

REPORT ON IMPLEMENTATION OF PILOT ACTION IN DE: IMPROVEMENT OF ENVIRONMENTALLY FRIENDLY BUSINESS AND COMMUTING TRIPS

D.T3.3.7	Version 1
	05 2019







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1. Executive Summary

The pilot action was implemented at the City of Leipzig and was finalized in May 2019. The Aufbauwerk Region Leipzig GmbH has implemented all pilot actions and investments, but the employees of the Office for Traffic Planning and Road Construction received the allowance to use the bikes and the fleet and booking management. The loan agreement for the 4 pedelecs, 1 cargobike and the construction of 5 bike boxes was signed in in October 2018. Furthermore, is also a booking and fleet management system for company cars, bikes and carsharing vehicles was established. The aim of the pilot action is making mobility more efficient, healthier and ultimately, more cost-effective for all employees to achieve the climate protection goals.

The costs of the pilot were in total 18.848,58 €. All ideas of the mobility plan could be implemented except the 5 bikes boxes because of technical problems that cannot be solved. An alternative to the bike boxes was found, in which the underground garage of the Technisches Rathaus (Technical Townhall) was used.

2. The pilot action

There are 3 pilot actions. The pilot action belongs among hard measures and is an investment in municipality equipment in Leipzig. The pilot consisted of the purchase of 4 pedelecs, 1 cargobike (1), the construction of 5 bike boxes (2) and the establishment of the booking and fleet management (3). The idea is that all of the technical equipment can be used by the employees of the Office for Traffic Planning and Road Construction. The construction of 5 bike boxes could not be implemented because the bicycle boxes could potentially damage the batteries of the bicycles during high summer temperatures. The weather conditions are the main reason not to buy bike boxes, which can be more safely stored in the underground garage where City of Leipzig already stored their company fleet. This underground parking lot is located in the "Technisches Rathaus" (Technical Townhall) and is a public area which is rented for that purpose. So, the distance between the parking lot and the Office for Traffic Planning and Road Construction is minimal. The pedelecs and cargo bike are more protected by snow and rain in the underground garage. Therefore, the City of Leipzig will store the equipment in the underground garage and thus doesn't need the bike boxes.

The pilot action belongs among soft measures and is the establishment of a booking and fleet management system for company cars, bikes and carsharing vehicles. This system is provided by the city of Leipzig and therefore brings no cost.

The topic of the pilot action is called "Improving environmentally friendly service and work routes". Even though the Aufbauwerk Region Leipzig GmbH is the official partner in the MOVECIT project, the Office for Traffic Planning and Road Construction of the City of Leipzig received the allowance to use these investments. The Aufbauwerk Region Leipzig GmbH has implemented all pilot actions and investments, but the employees of the Office for Traffic Planning and Road Construction received the allowance to use the bikes and the fleet and booking management. This has been specified in both a cooperation agreement and a contract of loan between the Aufbauwerk Region Leipzig GmbH and the City of Leipzig, in which is specified that the Office for Traffic Planning and Road Construction rents the bikes for 5 years with the possibility to extend the contract.

The target groups of this pilot are primarily:

Employees of the Office for Traffic Planning and Road Construction of the city of Leipzig (up to 270 employees)





The Office for Traffic Planning and Road construction of the city of Leipzig is an appropriate target group, as it is thematically the improvement of service and work routes and this office also deals with such topics in the city administration. Furthermore, it could be proven by a survey that about 70% of respondents (employees) use public transport or bicycles. Therefore, the measures aim to support this positive trend

The concrete preparations of the pilot started in 2018 with the organization of stakeholder meetings with the main focus on the pilots. Before that in 2017, workshops and seminars about the topic mobility have taken place.



Picture 1: Two employees of the Office for Traffic Planning and Road Construction in front of the "Technisches Rathaus" (Technical Townhall) with 2 pedelecs and the cargobike

3. The aim of the pilot action

The City of Leipzig's administration has set itself the goal of making mobility more efficient, healthier and more cost-effective for all employees to achieve its climate protection goals.

For the City of Leipzig work approximately 7.000 employees. In the Office for Traffic Planning and Road Construction of the City of Leipzig work around 270 employees. The office takes care of the Leipzig road network, the footpath and the bicycle traffic system and also the road system for the motor vehicle traffic. This includes the signage, lighting, regulation by traffic lights but also task approvals or special uses of the road. In addition, the Office is responsible for general transport planning, the urban development plan for transport and public space, the local transport plan or, for example, the cycling development plan. A foot traffic officer takes care of the concerns and the consideration of the deficiencies expressed by pedestrians in relevant technical planning. Therefore, the Office for Traffic Planning and Road Construction is the best leading-actor in the pilot action for Leipzig.





There are three goals to achieve; first to raise awareness of municipalities employees of the impact of their mobility behavior and to motivate and achieve changes in this behavior. The second is to introduce the pilot action plan as a strategic document of the city in the daily work agenda and pass it through the city council to gain wider acceptance. And along with that - as the third main goal - is to decrease the Carbon-Dioxide (CO2) Emissions by up to 20% per year among municipalities staff through implementation of this pilot and by changing transport mode to a more sustainable means of transport.

4. Implementation of the pilot action

The pilot action consisted of purchase the of 4 company pedelecs, 1 cargobike and the construction of 5 bike boxes. The second part of the pilot action is the establishment of a booking and fleet management system for company cars, bikes and carsharing vehicles.

Selection Phase: This pilot was selected during the project MOVECIT proposal writing due to reasons described in chapter 3.

Planning Phase: During this phase stakeholder meetings have been organised and tenders have been published. In addition, it turned out that the 5 bike boxes could not be implemented because the bicycle boxes could potentially damage the batteries of the bicycles during high summer temperatures. The weather conditions are the main reason not to buy bike boxes.

Implementation Phase: The cooperation agreement between The Aufbauwerk Region Leipzig GmbH and the Office for Traffic Planning and Road Construction was signed in February 2017. The loan agreement for the whole equipment in October 2018. The bikes were ordered in November 2018 and handed over to the Office for Traffic Planning and Road Construction in March 2019.

Promotion: Since the pilot refers to the employees of the Office for Traffic Planning and Road Construction, there was no classic advertising on a large scale, but an internal promotion to reach as many employees as possible. In addition, the equipment like helmets and the cargobike were marked with appropriate logos.



Picture 2: MOVECIT Logo on the cargobike





Stakeholder involvement:

Three stakeholder meetings have been taken place between November 2018 and March 2019:

- Meeting No. 1 2nd of February 2018 at Conference room at Aufbauwerk Region Leipzig GmbH, Otto-Schill-Str. 1, 04109 Leipzig
- Meeting No. 2 11th of September 2018 at Conference room at Aufbauwerk Region Leipzig GmbH, Otto-Schill-Str. 1, 04109 Leipzig
- Meeting No. 3 4th of March 2013 at Conference room at Aufbauwerk Region Leipzig GmbH, Otto-Schill-Str. 1, 04109 Leipzig



Picture 3: 1st Stakeholder Meeting

During the stakeholder meetings several topics could be discussed with the stakeholders from the City of Leipzig - the Office for Traffic Planning and Road Construction. The stakeholders gave a lot of valuable input for the further development of the MOVECIT project. As initially planned the investment of 5 bikes - 4 e-bikes and 1 e-cargo bike - could be fulfilled. On the other hand, during these meetings it has been ascertained that the purchase of 5 bike boxes can't be fulfilled because these boxes could potentially damage the batteries of the bicycles during high summer temperatures. The weather conditions are the main reason not to buy bike boxes.

For this problem a solution has been found in the meetings, which has been proposed to the lead partner of the project and been accepted by the JS. The solution is to store the 4 pedelecs and the cargo bike in the underground garage of the Technisches Rathaus (Technical Townhall)

Besides the pilot investments, the topic "dissemination events" was tackled. Within the stakeholder meetings the participation in the "Ökofete" and "Mobile wins" has been organised. During these events the MOVECIT project and its goal could be promoted among the citizens of Leipzig.



5. Monitoring of the pilot action

The original total costs for the implementation of pilot action was 32.000,00 € and consists of

- The purchase of 4 pedelecs and 1 cargo bike 12.000,00 €,
- The purchase of 5 bike boxes 9.8000,00 € and
- The implementation of a booking and fleet management system 10.200,00 €.

The purchase of the 4 pedelecs and the cargo bike hat a final total cost of $18.338, 18 \in$. For the long-time durability of the bikes a set of spare parts was purchased (total amount of $510, 40 \in$), such as tire levellers, battery compressor air pump and bikes valves.

The 5 bike boxes could not be purchases because of the wetter problems (see above) and the bicycles are now being stored in an underground parking lot located at the Technical Town Hall (Technisches Rathaus). No cost occurred for this part of the pilot action.

The booking and fleet management system is delivered by the City of Leipzig and may be used for the pilot action, so no budget was needed for the implementation of the booking and fleet management system.

This results in a total cost of 18.848,58 € for the implementation of the pilot action.

The monitoring of the pilot action started later as initially planned, due to the occurred delays for the implementation of the pilot actions.

The following indicators are considered for the monitoring of the pilot action:

- Number of bookings
- Distance per booked journey
- Routes and distances
- Time per booked journey
- Reduction of CO2 in total

6. Conclusions

In general, it's to say that the concept has arrived well with the employees and the bicycles will be used a lot. But there were certain difficulties in the implementation. On the one hand, the administration is relatively slow, as evidenced by the creation of contracts. This led to delays, which made it clear that a longer timeframe should be used in the future. Furthermore, the 5 bike boxes could not be implemented due to weather conditions. No attention was paid to these external factors during the planning phase, which led to further problems. But due to a good cooperation with the stakeholder and the lead partner, a solution could be found for the implementation. Costs could be saved because, on the one hand, the parking lot of the Office for Traffic Planning and Road Construction is currently used for the 4 pedelces and 1 cargobike and they have made their book and fleet management also available. The concept is easily transferable to other regions if local rules and procedures permit such investments.

The pilot action has the following SWOT analysis:

- Strengths: idea of the pilot is easy to use and accessible to everyone
- Weaknesses: high costs, implementation of a booking and fleet management is difficult





- Opportunities: easily transferable to other regions
- Threats: invisible without campaign

The following SWOT-Matrix shows the results

Opportunities	Strengths	
- easily transferable to other regions	 idea of the pilot is easy to use and accessible to everyone 	
Threats	Weaknesses	
- invisible without campaign	- high costs, implementation of a booking and fleet management is difficult	

It becomes clear that the concept idea is simple and thus applicable everywhere and to every target group. But the costs for that purpose are relatively high and can best be funded through targeted partnerships. In addition, the pilot is relatively unimpressive as a project and must be advertised accordingly, so that it is seen and used. In this project, the advantage is that the pilot refers only to one authority - the Office for Traffic Planning and Road Construction - on a larger scale, you would have to advertise correspondingly larger. The hardest part is the implementation of the booking and fleet management. It is costly and time consuming and can best be achieved through targeted partnerships that bring knowledge but also financial support into the project.