

# Information system of Brno

## English summary

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This document serves as a basis for the development of an information system in the city of Brno. Currently we are introducing information systems in major European cities and in the case of Estonia at the national level. It is therefore expected that this trend will prevail and that in the future there will be times when information system will be an integral part of all major cities. The system, which will not only be synoptic, intuitive and user friendly at the same time, will become the basic need of the citizens of the city. It is necessary to create a system, that not only takes up a wide range of needs, but is also easy to be mastered by users from fifteen to one hundred years.

We created a system, that meets the basic user requirements. It is based on the so-called modules, which enable the gradual addition of other sections. That makes life easier for the citizen and also improves his relationship with the city in which he lives. We included in the project timetable of the start of each individual module from first phase of the basic necessities for citizens, up to the second phase and the third phase with the needs of less importance. We believe, that this created information system becomes the basic need of the population of Brno, whose first steps in the search for information will be directed to IS. Due to the introduction of the forum, we expect to improve the relationship between the citizen and the city itself. The people will be able to simply insert comments and suggestions, which will be for the city of Brno feedback to enhance the quality of life in Brno.

In present world the most precious thing we have is the information. Its value is often impossible to quantify. The whole world is linked to the information technologies, media channels and social networks. Information is now disseminating so fast as never before. A work with such an information is for many people the most important part of their existence. The information is needed to acquire, process and forward as efficiently as possible. Most multinational companies, but also smaller companies increasingly begin to use the information systems to optimize their operations. It is not only in the private sphere. Universities as well as secondary schools are using information systems to facilitate the work of the staff and their students. The information is accessible, transparent, and all is available on one place - in the information system. Recently, the integration of these systems begin to implement at national level and in the state sector. The examples could be found in abroad, in countries such as Estonia or the Switzerland. The Czech Republic is vainly struggling with attempt to establish sophisticated information structure across the entire spectrum of the state and public sphere. This path could start also from the other side, represented by the individual municipalities, which is the aim of this work. The aim of this work is to create a project, that will serve the source material and inspiration for the creation of an information system in the city of Brno. The city of Brno is direct leader at the field of information technologies throughout the country. The

city of Brno wants to enter the information age, and so it is the perfect place to start working on unification of all information into a single system. This system could be a role model not only for other cities, but also for the state. Our thesis describes the information system from the user interface via each functions, promoting, until the time of his realization. The work does not focus on the technical execution, but on the manner of acquisition, unification and transfer of information to the citizens of Brno city. The aim of this work and the whole project is to facilitate and improve the life of the Brno residents, save them time and facilitate their communication with the authorities. The work is created based on the teamwork of all members, their ideas and creativity.

In our document, we firstly show the reasons for the introduction of an information system, including in particular the acceleration and quality of communication between the city and its citizens, the public sector approach to ordinary people. At the beginning of this work, we present the current status, which is now at the level of information security. In creating of this work, we proceeded from the already established information systems abroad and functioning of e-Government elements, which are not only in abroad but also in our country. We got inspired by the information systems of Czech universities. Furthermore, our work also describes the user interface, especially the possibility of user access to particular functions of an information system by the level of verification. In the information system are the users divided into three main groups. The first group are unregistered users, who have access to some parts of the system, are described but with limited features. The following two groups of registered users are gradually gaining access to other features of the information system. The highest level provides a certain user identification (Inspired already functioning systems MojeID and eIDAS). In addition to user levels in our work also the registration procedures, establishment and set up of user accounts.

The main part of our work is a description of the individual modules. Every module is rated at the 5 point scale in four categories. (Priority, difficulty of implementation, benefits and interest, risk deployment).

Culture - Culture aim of the module is the first phase of the unification of information about cultural and sports events in the city of Brno. This information should be found in the review system, which will be easy to work with. It also describes the introduction of a single reservation and payment system to facilitate the work of visitors attending cultural events.

Fare payment and fines - in Brno is now starting a project of an electronic fare payment. In our IS we calculate with this solution and we also propose the realization of payment portal.

Ordering System - is currently available on the part of the authorities and we

expect its development. We also want to increase convenience for users and relieve them from waiting at the authorities.

Discussion Forum - is an integral part of every information system. Currently the residents of Brno have many opportunities to express themselves in online discussions on various topics. Discussion in the information system of the city of Brno, would be different from others in that it would serve only to the registered users of the system.

Solving life situations - every person in his life could encounter situations, in which he needs an advice. Whether in everyday situations of his life or dealing with the requests at the authority. This module should help the user in such a situations. Individual events can be found the Annex.

Online support – is an essential part of the IS. The user may come across the situation that you can't cope, or there is a breakdown or failure of parts of the system. For this reason it is necessary to deploy the module online support.

Electronic filling out the forms – module is that the user to greatly facilitate the administration offices and allows the pre-filling and sending of important documents of the target institution.

Monitoring the status of the processing – builds on the previous module and allows the user to closely monitor the status of his request or the eventual outcome.

Block cleaning - module, which solves the issue of block cleaning the streets. This module is divided into two parts. The first part is only informational and the second part means the individual informing of the population of Brno on the block cleaning at the place of residence. These users are the information about the block cleaning at their place of residence through the information system.

Reservation of parking spaces - a problem of all big cities nowadays is the parking. This module should make life easier for all motorists travelling within the territory of the city of Brno. The module describes how the implementation of a new approach to the booking of parking spaces and the entrance to the historic city center. Its aim is to facilitate the process of dealing with the various matters with the authorities.

Collecting yards – currently, the ecology of the discussed topic and that's why we want this module to incorporate into the system. The user to facilitate the search of salvage yards in the area together with information about the collection materials in a given location.

Login animal – informs about the rules of registration and checking out the animals in the individual districts.

Payment of fines in transport infrastructure – every user of a motor vehicle welcomes information about towing where applicable, the possibility of online payment of the fines. The quality of the services leads information to the vehicle owner via SMS or e-mail.

Information about available apartments – this portal is also informative and offers users access to the currently available urban flats. It also offers complete the registration form and send a request to the waiting list.

Inventory procurement - it is an informative module. Includes inventory of orders in Brno and in the future also the surrounding area.

Metropolitan Police - cares about the safety of the citizens of Brno and in this module we inform about current events and organized events.

The core of our work consists of 16 modules. They are what creates something as complex as an information system for the whole city of Brno. It is these module, functional elements, which are to help the citizen to facilitate his life and improve communication between him and his city. Everything from everyday routine activities, through cultural life, his property, forms, views, to the exceptional crisis situation. It is important to realize that this is only the initial series of modules, which can be introduced within a few years. Over time, they can be added and existing ones expanded, and their services continue to be improved.

The information system of the city of Brno should be a publicly accessible web portal, or app, which gets everyone interested, who will want to benefit from easier access to information about everything that is happening in the city of Brno and advice on how to deal with their life situations.

There are currently for the city of Brno more servers, but neither one of them does not contain all the requirements that we require from a good information systém, it is therefore the main aim of this work to design and introduce a new, innovative approach to e-government in the city of Brno. Its aim is to improve, simplify and make life more enjoyable for all citizens of the city of Brno, both those living here and those who come here regularly and irregularly arriving. Improve and streamline communication of the city and their citizens and to be a means to Brno may enroll in Czech history, as the progressive city. All of this should happen in successive stages, and within a few years the Information system of the city of Brno.