



**Republic of Macedonia
Municipality Makedonska Kamenica**

PROJECT APPRAISAL DOCUMENT

**Reconstruction, adaptation and extension of the
Cultural center “Romansa” in municipality
Makedonska Kamenica**

**World Bank
Municipal Services Improvement Project**



Skopje, March 2015

The Project's Appraisal Document was prepared by the Center for Promotion of Sustainable Agricultural Practices and Rural Development – CeProSARD, with the exception of Environmental Impact section prepared by the MSIP consultant Slavjanka Pejcinovska-Andonova



CeProSARD
Str. Orce Nikolov 172
1000 Skopje, R. Macedonia
Tel/fax: + 389 2 3061 391
<http://www.ceprosard.org.mk>

CeProSARD would like to express many thanks for their generous and immense contribution to:

WB MSIP team – PMU office, Skopje
Mr. Darko Mitevski, mayor of the municipality
Mr. Vasko Despodovski, manager of the Cultural center “Romansa”
All municipality staff that help in receiving quality data and information
All representatives from the municipality council who participate at the interviews
All citizens who participate at the focus group

Skopje, March 2015

TABLE OF CONTENTS

2.1 GENERAL INFORMATION ON THE MUNICIPALITY	9
2.2 DEMOGRAPHIC AND ECONOMIC PROFILE	11
2.2.1 Demographic profile	11
2.2.2 Economic profile	13
2.2.3. General description of the Project	15
2.4 CONCLUSION.....	20
3.1 SOCIOLOGICAL STUDY	22
3.1.1 Social diversity and gender	22
3.1.2 Institutions, rules and behavior	23
3.1.3 Stakeholders	24
3.1.4 Participation	25
3.1.5 Social risks.....	26
3.2 OTHER FIELDS OF CONSIDERATIONS	26
3.3 RESETTLEMENT ISSUES.....	27
3.4 CONCLUSION ON THE PROJECT POTENTIAL SUCCESS AND RECOMMENDATIONS.....	27
5.1 DESCRIPTION	38
5.2 ANALYSIS AND EVALUATION.....	42
5.3 CONCLUSION.....	44
6.1 INVESTMENT COSTS.....	ERROR! BOOKMARK NOT DEFINED.
6.2 CREDIT CAPACITY.....	ERROR! BOOKMARK NOT DEFINED.
6.3 LOAN REPAYMENT	ERROR! BOOKMARK NOT DEFINED.
6.4 ANALYSIS OF THE FINANCIAL FEASIBILITY OF THE PROJECT	ERROR! BOOKMARK NOT DEFINED.
6.4.1 Time horizon	Error! Bookmark not defined.
6.4.2 Limitations of the analysis.....	Error! Bookmark not defined.
6.4.3 Projection of operating cash flows	Error! Bookmark not defined.
6.4.4 Analysis.....	Error! Bookmark not defined.
6.4.5 Sensitivity analysis.....	Error! Bookmark not defined.
6.4.6 Conclusion	Error! Bookmark not defined.
7.1 GENERAL INFORMATION.....	ERROR! BOOKMARK NOT DEFINED.
7.1.1 Limitations and constraints of the study.....	Error! Bookmark not defined.
7.1.2 Scope	Error! Bookmark not defined.
7.2 IDENTIFICATION OF THE RELEVANT COSTS AND BENEFITS	ERROR! BOOKMARK NOT DEFINED.
7.2.1 Project costs	Error! Bookmark not defined.
7.2.2 Quantifiable benefits	Error! Bookmark not defined.
7.2.3 Unquantifiable benefits.....	Error! Bookmark not defined.
7.3 ECONOMIC VALUATION OF COSTS AND BENEFITS	ERROR! BOOKMARK NOT DEFINED.
7.3.1 Economic valuation of the costs	Error! Bookmark not defined.
7.3.2 Economic valuation of the benefits.....	Error! Bookmark not defined.
7.4 OTHER ASSUMPTIONS	ERROR! BOOKMARK NOT DEFINED.
7.5 VALUATION OF THE COSTS AND BENEFITS.....	ERROR! BOOKMARK NOT DEFINED.
7.6 RESULTS FROM THE COST - BENEFIT ANALYSIS.....	ERROR! BOOKMARK NOT DEFINED.
7.7 SENSITIVITY ANALYSIS.....	ERROR! BOOKMARK NOT DEFINED.
7.8 CONCLUSION.....	ERROR! BOOKMARK NOT DEFINED.
8.1 TECHNICAL AND IMPLEMENTATION RISKS FACTORS	ERROR! BOOKMARK NOT DEFINED.
8.2 FINANCIAL AND COST-BENEFIT ANALYSIS RISK FACTORS.....	ERROR! BOOKMARK NOT DEFINED.

Tables

Table 1 Local communities in municipality Makedonska Kamenica	10
Table 2 Main demographic indicators	11
Table 3 Decreasing of population in municipality Makedonska Kamenica	11
Table 4 Live births according to gender	12
Table 5 Population according to the age structure in 2013	12
Table 6 Population according to the gender in 2013	13
Table 7 Population according to ethnic affiliation in 2002	13
Table 8 Main macroeconomic indicators	13
Table 9 Active business subjects by sectors in 2013	14
Table 10 Activity of the population between 15 years and more in 2002	15
Table 11 Implemented infrastructure projects	19
Table 12 Phase Architecture	39
Table 13 Thermal transmittance coefficient "K"	40
Table 14 Energy balance of installed electricity	41
Table 15 Functional layout of the premises	43
Table 16 Project costs breakdown	Error! Bookmark not defined.
Table 17 Current operating revenues of the municipality Makedonska Kamenica	Error! Bookmark not defined.
Table 18 Calculation of the annual capital repayment	Error! Bookmark not defined.
Table 19 Calculation of the repayment of the loan	Error! Bookmark not defined.
Table 20 Calculation of energy savings – using air-air heat pump	Error! Bookmark not defined.
Table 21 Calculation of energy savings – using electricity boiler	Error! Bookmark not defined.
Table 22 Recurrent costs of the cultural center	Error! Bookmark not defined.
Table 23 NPV analysis (in Denar)	Error! Bookmark not defined.
Table 24 Sensitivity analysis	Error! Bookmark not defined.
Table 25 Economic valuation of the investment outlay (in Denar)	Error! Bookmark not defined.
Table 26 Economic valuation of the operations and maintenance costs (in Denar)	Error! Bookmark not defined.
Table 27 Economic valuation of the benefits (in Denar)	Error! Bookmark not defined.
Table 28 Summary of comparisons between the "without" and "with the project" scenarios	Error! Bookmark not defined.
Table 29 Cost-benefit analysis (in Denar)	Error! Bookmark not defined.
Table 30 Sensitivity analysis	Error! Bookmark not defined.

Figures

Figure 1 Location of municipality Makedonska Kamenica	9
Figure 2 Local communities within municipality Makedonska Kamenica.....	10
Figure 3 Location of the cultural center in the central city area of municipality Makedonska Kamenica	15
Figure 4 Northern facade of the Culture center	16
Figure 5 Details of the dilapidated and outdated exterior carpentry	17
Figure 6 Hall for performances and screenings	18
Figure 7 Library	17
Figure 8 Macro location of the cultural center in municipality Makedonska Kamenica	38
Figure 9 External facade of the building.....	32
Figure 10 Part of the building's interior.....	39
Figure 11 New-designed situation	42

1.



INTRODUCTION

The project assumes reconstruction, adaptation and extension of the existing building of the cultural center in Makedonska Kamenica. The cultural center has yard of 16,069m² and the existing building of 575m² and is located in the central city area. The building is easily accessible and has good infrastructural connection with roads, walkways and parking space. The project activities consider extension of the cultural center, construction of new reading room for the library, replacement of windows and doors, additional isolation of floor, new roof and facade, installation of heating system and procurement of equipment (furniture and audiovisual).

The existing facility consists of main entrance with entrance hall, hall for theater, cinema shows and events with an auditorium with capacity of 165 visitors, library and some other small offices. The basement under the stage is being used as mechanical room for the heating system. The exhibition space within the entrance hall and the library are open every day, while the other spaces are used only occasionally for theater performances, school plays, performances of folklore ensembles and similar events, but rarely. Due to the poor condition of the building it cannot be regularly used, so at the moment the cultural center has only one employee.

The project solution provides new design of the cultural center and according to the data from the Project Design – Phase Architecture, belongs to the group of lower buildings comprising basement, ground-floor and 1 floor, with total net area of 925.45m². The total amount of the investment will be covered with loan. The project cost is lower than the credit capacity of the municipality, which provides the loan repayment. The relevance of the project comes from the fact that the biggest part of the municipality citizens is directly influenced by negative implications of the very old building of the cultural center, in addition to lack of capacity for acceptance of all interested in cultural events.

The project is in accordance with the existing positive laws and regulations in the country. The project is part of the general urban plan (GUP) of municipality Makedonska Kamenica. It will contribute towards achieving the vision of the municipal administration for providing full coverage of infrastructure, educational and social facilities throughout the municipal territory. It can be inferred that the implementation of the project will undoubtedly contribute towards improvement of the quality of life and well-being of the citizens. Municipality has implemented various similar projects in the past, some of which in collaboration with international institutions, which implies that, is able to implement large construction projects such as this one.

The project is relevant to the development objective of the MSIP because it is considered both as cost-efficient and cost-effective, over a long run, and useful for social inclusion and cultural education, especially for children and promotion of good practices, for the overall population, by implementation of energy efficiency measures. No adverse social or environmental impacts were identified.

The cost-benefit analysis (CBA) showed the project is acceptable and desirable for implementation according to the methods used. In addition, the project will cause significant unquantifiable benefits such as improvement of the social and cultural life for citizens who live in municipality Makedonska Kamenica, capacity building considering activities provided for cultural education of the children and youths, promotion of the municipality in respect to its culture and tradition, as well as increasing municipal cooperation with the other municipalities in the foreign countries and the Republic of Macedonia. Aside from being a place of comfort, library can help children achieve educational success, as well as boost their drive to learn. The present condition of the cultural center does not allow performance of some cultural events and forces the citizens to search for alternatives such as providing the events on other locations such as sport halls or even in other municipalities, which ultimately results in spending more time and money by the municipality. At the same time, some parts of the cultural center are very old and cannot be used, i.e. the cinema. Once the project is implemented, the municipality will increase the revenues through the increased number of sold tickets and reallocate them to other municipal services. Extended capacity will not only reduce the municipal spending for organizing events on different locations instead of cultural center, but will attract more citizens to visit the manifestations, festivals and other events, thus enabling reallocation of the funds to other more beneficial, i.e. productive use. The implementation of the project is also expected to increase the social and cultural life of citizens due to the increased number of events.

2.



PROJECT DESCRIPTION

2.1 General Information on the municipality

Makedonska Kamenica is a relatively small rural municipality and it is situated in the northeastern part of the Republic of Macedonia. It covers a total area of 179.2km². According to its absolute altitude, it is included in the group of municipalities with values above average in the country. The settlements' areas are distributed on one part of south – eastern slopes of Osogovo Mountains, i.e. in the basin's region of Kamenicka and Crna River, the Lake Kalimanci and upper flow of the river. The municipality extends from north to south. It borders with municipality Kriva Palanka and Bulgaria on the north, municipality Delcevo on the east, municipality Vinica on the south and municipality Kocani on the west.

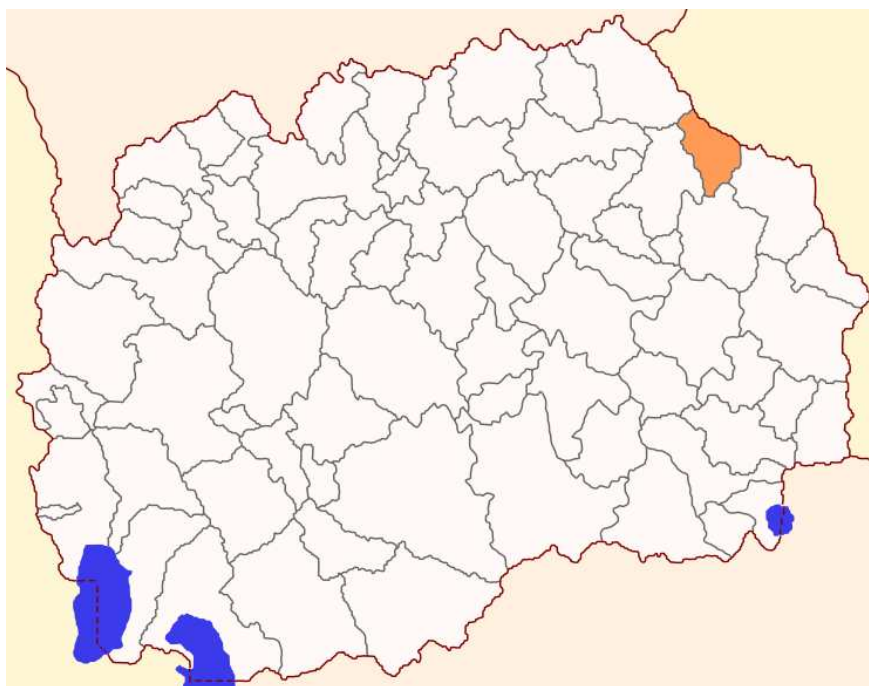


Figure 1 Location of municipality Makedonska Kamenica

Source: State Statistical Office

It has peripheral geographic position, but taking into consideration that the highway E-65 passes through the central settlement of Makedonska Kamenica, it has good traffic connections. It is only 32km from the border passage Arnautski Grob leading towards Bulgaria.

According to the geographical position, the climate in Makedonska Kamenica is mainly pleasant with moderate rainfall and temperature differences. The climate in the upper part is extremely mountainous and is characterized by long snowy winters and short fresh summers. Average annual temperature is 11 degrees Celsius. In Makedonska Kamenica and its surrounding rarely retain snow covers. The hottest are summer days, especially August, and the coldest days are in January. Spring is colder than the autumn.

The municipality consists of 9 local communities: 7 are lowland and 2 (Sasa and Cera) are hilly. The municipality consists of the following local communities, 8 rural: Todorovci, Lukovica, Kostin Dol, Kosevica, Mostica, Dulica, Cera and Sasa and the city Makedonska Kamenica as a municipal center.



Figure 2 Local communities within municipality Makedonska Kamenica
Source: State Statistical Office

Population density is 45 citizens per 1km², which is significantly more than a half on the country's average. The number of inhabitants has been increased for 117 (1.6%) since 1994. In the center settlement of Makedonska Kamenica live 5,147 citizens, or 63.5% of the total population in the municipality.

Table 1 Local communities in municipality Makedonska Kamenica

#	Local communities	Absolute attitude	Area (km ²)	Inhabitants (in 000)		Agrarian structure (ha)			
				1994	2002	Agricultural land	Pastures	Forests	Total
Municipality M. Kamenica		794	179.2	7,993	8,110	4,668	4,149	8,406	17,223
1	Dulica	700	23.6	409	305	751	396	963	2,110
2	Kosevica	865	14.8	318	240	434	346	605	1,385
3	Kostin Dol	990	13.6	152	116	305	263	704	1,272
4	Lukovica	600	8.0	301	269	364	164	244	772
5	M.Kamenica	540	14.3	4,283	5,147	396	138	742	1,276
6	Moshtica	875	24.0	600	543	571	446	1,278	2,295
7	Sasa	1,020	46.1	1,176	876	961	1,782	2,565	5,308
8	Todorovci	620	6.9	237	235	196	82	181	459
9	Cera	940	27.9	517	379	690	532	1,124	2,346

Source: Popovski, V., Selmani, A. and Panov, N. (2006). Municipalities in the Republic of Macedonia. Local Government of the Republic of Macedonia and its Territory Division

The most prevalent in the agrarian structure are the forests with 8,406ha, cultivated agrarian soil with 4,668ha and pastures with 4,149ha. One of the municipality landmarks is the lake Kalimanci and the central local community of Makedonska Kamenica is situated in so-called Kamenica's Bay, the biggest one of this artificial accumulation. The municipality is one of the best mining places of the Republic of Macedonia. Referring to the economic subjects, there is the mine Sasa for production of ore and concentrate of zinc and lead. After 2005, a reconstruction and modernization of the equipment in the mine Sasa was provided by an international investor. Today, it processes about 700,000 tons ore per year and produces about 70,000 tons lead and zinc concentrated suitable according to the world standards. The main is the mayor source for employment on the territory of municipality Makedonska Kamenica. Currently, there work more than 500 workers.

2.2 Demographic and economic profile

2.2.1 Demographic profile

According to the last revised Census of population and households (2005) for 2002 the number of inhabitants who live in municipality Makedonska Kamenica is 8,110 and 2,437 resident households, with an average of 3.3 members per household. In 2013, the total number of population has decreased to 7,709 inhabitants. The decreasing of population is due to the decreasing of live births and rate of natural increase per 1000 inhabitants. A statistical data on the population and migration in municipality Makedonska Kamenica, East Region and the Republic of Macedonia are shown in the table below.

Table 2 Main demographic indicators

Demography indicators	Municipality Makedonska Kamenica	East Region	Republic of Macedonia
Demography - according to the last revised census data for 2002			
Total population	8,110	181,858	2,022,547
Natural increase per 1000 inhabitants	5.3	1.1	3.1
Live births per 1000 inhabitants	13.1	10.2	11.9
Total households	2,437	57,896	564,296
Average households members	3.3	3.1	3.6
Total dwellings	2,971	72,248	698,143
Total immigrated citizens	52	728	11,861
Total emigrated citizens	74	924	11,219
Demography - State Statistical Office estimates for 2013			
Total population	7,709	177,988	2,065,769
Natural increase per 1000 inhabitants	-1.0	-1.7	1.9
Live births per 1000 inhabitants	6.1	8.6	11.2
Total immigrated citizens	26	705	8,405
Total emigrated citizens	57	957	8,860

Source: State Statistical Office, MAKStat database, 2013; revised Census of population and households, 2005

The rates of population movement considering natural growth, births and migrations per year (from 2001 to 2013) of municipality Makedonska Kamenica are shown in the table below. Hence, the analysis shows negative average rates for all three indicators of population growth and movement through the years. In addition, an average natural growth rate is -0.6, average birth rate is -0.4 and average migration rate is -0.1. The average values of population movement in the municipality are quite similar with the overall trend of natural movement of population in the rural areas in the country.

Table 3 Decreasing of population in municipality Makedonska Kamenica

Year	Natural growth rate	Birth rate	Migration rate
2001	-3.0	-2.5	-1.4
2002	2.1	4.1	2.1
2003	-2.1	-3.1	1.2
2004	-2.3	-1.8	-8.9
2005	0.8	-0.7	1.2
2006	0.8	0.8	3.2
2007	-1.9	0.2	1.5
2008	0.9	0.9	-2.3
2009	-0.2	-0.8	0.0
2010	-0.1	0.6	1.7
2011	-2.0	-1.1	-3.6
2012	1.5	0.7	2.6
2013	-1.6	-2.7	2.0
Average	-0.6	-0.4	-0.1

Source: State Statistical Office, MAKStat database

Live births according to gender in municipality Makedonska Kamenica, East region and the Republic of Macedonia are shown in the table below.

Table 4 Live births according to gender

Year	Municipality Makedonska Kamenica			East Region			Republic of Macedonia		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2009	36	32	68	970	830	1,800	12,340	11,344	23,684
2010	38	34	72	913	865	1,778	12,631	11,665	24,296
2011	33	30	63	808	759	1,567	11,752	11,018	22,770
2012	36	32	68	817	839	1,656	12,243	11,325	23,568
2013	25	22	47	843	697	1,540	12,093	11,045	23,138
Average	33	30	64	870	798	1,668	12,212	11,279	23,491

Source: State Statistical Office, MAKStat database

The analysis of live births through years in municipality Makedonska Kamenica shows bigger number of male babies than females which is similar to the live births in the East region and the overall country. In addition, according to the State Statistical Office data, there is a decreasing of live births through years which is the same in East region and the Republic of Macedonia. This indicates aging of the population in the country, especially in the smaller local communities.

The age distribution and its share in the total population in municipality Makedonska Kamenica, East Region and the Republic of Macedonia in 2013 are shown in the following table.

Table 5 Population according to the age structure in 2013

Repartition	Municipality Makedonska Kamenica		East Region		Republic of Macedonia	
	Number	Share	Number	Share	Number	Share
0	56	0.7	1,528	0.9	22,913	1.1
1-4	270	3.5	6,743	3.8	93,301	4.5
5-9	327	4.2	8,275	4.6	112,351	5.4
10-14	454	5.9	9,339	5.2	119,851	5.8
15-19	503	6.5	10,365	5.8	137,385	6.7
20-24	592	7.7	12,572	7.1	155,698	7.5
25-29	586	7.6	13,647	7.7	164,394	8.0
30-34	616	8.0	13,617	7.7	162,384	7.9
35-39	595	7.7	12,814	7.2	153,564	7.4
40-44	630	8.2	12,268	6.9	146,353	7.1
45-49	608	7.9	13,114	7.4	147,433	7.1
50-54	593	7.7	13,710	7.7	141,756	6.9
55-59	562	7.3	13,537	7.6	134,995	6.5
60-64	439	5.7	11,898	6.7	117,663	5.7
65-69	355	4.6	8,923	5.0	87,896	4.3
70-74	228	3.0	6,617	3.7	70,067	3.4
75-79	178	2.3	5,121	2.9	53,549	2.6
80 and more	116	1.5	3,894	2.2	43,857	2.1
unknown	1	0.0	6	0.0	359	0.0
Total	7,709	100	177,988	100	2,065,769	100

Source: State Statistical Office, MAKStat database 2013

The following table gives an overview of a gender structure in municipality Makedonska Kamenica compared to the East Region and the Republic of Macedonia. The data shows bigger number of male population in municipality Makedonska Kamenica, while in the East region and the country gender repartition is almost the same, with a slight increase of male population over the female population.

Table 6 Population according to the gender in 2013

Gender	Municipality Makedonska Kamenica		East Region		Republic of Macedonia	
	Number	Share	Number	Share	Number	Share
Male	4,027	52.2	89,996	50.6	1,034,841	50.1
Female	3,682	47.8	87,992	49.4	1,030,928	49.9
Total	7,709	100	177,988	100	2,065,769	100

Source: State Statistical Office, MAKStat database 2013

Most of the population in municipality Makedonska Kamenica is from Macedonian nationality, 99.3%. From the other minorities there are: Serb 0.3%, Roma with 0.2% and others with 0.1%. The minority repartition is shown in the table below. Macedonian population prevails in the East region as well with 92.4%, while the Roma population takes the second place with 3.8%.

Table 7 Population according to ethnic affiliation in 2002

Repartition	Municipality Makedonska Kamenica		East Region		Republic of Macedonia	
	Number	Share	Number	Share	Number	Share
Macedonians	8,055	99.3	168,046	92.4	1,297,981	64.2
Albanians	-	-	20	0.0	509,083	25.2
Turks	-	-	3,163	1.7	77,959	3.9
Roma	14	0.2	6,929	3.8	53,879	2.7
Vlachos	-	-	2,535	1.4	9,695	0.5
Serb	24	0.3	594	0.3	35,939	1.8
Bosnians	8	0.1	25	0.0	17,018	0.8
Others	9	0.1	546	0.3	20,993	1.0
Total	8,110	100	181,858	100	2,022,547	100

Source: State Statistical Office, revised Census of population and households, 2005

2.2.2 Economic profile

Considering the State Statistical Office data for 2013, the following table presents infrastructure, education and economic data for municipality Makedonska Kamenica, East Region and the Republic of Macedonia.

Table 8 Main macroeconomic indicators

Macroeconomic indicators	Unit	Year	Municipality Makedonska Kamenica	East Region	Republic of Macedonia
Infrastructure					
Local roads	km	2013	113	1,005	9,471
Health and social institutions	Number	2013	6	253	3,315
Transport and storage institutions	Number	2013	27	655	6,095
Water supply, sewage disposal and waste management institutions	Number	2013	2	33	306
Education					
Educational institutions	Number	2013	2	77	1,025
Children that attend primary school	Number	2013/2014	627	14,173	191,051
Children that attend secondary school	Number	2013/2014	214	6,667	86,418
Population literacy at age 10 and more	Number	2002	6,766	131,787	1,693,044
Women literacy at age 10 and more	Number	2002	3,092	63,705	829,755
Economy					
Active business subjects	Number	2013	191	5,526	71,290
GDP per capita	MKD	2012	-	236,025	226,440

Source: State Statistical Office, MAKStat database, 2013; revised Census of population and households, 2005

In municipality Makedonska Kamenica there are 6 health and social institutions, 27 transport and storage institutions and 2 water supply and sewage management institutions. The transport in the municipality is organized through 113km local roads (asphalt 72 km and macadam 41 km). There are 2 educational institutions, out of which there is 1 primary and 1 secondary school. In 2013/2014 study year there were 627 children in the primary and 214 children in the secondary school. At the municipality operate 191 business subjects, while the GDP per capita is calculated on a regional level, since there are no available data on the municipality contribution.

In the following table is given a distribution of the economic activities in the municipality considering the number of active business subjects by sectors in 2013.

Table 9 Active business subjects by sectors in 2013

Sector	Municipality M. Kamenica		East Region		Republic of Macedonia	
	Number	Share	Number	Share	Number	Share
Agriculture, forestry and fishing	6	3.1	427	7.5	2,866	4.0
Mining and quarrying	1	0.5	18	0.3	164	0.2
Manufacturing	19	9.9	924	16.3	7,918	11.1
Electricity, gas, steam and air conditioning supply	1	0.5	8	0.1	132	0.2
Water supply, sewerage, waste management and remediation activities	2	1.0	35	0.6	306	0.4
Construction	11	5.8	216	3.8	4,322	6.1
Wholesale and retail trade; repair of motor vehicles and motorcycles	72	37.7	2,048	36.1	25,429	35.7
Transportation and storage	27	14.1	433	7.6	6,095	8.5
Accommodation and food service activities	19	9.9	354	6.2	4,482	6.3
Information and communication	4	2.1	66	1.2	1,446	2.0
Financial and insurance activities	-	-	10	0.2	390	0.5
Real estate activities	2	1.0	32	0.6	485	0.7
Professional, scientific and technical activities	8	4.2	352	6.2	5,817	8.2
Administrative and support service activities	-	-	54	1.0	1,514	2.1
Public administration and defense; compulsory social security	1	0.5	23	0.4	258	0.4
Education	2	1.0	83	1.5	1,025	1.4
Human health and social work activities	6	3.1	297	5.2	3,315	4.7
Arts, entertainment and recreation	3	1.6	80	1.4	1,179	1.7
Other service activities	7	3.7	211	3.7	4,147	5.8
Total	191	100	5,671	100	71,290	100

Source: State Statistical Office, MAKStat database 2013

According to State Statistical Office there are 191 active business subjects in municipality Makedonska Kamenica in 2013. The most important and dominant sectors are Wholesale and retail trade; repair of motor vehicles and motorcycles with 35.7%, manufacturing industry with 11.1% and transportation and storage with 8.5%. From the other sectors, very important are professional, scientific and technical activities together with accommodation and food service activities.

According to the last revised Census data for 2002 the total number of population in age of 15 years and over (working age population) in municipality Makedonska Kamenica is 6,381; economically active people are 3,105, of whom 71.0% are employed, while 29.0% are still looking for a job. The municipality has 3,276 economically inactive persons. Considering gender, there are 20.4% women less employed than men.

The activity rate is a little less than the one in East Region and a little more than the one in the country. The employment rate in municipality Makedonska Kamenica in 2002 is bigger than the rate in the East region and in Republic of Macedonia.

Table 10 Activity of the population between 15 years and more in 2002

Population activity		Municipality Makedonska Kamenica		East Region		Republic of Macedonia	
		Number	Share	Number	Share	Number	Share
Economically active	All	3,105	48.7	74,875	51.0	743,676	47.2
	Employed	2,205	71.0	49,602	66.2	460,544	61.9
	Employed female	877	39.8	20,650	41.6	174,974	38.0
	Unemployed	900	29.0	25,273	33.8	283,132	38.1
Economically inactive		3,276	51.3	71,809	49.0	833,325	52.8
Activity rate		48.7		51.0		47.2	
Employment rate		34.6		33.8		29.2	
Unemployment rate		29.0		33.8		38.1	

Source: State Statistical Office, revised Census of population and households, 2005

2.2.3. General description of the Project

The project comprises reconstruction, adaptation and extension of the building of the cultural center in Makedonska Kamenica. The building was constructed in the 1950s and currently is in very poor condition due to dilapidation and neglect. So far, the building has not been reconstructed, has significant deficiencies regarding provision of basic conditions for the users (especially in heating season). In addition, in terms of content and equipment does not provide the basic necessary functions and therefore does not meet the needs of the population. The goal of the project is complete renovation of the existing building - its interior and the outer envelope, construction of the extension, adaptation, enrichment with new contents as required with the project program and in accordance with the needs of the local population. For the purposes of the extension, interventions for improvement of the construction system towards provision of proper structural stability are planned. The proposed measures for improvement of the energy performances of the building will provide improved energy efficiency and comfort for the occupants.

The building of the cultural center is located in the center of Makedonska Kamenica, in immediate surroundings of greenery and number of public spaces and buildings: the municipal building, high school, city square, the church "Assumption of the Holly Virgin", etc. The renewed and operational building will enrich the city center as a whole. The location of the building is presented on the Figure 3.



Figure 3 Location of the cultural center in the central city area of municipality Makedonska Kamenica

Source: <http://gis.katastar.gov.mk/arec>

Current situation

The cultural center is the only building in Makedonska Kamenica that comprises such contents in one facility in the central city area. The building is easily accessible and has good infrastructural connection with roads, walkways and parking space.

The existing facility consists of main entrance with entrance hall, hall for theater, cinema screenings and performances with an auditorium with capacity of 165 visitors (technical design – Bill of Quantities), wardrobes that have been readapted in library, official entrance readapted for the library, technical entrance for the set directly to the stage, toilets, two offices and screening box on the first floor connected with portable removable ladders. The basement under the stage is being used as mechanical room for the heating system.

The exhibition space within the entrance hall and the library are open every day, while the other spaces are being used only occasionally for theater performances, school plays, performances of folklore ensembles and similar events, but rarely. Due to the poor condition of the building it cannot be regularly used and provide sustainability, so at the moment the cultural center has only one employee. In the following figure is shown the view of the northern facade of the culture center (the main entrance) and the immediate surroundings of the building.



Figure 4 Northern facade of the Culture center

Source: CeProSARD archive

The cultural center was built in 1950s as ground level facility with structure of reinforced concrete, roof floor construction system “Avramenko” and walls of solid brick. The existing building has an area of 575m² (Source: <http://gis.katastar.gov.mk/arec>). With the planned extension, reconstruction and adaptation, the net area of the building will increase to 925.46m². These interventions will improve the overall building's condition and its energy performances, but as even more important - improved comfort for the users and in terms of content, appropriate modern public space for the population. This will significantly increase its operation, and ensure better sustainability of the existing building. Thus, the building will obtain space for events with an increased capacity of the audience with 247 seats (Technical design – Bill of Quantities); new library and reading-room located on the first floor (extension area); additional multifunctional space for practice of the folklore music ensembles, conferences and seminars on the first floor; appropriate utility and reception areas; appropriately designed bathrooms etc.

The heating system of the existing facility is with boiler that uses oil, placed in mechanical room in the basement. Because the system is outdated, irregularly maintained and considerably inefficient, it is not in use. Currently, the

cultural center is not heated, except some rooms when necessary, i.e. library. The heating is performed by electricity heaters. The weak energy performances of the building particularly evident at the exterior carpentry/ windows, additionally contribute to this inefficiency.



Figure 5 Details of the dilapidated and outdated exterior carpentry

Source: CeProSARD archive

In accordance with the technical documentation for reconstruction, adaptation and extension of the building (Project design – Thermo-technical Design), and towards improvement of the energy characteristics, it is foreseen replacement of the entire heating system with new energy efficient consisted of fan coil units with integrated thermostat that are planned also for cooling. This system will meet the requirements for heating and cooling of the overall area including the extension. Moreover, thermal insulation of the roof, facade walls and the floors is planned, as well as replacement of the entire carpentry/ doors and windows with new (Technical design – Phase Architecture) that will additionally improve the energy performance of the building. In the following figures is represented a current condition of the interior spaces that are among the most important and most exploited - the hall for performances and screenings and the library.



Figure 6 Hall for performances and screenings

Source: CeProSARD archive



Figure 7 Library

Source: CeProSARD archive

Municipality Makedonska Kamenica has tried to find opportunities for funding the reconstruction, adaptation and the extension of the building in the past, towards its revitalization. For that purpose in 2012 complete technical

documentation has been prepared and construction permit was issued. Due to the impossibility to provide the necessary funds for the construction works from its own sources, the municipality requested funds from the MSIP project.

Expected situation: Assessment of alternatives

In assessing the future situation in the municipality, the following possible solutions have been considered as significant in order to address the problems of the existing building of the Culture center.

First proposed solution involves not taking any action to improve the current situation of the cultural center, so called zero-situation. There will be lack of opportunities for realization of additional activities, very weak cultural and entertaining activity, lack of adequate space for realization of the educational activities that are currently being carried out by the school within the curricular or the extracurricular activities. Moreover, the poor heating conditions of the cultural center can influence on the health of the final beneficiaries, especially the children that use the facility within the school activities. There is also a tendency for some of the events that should potentially be organized in the municipality, to be redirected and organized in appropriate facilities in the neighboring municipalities and local communities. Additional cutback of the cultural events organized in cooperation with other municipalities and countries will also occur. As these events cannot receive the necessary infrastructural support, the level of cultural exchange will continue to decrease. This solution will further contribute to the emigration of the young and active population. This is unfavorable solution and the municipality does not consider it as a possible future solution.

The second possible solution assumes improvement of the condition of the existing building by renovation and implementation of measures for energy efficiency. This is the fastest solution for putting the cultural center into operation and providing the necessary comfort for the users at the same time. However, if taken into consideration that the building is more than half a century old, this intervention would not entirely meet the modern requirements in this area. These requirements imply introduction of new standards for spaces that involve appropriate infrastructural support as well as technologies and equipment. With a partial intervention there is a risk that the building remains insufficiently exploited, and the reallocation of certain events and educational activities that require organization in appropriate facilities will continue in other spaces or even out of the municipality. At the moment, there is no other facility in Makedonska Kamenica appropriate for theater or similar performances, cinema screenings, conferences and seminars, there is no library and reading-room, etc.

The third possible solution involves finding a mode that will meet the basic needs of the population, especially the young people in the area of culture. The modernization of the facility, increasing its capacity and enrichment with the necessary content, will contribute to the development of culture, education and science in municipality Makedonska Kamenica. In addition, this will signify greater promotion of the municipality, especially if taken into consideration the ongoing activities in this area, the cooperation and the international cultural exchange of the existing clubs and sections with organizations from other countries and the possibility to support the organization of the already established manifestations and festivals. A modern facility with enriched potential of contents and program can significantly improve its sustainability in cooperation with local individuals and the business sector.

After the analysis of all proposed solutions, a decision was made for reconstruction, adaptation and extension of the existing building of the cultural center located in the central city area of Makedonska Kamenica.

Strategic goals

The cultural activities and the extension and reconstruction of the cultural center are the key strategic goals of municipality Makedonska Kamenica (see the Strategy for Local Economic Development of the municipality¹, newspaper of municipality Makedonska Kamenica "Kamenicko oko", the program of the activities that are priorities of the municipality, Annual cultural program 2015, etc.) In accordance with the strategic goals of the municipality, three key activities have been highlighted in the area of culture: participation in the Program of the

¹ http://www.makedonskakamenica.gov.mk/images/stories/Docs/Public_Information/MK-LER.pdf

community called culture; establishment relations with European cultural organizations; utilization of the possibilities of the program "People to People". These activities identify the most important opportunities for development of municipality Makedonska Kamenica in this area. Particular emphasis is given on the work of the artist ensemble "Vera Jovic" with 50-60 active members as well as on the city library.

The planned reconstruction, adaptation and extension of the cultural center are in accordance with the strategic goals for the development of municipality Makedonska Kamenica by provision of modern infrastructure for organization of cultural and educational events. For that purpose, a comprehensive technical documentation has been prepared, and the municipality issued a construction permit. It is of particular significance that this project foresees improvement of the energy efficiency of the building's envelope as well as introduction of energy efficient heating system with heat pumps.

The field visit, the conducted surveys and interviews with the mayor, the municipal administration and the council, the manager of the building as well as with the civil sector, indicated the need for immediate adaptation and putting into operation this facility and the efforts to find funding for this project. During the interviews, the losses that the center suffers at many levels due to the poor conditions in the building were pointed out by the staff and the municipal administration: losses in terms of organization of cultural events, dislocation of events out of the municipality, difficulties to maintain traditionally organized activities of which part are international manifestations, difficulties in developing new activities in the area of culture, education and the tourism that would arise from the promotion of culture, and therefore a risk of reduced activity of the cultural and educational scene to the detriment mainly of the local population.

The goal of the project is:

- Improvement of the physical condition and the infrastructure of the cultural center;
- Integration of the local community;
- Adoption of the environmental protection principles;
- Improvement of the quality of life of municipal citizens.

Hence, it can be concluded that this project financed from MSIP funds is in line with the development goals of the municipality in the long run.

Knowledge and experience of the municipality in project's implementation

The knowledge and experience needed for successful implementation of the project are related to project management, technical knowledge and execution of procurement practices. In its working existence, municipality Makedonska Kamenica has implemented various infrastructural, educational and social projects some of which are mentioned in the table below.

Table 11 Implemented infrastructure projects

List of projects prepared by municipality Makedonska Kamenica				
#	Name of the project	Financing source	Year	Budget (Euro)
1	Construction of children's amusement part "Pinokio"	Swiss Embassy	2011	12,000
2	Construction of local street in the local community Todorovci 2,534m	World Bank	2011-2012	212,000
3	Reconstruction and furnishing of the social patronage in Makedonska Kamenica and purchase of vehicle	EU cross border cooperation program MK-BG	2011 - 2012	262,349
4	Community Forums	Swiss Agency for Development and Cooperation	2012-2013	110,569
5	Reconstruction of the water supply system in Makedonska Kamenica	European Investment Bank	2012-2013	330,000
6	Construction of local streets in the local	World Bank; EBRD	2013-2014	175,854

	community Dulica 1,600m			
7	Construction of access road to the monastery tourist complex ELENEC and adaptation of the area in 2 lodgings in local community Cera	EU cross border cooperation program MK-BG	2013-2014	274,000
8	Economic development and social cohesion between the regions	EU cross border cooperation program MK-BG	2013-2014	87,000
9	Construction and reconstruction of several local streets in Makedonska Kamenica	Municipality Makedonska Kamenica	2014	416,769

Source: Municipality Makedonska Kamenica

The implementation of all these projects contributed to improving municipal services. They were supported from the various domestic and international donors, such as: World Bank, European Bank for Reconstruction and Development (EBRD), Swiss Agency for Development and Cooperation, European Investment Bank (EIB), as well as EU cross border cooperation programs. Obviously, it can be claimed that the municipality is able to contribute with the necessary experience to large construction projects such as reconstruction and extension of the cultural center in Makedonska Kamenica.

2.4 Conclusion

The project is in line with the strategic priorities of municipality Makedonska Kamenica and will contribute to achieving the vision of the municipal administration to ensure full coverage of infrastructural, educational and social facilities.

The relevance of the project results from the fact that most of the population is affected by the negative implications of bad condition of the cultural center in Makedonska Kamenica. Cultural center consist of very old, cold and not efficient building with not enough capacity to accept all interested citizens on the cultural event. The proposed extension will allow more citizens to use the services that are provided by the cultural Center, indeed to visit the organized cultural events including manifestations, festivals, theatres, films, etc. In addition, the reconstruction of the cultural center will increase the comfort of the visitors, especially of the school children, children in the kindergarten and children who participate in the folklore ensemble, since they are providing their performances, drama and art sections, as well as folklore classes in the cultural center. Moreover, the increased library room will allow citizens (especially children) to have place where they can read or learn.

Municipality Makedonska Kamenica has knowledge and experience required for successful implementation of projects on project management, technical knowledge and execution of procurement practices. It has implemented a variety of infrastructural projects in the past, in cooperation with international institutions, international donors and cross-border cooperation programs, which means that the municipality is able to carry out large construction projects such reconstruction and extension of the cultural center.



3.

SOCIAL IMPACT

3.1 Sociological study

Data collection

The data collection included desk-top review of the relevant documents such as: main project documents, the World Bank Guidelines for assessing the social impact of the project, statistical data about the municipality, municipal documents verifying existing/used citizen participation mechanisms, Local Economic Development Strategy, Local environmental Action Plan, Profile of Municipality Makedonska Kamenica, Local newspaper "Kamenicko Oko" and Law on local self-government.

In addition, face to face semi-structured interviews were organized with five officials from the municipality: Mayor of municipality Makedonska Kamenica, General Director of the cultural center "Romansa", and three officials from municipal staff from Finance, Construction and Human Resources sectors. They all presented their opinions about the role and influence of various stakeholders in the process of decision making relevant to the project, as well as the level of information, capacities and readiness of the citizens to support the project. Taking their delegation and duties into account, the above mentioned officials proved to be useful interpreters of the opinions of the citizens since being their representatives and having frequent meetings with them, they are very familiar with the needs, attitudes and opinions of the local population and the project.

Moreover, one focus group with representatives of the local communities in the municipality was organized in order to solicit views of various citizens. Direct observations during the field visit were used. The focus group consisted of municipal citizens both direct and indirect users of the project. Most of the participants were from the city of Makedonska Kamenica and one who work in Delcevo. There were 13 participants in the focus group from whom 7 women, most of them parents and employed in public and private enterprises. At the same time, there were representatives who work with children and will have benefit of the project implementation: 2 employees in the kindergarten, 3 employees in the secondary school and 2 from the primary school.

Analysis and findings

The analysis is based on the processed data collected from the above mentioned instruments. According to the methodology laid out in the Social Impact part of the project document the research highlights five entry points of social analysis and will be analyzed separately:

- Social diversity and gender;
- Institutions, rules and behavior;
- Stakeholders;
- Participation and
- Social risk.

3.1.1 Social diversity and gender

Most of the population in municipality Makedonska Kamenica is from Macedonian nationality 99.3%. From the other ethnic minorities there are Roma, Serb, Bosnian and other nationalities. The official language in the municipality is Macedonian. Around 63.5% of the population lives in the city of Makedonska Kamenica and the remaining population in the other rural communities. According to the gender, male population is dominant over the female population (by 4.4pp). The municipality faces increased emigration to the big cities or other countries, especially to the Republic of Bulgaria, after the country acceptance in the European Union and other western European countries. This is due to the better social and economic conditions in the foreign countries especially for the higher educated population.

In order to satisfy the requirements of the local population, the main priorities of municipality Makedonska Kamenica are improving the quality of life of the citizens, improving the infrastructure especially on social and educational institutions, reconstruction of the streets and roads, improving the water quality and supply services, etc. According to all citizens, the most important issue is creation of new employment especially of the young population in order not to emigrate in the foreign countries. Moreover, all of the participants agreed that considering the infrastructural projects the most important is reconstruction of the cultural center in the

municipality. Considering local roads and educational and social institutions (kindergartens, schools, etc.) they are already reconstructed in the previous years and in fully satisfy the present needs of the municipality. At the same time, municipality representatives added the reconstruction and extension of the cultural center as a priority because of the increasing number of citizens who are interested in participating and visiting different cultural events and the increased number of cultural festivals and manifestations in the past few years in cooperation with the other countries. This will contribute to improving the lives of all citizens in the municipality through social inclusion and cultural education of children and other population. In addition, it will contribute to social inclusion and empowerment of the overall municipality by allowing promotion of the municipality, increasing number of tourists and thus will increase the economic benefits of the municipality.

Considering the number of beneficiaries of the project, the interviewees expressed their opinion that all citizens in the municipality will be beneficiaries of the project. There are no so many citizens who live in the other rural communities, since many of the population is living in the city or in the nearest villages which allow the location of the cultural center to remain in the center, by which be easily acceptable to all citizens. The reconstruction and extension of the cultural center will be beneficial for all age groups of population who live in the municipality, especially for parents, i.e. for women and their children, youths and elderly people. In addition, the project will bring benefit to the active population in the municipality representatives from public and private sector, not only by improving their social live, but by improving their economic benefits due to the increased number of tourists and cultural manifestations.

However, the biggest benefit from the project will have small children and youths, because they are direct and most frequent users of the cultural center. In the cultural center, children have their performances through art and drama sections, as well as folklore dance. Also, they are visiting the library for purchasing books and watching theater performances. Once the project is implemented there will be constructed a reading room for all children who wants to read or prepare their school projects which will additionally lead towards social inclusion of children in all ages.

If the project is implemented, the children and their parents can visit the library to borrow different books. Also, there will be a reading room for all book lovers interested in quite reading. Women will have indirect benefit from the implementation of the project, because they will have place to bring their children for social inclusion and capacity building without a risk to their children to get cold if there is no heating in the cultural center. In Macedonia, usually if the children get cold, their mothers stay at home to look after them instead of going to work.

One cultural event considers elderly people from all over the country. Every June the elderly people from 30 associations of pensioners from all over the country have cultural artistic program and culinary competition section in Makedonska Kamenica. Once the project is implemented, the cultural section for these elderly people can be organized in the cultural center.

3.1.2 Institutions, rules and behavior

Currently the cultural center is managed by the director of the cultural center "Romansa". It is envisaged that the renovated and newly constructed extension of the cultural center will be under supervision of the director. At present there is only one full time employee in the cultural center, and several employed through the Agency for employment. Considering the ethnic repartition all of the cultural center staff is from Macedonian nationality, but this is due to the highest representation of the Macedonian nationality in the municipality with 99.3%. There will be no need for new employments when the extension will be done.

There is only one very old cinema in the cultural center that is not in the operational condition, but since the project will be implemented the cinema will be renovated and put into operation. Also, the cultural center has a room for drama performances which is too small compared to the today needs, but there is no additional room for preparation of the performers before the event. At present, the cultural life of the citizens is increased due to their increased interest in visiting cultural events. Thus, there is always lack of seats for all visitors, i.e. stand up comedies are performed for about four times instead of one or two performances. This approach additionally increase costs for payment of the actors and their stay in the municipality. In addition, some of the performances and concerts are provided in the sport halls of the public schools in the municipality, or sometimes even in other

municipality 120km far from Makedonska Kamenica. Due to the bad condition of the cultural center, a sale of tickets is provided on minimum and the municipality covers all payments of the performers 100% by itself. With the reconstruction and extension of the cultural center additional seats will be constructed and payments for the performance are expected to be covered only 30% by the municipality.

Moreover, the municipality needs conference room where all bigger meetings and events will be organized. At present, there is no such room, but with the reconstruction and extension, a conference room is planned to be constructed for approximately 40 participants.

There is only one city library located in the cultural center. The library is in ownership of the library in municipality Delcevo. Instead of paying for a rent in the cultural center, the agreement is the library to pay the electricity bills of the cultural center which considerably lower the costs of the cultural center and municipality Makedonska Kamenica. At present, the library is very small and has no reading room. Due to the need of the citizens, especially of the school children, with the implementation of the project a new reading room will be constructed, as well.

Several interviewees and the focus group participants pointed out that even the citizens will have to buy tickets for visiting the performances on different events in the cultural center, the number of visitors will remain the same, or will even increase due to the better condition of the cultural center. The interest of citizens in cultural events is also constantly increasing every year. This is due to the social views and modernization of the population.

Main bodies of municipality Makedonska Kamenica are the mayor and the council composed of 11 members. The council consists of 7 men and 4 women, all from the Macedonian nationality. Participation of both genders in local councils should be minimum 30% following last local elections regulations². Favorable, in the Council of municipality Makedonska Kamenica the participation of women is 36% and man 64%. Most of the councilors come from the city of Makedonska Kamenica and the nearest local communities. In terms of political party representation 7 members are from the ruling VMRO-DPMNE political party, while the remaining 4 are from the opposition SDSM political party. All counselors are highly educated persons and work as doctors, dentists, and teachers and in other public and private enterprises. In order all councilors to be informed about the project, the idea and the needs of reconstruction and extension of the cultural center were presented in details at the council meeting. Then, a discussion with all counselors was performed in order to select the best possible solution for solving the problem of the cultural center bed condition and low capacity. Given the goal of the project, all council members support the implementation of the proposed project for reconstruction and extension of the existing cultural center building. They all considered that the project will increase the benefits to the municipality through promotion of the municipality and its culture and increased number of tourists and visitors from other countries.

3.1.3 Stakeholders

As we already mention, the main users of the cultural center are the children and youths in the municipality. They provide every day activities in the cultural center as representatives from educational institutions or social inclusion in various cultural activities such as drama and art sections, folklore dance, different performances, etc.

There is only one kindergarten "Bambi" in the municipality with approximately 130 children. Due to the bed condition of the cultural center with cold rooms and bed heating system, the children are not allowed to provide performances and cultural events in the cultural center building. Favorable condition is that the kindergarten has its own small hall where all performances and events are provided by the children. However, there is an interest of the kindergarten to provide the children's performances in the cultural center when the building will be renovated.

²Law on Local Elections of the Republic of Macedonia (2004)

The primary school "Ss. Cyril and Methodius" has 627 school children from whom 304 female. It has no its own hall and all school manifestations are provided in the cultural center where the children have their performances for the patronage of the school, New Year or for the beginning and ending of the school year.

The secondary school "Mile Janevski Dzingar" has 214 children attending gymnasium, textile and mining school. The secondary school also does not have its own hall and all manifestations are provided in the cultural center. The children are interested and willing to participate in the school manifestations and school sections where they provide their own performances. With the reconstruction of the cultural center the interest for visit and participation in the cultural events will be much bigger by the school children. At present, there is not good heating system, and the rooms are cold in winter period, which has negative influence on the willingness of children to participate in school manifestations and other cultural events and sections. If the project is implemented the risk of getting cold of children will be minimized.

Folklore ensemble "Vera Jocik" provides folklore dance and represents the municipality. It has 150 members, all folklore dancers, from whom 20 are elderly people – pensioners and the remaining are children not older than 18 years. The folklore ensemble provides classes 2 times per week in the cultural center building. It also provides folklore manifestations at least 4 times per year. These manifestations are usually provided in cooperation with the folklore ensembles from other countries, such as: Bulgaria, Belarus, Moldova, Serbia, Romania, Egypt and Turkey, from where at least 4,000 participants (folklore dancers) per year visited Makedonska Kamenica. Every September there is a folklore manifestation in the municipality Makedonska Kamenica when the folklore dancers provide parade on the occasion of the caravan "Istibanjsko Zdravozivo". Due to the lack of capacity of the cultural center there is no place for all folklore dancers and some of these manifestations are provided outside or in the sport halls in the public schools.

All interviewees and citizens in the focus group pointed out that private business will benefit from the renovation and extension of the cultural center. Directly, the business sector can rent and use the newly constructed conference room if they need a bigger place for meetings. Indirectly, through the increased number of visitors and tourists a lot of private businesses will have economic benefit and an opportunity to find partners for cooperation. At present, the biggest private business in the municipality is the main Sasa where approximately 700 citizens work and 200 more are engaged as external workers at the mine. There are some other bigger businesses in the municipality as well, such as 3 or 4 textile factories and several construction companies.

All interviewees and focus group participants without a doubt stated that all citizens will benefit from the project. The director of the cultural center stated that the citizens regularly complain and demand solution of the cultural center bed condition from the local authorities. The project for reconstruction and extension was given to insight by the citizens and they all agreed on its acceptance at one voice. They even demanded increasing the capacity planned for construction, due to the increased number of citizens who are willing to visit the cultural events in the municipality. The approach to apply for a loan for the reconstruction and extension of the existing cultural center building was proposed by the mayor and discussed at a council session and the councilors unanimously voted for the decision. The main reason for applying for the loan is the fact that the municipality does not have the financial resources to resolve it by itself i.e. to provide the full amount at once.

3.1.4 Participation

The interviewees stated the problem with the bed condition and low capacity of the cultural center was discussed at the public activities commission in the municipality and then at the council session. According to the law, the citizens can participate in municipal council sessions and they can discuss issues with prior announcement. All council sessions are regularly broadcasted on the regional television and there is an announcement board at the entrance to the municipality with all council decisions. Meeting with representatives from local communities are used as means for soliciting citizen's problems.

Mayor considers that the citizens are aware of the project since it has been discussed at public meetings, at council sessions and broadcasted on TV, as well as social networks. The citizens have open day for ideas and their acceptance to the Mayor office every Friday, where they can discuss with the Mayor their needs and requirements. Moreover, the citizens have submitted their complaints on the current situation in the cultural center that is subject of this appraisal, which again implies that the citizens are fully in favor of the project. As

elaborated earlier, since this project is expected to influence the overall living standard in the municipality, it is expected that all citizens will support it.

Given the above, it seems that all stakeholders support the implementation of the project given its high impact on their daily lives. This is due to the municipality program reach with cultural manifestations, festivals and events. In August each year the municipality organize big festival called "Kamenica cultural summer" that last 2 weeks. There are more than 15,000 visitors from the whole country, but also from the foreign countries, i.e. Bulgaria. Also, the festival each year is visited by at least 200 Macedonian emigrants to the western European countries. All manifestations and performances during this festival are organized outside, due to the low capacity of the cultural Center, and the rain often appears to be a big problem. When the reconstruction and extension of the cultural center will be finished, some of the events within the festival will be provided in the cultural center.

In the past few years, the municipality organizes one more festival called "True sound of Kamenica". The festival is organized in cooperation and with guests from Serbia and Bulgaria.

There are also other festivals and events organized by municipality Makedonska Kamenica and the cultural center, mostly different theaters (Veselski, Stipski, Nacional or Comedy), stand up comedies, individual performances, etc. All of them are provided in the cultural center in Makedonska Kamenica.

3.1.5 Social risks

All interviewees and focus group participants are unanimous that there are no social risks envisaged for the project implementation. The land where the extension is planned to be constructed is in the ownership of the state, a part of the existing cultural center, so no private land needs to be acquired. The project is planned to be completed by next summer at the latest, long before the scheduled local elections in 2017, which may bring political leadership changes in the municipality. In addition, detailed design for extension has been prepared and construction permit issued.

Interviewees presented a wide range of priorities in many fields that are within the local government competencies. They identified the reconstruction and extension of the cultural center as necessary for local economic development of the municipality, increasing the revenues from tickets sales, increasing the awareness of citizens as a good example for use of energy efficiency measures, improvement in social inclusion of children and women in the municipality, improvement of social and cultural life of all citizens, etc. Without exceptions, all interviewees said that the one of the highest priorities is full capacity of the cultural center to accept all visitors in the cultural events and to provide a quality services and comfort of children by using energy efficiency measures.

Additionally, it was discussed in detail whether the citizens are fully informed about the intended reconstruction and extension of the cultural center that is subject to this Appraisal. In that way, there is no risk for resident not to be informed about the project. This approach solves the problem that was persistent for many years. With the implementation of this strategically important project, the municipality is sending a strong signal that plans to solve this issue on the whole municipality area.

The current lack of seats does not allow all citizens to participate on the cultural events, while some events are organized in different locations such as sport halls or even other municipality, which additionally lower the productivity. Bed heating system is a reason for small children not to be allowed to use the cultural center for their performances due to the risk of children to become cold, thus their mothers to be forced to stay at home to look after them, instead going to work. In addition, youths are looking for better living conditions in the areas with developed social and cultural life. This is a reason for a lot of youths and young couples emigrate to the bigger cities or other countries. Hence, the project will contribute to reducing the risk of emigration from the municipality and will bring economic benefits to the population and overall municipality.

3.2 Other fields of considerations

The reconstruction and extension of the cultural center in municipality Makedonska Kamenica which is subject to this Appraisal is expected to improve the overall population living conditions in the municipality. The implementation of the project is expected to create savings per unit in the item of the cultural center budget for

maintenance of the facility and saving in heating costs by using energy efficiency measures on the long term basis, but also the project will increase the revenues from the increased number of tickets sold and the increased capacity for visitors.

The project will also increase the awareness of the overall population in the municipality for financial savings and quality living standards by using energy efficiency measures.

The extension of the cultural center will increase welfare of the local population, but will also improve their cultural life, as well as social inclusion and capacity building of the children. This approach follows strategic goals of the country for social inclusion and improvement of the cultural life of the overall population.

3.3 Resettlement issues

When actions are undertaken within development initiatives they may induce physical or economic displacement, which in turn can lead to long-term hardship and impoverishment. For that purpose, appropriate measures need to be carefully considered and carried out within the project development cycle. The current project under assessment in municipality Makedonska Kamenica does not impact any resettlement issues because it refers to the extension of the cultural center on an empty state owned land, which is part of the garden of the existing cultural center and does not envisage expropriation or purchase of privately owned property.

However, one of the reasons for emigration of the citizens from the villages to the big cities are the challenges that need to be considered for infrastructure improvement and a lack of social services and institutions in the smaller municipalities, which is the case in municipality Makedonska Kamenica. The increased capacity of the cultural center will improve cultural life of the local population and contribute to the social inclusion of young people. In that way, the implementation of this project will cause better living conditions followed by the expectation of decreasing emigration within the municipality.

3.4 Conclusion on the project potential success and recommendations

The project for reconstruction and extension of the cultural center “Romansa” in municipality Makedonska Kamenica affirms a human rights ideology and adheres to its basic principles. Its aim is to ensure quality social services, improvement of cultural life by using best practices considering energy efficiency measures.

The main drivers of the change that will bring about prosperity are the municipal authorities (mayors, councilors, director of the cultural center) who have initiated and made the decision for seeking funding from the World Bank financed MSIP. Since the problem has been around for more years it has been publicly declared and discussed on many occasions. The main beneficiaries of the project are the children and folklore dancers who are having their performances in the cultural center. Also, beneficiaries of the project are all visitors to the cultural events, as well as all citizens who are book lovers. At the same time, the cultural center will have a financial benefit by decreasing the costs of heating and maintenance of the facility and by sale of tickets for some events.

High social risks for carrying out this project cannot be perceived. There are no issues connected with ethnic distribution of population. The action will allow benefits for both Macedonian and other nationalities. The project brings benefits to the majority of citizens in the municipality and there are no land ownership (expropriations and resettlements) concerns that need to be resolved. Gender balance needs to be incorporated in the strategic approach of the municipality towards all development efforts. The project is expected to be socially successful because it is both cost-efficient and cost-effective over a long run, it is useful for improvement of the community living and social inclusion in the municipality, it is of a highest municipal priority for the public administration and for citizens and the stakeholders are very motivated by the realization of the project.

4.



ENVIRONMENTAL IMPACT

The main project aim is to improve the living and social life to the citizens of municipality Makedonska Kamenica through implementation of the activities on reconstruction, adaptation and extension of cultural center "Romansa".

Current situation of cultural center

The cultural center is located in central urban area and currently it is in poor condition (building constructed 60 years ago, old windows and doors, ground floor slab with significant damages and fractures, low energy efficiency of the building, lack of heating in all rooms of the building, etc.).

The building consists of entrance hall, hall for theater, cinema screenings and performances with an auditorium with capacity of 165 visitors, wardrobes that have been readapted in library, official entrance readapted for the library, technical entrance for the set directly to the stage, toilets, two offices and screening box on the first floor connected with portable removable ladders. The basement under the stage is used as mechanical room for the heating system (heating oil boiler has been placed there), but currently, the system is not functional and only the library has been heated by electricity heaters. Building is ground level facility with structure of reinforced concrete, roof floor construction system and walls of solid brick. Total area of existing building is 575m².

With the planned extension, reconstruction and adaptation, the net area of the building will increase to 925.46m². The proposed reconstruction activities will increase the cultural center functionality providing more space for various activities in the building, more comfort for the visitors and improvement of energy utilization and acoustic performances.

Location

The cultural center "Romansa" is located in the center of Makedonska Kamenica city, in surroundings of greenery. In closer surrounding there are number of public spaces and buildings: the municipal building, high school "Metodija Mitevski Brico", city square, the church "Assumption of the Holly Virgin". The cultural center is approx. 100 meters from the river Kamenica. Across the city of Makedonska Kamenica the road "M-5" and regional road "P-208" are passing connecting the city with other towns in the country. The location of the cultural center is presented on Figure 8.



Figure 8: location of Cultural center

Main project activities with environmental impact

The project includes complete renovation of existing building, exterior and interior, adaptation, extension, enrichment with new contents, installation of system for heating and cooling consisted of fan coil units, thermal insulation of the roof, facade walls and the floors, water supply system, sewage system etc.

The project activities with environmental impacts are:

- **Preparatory works** will include the demolition of the ground floor slab, old windows, doors, roof panels, demolition of the existing slab construction with thickness of 6cm and excavation/ground works,
- **Reconstruction and Extension** of the building will include concrete and reinforced concrete works, reinforcement works, masonry and plasterboard works, insulation works (hydro insulation and thermal insulation), floor and ceiling construction, facade works, finalization of the exterior and interior openings with aluminium profiles, installation of new doors, windows and glass curtain walls and painting works;
- **Installation of air-conditioning system** with recuperation unit for primary amount of air for ventilation and channels with regulation and automation in basement, installation of water supply system and sewage system, light, acoustics equipment etc.

Main environmental impacts and sensitive receptors

The proper completion of all purposed project activities will have a very positive impact on the local population of municipality Makedonska Kamenica providing a modern place for culture and entertainment events and improving social life of citizens.

Taking into account the location of the planned project activities (urban area with surrounding buildings, school, main roads) the community safety and occupational health and safety for workers are the major adverse impacts during preparatory and reconstruction/extension phases of the project. In order to prevent the injuries, accidents or to minimize the possible negative impacts, the contractor should provide solid high fencing and marking the reconstruction area and should post attention signs on the fence and notice boards informing the citizens about ongoing activities and the workers about obligatory wearing the personnel protective equipment.

During renovation of the cultural center, the different waste streams could be generated (e.g. waste from excavation of soil, communal waste, packaging waste, and mix waste from construction and demolition (construction waste, wooden and metal doors and windows, sanitary fittings, ceramic tiles, cinema chairs, metal stairs, lights, etc.). A small amount of waste water and communal waste will be produced by workers on construction sites. The contractor has to make classification of different type of waste according the national List of Waste and also should identify the hazardous and non-hazardous waste and separate them. The following waste streams are expected on the site (Table 12):

Table 12 Possible waste streams generated on the reconstruction site

13 - Oil wastes and waste of liquid fuels (except edible oils, and those in chapters 05, 12 and 19)	
13 02	Waste engine, gear and lubricating oils
13 07 01*	Fuel oil and diesel
15 - Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified	
15 01	Packaging
15 01 01-15 01 09	Waste generated from paper and cardboard, wooden, plastic, metallic, glass, composite packaging
15 02	Absorbents, filter materials, wiping cloths and protective clothing
15 02 02*	Absorbents, filter materials, wiping cloths and protective clothing contaminated with dangerous substances
16 - Waste not otherwise specified in the List	
16 02	Wastes from electrical and electronic equipment
16 06	Batteries and accumulators
17 - Construction and demolition wastes	

17 01	Concrete, bricks, tiles and ceramics
17 02	Wood, glass and plastic
17 02 04*	Wood, glass and plastic containing or contaminated with dangerous substances
17 03	Asphalt, tar and tarred products
17 04	Metals (including their alloys)
17 05	Soil and dredging spoil
17 05 04	Soil and stones that do not contain dangerous substances
17 06	Insulation materials
17 07	Mixed construction and demolition waste
17 08	Gypsum-based construction material
20 - Municipal wastes and similar commercial, industrial and institutional wastes including separately collected fractions	
20 01	Separately collected fractions (paper, glass, biodegradable waste from kitchen and canteen, solvents, paint, adhesives, medicines (there are also hazardous waste streams marks with *))
20 02	Garden and park waste (biodegradable, soil and stones)

The contractor needs to keep records on generated waste streams (type, quantity and waste management – temporary and final disposal, contracts with authorized collectors of waste, etc.). Prior the start up of activities, the Waste Management Plan should be developed by the contractor to ensure that all records referring the proper waste management will be kept.

There is a possibility for reuse the old dismantled windows, doors, lights and chairs during demolition phase. The decision will be made by the municipal staff. Otherwise these waste streams should be collected, transported and finally disposed on the municipal landfill (3km far from the city) by the licensed collector of waste. Small amount of hazardous waste that could be generated need to be collected, temporary disposed on proper way (packaged and labelled as hazardous waste). The municipal and inert waste streams need to be managed by the CSE "Kamenka reka" responsible for waste management in the municipality. The waste from excavated soil in quantity of 259m³ could be expected according the Project Main Design (reconstruction, construction of water supply and sewage system). The excavation soil should be disposed to do municipality landfill as well.

The vicinity of the river Kamenica (approx. 100m far from the site) as well as its categorization refer to the existing water quality should be taken into account due to potential adverse impacts of the project to water quality (improper waste management – disposal of waste streams along the river bank). The surface water of river Kamenica belongs to the III class according to Regulation on Classification of waterways, lakes, reservoirs and groundwater ("Official Gazette of RM" No. 18/99). All produced waste water from the reconstruction activities should not be released into water recipient without prior treatment.

Cultural center is located in the urban area of the municipality and around the building there are several public buildings: school, municipal building, city square, and church. The increased noise levels will be produced by the operation of machines for demolition and machines for delivery of materials for renovation of cultural center building. The noise sensitive receptors of the planned project activities will be workers, students and people passing and living in the vicinity of the site.

According to the Law on noise sensitive protection (Official Gazette No. 79/07, 120/08, 1/09) all these areas (schools, living area, commercial buildings) have been identified in the same noise areas - second degree of noise protection and the maximum allowed noise level should be 45dBA for night and 55dBA for evening and day.

During reconstruction of the building the air pollution will occur from the fugitive dust emissions during demolition, cleanup the construction site and removal soil, dust emissions during loading and transport of excavated material. The dust management measures should be implemented in order to reduce the PM (particulate matters – dust) emissions.

All possible environmental impacts are expected on short-term basis - during the reconstruction period and the impacts will be with minor local significance. The good construction practice and associated measures could prevent and/or mitigate the short-term adverse impacts. Several prevention and mitigation measures are provided in the following Environmental Mitigation Plan and monitoring parameters provided in the Monitoring Plan need to be implemented by the contractor. The supervisor needs to monitor the implementation of proposed measures and to communicate with the municipal staff (PM, mayor and communal and environmental inspectors).

A. MITIGATION PLAN

Project activity	Potential impact	Impact scale	Proposed mitigation measures	Responsibility
Reconstruction, adaptation and extension of cultural center "Romansa" in municipality Makedonska Kamenica (Construction of new reading room for the library/ Replacement of the old windows and doors/ Additional isolation of floor/ New roof and facade/ Installation of heating system)	<p>a) OH&S issues</p> <p>Possible adverse health impacts to the workers and community due to:</p> <ul style="list-style-type: none"> - Unsafe start of construction works - Injury passing near the construction site - Not compliance with health and safety at work procedure - Not compliance with community safety procedure 	Local/ short term/minor	<p>Marking out the reconstruction site around the cultural center "Romansa"</p> <ul style="list-style-type: none"> ➤ Adequate warning tapes and signage need to be provided ➤ For the workers the health and safety measures should be applied: a) Security measures like: perimeter fence, life jackets, use of proper protective clothing and equipment by employees, b) Maintain a good level of personal hygiene-have on site installations for washing, cleaning; c) Health protection-first aid kits and medical service on sites d) Apply the emergency and normal first aid procedure for any injury if such occur through construction work ➤ The surrounding area (near the cultural center are many public buildings: the municipal building, high school, city square, the church "Assumption of the Holly Virgin") should be kept clean, without waste disposed ➤ The old windows, doors should be temporary put on safety place without entrance of unauthorized persons 	<ul style="list-style-type: none"> • Contractor –Bidder • Supervisor • Municipal staff
	<p>b) Air quality</p> <p>The dust could be caused by removing the roof material, old windows and doors, vehicle movement and materials (concrete and thermal insulation) handling. The transport and construction machinery will contribute to the air pollution as well.</p>	Local/ short term/minor	<ul style="list-style-type: none"> ➤ Reconstruction/construction materials should be stored in appropriate marked places covered to minimize dust ➤ Parking place for the transportation vehicles and construction machines should be provided ➤ Restriction of the vehicle speed within the construction location should be announced 	<ul style="list-style-type: none"> • Contractor –Bidder • Supervisor • Municipal staff
	<p>c) Waste management</p> <p>Possible adverse environmental impact and health effects could occur due to inappropriate waste management with various waste streams</p>	Local/ short term/minor	<ul style="list-style-type: none"> ➤ The preparation of Waste Management Plan is a crucial at the beginning of the preparatory work. The Waste Management Plan should include: <ul style="list-style-type: none"> ➤ Identification of the different waste types that could be generated at the reconstruction site ➤ Classification of different type of waste according the national List of Waste (Official Gazette no.100/05) ➤ Identification of the hazardous and non-hazardous waste and separation ➤ Fulfilment of the Annual Report for non-hazardous waste management by the Mayor 	<ul style="list-style-type: none"> • Contractor –Bidder • Supervisor • CSE "Kamena reka"

Project activity	Potential impact	Impact scale	Proposed mitigation measures	Responsibility
			<p>of Municipality Makedonska Kamenica and reporting to the Ministry of Environment and Physical Planning</p> <ul style="list-style-type: none"> ➤ Transportation and final disposal of the inert and communal waste by the CSE "Kamena reka" ➤ The contract with the company for waste collection and transportation should be signed for collection and transport of waste to the municipal landfill 3km near the city of Makedonska Kamenica ➤ The construction waste should be promptly removed from the site, should be re-used if possible ➤ The materials should be covered during the transportation to avoid waste dispersion; ➤ Burning of construction waste should be prohibited; ➤ The old windows and doors should be stored on proper place covered and labeled "not to open" until distribution to the persons with social needs 	
	<p>d) Noise</p> <p>The reconstruction activities will cause noise and vibration due to the machinery and vehicles used for transport of waste materials, transport of workers</p> <p>The potentially affected will be students from the nearby high school, nearby residents and municipal staff</p>	<p>Local/Short term/Medium significance/ Certain to happen</p>	<ul style="list-style-type: none"> ➤ The equipment should be fitted with appropriate noise devices that will reduce sound level ➤ The level of noise should not exceed 55dB during the day and evening and 45dB during the night ➤ The demolition work should be not permitted during the nights, the operations on site shall be restricted to the hours 7.00 -19.00 ➤ The vehicles that are excessively noisy shall not be operated until corrective measures have been taken (the area is residential - with second degree of noise protection and the maximum allowed noise level should be 45dB for night and 55dB for evening and day) 	<ul style="list-style-type: none"> • Contractor –Bidder • Supervisor • Communal Inspector/ Environmental Inspector
<ul style="list-style-type: none"> • Operational phase 	<ul style="list-style-type: none"> • No environmental risks are expected • Positive impact (energy efficiency and energy savings) is expected with better insulation of cultural center "Romansa" • Improvement of the physical condition and the infrastructure of the cultural center "Romansa" • The Project documentation needs to be kept/ Regular preventive maintenance checks up need to be performed by the authorized trained personnel to enable operation of the building 			

B. Monitoring plan

What parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored?	When is the parameter to be monitored (frequency of measurement)?	Why is the parameter to be monitored?	Cost		Responsibility	
					Construction	Operations	Reconstruction of Cultural center “Romansa”	Operation of Cultural center “Romansa”
Project stage: Startup of the reconstruction work (marking out the reconstruction site around the cultural center “Romansa”)								
The community safety protection measures applied	Around the cultural center “Romansa”	Visual checks	At the beginning of the reconstruction work (first day) Every working day during the project activities	To ensure minimization of health and safety risks – mechanical injuries for the local community in the city of Makedonska Kamenica			Contractor - Bidder /Supervisor/ Municipal staff	
The OH&S protection measures applied for the construction workers at the site	On the reconstruction site	Visual checks	Every working day during the project activities	To minimize the risks on occupational health and safety of the workers			Contractor - Bidder /Supervisor/ Municipal staff	
Project stage: Reconstruction of the cultural center “Romansa”								
Primary selection of the waste streams at the reconstruction site	On the site	Review the documentation – identification of the waste type according the List of waste and the implementation of the Waste Management Plan	At the beginning of work	To separate hazardous from the non-hazardous waste as well as inert from biodegradable waste			Contractor – Bidder Supervisor/ Municipal staff	
Temporary storage of the old windows and doors with proper label and	At separate room/basement of the building or in the yard	Visual checks	On daily basis	To minimize injuries			Contractor – Bidder	

What parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored?	When is the parameter to be monitored (frequency of measurement)?	Why is the parameter to be monitored?	Cost		Responsibility	
					Construction	Operations	Reconstruction of Cultural center "Romansa"	Operation of Cultural center "Romansa"
coverage								
Collection transportation and final disposal of the wooden windows and doors	On the site and around the site	Visual monitoring and reviewing the transportation and disposal lists from the sub-contractor	After the collection and transportation of the solid waste on regular base each day	Not to leave the waste on the spot to avoid the environmental and health impacts to the community in the city of Makedonska Kamenica			Contractor – Bidder who need to sign the contract with licensed company for collection, transportation and disposal of the solid waste	
Fulfilled Annual Report for collection, transportation and disposal of waste	Local self-government administration-municipality Makedonska Kamenica	Review of documentation – Identification waste List	After the accomplishment the task of collection, transportation, temporary disposal and final disposal of waste	To improve the waste management on local and national level To be in compliance with national legal requirements			Mayor of Municipality Makedonska Kamenica/ Ministry of Environment and Physical Planning	
Noise level	On the site	Monitoring of the noise levels dB (A) with appropriate monitoring devices	On regularly basis during the work, in accordance with the national legislation	To monitor if the noise level is above/or below the acceptance noise level for that type of area - II exposure area for noise protection as residential district (55 dB (A) during the day time			Contractor – Bidder Authorized Company for performing noise levels measurements sub-contracted by the Contractor – Bidder	



5.

TECHNICAL SOLUTION

5.1 Description

The project³ foresees reconstruction, adaptation and extension of the existing building of the cultural center in Makedonska Kamenica. The building is located in the central city area (shown on the Figure No.1), str. Marshal Tito No.8a, c. p. No.4255/1, property sheet No.589⁴. The yard area is 16,069m², and the existing building has a total area of 575m² (source: <http://gis.katastar.gov.mk/arec>). The designed building according to the data from the Technical design – Phase Architecture, belongs to the group of lower buildings consisted of basement, ground-floor and 1 floor, with total net area of 925.45m².



Figure 9 Macro location of the cultural center in municipality Makedonska Kamenica

*Note: the building under consideration is marked in yellow

Source: <http://gis.katastar.gov.mk/arec>

The existing facility is composed of: main entrance with entrance lobby, hall with auditorium and stage for cinema screenings, theater performances, etc., wardrobes that have been readapted in library, official entrance readapted for the library, technical entrance for the set directly to the stage, toilets, two offices and screening box on the first floor connected with removable ladders.

The basement is being used as mechanical room for the heating system. The heating system on oil was installed from the beginning of construction of the cultural center. However, due to the energy inefficiency of the building and of the oil heating system, it was never used. Instead, some rooms of the cultural center were heated by electricity heaters when necessary, i.e. library.

The building is ruined and neglected, but still operational. The figure 9 shows part of the interior of the cultural center "Romansa" and the figure 10 the external facade of the building.

³ The Technical Design was prepared by "Parametar" DOOEL – Skopje, technical No. 26/12 from 2012

⁴ <http://gis.katastar.gov.mk/arec>



Figure 10 Part of the building's interior
Source: CeProSARD archive⁵



Figure 11 External facade of the building
Source: CeProSARD archive

In order to provide proper function of the building as a whole, it is necessary to perform the following construction activities in accordance with the technical documentation:

Table 13 Phase Architecture

No.	Description
1	Preparatory works
2	Excavation/ground works
3	Concrete and reinforced concrete works
4	Reinforcement works
5	Masonry works
6	Plasterboard works
7	Insulation works (hydro insulation and thermal insulation)
8	Sheet metal works
9	Floor construction
10	Ceiling construction
11	Facade works
12	Ceramic pavement
13	Performance of final finish of the exterior and interior openings with aluminum profiles, installation of doors, windows and glass curtain walls
14	Painting works
15	Woodwork
16	Locksmith works
17	Additional works
18	Landscaping

Source: Technical Design – Phase Architecture and Bill of Quantities

⁵ On 27.01.2015 CeProSARD team performed field visit to determine the current condition of the building under consideration

The reconstruction and upward extension of the building will provide improved stability, acoustic, as well as energy performance.

Structure of the building – The newly designed building has structure of reinforced concrete divided in two elevations/platforms. The structural system is composed of reinforced slab construction, columns and beams from reinforced concrete. In accordance with the technical documentation, the reinforced concrete columns have been designed with dimensions of 30/30cm and 25/25cm; the existing columns of the ground floor have dimensions of 30/30cm, 30/50cm and 40/50cm. The reinforced concrete beams have dimensions of 30/55cm, 40/55cm at the first platform PI “100” and 30/55cm 25/30cm and 30/30cm at the second platform PI”200”. The reinforced concrete floor construction has thickness of 15cm. The platform PI”200” has no floor construction, and the wooden roof construction is supported directly by the reinforced concrete beams.

After the demolition of the existing elements of the construction as foreseen with the technical documentation, as well as the construction of the new reinforced concrete columns that will have their own independent foundations, a new reinforced concrete slab construction composed of reinforced concrete beams and slab will be constructed in accordance with the technical documentation – structural calculation. The columns continue to the roof and will be interconnected with reinforced concrete inclined and straight beams that will bear the newly designed wooden roof construction, roof cover of corrugated thin as well as all necessary insulation layers.

Energy efficiency – In order to improve the energy condition of the building, a thermo-technical project for heating, cooling, ventilation and air-conditioning has been prepared. With this project the thermal transmittance coefficients have been determined in accordance with the proposed materials for construction, the technical documentation - phase architecture and structure estimation, the interior design and the functionality of the space. The values for the indoor temperature of the building were set depending on the purpose (premises), with assumption for boundary temperature conditions of continental climate zone II, for the location Makedonska Kamenica.

In winter, for minimum outdoor temperature of -15°C, the internal temperature shall be 20°C,

In summer, for maximum outdoor temperature of 35°C, the indoor temperature shall be 26°C

For all construction elements, the calculations for the thermal transmittance coefficient (in this case indicated with “K”) have been made in accordance with the DIN 4071 standard and the results are shown in the following table as follows:

Table 14 Thermal transmittance coefficient “K”

Construction elements:	Thermal transmittance coefficient “K” (W/m²K)
Exterior wall - new	0.43
Exterior wall - existing	0.26
Roof	0.25
Floor	0.68
Glass	2.59
Door	3.5

Source: Technical Design - Thermo-technical design

Based on the values of the thermal transmittance coefficient of the construction elements as well as on the technical documentation (architectural and construction bases), technology and the applicable standards and regulations, a mechanical project has been prepared for the thermo-technical installations for heating, cooling, ventilation and air-conditioning. Regarding the air-conditioning system, it is designed with an air handling unit with recuperation for primary amount of air for ventilation and channels with regulation and automation. The heating and cooling of all other spaces is planned with fan coil units, except for the toilets where heating with radiators is planned.

The energy balance is given in the table below. According to the technical design, heating of the cultural center will be provided by use of energy efficient air cooled heat pumps with precisely defined characteristics.⁶ In order to meet the needs of the entire facility in accordance to the review of the overall required optimal heating energy $Q=116.40\text{KW}$ and the overall required optimal cooling energy $Q=130.00\text{KW}$, it is foreseen installation of two heat pumps with nominal cooling capacity $Q=63.00\text{KW}$ and nominal heating capacity $Q=63.00\text{KW}$. This model of pump has electricity consumption of 26.70 KW when cooling and 21.00 KW when heating.

Table 15 Energy balance of installed electricity

No.	Thermo-technical equipment	Installed electricity KW
1	Heat pump	68.0
2	Air handling unit	7.0
3	Circulation pump	3.5
4	Fan coils	2.0
5	Ventilators	0.5
6	Channel air-conditioner	7.0
Total installed amount of electricity		88

Source: Technical Design – Thermo-technical design

The adopted amount of consumed electricity is 90 KW. The heat pumps and part of the heating and cooling equipment will be placed in the mechanical room in the basement.

Acoustic performance - It is of particular importance to provide good acoustic insulation with the reconstruction of the building. The technical design foresees acoustic insulation especially for the main hall.

The wall coating with area of 280m^2 – TIP1 should be performed with perforated plasterboards KNAUF – Cleaneo with combined circular perforation of the type 12/20/35P and perforation of 9.8%, thickness 12.5mm. The empty space behind the Cleaneo plasterboards should be filled with a layer of hard-pressed mineral wool with thickness of 5cm.

In order to decrease the echo within the space, placement of 184 semi-cylindrical diffusers with dimensions of the base of 600/600mm is planned.

The suspended ceiling with an area of 260m^2 is made of acoustic boards. All existing finishing materials and finishing details will be replaced with new as appropriate.

Description of construction parts of the building:

Facade - The facade will be completely renewed with construction of thermo-insulated facade which consist of:

- Installation of extruded polystyrene (EXP) boards thickness 8cm with wall plugs and special glue;
- Installation of PVC mesh;
- Application of basic layer of plaster;
- Application of the final layer of facade decorative plaster in color.

Floors - The floor finish of granite tiles is planned for the ground floor and the staircase and ceramic tiles flooring for the toilets. Carpet will be laid in the hall, and PVC flooring in the folklore-music dance room and the stage. The floor reconstruction foresees also placement of thermal and hydro insulation throughout the building. Floor structure is the following: Cement screed with thickness 5.0cm, Pressed mineral wool - 5.0cm, Slab of reinforced concrete - 12.0cm, Hydro-insulation - 1.5cm, Lean concrete MB15 - 15.0cm, Gravel - 20.0cm.

⁶ The characteristics of the device are precisely defined with the Technical Design – part: Thermo-technical project

Exterior walls - Structure of new exterior walls is the following: plasterboard - 1.25cm, solid brick - 25cm, polystyrene - 8cm and plaster.

Interior walls – The interior partition walls have been designed as plasterboard walls with thickness of 12cm and solid brick walls 20-25cm thick, depending on the position.

Roof – It is foreseen roof cover with corrugated plastic-coated thin, placed over wooden construction of two rows of battens (for ventilation of the roof), bituminous paper, wooden planks 2.4cm placed over wooden beams 10/12cm, thermo insulation of mineral wool thickness 20cm, hydro insulation of PE foil and ceiling with plasterboard thickness 1.2cm.

Glazing – the technical documentation foresees glazing with thermo-insulating semi-reflective glass 4+12+4mm; usage of safety glass for all entrance portals. Placement and fastening performed by valid standards. Exterior doors and windows are planned with aluminum profiles.

5.2 Analysis and evaluation

The reconstruction of the cultural center “Romansa”, which is entirely damaged and functionally unused, shall provide improvement of the stability of the building, improved energy and acoustic performances, as well as functional utilization of the space. Therefore, the technical documentation foresees realization of the following construction works:

- Demolition of the ground floor slab that has significant damages and fractures and construction of new in order to perform the necessary leveling for the hall entry, and provision of the appropriate inclination for the audience hall;
- Demolition of the existing slab construction type “Avramenko” with slab thickness of 6cm that is not in accordance with the new designed purposes and additional weight;
- Construction of new columns of reinforced concrete that have own independent foundations;
- Construction of new slab construction of reinforced concrete, including beams and slab in accordance with the structural calculations, positioned over the existing and newly constructed columns;
- Extension of the lower part of the building and gallery with seats for the auditorium.

The image below shows the new-designed situation of the building in the immediate surroundings.



Figure 12 New-designed situation
Source: Technical design – Phase Architecture

The functional layout of the premises and their net area in the basement, ground floor and first floor is presented in the following table.

Table 16 Functional layout of the premises

No.	Room description	Area (m ²)
Underground floor		
1	Basement	79.17
Basement total		79.17
Ground floor		
1	Covered entrance	22.49
2	Entrance hall	15.68
3	Wardrobe	17.84
4	Foyer	75.68
5	Technical room	9.70
6	Staircase	16.47
7	Hallway	3.87
8	Toilets men	7.46
9	Toilets woman	7.61
10	Bar	21.28
11	Sanitation room	1.70
12	Hall-auditorium	122.30
13	Stage	89.61
14	Corridor	2.84
15	Booking office	7.04
16	Corridor	7.62
17	Corridor	13.85
18	Toilets men	4.44
19	Toilets woman	4.69
20	Wardrobe men	18.84
21	Wardrobe woman	22.10
22	Staircase	5.19
23	Parch with stairs	12.61
Ground-floor total		510.89
First floor		
1	Stairs	16.47
2	Foyer	28.29
3	Gallery-auditorium	69.88
4	Screening cabin	4.55
5	Dance practice hall	69.69
6	Storeroom	3.25
7	Office	8.55
8	Library	48.81
9	Books depot	48.66
10	Gallery above stage	9.13
First floor total		307.28
11	First floor terrace	28.12
First floor incl. terrace total		335.40
Total/basement, ground-floor and first floor incl. terrace		925.46

Source: Technical design – Phase Architecture

In order to improve energy efficiency of the building, placement of two heat pumps is planned, each with capacity of Q=63.00KW. The adopted amount of energy consumption is 90KW. The heat pumps have been chosen in

accordance with the selection of construction materials for the reconstruction and proper functioning of the space. The utilization of heat pumps for heating and cooling is the most excellent solution for reduction of the energy consumption and the emission of carbon footprint CO₂.

It is necessary to provide optimal operation of the building that includes library, cinema, practice room for the folklore music ensembles in the municipality, space for organization of cultural and social events and manifestations. As this is the only multipurpose center in the municipality, in addition to the improved acoustic performances, procurement of furniture and acoustic equipment is planned in order to support its functionality. The building will be connected to the existing infrastructure, water supply system, sewage system, electricity supply and the existing telephone network. The immediate surrounding will be arranged with appropriate infrastructure, walkways and greenery.

5.3 Conclusion

The need for functional cultural center in municipality Makedonska Kamenica arises as a result of the need for cultural animation of the young people in the municipality. The existing building has no functional capacity and due to its physical damage cannot be utilized. The reconstruction of the existing building will increase its performances regarding the improved energy efficiency and acoustics. The extension will be performed in accordance with the standards for energy efficiency in the country. The utilization of heat pumps as energy source is additional measure that is of benefit not only for the employees, but also for the municipality. Moreover, the action of the public sector will give a positive example for the commercial and residential sector in municipality Makedonska Kamenica.

The reconstruction and the extension will satisfy the required criteria for this type of building. By putting the building in function better conditions will be provided for the young people in the municipality as final beneficiaries.