

# SMART RURAL MUKAŘOV



## SMART VILLAGE STRATEGY OF MUKAŘOV (CZECHIA)



Prepared in the framework of the  
Preparatory Action on Smart Rural Areas in the 21<sup>st</sup> Century

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## Foreword: Smart Rural Mukařov

Mukařov is a village with a population of 2,500, located 35 kilometres far from the Czech capital Prague. It consists of three formally independent communities which each had to have its unique character – Mukařov - except the oldest part around the church and school - used to be rather a weekend resort, Srbín was a typical agricultural village, and Źernovka achieved fame for its granite quarries and stonemasons' tradition. In the last two decades, the whole municipality is primarily an accessible location for a new settlement of people commuting to Prague.

The smart approach aims at enhancing the living conditions for both the long-term residents and newcomers. The municipal office plans to offer new ways of communication and online access for addressing the crucial matters, especially payments of local fees.

The municipality also aims at a broader involvement of its citizens and their enhance their participation in projects developing the public space and social life of the village. A specific project management tool shall smooth the communication about participative projects, proposed and chosen by the citizens themselves. Another goal is the building of a co-working hub that could help especially parents of small children to harmonise their working and family lives.



## I. INTRODUCTION

### 1.1 Local governance in Czechia

The governance structure in the Czech Republic typically consist of:

- The mayor
- The municipal council
- The municipal board, and
- Municipal committees and expert groups.

Their key characteristics and roles are described below. Detailed responsibilities of various bodies are presented in Annex I.

#### **Mayor**

In the Czech Republic, the mayor is a one-member body of the municipality, which he/she represents externally. The mayor may be a person over 18 years of age and always must be a citizen of the Czech Republic. Mayor is elected by the municipal council, to which he/she is also responsible for the performance of his function and is represented by one or more deputy mayors. The mayor is a member of the municipal council from his position and heads the municipal office.

At Mukařov, the mayor is the person fully responsible for the performance of the Municipal Office (that employs 5 members administrative staff). He is assisted by two **Deputy mayors who are dealing with specific thematic areas.**

#### **Municipal council (Zastupitelstvo obce)**

The municipal council is the basic body of the municipality, which manages and administers it. All other bodies of the municipality are derived from the council. The municipal council is responsible for the development of the municipality and for the management of the municipal property. The council is elected in municipal, equal, direct and secret elections on the principle of comparable representation for a four-year term. The number of council members is determined by the size of the municipality, by the number of inhabitants of the municipality, and the decision of the council. The municipal council meets as needed, but at least once every three months. They are convened by the mayor of the municipality, who also chairs the meeting. These, unlike the municipal council, are public. An absolute majority of all members of the council is required for the approval of the resolution. The municipal council may set up committees as its subsidiary bodies, always setting up two obligatory ones - financial and control.

The Mukařov municipal council has 15 representatives.<sup>1</sup>

### **Municipal board (Rada obce)**

The municipal board is an executive body of a municipality established in these with more than a 15-member council according to the Law. It primarily carries out the tasks entrusted to it by the council, but part of its competencies is entrusted to it exclusively by Law. The members of the council, referred to as councillors, are elected from among the representatives of the council and the board is accountable to the council. The board is headed by the mayor, and one or more deputy mayors are elected. Its competencies include ensuring the management of the municipality, approving the budget, establishing commissions and departments of the municipal office. According to the Law, the board has 5–11 members (always an odd number), elected by the council - the members are the mayor, deputy mayor and other members of the council from the council.

The Mukařov municipal board has 5 members: Mayor, both Deputy Mayors and two members of the municipal council.<sup>2</sup>

### **Municipal committees** include:

- Finance Committee – has 7 members (2 representatives of the council + 5 non-representatives):
- Committee on Spatial Planning and Development – has 7 members (Mayor, 1st Deputy mayor, 1 councillor, 2 representatives of the council, 2 non-representatives)
- Cultural and Social Committee – has 9 members (2nd Mayor deputy, 1 councillor, 7 non-representatives)
- Committee on Public Order and Transport – has 7 members (3 representatives, 4 non-representatives)
- Committee on the Environment – has 8 members (3 representatives, 5 non-representatives)
- The advisory body of the board is its commissions.

### **Other expert groups supporting the work of the village**

- Commission for digitisation
- Commission for school campus development

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<sup>1</sup> <https://www.mukarov.cz/obecni-urad-a-samosprava/obec-a-jeji-organy/zastupitelstvo>

<sup>2</sup> <https://www.mukarov.cz/obecni-urad-a-samosprava/obec-a-jeji-organy/rada-obce>



### 1.2 What is a ‘village’ in Czechia?

Village (“vesnice” in Czech language) usually means a small municipality (typically below 3,000 inhabitants). Villages, just like other municipalities are ruled by the Act on Municipalities that defines the municipality as “a basic territorial self-governing community of citizens; it forms a territorial unit, which is defined by the boundary of the municipality.”

According to the legislation, the community can have its self-governance if its population is over 1,000, but for historical reasons there are many villages with their own municipal office even below 100 inhabitants. At the same time, reaching the number of 3,000 inhabitants does not mean automatically, that a village become a town, it has to be the will of the mayor who has to ask the parliament for the permission.

The body of the municipality is the municipal council and the municipal board. Externally, the village is represented by the mayor, who also heads the municipal office.

The municipality, within its independent competence, manages matters that are in its interest and in the interest of its citizens, unless they are managed by the region. At the same time, the municipal authority performs state administration within the scope of delegated powers to the extent provided by law. While the smallest municipalities have powers only in their own territory, while the larger ones have delegated powers within the entire administrative district.

Within its independent competence, each municipality is obliged to manage its own property, create and implement a budget, establish and abolish municipal organisations and municipal police, issue generally binding decrees, decide on a local referendum, name parts of municipalities and streets and other public spaces and grant and withdraw honorary citizenship.

Within the so-called delegated competence, the municipality participates in the performance of state administration. In the smallest municipalities, including Mukařov, the delegated competence is limited to the agenda of records of residents. Other agendas (eg. registry office, building authority, environmental protection, etc.) are at the locally competent authority of the municipality with extended powers, i.e. in Říčany.

The mayor is a one-member body of the municipality, which he/she represents externally. The mayor may be a person over 18 years of age and always must be a citizen of the Czech Republic. Mayor is elected by the municipal council, to which he/she is also responsible for the performance of his function and is represented by one or more deputy mayors. The mayor is a member of the municipal board from his position and heads the municipal office.

### 1.3 What smart is for Mukařov

Due to the proximity of Prague, Mukařov has a slightly different composition of the population than the average village in the Central Bohemian Region, where it belongs. People are more



educated and more prosperous, which is because most of the new inhabitants of Mukařov are people who came to Prague to work from more distant places. Instead of renting an apartment, they prefer to build or buy their own houses within driving distance to their workplace.

The inhabitants of Mukařov are therefore smart and well equipped, and the municipal infrastructure also meets increasingly stringent criteria. The citizens of Mukařov expect to have smart self-government that will offer them smart solutions that will make their lives as easy as possible.

However, modern technologies must increase the quality of life, i.e. save time, and at the same time facilitate social contacts, contribute to solving of problems and motivate to cooperation and sharing not only worries but also joy.



## II. CONTEXT

### 2.1 Context of the smart village strategy development

The initiation of the smart village strategy in Mukařov came from the mayor's office, represented by the deputy mayor Katerina Cadilova. The village became one of the individual village members of the Smart Village Network at its own initiation in 2019, as they were seeking opportunities for developing smart village solutions. Mukařov applied to become one of the pilot villages in the Smart Rural project through the smart village application published in the context of the project proposal and has been selected as one of the first five pilot villages.

### 2.2 Existing strategies & initiatives

#### Links to existing local strategies

##### The local plan of village modernisation<sup>3</sup>

Since 2010, Mukařov has been developing its strategic development document, called "[Místní plán obnovy vesnice](#)". This document comprises all ongoing and planned projects, and monitors achieved progress. It is divided into four parts: Utilities, Communication and transport, Public and other services, and Grounds.

It is a very comprehensive document that contains a list of projects spanning from the infrastructure to the education, culture and leisure activities. It describes individual projects and aims of specific topics. The plan is regularly updated (on a yearly basis). It serves as the main source preparation of the budget. The strategy consists of individual projects. Some of them are at the stage of a project aim only, and some are quite detailed.

The document contains a description of the current state of affairs in the municipality and projects of further development of the municipality with their short characteristic. The specific time and financial frameworks have to be approved by the Mukařov municipal council for the implementation of projects (Financial part) when planning a specific budget for a given year or budget perspectives are planned.

Individual development projects in the municipality are implemented in accordance with the binding Local Village Renewal Plan, which consists of a text part and a financial part. This is continuously updated document (at least once a year) in connection with the preparation of the municipality's budget and contains, in addition to planned and implemented projects, a brief description of the current situation in individual areas of public life in the municipality. The document also serves as a basis for negotiating subsidies.

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<sup>3</sup> <https://www.mukarov.cz/files/rozvoj-obce/mistni-plan-obnovy-vesnice-2020.pdf>

There is very little space devoted to smart technologies, broadband access or ICT/ digital development or activities. Broadband access is not a strong issue in Mukařov, since the last part of our village should get an optical connection by the end of this year. The digital agenda has been so far reduced to the launch of a new website of the village office (see <http://www.mukarov.cz>), but there are no really smart functions yet, only some references to automation of the village library (implemented in 2019), and the implementation of the WiFi4EU project, that should be finished by summer 2020.

The modernisation plan has rather been a list of project ideas than a structured and integrated strategy. Mukařov has also lacked any recent analysis (like SWOT) summarising in a comprehensive way challenges, needs, threats, strengths/ assets or opportunities. This Smart Village Strategy document and related action plans have the potential of bringing together ideas already included in the village modernisation plan in a more integrated, coherent and targeted way.

### Links to higher level (local, regional, national, European) strategies

#### Smart Rural area Strategy of the Central Bohemian Region<sup>4</sup>

The basic concept was originally focused primarily on the energy intensity of the life of the city or region, but now the concept is being promoted, using a "smart" approach to all areas of the life of the territory and its inhabitants. It is the comprehensive approach, using all the possibilities provided by current "smart" technologies in each area, that makes it possible to maximise the resulting effects for the citizens of the territory and for the quality of their lives. The concept of a "smart region" emphasises, in particular, the need to balance the use of available technical tools and procedures while maintaining the human dimension of the results of their work. The aims of Mukařov comply well with both priority fields of interest (e-Governance), and the strategic goals (Society 4.0) mentioned in the document.

The strategy Smart rural areas of the Central Bohemian Region had been developed within the framework of a project financed from the European Social Fund. The tools and procedures used in the preparation and in the document will be based on the SMART CITY / REGION concept. The project defines complex parameters of the quality of life of the region's citizens, which will then be monitored and evaluated and will also enable benchmarking to be carried out on a uniform basis. Project methodologies for data collection and evaluation, as well as the data itself, will enable the management and representatives of the region and municipalities to improve strategic decision-making.

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<sup>4</sup> Zpracování Strategie Chytrý venkov - Středočeský kraj - <https://www.kr-stredocesky.cz/web/regionalni-rozvoj/chytny-venkov>



### Smart Cities Methodology for preparation and implementation of the Smart concept at the level of cities, municipalities and regions<sup>5</sup>

The official methodology published by the Ministry of Regional Development presents the Smart City (SC) as a way of sustainable development to the organisation of cities, which relies on the use of modern technologies to improve the quality of life and streamline governance. The SC concept is a program change led by the political representation of the city and is a gradual process (not status) and simplifies the process of involving professionals and the general public through electronic tools. The application of this concept is especially suitable in the field of energy and transport (however, it can also be applied to the areas of, e.g. water management, waste management, e-government or crisis management) by deploying appropriate information and communication technologies (ICT).

#### Summary of methodology

The unified SC framework consists of 16 hierarchically and structurally arranged components, which can be divided into 4 consecutive higher units: organisational (city), community (citizen), infrastructure (technology) and the resulting (smart city). Each higher unit (A, B, C, D) consists of four hierarchically arranged components from basic to complex (1, 2, 3, 4), whose order is procedurally connected. The overall concept then represents the process for creating a smart city, and any project requiring public support should follow, if any relevant, all 16 components.

The methodology addresses mostly towns and much bigger municipalities than Mukařov, nevertheless, it gives a good guidance how to build the smart strategy step by step. In terms of the necessary infrastructure, the information and communication technology is relevant to the aims of our municipality.

### 2.3 Cooperation with other villages

Mukařov is cooperating with L.A.G. říčansko, the partnership of villages "Ladův kraj", including financing of projects, and participation at the microregional strategy. This partnership focuses mostly on local tourism – as the network of walking routes or cycling tracks.

The cooperation with other villages should stem from both formal and natural bindings. Mukařov is a member of two unions of municipalities: Ladův kraj and REGION JIH (SORJ). Their territories are overlapping, Ladův kraj is larger (24 municipalities, SORJ 18). While Ladův kraj aims at the local tourism and support to culture and small businesses, SORJ had been set up as a corporation to build the strategic infrastructure – gas and water pipelines. Mukařov is an active member of both, but due to its border location, its benefits are slightly diminished.

The natural binding has the historical roots. The strongest ones are expressed in the current self-government arrangement that unifies once independent villages Mukařov, Srbín, and

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<sup>5</sup> METODIKA SMART CITIES - <https://mmr.cz/cs/microsites/sc/metodiky/metodika-smart-cities>



Žernovka within one community. (All parts used to be independent during last century, moreover, in a short period, Mukařov was subordinated to Žernovka; also, another neighbouring village, Tehovec, used to be a part of Mukařov till the 90s.)

The other bindings stem from the fact that Mukařov is a seat of the post office that serve also next villages in the South – Tehovec, Svojetice, and Louňovice, the population of which doubles that of Mukařov.

Even larger is the group of municipalities using the primary school at Mukařov. They are six altogether, along with the above mentioned Tehovec, Svojetice, and Louňovice in the South, also Babice, Doubek, and Štřhlice from the North-West (with other approximately 2 000 inhabitants). Although the cooperation on the maintenance and development of the school campus has a long history – there were three sequential enlargements completed between 2009 and 2015, co-financed by all municipalities, the current situation is critical. The capacity of campus (limited not only by the number of classrooms, but also the capacity of the school canteen and – what is more serious – the sewage treatment plant) is exhausted, but the need is still growing. Seeking for a constructive way how to proceed and cooperate is currently the hottest topic of the inter-municipality communication. Paradoxically, in times when the school education has been provided totally on a remote basis for two months already.

Internationally, Mukařov is member of the Smart Village Network, that is a bottom-up initiative of villages, village groups and village associations across Europe.



### III. KEY CHARACTERISTICS OF MUKAŘOV

#### 2.1 Key characteristics of the village and rural area

Mukařov consists of three parts (former independent communities): Mukařov, Srbín and Žernovka. Although, Mukařov and Srbín have become more integrated due to the massive building development; the differences among the three parts are still visible, and Mukařov has no typical centre. Until the middle of 20th century, Mukařov was only a small hamlet around the church, parish office, and a school, less than one kilometre far from an important crossroad called Buda, where a pub and a blacksmith's shop had been located. The fields in between have been filled with villas continuously from the 1930s to the 1970s. The present municipal office is situated in the former school building, but there is no square with shops and a natural living functions. Srbín and Žernovka are much more traditional villages, but they are very quickly losing their characters, overflooded with new houses.

Specific needs have been identified to complete the sewage system (still missing for more than half of the village population), and the maintenance of the school that attends pupils not only from Mukařov but also six neighbouring villages. Due to the constant increase in population in this area, the school has been permanently dealing with the capacity problem. In 2020, the school will have to refuse some children, for the first time.

**Table 1: Closest towns:**

Name of closest town or city	Population of town or city	Distance between village and town/ city
Říčany	15 517	6 km
Kostelec nad Černými lesy	3 723	9 km
Mnichovice	3 861	8.5 km

Table 2: Key development indicator

Indicator	Value (Mukařov)	Value (nat. average)	Latest year	Comments/ source
Population Out of which migrants Out of which people with disabilities	2619 5,5 % 1,1 %	5,6 % 10,2 %		
Elderly dependency ratio %	40,9	27,8%	Jan 2020	Elderly dependency ratio % represents the ratio between the elderly population (aged 65 and over) and the working-age population (aged 15-64). Citizens of Mukařov aged 65 and over were 450, and the working-age population within range 15-64 were 1394 at the beginning of the year 2020. Source: Internal municipal population records
Unemployment rate %	2,0	2,0	Feb 2020	The general unemployment rate of 15–64-year-olds (the ratio of unemployed to economically active, i.e. the sum of employed and unemployed) adjusted for seasonal effects reached 2.0% in February 2020 and did not change year-on-year. The seasonally adjusted male unemployment rate reached 1.8%, and the female unemployment rate of 2.3%. Source: Czech Statistical Office
Employment rate %	74,9	74,9	Feb 2020	The seasonally adjusted employment rate of 15-64-year-olds (the share of the employed in this age group) reached 74.9% in February and decreased by 0.6 percentage points compared to February 2019. The employment rate of men after seasonal adjustment was 81.7%, the employment rate of women 67.8%. Source: Czech Statistical Office
Participation rate %	49,5	76,4	Mar 2019	Participation rate as the indicator of economic activity of the population is based on the age composition of the population and represents the labour force of the given territory, i.e. the share of the working-age population from the total population. In the village of Mukařov, the economically active population is 49.5%. The main factor that affects this final value is the share of three basic age groups of the population, respectively, a lower share of the productive population and, conversely, a higher share of the pre-productive and post-productive population. <a href="#">A demographic study of Mukařov</a>



Age structure:				
Share of population aged 0-14	22%	15%	2020	Internal municipal population records
Share of population aged 15-59	56%	61%	2020	
Share of population aged 60-65	5%	7%	2020	
Share of population aged 65+	18%	17%	2020	
Educational attainment:				
Share of workers with tertiary education	24,9			The representation of university students is highest in the younger age groups of productive age, with a decreasing age it has a decreasing tendency. The most significant is the difference in the age group 40-44 years, whose share in of total employment represents 16.2%, but only 24.1% of workers have a university degree. The highest proportion of university-educated people is among people of post-productive age. At the age of 65 and over, university students make up 32.6% of workers, which is, however, related to the nature of the job performed (at this age, people in professions less demanding on physical fitness, but with the required higher formal education often remain in employment). <a href="#">Analysis of employment and unemployment development in 2018 by the Ministry of Labor and Social Affairs of the Czech Republic</a>
Share of workers with primary education	4,3			

\* Migrants here mean 'foreign citizens'. The number on people with disabilities comes from the database of requests for the reduction of the fee for waste based on disabilities (no other records are available)



## 2.2 Key challenges

### 2.2.1 Improving e-skills

Although there is a high percentage of people with relatively high education and also the rate of the household with a broadband connection (or at least the access to it) is almost 100%, there is a need for practical improvement of knowledge of office applications and other IT tools that can help local people to get new jobs. It is important, especially for mothers and people 55+ who prefer part-time jobs or working from their homes. There are currently no e-skills courses available in the village. The municipality could support NGOs that can organise it – the facilities could be shared with the school or coordinate with the planned co-working hub.

### 2.2.2 Need for improved community spaces and activities

The village is lacking dedicated community spaces and activities for different groups and generations, especially teenagers, elderly people and newcomers:

- **Teenagers** are a very specific group. They tend to gather in their free time, but football and some other sports (floorball, Taekwondo) are currently the only available organised activities for this group, and they have no place to meet. One participative project is proposing a parkour ground that could also include a simple shelter. There is a question of involvement of the target group to planning and building that could prevent later vandalism and damage. A smart project management tool could be a clue.
- The social care and intervention are more or less covered by the special service, but there is a lack of natural social contacts for the **group of elderly citizens**. There is no seniors club at the moment, the newcomers are mostly young families, and if a new senior will settle here, he or she is isolated. The long-term residents also have minimal opportunities for social contacts. The Community centre has been offering regular programmes intended for this group (but not exclusively), and smart solutions can be an important added value. Despite their age, the seniors mostly have smart mobiles, and some use the computer, it would be possible to merge creative and educational activities with offering services that can monitor the health and overall wellbeing.
- Mukařov has a relatively wide scale of various free-time activities, but **newly settled citizens** can have problems to engage. Especially traditional associations as sports club or firemen brigade could communicate their invitations for new members via various smart solutions. The need for an additional gym has been discussed for several years, it is a part of the plan of enhancing the school campus. The present gym, almost 70 years old, is the property of the sports club TJ Sokol Mukařov. It hosts not only the sportsmen but also all pupils of the school during their PE lesson.

While there are three ongoing projects dealing with the central spaces of Mukařov, Srbín, and Žernovka; further planning/ refurbishment and financing would be needed to complete the community space projects.

The village is also lacking an appropriate hall for cultural events – the only larger one is in the gym that has not enough capacity neither for the physical activities. There is a vision of the building of a new cultural centre at the place of a former pub at Srbín, but the project is still in the very initial phase.

### 2.2.3 Integration of newcomers into the local community

An extremely fast increase in new houses and new inhabitants is one of the biggest challenges that Mukařov has been facing for the last two decades. Thanks to a new zoning plan, the future development should be under better control, but there is another problem – a substantial part of newcomers does not register a permanent address in the village as they usually possess other properties in Prague and can benefit from citizenship in the capital. Mukařov has much lower income from taxes than it could have if people who live and use the infrastructure here, would register. The better the municipal and community services will be, the higher percentage of newcomers we could be convinced to register. There should be a long-term informative campaign on the impacts and benefits of registering along with the continuous improvement of services.

### 2.2.4 Liveable & tidy village

Keeping the village tidy and ready for wellbeing is a never-ending process. The technical staff responsible for the cleaning and regular repairs can enhance the efficiency of its work with new technical facilities (we leased a new multifunctional cleaning machine recently). The citizens can contribute with the direct care for their environment or through the tools for reporting of different troubles. This tool is implemented in both the municipal website and the special tool for mass sending SMS and MMS that the municipality uses for direct informing the citizens. The improvement of spots could be reached by further participation of citizens, the overall mapping of citizens feeling could be reached by the implementation of feeling map concept.

### 2.2.5 Water

Lack of drinking water in some parts of the village (mostly Žernovka) should be solved by this summer with a newly built water pipeline. It will bring the water from a remote source – Želivka. Due to climate change and the permanent growth of housing, water retention is a big challenge, as well as the local flooding of specific parts of the village caused by torrent rains. There is a study describing the water regime of the landscape, covering the whole basin of Sázava river, but no consistent plan on how to prevent the further loss of water. Better information of the present state and measures – both municipal and individual – could help to

involve citizens and explain the importance of responsible behaviour in terms of water management.

### 2.2.6 Circular economy/waste management

Waste management is one of the main challenges of our era. Consumerist style of life and a growing number of inhabitants result in a continuous increase in the waste amount. And the costs of its disposal are growing as well – and will do much more if the recycling EU directive comes into effect. Mukařov is dependent on the garbage collecting company (several multinational companies control the market with these services in the Czech Republic), but the communication with individual citizens is within municipal responsibilities. Mukařov implemented the incentive waste management system last year that enables every citizen or owner of a building to monitor all his or her waste bins and get benefits if the overall waste production is low and the recyclable materials are separated.

Due to its individuality, the introduction of incentive system is time and work demanding, but when fully implemented and – possibly – incorporated to the personal payment accounts, it should help the municipality to fulfil the indicators set by the EU directive and the Czech Law (under preparation), and also to communicate with the citizens directly and effectively.

### 2.2.7 Improving transport connectivity

Transport is the Achilles heel of living in Mukařov. The main road is permanently overloaded not only with personal vehicles but also – and mainly – with the transit trucks. The bus connection is sufficient, but there is no dedicated route for the busses, so they are suffering from traffic jams similarly to individual travellers. Nevertheless, the municipality can subsidise particular bus connection to help school children and people from surrounding villages to commute to Mukařov, and it could also negotiate with other towns and villages on new connections or subsidies for the bus fare.

The optical cabling should cover the major part of the village, including Źernovka, that is insufficiently covered with a mobile signal. The online bus schedules are already provided by the bus company at the main bus stop, but the online traffic information could help to control the traffic jams and extraordinary situations. Online information on the bus connection and the traffic should be offered through the municipal information channels.

### 2.2.8 Cycling/walking routes

There is quite a rich network of cycling and walking routes around the village, but there are intended for tourism, not for regular commuting. Enhancing facilities for using bikes and better informing of citizens could attract this mean of transport.



### 2.2.9 Communication

Fast and clear communication is a clue to effective government. The aim of a new website (launched in September 2019), is to combine both topical news and comprehensive useful information for all groups of local citizens and visitors of the village. Reaching this aim is not easy as the amount of information that the municipality wants (and often must) share with the public is huge, but the trend is to make the posts as short as possible and to attract people more with pictures than with texts. The website is based on object-oriented programming and tailor-made content management system. Thanks to this, it is flexible and can continuously react to the needs of both municipality and the citizens. The website includes tools for reporting the problems and the registration for news mailing.

There are other communication tools – external messaging services, and the Facebook page, and a Facebook group. The greatest challenge is to identify the lengths and targeting of information to be spread and keep the response rate to any impetuses.

### 2.2.10 Public engagement in decision-making / public-private partnership

Ongoing voting for participative projects, dealing with public spaces and proposed directly by citizens, is the first attempt of the direct involvement of citizens to municipal projects. (There were only public discussions on specific projects before.) The response rate is not high, (less than 50 votes after one month), but it is a starting point. The next step, implementation, will be the first test of public participation in this mode. On the other hand, thanks to active civic associations, the rate of public involvement is high in general.

Public-private partnership is a new concept that should be examined. The implementation of participative projects should be an opportunity.

Cooperation is the momentum of any substantial and lasting progress. We need to cooperate among the deputies, among the municipality and its subsidiary organisations (primary and nursery schools), with and among associations, among the parts of the village, the long-term residents and newcomers, the young and the elderly, etc.

### 2.2.11 Need to improve education services

There are nursery and primary school available. The growing demand for these facilities resulted in a major enlargement of both these facilities in the last decade. Unfortunately, the school with the current capacity of 660 pupils is not large enough. There are plans for building a new primary school in the next village, but the financing of the project is not secured yet. The pressure on enrolling the maximum of pupils has negative consequences both to the quality of education, and the relations to the neighbouring villages that focus on their own project while the present school at Mukařov is overshadowed.



### 2.2.12 E-governance

The municipality office would like to provide as much as possible services online – starting with personal accounts dedicated to the payment of fees, and maintenance of personal agendas. We have to seek an optimal balance between the ready-made solutions that have been launched and are secured by the state administration, and own, tailor-made applications. We have been using services of a small local company that is able to tailor our web solutions, but there is still the question of security of personal data and other sensitive information, and the costs and effectiveness.

## 2.3 Main assets & opportunities

### 2.3.1 Growing population: newcomers & young people

The population of Mukařov has features typical for the satellite ring around the Czech capital – a substantially higher rate of children and youth, and a growing rate of seniors comparing with the national average. Also, the level of education is among the highest in the Czech Republic. Quite a lot of Mukařov's newcomers used to live in towns, their computer literacy is high and so are the expectations what the municipality should provide to its citizens. It is an asset and strength of the village that most inhabitants live here by their own choice and therefore, their identification with the village and its surroundings is high and positive.

Mukařov (except the historical cores of Srbín and Žernovka) is not a typical rural settlement, and it has been changing to a residential area for last more than 50 years. Even before, between the world wars, one could find single villas used as summer residences in the middle of fields. Since that time, Mukařov had been taken as a summer resort close to Prague. Many weekend houses have been changing to permanently inhabited houses now, but there is still quite a big community of people arriving only for weekends, as well as hikers and cyclists who stop in the local pub and enjoy nice routes through woods all around. They expect services and various facilities and can spend money and help the local economy if motivated to stay and buy.

### 2.3.2 Public participation & better engaging newcomers

The extremely fast increase in population in the last two decades has profiled two groups of citizens: long-term residents and newcomers. Despite of the efforts of the local association Mukarov-sko to bring together different groups (see below), the divide between the “old” and “new” is still visible, which is also caused by the changes brought by the massive building of new houses, and the consequent pressure on the infrastructure. On the other hand, the newcomers from a specific part of the village have their own association (Pod Budama), defending their local interests as maintenance of streets. The last local election motivated the formation of another association (SPOLEČNĚ je správně), that was attempting to present opposite opinions to the present governance model.



Generally speaking, Mukařov with its population about 2500 inhabitants and other approximately 500 non-residents who live here or are regularly arriving to relax, stands between a typical village where people know each other, spend their time together as friends and keep traditions of their ancestors, and the town, where the participation has to be motivated and supported either by the municipality, or dedicated groups. Up till now, both approaches have been combined and work in harmony, but the latter one will probably prevail in the future, and the municipality should be ready. The participative projects and assessment by public voting seem to be the first try of smart village solution in the participative field.

### 2.3.3 Centralised location on the historical crossroad

Although the church devoted to the Assumption of St Mary or the house of the Municipal office is usually taken as the centre of the village, its natural heart is situated at the crossroad of the “state” road No. 2. and the “district” road No. 113. The state road follows the route of the historical trail connecting the capital with Kutná Hora (a significant medieval town with silver mines). There used to be a pub, and a blacksmith’s workshop at the crossroad, later followed added with a police and petrol stations. This spot is lively up till now – there are several stores located here, as well as a nearby bus stop and restaurants. This crossroad hosts not only local people but also the passengers and commuters. The intensive traffic burdens but also brings benefits to the local economy that can be profitable for local citizens as well.

### 2.3.4 Local small businesses

There is one bigger grocery store and one supermarket, both run by nation-wide chains. The other stores and services are run by small businesses, mostly settled in the village. There is a growing number of retailers in the village, there are also several smaller workshops and one factory. They profit from the location of Mukařov at a busy crossroad, and a thoughtful promotion could strengthen their relations with the local community and have a win-win impact. The municipality has no specific policy for local businesses, but the smart strategy should introduce tools for targeted promotion and sharing of resources local resources. Also, the public-private partnership project could be included and used. The coronavirus crisis strengthened the remote services, which could be used also when the crisis is over.

### 2.3.5 Individual safety

Except for rare cases of burglary to family houses, the occurrence of crime is low. People feel safe, they move freely through both the village, and the surrounding countryside, and even the children can enjoy rides and walks without the constant supervision of the adults. On the other hand, we are living in the world where people expect that they will be able to be always connected, so the project of WiFi4EU that will cover all public spaces with free broadband internet, can increase the comfort and enhance the safety especially for families with children or seniors.



### 2.3.6 Public facilities & basic services

Mukařov has been a central settlement since the 70s, and even before, thanks to the school. There had been also the **post office and doctors' offices** here. These facilities serve the population of 7-10 thousand people from surrounding communities up till now. And there are some **new restaurants, beauty and wellness services, store with electronic, stationery, and household wares, and the social service counselling office**. Despite the fact, that the closest town is only 7 kilometres far, and the capital is reachable in 40 minutes, the growing population of Mukařov and neighbouring villages appreciate the facilities that diminish the need to travel outside.

The **village library** <https://mukarovska.knihovna.cz/> represents a traditional cultural institution. In 2016, it moved to larger and more comfortable premises and vacated its former place for the gallery. In 2019, an online library system was introduced, so the readers can search the catalogue and manage their loans from their homes. The library is trying to address new clients by events as public readings or contest for young readers.

The **gallery** <https://www.galerie-stara-skola.cz/> called STARÁ ŠKOLA is rather small, but it offers its space to both professional and amateur artists, and also to thematic exhibitions like nativity scenes before Christmas, or Easter decorations, as well as the important moments from the history or literature. The gallery is open three days in a week including Saturday, and the service is combined with the Czech POINT desk providing access to e-government services.

The **Cultural and Community Centre** is focusing on both regular, and single programmes and events, and educational courses of music, dance, or drama. The programmes include talk shows, creative workshops, and discussions with various experts – from psychologists to gardeners.

The growing demands for different fitness and dancing activities and performances show the need for a hall dedicated to this type of activities. (There is only one larger facility in the village, the gym owned by the sports club, that is occupied with sports training and school PE lessons.).

There are three ongoing projects dealing with the central spaces of Mukařov, Srbín, and Žernovka. At Mukařov, the central area (parking and park) in front of the municipality office should be revitalised. At Srbín, a former pub building should be rebuilt to a hall for different cultural activities and dance and fitness lessons, and the adjacent square should be revitalised. At Žernovka, a public space attached to the local pub should be returned into a place where local people will meet at barbecue and leisure sports.

### 2.3.7 Low unemployment rate

Prague and its adjacent areas have traditionally the lowest unemployment rate in the country. The impact of the coronavirus crisis can raise the unemployment numbers, but up till now, the job seekers are mostly those who have special needs – as mothers of young children, persons 55+ aged, or persons with special needs. Also, the economic status and buying power of the



local population is high, although their personal finances can be affected by mortgages for new houses. (But it is still cheaper to buy a family house here than an apartment in Prague.)

### 2.3.8 Natural resources and attractiveness

Mukařov lies in the massive belt of forests that had been surrounding the Czech capital since the early middle ages. While the fields in-between woods have been partly changing to residential areas, forests are keeping their extent and provide not only a shelter but also an important reservoir of water. The ongoing bark beetle calamity has been significantly changing the appearance and the structure of forests, but still, thanks to a dense network of hiking and cycling trails, and the closeness to the protected area of beech woods Voděradské bučiny, this area is still attractive for the short walks or the long-distance hiking or cycling.

Due to a worsening water quality majority of nearby ponds are not suitable for bathing, but there are at least two places in the neighbourhood that are worthwhile to visit during the bathing season – Jureček at Řičany, and Vyžlovský rybník at Vyžlovka. Mukařov is located in-between of them and can attract passengers with the offer of restaurants, bistros, and cafes.

### 2.3.9 Broadband connection

Mukařov has a stable broadband connection both VDSL and mobile. New optic fibre cabling in progress, covering Žernovka so far but approaching the other parts of the municipality. In summer 2020, the project WiFi4EU should be accomplished – it will provide the free high-quality WiFi coverage at 12 publicly accessible places (both inside and outside municipal buildings).

### 2.3.10 Public transport

Although the public transport is not among the significant assets of Mukařov as there is no railway connection, the frequency of buses connecting the village with the nearest town (and rail), and the capital (the end station of the underground) is rather high – there are at least 4 buses per hour in peaks, and 2 in the rest, the first bus departs at 4:19 in the morning and the last arrives at 0:33 in the night.

### 2.3.11 Enhanced municipal website

The website of Mukařov had been above average since 2004 when it was placed third at the contest of municipal web pages from the whole Czech Republic. The next generation was created in 2011 and served quite well till the "mobile-first" strategy has not prevailed and made necessary a substantial change of not only design but the whole web policy. The current web portal is a result of the cooperation of the expert group that had been set up after the local election in autumn 2018. The programming is done by the same company that is caring for the municipal website since its beginning, and heads of the Council and several municipal officers are responsible for the updates.

Citizens can not only read the news, find all necessary documents, or learn about the topics that they are interested in, but they can also announce possible troubles or subscribe for the mass mailing of news. For the first time, they can also vote on the portal for their favourites of the participative projects.

### 2.3.12 Waste management accounts

Since the end of 2019, all citizens or owners of houses at Mukařov have their personal waste management accounts. The system is operating in cooperation with an external provider (ISNO IT s.r.o.), it is accessible on the internet, secured by passwords, and it helps not only the citizens to control their production of waste and “pay as you throw” (PAYT), but it also helps to the municipality to check all the processes related to the garbage disposal.

### 2.3.13 Public address system (both sound and wireless)

A sound system that should address most of the village population, has been installed for the first time in the 90s. Since that time, it has been upgraded to wireless technology. It is still a very effective mean of informing local people about topical news. But due to the spread of houses and heavy traffic on the main road, the audibility is not perfect everywhere.

Since 2018, Mukařov is offering an alternative focused on mobile phones – an external portal [www.mobilnirozhlas.cz](http://www.mobilnirozhlas.cz) that provides both text and multimedia messaging to mobile phones. The rate of registration is currently about 25 % of the population.

### 2.3.14 Cloud accounting and finance management system

Since 2020, the accounting and finance management system has been upgraded to a new version, located at cloud storage. This upgrade enables multiuser policy management, as well as remote management and work. The next step should be the implementation of personal accounts for all citizens, that would be a pilot project for both the software provider (ALIS) and the municipality.

### 2.3.15 Microsoft software-based IT network

The municipal office has enhanced its network in early 2019. It is built on Microsoft platform, MS server 2019 is the core; the emails run at MS Exchange and individual workstations and laptops are equipped with the latest MS Office software. Sharepoint storage provides a safe space for sharing the data with the council deputies and other external co-workers. All deputies have also their alias e-mails that are forwarded to their personal mailboxes.

## 2.4 Key characteristics of the local community

In Mukařov, the **population has doubled in the last two decades**, the village changed from a settlement where all residents knew each other to a community with a big group of



newcomers. The latter has no natural relations to the local community. They invest their money to have a comfortable life in the countryside, but the reality is sometimes disappointing: They have to commute to work and fight with traffic jams, the infrastructure - water, sewage but also nursery and primary schools - is not sufficient, and they find that “local people and their animals are noisy”.

There are very modest experiences regarding the involvement of the community – the first attempts were made with the projects of the revitalisation of public spaces in the centre of Mukařov and Srbín; both realised through public meetings, without any specific technical tools. The need of public engagement was not felt urgent, as the public life is mostly organised by very active citizens groups mostly organised in three organisations:

- (1) The association Mukařov-sko: The association Mukařov-sko was set up in 2006 and has been concerned with merging the various local groups of residents (old and new/ passive and active). This association has been participating actively in the local policy and organising different public events and programmes (for families). For 12 years, it has been running maternity centre that was transferred into a Cultural and Community Center four years ago. The centre that offers more and more activities for all generations, including a social and Law consultancy. Members of Mukarov-sko are also involved in the village council and govern the village for more than 12 years. Its goal also was to harmonise two above mentioned camps of local citizens. The aim has been mostly reached, the members of this association won all the local election since 2007, and the events and programmes run as a part of the activities of the Cultural and Community Centre have growing echoes.
- (2) **The voluntary firemen**, who are dealing not only with the fire safety but also organising programmes for children or popular balls
- (3) TJ Sokol local sports club (mostly football players).

Representatives of these three groups traditionally act as deputies in the municipal council (Obecní zastupitelstvo). This model is typical for many small Czech communities. But the fast increase of the population is changing the environment and the challenge of involvement of the "general public" is getting pressing.

After the local election in October 2018, there are two additional groups presented in the municipal council: 3 deputies nominated by TOP09 (a nationwide political party), and 3 deputies nominated by a newly created association Společně.

**A new expert group was set up after the election**, with the aim of upgrading the municipal website (see also section on Management). The group consists of representatives of all elected groups, and experts on different topics related to online communication: web programming, online payment, big data. After a successful implementation of a new website in September 2019, based on object programming, and featured with functions as reporting different troubles

or mass mailing of news, the group continues its work and focuses on the development of the smart strategy for our village.

It is very probable that the recent developments related to the coronavirus pandemic will change the level of IT-literacy and working habits of a substantial number of local inhabitants – and that the online solutions will be better received and even desired. Parallel to the official municipal website, there is also a Facebook page and a quite lively Facebook group. It serves as a platform of discussion of all hot topics, but it is not a tool that could be used for a deep discussion of real problems and tasks.

The village Cultural and Community Centre has a broad group of clients (approximately 500 people) who can be reached either personally or via another web and Facebook page. There is still a big part of citizens who are not actively involved, and the municipality has only limited instrument how to reach them (besides the printed monthly newsletter).

The ongoing poll on "participative projects" – it means project proposed by citizens – could deliver a new need for a technical tool for project management with public participation.



## 2.5 SWOT Analysis

The main strengths, weaknesses, opportunities and threats (SWOT) set out above in details are summarised in the SWOT table below.

STRENGTH	WEAKNESSES
<ul style="list-style-type: none"> <li>• Centralised location on the historical crossroad</li> <li>• Good public facilities</li> <li>• Easily accessible job opportunities in nearby capital city Prague</li> <li>• Intensive bus connection to Říčany (closest railway station) and Prague</li> <li>• Well-educated inhabitants motivated to use new solutions</li> <li>• Lively Cultural and Community Centre (KKCM) with plenty of programmes for all ages, the Village Library, and Social Counselling</li> <li>• Village gallery</li> <li>• Active groups organising public events</li> <li>• Primary and nursery schools</li> <li>• Beautiful countryside surrounded by woods and ponds</li> </ul>	<ul style="list-style-type: none"> <li>• The local inhabitants are losing their farming and stonemason traditions</li> <li>• Most people are commuting to their work and fighting everyday traffic jams; the travelling takes much more time than it should</li> <li>• The main road is overloaded with transit traffic</li> <li>• There is no offer of accessible flats for young people or seniors</li> <li>• The local sources of water are limited</li> <li>• There are only one general practitioner and one dentist, no paediatrician; all children and newcomers must travel to doctors at least to the closest town</li> <li>• The capacity of the primary school is full, quality of the education is declining</li> <li>• There are facilities only for children, no choice for older people except for several courses in the KKCM. The slow progress of the implementation of the e-governance principles in the Czech Republic</li> </ul>
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>• Public participation: An ever-growing group of people of all generations around our village community centre and other associations (volunteer firemen brigade, sports club Sokol)</li> <li>• Participative projects – first round of voting for the project proposed by local citizens is in progress</li> <li>• Personal safety is one of the reasons why more and more people are building or buying houses here</li> <li>• Optical cabling is progressively growing</li> <li>• Preserving the quality of environment/ countryside</li> <li>• Water management study for retention of the rainwater</li> </ul>	<ul style="list-style-type: none"> <li>• Most of the village is dependent on the distance water pipe; quite a big part still misses the sewage system</li> <li>• Fields are changing to new streets of family houses where people are strangers among themselves.</li> <li>• The village is changing to a small town, but the facilities have low capacity More than half of the present population moved here in the last 20 years. They have no roots and connections here, while the old residents do not trust them.</li> </ul>

## IV. INTERVENTION LOGIC

### 3.1 Overall objective

The main objective of the smart strategy is to contribute to the enhancing of the living standard of Mukařov's citizens, through offering not only new services, but also new ways of communication, and enabling effective participation in public governance.

### 3.2 Specific & operational objectives in response to SWOT

The strategy should focus especially on the topics of e-governance, reduce of commuting to work, sustainable environmental management, and public participation on development of the municipality.

Smart solutions could improve the efficiency of the governance processes and open the office for online communication. Traffic congestions that are slowing the transport, cannot be easily diminished but the alternatives to daily commuting could help. And the quality of the environment could be enhanced through modern technologies, and citizens could be motivated for a responsible approach for it, especially in waste management and retaining of water. Citizens should be further involved to active participation in community projects.



**Table 3: Objectives in response to SWOT**

Specific objective (SO)	Strengths & opportunities	Challenges & threats	Planned actions
Improving the efficiency of the governance processes and opening the municipal office for online communication	Citizens have a high level of computer literacy. The municipality has a brand-new website based on an object-oriented and tailor-made system	The municipality uses various incompatible systems (accounting, waste management incentives, database of graves, mass-mailing and communication software); There is no generally accepted identification standard in the Czech Republic	Existing action: careful implementation of incentives for waste management, and the upgrade of the accounting system to a cloud solution Planned action: Searching for a merge of existing solutions, creation of own web-based portal; due to the need for a function identification, it is necessary to wait until the governmental e-identity project is fully operating
Active citizens' participation in community projects	First attempts of community planning of public spaces; first round of voting for participative projects. Long-term participation of citizens on public events and activities of the community centre	Lack of concise approach and management tools. The need for balance among three parts of the village	Existing action: Online voting for participative projects Planned action: Implementation of community planning management system
Reducing commuting of local inhabitants	We can build on the previous activities of the Cultural and Community Centre; address its clients from both parents and seniors' groups	A balance between demand and offer, space limits; if building a hub, other activities of the community centre would be reduced.	Existing action: infrastructure that enables citizens to work from their homes to avoid difficult commuting has been developed Planned: teaching local people - especially women with small children and 50+ persons - how to use modern technologies and return or stay on the labour market. The building of a co-working hub
Responsible approach to the environment	Smart waste management system, door-to-door collecting of separated plastics and paper Woods are surrounding the village – the potential for sustainable tourism; several own water wells – not self-sufficient but important sources.	Pressure of the garbage collecting companies (an increase of the costs); uncertainty of the government policy – the new waste management law Dependence on external water sources, low retention capacity of own ponds	Existing action: Incentive waste management system Planned action: Implementation of the study of water retention, public education



### 3.3 Smart solutions: actions, outputs and results

The strategy of the smart village has chosen four initial themes: e-governance, e-skills and facilities for remote working for local citizens, sustainable environmental management, and development of public participation.

The ideas and planned actions are either based on long-term priorities of the management of the municipality, were initiated within the expert group or during the discussion with clients of the community centre or expressed by respondents of a Facebook poll.

According to the overall vision:

- The strategy should result in enhancing the communication within the municipality, providing new services and opportunities on how to spend time effectively and participate in public governance.
- The citizens will be provided with a comfortable and reliable tool to manage their duties towards the municipality. The municipal office will enhance the efficiency of its procedures.
- The rate of people commuting to work will decrease as more citizens will be able to work from their homes or the coworking centre. They will not contribute to regular traffic jams; they will have more time for free-time activities and socialisation with their neighbours instead.
- The environmental awareness and overall responsibility will boost, the village and its beautiful surroundings will be cleaner and healthier.
- The public will be involved in ongoing projects effectively, with individual level of engagement and regularly updated information.

Key actions planned in order to achieve the objectives, their expected outcomes and results are outlined in the table below.



**Table 4: Key actions, results and outputs**

Operational objectives	Actions planned or taken	Expected results	Expected outputs
<b>SO1: Improved efficiency of the governance processes and opening the municipal office for online communication</b>			
1.1. Simplification and merging of agendas	Activity 1.1.1 – Review of present SW architecture	<ul style="list-style-type: none"> <li>• simplification of municipal agendas</li> <li>• merging of present software systems</li> <li>• elimination of doubled processing of data</li> <li>• clear software architecture</li> </ul>	<ul style="list-style-type: none"> <li>• review of communication between systems and agendas</li> </ul>
	Activity 1.1.2 – Design and implementation of tools necessary to direct communication with citizens	<ul style="list-style-type: none"> <li>• implementation of new means of communication with the public</li> <li>• lower administrative burden for the municipal officers</li> <li>• personalized information service</li> </ul>	<ul style="list-style-type: none"> <li>• software restructuring</li> <li>• introduction of personal accounts intended for payments of local fees</li> </ul>
1.2. Opening the municipal office for online communication	Activity 1.2.1 – Opening the municipal office for online communication with citizens	<ul style="list-style-type: none"> <li>• lower administrative burden for the municipal officers</li> <li>• personalized information service</li> </ul>	<ul style="list-style-type: none"> <li>• introduction of personal accounts intended for payments of local fees</li> <li>• implementation of new means of communication with the publi</li> </ul>
<b>SO2: Active citizens' participation in community projects</b>			
2.1 Mapping of public needs and feelings	Activity 2.1.1 Public surveys	<ul style="list-style-type: none"> <li>• better understanding of public opinion</li> <li>• building up of relations to stakeholders</li> <li>• targeting of the smart strategy</li> </ul>	<ul style="list-style-type: none"> <li>• mapping of public opinion</li> <li>• feeling map</li> <li>• opinions poll – priorities for the smart strategy</li> <li>• database of local stakeholders – both individuals and organisations</li> </ul>
2.2 Participative projects	Activity 2.2.1 Online voting for participative projects	<ul style="list-style-type: none"> <li>• activation of the public</li> </ul>	<ul style="list-style-type: none"> <li>• list of projects with potential to change the public space</li> </ul>
	Activity 2.2.2 Publicity of participative projects	<ul style="list-style-type: none"> <li>• activation of stakeholders</li> <li>• feedback to ongoing projects</li> </ul>	<ul style="list-style-type: none"> <li>• inventory of project proposals</li> <li>• involvement of general public to community matters</li> </ul>



Operational objectives	Actions planned or taken	Expected results	Expected outputs
2.3 Community dashboard	Activity 2.3.1 Introduction of the community dashboard tool for community project management	<ul style="list-style-type: none"> <li>enhancing the transparency of project management</li> <li>activation of stakeholders</li> <li>regular reporting of the project progress</li> </ul>	<ul style="list-style-type: none"> <li>implementation of the project management tool</li> <li>regular progress reports</li> </ul>
<b>SO3: Reducing commuting of local inhabitants</b>			
3.1 Improving digital infrastructure & skills	Activity 3.1.1 Continuous enhancement of infrastructure – optical cabling and free wi-fi	<ul style="list-style-type: none"> <li>accessible broadband for all citizens</li> </ul>	<ul style="list-style-type: none"> <li>100% broadband coverage</li> </ul>
	Activity 3.1.2 Teaching local people - especially women with small children and 50+ persons - how to use modern technologies and return or stay on the labour market	<ul style="list-style-type: none"> <li>organisation of courses of computer skills (in collaboration with specialised organisations, preferable with help of structural funds)</li> </ul>	<ul style="list-style-type: none"> <li>enhancing of computer literacy and preparedness for remote working</li> </ul>
3.2 Building of a co-working hub	Activity 3.2.1 Testing of a workplace in one room in the Cultural and Community Centre	<ul style="list-style-type: none"> <li>help to parents with return the labour market</li> </ul>	<ul style="list-style-type: none"> <li>ready-made space for office work especially for the parents of young children</li> <li>synergy of services for families</li> </ul>
<b>SO4: Responsible approach to the environment</b>			
4.1 Waste management	Activity 4.1.1 Further development of the incentive system of waste management	<ul style="list-style-type: none"> <li>cooperation with the provider of the PAYT system on the merging with the accounting system</li> <li>improved communication with the citizens</li> <li>reaching the recycling goals set by the European Commission</li> </ul>	<ul style="list-style-type: none"> <li>merging the PAYT and accounting systems</li> </ul>
4.2 Car pooling	Activity 4.2.1 Testing of a car-pooling facility / application	<ul style="list-style-type: none"> <li>help to people who commute to work save costs and the environment</li> </ul>	<ul style="list-style-type: none"> <li>application for sharing the cars for commuting to from Mukařov to Prague</li> </ul>



**Table 5: Indicative list of actions, timeline and resources**

<b>Actions planned or taken</b>	<b>Timeline</b>	<b>Necessary human capacity</b>	<b>Necessary technical capacity</b>
Activity 1.1.1 – Review of present SW architecture	March 2020 – June 2020	<ul style="list-style-type: none"> <li>• office staff, members of the committee for digitisation</li> </ul>	<ul style="list-style-type: none"> <li>• N/a</li> </ul>
Activity 1.1.2 – Design and implementation of tools necessary to direct communication with citizens	May 2020 – June 2021	<ul style="list-style-type: none"> <li>• members of the committee for digitisation</li> <li>• ALIS staff (accounting system provider)</li> <li>• ISNO IT staff (waste management system provider)</li> </ul>	<ul style="list-style-type: none"> <li>• broadband connection – optic fibres, wi-fi</li> </ul>
Activity 2.1.1 Public surveys	June 2020 – September 2020	<ul style="list-style-type: none"> <li>• members of the committee for digitisation</li> <li>• Pocitové mapy</li> <li>• local associations</li> </ul>	<ul style="list-style-type: none"> <li>• google</li> </ul>
Activity 2.2.1 Online voting for participative projects	March 2020 – May 2020	<ul style="list-style-type: none"> <li>• web solution provider</li> <li>• office staff</li> </ul>	<ul style="list-style-type: none"> <li>• tailor made module in the web page</li> </ul>
Activity 2.2.2 Publicity of participative projects	June 2020 – August 2020	<ul style="list-style-type: none"> <li>• office staff</li> </ul>	<ul style="list-style-type: none"> <li>• web editing system</li> <li>• Facebook</li> </ul>
Activity 2.3.1 Implementation Introduction of the community dashboard tool for community project management	July 2020 – December 2020	<ul style="list-style-type: none"> <li>• eConcept – provider of the service</li> <li>• office staff</li> <li>• proposers of the participative projects</li> <li>• general public</li> </ul>	<ul style="list-style-type: none"> <li>• community dashboard implementation</li> </ul>
Activity 3.1.1 Continuous enhancement of infrastructure – optical cabling and free wi-fi	March 2020 – December 2020	<ul style="list-style-type: none"> <li>• supplier of the connectivity</li> </ul>	<ul style="list-style-type: none"> <li>• electricity supply</li> </ul>
Activity 3.1.2 Teaching local people - especially women with small children and 50+ persons - how to use modern technologies and	September 2020 – June 2021	<ul style="list-style-type: none"> <li>• external delivery</li> <li>• target group – parents and persons 50+</li> </ul>	<ul style="list-style-type: none"> <li>• classroom for adult</li> </ul>



## Smart Village Strategy of Mukařov

Actions planned or taken	Timeline	Necessary human capacity	Necessary technical capacity
return or stay on the labour market			
Activity 3.2.1 Testing of a workplace in one room in the Cultural and Community Centre	October 2020 – ongoing	<ul style="list-style-type: none"> <li>office staff</li> </ul>	<ul style="list-style-type: none"> <li>equipment of two working spaces (2 laptops, printer+scanner, wifi router)</li> </ul>
Activity 4.1.1 Further development of the incentive system of waste management	ongoing	<ul style="list-style-type: none"> <li>office staff</li> <li>PAYT system provider</li> </ul>	<ul style="list-style-type: none"> <li>N/a</li> </ul>
Activity 4.2.1 Testing of a car-pooling facility / application	February 2021	<ul style="list-style-type: none"> <li>members of the Committee for Digitisation</li> </ul>	<ul style="list-style-type: none"> <li>application</li> </ul>



## V. MANAGEMENT AND MONITORING

Smart solutions of some kind have been discussed prior to the local election in 2018. The winning political alliances included among its priorities the modernisation of the municipal office and open communication with the citizens. At the same time, the other political alliances that succeeded in the election expressed similar aims. **A new working group** for the upgrade of the municipal website that has been set up at the very beginning of the work of the newly formed municipal council reflected the consensus, that the online communication is the clue.

After the successful launch of the new website, the Municipal board proposed to the Municipal council to **modify the working group to an expert committee dealing with smart solutions**. The committee members were named by the board, and although they were formerly nominated on a political basis (representing all three ruling associations), their profiles contributed to an excellent team with a wide scale of expertise and experiences.

This group, chaired by the deputy mayor, works on a voluntary basis, while the proposed solutions should be financed by the municipal budget.

For the time being, the financing is secured only by the municipal budget, and it is rather modest. At the time of the planning of the 2020 annual budget (during October/November 2019) no detailed development plans were at place; therefore, the allocated budget for the year 2020 is limited and mostly dedicated to webpage developments. The Smart Village Strategy should help to focus on specific solutions and plan both internal and possible external resources in the future.

The implementation of the strategy will be supervised by the expert committee, while the responsible body is the Municipal board and namely the vice mayor; the financial management must be controlled in collaboration with the finance committee of the Municipal council.

The successful accomplishment of the smart strategy will not be possible without cooperation with relevant organisations and the sharing of resources and experiences. There are specific platforms for potential cooperation, such as unions of villages or the partnership set up by the Local Action Group Říčansko.

Mukařov is closely cooperating with various organisations, and has set up interesting alliances. For instance, the municipality can rely on the services of a local company providing tailor-made web solutions of high-level quality. The providers of the accounting and PAYT system are also enthusiastic and open for more profound cooperation. The partners of Smart Rural 21 project are expected to provide specific support for the identification and implementation of relevant solutions..



## VI. STAKEHOLDER ENGAGEMENT IN STRATEGY DEVELOPMENT

### 6.1 Stakeholder engagement in strategy development

The public has been involved from the beginning through polls and discussions; in the next stage, a special community development management tool should be implemented. As the overall strategy is strongly oriented to the communication with local citizens and the general public, effective public involvement is crucial and substantial in each step made towards the smarter village.

While the strategy has been coordinated/discussed within the expert group, it is widely recognised that there should be a wider platform of public opinion representatives to review the ongoing outputs set up through a poll and discussions.

A Google document-based poll will be done in next weeks, and the "Community dashboard" facility is being considered.

The direct engagement with the community derives from previous contacts, discussions, and implementation of projects by both the municipality, and the associations, especially the Community centre.

### 6.2 Key channels of communication and awareness raising among citizens

Local citizens get information about strategy development in various ways, including:

- Monthly municipal newsletter printed and delivered to every household and digital version on the municipal website
- Expert committee meetings and its reports
- News on the municipal homepage website
- Social media channels

### 6.3 Planned actions to mobilise stakeholders

As presented above, one of the main objectives of the strategy is to better engage members of the community in the planning and implementation of the smart village strategy. Specific actions for engaging the community are currently being considered (such as the 'feelings map' or the community dashboard tool). These will be further elaborated in the action fiches complementing this strategy.



## Annex: Governance bodies and responsibilities

The mayor is:

- responsible for informing the public about the activities of the municipality;
- convenes and usually manages meetings of the municipal council and the municipal board;
- together with the deputy mayor or another councillor signs the legal regulations of the municipality and other documents;
- may suspend the execution of the resolution of the municipal council if it considers it to be incorrect;
- may request the Police of the Czech Republic to cooperate in securing local matters of public order;
- has the right to use the hanging badge of the municipality on essential occasions and civic ceremonies;
- is responsible for timely ordering a review of the municipality's finances for the past calendar year;
- with the consent of the director of the regional office, appoints and dismisses the secretary of the municipal office and determines his salary or performs other tasks stipulated by a special law.

The purpose of **municipal council** is decision-making on matters falling within the independent competence of the municipality, such as approval of the community development program; approval of the budget and final account; establishment of permanent and temporary monetary funds of the municipality; establishment and dissolution of contributory organisations and organisational units of the municipality; establishment and dissolution of legal entities; issuing generally binding decrees; election and removal of the mayor, deputy mayor and other members of the municipal council; determining the number of members of the municipal council; determining the functions for which the members of the municipal council will be released; establishment and abolition of committees, election and removal of their chairmen and members; establishment and abolition of municipal police; determination of the amount of remuneration to unreleased members of the council; deciding on the announcement of a local referendum; deciding on cooperation with other municipalities and on the form of this cooperation and last but not least is decision-making on the property of the municipality.

The agenda of the **municipal board** includes municipality operation processing as well as projects and large buildings management; proposals and updates of contracts, rents, fees; document preparation of investment projects, cooperation in the design of buildings and large-scale repairs; organisation of tenders and audition proceedings; negotiations with companies providing services to the municipality - waste management, operation of water



supply and sewerage, maintenance of roads, bus lines; supervision over the establishment and operation of the wastewater treatment plant, sewerage and water supply networks in the municipality, water resources, drinking water treatment plants; supervision of compliance with conditions for developers and builders in the division and development of land and others.

**Finance Committee** – has 7 members (2 representatives of the council + 5 non-representatives):

- Proposes and compiles of the municipality budget (in cooperation with other committees)
- Analyses of financial drawing, a compilation of the budget outlook, elaboration of the final account of the municipality, control of budget execution, proposals of budget adjustments, including preparation of written reports
- Controls of the management of contributory organisations, control of costs incurred for investment projects
- Checks the balance of finances on the accounts
- Controls the fees for services, dogs, rentals, public spaces (in cooperation with the control committee), etc.

**Audit Committee** – has 7 members (3 representatives of the council + 4 non-representatives)

- Controls the implementation of resolutions of the Council and the Board
- Monitors compliance with legal regulations by other committees and the municipal authority in the area of independent competence.
- Checks the correctness of the records of movable and immovable property of the District Office (in cooperation with the Financial Committee of the municipality)
- Monitors the handling of petitions, complaints, notifications and suggestions of citizens and organisations by individual municipal bodies
- Cooperates in the creation of generally binding decrees and regulations of the municipality proposes their changes, etc.

**Committee on Spatial Planning and Development** – has 7 members (Mayor, 1st Deputy mayor, 1 councillor, 2 representatives of the council, 2 non-representatives)

- Deals with construction and technical issues and spatial planning
- Participates in the preparation of construction projects and control of their implementation in cooperation with the construction supervision and management of the municipality
- Monitors the technical condition of buildings and roads
- Submits proposals for repairs of local roads and buildings owned by the municipality



- Proposes a connection to the technical infrastructure of the municipality and the transport network
- Manages the division of land, proposals for transfers, exchanges, purchase, sale of land owned by the municipality
- Issues the opinions of the municipality on the construction
- Participates in long-term and short-term planning of community development
- Discusses modifications and changes to spatial planning documentation
- Oversees compliance with the conditions of the municipal zoning plan

**School Committee** – has 7 members (2 representatives of the council, 2 non-representatives)

- Cooperates with schools and control of their activities
- Supervises of the quality of education in preschool and school facilities
- Oversees of non-investment costs at primary and nursery schools (together with the Finance Committee)
- Cooperates with the municipal office of surrounding municipalities in discussing contributions and the needs of schools
- Checks the order around the elementary and nursery schools
- Cultural and Social Committee – has 9 members (2nd Mayor deputy, 1 councillor, 7 non-representatives)
- Congratulations to the jubilees, welcoming new-born citizens, providing events for seniors
- Cultural and leisure events organised by the municipality, Municipal library
- Assistance in arranging cultural and sports events in the village - in cooperation with local NGOs
- Social area - monitoring the social situation of citizens, cooperation with the Mukařov Counselling Centre

**Committee on Public Order and Transport** – has 7 members (3 representatives, 4 non-representatives)

- Monitoring and incentives to maintain cleanliness and order in the village, playgrounds and rest areas, condition and maintenance of roads, including proposals for repairs
- Solving complaints about the coexistence of citizens in the village
- Control of occupation and rental of public spaces, long-term parking, stalls
- Compliance with municipal regulations



- Participation in local surveys

**Committee on the Environment** – has 8 members (3 representatives, 5 non-representatives)

- Cooperation with a forest manager in the maintenance of a municipal forest
- Statement on permission to cut down trees and shrubs
- Checking the state of public greenery, incentives for landscaping, proposals for new plantings, nature trails, resting places
- Participation in local surveys
- The advisory body of the board is its commissions.

