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THE IMPORTANCE OF DEVELOPING THE BICYCLE INFRASTRUCTURE

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The reason of this research is the increasing environment pollution, as well as reduction of lifespan due to factors such as industrialization, high energy consumption and air pollutions that auto industry causes. The purpose of this research is to prove that the pros of improving and developing the bicycle infrastructure overweight the cons, such as expenses needed for bringing to life this idea.

To solve this problem we need to take a look at all the possible ways to deal with it and determine the most effective ones.

The object of my report, as I mentioned above, is decrease of life standards. The subject is the bicycle industry throughout the world, as well as infrastructure, its fitness in modern life and what measures can be implemented to reach the healthy future.

Everything has to start somewhere and even including bicycle infrastructure in the budget discussion as a serious thing to be done is a big step in the direction of healthy future. The key is to begin to change the car culture in the city and to take steps to popularize bicycling on the roads of country.

Even spending \$1.5 million towards bicycle development in a year budget is only a small part when you consider that building a mile of a lane costs approximately half a million dollars. Spending \$1.5 million on bicycles compared to The Netherlands \$665 million yearly on bicycles shows how small that number really is.

It is interesting to know, that in our country discussions in parliament about bicycle lanes started only in 2008, after an accident, road crash, when cyclist was struck dead by a drunk driver.

According to the statistics, after 10 years since 2008, we already had as much as 69 kilometers of secured bike lanes in total, moreover even bicycle parking quantity reached the number of 811. The longest one is a path spreading from Troyeshchyna to European square (opened in 2015), that reaches approximately 15 kilometers.

Back to the 19 century situation was much worse, it was prohibited to use a bike in our capital, some people even made ambushes to punish passing by cyclists, therefore some took weapons to protect themselves. Later, after 25 years since the first bicycles appeared, citizens obtained a right to ride them legally.

To deal with urban traffic problems, cities need to support non-motorized transport modes such as cycling. The following measures can be initiated to promote and to increase the use of bicycles: to extend and improve the bicycle networks and network connectivity of different streets, districts to make all areas accessible by bikes; improvement in the comfort and safety of bicycle lanes as well as adaptation of road infrastructure, such as crossings and traffic signs to give cyclists priority and safer journeys; offering additional bicycle services like safe and comfortable parking, repair shops or accommodation on public transport vehicles.

Also there are a lot of innovations in bikeway types which can be established, in addition to existing ones. Some of them are bike lanes, or cycle lanes (on-road lanes marked with paint dedicated to cycling and typically excluding all motorized traffic); a buffered bike lane (typically a lane with a wide painted buffer to split up the cycle lane and other traffic); contraflow bike lanes (typically a painted lane added to some one-way streets, to allow cycling traffic to safely travel in the opposite direction of all other traffic, including motorized vehicles and bicycles). A cycle track, also called separated bike lane or protected bike lane, is a separated lane dedicated for cycling that is on or directly connected to the roadway but typically excludes all motorized traffic with barrier. Bike paths such as a greenway (a long, narrow piece of land, often used for recreation and pedestrian and bicycle user traffic, or a shared use path (where walking, bicycling, inline skating and people in wheelchairs can safely move); A bicycle boulevard is a low speed street which has



been optimized for bicycle traffic. They are designed to give priority to cyclists as through-going traffic; A road shoulder is a reserved lane on the verge of a roadway that is often used by bicyclists and also serves as an emergency stopping lane for motor vehicles.

By popularizing cycling in a city, the use of private cars can be decreased. For example, researches showed that the percentage of trips made by cycles rose by between 2% and 7% in four years. As an addition, air pollution and the need for parking spaces declines, giving the possibility of being able to reconstruct and re-use public spaces in a more citizen-friendly way. This can result in greater attractiveness of housing districts. The health related quality of life in such areas may result in increases of social and leisure activities. By extending cycling facilities in a city, the recognition and acceptance by other road users will be enlarged. More people may be using the bicycle even for simple rides such as to workplace, school, supermarket. This reduces congestion during peak hours, which can save you a lot of time and petrol. Also, cities become more accessible for children and elderly people, who can't properly drive a car.

Concerning safety it has to be pointed out that the more people cycle the greater are the safety benefits for cyclists, because car drivers get used to noticing cyclists and both car drivers and cyclists learn how to cope with conflicts and dangerous situations. There are three key aspects of infrastructure: people do not like cycling amongst traffic, or mixing with pedestrians. Therefore the primary requirement, which will make cycling an easy choice, is to provide dedicated space for cycling on streets carrying most traffic. At least 2.1m of dedicated cycling space must be provided on each side of the road, with some degree of protection from traffic. All cycle tracks along primary streets should have priority over side roads, including junctions with secondary streets. The cycle track and footway must not change height across this junction. Junctions are the most common location for collisions. A well designed junction reduces the number of decisions that need to be made by each road user. Providing space for cycling, that minimizes conflict points, will prevent collision blackspots.

Private companies, which support their employees in using a bicycle, can save money because their workers are healthier and they are not home sick as often as people who don't exercise.

Thanks to all these initiatives, people's health will be enhanced by cycling regularly. For example, for a person who was not doing sports at all but starts to cycle 30 minutes per day regularly, the risk of a heart attack can be decreased by 50%.

All this process to success bike friendliness in the city requires a lot of work to do, a lot of money to be invested, but this costs worth the healthy future.

Keywords: pollution, bicycle infrastructure, bicycle lane, budget, parking space, cyclist, quality of life, cycling, cycle track, footway.

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