

REPORT ON IMPLEMENTATION OF PILOT ACTION IN CZ: SMALL SCALE MEASURES FOR CYCLISTS

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1. Executive Summary

The pilot action was implemented at the municipality of Litoměřice and it was finalized in June 2018. The pilot consisted from purchase of 10 e-bikes and 4 charging stations and all actions that needed to be taken to make its implementation successful. The charging stations were installed at municipal buildings and one is publically accessible near the entrance of the Litoměřice Hospital. The aim of the pilot action is to promote sustainable way of travelling and commuting among employees of Litoměřice and promote e-bikes (and e-mobility in general) within the public.

The pilot has attracted attention of local inhabitants, especially the e-bikes used by the municipal police. Costs of purchase of e-bikes were 9,618 EUR. The employees cycled at the e-bikes 5 657 km during first monitoring period (April 2018 to November 2019) which already saved 1 038.85205 kg of CO₂. The cost-benefit ratio is moderate, taking into account the investment and the CO₂ emissions savings.

After the e-bikes and bike charging stations were purchased, we have not faced any serious problems or complications. Our experience with application of the pilot is quite positive and it even motivated some employees of the municipality to buy their own private e-bikes.

2. The pilot action

The pilot action in Litoměřice belongs among hard measures. It is an investment in municipality equipment. More precisely, the pilot consisted from purchase of 10 e-bikes in November 2017 and of 4 bike charging stations in May 2018. The e-bikes were distributed to six municipality departments and 4 of them to the municipal police by start of the cycling season in 2018, so that they can be used for business trips and local commuting. The respective departments and the municipality police are also responsible for maintenance of “their” e-bike. There is a reservation system especially developed and accessible to all employees through the municipality intranet.



Picture 1: A member of the municipality police riding an e-bike



Regarding the charging stations, 1 of them (for 4 e-bikes) was installed at the premises of hospital and can be accessed and used by general public. The other 3 were installed in the municipality premises: at Pekařská workplace (1 charging station for 3 e-bikes) and Topolčanská workplace (2 charging stations, each for 4 bikes). After reconstruction of the inner yard in Mírové náměstí workplace one of the charging stations from Topolčanská will be moved to Mírové náměstí. The charging stations are in operation since their installation in June 2018.



Picture 2: A charging bike station at the hospital in Litoměřice

The mobility manager under the Smart City department at the Municipality of Litoměřice is responsible for the successful implementation. Our target groups of this pilot are primarily:

- employees of the Municipality of Litoměřice (up to 218 employees, especially for business trips and commuting)
- employees of the Municipal Police department (up to 33 people, especially for daily work-related rounds and patrols)
- employees of the Litoměřice hospital (up to 933 employees, especially for commuting)
- and in further extent even the public from Litoměřice and its FUAs by using the charging stations (roughly 25 000 citizens, can be used for visiting the hospital or its surroundings).

3. The aim of the pilot action

The city of Litoměřice is a local leader in energy efficiency and energy management in the Czech Republic. Litoměřice has been focusing on usage of geothermal energy and photovoltaic energy and has been looking for possibilities to use renewable energy also in transport for several years. In 2019 the city plans to install accumulation systems to accumulate photovoltaic energy and use it for charging cars and bikes. Litoměřice has also a fleet of e-cars and a support of e-bikes is another logical step in its strategy. There is a range of short-distance trips which might be comfortably done by e-bikes, and furthermore e-bikes are more acceptable than “normal” bikes because riding e-bikes does not allow so much energy or changing clothes after a ride.



The aim of the pilot action is to promote sustainable way of travelling and commuting among employees of Litoměřice and promote e-bikes (and e-mobility in general) within the public. One of the main goals is to significantly increase usage of bikes for business trip purposes, especially within the town and its close surroundings. Since there are three municipal building and there is a need for employees to often visit the other buildings, usage of the e-bikes can save time, environment and money. E-bikes were chosen instead of regular bikes because one of the municipal building (Topolčanská) is slightly up hill which could cause trouble for some employees. E-bikes are also a very friendly solution even for those who aren't active sportsmen.



Picture 3: E-bikes at a yard of the building Pekařská

The charging stations are not only a necessary infrastructure for the e-bikes usage, but their goal is also to promote e-bike commuting from the FUA of the municipality and use of e-vehicles in general. The pilot aims to motivate people to change their mode from cars to a more environmentally friendly mode by offering the possibility to charge e-bike for free on a public place such as near the hospital entrance. E-bikes are considered the best alternative to cars in this case since they are also an individual transport mode and they are less physically challenging as regular bicycles. The three charging stations at the municipal building can also motivate the employees to purchase their own e-bikes and to rise the share of e-bikes commuters even more.

The pilot has attracted attention of local inhabitants, especially the e-bikes used by the municipal police. Not only local people but also regional and national-wide media put attention on our pilot and prepared news about Litoměřice experience; it is also because e-bikes at municipalities' vehicle fleets are quite a novelty in Czech conditions.

The pilot helps us test how much the e-bikes will be used by the staff of the city hall and what effects they will have on their transport behaviour (not only on business trips and commuting to work but also on trips for other purposes not connected with work).

4. Implementation of the pilot action

The pilot action consisted of purchase of 10 e-bikes, 4 charging stations (3 stations for 4 bikes and 1 station for 3 bikes). Beside the e-bikes and bike charging stations, also helmets and bike maintenance package have been purchased for each bike and distributed to the bike caretakers at respective departments.

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



Planning phase: The pilot was specified during creation of the period of the Workplace Mobility Plans of the Municipality of Litoměřice and Litoměřice hospital. Throughout the mobility planning process there were several meetings of the working group (internal stakeholders), where the pilot was discussed from many points of view. Setting the details of the pilot was important, as well as what kind of bikes and equipment will be purchased, which and how many charging stations will be installed and where, etc. A part of the planning was also tendering to determine providers. Two tenders took place - a tender for e-bikes and a tender for bike charging stations. Unlike in the e-bike case, tendering charging stations was quite challenging because of a limited number of potential suppliers. We had to look for them carefully not only in Czechia but also abroad. However finally after a substantial effort we received an offer which was corresponding with our needs and requirements.

Implementation phase: After the purchase of the equipment it was necessary to get in line the usage of the e-bikes and its infrastructure. Several rules including safety measures needed to be set up. Another important issue was the insurance of the equipment, so the employees are not afraid to use it. Some legal issues regarding the purpose and personal usage were set. After several meetings each e-bike got its caretaker who is the person who is responsible for each bike, handles its borrowing and also has a repair kit which can be used by anybody to fix small damages on bikes. The charging stations needed to be installed which required some expertise in installation. Apart from physical installation, the hospital required a legal consultancy on matters of ownership and maintenance as well as the distribution of electric power. One charging station was installed into its temporary location (at Topolčanská building) as there are plans to conduct a reconstruction of its original intended location (at Mírové náměstí building). This charging station will be reinstalled after this planned reconstruction.

Promotion: The news about the pilot was spread via intranet system among the employees of the Municipality. There also was a press release published along with a press conference. Article about this pilot action and how to use it will be also published in a newsletter as part of an awareness raising campaign.

Stakeholders involvement: Throughout the mobility planning process there were several meetings with the working group (internal stakeholders), where the pilot was discussed. This will be described in more detail in D.T3.3.9.: Stakeholders' input on CZ pilot action.

5. Monitoring of the pilot action

The pilot action is monitored via these key performance indicators:

- the number of kilometres for each bike for one cycling season (April-October)
- the number of people using each bike

The monitoring phase started in April 2018 and ended in October 2018. Results measured during this period are summarized in the following table.

Table 1: Overview of usage of e-bikes

The name of bike	The number of kilometers for each bike for one season	The number of people using each bike
1 CITANA 19"	40	4
2 CITANA 16,5"	212	3



3 CITANA 16,5"	160	1
4 CITANA 16,5"	28	3
5 CITANA 19"	33	1
6 ALTEZZA 17"	259	5
7 VOYAGER 19"	1200	4
8 MONTANA 19"	2 173	1
9 MONTANA 17"	801	18 policemen
10 MONTANA 19"	751	
TOTAL	5657	40

Biked kms per person (in average): 141.4 km

Biked kms per month (in average): 808.1 km

Maximum kms biked by one person on one bike during the monitored period: 2,173 km

Minimum kms biked by one person on one bike during the monitored period: 10 km

Costs of purchase of e-bikes were 9,618 EUR. Costs of purchase and installation of charging stations were 4,805 EUR. The total costs were 14,423 EUR.

This pilot action enabled the employees of the Municipality of Litoměřice and the Municipal Police Department employees to cycle 5 657 km. Considering this number of kilometres would be made by a car individually, we can claim that this pilot action in the period from April 2018 to November 2018 saved 1 038.85205 kg of CO₂. (This calculation was made by using the average production of CO₂ by car per km: 183.6401 g/km.) The cost-benefit ratio is moderate, taking into account the investment and the CO₂ emissions savings.

6. Conclusions

The pilot was implemented fully for the city hall and the Hospital of Litoměřice. Bikes and charging stations were purchased and installed/distributed according to a carefully prepared plan (which was discussed with representatives of the both institutions during series of meetings with members of the MOVECIT working groups).

The e-bikes have been used since the beginning of the cycling season 2018 and the charging stations since their installation in June 2018. There is a variety of e-bikes on Czech market but it was quite difficult to find out potential suppliers of bike charging stations which would confirm our requirements (regarding size, requirements on the place for stations, installation and maintenance, and other technical parameters).

After the e-bikes and bike charging stations were purchased, we have not faced any serious problems or complications. Even more, the pilot action was taken positively by employees of the both institutions, it has attracted attention of local people in Litoměřice (and demonstrated a potential of e-bikes in the city and its surroundings), especially because 3 of them were used permanently by the members of the Municipal Police. The e-bikes even attracted attention of local, regional and national-wide media (because it is quite a unique transport measure in the region and there is no other city in the region which



would have e-bikes in its city vehicle fleet). Because of this uniqueness, we faced some legal problems, especially how to deal with security and safety issues of employees and bikes.

To conclude, our experience with application of the pilot is quite positive and it even motivated some employees of the municipality to buy their own private e-bikes. The whole pilot is in line with the city long-term strategy to be a local leader regarding energy management and sustainability, Litoměřice is an example of a city which directly supports sustainable transport modes.