

Comparison of Polish and Danish Approach to Promotion of Cycling

Romanika Okraszewska¹, Zofia Jagielska²

¹ *Department of Highway Engineering, Faculty of Civil and Environmental Engineering
Gdansk University of Technology, Gdansk, Poland*

² *Danish Road Directorate, Copenhagen, Denmark*

E-mails: ¹rokrasze@pg.gda.pl (corresponding author); ²zaj@vd.dk

Abstract. The article describes two different approaches to promotion of cycling from Denmark and Poland. In the former the promotion locally from 2009 to 2015 has been supported financially by the national government and where initiatives partly have been financed by the national level. In Poland, the promotion has been implemented often as a result of bottom up initiatives and financed solely on local level often with the support of EU funds. Authors will indicate the strengths of each approach and will formulate recommendations for promoting bike strategy based on the best practices.

Keywords: cycling promotion, cycling strategy.

Conference topic: Sustainable urban development.

Introduction

To reduce the negative impact of transportation on both local scale (eg. congestion) and global scale (eg. climate change), the European Commission recommends a shift in modal split towards more sustainable modes of transportation. It is recommended to reduce the use of private cars in favor of active forms of mobility, including walking and cycling. EU recommendations are defined as an objective, not as specific methods of implementation. Therefore, the methods and commitment into implementation of the EU recommendations for taking measures to increase the active forms of mobility, including walking and cycling, differ between countries, regions or cities. The main tool for shaping the modal split is transport policy. The share of bicycle trips in modal split varies between cities from 0–30% (EPOMM 2005–2014) and is largely dependent on the approach to the promotion of cycling. This article compares two different approaches to promoting cycling – the Polish and the Danish one. The example of city of Gdansk and Copenhagen are used. The effects of these two approaches are measured by the share bicycle trip, which is in Poland in Gdansk 6% (VIA VISTULA 2016), in Denmark 16% (DTU 1998–2015) and in Copenhagen 30% (EPOMM 2014).

Polish approach

In Poland central government’s responsibility for cycling comes down to passing the legislation, provision of funding and managing national roads. The government does not create systemic solutions to support cycling policy. In Poland, there are no acts or any regulation at the national level relating to the issues of cycling in a comprehensive manner. A document titled *The project development program for cycling in Poland*, which was developed at the request of the Ministry of Transport and Construction in 2005, has not been officially adopted. *The State Transport Policy for the years 2006–2025* recommends the promotion of the bicycle as an ecological mean of transport, in terms of supporting the development of a network of cycle paths, public education, including information campaigns and advertising a “new culture of mobility”, inducing the use of bicycles and responsible attitudes, self-limiting use of the car. Thus, also the regulation on operation and development of the cycling system or its role in the whole transport system on the lower level of territorial division are often a part of a general transport policy. The exceptions on the regional level are Lower Silesia Region and Pomeranian Province where a comprehensive approach to cycling were published as a bicycle policy. The comprehensive approach to cycling traffic occurs more often at a local level. The example of cities having cycling policy are cities such as Białystok, Bydgoszcz, Gliwice, Krakow, Lublin, Lodz, Poznan, Radom, Szczecin, Torun, Warsaw, Wrocław and Gdańsk.

At all levels of the territorial division in Poland the process of developing cycling policy has strong bottom up support by NGO members, who represent a group of cyclists. The primary reason for non-governmental groups to engage in the processes of transport policy making has been insufficient exploitation of the potential of bicycle traffic by local governments in large Polish cities and marginalization of the role of cycling in the urban transport services and also the lack or poor quality of transport investments. In many cases, the measures taken in favor of cycling does not satisfy the needs and expectations of the end-users, because they are not comprehensive, coordinated and are often

implemented in a hurry. Meanwhile, as already mentioned, the process of policy-making towards increased cycling is a time-consuming process. The involvement of NGO in the cycling policy-making process on the country level resulted in establishing of the Parliamentary Group for Development of Cycling Communication and Tourism in 2008. Through this group the amendment of law concerning cyclists and widely understood cycling traffic in Poland became possible. The main achievements of the group are the amendment to the *Law on Road Traffic*, which ensures compatibility of national legislation with the *Vienna Convention*, and the two key regulations on road signs and signals which make implementation of bicycle-friendly roads and traffic organization easier, introducing new signs and traffic signals, significantly facilitating the organization of cycling on roads.

Gdansk example

In 2012 Gdansk was honored as the most bicycle-friendly Polish city in a competition among 40 other cities with the number of residents over 100 thousand. Factors such as cycling infrastructure and other approaches of shaping proper conditions for cyclists (e.g. limited traffic zone, bicycle racks, signage, system solutions, promotion) were taken into consideration in the assessment. The award is a result of years of activities in development of conditions for cycling.

The institutional framework to support the effectiveness of bottom up actions

In Gdansk, as in most of Polish cities, the beginnings of the efforts to improve conditions for cycling were connected with initiatives of local non-governmental groups promoting bicycles and cyclists' rights. Those local initiatives were usually related to nationwide pro-environmental NGOs (Polish Ecological Club and the Federation of Greens) and formed a loose network called Cities for Bicycles (Hyla 2006). The main intention of the representatives of cyclists was to promote the bicycle as a mean of transport and increasing its role in daily trips. As a basis for the implementation of this objective was indicated the need for infrastructure development. However, priorities of transport policy at that time were focused on promotion of road traffic (motorized vehicles). Therefore, the main objective for NGO members became the development of cycling infrastructure that meets technical standards, needs and expectations of cyclists. The base of development of a proper cycling network was development of technical regulations for designing and construction of bicycle paths on city level. However, any effective action required partnership cooperation between local authorities and representatives of non-governmental organizations. Undoubted success of the Civic Ecological League (OLE) association that acts in Gdansk representing the expectations and rights of cyclists, was development of the institutional framework for further cooperation with local authorities. The first milestone of the collaboration was establishment of the city a special committee for the Cycling Traffic Development in 1998 by the Gdansk president for consultation, advisory and initialisation of actions. In 2011 Gdansk's cyclists have received an official representation in the city hall by the Department of Active Mobility. Gdansk was also the first city in Poland where the Plenipotentiary of the President of the City for the Bicycle Traffic was appointed (2006). In 2000 an important milestone was reached in work on the cycling policy of the city: the development of standards for constructing bicycle paths in Gdansk connecting the legal and technical requirements with the demands of cyclists (Krystek *et al.* 2000). In 2012 the technical standards and the principles of planning were adopted by resolution of the City Council, designing and pro-cycling organizations have gained the status of local law.

The evolution of local government approach to the role of the bicycle in the city transport system

The main objective of the collaboration of NGOs with the city authorities was to change the approach of the authorities to the role of the bicycle in the city transport system. Initially, the interest of the city government in development of bicycle subsystem came down to activities aimed at solving the current problems. For example initially the dedicated bike paths were segregated from sidewalks by painted white lines (Okraszewska 2011: 88–90). Cooperation of NGOs with the government contributed to the change in the approach of the authorities to the role of the bicycle in the transport system of the city. An expression of this was not only institutional changes, investments in cycling infrastructure, but also strategic documents adopted by the city authorities which let define formal framework of further development of cycling. The Gdansk cycling policy consists of different documents where the objectives are determined as a target level of bike share in modal split. *The Gdansk Investment and Promotional Cycling Project 2002–2005* aimed to increase the share of cycling from 5–10% until 2013 for the whole city. Today, we know that the target has not been achieved and many of the planned activities were never implemented. In the *BYPAD* action plan, Gdansk is to become a leading cycling metropolis in Poland as well as Central and Eastern European countries until 2020. By signing the *Brussels Charter*, the authorities of Gdansk committed to setting a target of at least 15% for the share of cycling in the modal split of trips for the year 2020 and further growth if this target is achieved (City of Gdansk 2009). In the *Mobile Gdansk Programme* a priority was set for cycling, walking and public transport. The document emphasises the need to replace costly road projects with new traffic layouts and changes in people's traffic customs. *The Transport Strategy and Metropolitan Area Mobility until 2030* (Michalski *et al.* 2015) is set to pursue a programme of active mobility which assumes a 8% share of cycling annually and 15% in the summer. The main directions and principles of the current transport policy of the City of Gdansk defines the operational program *Mobility and Transport*,

which is part of *Gdansk Operational Programmes in 2023* – an instrument of implementation of the document entitled *Gdańsk 2030 Plus City Development Strategy* (City of Gdansk 2015).

Financing and development of cycling infrastructure in Gdansk

One of the factors determining the achievement of the assumed increase in the share of bicycles in the modal split is the development of cycling infrastructure. One of the best cycling infrastructure in Poland was created in stages and is undoubtedly the greatest achievement of cooperation between NGOs and the local government. According to 2016 data the Gdansk's cycle network is now 568.2 km long, of which 388.2 km are on streets with traffic calming measures with a speed limit not more than 30 km/h, 117 km are segregated cycle roads and 42.2 km of one-way streets where cycles are allowed to ride in the opposite direction (contraflow lane) (City of Gdansk 2016).

The development of cycling infrastructure is an expensive proposition. As already mentioned in Poland there is lack of systemic solutions that would guarantee funding from the country level. The development of cycling infrastructure is the responsibility of local government. In most Polish cities, the cycling infrastructure is implemented as part of other large infrastructure investments projects. Gdansk, with its separate and high cycling budget (17.8 million in 2011, 18 million PLN in 2013, 8.7 million Polish zlotys in 2014) is an exception. However, the first investments made within the framework of the *Gdansk Investment and Promotional Cycling Project* were possible only due to the determination of non-governmental organizations that have helped in the development of projects and acquired money from the fund of the United Nations Global Environment Facility (1 billion Polish zlotys). Today, most of cycling the infrastructure investments is being developed within the framework of projects financed from external sources in e.g. the framework of the *Integrated Territorial Investment*. Smaller investments are financed part of the Citizens Budgets.

Soft tools to encourage the use of bicycles

A very important part of cycling policy is promotion. Polish cities do not use this tool, or they lead promotion actions at a negligible scale. Despite the wide range of promotional and educational instruments used in Gdansk, the cycling campaigns are not sufficiently coordinated and only inform about the objective of a specific project. Promotional campaigns are carried out on a scale not giving the opportunity to obtain a massive social impact. Gdansk's first broad promotion of cycling took place in the early 1990s and was delivered by NGOs. The *Civic Environmental League* (OLE) is still running today its campaign launched in 1997 called the *Gdansk Cycling Campaign* (initially *Gdansk a city of cycles*). One of the elements of the campaign is the *Great Bike Ride* and the accompanying events (competitions, races, picnics, movie shows and others). At present, cycling promotion and education is the responsibility of the staff of the Active Mobility Unit within the Gdansk City Hall. They are involved in international congresses and local training and organise regular Active Mobility Congresses. *The Metropolitan Transport Union of the Gulf of Gdansk* has been teaching road safety since 2012 in primary schools and middle schools with cycling given a lot of attention in the programme. The Active Mobility Unit used EU projects (CIVITAS-MIMOZA, PIMMS Transfer) and their own initiatives to promote cycling targeting children (art competitions about cycling for primary school students, Cycling May), youth (Cycling May), the staff of big companies and the inhabitants (Cycling Fridays, Cycling to work, U-lock as a gift campaign). Information activities included: vertical signage, distributing cycling maps and running the rowerowyGdansk.pl website (Okraszewska *et al.* 2016: 87–99)

Integration with public transport

There are some differences between Gdansk's districts in coverage by network of bicycle paths due to the characteristic topographic conditions resulting in city division into lower and upper terrace, with differences in relative elevation reaching 100 metres and gradients in excess of 8%. The lower terrace is densely covered and there is a poor connection between the two terraces. The natural barriers, the *Tricity Landscape Park* and *Gulf of Baltic Sea*, contributed to the longitudinal development of the city making the distances between districts considerable. Therefore, the integration with public transport and development of city bikes system play an important role in making the bicycle attractive as a transport mode. The offer of the City Fast Railway makes traveling with bike along the main transport axis easy. However, although the bus lines connecting the terraces allow carriage of bicycles, cyclists are not guaranteed space for their bicycles in the bus. With the launch of the Pomorskie Metropolitan Rail (PKM) in 2015, the service may become a milestone in developing cycling. The train service connects not only Gdansk's lower and upper terraces, but also offers a potentially attractive link between the Kashubia Lake District and the Tri-City. It runs partly across the city's non-urbanised areas and some stations are difficult to access on foot (the distances are too long for walking) which makes them just right for the Bike and Ride system. This however, means that modern B&R facilities (not just bicycle stands) are needed as close to PKM stations as possible with sufficient spaces, CCTV and service points. Steps should also be taken quickly to offer tickets that will come with free bicycle parking (Okraszewska *et al.* 2016: 87–99).

Gdansk modal split

The execution of cycling policy, the number and quality of cycling infrastructure, activities related to the promotion of cycling, have a direct impact on the number of trips made by bicycle. In Gdansk, the share of bike trips in modal

split is growing steadily. This tendency was recorded at the Comprehensive Traffic Research which was conducted in 2009 and 2016. The share of bicycle increased from 2% in 2009 to 6% in 2016 (Fig. 1).

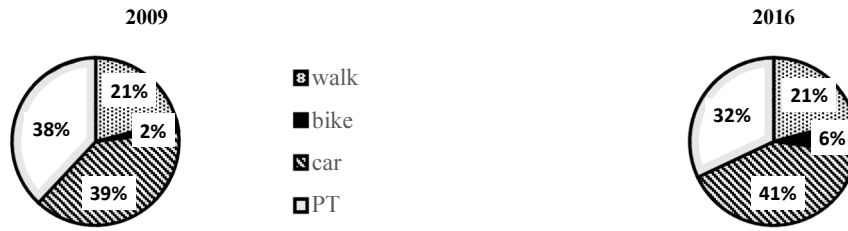


Fig. 1. Changes in Modal Split in Gdansk in years 2009–2016
Source: own study based on (VIA VISTULA 2016)

The results from automatic cyclist counters, operating for three years on selected road sections, also show an upward trend in the number of cyclists. Additional source of cycling traffic data is manual counting conducted regularly in May-June by the employees of the Development Office of Gdansk. A comparison was made of cycle traffic data in the years 2011–2014 which shows that while cycle traffic grew significantly, it differed from cross-section to cross-section by several to some fifty per cent. On average in the years 2011–2014 the number of cyclists went up by 44.2 % and between 2013 and 2014 by 12.5 %. In some points, during the summer the cycling traffic exceeds the design assumptions. In summary, the results from the automatic and manual counting (collective work in 2014) are consistent, show the general trend of an increase in the number of cyclists.

Danish approach

Most bicycle rides in Denmark are conducted on roads administrated by local authorities (municipalities) (as in Poland). It is the municipalites who set up targets, political framework and decides the level of bicycle investements in Denmark. Thus, as in Poland, the modal split of cycling, the quality of bicycle facilities and the political focus on cycling in the cities and by the local governments vary a lot (Fig. 2) (DTU 1998–2015).

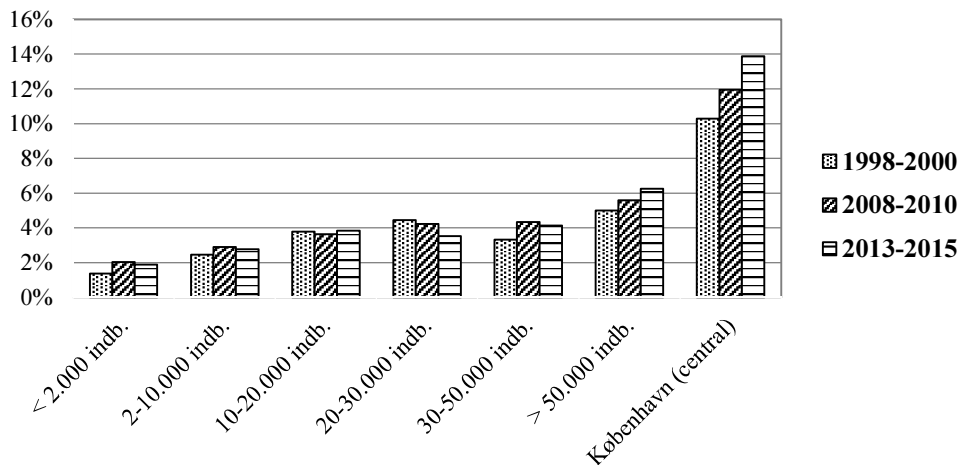


Fig. 2. Modal split and urbanization in Denmark
Source: DTU 1998–2015

The role of the national government in regard to bicycle promotion might thus seem limited in Denmark. However the Danish government has for recent years played a significant role in bicycle promotion. This is mainly done through administration of several subsidy schemes for bicycle projects.

In 2009, the signatory parties of the agreement on “A Green Transport Policy” allocated € 134 million to the Cycling Fund for 2009–2014. The purpose was to improve the conditions for cyclists and to make cycling more attractive, frequent and safe. The Cycling Fund has provided subsidies for various cycling projects initiated by local authorities – mostly municipalities – but also corporations and NGO’s (Danish Road Directorate 2016a)

The projects supported by the subsidy schemes range from Cycle Cities, including the combination of soft and hard measures, to establishment of bicycle facilities or campaigns. In 2009, it was possible to apply for subsidies of up to 30% of total project costs – 50% for innovative projects and in special cases more. Since 2010, the subsidy has been

40% for ordinary Cycling Fund projects and 100% for special or innovative projects. This has resulted in cycling investments of more than € 268 million in Denmark (Danish Road Directorate 2016a).

From 2009 to 2014, the Cycling Fund granted € 96 million to 338 projects. The Cycling Fund received 1,013 applications in total. This proves that potential subsidy recipients are very interested in promoting cycling. The municipalities have conducted the majority of the projects and, thus, have been granted the most money, although subsidies have also been given to NGO's and corporations as mentioned above (Danish Road Directorate 2016a).

In June 2014, an additional € 7 million was allocated to an additional subsidy scheme for bicycle projects called, "Fund for the Promotion of Cycling". In May 2015, 19 projects have been subsidized by the scheme as well as one state road project. Among others, the traffic agreements on "Super Cycle Highways" from May 16th 2013 and the agreement on "Metro, light rail, local rail and bikes" from June 12th 2014 allocated funds to the following two subsidy schemes for super cycle highway projects: "the Fund for Super Cycle Highways in Large Cities" and "the Fund for Super Cycle Highways and Bicycle Parking". The aim of super cycle highways is to provide bicycle commuters with a fast, easy and safe connection so that they can cover long distances along cycling routes of a high standard. A total of € 46 million has been granted to super cycle highways and bicycle parking projects (Danish Road Directorate 2016a).

In 2015 a preliminary evaluation study of the Cycling Fund was conducted. It was based by 161 projects 161 projects which had been completed and evaluated by the middle of 2015. The evaluation was conducted by the Danish Road Directorate in cooperation with the consultancy firm COWI. A full evaluation of the Cycling Fund (including the remaining 227 projects) is expected to be completed in 2019 (Danish Road Directorate 2016a).

The completed Cycling Fund projects have inter alia resulted in the construction of approximately 250 km of new bicycle track and 3,250 new bicycle parking places so far. The Cycling Fund has contributed to making cycling more attractive and safe. It is not possible to say how much more bicycle traffic the projects that are co-funded by the Cycling Fund have created altogether. However, results show a 24% increase in bicycle traffic on average on stretches of road where the Cycling Fund has provided grants for new bicycle tracks. The results indicate that the increase in bicycle traffic is partially due to modal shifts (from cars and public transport to bicycles). In addition, entirely new trips by bicycle have occurred and cyclists have come from other routes as well. Two thirds of the subsidy recipients stated that the Cycling Fund has increased their own investments in cycling. 84% of the grant recipients stated that they will apply if a new fund is established within the next two years (Danish Road Directorate 2016a).

The Danish Road Directorate builds and operates "national roads" including highways, but also a large number of regional roads and their urban segments which naturally include a mix of motorized traffic, bicycles and pedestrians. Therefore efforts also include funding for bike-infrastructure along national roads, as well as a general emphasis on planning for bicycles that include e.g. a national bicycle conference, where bicycle experts in Denmark meet and share valuable knowledge. Furthermore, the Danish Road Directorate develops national guidelines and standards for bicycle infrastructure in co-operation with different public and private actors among other things.

The aim with the bicycle promotion initiated by the national government is to reverse what has been observed as a negative trend in cycling in some places of the country and further increase cycling for its environmental, congestion and public health benefits (Danish Ministry of Transport 2014; Danish Road Directorate 2016b).

The above-mentioned actions on bicycle promotion initiated by the national government are framed by a national bicycle strategy from 2007 and an updated version "Denmark – on your bike!" from July 2014 (Danish Ministry of Transport 2014).

The bicycle strategy should be an inspiration to the municipalities and to other actors who would like to participate in the green transition and who wish to invest in promoting cycling. Funding is therefore continuing to be allocated through funds that can help to bolster new cycling solutions and encourage cycling.

The national bicycle strategy is built on three pillars, each containing a number of specific initiatives to support and increase the use of bicycles as a means of transport for the benefit of mobility, the environment and public health (Danish Ministry of Transport 2014):

1. Everyday cycling,
2. Active holidays and Recreation,
3. New and safe cyclists.

The strategy shows best practices and gives advices on how to promote cycling for different bodies. It is worth noticing that there are no quantitative objectives in the Danish bicycle strategy and also no political commitments.

The evaluation study indicates that financial support from the governmental level has a positive impact on increased cycling. Not only due to the financing itself but also as a political signal from the governmental level to local levels on the importance of sustaining and increasing bicycle traffic. It is also worth to stress that a pro-cycling policy in Denmark has been supported widely by almost all parties in recent years on both local and a national level.

As mentioned above cycling levels are decreasing in small towns and rural areas. On a national level the level of cycling has been more or less stable in recent years after a negative trend since the 50–60s (Fig. 3.)

Data is collected from permanent counting stations placed in different places around the country by the Danish Road Directorate and the municipalities.

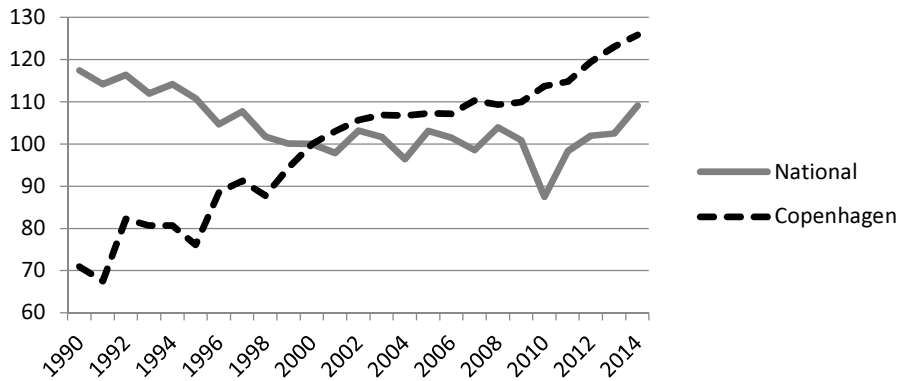


Fig. 3. Development in Bicycle Traffic. Index 100 = year 2000
Source: DTU 1998–2015, Danish Road Directorate 2016b

It is not clear why cycling levels are decreasing remarkably in especially small towns and rural areas (see Fig. 2). However cheaper cars (due to lower taxes), urban sprawl and urban planning based on narrowminded economical interests, as e.g. the establishment of huge shopping malls with free parking space in the outskirts of towns, are some feasible explanations.

However, the cycling levels in the biggest cities have been increasing remarkably in years. Especially in the capital Copenhagen, the city perceived as one of the best cycling cities in the world (Fig. 3).

Copenhagen as a case

Copenhagen is known as a cycling city and cycling is an important brand for the city. Initial efforts to increase cycling and improve physical conditions for cyclists were initiated as a bottom-up approach in Copenhagen. This has changed a lot the last 10–20 years. In Copenhagen the development of the city towards one of the world’s best cycling cities has been initiated in the early 80s as a bottom-up movement but in recent years led by the City of Copenhagen as a top-down approach, though with an emphasis on citizens engagement.

The city has since worked ambitiously and targeted on increasing cycling levels. Already in 2007 the political goal of becoming the world’s best city for cycles was formulated in “ECO-METROPOLIS OUR VISION FOR COPENHAGEN 2015” (City of Copenhagen 2015) by achieving the three following objectives:

1. In Copenhagen at least 50% of people will go to their workplaces or educational institution by bike,
2. The number of seriously injured cyclists will drop by more than half compared to today,
3. At least 80% of Copenhagen cyclists will feel safe and secure in traffic.

Later those goals were adopted in “Good, Better, Best – The City of Copenhagen’s Bicycle Strategy 2011–2025” and postponed to 2025 (see Fig. 4). These policies and strategic documents are followed up by a high budget and actions supported by the local politicians. Actions are e.g. building cycling facilities, keeping on extending the network of bicycle paths, building bridges for cyclists and pedestrians, maintaining and improving the existing network. Bicycle parking, pumps and counters are also physical means to make people choose the bike as an everyday mean of transportation. As mentioned, developing bicycle infrastructure is timeconsuming. In Copenhagen the bicycle tracks are more than 100 years old. The city infrastructure can be divided into bicycle tracks along roads (separated by the road lanes by a curb), off-road separated routes, and bicycle lanes (painted line). Also traffic-calmed streets with a low-speed can be considered as cycle facilities.

In 2013 the city integrated design guidelines for bicycle infrastructure in the general guidelines for the design of road projects called “FOCUS ON CYCLING Copenhagen Guidelines for the Design of Road Projects December 2013”. The main purpose of the document is that cycling should be an integral part of all infrastructural and the best conditions for cyclists as possible always assured. *Copenhagen road projects should be an integral part of a holistic approach. For example, when planning cycling facilities it is vital to factor in pedestrian safety as well; green waves can be synchronized so as to benefit both cyclists and busses. However, bicycle traffic should have priority over motor traffic in intersections and sections where limited space is available. This is a consequence of the top political priority given to cycling* (City of Copenhagen 2013)

But also soft measures as campaigns (encouraging citizens to bike through events, communications, competitions etc.) and a focus on schoolchildren and integrating cycling in the school lessons is used too increase the number of cyclists and to reach the goals of the eco-metropolis vision.

The city uses the strategy of carrots (bicycle facilities), whip (e.g. paying for parking) and tambourine (communication, encouragement and campaigns).

The development and whether the objectives are being met are followed up by a bicycle account every second year. It is based on interviews and the Danish National Travel Survey. The city conducts manual countings once a year as well. In the bicycle account cyclists are asked whether they are satisfied with the work of the city.

The Bicycle Account from 2014 shows for instance modal splits in Copenhagen for all journeys to work and education in Copenhagen (45 % on bicycle), for all internal trips to work and education (63 %), for all trip purposes internally (30 % on bicycle) and for all trip purposes internally without walking (36 % on bicycle), see figure below

Below are shown some figures (Figs 4 and 5) from the newest bicycle account from 2014 (City of Copenhagen 2014).

'04	'06	'08	'10	'12	'14	'15	'25	
36	36	37	35	36	45	50	50	Proportion of people who cycle to work/education (5) *
58	53	51	67	76	74	80	90	Proportion of cycling Copenhageners who feel secure (%)*
125	97	121	92	102	91	56	34	Cycling casualties (number per year) *
				17	19	40	80	Propotion of PLUS network that has 3 lanes (%)
				0	7	5	15	Reduction in cycling travel time (%)
50	48	54	50	61	63	70	80	Satisfaction with start of cycle tracks (%)
			67	73	70	70	80	Satisfaction with cycling culture's impact on urban life (%)
'04	'06	'08	'10	'12	'14			
1.13	1.15	1.17	1.21	1.27	1.34			Kilometres cycled (minlion km per weekday)
3	4	3.2	4.4	4.2	4.9			Kilometres cycled between each casualty (million km)
15.3	16	16.2	15.8	15.5	16.4			Avarage cycling speed (km/h)
329	332	338	346	359	368			Cycle tracks (km)**
14	17	18	23	24	28			Cycle lanes (km)
37	39	41	42	43	58			Green Cycle Routes (km)
				17.5	38.5			Cycle Super Highways (km)***
	42	47	48	49	51			Bicycle parking facilities on road and pavements (1,000)

*Targets included in the City of Copenhagen's publication Eco-Metropolis. Our Vision for Copenhagen 2015.

**Includes cycle tracks in Nordhavn

***Entire Capital Region of Denmark

Fig. 4. Targets stated in Good, better, best – the city of Copenhagen's bicycle Strategy 2011–2015 and other key figures
Source: City of Copenhagen 2014

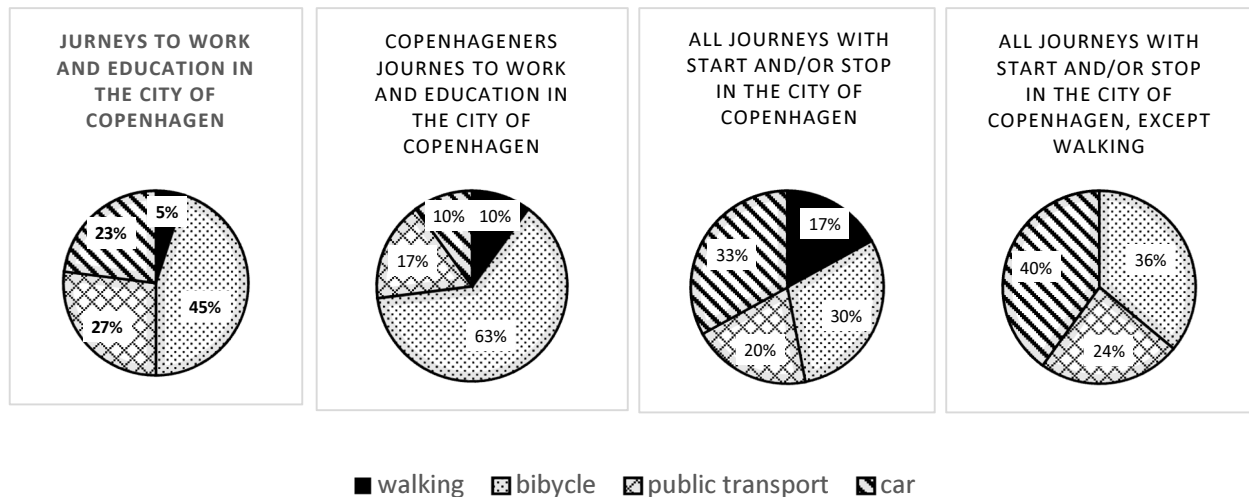


Fig. 5. Break-down of jurneys in 2014 in Copenhagen
Source: City of Copenhagen 2014

The ambitious and targeted work of the city has resulted in an increase in cycling, high levels of cycling (see Fig. 6), and a comprehensive network of cycle paths and not least that Copenhagen can be claimed to be one of the best cities in the world for cyclists.



Fig. 6. The Increase in levels of cycling in Copenhagen

Source: City of Copenhagen 2014

Conclusions

When comparing the Polish and Danish approach to promoting cycling some analogies are seen at the initial stages of cycling policy-making. An interest in the cycling traffic development has been started maybe a little bit earlier in Denmark than in Poland, but in the same range – as a bottom-up movement.

Nowadays some differences are recognizable especially in terms of commitment of governments on country and local level to the process of promotion and financing. And as it was already mentioned, the financial support from the governmental level has a positive impact on increased cycling. Not only due to the financing itself but also as a political signal from the governmental level to local levels on the importance of sustaining and increasing bicycle traffic.

In Copenhagen actions are a consequence of the adopted documents which set out the development objectives for cycling. In Poland, the objectives of the role of cycling are located in different documents and are not consistent with each other.

Depending on how much the city is bike oriented, authors of PRESTO guide have assigned it to the one of the group: Starters, Climbers and Champions. Each group of cities are suggested to use of different approaches and different sets of activities that are likely to be most effective. Based on this division we can conclude that Copenhagen with 30% of bike share in modal split is a Champion, from which a Climber like Gdansk, with 6% of bike share in modal split, can learn a lot. Gdansk is on right way. Nevertheless, there is still much to do. Especially the promotion and integration with public transport must be improved. The main actions to increase the number of cyclists were related with infrastructure investments. The use of the soft tools of transport behaviors management followed with a delay and still has significant gaps.

References

- City of Copenhagen. 2014. *Copenhagen city of cyclists – the bicycle account*. Copenhagen.
- City of Copenhagen. 2015. *Eco-metropolis our vision for Copenhagen 2015*. Copenhagen: City of Copenhagen.
- City of Copenhagen. 2013. *Focus on Cycling Copenhagen guidelines for the design of road projects.*, Copenhagen.
- City of Gdansk. 2009. *Charter of Brussels*.
- City of Gdansk. 2016. *Gdansk cycling policy* [online], [cited May 29 2012]. Available from Internet: <http://www.roverowygdansk.pl/start,166,29.html> (in Polish)
- City of Gdansk. 2015. *Gdańsk 2030 plus strategy*.
- Danish Ministry of Transport. 2014. *Denmark – on your bike! The national bicycle strategy*. Copenhagen: Ministry of Transport.
- Danish Road Directorate. 2016a. *The Cycling Fund 2009–2014. Preliminary evaluation study. Report 554*.
- Danish Road Directorate. 2016b. *The Danish Road Directorate* [online], [cited November 14 2013]. Available from Internet: <http://www.vejdirektoratet.dk/EN>
- DTU The Danish National Travel Survey 1998–2015. *The Danish National Travel Survey*.
- EPOMM TEMS – The EPOMM Modal Split Tool. 2011. [online], [cited 2011]. Available from Internet: <http://www.epomm.eu/tems/>
- Hyla, M. 2006. *Gdański Rowerowy Projekt Inwestycyjno-Promocyjny Polski Klub Ekologiczny*. Rowerowy Gdańsk, Rowerowa Polska. Gdansk – Krakow.
- Krystek, R.; Michalski, L.; Kazimierz, J.; Budzyński, M. 2000. *Standardy techniczne dla infrastruktury rowerowej w Gdańsku*. Gdańsk.
- Michalski, L.; Jamroz, K.; Grzelec, K.; Grulkowski, S.; Kaszubowski, D.; Okraszewska, R.; Birr, K.; Kustra, W. 2015. *Strategy of Transport and Mobility for Metropolitan Area*.
- Okraszewska, R. 2011. The evolution of the technology of pavement cycling in Gdańsk, *Inżynieria i Budownictwo* 67(2): 88–90.
- Okraszewska, R.; Grzelec, K.; Kazimierz, J. 2016. Developing a cycling subsystem as part of a sustainable mobility strategy: the case of Gdansk, *Scientific Journal of Silesian University of Technology. Series Transport* 92: 87–99. <https://doi.org/10.20858/sjsutst.2016.92.9>
- VIA VISTULA. 2016. *Gdansk traffic research. A leaflet*. Gdańsk. (in Polish)