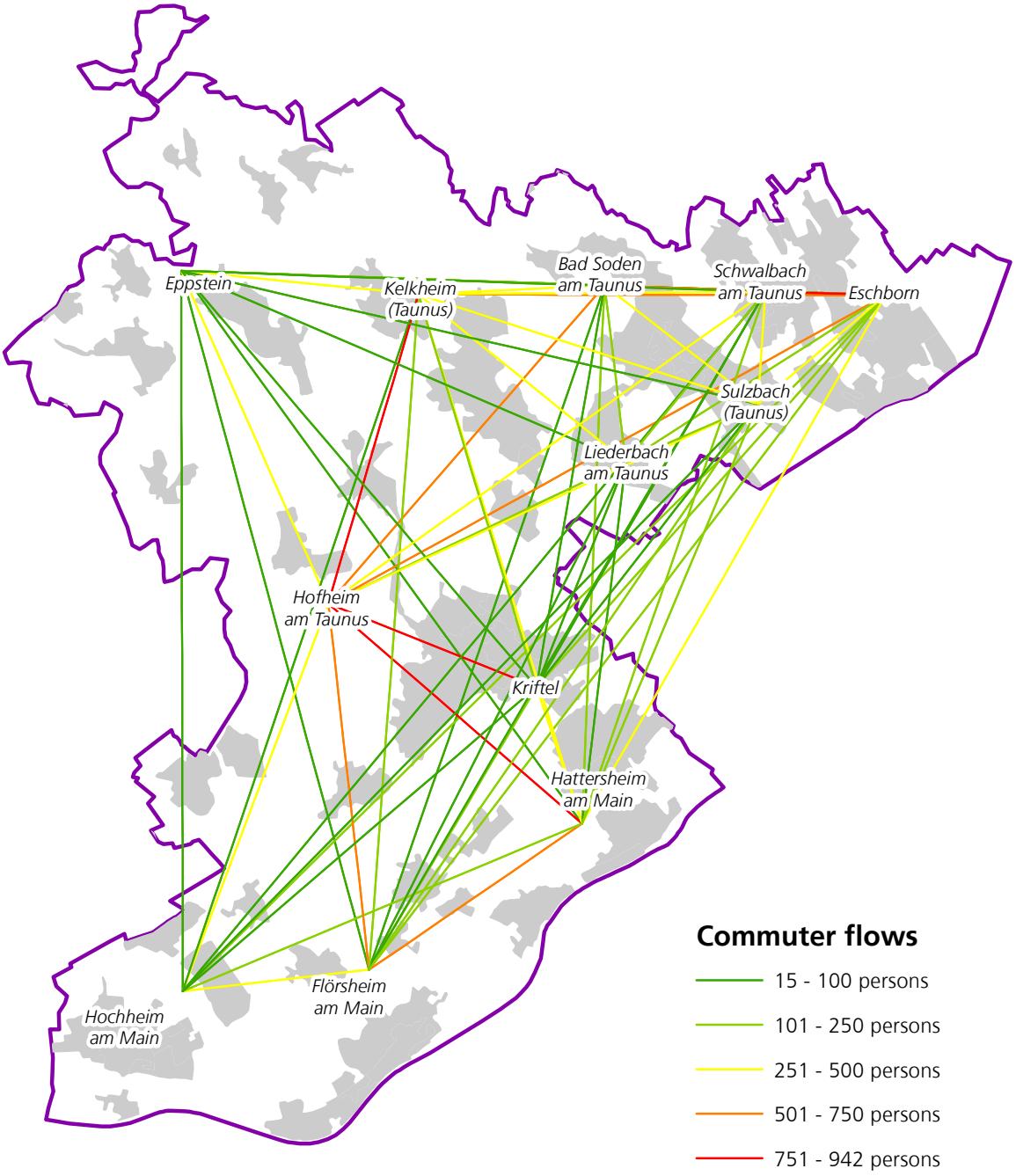
Commuter flows in the regional SUMP area for workers subject to social security contributions (excluding Frankfurt am Main and Offenbach am Main)



Analysing commuter flows shows the extent to which cities and municipalities are closely interconnected in terms of traffic. This raises a topic which will be crucial for the transport transition in the region: mobility other than the major radial transport axes mostly oriented towards Frankfurt am Main or Offenbach am Main, and mobility in rural areas also requires consideration and action.

This is consistent with the decision to expand the area under consideration when developing the regional SUMP. Looking specifically at commuter links within the Main-Taunus district and the range and size of commuter flows between many different places reveals the region's polycentric character.

Plenty of mobility also between municipalities: Commuter flows for workers subject to social insurance contributions in the Main-Taunus district



How the population gets around – Mobility in Deutschland (MiD) 2017

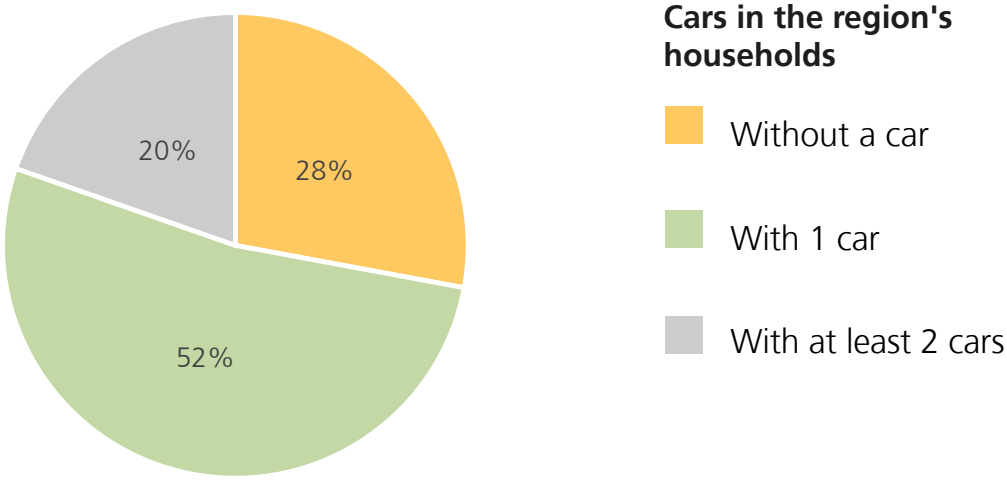
The following information is taken from a survey of households on mobility in Germany (*Mobilität in Deutschland*) conducted in 2017, in which the Regional Authority participated with a larger sample size. Through this participation, it was possible to obtain differentiated information about the region, which was very helpful in drawing up the regional SUMP.

! Note

The findings of the survey were available before the decision to expand the regional SUMP area. The findings therefore relate to the area covered by the 75 municipalities within the Regional Authority. However, a crystal ball is not needed to extrapolate the findings to the 108 municipalities now under consideration. All indicators are shifting in favour of the car. There are demonstrably strong connections between urban and rural sub-areas. Traffic problems on roads in large cities are caused to a notable extent by commuters from all parts of the region. An extension of the regional SUMP to rural areas outside the current Authority area therefore makes sense in order to relieve the core of the region. Here, too, it is evident that although the challenges in cities and rural areas are different, we can effectively integrate them in a joint, regional network and overcome them more easily.

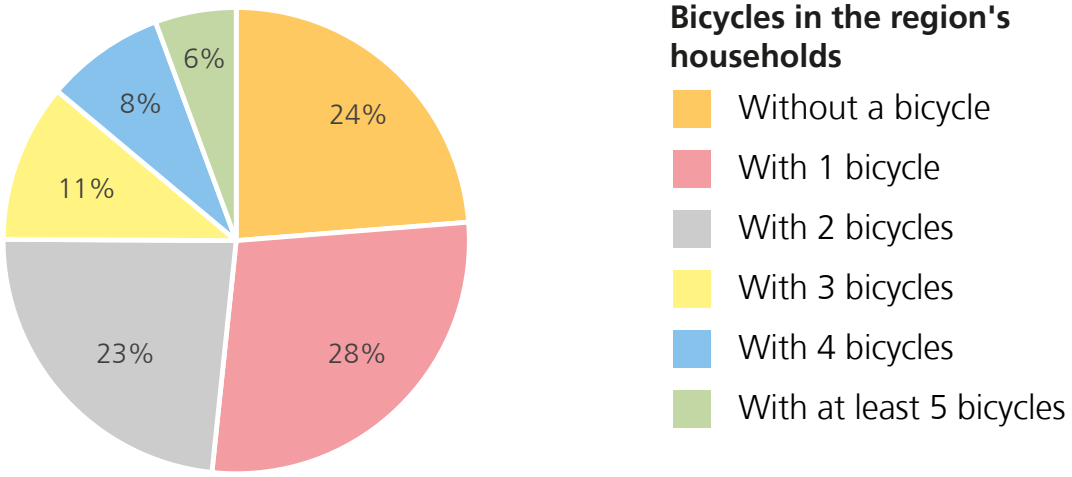
Much attention has been paid to traffic for work and education. Both account for around a quarter of all daily journeys. Three quarters of journeys are made for leisure time, for shopping and for other daily errands. It is important here that alternatives are provided through cycling and walking networks and public transport services, because not all people have or want access to a car. Around a quarter of households across the Authority are non-motorised.

Looking at the statistics on car ownership reveals that 72% of households own at least one car, while 28% own none. Since most households have more than one person living in them, it can be assumed that a large proportion of the population manage their daily lives without a car. This implies a clear need to strengthen and expand alternative transport services in order to meet the demand for "mobility for all".



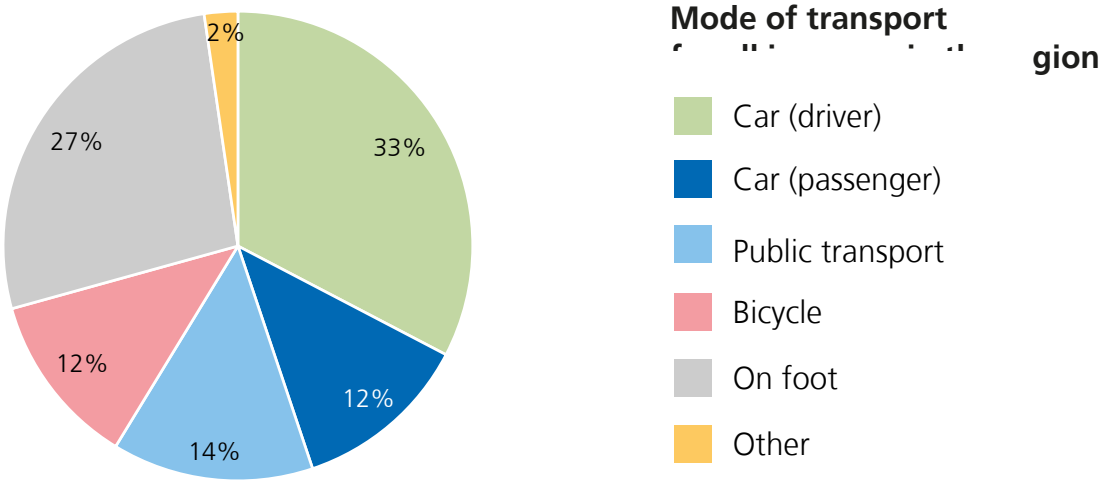
Basis: 4,166 households, region
Source: MiD 2017, evaluation by the Regional Authority FrankfurtRheinMain

Focus is currently on the bicycle as a key factor in future mobility alongside public transport. Expanding cycling infrastructure also plays an important role in the regional SUMP. A survey on bicycle ownership in the region shows that about a quarter of all households own no bicycles at all. Improving opportunities for cycling is a meaningful measure, but not sufficient on its own.



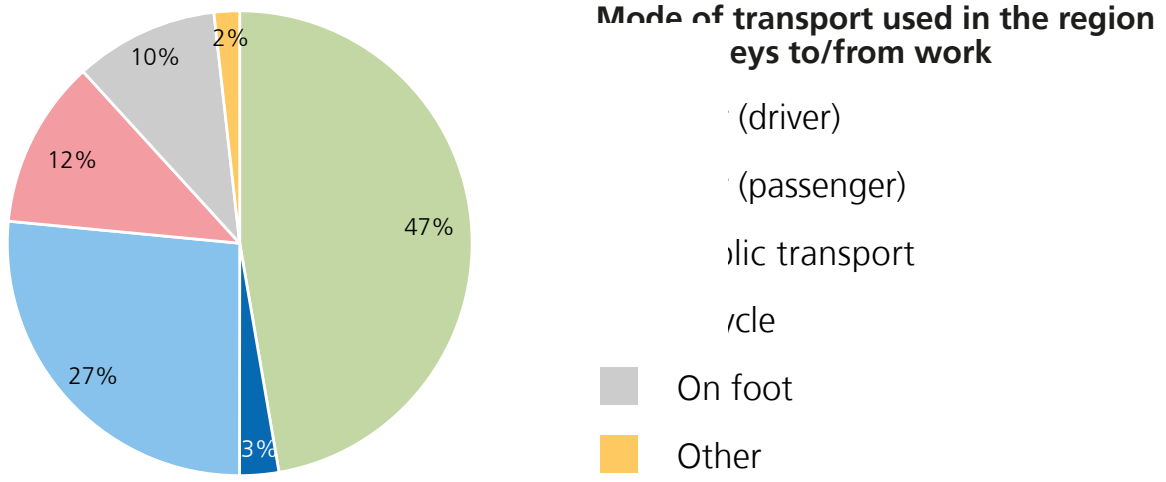
Basis: 4,166 households, region
Source: MiD 2017, evaluation by the Regional Authority FrankfurtRheinMain

The modal split is an important and recognised indicator for assessing mobility behaviour. It shows the distribution of daily journeys across the different modes of transport. The number of journeys made by the population living in the region on an average day is shown below. Cars account for slightly less than half of all journeys (47%), followed by journeys on foot (27%). Public transport accounts for 14%. Cycling is just below that at 12%.

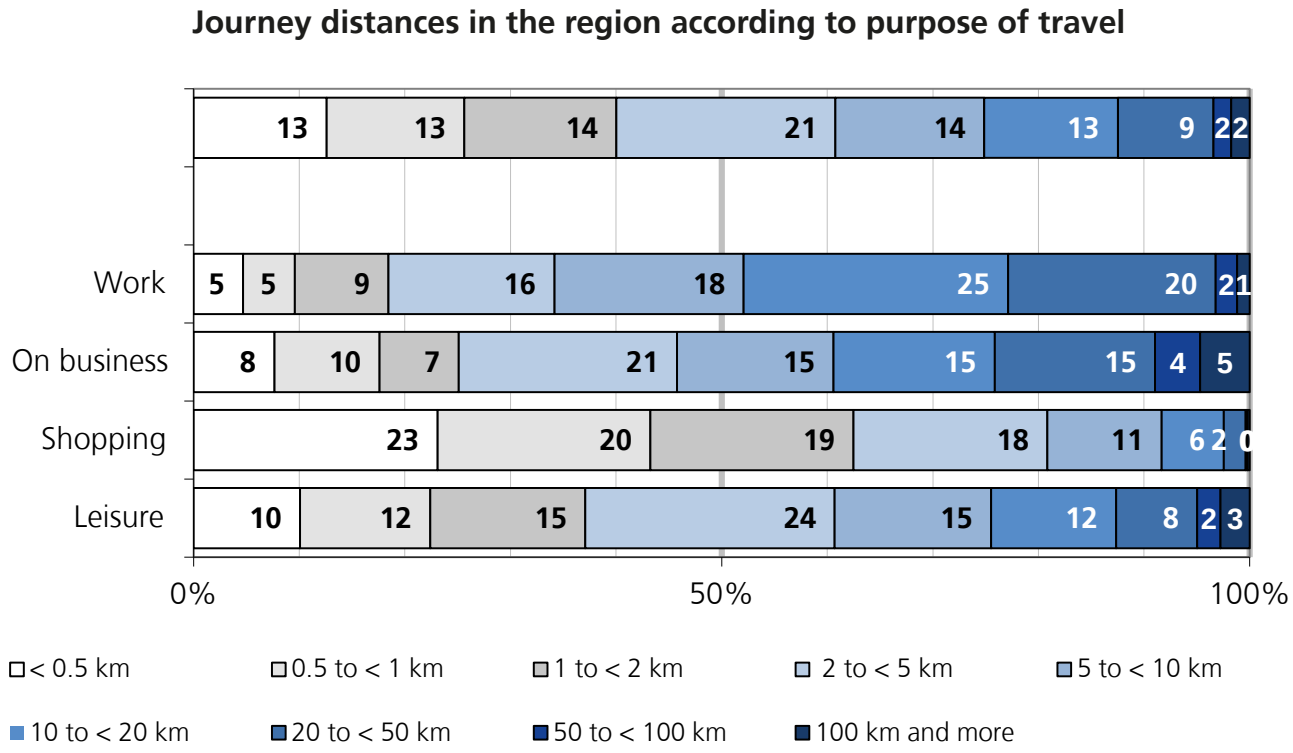


Basis: 25,515 journeys, incl. commercial traffic, region
Source: MiD 2017, evaluation by the Regional Authority FrankfurtRheinMain

In commuter traffic, car usage is even higher. This is due, among other things, to the relatively high journey distances compared to other reasons for travel, and also due to sub-standard public transport services in rural sub-areas. However, 53% of journeys to work are less than 10 km. This is represented in the graph below with a breakdown of distances travelled. It also illustrates the relatively high proportion of short distances travelled for shopping. For daily shopping, this means that a good range of retail outlets are being used within the local neighbourhood. For commuter traffic, it can be assumed that expanding public transport and building Cycle Highways will lead to shifts within the modes of transport used. The commuter flows shown above also confirm this assumption.



Basis: 3,791 journeys to/from work, region
Source: MiD 2017, evaluation by the Regional Authority FrankfurtRheinMain



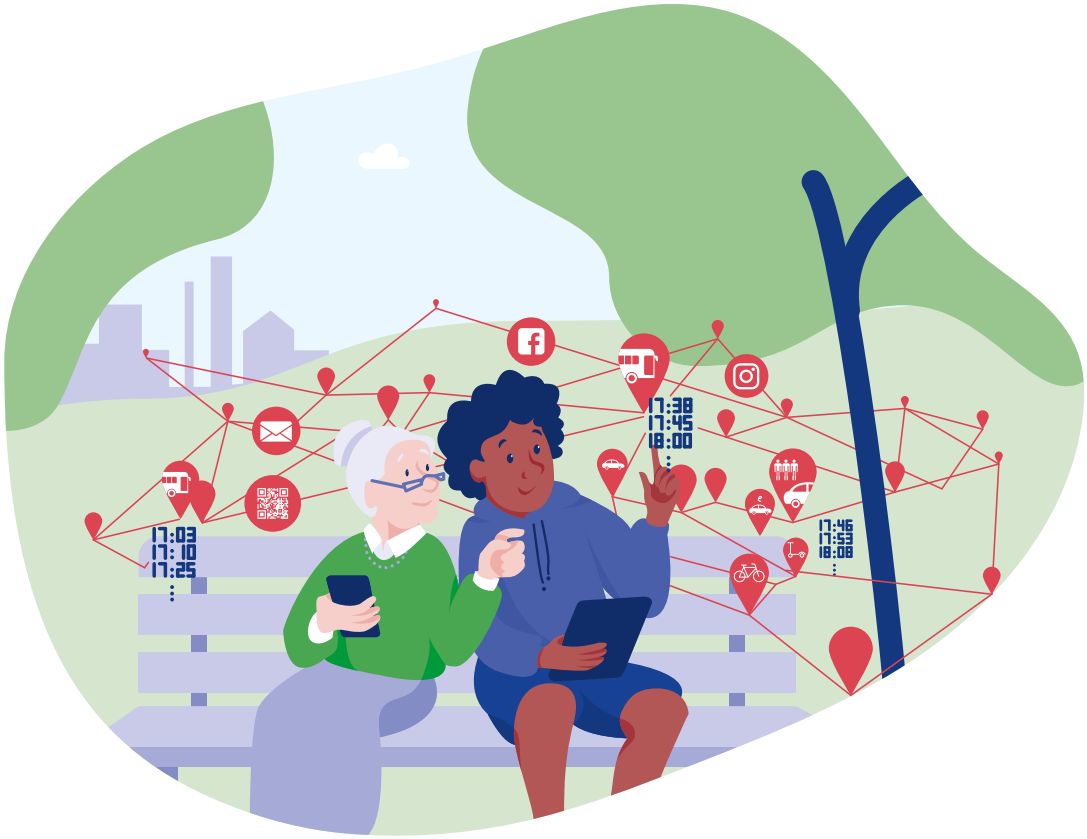
Basis: 25,103 journeys, incl. commercial traffic, region
Source: MiD 2017, evaluation by the Regional Authority FrankfurtRheinMain

The excerpts from the structural data presented here underline that mobility flows within the region do not run in a star shape to the major centres, but instead form a widely dispersed network of daily traffic on all available transport modes. Cars continue to play the dominant role as a means of transport. However, road networks have long since exceeded their capacity, as evident from congestions reports on the radio and first-hand experience, especially at peak times.

If the region wants to keep moving, then the modal split must significantly change in favour of other transport means. Easing road use creates space and less congestion for all those who really need to use a car.

We therefore need to offer alternatives that meet needs and traffic flows and thus reduce dependence on the car. It should be about attractive alternatives and options, not about bans and restrictions. But any mobility transition cannot succeed without transport policies that include restrictions and bans. This topic was discussed in detail in consultations with experts. It was proposed to commission a study on the regional effectiveness of regulatory instruments as a basis for policy decisions, and pooled into measure M21 in Section 5.7 of the regional SUMP.

The mobility transition in the FrankfurtRheinMain Region can only succeed when there is a reduction in road congestion. And this can only be achieved by improving local public transport, cycling infrastructure and other factors explained in more detail below.



2.4. Exploiting digitalisation

Everyone is talking about digitalisation. Unsurprisingly, the analogue to digital transformation is practically changing every aspect of our lives. Digitalisation enables many innovations, bringing both opportunities and also challenges. These are rightly the subject of intense debate. Many places still need to create the necessary infrastructures, develop and introduce resilient digital applications and services, and make data accessible while also ensuring its security. Despite all the enthusiasm, digitalisation should never be an end in itself, but always a technical means to achieve defined goals.

Digitalisation offers a multitude of opportunities for transport and mobility in the FrankfurtRheinMain Region. For example, to reduce and manage traffic. The changes encompassed in Work 4.0 favour mobile and flexible working models, as revealed and hastened by the Covid-19 pandemic, especially in the service sector. In the long term, business meetings will also be held via video conferencing, which will permanently reduce the number of business-related trips.

Digital systems can make the remaining necessary traffic more efficient, climate-friendly and health-friendly. Such systems include the development of automated and connected driving, smart traffic management systems for road and rail, and the trend towards mobility sharing. From a municipal perspective, further potential is opening up, e.g., via applications for "smart parking" or "smart charging".

The new world of digital services focuses on user needs by developing and interlinking digital information and ticketing systems as well as the smart linking of transport modes in integrated mobility apps ("seamless mobility" and „Mobility as a Service“ (MaaS)). Individual mobility becomes less dependent on the private car, in keeping with the objective described in the previous section. Digital technologies also bring considerable safety gains as well as improvements in mobility services in rural areas such as "mobility on demand" services, i.e., local transport services based on demand rather than on a timetable. These developments will significantly enhance public transport, as successful examples have already demonstrated.

To tap into this potential, a high-performance broadband infrastructure and good mobile data accessibility are essential prerequisites. It is therefore vital to make headway with expanding fibre optics and introducing 5G throughout the FrankfurtRheinMain Region.

However, the digital infrastructures using this technology, such as electronic administration systems, standardised data interfaces and central data platforms, are

also necessary for smart mobility in a "smart region". Data accessibility and usability is becoming the new currency in the digital age. Furthermore, modern policy frameworks are needed to manage access and the sharing of traffic data in a legally secure and fair way. Setting standards, which now primarily takes place at European Union level, is not only about issues of competition. Another issue is data privacy – especially on storing personal mobility data and creating mobility profiles. Society's openness to digital infrastructures and digital applications, and a readiness among people, public administrations and companies to acquire digital skills is key here.

Responsible: Regional Authority

Our contribution to a digital and mobile region of the future

The basis for all of this is an appropriate digital infrastructure. "Gigabitregion FrankfurtRheinMain", a regional association of nine districts and three independent cities within the metropolitan region, is to therefore speed up expansion of fibre optics in the region as a cornerstone for digital applications including transport and mobility. Only high-performance fibre-optic expansion to all locations and along transport routes will enable the fast and powerful mobile communications that are required for future digital transport and mobility solutions, as well as innovations in other fields of application.

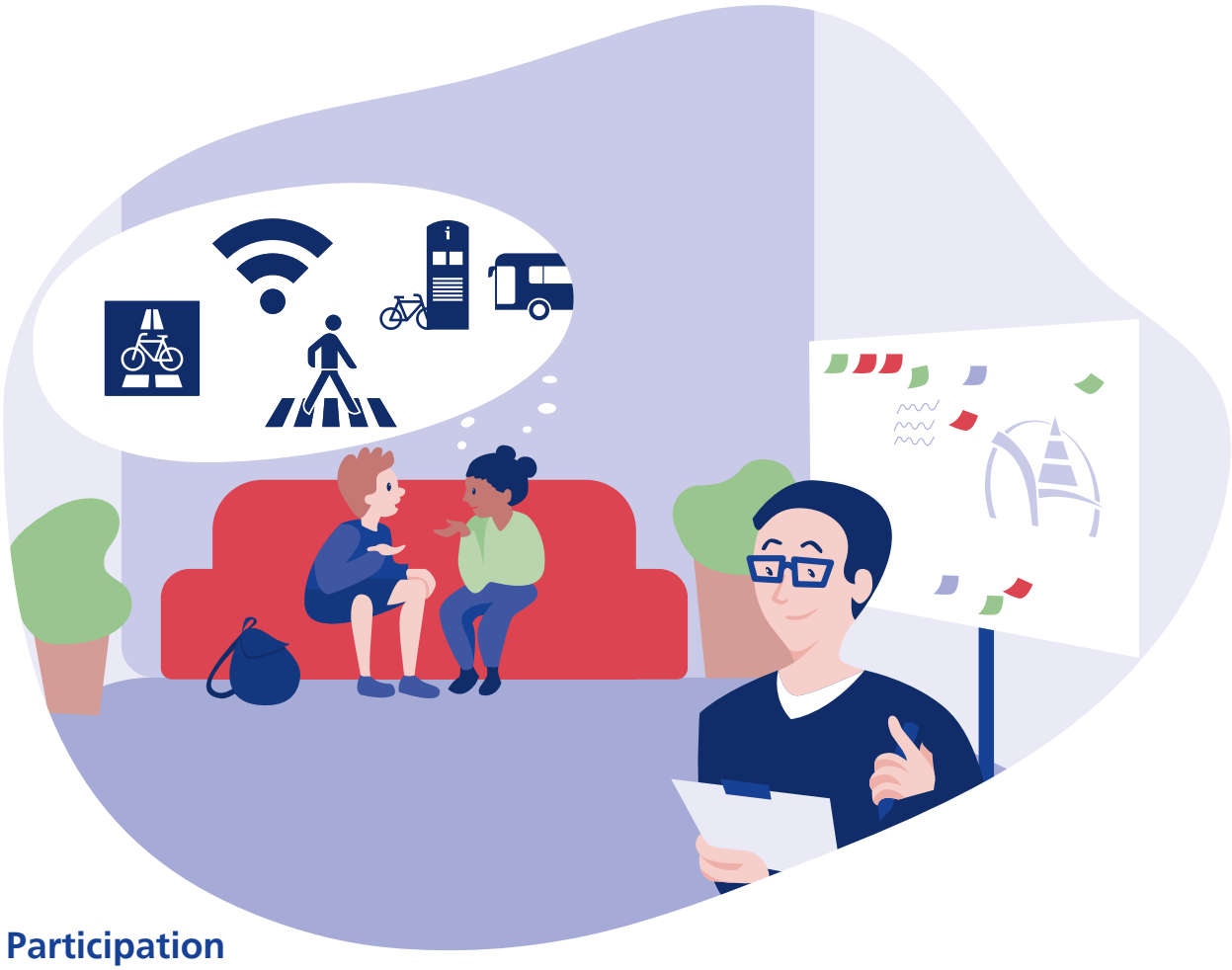
Scepticism about the digital transformation is not uncommon and the expansion of digital infrastructure, be it fibre-optic cables, the 5G mobile communications standard or the data centres required for each application. It is an issue that the Regional Authority is aware of. The Regional Authority aims to actively address such concerns through campaigns and information events to promote awareness of the need for such technological developments for an attractive and competitive region of the future.

In parallel to its infrastructure activities, the Regional Authority FrankfurtRheinMain is also developing a digitalisation strategy. The aim is to support municipalities with expert knowledge and experience from the Authority's own core competences, such as in planning, mobility and funding, and in a way that is geared to practical implementation.

An overview on funding programmes to support digitalisation projects is currently being developed. This strategy also aims to promote exchange at regional, cross-regional and European levels to work together on meeting the challenges of a digital future. Particularly smaller authorities are faced with the hurdle of having to implement EU or federal administrative regulations. The European Office of the FrankfurtRheinMain Metropolitan Region is housed in the Regional Authority's headquarters and represents the region's interests in Brussels, providing support for all relevant policy frameworks on digitalisation and broadband expansion.

All such work packages and measures for digitalisation are needed to achieve a future mobility consistent with the goals of the regional SUMP. Even the smartest mobility app will be useless in a mobile "dead zone". Having the option to switch from rail to a rental vehicle is pointless if I can't reserve it, use it and pay for it. For these reasons, progressive digitalisation is a cornerstone of many of the measures described below. The Regional Authority is therefore already working intensively on this complex of topics together with competent partners who are willing and able to implement them. The work phases on digitalisation are therefore not listed as separate components within the regional SUMP. **A connected region is rather to be seen as a prerequisite for implementing the regional SUMP.**

www.region-frankfurt.de/digitalisierung



3. Participation

As already mentioned in Section 2, this regional SUMP has not been developed in isolation within the region's headquarters. Anyone has been able to participate, contribute to the discussion and share experiences, ideas and visions.

Ultimately, even the best ideas can only succeed when they are supported and accepted by the people they affect. A transport transition begins in the minds of transport users. Therefore, from the very beginning, the aim of the regional SUMP was to get as many users as possible to participate and contribute to the strategy's development. This was, of course, also a way of tapping into the technical and specialist knowledge that is widely available in our region. To ensure effective participation, the regional SUMP has therefore allocated sufficient time and budget to developing ways of involving target groups and to have a professionally managed communication concept.

In this way, direct, local involvement of local populations with specific project proposals is evident. The involved specialists focused on a coordinated, strategic pooling of different approaches into coherent measures while providing opportunities for participation by a wide range of stakeholders.

Consequently, as a bottom line, **we can only achieve a real mobility transition when everyone is involved and no one is excluded.** The requirement for "mobility for all" also applied to the participation process and will apply to the ongoing implementation.

3.1. Public participation promotes acceptance

Public participation was one of the central components in drawing up the regional SUMP and was based on two forms of participation:

citizens' forums on specific dates, as well online involvement at any time. The schedule envisaged hosting a total of five citizens' forums, one in each of the region's four points of the compass, plus one event in the middle of Frankfurt, on the northern bank of the Main, which was closed to traffic at the time. The plan was to publicly present ongoing progress and to develop it further with as many interested, committed people as possible. Unfortunately, Covid-19 pandemic restrictions thwarted any plans involving face-to-face contact, direct conversations and discussions. The second form of participation therefore became the focus: online. An area was created on the Regional Authori-

ty's website where, in addition to short reports on the two citizens' forums that had already been held, further ideas and suggestions could be entered. Each individual proposal was checked for content and added to a growing list.

The public participation forums held in Nidderau and Egelsbach showed, however, that personal contact is of enormous importance in such a process, to understand ideas, to inspire and to turn visitors into actors. The plan is therefore to continue with such events as part of the implementation process, and to hold them on a regular basis as soon as circumstances allow. They will be based on the successfully tested concept described below.

The participation process started in November 2019 under the slogan "People shaping the region's future mobility". Participants were not to be bored by presentations and frontal lectures. Instead, the aim was to make people feel comfortable, to get them motivated, to discover topics related to transport and mobility for themselves at specific points, and to be able to enter into dialogue without feeling inhibited. For this purpose, a separate room layout with interactive elements was designed. Interest was aroused by four mobility stands (Transition in Minds, Doing, Process and Other), where visitors could contribute their ideas and suggestions for a transport transition in our region.

Public transport should be made more accessible through better pedestrian ways.

The red sofa served as a special place to get involved. According to the motto "What I've always wanted to ask you...", participants could invite a chosen candidate to sit on the sofa with them, who then answered questions – for the benefit of everyone, of course.

The participation process has shown the broad and holistic way in which the topic of mobility is perceived by the general public and their willingness to debate it in detail.

The east of the region would be better connected with an express bus between Friedberg – Büdingen.

Everyone in the region is invited to find out about the regional SUMP and to contribute further ideas to the process via the online participation form. The task is, after all, far from complete.

The participation form is available on the website of the Regional Authority or via this

QR code:

3.2. Involving experts from the region

The FrankfurtRheinMain Region is home to a large number of experts working on mobility and transport issues, some of whom have similar, others different interests and motives. Their structures and cultures are as diverse as their expertise and responsibilities.

The expert participation element within the FrankfurtRheinMain regional SUMP has taken stakeholder diversity into account by being designed as an ongoing process and focusing on a willingness to work together. Knowing that conflicts of objectives and expertise were possible, these were openly discussed. This helped to gain a better understanding of the wider interests and even to generate new synergies.

What is the recipe for making the best possible use of the region's strengths and at the same time meeting growing challenges in a sustainable way? The Authority hereby focuses on sharing knowledge, services for information and data, as well as a continuous and open dialogue about its own, each other's and common goals and perspectives.

Involving experts was designed as an iterative, ongoing and interdisciplinary process and comprised three formats:

Internal expert discussion

The regional SUMP is a joint product of all staff within the Regional Authority. The aim was to incorporate the views of all in-house disciplines into the drafting process. These disciplines not only include the specialist departments but also the Human Resources, Finance and Communications departments. To this end, in the first phase of the regional SUMP, internal discussions were held with the Authority's departments on ideas concerning the content of a regional SUMP for the FrankfurtRheinMain Region. In this way, a holistic approach was achieved that raised the quality of the plan's content.

Expert meetings

From the beginning, the regional SUMP was to incorporate existing approaches to action and activities in the region. Bilateral meetings with relevant actors helped to increase the knowledge and understanding of each other's structures, tasks and activities. Valuable feedback was provided on the regional SUMP's ongoing content, and prospects for future cooperation were also explored. Expert meetings were held with about 30 people.

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Online specialist sessions

In small, moderated sessions, up to ten participants discussed three selected topics for around 90 minutes. The specialists were to derive content-related goals as concretely as possible and, if necessary, also identify conflicting goals that might arise from these. In a final session, the range of topics was once again opened up: In the view of the participants, which other content-related goals should also be included in the FrankfurtRheinMain regional SUMP? Discussions and goals from the respective final sessions were used as a basis for topics in subsequent rounds of sessions.

The results from specialist department participation confirmed that as with public participation, specialist participation does not end with a decision on the regional SUMP, but continues as an ongoing process during the plan's implementation.

The Regional Authority intends to involve as many specialists as possible in this process. It therefore remains possible to contribute with ideas and information online via a contact form on the homepage of the Regional Authority or directly by email (mobilitaet@region-frankfurt.de).

Or by scanning the

QR code:

The specialists have provided valuable input to the regional SUMP. At the same time, all are aware that the goals and measures discussed in these sessions only represent a fraction of the many ongoing transport issues and challenges in FrankfurtRheinMain. It is therefore all the more important to continue to ensure the involvement of specialists both in implementing existing and in developing new sets of measures. Only by working together with many of the region's movers and shakers can the necessary steps towards a transport transition be taken.

4. 2030 targets: FrankfurtRheinMain mobility and transport transition

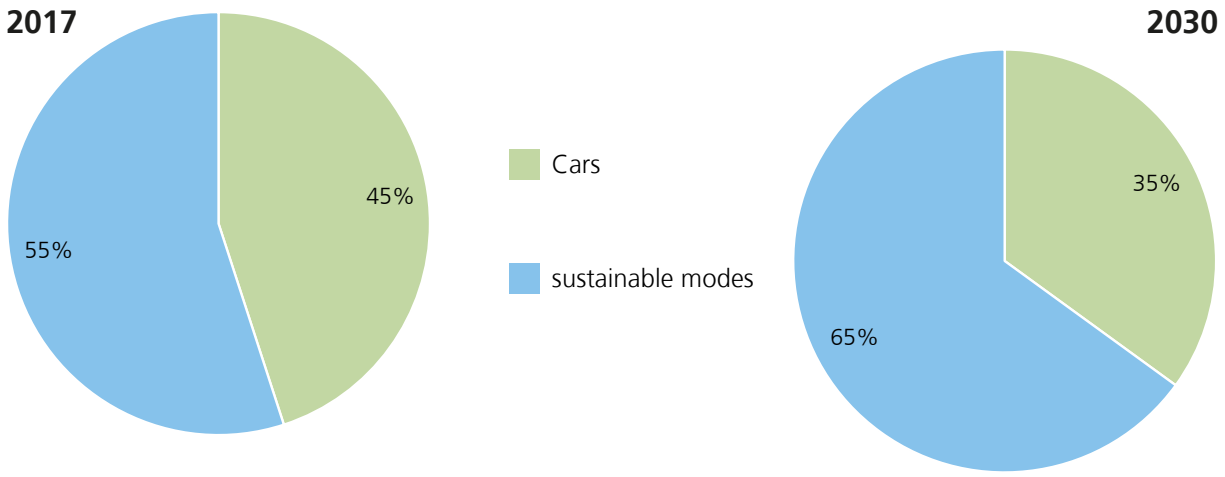
This plan was launched with the ambition of initiating a transport transition. The regional SUMP should also be measured against this ambition. "Mobility for all", "avoiding unnecessary traffic" and "managing necessary traffic" specify how this vision is to be achieved. Is it possible to measure whether the region is on the right track?

By 2030, a noticeable change in everyday traffic patterns should have been achieved. However, this is ultimately a subjective perception. Not to be neglected is that by 2030 we want to reduce the time people of the region are stuck in traffic, to enable them to make fewer journeys and to enjoy higher quality mobility. But to be able to evaluate the success of such a project, requires an objective evaluation standard. To evaluate the medium-term success of the regional SUMP, the modal split should therefore be used, which can be determined neutrally by extrapolating the "Mobility in Germany" study. Furthermore, traffic-related environmental impacts are to be identified and assessed.

In 2030, the share of sustainable modes of transport (walking, cycling, bus and rail) in the modal split of the FrankfurtRhineMain Region will have increased to 65%.

Today, 55% of people in the FrankfurtRheinMain Region travel by foot, bicycle, public transport or other sustainable modes of transport. To relieve road traffic and the overall traffic situation, the goal is to increase this share by 10% to a total of 65% by 2030.

Modal split according to MiD 2017 and target modal split 2030



Source: MiD 2017 and own calculation / Targets set by Regional Authority FrankfurtRheinMain

The FrankfurtRheinMain mobility and transport transition also means meeting climate protection targets and ensuring economic prosperity

A well-functioning transport system is one of the key prerequisites for economic success. Traffic connections, transport mode performance and existing hub and gateway functions always rank high on questions about the key hard location factors. This is particularly true for the FrankfurtRheinMain location. Being located in the heart of Europe has promoted highly developed transport infrastructures that have the aforementioned features, and ensures the region remains in high demand as an excellent location for trading goods, services and capital for people from all over the world. As a consequence, ever-increasing flows of people and goods within the region are creating more traffic in the system. The fact that expansion of the existing transport system is not close to keeping pace with the region's growth is only one facet of the problem. People's increased mobility demands and expectations of goods and commodities being available around the clock worldwide, made possible by digitalisation processes, mean that the once so well-functioning trans-

port system not only has capacity problems, but also adaptation problems. However, the transport sector has enormous challenges to overcome, not only in terms of people and the economy. Globally, it faces a much bigger problem: it has not as yet contributed to climate protection.

At 30% of final energy consumption, the transport sector was the largest energy consumer in Germany in 2018. Continued high energy consumption and nearly unchanging CO_2 emissions jeopardise achieving the energy and climate policy goals that the federal government has adopted and to which the state of Hessen, the Regional Authority and many of its member municipalities have committed themselves.

The transport sector, with a 19% share (2018), ranks 3rd nationwide among the largest emitters of greenhouse gases, especially by road traffic. One reason is the still predominant use of fossil fuels. Mineral oil is used in 90% of all power production. The remaining 10% for the biofuel, electricity or hydrogen alternatives are niche options. The long-term picture also looks bad. Compared to 1990 levels, greenhouse gas emissions in Germany have remained almost unchanged. The regional SUMP therefore includes a further target parameter against which the impact of its measures must be determined.

In view of the Hessian state government's goal of reducing greenhouse gas emissions in the state of Hessen by 40% by 2025 compared to the 1990 level, the FrankfurtRheinMain Region is aware of its special position and responsibility and is not only pursuing this goal, but raising it.

In 2030, greenhouse gas emissions in the FrankfurtRheinMain Region are to be reduced by 55% compared to the 1990 level.

In doing so, the 17 Sustainable Development Goals (SDGs) adopted by the United Nations (UN) have been considered, which are intended to ensure sustainable development worldwide on economic, social and ecological levels by 2030.

The Verbandskammer also approved the FrankfurtRheinMain Regional energy concept at the end of 2016, which contains many measures closely linked to measures in the regional SUMP.

www.klimaenergie-frm.de

5. Sets of measures

Now that the vision for our region's future mobility has been set down, a framework established and targets defined, it has become a question of the measures that can be undertaken to tackle this ambitious project. This section serves as a tool kit providing various options. Many of these options have already been put into practice and found to be successful in pilot projects. Not all of them are applicable or useful for every municipality. But it shows that there are sufficient opportunities to make real progress. Wanting big-bang solutions or demanding spectacular projects is futile. We have to start small and act where we can to make a difference. The following pages will show that there are many such starting points.

Twenty-three measures have been identified for the regional SUMP, which exemplify concrete ways of tackling the transport and mobility transition as quickly as possible.

Fast implementation is most likely to happen by appointing a "coordinator" for each measure, when there is a basis for the measure's content (e.g. a law, a concept, a study) and, ideally, when funding has been secured. Not all of these conditions have been met for all 23 measures of the regional SUMP. For example, four measures still bear the "Coordinators Wanted!" stamp. But this situation gives an idea into how things will be after adoption of the regional SUMP: it is to be a continuous process, fulfilling any missing prerequisites, implementing the many already developed measures, both small and large, and above all introducing many new measures to keep the region mobile and to bring it ever closer to the vision of high-quality mobility.

The measures M1 to M23, which are presented below, can be categorised into seven themes:

1. Integrated cycleway network
2. Multimodal mobility hubs
3. Enabling pedestrian traffic
4. Rail-centred community developments
5. Needs-based public transport
6. Integrated commercial traffic
7. Managed mobility and transport transition

5.1. Integrated cycleway network

Responsible: Regional Authority and towns and cities

M1: Closing gaps in the cross-municipality cycleway network, depicted in the RegFNP Regional Land Use Plan.

For many cyclists, rides to neighbouring municipalities are hindered at their own town or municipality borders or at difficult or even impossible to negotiate obstacles such as main road junctions, railway lines or motorways. This results in long detours, perilous crossings, forced to use gravel roads and farm tracks, or having to change modes of transport.

Only a fully integrated, cross-municipality network of cycleways can get people to perceive the region as having cyclable distances, e.g., for cyclists commuting from Kelkheim to Frankfurt-Höchst or for residents of Liederbach wanting to meet friends from Frankfurt-Unterliederbach to visit the cinema in the Main-Taunus centre.

The inclusion of cross-municipality cycleways in the FrankfurtRheinMain Regional Land Use Plan is unique in Germany. It includes existing as well as planned routes, i.e., to close current gaps in the network. Around 600 kilometres of the overall 2,500-kilometre network have not yet been constructed.

The Regional Authority has thus far limited its activities in this area to the planning of cycleways. A unanimous decision by the Verbandskammer in June 2019 means that the Regional Authority can now also support its member municipalities in future construction of planned routes.

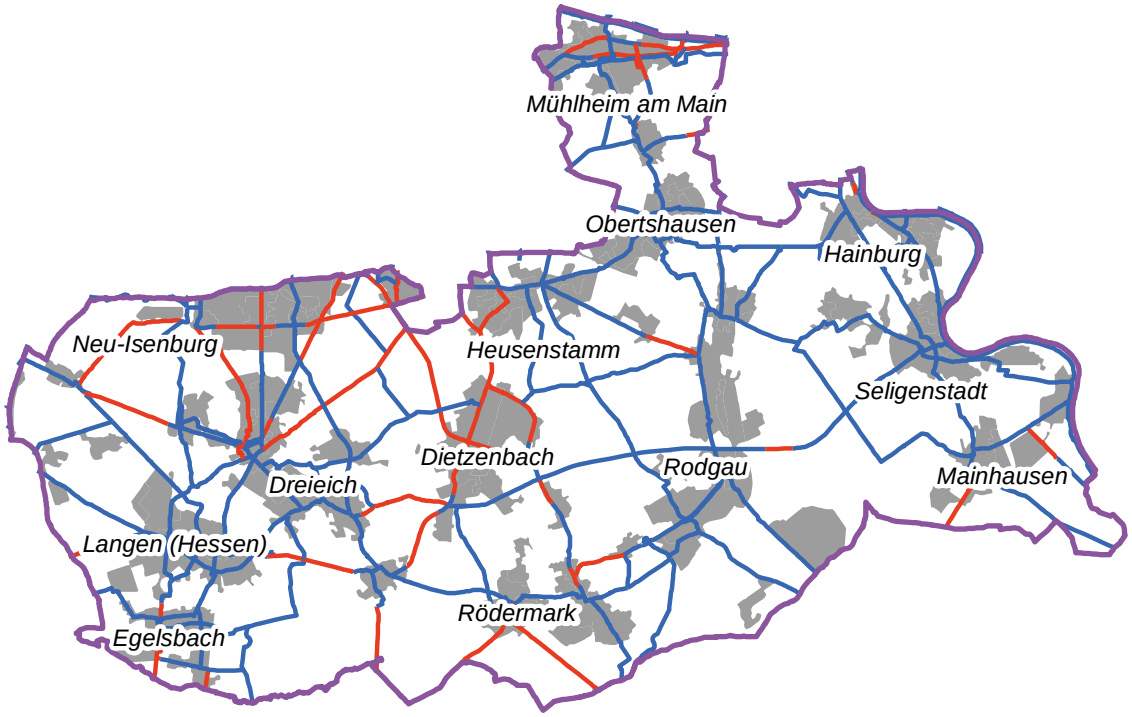
Every ride on the cross-municipality cycleway network relieves the congested road network. At the same time, cross-municipality cycleways serve as feeder routes to local public transport stops as well as to Cycle Highways currently being planned and constructed, premium products within the network (see M2).

The measure first aims to close gaps between municipalities. Gaps within a municipality are just as important, but are often already being worked on through municipal cycleway projects. However, the Authority will also provide support here if requested by a municipality.

Roadmap:

- Upgrading of the overall network in consultation with all municipalities
- Identifying all gaps in the network
- Drawing up a catalogue of criteria on "cross-municipality gaps" at district level
- Evaluating the gaps
- Compiling a ranking list of an initial gap closure programme for the cross-municipality cycleway network in FrankfurtRheinMain
- Consulting with the relevant stakeholders
- Acquiring funding
- Tendering of planning and construction services
- Awarding of contracts
- Construction

Cross-municipality cycleways in the Offenbach district



Length of Offenbach district network: 423 km

- of which existing: 335 km
- of which planned: 87 km

Number of gaps: 55

- of which cross-municipality: 20

Cycleways – existing
Cycleways – planned
Offenbach district

M1: Cross-municipality cycleways

Type of measure	Planning and construction
Basis	Cross-municipality cycleways in the Regional Land Use Plan (RegFNP)
Further info	www.region-frankfurt.de

Responsible: Regional Authority

M2: Construction of the FrankfurtRheinMain Cycle Highways (FRM 1-9)

Increased use of electric bicycles opens up new perspectives regarding cycling ranges due to distances being faster and more comfortably ridden. This new generation of bicycles could enable commuters going from Hanau via Maintal to Frankfurt to travel at speeds similar to those of car drivers in rush-hour traffic. Searching for parking spaces also becomes unnecessary. But in the existing cycleway network, restrictions, circuitous routes and potential conflicts with other road-users hinder journeys by bicycle.

Cycle Highways are ideal here due to their high standard of build enabling fast and safe cycling. Distances of up to 15 kilometres and more are then easily "manageable" by commuting cyclists. These highways are primarily intended for heavily frequented commuter corridors due to their broad widths. Routes such as from Eschborn to Frankfurt can easily accommodate up to 5,500 potential commuting cyclists per day. These are commuters whose absence will be positively felt on buses and trains as well as on roads. For the first Frankfurt–Darmstadt Cycle Highway link (FRM 1), the Regional Authority took on the role of process manager in preparing a feasibility study. A project coordinator was fortunately found in the company Regionalpark RheinMain Südwest gGmbH, who are implementing the feasibility study. Thanks to the pragmatism and leadership of Kelsterbach Mayor Manfred Ockel, the company has already been able to complete the first construction phases.

Feasibility studies are now also available for two other Cycle Highways, Friedrichsdorf–Frankfurt (FRM 5) and Hanau–Frankfurt nordmainisch (FRM 7), which have been prepared under the auspices of the Regional Authority together with the beneficiary municipalities. This raises the question: How do feasibility studies become actual cycleways?

As with the cross-municipality cycle routes (M1), the Verbandskammer created a paradigm shift here in June 2019. Until then, the Authority's responsibility had ended with the handover of a completed feasibility study to the municipalities, but now the Authority

> *You can't cycle on feasibility studies.*
>
> Rouven Kötter

will also take responsibility for implementing the Cycle Highways and act as project coordinator for their construction. Preparations for FRM 5 and FRM 7 implementation phases are already underway.

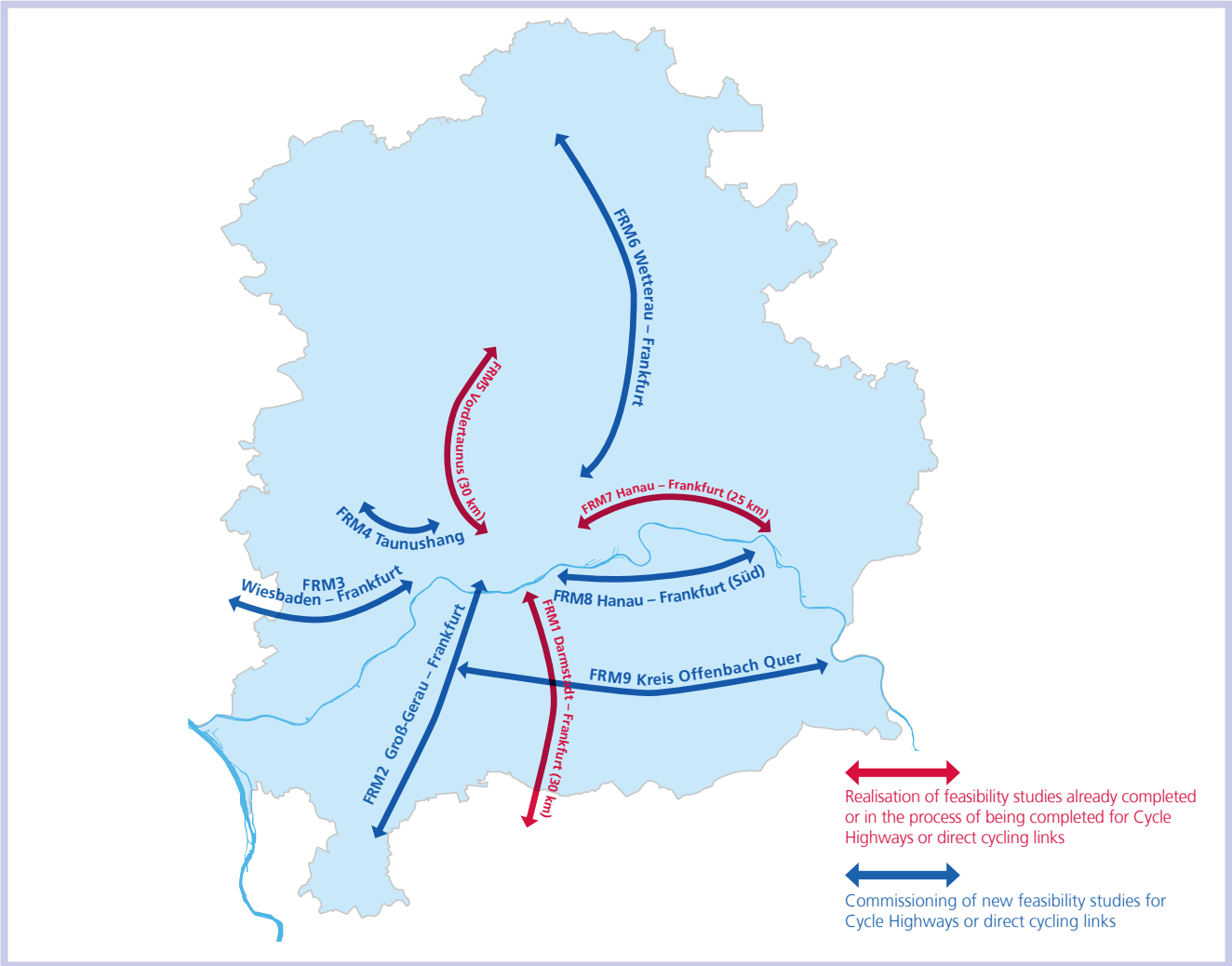
A study published in April 2019 by the state of Hessen identifies potential corridors for Cycle Highways throughout Hessen. According to the study, the greatest potential is in the FrankfurtRheinMain conurbation. The Regional Authority has identified a total of nine corridors, including the three projects already underway, where Cycle Highways are to be implemented in the region. The result is a star-shaped network with stronger links for bicycles between the surrounding municipalities and the conurbation centre, but which will also optimise connections between the municipalities themselves.

Further projects are:

- FRM 2 Groß-Gerau–Frankfurt
- FRM 3 Wiesbaden–Frankfurt
- FRM 4 Taunushang
- FRM 6 Wetterau–Frankfurt
- FRM 8 Hanau–Frankfurt südmainisch
- FRM 9 Across the Offenbach district

The district of Groß-Gerau has undertaken responsibility for implementing the FRM 2 corridor. The Regional Authority's involvement is advisory and supportive here.

For all other corridors, the Regional Authority acts as project coordinator in preparing the respective feasibility studies. To avoid losing time and to pool resources, all corridors are being developed in parallel. The feasibility studies are not simply intended to identify the best theoretical routes. Routes that have high likelihood of realisation are to be identified. This is done by working together with project partners, accompanied by extensive citizen and expert participation. The studies are not simply being made to fill an office drawer. They all aim at actually realising a Cycle Highway.



Signing of the FRM 6 statement of intent

Signing of the FRM 9 statement of intent

Although all the Cycle Highways will not be finished at once, even partially completed sections will already attract many to commute by bicycle. Not everyone needs to ride from a highway's start to its finish. Each completed section significantly increases the cycling infrastructure's attractiveness.

The aim of this measure is to fully construct all nine Cycle Highways.

Roadmap:

- Feasibility study conclusions
- Funding acquisition/Awarding of contracts/Performing feasibility study
- Planning decisions
- Funding acquisition/Awarding of contracts/Performing planning services (incl. approval procedures)
- Constructions decisions
- Funding acquisition/Awarding of contracts/Carrying out construction work

The Frankfurt–Darmstadt Cycle Highway

... are direct, high-grade and high-performance routes within the cycleway network, designed to allow speeds of up to 30 kilometres per hour. They are at least three metres wide for one-way cycling and four metres wide for two-way cycling. Pedestrian traffic is separately routed and surfaces are constructed to a high standard of quality. Cycle Highways are illuminated and, where possible, given priority over other road users at junctions.

M2: Cycle Highway

Type of measure	Planning and construction
Basis	Decisions by the Verbandskammer, June and September 2019
Further info	www.region-frankfurt.de

Responsible: Regional Authority

5.2. Multimodal mobility hubs

M3: Developing a mobility hub concept including an implementation strategy

People's mobility needs are increasing, and mobility services from providers are becoming more diverse. While needs are equally high in all sub-areas of the region, the further away a location is from urban areas, the less the diversity of services on offer.

The opportunities offered by digitalisation can today already be used to smartly connect traditional public transport mobility services with new mobility services such as on-demand transport or the sharing of transport modes. Digitalisation is therefore key to meeting modern mobility demands. However, those people wanting to use high-end digital services that can be accessed via a smartphone at any time and from anywhere are often disappointed. The mobility services lack planning and organisation. In the FrankfurtRheinMain Region, this applies equally to rural and urban structures. To help boost sustainable modes, the physical and digital realms must work together. The solution for the physical realm is the mobility hub (*Mobilitätsstation*).

In the FrankfurtRheinMain Region, various conceptual approaches already exist to promote the linking of transport modes. However, these are either only limited to combining two transport modes or only provide very general information on how public transport stops should be linked. Model locations that have the quality of a mobility hub, but whose impact is limited to a small area, also exist.

Mobility hubs ...

... are easily accessible hubs in public spaces, recognisable through a regional, standardised design and are compatible with the locality. They complement existing mobility services with additional services according demand.

Against this background, the Regional Authority FrankfurtRheinMain has decided to use a grant from the Federal Ministry of Education and Research (BMBF) to expand the mobility hub RaMo component "Raum für moderne Mobilitiät" (space for modern mobility). The objectives are:

- Developing a concept for mobility hubs,
- Examining integration of the concept as a component in the Regional Land Use Plan (RegFNP),
- Developing an umbrella brand,
- Implementing the concept by the end of 2023.

Only a regional network of mobility hubs can deliver all the benefits of multi-modality. Residents of Rockenberg will then have the option of getting home from Friedberg at night by means of car-sharing. Commuters from Frankfurt on their way to work in Ginsheim-Gustavsburg can use a rental bike to travel the last mile after arriving by train, and on their way home, use a cargo bike to go shopping after the train journey.

In a first step, suitable locations for mobility hubs have been identified and categorised according to location. To gain experience, the project includes development of a planning concept at a model site. In addition to location issues, questions on stakeholder involvement, a standardised booking system, operator models, logistics and the option of integrating the hubs into the Regional Land Use Plan are to be clarified. Investigations are being carried out on the graphical representation of mobility hubs under 5,000 square metres. An umbrella brand for the mobility hubs will be developed in a communications and participation process. The brand is intended to be a component of future marketing, and a public competition for ideas on a model location will be held. The project is receiving academic support from the RheinMain University of Applied Sciences.

M3: Mobility hubs

Type of measure	Concept
Basis	BMBF-funded RaMo project results on a mobility hub network
Further info	www.region-frankfurt.de

Responsible: Regional Authority

M4: Establishing a regional network of mobility hubs

Mobility hubs are locations that link a wide range of services. To bring all stakeholders together, the Regional Authority has initiated a mobility hub network. Activities and resources in the region are then more easily pooled, thus enabling the region-wide implementation of mobility hubs. The cooperation is intended to generate synergies to clarify plans relating to transport and mobility in the Authority's area from a supra-regional perspective. An integrated overview of the varying activities opens up new ways of cooperating at a supra-regional level. The aim of the network is a regular dialogue, initially once a quarter, and joint workshops on setting out the issues.

In these workshops, participants from regional transport companies, transport associations, mobility service providers, local public transport organisations, interest groups, associations and consultancies work in small groups to formulate basic definitions and requirements to develop a common vision. An action plan agreed upon with the central stakeholders is to be adopted on the basis of information from discussions, knowledge gained from best practice examples in other regions, and identified issues. The plan will be subjected to continuous monitoring at a specialist level.

Kick-off event for the mobility hub network

Presenting group work results at the first network meeting

M4: Mobility hub network

Type of measure	Network
Basis	Work packages and results of the BMBF-funded RaMo project in the "MobilitätsWerk-Stadt 2025" federal competition.
Further info	www.region-frankfurt.de

Responsible: Regional Authority

M5: Expansion of Bike+Ride facilities

Many public transport stops in the region have too few or dilapidated facilities for parking bicycles. Many facilities are also difficult to access, inadequately lit, lack roofs and have rusty old "rim clamps" that damage the bike rather than provide a secure stand.

To attract more people to ride bicycles to a public transport stop, a different level of quality is needed. Roofed wheel brackets placed at a sufficient distance from each other allow safe parking and easy locking of bikes. Bookable, lockable bicycle boxes preventing others from accessing the valuable bicycle are also increasingly in demand, especially from pedelec riders. People will opt to use a bicycle to get to a stop only when they are confident of finding their bike undamaged on their return. Well-equipped parking facilities, located as close as possible to stops, increase catchment areas and passenger numbers.

The Regional Authority is supporting its municipalities to determine parking needs, to plan them, to offer them for tender and to install them. Support is also provided on acquiring funding from the state of Hessen. A subsidy of at least 60% can thus be achieved via the mobility promotion law (limit EUR 100,000) and the local mobility guideline (limit EUR 20,000). To save on personnel and financial costs, group applications from several municipalities make sense. The Regional Authority acts here as the applicant for such Bike+Ride group applications and is also the state's contact until verification of use has been provided. This significantly saves work for the beneficiary municipalities.

Covered bicycle parking in Kelkheim-Münster

The Regional Authority's commitment has already resulted in the installation of a total of 595 bicycle parking spaces and 136 lockable bicycle boxes at 32 locations in 16 municipalities. The next group application is currently being processed, and others are to follow.

Bike+Ride facilities are being installed according to the following roadmap:

- Needs assessment
- Registration of the measure
- Application
- Letter of interest and call for tenders
- Installation
- Approval
- Billing

M5: Bike+Ride facilities

Type of measure	Planning and construction
Basis	Preliminary surveys by the Regional Authority
Further info	www.region-frankfurt.de

Responsible: ivm

M6: Further development of a regional Park+Ride concept

Private car use is unavoidable for many journeys. But increasingly stringent laws, e.g., on clean air, is increasing the pressure for action to be taken to prevent driving bans in cities.

Having the option of using rail-based local transport near your place of residence is to be improved by facilitating walking, cycling, car and public transport links through additional, intermodal services and decentralised P+R facilities. This significantly shortens the distances needed to be travelled by car. Congestion will be relieved at peak traffic times, public transport use will be promoted and environmental and climate protection will be enhanced.

The RMV (Rhine/Main Regional Transport Association) has a network-wide P+R plan of action that provides for a multi-stage system to optimise connections.

- Stations with a more local catchment area (less than 5 kilometres)
- Stations with an inter-municipal catchment area and for connecting more remote residential areas (more than 5 kilometres)

Each regional rail stop should have a minimum of 10 P+R parking spaces.

Park+Ride sites from 5,000 square metres are included in the Regional Land Use Plan (RegFNP). For the new plan, it is conceivable to apply this minimum requirement to providing correspondingly large multi-storey car parks.

Expanding public transport, implementing the regional mobility hub concept and reducing parking space in city centres are complementary measures that are highly relevant for the uptake of services.

Roadmap:

- RMV-wide analysis of stations with needs assessment and evaluation for expansion, new construction, reallocation and optimisation of connections
- Communicating with the region's towns and cities
- Short- and medium-term implementation concept
- Overall concept for promoting P+R and intermodal connections at rail stations
- Integrating relevant areas into the Regional Land Use Plan (RegFNP)
- Managing data and expanding the digital platform on Park+Ride spaces
- Preparing a funding application under the federal clean air programme


© Sabine Müller

M6: Regional Park+Ride concept	
Type of measure	Concept
Basis	Regional public transport plan, Park+Ride action plan, preliminary surveys by ivm
Further info	www.ivm-rheinmain.de

Responsible: Regional Authority

5.3. Enabling pedestrian traffic

M7: Establishment of the Rhine-Main pedestrian forum

The Rhine-Main pedestrian forum was established in the late summer of 2020 to increase focus on pedestrians and to seek concepts and planning solutions on how pedestrians of all ages can move around safely, comfortably and without interruption in the cities and municipalities of the region. For this purpose, representatives of various associations such as FUSS e.V. (German Pedestrian Traffic Association), Verkehrsclub Deutschland (German Traffic Association), but also ADFC Hessen (German Cycling Association Hessen) and transport planners from the Authority's municipalities met in the Authority's headquarters. Every six months, the pedestrian forum is intended to facilitate the exchange of knowledge and expertise, to share diverse views and challenges – from municipalities, professional associations and lobby organisations through to the police – to network ongoing activities and initiatives, and to develop and initiate new ideas and measures for more and better pedestrian traffic. The format is modelled on the successful "RADforum RheinMain", in which cycling stakeholders have been exchanging ideas and coordinating regional activities and planning for 17 years.

M7: Pedestrian forum, Rhine-Main	
Type of measure	Network
Basis	Cooperation with the AGNH and FUSS e.V.
Further info	www.region-frankfurt.de

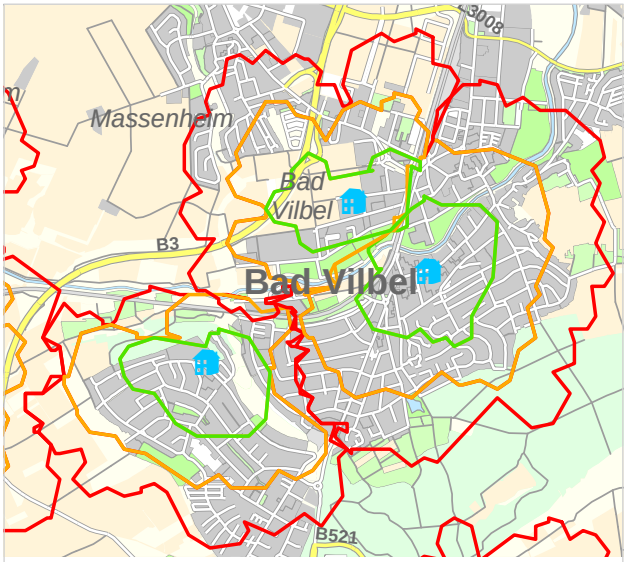
Responsible: Regional Authority

M8: Analysis of walking distance access to local amenities

The quality of life in residential areas is measured not least by how easy it is to reach services for daily needs on foot. Efficient land use and transport structures can significantly reduce car dependency and traffic volumes as well as the use of scarce land. Short ways within communities also contribute significantly to energy-efficient, climate-friendly and dynamic municipal development.

To examine the situation of walking distance access to local amenities, the Regional Authority created a network of footpaths in its Geographical Information System (GIS) in 2013, which is updated annually. In simple terms, all roads and paths that cannot be used by pedestrians such as motorways and dual carriageways were marked first, with all other routes then forming the network of footpaths. It was analysed by recording a route length for each section and, depending on a user's profile, a journey time. The user profiles contain average walking times (kilometres per hour) for people in different age groups as well as with mobility impairments. In this way, the GIS footpath network enables pedestrian routing and catchment areas to be derived, which can be displayed as isolines of equal distance or walking time.

All key amenities for general needs are included in the analysis. These are stored in the GIS as points of interest (POI). They include schools, nurseries, sports facilities, supermarkets, community centres, doctors' surgeries, pharmacies as well as bus and rail stops. Accessibility on foot can be calculated and graphically displayed for these POIs.



Walking distance to primary schools

Distance to the nearest primary school depicted as catchment areas in metres

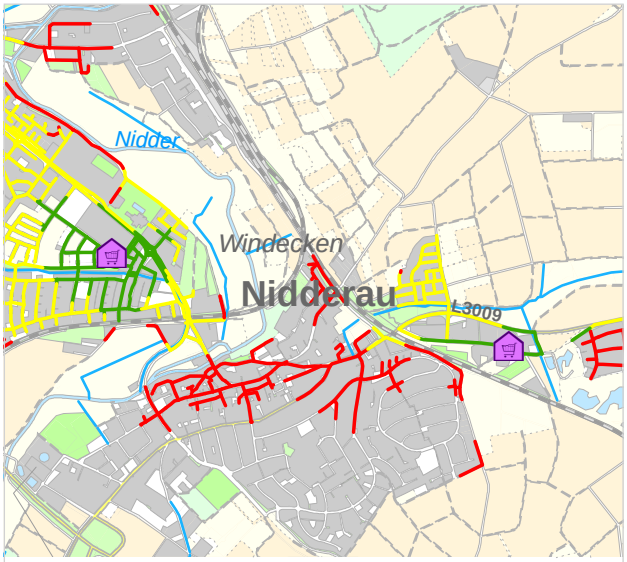
Primary school

Distance in metres

Up to 400

400 to 800

800 to 1200



Walking distance to food shops

Walking time to the nearest food store depicted along the footpath network in minutes - at a moderate walking speed -

Food store

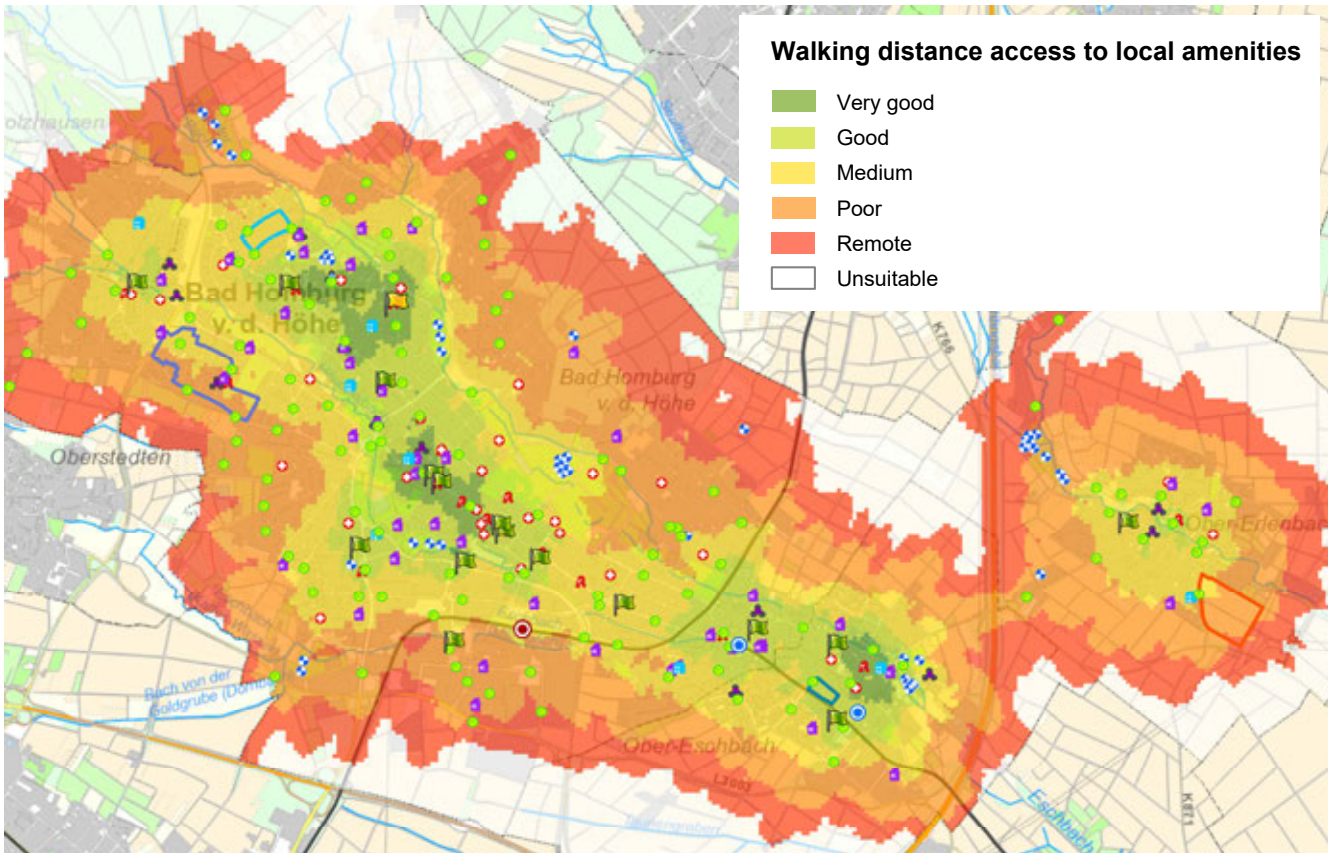
Walking time in minutes

Up to 5

5 to 10

10 to 15

People will walk a maximum of 1,200 metres to reach amenities for general needs. For longer distances they will choose another means of transport. The area under consideration is then divided into accessibility classes using a 200-metre matrix. The result is a map that identifies areas with poor accessibility, those in need of action to improve the footpath network, and those with good accessibility. The analysis is provided to the municipalities of the Regional Authority.



Example of walking distance access to local amenities in Bad Homburg vor der Höhe 2016

M8: Walking distance access to local amenities

Type of measure	Analysis
Basis	In-house analysis of walking distance accessibility
Further info	www.region-frankfurt.de

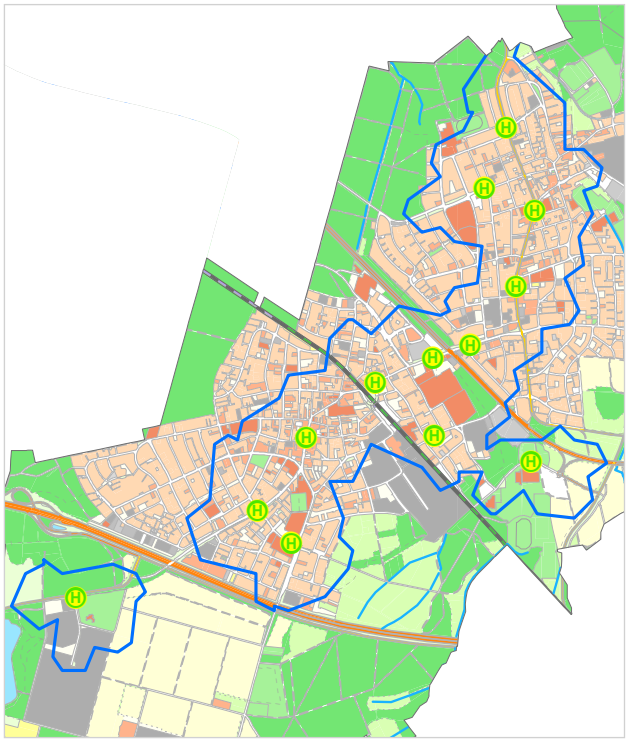
Responsible: Regional Authority

M9: 5-minute walk to access a mobility service

Being able to reach a mobility service such as public transport and/or sharing services within a 5-minute walk is an attractive alternative to using your own car. Several municipalities in the area covered by the regional SUMP do not yet have this option everywhere.

The Regional Authority has carried out an analysis for its member municipalities on the issue of getting to a mobility service within five minutes on foot. The analysis is not about determining a time that people can be reasonably expected to manage, but about determining a quality that makes it extremely attractive to use mobility options other than one's own car.

Based on the existing public transport network as well as the various local sharing services, a geographic information system was used to determine residential areas



Getting to a mobility service within a 5-minute walk – possible in the blue-marked areas

that can be reached on foot within the specified time. Actual usable path connections were considered. The result was that in almost 80% of the inner areas of the Authority area, at least one of the above-mentioned mobility services is accessible. The remaining 20% of areas now require assessing by working together with the respective member municipalities. Where possible, measures can then be drawn up to efficiently close any gaps in the transport network. It is possible that bus routes could undergo minor local changes, sharing hubs set up, or even a mobility hub installed with pooled mobility services. The Regional Authority has already established an extensive network of experts in public transport, sharing systems and mobility hubs that is available to advise and support the municipalities within the regional SUMP area.

M9: The 5-minute region

Type of measure	Analysis
Basis	Analysis of walking distance accessibility: POI, mobility services
Further info	www.region-frankfurt.de

Responsible: Regional Authority

M10: Concept on improving walking distances to train stations

People used to settle along transport routes such as rail lines because both goods and people are easy to transport by rail. However, in recent decades, local train stations have often taken a secondary role concerning the development of towns and cities. As a result, less attention has been given to walking distances to stations and between individual residential quarters, and at times neglected in planning processes. Positive examples also exist, such as the Offenbach Ost train stop or Rosbach vor der Höhe, which are connected from a broad range of directions.

However, to strengthen local public transport and make it a real alternative to private motorised transport, stops must be easily accessible. Therefore, walking distance accessibility to train stops in the regional SUMP area is to be analysed in a multi-stage process by the end of 2023 and discussed with local municipalities. Train stops are to be classified, e.g., as "central" or "peripheral", and connections from/to P+R facilities and bus stops are to be examined, and key pedestrian flows identified. The quality of the access routes to train stops is to be considered as well as a range of criteria for creating access to all. In this way, access to rail-based local public transport is to be made more attractive for people in the region. This requires close coordination with local municipalities and station operators.

Stops (Offenbach-Ost, Rosbach vor der Höhe, r.) can be enhanced with different accessibility options and gaps closed in transport connections.

M10: Walking distance access to stations	
Type of measure	Concept
Basis	RMV local transport plan, analysis of walking distance accessibility, Resolution of the Verbandskammer, July 2020
Further info	www.region-frankfurt.de

Responsible: Local transport organisations

M11: Building easy access at all rail stops

Wheelchair users, senior citizens who require the use of a walker, people with motor or sensory impairments, parents with prams or passengers who simply carry a lot of luggage are all dependent on accessible local rail transport for their normal travel. Accessibility can mean access to timetable information as well as getting to a station, a station's facilities and transfer options to other transport modes. Railway building and operating regulations as well as the passenger transport laws contain relevant specifications for both rail transport and public transport by road.

However, full accessibility has not been clearly defined in law. For the RMV, passenger autonomy is the benchmark for creating easy access for all. The regional SUMP aims to support municipalities and local transport operators in making it easy and uncomplicated for everyone to use train stops. Examples are level entry and exit, tactile guidance strips and next-stop announcements in trains.

As with improving walking distance accessibility to rail/tram stops (see M10), removing barriers to public transport is to be achieved in cooperation with the municipalities in the area covered by the regional SUMP, with the RMV, local transport authorities and with station operators.

Rail stop "Musterschule" for the U5 towards Preungesheim with level entry and exit, tactile guidance strip and visual destination display

M11: Building easy access at all rail stops	
Type of measure	Planning and construction
Basis	Legal stipulations, regional and other local transport plans

5.4 Rail-centred land-use planning

Responsible: Regional Authority

M12: Prioritising new development areas within a maximum distance of 2,000 metres from a rail stop

In recent decades, residential developments in the regional SUMP area have not always been prioritised according to existing transport axes such as rail lines.

Rail travel is environmentally friendly, has no access restrictions, and allows people and goods to move over longer distances in a way that saves on land use. Many rail stops serve as drivers for developments as attractive locations for residential and commercial sites. Commercial areas require rail access for their workforce and for transporting goods. This prevents heavy-goods vehicle traffic through environmentally sensitive locations.

New building developments should generally be designated no further than 2,000 metres from existing rail stops wherever feasible to facilitate connections between settlements and rail axes. Furthermore, investigations should also be carried out around existing settlements to determine whether the existing rail network can be expanded to include further stops as part of settlement developments. An open-minded approach is also required to the construction of completely new rail lines.

M12: Locating new building developments near rail stops	
Type of measure	Preparatory land-use planning
Basis	Regional land use and other land use plans
Further info	www.region-frankfurt.de

M13: Constructing a rail ring around Frankfurt am Main

Responsible: RMV

Completion of the west route (RTW) rail expansion project will not be enough. To significantly increase the competitiveness of public rail passenger transport over car use and noticeably relieve pressure on Frankfurt's main railway station as a transit point, the FrankfurtRheinMain Region also needs eastern as well as southern and northern routes. Only with a continuous rail ring around the metropolis on the Main River will rail be able to assert itself as the backbone of efficient infrastructure within the region. Rail efficiency around the Frankfurt am Main hub depends greatly on a long-distance rail tunnel and other measures in other parts of the region, including reactivation of the Horlofftalbahn and electrification and expansion of the Niddertalbahn. Furthermore, rail infrastructure improvements will result from many of the measures in the federal transport infrastructure plan, such as the northern Main line extension and the new/expanded Frankfurt–Mannheim and Frankfurt–Fulda lines.

M13: Rail ring around Frankfurt am Main	
Type of measure	Building project
Basis	Regional Land Use Plan, Regional Public Transport Plan, FrankfurtRheinMain^{Plus}
Further info	www.frmplus.de

Responsible: Local public transport organisations

5.5. Needs-based public transport

M14: Developing on-demand transport systems in the region

Public transport services in rural areas are often unappealing with only a few lines and operating at infrequent times. Public transport does not offer a real alternative to the car, especially during off-peak hours and at night. Even in urban areas, existing shared-call taxis and on-call buses often offer inflexible systems that are of little use to passengers. Fixed routes at hourly or longer intervals also mean people prefer using their own cars instead of public transport.

On-demand systems, which are already in use in some parts of the regional SUMP area, can be an attractive alternative. For example, the "Hopper" offered by the Offenbach district transport authority supplements the existing public transport network, and offers a high degree of flexibility. This novel on-demand service adapts to the needs of its users and operates without a rigid timetable by combining requests from different customers in a practical way, thus creating synergies.

Passengers are also prepared to pay a higher fare for the service. The more flexible the services are, the less attractive it becomes to use a car. A coordinated and user-friendly introduction of this service in all six districts of the region, which won't impact on local public transport organisations' own services, can make a decisive contribution to the transport transition.

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M14: Region-wide on-demand systems	
Type of measure	Extension of services
Basis	Regional Public Transport Plan, Local Public Transport Plans
Further info	www.kvgof-hopper.de

Responsible: RMV

M15: Expanding the region's express bus route network

Large parts of the public transport network in the regional SUMP area are directed towards the Frankfurt city centre as the destination. As a result, travel connections to other mid and upper centres in the polycentric FrankfurtRheinMain Region are only possible with transfer connections in the Frankfurt city centre or Frankfurt main station. This results in long travel times and regular waiting times.

Express bus lines can help here, as they often run on tangential routes in the conurbation and do not enter the Frankfurt city centre. Examples are the X17 (Hofheim–Hattersheim–Frankfurt Airport Terminal 1–Neu-Isenburg) or the X27 (Königstein–Kronberg–Oberursel–Bad Homburg–Karben–Nidderau). Such bus lines are also a good alternative to the (as yet) non-existent suburban and regional rail lines, because regional distances can also be bridged quickly using buses.

In contrast to rail lines, they are much quicker to implement by operating on existing transport infrastructure with stops being easy to incorporate. However, efficient operation and being a real alternative to car travel requires dedicated bus lanes to ensure reliability and punctuality, especially in high-density areas and on busy stretches of road. Particularly along future routes of a rail ring around Frankfurt, express bus routes can be an attractive alternative to car use and can be set up at short notice.

© Jana Kay

M15: Express bus network	
Type of measure	Extension of services
Basis	Regional Public Transport Plan
Further info	www.rmv.de

Responsible: Regional Authority

M16: Developing urban cableways

Cable cars not only give access to recreational areas in mountains, but can also be useful in conurbations as part of an integrated mobility concept for daily transport needs. This was made evident in presentations at the Regional Authority's first cableway day in the spring of 2019.

Authority director Thomas Horn, 1st cableway day 2019

Urban cableways can cross topographical obstacles as well as rivers and motorways and provide high levels of transport capacity. Frequently visited destinations such as airports, multi-functional arenas, university locations and large commercial areas reach their capacity limits at specific times of the day so can benefit from urban cableways as an additional service, or as an interim solution for infrastructure projects with lengthy planning and construction times. Short planning times, low construction costs and, last but not least, low land and resource consumption speak in favour of this mode of transport. As a practical addition to the existing public transport network, cable cars can be easily integrated into the service structure of municipal transport systems.

Initial studies on possible routes indicate potential applications for urban cableways in the region. For example, there is potential on the route from the future Terminal 3 of the airport via Zeppelinheim, Neu-Isenburg, the forest car park at the Frankfurt stadium to the Louisa S-Bahn station. Implementing such a route would significantly relieve congestion at hitherto highly frequented junctions.

Financing is also favourable. Amendments to the Hessian mobility promotion law (MobFG) and the municipal transport financing law (GVFG) mean cableways are eligible for funding.

M16: Urban cableways	
Type of measure	Concept
Basis:	Preliminary studies by the Regional Authority with the University Darmstadt h_da
Further info	www.region-frankfurt.de

5.6. Integrated commercial traffic

Responsible: Regional Authority

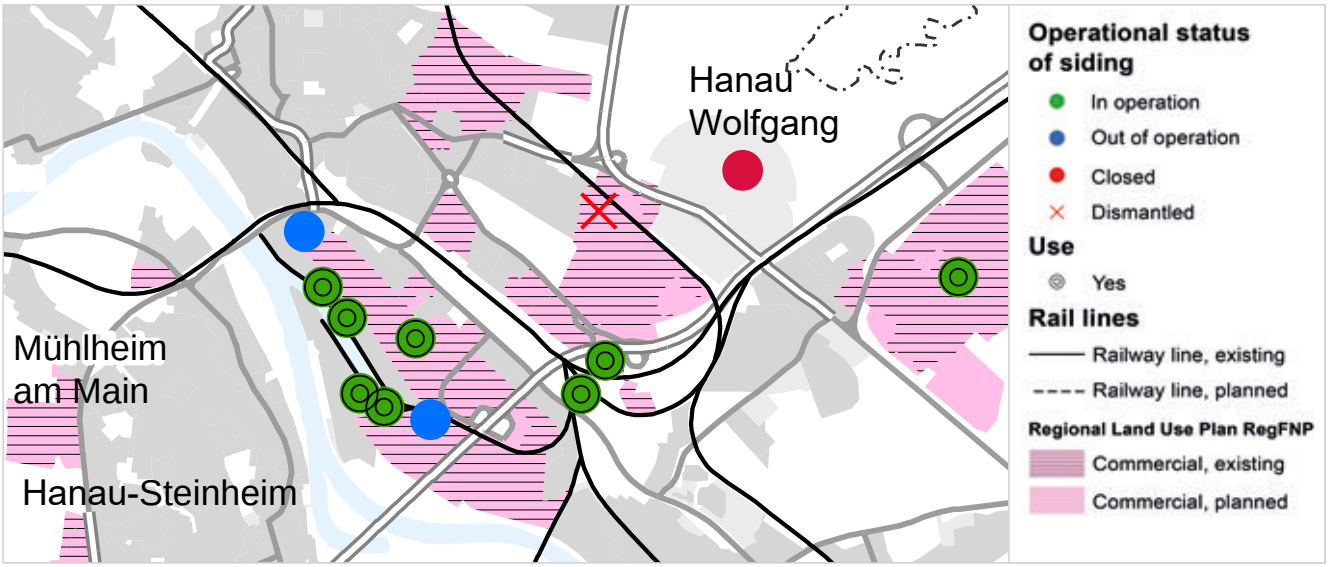
M17: Examining the potential of sidings in the region to shift more freight traffic onto rail

A nationwide siding charter, signed by over 40 specialist associations and institutions, aims to improve the legal, economic and financial framework conditions for sidings in freight transport. The Regional Authority is a co-signatory. By 2030, all 110 or so industrial tracks and sidings in the region are to be assessed with a view to reactivating or extending them. Furthermore, the Regional Authority, together with other stakeholders, will ensure that the federal siding funding scheme is made more attractive.

The number of sidings providing a direct connection from one or more businesses to the rail network has declined dramatically over the past 25 years. Not all of the remaining connections are currently being used. The reasons are manifold: the (partial) shift to rail is seen as unnecessary or uneconomical; the benefits are unknown; attempts at reactivation have failed due to the lack of a contact person or complex procedures Last but not least, force of habit also plays a central role: the road as a mode of transport with HGVs as the means of transport is well-known, the risks, e.g., traffic jams and accidents, are generally accepted, and there are still no direct consequences for the impact on the environment and people.

The next steps include:

- Start of a new federal siding funding scheme
- Testing of first sidings by a regional rail consultant in a pilot phase (see M18)
- Continuation of the years-long dialogue between stakeholders in the region to assess further sidings.
- Updating the map of commercial areas and railway sidings



Many sidings in the region are being used. In the map section for Hanau, these are shown in green. All other sidings are unusable for various reasons, but could be reactivated with little effort.

M17: Rail sidings	
Type of measure	Analysis
Basis	Authority's regional rail strategy, map of commercial areas with rail sidings
Further info	www.region-frankfurt.de

Responsible: Regional Authority

M18: Regional rail consultant to increase the level of freight transported by rail and improve accessibility for passengers

Reliable goods transport for production processes as well as for supply and disposal is essential for the competitiveness of the FrankfurtRheinMain Region. Currently, about 80% of goods transport is by road, leading to environmental impacts such as noise and air pollution, and in some cases considerably impairing the local quality of life. The Regional Authority has engaged a regional rail consultant for the regional SUMP area to enable the shifting of more freight onto rail and to explore opportunities for developing rail routes. The aim is to not only increase rail freight demand, but also rail passenger demand. The regional rail consultant is a point of contact for the municipalities, and can advise them on activating or re-commissioning sidings or railway lines, refer municipalities to the relevant authorities and provide information on funding.

The service also includes smaller upgrades to rail infrastructure, e.g., improving services by establishing relay trains at stations on single-track lines.

The rail consultant will be performing the following tasks from the end of 2020:

- Market monitoring and assessment
- Assessing the potential for more freight to be transported by rail at possible locations (individual company sites or entire commercial parks) as well as assessing passenger transport demand for residential areas within the catchment area of rail stops.
- Advising municipalities and companies on planning and maintaining sidings and rail lines and support with procedural issues
- Advice on funding for municipalities and companies and support in selecting the appropriate rail specialist, freight forwarder as well as rail operator.

The advisory service is not only limited to municipalities with direct rail links. Combined transport also offers considerable potential that needs to be exploited.

Using the rail consultant to exploit potential for rail lines and commercial developments
Location: Mainova in Frankfurt am Main and the Frankfurt am Main – Grävenwiesbach line

M18: Regional rail consultant

Type of measure	Advisory service
Basis	Regional rail strategy of the Authority, map of commercial areas with rail sidings, resolution by the Verbandskammer, July 2020
Further info	www.region-frankfurt.de

Responsible: Regional Authority

M19: Developing a regional commercial transport concept

The lives of everyone living in the region is accompanied by the flow of goods. Whether people are shopping at the supermarket in Butzbach, the bakery in Steinbach or online from their homes in Offenbach, their goods have to be transported, waste disposed of and workers conveyed. The commercial traffic generated is necessary, but poses challenges for the FrankfurtRheinMain Region. Inner-city delivery traffic, driven in no small part by online retailing, is becoming increasingly significant, as is HGV traffic on feeder roads to large peripheral commercial and industrial areas. Coordinated management is often lacking here.

Local measures are only partial solutions because they cannot fully address the widely interconnected processes in commercial transport. Optimised management of commercial traffic can therefore only be achieved through a regional strategic approach based on practical recommendations for action.

One such approach is a regional commercial transport concept, which contains specific measures to improve the situation in commercial transport. Together with the relevant actors, regional strategies with implementation plans are being developed for the pooling of transport, delivery via micro-depots, establishment of loading zones, logistics space management, securing/expansion of multimodal logistics locations, etc. The concept is therefore crucial for optimising cross-municipality traffic as well as for reducing traffic within towns and cities. The municipalities are to be encouraged to pool goods when making deliveries to private households and businesses. The concept content is also to be incorporated into regional plans such as the Regional Land Use Plan, when appropriate.

Roadmap:

- Establishing a steering group
- Identifying requirements with support from the steering group
- Drafting the concept

The commercial transport concept is intended, for example, to pool delivery journeys to relieve inner city traffic

M19: Regional commercial transport concept	
Type of measure	Concept
Basis:	Position papers from the business community

5.7. A managed mobility and transport transition – unevaluated proposals from expert involvement

M20: Regional status report on transport infrastructure

To determine the need for investment in transport infrastructure, the condition of all roads, bridges, railways, etc., must be recorded and assessed. These status reports are to be prepared and published every three years.

M21: Study on the region-wide impact of traffic regulation instruments

Can the mobility transition only succeed through (re) construction, redistribution and alternative services alone? Or does it also require regulatory measures? A review of the efficacy of measures such as the regional toll, 30 km/h speed limit in built-up areas, a regional environmental zone, a speed limit on motorways, a local transport levy and a regional parking management system provides the decision-making basis for coordinated policy intervention. Reviewing ongoing successful Europe-wide measures and those that have been less successful should help to assess the situation.

M22: Supra-regional transport data model including all modes of transport and integrating relevant data from these modes

To understand transport patterns and interactions with measures regarding settlement development requires an integrated planning model for settlement and traffic that includes all cross-municipality relevant land transport modes. The model should also include transport and environmental policy instruments. The basics for the model already exist within the region.

Included here is the establishment of a regional and cross-modal road works management system.

M23: Establishing a regional mobility fund

Many good ideas for projects and measures that can shape the future of mobility exist in the region. To realise them not only requires committed actors and bold decision-making, but also secure funding. Funding is often necessary here to make up for a lack of financial resources. However, hurdles exist in the application process, such as the need to provide own financial resources, low financial thresholds and complex application procedures.

For instances where such hurdles threaten to prevent the implementation of measures, a suitable financing instrument needs to be created. The instrument should enable quick and uncomplicated funding applications as well as provide own financial resources required for most funding programmes.

The regional mobility fund is intended to complement the portfolio of existing funding pots and fulfil the requirements already described. Allocation should be via public and private sector actors who have an interest in improving the mobility situation in the region.

6. Next steps

The opening section of this regional SUMP set out a bold vision of mobility for FrankfurtRheinMain and then formulated goals for it. Specific measures have also been listed that will bring us closer to the vision and turn it into reality. Publications such as these often end at precisely this point. However, work for the Regional Authority FrankfurtRheinMain and its clients, the member municipalities, only really begins with adoption of the regional SUMP by the Verbandskammer. A regional SUMP with good ideas is not yet a mobility transition. But it can be the starting signal, which is how we want it to be understood. The mandate from the member municipalities was clear: take action and get things done.

Section five showed which measures can fundamentally contribute to further implementation of the transport transition. This tool kit is now to be communicated to the member municipalities and sub-regions where selecting and applying the appropriate tools can be worked on together.

Mobility in the FrankfurtRheinMain Region today neither meets the needs of its people, its economy, nor climate protection. To change this, we want to work together with all municipalities and their citizens, as well as the many other stakeholders and organisations in the transport sector. And we want to do it now rather than decades from now.

For this reason, the Regional Authority will start implementing those measures for which it is the designated "coordinator" immediately after consultation and adoption of the regional SUMP. For the other measures, the designated coordinators are to be supported as best as possible by the Regional Authority team. A coordinator will be sought for measures which do not yet have one.

Achieving the mobility transition and thereby realising the vision for FrankfurtRheinMain is not just a matter of large-scale infrastructure measures that take decades to complete, while also being easy targets for complaint and used as excuses. It is more about taking a multitude of small steps to reach the goal, as individuals and as a collective. Each of these small steps will be of help. The important thing is to start today and not to forget taking the initial steps while waiting to make a big leap.

A note about ourselves

Mobility in the Regional Authority Frankfurt-RheinMain

The Regional Authority not only wants to promote a transport transition in the region as part of its mandate, but also to contribute as a role-model employer. As part of internal mobility management, a range of options have been introduced to promote sustainable employee mobility.

Premium job ticket and BahnCard reimbursement

To give employees options in their choice of transport, not only for their journey to work but also for their general mobility, the Regional Authority provides a travel ticket known as a premium job ticket. This ticket is available to all Regional Authority employees and allows them to not only travel to their place of work, but also throughout the entire area covered by the RMV. Ticket holders can take others with them for free at weekends and on Mondays to Fridays after 7 pm, thereby enabling families to use public transport with the ticket. Because the ticket can also be used for business trips, the Regional Authority additionally saves considerable amounts on staff costs from travel expense claims.

To promote sustainable mobility on business trips, the Regional Authority reimburses its employees for the purchase of a rail BahnCard. The discount obtained on tickets for business trips is reimbursed to employees after each trip until the total amount of the purchase price of the BahnCard has been covered. The option of using the BahnCard for private rail travel creates an incentive to change personal mobility behaviour.

Certification as a bicycle-friendly employer

The Regional Authority has implemented a number of "bicycle-friendly" measures to make commuting by bicycle more attractive. These include showers and changing facilities, secure parking spaces, advice and information, and the provision of company bicycles. To sustain such activities, the Regional Authority is in the process of being certified as a "bicycle-friendly employer".

Salary advances to purchase bicycles

Long-distance commuting by bicycle requires high-quality bicycles. E-bikes and pedelecs in particular are playing an increasingly important role here. Since June 2020, employees have been able to apply for an interest-free salary advance for the purchase of a bicycle. This advance is to be repaid in monthly instalments according to individual arrangements.

Participating in schemes such as "JobRad", in which bikes financed by employers is recuperated as deferred compensation, is unfortunately not currently possible in the public sector. Private-sector employers have more opportunities to provide bicycles to their employees.

Provision of a multimodal transport fleet

The Regional Authority has a diverse fleet of vehicles, ranging from conventional cars to pedelecs, bicycles, cargo bikes and e-scooters, offering a wide variety of options for official travel. The vehicles can be used for official journeys during working hours. The previously mentioned job ticket and BahnCard also form part of the Regional Authority's transport fleet.

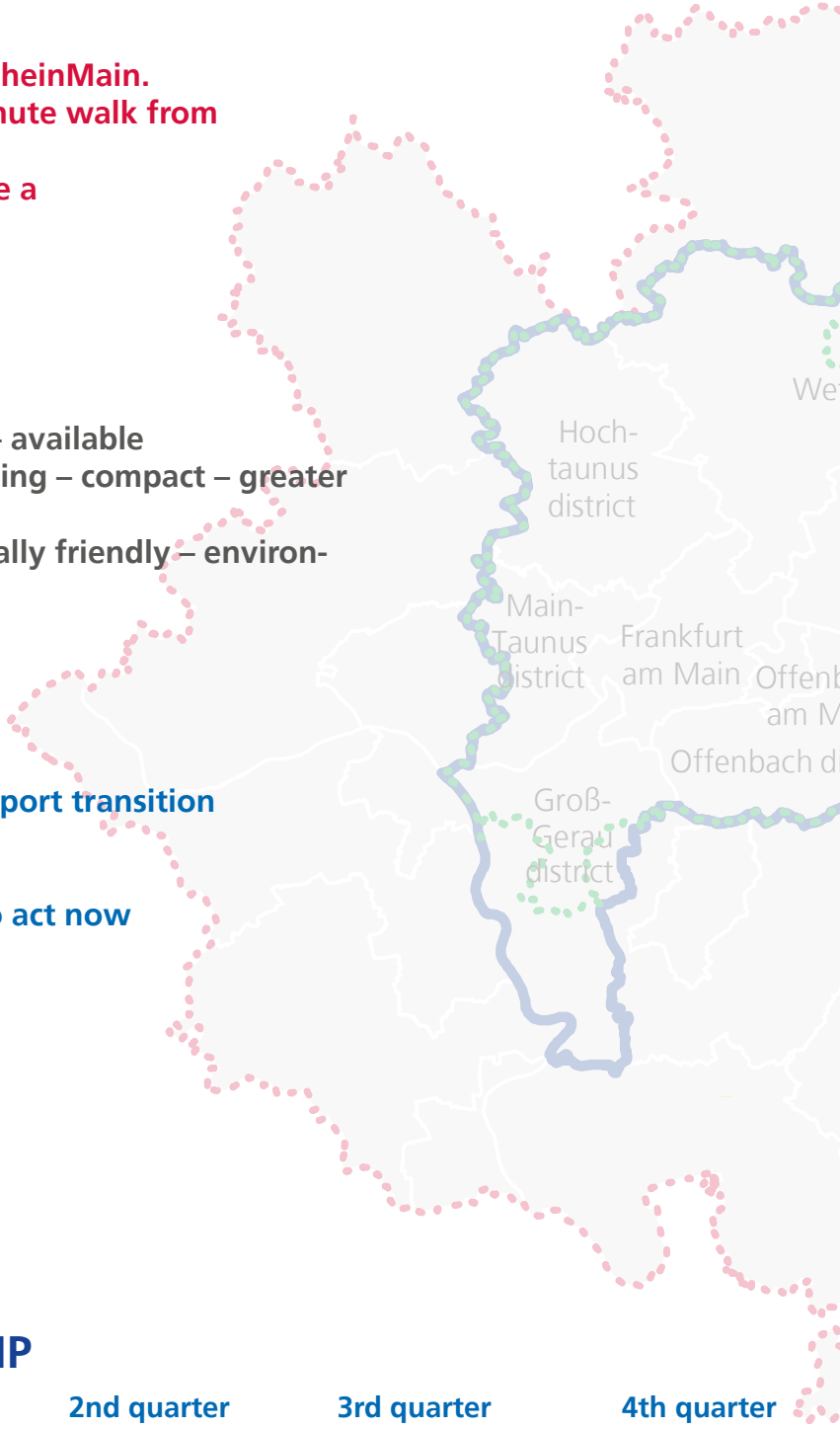
Introducing mobile working

Working from home in exceptional cases has already been an option at the Regional Authority for several years. A reason was required to perform a task at home or had to make sense from a work efficiency perspective. It also had to be approved by the respective departmental management. During the corona-related contact restriction period, the Regional Authority had all staff working on a mobile basis. Since July 2020, mobile working has been possible two days a week (Mondays and Fridays). A further review is being carried out to see whether mobile working can be introduced as a general employment provision. Mobile working means that work, rather than being performed at a fixed location, can also take place, for example, on a train during a business trips. It saves travelling to the place of work for tasks that do not necessarily have to be done in the office. A prerequisite for mobile working is that staff can be reached via internet and telephone.

7. Our regional SUMP at a glance

Vision

**High-quality mobility for all in FrankfurtRheinMain.
A travel option is available within a 5-minute walk from any populated area in the region.
In short: FrankfurtRheinMain is to become a 5-minute region.**



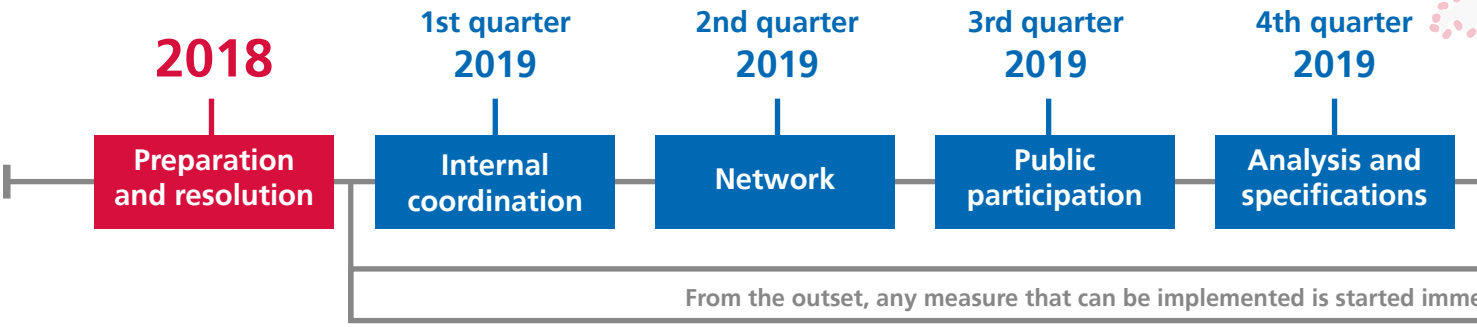
Requirements

- Mobility for all: accessible – affordable – available
- Avoiding unnecessary traffic: direct routing – compact – greater awareness
- Planning necessary traffic: environmentally friendly – environmentally compatible – safe – reliable – economical

Approach

- Roadmap to launch a mobility and transport transition
- Together as a region
- Ongoing process
- Taking action now and getting others to act now

The road to the regional SUMP



Set of measures

- Integrated cycleway network
- Multimodal mobility hubs
- Enabling pedestrian traffic
- Rail-centred community developments
- Needs-based public transport
- Integrated commercial traffic
- Managed mobility and transport transition

Post-strategy

- Implementing the "tool kit"
- Tailor-made solutions
- Working together with the municipalities and partners from the region
- The work only now begins

Regional SUMP partners

- Municipalities and districts
- Institutions and stakeholders from business, science, administration
- Associations and mobility service providers
- Citizens in the region
- Employees of the Regional Authority

1st quarter 2020	2nd quarter 2020	3rd quarter 2020	4th quarter 2020	2021
First draft	Expert consultations	Draft	Submission to decision-makers	Adoption and implementation

ediately – even before completion and adoption of the regional SUMP.

8. Thanks

The fact that this FrankfurtRheinMain regional SUMP was able to be produced in just under two years has been due to broad and highly productive cooperation at many levels.

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- The 108 municipalities and 6 districts within the FrankfurtRheinMain regional SUMP area.
- Specialist colleagues and in associations: Allgemeiner Deutscher Fahrrad-Club Landesverband Hessen e.V.; Arbeitsgemeinschaft Nahmobilität AGNH des Hessischen Ministeriums für Wirtschaft, Energie, Verkehr und Wohnen; der Bau- und Planungsämter im Regionalverbandsgebiet; Bayernhafen GmbH & Co. KG Aschaffenburg; Benz + Walter GmbH; book-n-drive mobilitätssysteme GmbH; Cassini Consulting AG; DB Netz AG; FUSS e.V. – Fachverband Fußverkehr Deutschland; Hessisches Landesamt für Naturschutz, Umwelt und Geologie (HLNUG); Hochschule Darmstadt, Fachbereich Bauingenieurswesen; Hochschule RheinMain, Fachgruppe Mobilitätsmanagement; House of Logistics and Mobility (HOLM) GmbH; Industrie- und Handelskammer Frankfurt am Main; Infraserv Logistics GmbH; Institut für sozial-ökologische Forschung (ISOE) GmbH; ioki GmbH; ivm Integriertes Verkehrs- und Mobilitätsmanagement Region Frankfurt RheinMain GmbH; Karlsruher Institut f. Technologie (KIT), Institut f. Technikfolgenabschätzung u. Systemanalyse (ITAS); KVG Main-Kinzig mbH; Lokale Nahverkehrsgesellschaft mbH Kreis Groß-Gerau (LNGV); mobileeee GmbH; Netzwerk Mobilitätsstationen; RADforum RheinMain; Regierungspräsidium Darmstadt, Regionale Siedlungs- und Bauleitplanung, Bauwesen; Regionale Austauschplattform „Güter auf die Schiene"; Rhein-Main-Verkehrsverbund GmbH; Speditions- und Logistikverband Hessen und Rheinland-Pfalz e.V.; TU Braunschweig, Institut für Vergleichende Regierungslehre und Politikfeldanalyse (CoPPP); Verband der Chemischen Industrie e. V. (VCI) Hessen; Verband Deutscher Verkehrsunternehmen (VDV) e. V.; Vereinigung der hessischen Unternehmerverbände (VhU) e. V.; Verkehrsclub Deutschland (VCD), Landesverband Hessen e.V.

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Last but not least, we would like to thank the citizens of the region for their constructive ideas and suggestions for improving mobility and transport in FrankfurtRheinMain.

The best made plans and measures will only be effective and lead to a transport transition when they are supported and accepted by you, the people of FrankfurtRheinMain!

Mobility unit
Regional Authority FrankfurtRheinMain

9. Sources and abbreviations

Selected: Arbeitsgemeinschaft hessischer IHKs (Eds.): Verkehrsinfrastruktur in Hessen – Status Quo 2016. Position der Arbeitsgemeinschaft hessischer Industrie- und Handelskammern. IHK Frankfurt am Main (2017). BBSR – Bundesinstitut für Bau-, Stadt- und Raumforschung (Eds.) im Bundesamt für Bauwesen und Raumordnung: Raumordnungsbericht 2011, Bonn (2012). BBSR – Bundesinstitut für Bau-, Stadt- und Raumforschung (Eds.) im Bundesamt für Bauwesen und Raumordnung: Raumordnungsbericht 2017, Bonn (2017). BMVI – Bundesministerium für Verkehr und digitale Infrastruktur: Bundesverkehrswegeplan (BVWP) 2030, Berlin (2016). FES – Friedrich-Ebert-Stiftung (Eds.): Nachhaltige Mobilitätskultur in Hessen gestalten. Konzept für eine Mobilitätsstrategie. Bonn (2017). Hessisches Ministerium für Wirtschaft, Energie, Verkehr und Wohnen: Mobilitätsbericht 2016: Leitlinien – Entwicklungen – Perspektiven, Wiesbaden (2016). IHK Frankfurt am Main (Eds.): Hessen 2030 - Zukunft gestalten, Infrastruktur - Wege für morgen. Veranstaltungsdokumentation. Frankfurt am Main (2013). IHK Frankfurt am Main (Eds.): Zukunft der Mobilität in FrankfurtRheinMain. Dokumentation eines Expertenworkshops. Frankfurt am Main (2011). IVM – Integriertes Verkehrs- und Mobilitätsmanagement Region Frankfurt RheinMain (Eds.): Mobilitätsmasterplan FrankfurtRheinMain. Handlungsempfehlungen für eine mobile Region. Frankfurt am Main (2011). Kreisverkehrsgesellschaft Offenbach (Eds.) Leitbild für die Mobilität der Zukunft im Kreis Offenbach. Bericht von 2013 bis 2018 für den Kreis Offenbach – zusammengestellt von: Prof. Dr.-Ing. Jürgen Follmann. Offenbach (2020). Regierungspräsidium Darmstadt (Eds.): Regionales Entwicklungskonzept (REK) für Südhessen. Darmstadt (2019). RMV – Verbundweiter Nahverkehrsplan (RNVP) des Rhein-Main-Verkehrsverbund (Eds.) für die Region FrankfurtRheinMain. Frankfurt am Main (2014). VCD – Verkehrsclub Deutschland (Eds.): Wir fordern die Verkehrswende! Zehn Kernforderungen zur Bundestagswahl 2017. Berlin (2017). Wirtschaftsinitiative PERFORM (Eds.) der IHKs und Handwerkskammern der Metropolregion: Für eine zukunftsfähige Mobilität in FrankfurtRheinMain. Forderungen und Vorschläge. IHK Darmstadt Rhein Main Neckar (2017).

Abbreviation	Meaning	Abbreviation	Meaning
AGNH	Hessen Local Mobility Working Group	MiD	Mobility in Germany
BMBF	Federal Ministry of Education and Research	ÖPNV	Local public transport
BMU	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety	POI	Points of interest
BMWi	Federal Ministry for Economic Affairs and Energy	RegFNP	Regional land use plan
Destatis	Federal Statistical Office	RTO	Eastern regional rail route
FRM	FrankfurtRheinMain	RTW	Western regional rail route
HFM	Managementgesellschaft für Hafen und Markt	RV	Regional Authority
HOLM	House of Logistics and Mobility	SPNV	Local rail passenger transport
LNO	Lokale Nahverkehrsorganisation	UBA	Federal Environment Agency

Data sources

Page 12, Figure: Commuter flows, within the regional SUMP area, of workers subject to social security contributions (excluding Frankfurt am Main and Offenbach am Main)
Page 13, Figure: Commuter flows of workers subject to social security contributions in the Main-Taunus district
Data sources: Statistics of the Federal Employment Agency, commuter data of employees subject to social insurance contributions by municipality.
As at: 30 June 2019
Areas of settlement according to CORINE Land Cover – CLC 2018 © GeoBasis-DE / BKG 2020
Page 27, Figure: Cross-municipality cycleways in the Offenbach district
Data sources: Cross-municipality cycleways in the district of Offenbach for the regional land use plan RegFNP2030, as at 2020
Areas of settlement according to CORINE Land Cover – CLC 2018 © GeoBasis-DE / BKG 2020
Page 36, Figure (left): Walking distances to primary schools
Data sources: Primary schools, Hessian State Office of Statistics 2019, excerpt POI's Regional Authority FrankfurtRheinMain
Pedestrian network: ATKIS-Basis-DLM, Hessische Verwaltung für Bodenmanagement und Geoinformation (HVBG) 2012 bis 2019.
Additions according to DOP 2017/2018 and OpenStreetMap. Calculations using ArcGIS Network Analyst, ESRI
Map background: City map, Regional Authority FrankfurtRheinMain 2017
Page 36, Figure (right): Walking distances to food retailers
Data sources: Lebensmittelhandel, Recherche 2018, Auszug POI's Regionalverband FrankfurtRheinMain
Pedestrian network: ATKIS-Basis-DLM, Hessische Verwaltung für Bodenmanagement und Geoinformation (HVBG) 2012 bis 2019.
Additions according to DOP 2017/2018 and OpenStreetMap. Calculations using ArcGIS Network Analyst, ESRI
Map background: City map, Regional Authority FrankfurtRheinMain 2017
Page 37, Figure: Situation on walking distance access to local amenities in Bad Homburg v.d.H. 2016
Data sources: Education: Research, Regional Authority FrankfurtRheinMain 2015
Mobility: RMV 2015; health: POIs Nexiga 2015; amenities, culture, leisure/sport: Bad Homburg v.d.H.
Pedestrian network: ATKIS-Basis-DLM, Hessische Verwaltung für Bodenmanagement und Geoinformation (HVBG) 2012 and 2015.
Additions according to DOP 2012 and OpenStreetMap. Calculations using ArcGIS Network Analyst, ESRI
Map background: City map 2015 of the Regional Authority FrankfurtRheinMain
Page 38, Figure: Getting to a mobility option within a 5-minute walk
Data sources: RMV list of stops 2019
Pedestrian network: ATKIS-Basis-DLM, Hessische Verwaltung für Bodenmanagement und Geoinformation (HVBG) 2012 bis 2019.
Additions according to DOP 2017/2018 and OpenStreetMap, calculations using ArcGIS Network Analyst, ESRI
Map background: City map, Regional Authority FrankfurtRheinMain 2017, excerpt
Page 46, Figure: Commercial areas with rail sidings
Rail sidings: Research by the Regional Authority FrankfurtRheinMain 2017 based on Hessen Mobil, Regierungspräsidium Darmstadt and information from companies
Commercial areas and map background: Regional Plan / Regional Land Use Plan 2010 FrankfurtRheinMain, main map, plan as at 31 December 2015

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