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Smart Győr: Good steps to become a smart city

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If someone start to read an article about smart city, she probably see, that at the beginning of the document the author write some words about the urbanization. Of course, it is not unwitting.

2008 was the borderline, when the population of the Earth reach, that the 50% of the mankind live in cities or urban areas. And it is growing. According to the forecasts between 2030 and 2050 this number will reach the 60%, and by the end of the century it is certainly approaching the 70%. You can see that the research about cities and the development of the cities are a very actual an important topic nowadays, and it will be also in the near future.

The most popular trend of the present and future of cities is the smart city concept. What is a smart city? The are not a common definition, because there are different approaches. Matt Hamblen says: *„A smart city is an urban area that uses different types of electronic data collection sensors to supply information which is used to manage assets and resources efficiently.”* (Hamblen, 2012) (The Wikipedia uses Hambles definition.) According to the IBM (who is a big player in the smart city research). *„An urbanizing world means cities are gaining greater control over their development, economically and politically. Cities are also being empowered technologically, as the core systems on which they are based become instrumented and interconnected, enabling new levels of intelligence. In parallel, cities face a range of challenges and threats to their sustainability – across their business and people systems and core infrastructures such as transport, water, energy and communication – that they need to address holistically. To seize opportunities and build sustainable prosperity, cities need to become smarter.”* (IBM..., 2009) And there are some others...

If there are no common definition, how a city become a smart city? Of course, there are not a „jolly joker” methodology. So we can find a lot of different smart city soulutions, when examine numerous cities.

In this article I don't want to introduce all of them. My goal is presenting just one city. I work at the Széchenyi István University. This uni is from Győr. Győr is one of the most important cities in Hungary nowadays, and

would like to become the smartest Hungarian city for 2030. I will present, how smart is Győr, and what are the plans for the future.

Smart steps from the history

However, the smart city is a new concept in the scientific communication and in the media, and the smart solutions are modern things, the idea have already arrived at Győr 20 years ago.

First of all, in 2001, the Strategy Research Institute, lead by Csaba Varga a famous Hungarian sociologist, made the Intelligent Győr City Strategy (Intelligens..., 2001) document. Of course, Csaba Varga's 20-year-old theory about intelligent cities (Varga, n.d.) differ from modern smart city conceptions, essentially there is a precursor of this point of view.

The next milestone was the Smart cities study by the Hungarian Academy of Sciences Institute for Regional Studies (Lados & Horváthné-Barsi, 2011). This research was made in 2011, and eight Hungarian big cities (Debrecen, Győr, Miskolc, Pécs, Szeged, Székesfehérvár, Tatabánya, Veszprém) and one little city (Kőszeg) was examined in seven categories: people, business sphere, traffic, city services, energy management, water management and communication. Based on the results Győr was in the front of the midfield.

In the recent years the Local Government of Győr prepared some main strategic documents about the future of the city and the possibilities for development. The Integrated Urban Development Strategy (Local Government of Győr, 2008) (IVS) was made in 2008, and the Integrated Community Development Strategy (Local Government of Győr, 2014) (ITS) was made in 2014. An interesting thing, what is the role of smart city concept in these documents. The IVS is 208 pages long, the ITS is 152 pages long. I examined the frequency of some keywords in these documents. The word „industry” was 261 times in the IVS and 106 times in the ITS. This number was 187 and 190, if I search for the word „economy”. The „innovation” had a big growth: in 2008 it includes 25 times, and in 2014 it was 60 already. The number of „sustainable development” was 4 and 7. The topic of this article, the „smart city” was not mentioned in the first document, but in the Integrated Community Development Strategy you can find it 15 times. It is a positive change, and it proves that this theme became popular among the city leaders.

Table 1. Keywords in Győr's strategic documents

	Integrated Urban Development Strategy (2008)	Integrated Community Development Strategy (2014)
Industry	261	106
Economy	187	190
Innovation	25	60
Sustainable development	4	7
Smart city	0	15
Number of pages	208	152

Source: own editing

Smart city projects in Győr

As I said, there are several strategic documents in Győr what affects the topic of smart city, and the local government has intention to the city become smarter. The goal is that Győr want to become the smartest Hungarian city for 2030.

However, the complex smart development is missing (or just doesn't seen), there are some good solutions already working in Győr. One of the first steps was the cooperation between the local government and the E-ON (the electricity provider company) in 2013. According to this contract 150 intelligent leds was placed in different points of the city, what takes consider to the consumer demands, and optimize their own work. The data service and the energy efficiency are realized at the same time.

Other popular solution is the City Service Application. This is a mobile app, and actually an online error reporting program. If you walk on the street, and see that something is wrong (for example bumps, potholes, damaged public bench or trash can, etc.), you can take a photo, mark the location, and send this with the app to the city service company. The company get a notification about the problem, and they hopefully take action.

A smart solution is the real time traffic-schedule. If you need information about the local buses, you can find it at the internet. And, of course, in the bus stops and stations. There are some bus stops in the city what not just write the information but also say it. The people called them „speaking bus stations”, and like is.

One of the most important smart city solutions in Győr is the GyőrBike. It is a public bike system. The bicycle is a cheap and healthy transport mode. Although there are several public bike system in Hungary, the GyőrBike is one of the biggest. (Of course the biggest is the MOL BuBi, the public bike system in Budapest, the capital of Hungary.) The GyőrBike started in 2015. In 2016 was an interesting event about the system's first one year, organized by the Hungarian Society for Urban Planning's local group (Jóna, 2016:10). GyőrBike is a popular device in Győr, a lot of stategic documents and city marketing materials write about is. And it was

a main design element at the European Youth Olympic Festival, because the EYOF was in Győr in 2017.

Last, but not least I must write about the solar public bench. It is a simple and useful invention. If you sitting in the bench somewhere in the campus or other public space, thanks to the solar panel, you can charging your mobile phone.

Vision

The present is encouraging. There are several good projects and acting smart solutions. The people likes them. But what will be in the future? – The public bike system, the smart public lighting, the city service application made the weekdays comfortable. However, this solutions are separate elements yet, not a complex smart system. The local government's „smartest Hungarian city” vision is a good plan, and the city took the first steps, but the goal is still far away. Győr will have competitors in this race. For example Debrecen, Szeged, Miskolc and Kecskemét want to become the smartest Hungarian city too. The smart measuring devices should be use not only the public lighting, the city should be expand to the other public services too.

The GyőrBike made the city's bike transport better, there are more oportunities. I think the people need more bicycle storages in the city, mainly next to the railway station. Some European cities have already using this solution. According to the Integrated Community Development Strategy, the city will improve the energy efficiency in the next years. Győr applies for the European Capital of Culture, because in 2023 Hungary will delegate a city for this title. I think the urban development for the European Cultural Capital and for the smart city can complete each other.

Summary

The „smart city” phrase is very popular nowadays. Some different disciplines research this topic from their own point of view. The people, the cities, the companies and of course the local governments increasingly interested in this theme, and they would like to meet and use the technological and digital novelties, and want to make their life better.

The smart city conception is an urban development way what uses modern technology and the big data to become the city more liveable and environmentally sustainable for the people.

There are a lot of good solutions from abroad and Hungary too. Fortunately, Győr is in the forefront between the Hungarian cities. In this article I wrote about the most popular smart city solutions from this city, for example GyőrBike, city service application, etc.

In my opinion, Győr has a positive vision of the future. The local government defined a goal that the city would become a smartest Hungarian city for 2030.

References

- Hamblen, M. (2012). Just what IS a smart city? *Computerworld*. Retrived from <https://www.computerworld.com/article/2986403/internet-of-things/just-what-is-a-smart-city.html> [10.01.2018].
- Jóna L. (2016). Terítéken a GyőrBike. *GazMag*, 6. X., p. 10.
- IBM Global Business Services (2009). *A vision of smarter cities*.
- Lados, M., & Horváthné-Barsi, B. (2011). *Smart cities*. Győr: HAS IRS WHDO.
- Lechner Knowledge Center (2016). *Okos Város Tervezési Modell – Tervezési Útmutató*. Budapest: Lechner Knowledge Center.
- Lechner Knowledge Center (2016). *Smart City Példatár – Metodikai Javaslat*. Budapest: Lechner Knowledge Center.
- Lechner Knowledge Center (2016). *Smart City Tudásplatform – Metodikai Javaslat*. Budapest: Lechner Knowledge Center.
- Local Government of Győr (2014). *Győr Megyei Jogú Város Integrált Településfejlesztési Stratégiája*. Győr: Önkormányzat.
- Local Government of Győr (2008). *Győr Megyei Jogú Város Integrált Városfejlesztési Stratégiája*. Győr: Önkormányzat.
- RTPI (2014). *Térben gondolkodva*. Budapest: Magyar Urbanisztikai Társaság.
- Intelligens Győr Város Stratégia* (2001). Budapest: Strategy Research Institute.
- Varga, Cs. (2001). *Az intelligens világ esélyei és feladatai*. Budapest: Strategy Research Institute.
- Varga Cs. (n.d.). *Intelligens régió – Intelligens Város*. Budapest: Strategy Research Institute.