

BIKE PAL FINAL REPORT

Cycling Safety Improvement

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Vilnius, Lithuania

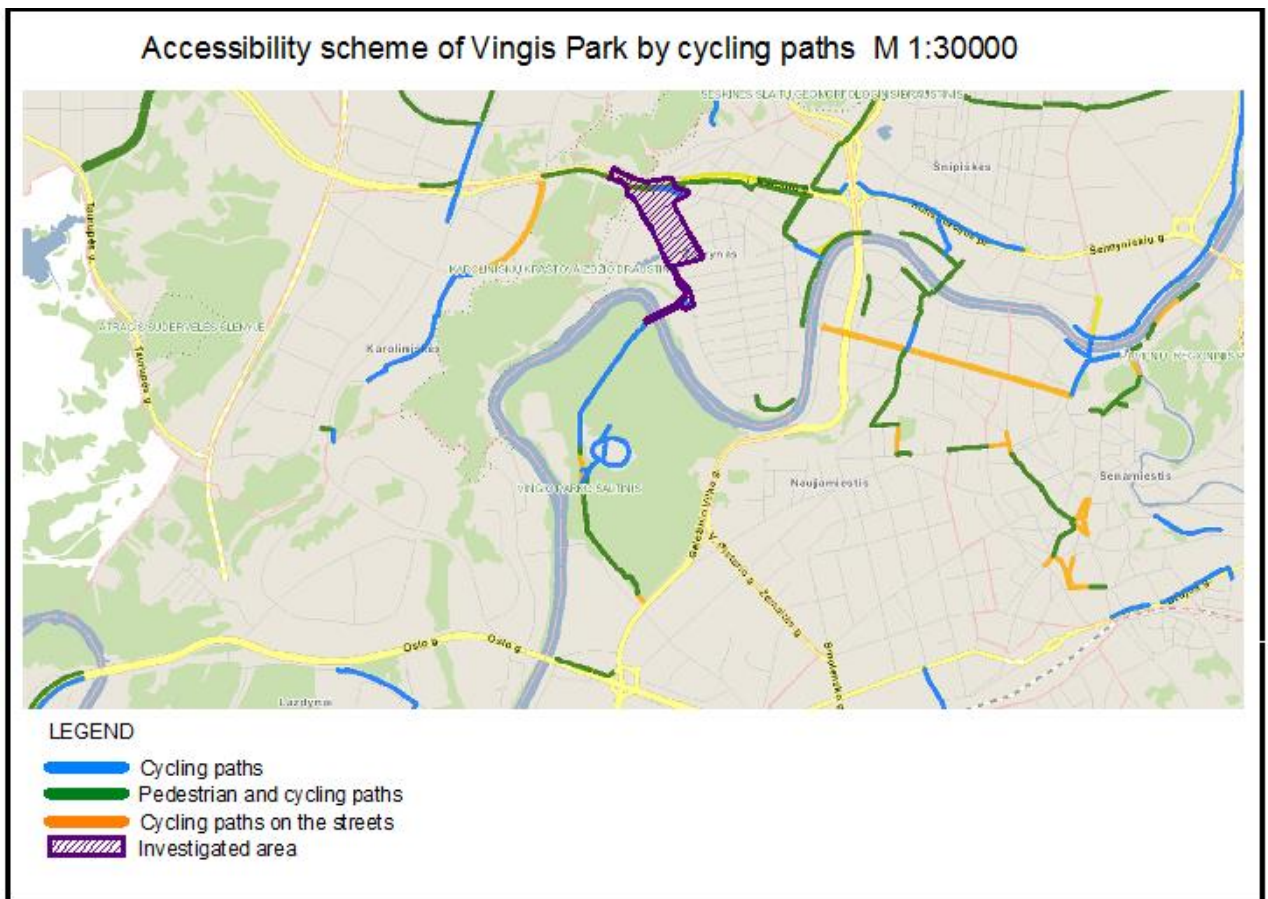
Introduction

During the project the idea was always about how to improve cyclists' safety on the roads, although it has changed during the process due to different circumstances. From the beginning of the project we had an idea of making a social event for raising awareness about cycling safety and give information about using helmets and reflectors for cyclists. However, it was suggested to make a bigger scale project, so our plans were changed and it was decided to do technical proposition for cycling paths in Vilnius city.

Preparing the First Idea

We began consulting with professors from Vilnius Gediminas Technical University after agreeing to make rather technical-engineering proposition than some social event to promote using helmets and reflectors.

Using interactive bicycle route in Vilnius city map we cleared out areas looking the most concerning to us. This made us pick Žvėrynas micro district through which cyclists ride to main city park Vingis or goes to a city centre. Area of micro district is around 2.6 km² and it is located almost in the main part of the city. Scheme bellow shows the current accessibility of Vingis Park by cycling paths (see scheme 1).



Scheme 1. Accessibility scheme of Vingis Park by cycling paths (own work).

Problem in this area is that despite quite intensive bicycle traffic there basically are no bicycle paths only some small parts of it so cyclists have to use streets where vehicles go. Streets are quite narrow and in some places condition of road sides (where cyclists usually ride) is lower than medium with

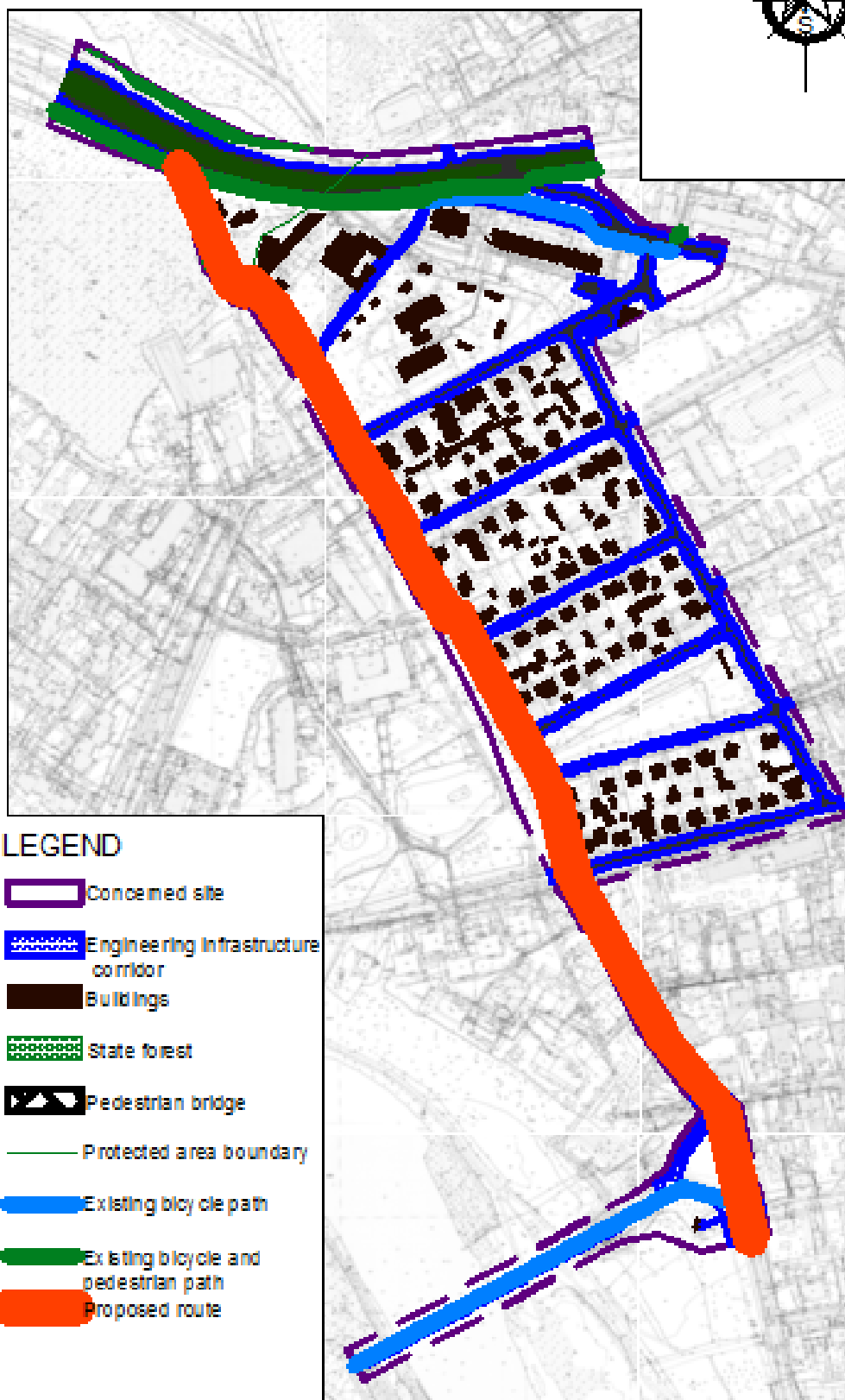
depreciated coating, pits and other obstacles. Streets aren't of high density traffic, but still creates unsafe environment for cyclists especially less experienced. Some pictures of current state of cycling paths in chosen area can be seen bellow.



Picture 1. Problematic cycling paths in chosen area (own work).

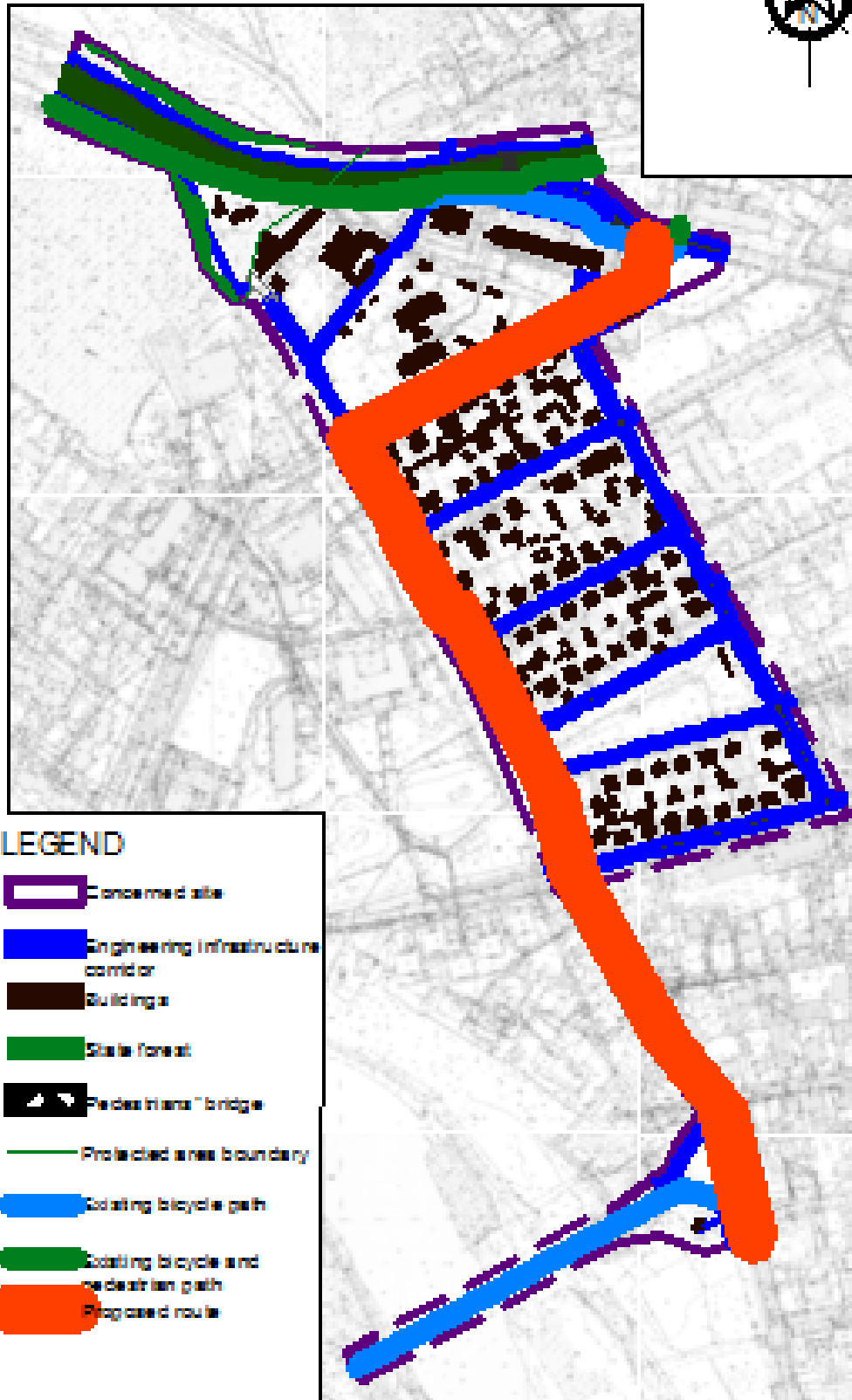
To solve problems we decided to propose a shared road conception. Lithuania does not have that kind of conception, so from the beginning we were prepared that our project might have to be changed. For making project flexible we decided to prepare three routes that each helped to avoid some troubles associated with landmarks, questionable land ownership or more complicated junctions. Shortest route is around 1 km long and longest one - around 1.35 km. Examples of routes are given bellow.

First route M 1:5000



Scheme 2. Route No. 1 (own work).

Second route M 1:5000



Scheme 3. Route No. 2 (own work).

For all three routes we created information table (see table 1) about the propositions where we pointed out strengths, weaknesses, some features of the proposed routes and works which have to be done in order to implement one of the routes.

Table 1. Propositions information table (own work).

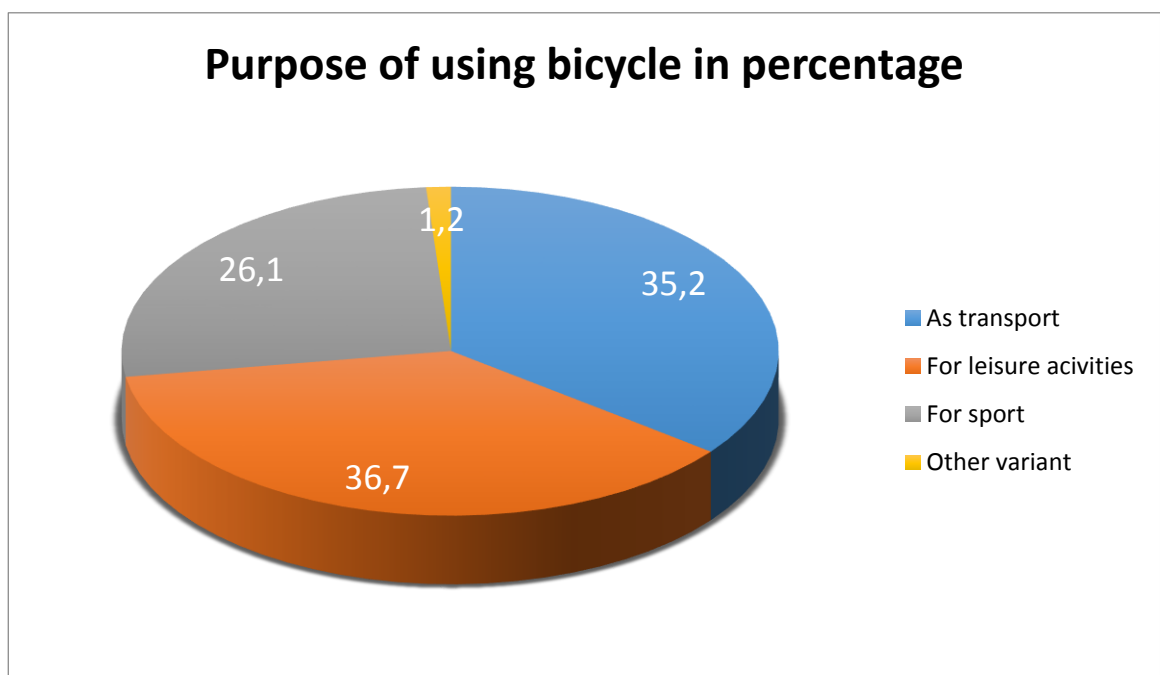
Proposition Criteria	First	Second	Third
Length	959 m	1343 m	1328 m
Number of junctions	10	12	12
Strengths	The shortest and straightest; Possibility is created to cycle without making any additional harm to the nature; The most attractive to cyclists	Avoidance of implementing cycling path in reservation area.	Avoidance of uncertain ownership territory; Avoidance of implementing cycling path in reservation area.
Weaknesses	Path would be implemented in a part of reserved area; It goes through uncertain ownership territory; Street reconstruction might be needed; Route crosses a parking lot.	The longest; Because of detour might be unattractive to cyclists; Route crosses uncertain ownership territory; Street reconstruction might be needed.	Long; Because of detour might be unattractive to cyclists.
Work to be done	Build a path through forest which is in reserved territory; Possibility of necessity of street reconstruction; Vertical and horizontal road marking.	Possibility of necessity of street reconstruction; Vertical and horizontal road marking.	Vertical and horizontal road marking.
Notes	1. There is no shared street conception in Lithuania`s Road Marking System; 2. With all three routes it is proposed to implement a mirror or/and a stop line in Birutės and Latvių streets junction.		

This and other possible routes were prepared consulting with lecturers from Vilnius Gediminas Technical University.

Questionnaire

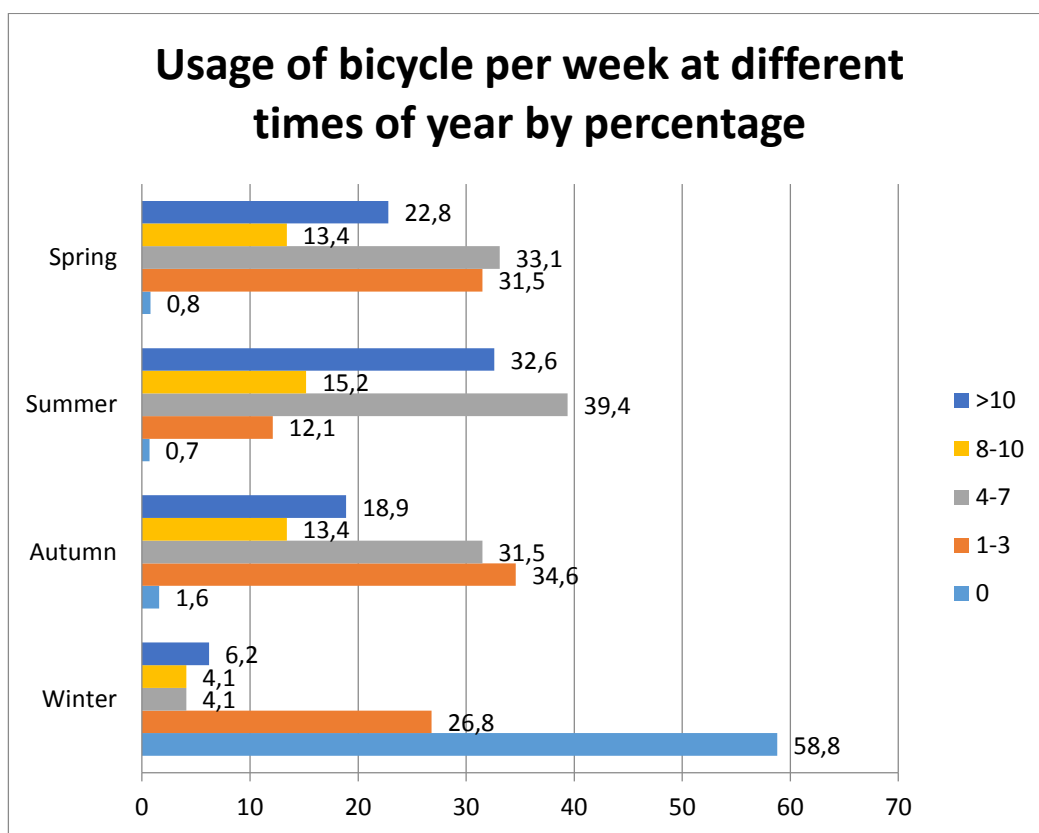
The questionnaire was prepared to make project concerning needs of Vilnius city cyclists themselves and to have a clearer view of what kind of everyday problems they deal with. Questionnaire was prepared and conducted at the time from May till July. To make it more comfortable we put questionnaire to internet page www.apklausa.lt (page made to make all kind of questionnaires). Over all questionnaire had 14 questions. The questionnaire can be seen in Appendix 1.

The results: We received responses from 128 cyclist located in different parts of Vilnius. Age of respondents ranges from 19 to 62 years, where 74,2% were men and 24,2% - women, rest 1,6% did not answer. By the living place respondents divide up: Antakalnis – 10,94%; Žvėrynas – 10,16%; Fabijoniškės – 7,81%; New city – 7,81%; Žirmūnai – 7,03%; Old town – 6,25%; Viršuliškės – 4,69%; Naujininkai – 3,91%; Lazdynai – 3,91%; Pilaitė – 3,91%; Karoliniškės – 3,13%; Santariškės – 3,13%; Baltupiai – 3,13%, other micro districts have less than 3% respondents. From these results we can see, that bicycle paths in chosen part would be relevant to cyclists from almost all parts of the city. Most of the respondents use bicycle – 96,6%. At the diagram No 1 is shown the main purpose of bicycle using:



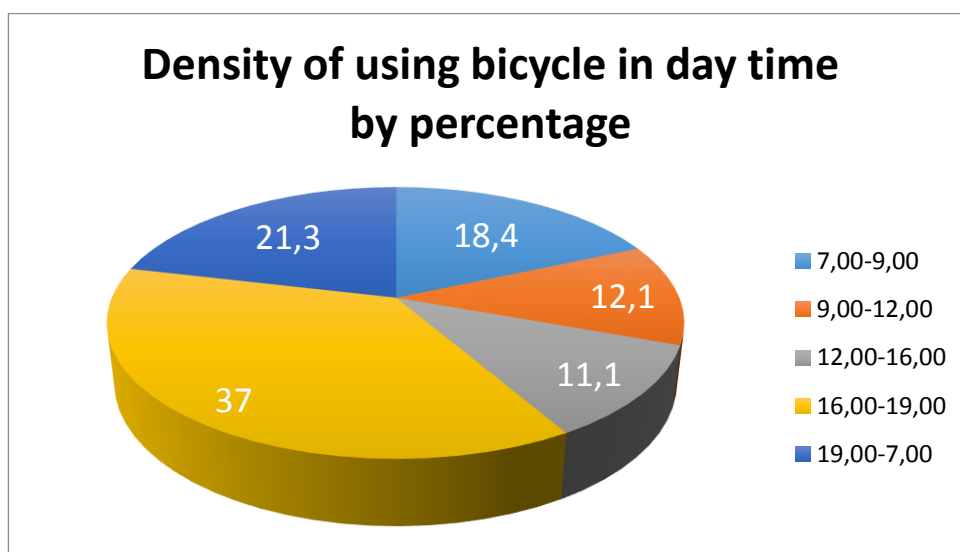
1st diagram. Purpose of using bicycle

In the 2nd diagram is shown in which time of year and averagely how many times per week respondents use bicycle:



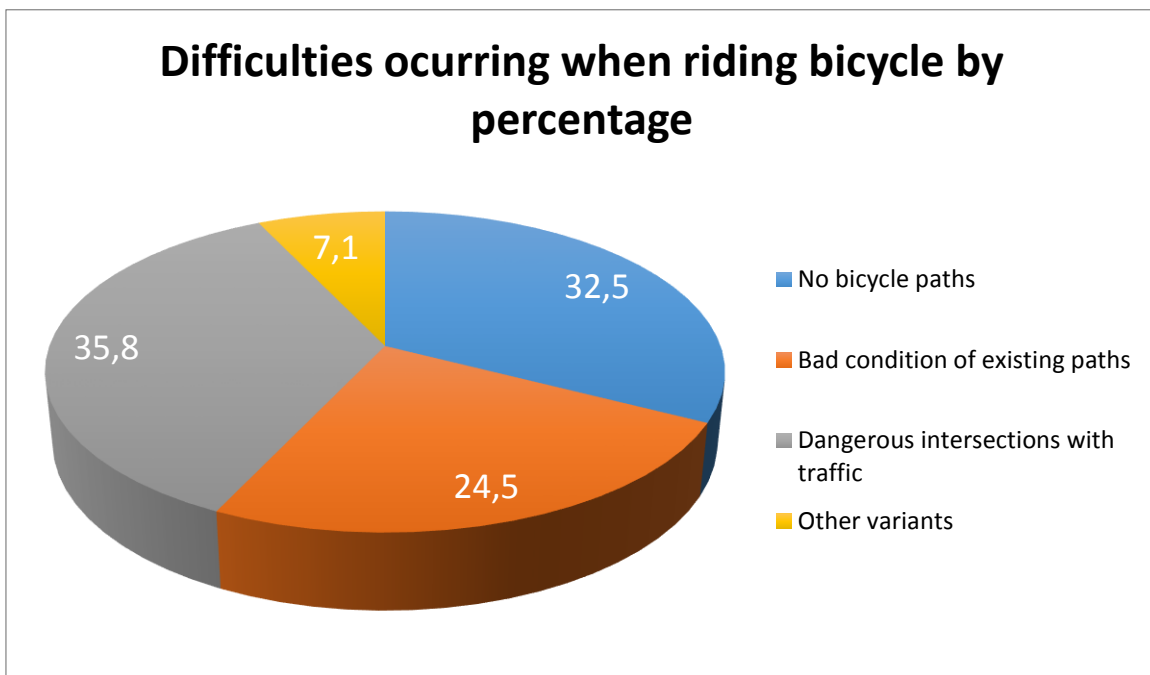
2nd diagram. How many times a week respondents ride bicycle in different times of year

In the lower given 3rd diagram can be seen that most (37,0%) of respondents ride bicycle from 16.00 to 19.00. Rest of the results is shown in the diagram:



3rd diagram. At what time of the day respondents usually ride bicycle

When asked whether they go to Vingis park by bicycle even 85,9% of respondents answered positive. Even 43,7% of them say, that have difficulties when riding to Vingis park. 36,7% said that they have particular problems, 13,3% said that no problems occur to them and 6,3% did not answer the question. 4th diagram shows that the main problem going to Vingis park is dangerous intersections with traffic (35,8%). Second most commonly mentioned problem was – no bike paths (32,5%), 24,5% respondents said that existing path are in bad condition, other 7,1% gave their own notices: it is not safe to ride in street, too far, pedestrians on bicycle paths and other).



4th diagram. Main difficulties occurring when riding a bicycle

To the question whether they would use a shared road respondents answered: 77,3% would use, 13,3% don't know, 7,8% wouldn't use and 1,6% did not answer. Given a chance to choose a route, of course, most of respondents chose shortest one (60,2%).

This questionnaire gave us a clear view of what kind of problems cyclists have when riding a bicycle. It can also be claimed that this is a real statement that cyclist want to use their bicycles and would love to have a better infrastructure and safer environment.

We also asked which of the proposed three routes would be the best for cyclists and the majority 59,6% said that they would prefer the first route. The second route got 20,6% and the last route got just 16,9%.

From this questionnaire we got information about the problems which cyclists face when cycling in analysed area and which of proposed routes they prefer.

Afterwards, we went to Ministry of Transports and Communications for showing our propositions and trying to make it real.

The Second Idea

Visiting Ministry of Transports and Communications gave a new turn to our project. Ministry representative Vidmantas Pumputis examined our proposition and offered to make it even bigger. He thought that we should try to solve not this small piece, but try to make a full route at least in one big living micro district of Vilnius.

Knowing that a lot of people live in Karoliniškės micro district and there are not almost no bicycle paths, we decided to take care of that area. We did examination of the area, where should the path be placed, what kind of local problems there may occur, what should be done and so on. Photo fixation was done also, so it would be easier to make a proposition. We planned a system of paths that should be around 13-14 km long and give a comfortable ride to every resident. Path would also have connection with Pilaitė micro district and would reach Žvėrynas micro district where the original proposition should be implemented. This project would not only give comfortable ride around living micro districts but also would give a useful connection to the city centre. This part of path could be useful not only for Karoliniškės residents but also to at least residents of 3 other big micro districts. The proposition was analysed with Ministry and approved by professors of Vilnius Gediminas Technical University. After full agreement with all representatives, project was proposed to Vilnius municipality in order to be implemented.

For this idea we created a current situation scheme with existing problems, also proposed routes` scheme of the chosen area and we gave possible solutions for identified issues (see Appendix 2).

After consultations at Ministry and Vilnius Gediminas Technical University we were negotiating with the municipality. However, our chosen area is not one of the prioritised areas for developing cycling paths and there were and still are no funds for the implementation. Then we came up with an agreement to our proposition to be implemented when funds will be found till 2020 because our suggestion coincided with preparatory special cycling paths plan.

Nevertheless, our project had to be implemented earlier in order to be evaluated by European Transport Safety Council. For this reason Ilyas Dadoud who is a project manager at the European Transport Safety Council decided to come to Lithuania and meet with the municipality of Vilnius and agreed on a smaller scale project which might be done sooner. After meeting with the municipality the third idea was born.

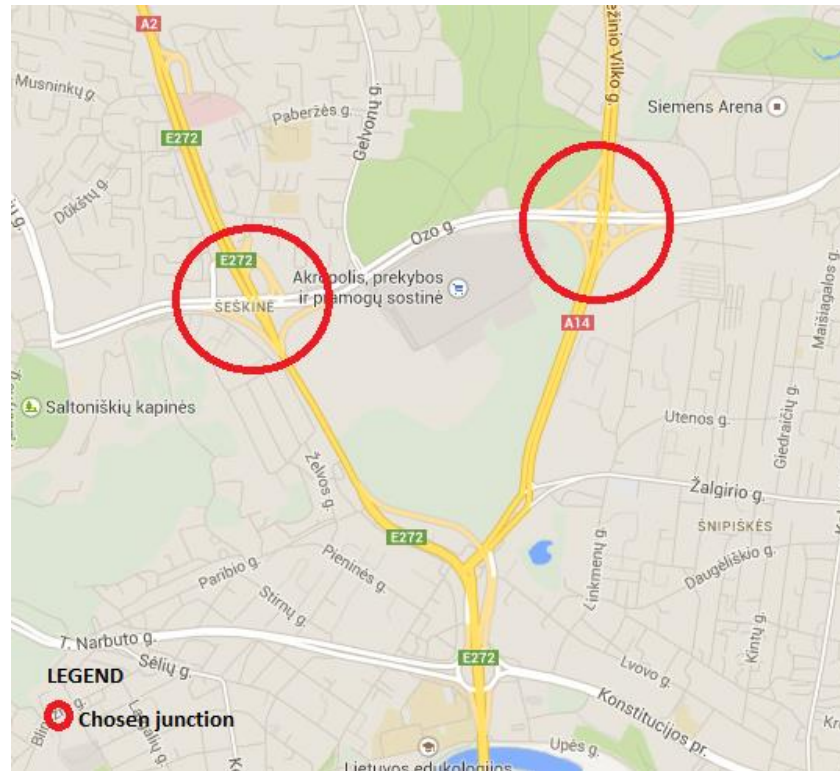
The Third idea

After reaching Rūta Matonienė, who is Deputy Director of Urban Development Department at Vilnius city municipality we have arranged that there should be held a meeting between municipality representatives and us, representatives of Bike Pal project to discuss ways of collaboration. On 7th of April meeting was held at Vilnius city municipality. Participants of meeting were Ms. Rūta Matonienė, Mr. Eugenijus Grikinis – senior specialist of Urban Development Department, Ms. Sonata Čapienė – Chief specialist of Design Subdivision at Urban Agriculture and the Department of Transport Infrastructure Division and Mr. Alvydas Karalius – GIS department chief at Municipal enterprise “Vilniaus planas”, Mr. Ilyas Daoud and Meilė Grinkevičiūtė.

During the meeting Mr. Ilyas introduced municipality representatives with project Bike Pal, its goals and what encouraged to begin project like that. After that we began to introduce our local proposition, since most of meeting participants did not see it before. As we found out later, despite the fact that areas that we proposed to take action at are included in Vilnius city special bike path plan, they are not priority areas. As priority areas municipality sees city centre and main paths, joining biggest parts of the city and area we chose is more of the living area that is more distant from city centre. So it is likely that they start working on this area at the end of special plan and this could be closer to the year 2020.

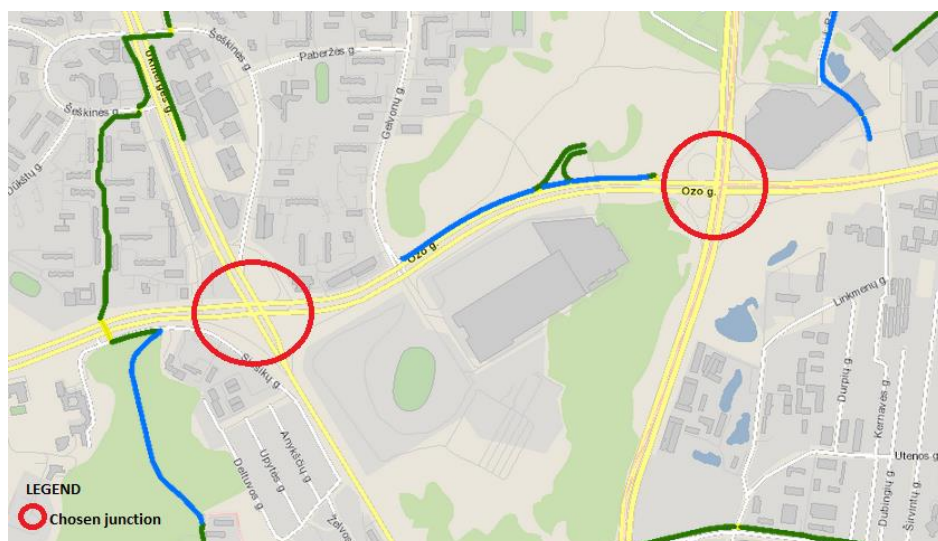
The good news was that municipality looked positive at our efforts to participate in improving cycling situation at the city so they were open to search solutions how we could be useful for each other. After some discussion on what we would be able to do we agreed that best solution would be if we prepared some propositions how cyclist could safely and handily pass junctions and viaducts.

For this new idea two main junctions were agreed on with Vilnius municipality. These junctions are in Šeškinė district (see picture 2). First junction which is on the left of the picture 2 is called Ukmergės Pientas junction and another one – Geležinis Vilkas junction.



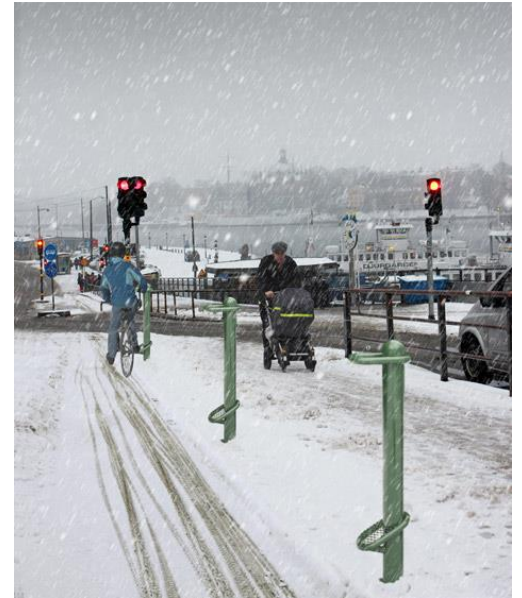
Picture 2. Chosen junctions in Šeškinė district.

From Geležinis Vilkas junction towards Ukmergės Pientas junction there are a pedestrian and cycling path (marked blue in the picture 3), although there is no marked crossings and there are no low kerbs.



Picture 3. Existing cycling paths in the analysed area.

Ukmėrgės Plentas junction is a big, traffic-light controlled intersection where we wanted to implement bollards with a foot rest and handle to help cyclists keep their balance at traffic lights (see picture 4).



Picture 4. Bollards for cyclists (<http://www.dezeen.com/2013/02/12/bikers-rest-by-marcus-abrahamsson-for-nola/>)

The idea was also to use different pavement for cycling lanes which also differs by colour not only by texture and by this to separate pedestrian traffic from cyclists. Moreover, it was thought to use

road markings, traffic signs, and safety fences to prevent cyclists from getting into the street without stopping before carriageway.

Also it would be needed to make pavements wider in order to have pedestrian and cycling paths together, to implement low kerbs at crossings which should be marked with red paint and road markings.

Unfortunately, due to the lack of time we did not reach our goals for this project because of working, studying and organizing running events across Lithuania at the same time and being in different countries.

Conclusion

Since the beginning of the project the process of developing and implementing our idea was interrupted because it was changed three times due to various circumstances. After the third idea was born, we did not manage to implement it, however this project gave us invaluable experience, knowledge about cycling infrastructure and safety, also improvement of our project preparation skills, helped to solve problems and taught how to communicate with different actors from various institutions. We truly appreciate this opportunity to participate and be a part of this significant “Bike Pal” project, although, we did not succeed in the end.

References

De Zeen magazine (<http://www.dezeen.com/2013/02/12/bikers-rest-by-marcus-abrahamsson-for-nola/>)

European Transport Safety Council (<http://etsc.eu/>)

Questionnaire (<http://apklausa.lt/private/forms/bendrojo-naudojimo-gatves-irengimo-projektas-vilniaus-mieste-zveryno-mikrora-at9gn8h/entries>)

Vilnius Thematic Maps (<http://maps.vplanas.lt/aplinka/>)

Appendix 1

Questionnaire for making a shared road in Žvėrynas micro district

1. Your gender?
 - Male
 - Female
2. Your age?
 - Enter your age
3. In which Vilnius micro district you live?
 - Enter your district
4. Do you ride a bicycle?
 - Yes
 - No
5. In what purpose do you use bicycle?
 - As transport
 - For leisure activities
 - For sport
 - Other variant
6. In which time of year and how many times a week you ride your bicycle?

	0	1-3	4-7	8-10	>10			
Summer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			
Autumn	<input type="radio"/>			<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Winter	<input type="radio"/>			<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spring	<input type="radio"/>			<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. At what time of day you usually ride bicycle?
 - 7.00-9.00
 - 9.00-12.00
 - 12.00-16.00
 - 16.00-19.00
 - 19.00-7.00
8. Do you go by bike to Vingis Park?
 - Yes
 - No

9. If you go, do you have any difficulties during your travel?

- Yes
- No
- Partly

10. What kind of these difficulties are?

- No bicycle paths
- Bad condition of bicycle paths
- Dangerous intersections with traffic
- Other variant

11. Would you use a shared road? (*description of shared road was given*)

- Yes
- No
- I don't know

12. Which of given variants looks more suitable for you? (*visualization of routs was given*)

- First
- Second
- Third

13. Why did you choose this variant?

- Space for opinion

14. Your ideas and notices?

- Space for opinion

Appendix 2