



FINAL REPORT



The implementation of DRT-Services in Saarland's public transport system

A Policy Learning Platform peer review

28 and 29 November 2023

1. The “MUKMAV” Saarland and its motivation to host a peer review

1.1 Presentation of the “MUKMAV” Saarland as beneficiary of a peer review

Saarland is a federal state in the southwest of the Federal Republic of Germany. It is the smallest of the non urban federal states within Germany and, in terms of population, the second smallest federal state (after Bremen) with just under one million inhabitants. It borders the federal state of Rhineland-Palatinate to the north and east, the French region of Grand Est with its département Moselle to the south, and the Grand Duchy of Luxembourg to the west. Therefore, in addition to parts of Rhineland-Palatinate, parts of the French region of Grand Est and Luxembourg also belong to the catchment area of Saarland with mutual interdependencies. Together with these neighbours and the Belgian region of Wallonia, Saarland forms the European greater region of Saar-Lor-Lux, which is home to about 11.6 million people.



Saarland is characterised by a high degree of industrialisation and a well-developed infrastructure. Saarbrücken is the state capital, largest city and regional centre of Saarland. Saarland is divided into 5 districts and a regional association. The district towns are Homburg, Merzig, Neunkirchen, Saarbrücken, Saarlouis and St. Wendel. The seat of the state parliament and the state government are located in the capital Saarbrücken. In addition to the State Chancellery, the highest

administrative level is divided into seven ministries. One of these is the Ministry for the Environment, Climate Protection, Mobility, Agriculture and Consumer Protection (Ministerium für Umwelt, Klima, Mobilität, Agrar und Verbraucherschutz), abbreviated as “MUKMAV”.

The "MUKMAV" is responsible, among other things, for setting the framework for local public transport in Saarland, for example through the Act on Local Public Transport in the Saarland (ÖPNVG), which was last amended in 2017, or by adopting the Public Transport Development Plan (VEP ÖPNV). The “MUKMAV” also provides funding for municipalities and other local stakeholders in the mobility sector through the funding programme for sustainable mobility (NMOB). From 2023 onwards, for the first time, funding is being granted for the establishment of so-called demand-responsive transport (DRT) as a new form of sustainable public mobility. The funding recipients are various districts in Saarland.

1.2 The motivation to host a peer review

In order to efficiently link different means of transport, the Saarland supports, among other things, the expansion of linking facilities, measures to strengthen cycling, mobility concepts, digitalisation measures and pilot projects in the context of the introduction of new forms of mobility within the framework of the NMOB funding guidelines. Since it is to be expected that the new services will have high cost deficits, especially in the implementation phase, the federal state will support for example the new DRT with a total of 1.45 million euros within the framework of the NMOB funding programme. The “MUKMAV” has a great interest in the success of the on-demand transport planned by the responsible districts. In accordance with the funding objectives of the NMOB programme, the introduction of this new mobility service should increase the attractiveness of local public transport and make it easier for citizens to switch from private cars to local public transport. Since on-demand transport with its flexible and digitalised character represents a new form of mobility for all stakeholders, the susceptibility to errors in the new implementation is high due to a lack of empirical values. At the same time, a smooth start of this new form of mobility is important to ensure acceptance among the population. The main actors in Saarland’s public transport

system would therefore benefit enormously from an exchange with other actors who have already gained experience in the implementation of DRT services facing. The MUKMAV has therefore applied to participate in the peer review.

2. Specification of the policy challenge encountered

At the end of 2022, the MUKMAV has selected 3 DRT projects that will receive funding from the federal state for the implementation phase. The ministry is also supporting the procurement of the necessary IT infrastructure to map all DRT transport in Saarland in the future via a common digital booking platform. Users will thus be able to access all DRT services in Saarland via one application. At the same time, the technical effort for the introduction of the new software and the costs for its procurement will be minimised on the part of the transport companies and the association of public transport authorities. The coordination of the software procurement as well as the future administration of the IT system lies with the ZPS.

The individual DRT services in Saarland are also to be integrated into the tariff model of the transport association. Users will then be able to travel in a uniform tariff for both regular and demand-responsive transport. Depending on the design of the DRT service, it should be possible for the transport companies to also charge surcharges locally for the DRT service if it goes beyond the purely public service. One focus of the implementation of the DRT service should be the integration into existing digital systems of timetable information (“Saarfahrplan”-App) as well as into the digital ticket shop of the transport association saarVV.

2.1 Planning of the DRT offers

The success of a transport service depends on its planning, which must be oriented towards the needs of the local population. At the level of the federal state, the transport development plan is the planning framework for public transport. In the last update in 2019, DRT was already included as a new form of mobility and the funding programme, which is now being implemented, was also already created. The establishment of a state-wide digital booking and scheduling platform for DRT is also a measure that is anchored in the transport development plan.

As further planning instruments, the districts and municipalities are required to draw up a local transport plan every 5 years. This is based on the state-wide transport development plan. In the current local transport plans in Saarland, demand-responsive services are predominantly in the form of call taxis. A fully flexible DRT service that can be booked digitally is not yet anchored in the local transport plans. This is an urgent field of action in which municipal transport planners can generate knowledge from other European regions.

Also with regard to the tendering of the service to provide DRT offers, there are no empirical values yet among the responsible actors at the district level, as this is a new form of mobility. Accordingly, it is important to address the question of what quality criteria are defined for a DRT service and how the need for DRT offers can be effectively determined.

2.2 Operational implementation of the DRT offers

The transport companies in the Saarland are also entering new territory in the implementation of a DRT service. On the one hand, this concerns dealing with the technology that is necessary for scheduling and

carrying out the service. Here, it is part of the contract that the software provider offers a comprehensive training programme.

On the other hand, further practical challenges are to be expected in the implementation of a new mobility service, which cannot be foreseen in advance. The municipal and private transport companies in the Saarland would therefore benefit enormously from an exchange with other actors who have already gained experience in the operational implementation of DRT services.

2.3 Integration of DRT into the existing IT infrastructure

Public transport in Saarland is already highly digitalised. Timetable data from the transport companies have already been aggregated at the state level for many years, including in real time. Thus, real-time information is continuously made available to the customers of Saarland's public transport via the Saar timetable app or also via digital display boards. The Saarland is also well advanced with regard to the digital booking of public transport tickets. The payment options for the mobile phone ticket are being continuously expanded and current security standards are being introduced in order to also introduce time tickets as mobile phone tickets.

Numerous different software applications are already interacting with each other in order to digitally present a convenient public transport offer to users. With the digital booking of DRT services, a new offer is now being added that must be integrated in a meaningful way into the software portfolio of the transport association. Depending on the software providers involved, different approaches come into question here. Last but not least, the topic of DRT and its digital integration is also seen in Saarland as an entry into a future-proof Mobility-as-a-Service (MaaS) strategy. The question here is to what extent the existing Saarfahrplan journey planner can be expanded into a holistic MaaS app. Or whether it might make more sense to build a new platform that digitally links different mobility services. The question of the right MaaS strategy is currently moving mobility players all over the world. Here, too, all participants can benefit from the broadest possible transfer of knowledge.

2.4 User acceptance

Of course, user acceptance should always be considered when planning and implementing DRT services. It is important to identify the target groups and define clear requirements. Particularly in the area of user acceptance, important insights can be gained from sharing information with others

3. Participants

The following persons from MUKMAV took part in the peer review

Amri	David	MUKMAV, Unit F6 “new forms of mobility and public transport funding programmes”, referent
Fernandez-Hoffmann	Piedad	MUKMAV, Unit F6 “new forms of mobility and public transport funding programmes”, referent
Lill	Alexander	MUKMAV, Unit F4 „public transport, inland navigation and logistics“, referent
Ramelli	Christian	MUKMAV, Unit F6 “new forms of mobility and public transport funding programmes”, head of unit
Thul	Sebastian	MUKMAV, State Secretary

The following local stakeholders were involved in the peer review

Bach	Arne	Saar-Mobil GmbH & Co. KG
Eich	Dominic	KVS GmbH
Eickhoff	Maurice	District of Saarpfalz-Kreis
Hajak	Stephan	BPV Consult
Jacobi	Carl Isaak	District of St. Wendel
Kunze	Sven	State Capital Saarbrücken
Lay	Stefan	Lay Reisen On Tour GmbH
Martin-Gomez	Juan	Taxi Martin
Mischke	Andreas	ZPS (Local public transport association)
Morschett	Michael	ZPS (Local public transport association)
Müller	Gabriele	Taxi Martin
Philipp	Markus	ZPS (Local public transport association)
Sauer	Patrick	District of Merzig-Wadern
Schmidt	Elke	SNS GmbH
Schmidt	Hartwig	LVS (general transport association Saarland)
Schmidt	Matthias	District of Neunkirchen
Schneider	Steve	Taxi Schneider
Schumacher	Phillip	District of Saarpfalz-Kreis

The following persons took part as international peers in the peer review

Caetano	Sérgio	Mobility and Transport Unit, Intermunicipal Community of the Region Coimbra, PT
Höfler	Daniel	Leipziger Verkehrsbetriebe / Transport department of the city of Leipzig, DE
Marcer	Albert Guillaumes	Generalitat de Catalunya
Meally	Jackie	TFI Local Link Carlow Kilkenny Wicklow, IRE, General Manager
O'Brien	Noel	TFI Local Link Carlow Kilkenny Wicklow, IRE, Fleet Manager

The following persons from the Interreg Europe Team took part in the peer review

Krell	Katharina	Interreg Europe Policy Learning Platform
Martinez	Jason	Interreg Europe Joint Secretariat
Michalíková	Magda	Interreg Europe Policy Learning Platform
Oswald	Christina	Interreg Europe Contact Point Saarland

4. Policy Recommendations

Based on various DRT models and the different functions associated with the introduction of DRT, a number of recommendations were derived as part of the peer review. The following important findings emerged:

- **Know your area** and actual mobility data to design DRT schemes
- Determine the **objective(s)** of the individual DRT scheme
 - Social inclusion for remote areas / modal shift for commuters / decarbonisation?

- **Monitor regularly and improve** based on what works and what doesn't
- **Agility** to change the system according to actual demand and changes over time
- Have a **critical mass**, think about long-term **funding**
- Keep it **simple**
- Have a **standardised system**
- **Communicate!** Inform & consult the public and all the stakeholders

The key findings and policy recommendations are concretised below for the individual questions of the peer review.

4.1 Recommendations for the planning of DRT

4.1.1 Framework setting via funding

One of the recommendations from the peer review was to set certain framework conditions for DRT via the federal state's funding guideline. This has already been done with the publication of the NMOB On Demand guideline in 2022. The extent to which the federal state will provide further funding for DRT depends on political decisions. If it becomes clear by the end of 2024 that further funding will be available, consideration can be given to which certain criteria will be prioritised in a further call for funding.

With regard to the funding of a nationwide DRT platform, it can already be stated that this has been successful with the procurement that has already taken place. The extent to which further funding is required for further development will be monitored.

4.1.2 Exchange with other EU regions

The exchange between EU regions on common policy challenges is the core idea of Interreg Europe. In this sense, the peer review has opened up important perspectives. At national level, there has been a continuous exchange of knowledge between the actors in the DRT sector for years. As part of this exchange, the host will increasingly encourage the inclusion of experiences from beyond national borders. In addition, the possibility of an onsite follow-up meeting between the beneficiary and the peers will be utilised.

4.1.3 (Local) data collection

The evaluation of DRT transport operations on the basis of data is basically possible via the software system used. This applies in particular to user data and user feedback via the app, as offered by the flexa app in Leipzig, for example. In addition to this bottom-up planning, the recommendation from the peer review is that further data relating to the mobility sector should also be integrated for top-down planning. This process requires a broader coordination of data provision. The extent to which there will be initial progress in this area as early as 2024 depends on further political decisions. In any case, however, a basic evaluation is already possible using the DRT software. The software provider is also available as a service provider for data-based planning processes.

4.1.4 Including DRT in "NVP"s/SUMPs

Another topic of the peer review was the integration of DRT into sustainable urban mobility plans, so-called SUMPs. The creation of mobility plans is the responsibility of the municipalities. With regard to public transport, the districts publish local transport plans (NVPs). It can be assumed that it will be some time before the plans fulfil the criteria for SUMPs. These criteria are currently still under development and SUMPs

are initially only mandatory for large cities. However, it can be assumed that they will set a standard for mobility planning in general. DRT will inevitably also play an important role in this. Further development depends in particular on the responsible players at local authority level.

However, anchoring DRT in local transport plans is a key prerequisite for putting DRT services out to tender. Here, the host was able to benefit from important experiences from Leipzig and important insights could already be gained from the presentations of all peers. The core requirements from the Coimbra example are also of particular interest to the host. One contribution that the federal state can make here is to review the transferability of practical examples to local structures and identify best practices. One option for this may be the "SaarMila" research project, for which the federal state is receiving federal funding and which will start in 2024.

4.1.5 Capacity building at the ZPS

Capacities could also be built up at the ZPS to support local authorities in planning DRT services. This recommendation was derived from the consultations during the peer review. One of the central tasks of the ZPS is to support the municipalities in the preparation of their local transport plans (NVPs) and in the tendering of scheduled public transport services. As part of an initial tendering process in the Saarpfalzkreis district, the issue has already been addressed there. However, further expertise needs to be built up, which will depend on a further increase in personnel. Further training of existing staff would also be an option. The federal state will enter into dialogue with the ZPS on this. The suggestion from the peer review to employ students from the field of data analysis could also be helpful here. DRT could also be proposed as a topic for a Master's thesis.

As a first step, the topic of DRT is to be examined in the local transport plan (NVP) of the ZPS. The aim here is to open up a perspective for the whole of Saarland. As part of the development of the NVP, the ZPS will also continue to build up knowledge. The development of the NVP will be put out to tender in 2024.

4.2 Recommendations for the operational implementation

4.2.1 Defining objectives and criterias

The objectives of a DRT vary depending on the region and the purpose of the transport. The peer review showed that it is very important to formulate clear objectives for the individual transport operations, particularly with regard to the various scenarios. The examples provided by the peers demonstrated this impressively and also gave an insight into the variety of applications for DRT. These correlate with a large number of operational parameters that are used to define the transport operations. For example, a fixed timetable is also possible with DRT, but the variance ranges all the way to transport without a timetable at all. The examples provided by the peers also showed a wide range of permissible waiting times for users. To summarise, it became clear that the design of DRT requires a high degree of flexibility. In Catalonia, for example, a very well-functioning DRT service was converted into a regular bus route. The practical example from Ireland, with its many years of experience, showed that there are always changes to the territorial structure of the DRT service, as did the example from Leipzig.

Clearly defined criteria are a key requirement when designing or redesigning DRT services. For example, measurable targets can be defined for increasing passenger numbers. But targets can also be formulated in general and fundamental terms, such as a higher degree of independence as in the project in Ireland. Another important indicator is vehicle capacity utilisation.

For Saarland, this means that clear targets must also be formulated for the individual DRT services, as well as criteria that can be used to measure the targets. This requires interaction between the various players at

planning level and the companies. This process has already begun with the application for federal state funding by the districts. An exchange on objectives and indicators already took place here. This process is now being continued and further developed. Here too, the "SaarMila" research project offers a good opportunity to steer this process and professionalise it with regard to participation.

4.2.2 Evaluation of DRT pilots

There was a consensus in the peer review that it makes sense to start with pilots when introducing DRT. This enables a faster introduction to the new system and increases error acceptance. In this sense, the DRT projects funded in Saarland are also to be understood as pilot projects. These are to be evaluated during their three-year term. Qualitative criteria in particular are to be developed for the evaluation. The findings of this evaluation are to be incorporated into the further development of the governance structures. Against this backdrop, it is a great opportunity that the funding for the "SaarMila" research project mentioned above was approved at the beginning of 2024. This project can be used to finance the necessary human resources to evaluate the pilot projects and take further steps in relation to DRT. The project is expected to start at the end of 2024.

4.2.3 Human Resources offensive

The shortage of skilled labour is becoming noticeable throughout Europe in the field of public transport. This has become clear in the course of the peer review. The solutions differ depending on the country and sector. In Saarland, there are already some state initiatives in place to recruit skilled labour. These should also increasingly include the public transport sector. This depends on talks that are currently still being held.

For the DRT sector, the presentation from Ireland impressively described the special skills that DRT drivers need to have compared to drivers in scheduled services. This also offers companies the opportunity to tap into additional target groups when recruiting staff. Co-operation with the taxi sector can also be beneficial here, and the example from Coimbra provided impressive insights into this. The Saarland taxi industry, which was strongly represented at the peer review, has already signalled great interest.

As far as the training of drivers for DRT is concerned, there are already fixed agreements with the software provider responsible for carrying out the training, at least in the area of using the software.

4.2.4 Advancement of the pricing model

With regard to the pricing of DRT, it has been shown that the public transport tariff is decisive in almost all the projects presented. This also corresponds to the current decision-making situation in Saarland. Theoretically, a surcharge could be levied here depending on the application of the DRT. However, this is not yet planned for the Saarland pilot projects. Further development of the pricing model will be an issue in the future. However, this will not be tackled again in the short term.

4.3 Recommendations for the integration into existing IT infrastructure & MaaS strategy

4.3.1 Advancement of the DRT platform

There was very good feedback from the peers on the approach of developing a standardised DRT booking platform for DRT in Saarland. The following advantages were emphasised in particular:

- Uniform and easier user experience
- Economies of scale
- Easy onboarding of additional DRT schemes
- Easier to communicate


- Easier to control and manage
- Central bug fixing

The completion of the DRT Platform by the software provider Hacon/Padam Mobility is imminent. Responsibility for this process lies with ZPS. The contract with the software provider also includes the continuous further development of the platform. This relates in particular to the aspect of intermodality, i.e. the integration of route planning between public transport and DRT. The examples from Leipzig and Catalonia have shown concrete approaches to implementation here.

The next step on the agenda is the integration of further shared mobility services. The political objective in Saarland is to further develop the current "Saarfahrplan" - app into a holistic MaaS platform. This further development will take place successively and step by step. The development of a MaaS platform is also a key challenge in other regions. The presentation from Coimbra, for example, examined the regional mobility system from the perspective of MaaS.

4.4 Recommendations for communication and user acceptance

4.4.1 Communication and campaigning


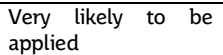

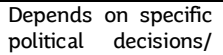

A major benefit for the host region resulted from the question of user acceptance that was addressed in the peer review. On the one hand, the question of the marketing campaign was addressed. The examples of "flexa" in Leipzig and "clic.cat" in Catalonia were presented as good practice. Here, a brand was successfully created for DRT and corresponding material was developed for a marketing campaign. In Saarland, too, the development of an umbrella brand under the name "flitsaar" is now nearing completion. An agency is also designing materials for this, which stakeholders can customise for their local purposes. 

One aspect that has so far been neglected in Saarland is that of participation. This is due to a lack of resources. Fortunately, a participation process can now be initiated from the end of 2024 as part of the "SaarMila" research project in order to improve communication on the topic of DRT in Saarland. The findings on the topic of participation presented from Coimbra and Ireland will be incorporated into this process.

5. Possible calendar of implementation

Recommendation	2024				2025				on-going
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
<i>Planning of DRT</i>									
1 Framework setting									
- A Decision about funding				MS 1A					
- B Further call for funding						MS 1B			
2 EU-wide exchange									
- A Permanent exchange									
- B Follow-up meeting			MS 2B						
3 (Local) data collection									
- A Data-strategy				MS 3A					
- B Data-Monitoring DRT									
4 DRT in "NVP"s'/SUMPs									
- A Municipal plannings									
- B Identify best practices									
5 Capacity building at ZPS									
- A Tendering NVP / ZPS				MS 5A					
- B NVP working phase								MS 5B	
<i>Operational implementation</i>									
6 Defining criterias									
- A Defining objectives									
- B Defining criterias									
7 Evaluation of DRT pilots									
- A Planning evaluation							MS 7A		
- B First phase of evaluation									
8 HR offensive									
- A Stakeholder dialogue				MS 8A					
9 Pricing model									
- A Discuss need for action									
<i>IT implementation</i>									
10 Advancing DRT platform									
- A Platform completion	MS 10A								
- B Intermodality PT/DRT					MS 10B				
- C MaaS - platform								MS 10C	
<i>Communication/ user accept.</i>									
11 Communication									
- A Umbrella brand flitsaar	MS 11A								
- B Marketing	MS 11B.1		MS 11B.2		MS 11B.3				
- C Participation/ dialogue								MS 11C	

Legend:

	Very likely to be applied		Working process	MS 1A	Political decision taken	MS 10A	Start of operation
	Depends on specific political decisions/ conditions		Milestone	MS 1B	Call of funding opened	MS 10B	Intermodality realised
	Rather seen as not applicable at the moment			MS 2B	Meeting takes place	MS 10C	MaaS-strategy finalised
				MS 3A	Key issues defined	MS 11A	Umbrella brand finalised
				MS 5A	Call for tenders opened	MS 11B.1	Marketing St. Wendel
				MS 5B	First results known	MS 11B.2	Marketing Spiesen-Elv.
				MS 7A	Evaluation criteria defined	MS 11B.3	Marketing Saarpfalzkreis
				MS 8A	Political decision taken	MS 11C	Key issues defined

5. Conclusions

Overall, the recommendations from the peer review fit perfectly into the work process for implementing DRT in Saarland's public transport system. They provide an excellent perspective on the next steps. Important milestones were identified with the help of the peer review. This has shown that the stakeholders in Saarland are already well on their way in many areas, particularly with regard to the state-wide DRT software. However, some other points still need to be fine-tuned, such as the more precise definition of objectives and evaluation criteria for DRT programmes. Valuable insights were also generated from the peer review in terms of increasing user acceptance. These will be incorporated into further planning.

In addition, the stakeholders involved on the part of the host are very interested in a further exchange with the projects presented. This can take place bilaterally as required. A follow-up meeting with the peers in the second half of 2024 is definitely desired. It would also be conceivable to organise an excursion to one of the projects presented. Leipzig is a particularly suitable location due to its proximity.

In closing, many thanks to the Interreg Policy Learning Platform team. The peer review concept was convincing across the board. In particular, it is thanks to the excellent preparation and structured working methods of the Policy Learning Platform team that all participants were able to benefit from the peer review by gaining a great deal of knowledge.



- The Ministry for the Environment, Climate Protection, Mobility, Agriculture and Consumer Protection

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