



Association of Kosovo Municipalities - Collegia for Spatial Planning

ASSESSMENT OF THE GIS SITUATION, FACILITIES AND CAPACITIES IN KOSOVO MUNICIPALITIES

February 2020



INCLUSIVE DEVELOPMENT PROGRAMME
PROGRAMI PËR ZHVILLIM GJITHËPËRFSHIRËS
PROGRAM SVEOBUH VATNOG RAZVOJA

Association of Kosovo Municipalities - Collegia for Spatial Planning

**ASSESSMENT OF THE GIS SITUATION,
FACILITIES AND CAPACITIES IN
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United Nations Human Settlements Programme (UN-Habitat)
Ministries Building Rilindja, 10th Floor, 10000 Pristina, Kosovo
www.unhabitat.org
www.unhabitat-kosovo.org

Association of Kosovo Municipalities (AKM)
Gustav Mayer Str. no.5 , 10000 Pristina, Kosovo
www.komunat-ks.net

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REPORT AUTHOR:

Modest Gashi

REVIEW:

Gwendoline Mennetrier

MAIN CONTRIBUTORS:

Alma Paçarizi, Korab Vranovci

OTHER CONTRIBUTORS:

Besnike Koçani, Zana Sokoli, Sami Stagova

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TABLE OF CONTENTS

List of abbreviations and explanations

List of tables

List of diagrams

List of tables

1.

Introduction

Summary

Tool and methodology

Expected results

2.

Content of the questionnaire

Chronology of activities

Questionnaire assessment

Problems identified

3.

Results obtained from the questionnaire

Results from the administrative component

Results from the civil servants Component

Results from the Information and Networking Communication Technology Component

Results from the hardware component

Results from the software component

Results from the data component

Results from the methodological component

4.

Conclusions

LIST OF ABBREVIATIONS AND EXPLANATIONS

AKM – a non-profit organization or legal entity representing the general interests of its members, namely the local authorities of Kosovo.

GIS – The Geographic Information System is a computer system consisting of hardware, software, operator, data and collection methods, collection, verification, integration, manipulation, analysis and presentation of geographic data and information. Different types of data that are analysed based on spatial location and organized into informational layers through cartographic visualization or 3D staging can be integrated into GIS. As a result, users gain deeper insights about data based on patterns, interconnections, and status.

MDP – Municipal Development Plan is a multi-sectorial strategic plan that defines long-term economic, social, and spatial development goals. MDP should include a plan for the development of urban and rural areas for at least eight years.

MZM – Municipal Zoning Map is a multi-sectorial document which through using graphs, photos, maps and text determines in detail the type, destination, planned spatial use and action measures that are based on the duration and justifiable projections for public and private investment for all the territory of the municipality, for a period of at least eight years.

UDP – The Urban Development Plan is a multi-sectorial strategic plan that defines long-term goals for the development and management of urban areas for at least five years and has been part of the old Law on Spatial Planning no. 2003/14 (now repealed). The new approved Law No. 04/L-174 on Spatial Planning does not recognize the UDP.

URP – The Urban Regulatory Plan sets out the conditions for the regulation of space as well as the rules for the location of buildings on urban land parcels. Urban Regulatory Plans shall define construction zones, including Regulatory Lines, Construction Lines, Urban Technical Norms, and other requirements regarding permitted locations of buildings and other constructions in urban land parcels for a minimum period of five years or more (formerly part of Law on Spatial Planning no. 2003/14 which has been repealed). The new Law No. 04/L-174 on Spatial Planning does not recognize URP, instead a new plan known as the Detailed Regulatory Plan (DRP) is required though not mandatory.

Hardware – includes physical parts or components of a computer, such as the central processing unit, monitor, keyboard, mouse, hard drive, graphics card, sound card, headphones, and computer case.

Software – is a generic term that refers to the collection of computer data or instructions through which a computer operates.

Printer – is a peripheral device that converts outputs (text-readable or graphical material) from a computer into a printed image.

Plotter – is a computer printer for printing vector graphics. Plotters were formerly used in applications such as computer-aided design (CAD) but now they have generally been replaced with wide-format printers.

Scanner – is a device that optically scans images, printed text, handwriting or an object and converts it to a digital image.

Server – is a computer program or a device that provides functionality for other programs or devices.

Hardcopy – is a permanent reproduction, or copy, in the form of a physical object, of any media suitable for direct use by a person (in particular paper), of displayed or transmitted data.

Softcopy – is an electronic copy of some type of data, such as a file viewed on a computer's display or transmitted as an e-mail attachment. Such material, when printed, is referred to as a hard copy.

Photo-documentation – is photographic documentation related to a specific time or date during a thematic work process.

Web GIS - is a type of distributed information system, comprising at least a server (GIS server) and a client (web browser, desktop or mobile application).

Geportal – is a type of web portal used to find and access geographic information (geospatial information) and associated geographic services (display, editing, analysis, etc.) via the Internet.

QGIS - Quantum GIS is a free cross-platform desktop geographic information system (GIS) application that supports viewing, editing, and analysis of geospatial data.

SPAK – The Spatial Planning Application Kosovo is the official GIS spatial planning system based on the management of the CSPD/BKKPH, and should be used to prepare the Cartographic Section of the status of spatial planning documents;

CSPD – is the National Consolidated Spatial Planning Database as specified in Law No. 04/L-174

MIE - Ministry of Infrastructure and Environment

KCA - Kosovo Cadastral Agency

UN-Habitat - United Nations Human Settlements Programme

KIPA - Kosovo Institute for Public Administration

MuSPP - Municipal Spatial Planning Programme

LIST OF TABLES

Table 1. Name/classification, number of inhabitants and basic functions

Table 2. Classification of settlements according to AI 8/2017

Table 3. Basic functions

Table 4. Categories and number of population by classification based on AI 08/2017

Table 5. Surface areas and population by administrative regions

Table 6. Municipality and name of the department

Table 7. Key terms of urbanism departments, division of (internal) sectors and comparison of their designations

Table 8. Recommendations for the administrative component

Table 9. Recommendations for the civil servants component

Table 10. Recommendations for the information and networking communication technology component

Table 11. Recommendations for the hardware component

Table 12. Recommendations for the software component

Table 13. Recommendations for the data component

Table 14. Recommendations for the methodological component

LIST OF DIAGRAMS

Diagram 1. Number of municipalities by classification in %

Diagram 2. Kosovo municipalities

Diagram 3. Completion of the questionnaire by AKM member municipalities

Diagram 4. Completion of the questionnaire by non-member municipalities

LIST OF FIGURES

Figure 1. Kosovo Municipalities

Figure 2. Chronology of AKM activities related to GIS questionnaire

Figure 2. Kosovo municipalities that completed the questionnaire

PART OF AKM

1	DEÇAN
2	DRAGASH
3	DRENAS
4	F.KOSOVË
5	FERIZAJ
6	GJAKOVË
7	GJILAN
8	GRAÇANIC
9	HANI ELEZIT
10	ISTOG
11	JUNIK
12	KAÇANIK
13	KAMENICË
14	KLINË
15	KLLOKOT
16	LIPJAN
17	MALISHEVË
18	MAMUSHË
19	MITROVICË J
20	NOVOBËRDË
21	OBILIQ
22	PARTESH
23	PEJË
24	PODUJEVË
25	PRISHTINË
26	PRIZREN
27	RAHOVEC
28	RANILLUG
29	SHTËRPCE
30	SHTIME
31	SKËNDERAJ
32	THERANDË
33	VITI
34	VUSHTRRI

NOT PART OF AKM

35	MITROVICË V
36	ZUBIN POTOK
37	LEPOSAVIC
38	ZVECAN

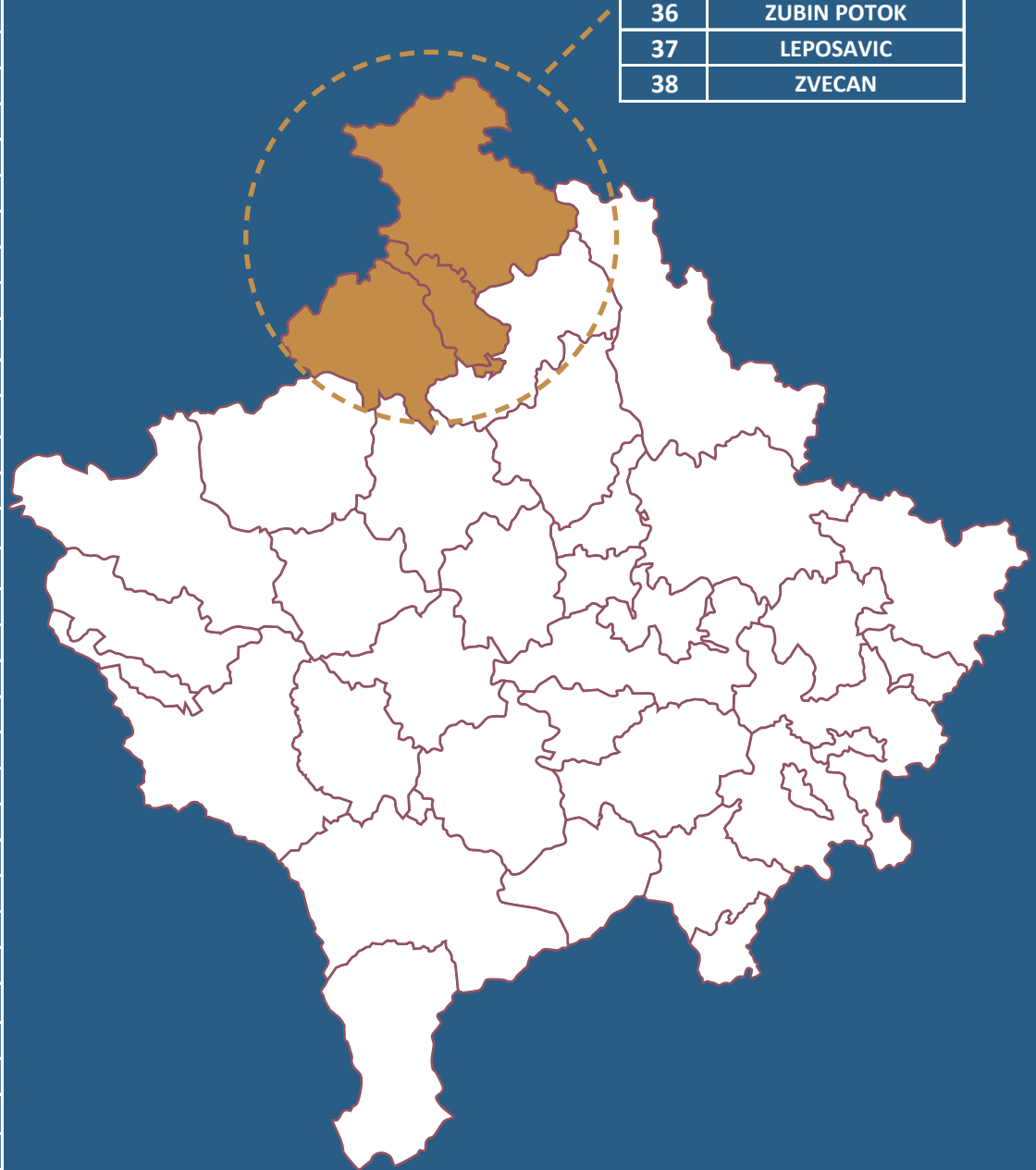


Figure 1. Kosovo Municipalities

Introduction

The Association of Kosovo Municipalities (AKM) was established in 2001 following the first democratic municipal elections in post-conflict Kosovo. The establishment of the AKM was based on Article 10 of the European Charter of Local Self-Government within the Council of Europe (the right to associate). AKM is a non-profit organization or legal entity representing the general interests of its members, namely the local authorities of Kosovo. These authorities become AKM members by the Assembly of the Association following the decision approved by the Municipal Assembly. The AKM is committed to enforcing the rules of the European Charter of Local Self-Governance in Kosovo.

The mission of the Association of Kosovo Municipalities is to create efficient, sustainable and democratic local governance through joint efforts with municipalities and achieve high quality performance in the service of the needs of its members.

AKM has the following objectives:

- Improve legislative structures of self-governance and practical efficiency of their implementation;
- Stimulate the decentralization of power through practical support and equal participation of central and local authorities;
- Expand public support on local democracy, citizens and business community included, as well as increase their trust in self-organization and readiness to take part in local government;
- Increase the competencies, knowledge and municipal capacities to ensure high and effective quality in local services;
- Find alternative financial sources for municipalities;
- Demonstrate that Kosovo municipalities are equal and competitive partners with local authorities in Europe and throughout the world;
- Support the Association's development in accordance with different circles within and outside Kosovo.

Under the Inclusive Development Programme, UN-Habitat and the AKM have formalized their cooperation in support of the AKM Spatial Planning Collegium aiming further contribution to central/local level coordination and inter-municipal cooperation, peer-exchange and exchanges of good practices amongst the municipal level in the field of spatial planning and construction. The programme serves as the Collegium's secretariat and supports its meetings and activities.

Summary

The demand of municipal departments in Kosovo municipalities to build a GIS cabinet to collect, store, improve and use spatial data and information in various thematic areas is growing. The use of GIS (Geographic Information System) in different municipal departments in Kosovo is seen as a tool that would enable higher quality of general spatial analysis, more qualitative and feasible plans as well as help solve problems that usually take a lot of time. In the context of developing spatial plans, departments that mostly need GIS are the Department of Urbanism, Department of Cadastre and Geodesy and Department of Public Services, although other municipal departments and public/social enterprises should also be considered. Therefore, GIS is the key technology that not only manages and analyses data, but also creates networking between sectors and institutions through the exchange of data and information. Building a GIS cabinet requires a lot of time, commitment, professional and technological knowledge and cost. It is recommended that before taking concrete actions to build a GIS cabinet, preliminary assessments of human, financial and technological capacities are made, including the assessment of data and information, their types and organizational structure at the municipality. In addition, the data and information are expected to be maintained and updated continuously therefore the engagement of professional staff/individuals is required. Despite the advantages, it should be noted that GIS does not provide any of the following measures such as: preventing informality, protecting agricultural land, regulating the traffic at urban/municipal level, protecting the environment/other social phenomena, and developing the economy of any neighbourhood, city or municipality. However, the provision of different data and information regarding the above mentioned subjects or more, that shall be entered into the database consistently, enables proper understanding and rightful decisions on different aspects of the citizens' quality of life, socio-economic and environmental situation, and disaster prevention that certainly affects the well-being of citizens.

The exchange of good practices through the City to City Dialogue within the Collegium showed great interest from municipalities to build GIS cabinets but they also noted the lack of knowledge for its sustainability. As a result, in September 2018 a decision was made to prepare a questionnaire for assessing the GIS situation in Kosovo municipalities by the "Inclusive Development Programme"/UN-Habitat.

Tools and methodology

The situation of GIS in Kosovo municipalities was surveyed through a comprehensive questionnaire. The final version of the questionnaire was developed by AKM's Collegium of Spatial Planning with the support of "Inclusive Development Programme"/UN-Habitat. The questionnaire was filled online by means of collecting standardized data from respective (municipal) officers; the data was analysed and a final product on the GIS situation delivered (including a database and data collection from past planning processes). The questionnaire was identified as a tool to assess the existing situation of GIS in Kosovo municipalities therefore the online form obtained by the SurveyMonkey site (www.surveymonkey.com) has been designated as a methodology with ensuing discussion and validation of findings within the Collegium. The advantages of using this methodology are in terms of:

Time	For a short period of time, a large group of Collegium members were interviewed;
Confidentiality	Participants are ensured privacy during the questionnaire completion and are given the opportunity of the right answer in case of uncertainty in completing the questionnaire;
Standardization	All answer forms are standardized and easily processed;
Process management	Online completion enables questionnaire designers to electronically manage the process by having in mind which municipality has completed, is completing, or has stagnated completing the questionnaire;
Data processing	Collection of all standardized answers enables the data processing work and immediate correction of identified errors.

Target groups

Target groups in this research are the Departments of Urbanism though other departments have also been included depending on their internal municipal structures that are involved in data management and use of GIS programmes.

Expected results

The results of the final product provide wider information on the actual situation of the municipalities of Kosovo, namely the Departments of Urbanism, in order to evaluate the professionalism and capacities in these departments. Also, the hardware/software status and requirements are assessed in accordance with technological advancements, professional training of local staff for software usage and their knowledge of GIS programmes, training needs and methodologies - types of training, financial needs for software acquisition and maintenance, building and strengthening inter-sectorial and inter-institutional collaboration, efficient database management at local institutions, political and institutional support for database strengthening and the use of GIS.

2.

Content of the questionnaire

The questionnaire was designed to provide a clear view of the sectorial composition of urbanism departments, gender composition and professional background of the civil service, the current hardware and software situation, data possession and the methodology of their use. As a result, the questionnaire is based on seven components:

Administrative component

– focuses on the sectorial composition of the department, workspace, working conditions, and needs to improve services;

Civil servant's component

– focuses on the composition of the number of civil servants in each sector, profession, gender composition and competence;

Communication, information and networking technologies

– focuses on inter-institutional and sectorial networking;

Hardware component

– focuses on the current situation of hardware within the department;

Software component

– focuses on the current situation of software within the department;

Data component

– focuses on the existing situation of the data in and type of data (digital copy, print copy) within the department;

Methodology component

– focuses on collecting and using data from past and future planning processes.

Chronology of activities

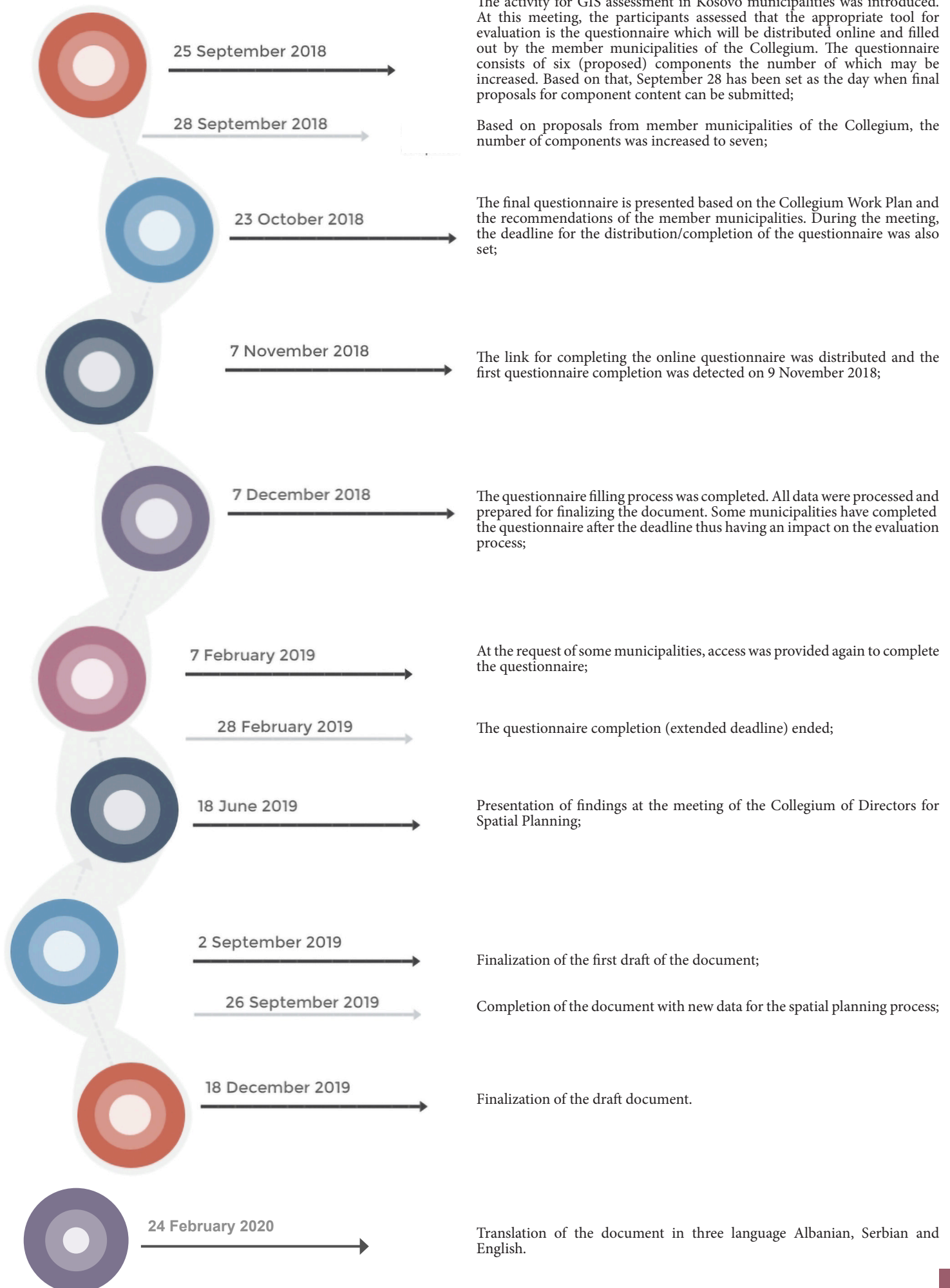


Figure 2. Chronology of AKM activities related to GIS questionnaire

Questionnaire assessment

After the questionnaire was completed, it was decided that all the municipal responses would be assessed and compiled into a general report. All answers were provided in two categories:

Multiple choice survey questions such as affirmative or negative, numerical and temporal answers. In these cases, the data was easily extracted from the questionnaire since tables with charts were directly displayed; nevertheless, the evaluation of the data was difficult due to incomplete questionnaires by some municipalities. For such cases, it was decided that the answers be evaluated based on the number of municipalities that answered all the questions.

Open-ended survey questions where the participants were asked to write down the answer. The answers were collected, and the issues raised by the participants in the questionnaire were categorized and prioritized based on their content analysis.

The compilation of recommendations for both categories of survey questions, including the categorization of municipalities, was done based on the number of inhabitants for each municipality. The classification of Kosovo municipalities is based on AI no. 08/2017 on Spatial Planning Technical Norms (Chapter 2, article 2.1.1.1, Classification of Formal Settlements). According to the tables on this AI, settlements are divided in 10 categories based on the number of inhabitants; this AI was also considered as a base document for comparison since there is no other AI that would help define the classification of municipalities. Until a new population census ensues, the 2011 census is taken as a basis for the number of populations, respectively "Population, Households and Housing Census in Kosovo, Final results - main data" (Kosovo Agency of Statistics, 2011).

Regarding the territories of the municipalities, there were inconsistencies in the data. The surface areas of the municipalities presented in the (approved) spatial plans provide no data sources and are not the same as the surface area of municipal territories shown in the profile of the official website of municipalities. Therefore, as a final study on the territory of the Republic of Kosovo - which includes the territories of all municipalities - was taken the "Factual Report - Measurement of the Territory of the Republic of Kosovo" (February 2017), drafted by the Commission of Experts for measuring the territory of the Republic of Kosovo - by decision of the Government of the Republic of Kosovo at its meeting held on 23 December 2016 (No. 03/122) - and it was compared with GIS data for measuring the surface areas of municipalities in digital format which were the same as the above report.

Next, the settlement classifications are done for all municipalities of Kosovo though it should be noted that four northern municipalities (Zubin Potok, Leposaviq, Zvecan and Mitrovica North) are not part of AKM and the Collegium of Spatial Planning respectively; as a result, these municipalities have not completed the questionnaire except the Municipality of Mitrovica North. Population data for Serb-majority municipalities refer to the 2011 census and are classified in the same way as other municipalities in Kosovo. If the municipal-level population is combined with the AI no. 08/2017, all settlements rank in a higher category, except for the municipalities of Mitrovica North, Leposaviq, Zvecan and Zubin Potok.

Table 1. Name/classification, number of inhabitants and basic functions

No. 1	Name - classification	Number of inhabitants
1.1	Large urban settlement	>100,000 inhabitants
1.2	Large medium-sized urban settlement	50,000-100,000 inhabitants
1.3	Small medium-sized urban settlement	25,000-50,000 inhabitants
1.4	Small urban settlement	10,000-25,000 inhabitants
1.5	Very small urban settlement	5,000-10,000 inhabitants
1.6	Large rural settlement	2,500-5,000 inhabitants
1.7	Large medium-sized rural settlement	1,000-2,500 inhabitants
1.8	Medium rural settlement	500-1,000 inhabitants
1.9	Small rural settlement	200-500 inhabitants
1.10	Very small rural settlement	<200 inhabitants
Nr. 2	Basic functions	
2.1	Capital city/ metropolis	
2.2	Regional centre	
2.3	Municipal centre	

Table 2. Classification of settlements according to AI 8/2017

No	Name of municipality	Administrative region	Population (2011)	Surface area (km ²)	Density (km ²)	Ratio to KS	Classification according to AI 8/2017
1	Deçan	Gjakova	40,019	293	136.58	2.50%	Small urban settlement
2	Dragash	Prizren	33,997	433	78.52	2.00%	Small urban settlement
3	Drenas / Glogoc	Prishtina	58,531	275	212.84	3.50%	Small medium-sized urban settlement
4	Ferizaj	Ferizaj	108,610	345	314.81	6.50%	Large medium-sized urban settlement
5	Fushe Kosove	Prishtina	34,827	84	414.61	2.00%	Small urban settlement
6	Gjakova	Gjakova	94,556	587	161.08	5.50%	Small medium-sized urban settlement
7	Gjilan	Gjilan	90,178	391	230.63	5.20%	Small medium-sized urban settlement
8	Gracanica	Prishtina	10,675	122	87.50	0.60%	Very small urban settlement
9	Hani i Elezit	Ferizaj	9,403	83	113.29	0.60%	Large rural settlement
10	Istog	Peja	39,289	454	86.54	2.30%	Small urban settlement
11	Junik	Gjakova	6,084	77	79.01	0.40%	Large medium-sized rural settlement
12	Kacanik	Ferizaj	33,409	211	158.34	0.20%	Small urban settlement
13	Kamenica	Gjilan	36,085	413	87.37	2.30%	Small urban settlement
14	Klina	Peja	38,496	309	124.58	2.30%	Small urban settlement
15	Klllokot	Gjilan	2,556	23	111.13	0.20%	Large medium-sized rural settlement
16	Leposaviq	Mitrovica	13,773	539	25.55	0.80%	Small urban settlement*
17	Lipjan	Prishtina	57,605	338	170.43	3.50%	Small medium-sized urban settlement
18	Malisheva	Prizren	54,613	306	178.47	3.50%	Small medium-sized urban settlement
19	Mamusha	Prizren	5,507	11	500.64	0.50%	Large rural settlement
20	Mitrovica South	Mitrovica	71,601	330	216.97	4.50%	Small medium-sized urban settlement
21	Mitrovica North	Mitrovica	12,634	5	2526.80	0.80%	Small urban settlement*
22	Novoberde	Prishtina	6,729	204	32.99	0.50%	Large rural settlement
23	Obiliq	Prishtina	21,549	105	205.23	1.50%	Small urban settlement
24	Partesh	Gjilan	1,787	28	63.82	0.10%	Medium rural settlement
25	Peja	Peja	96,450	602	160.22	5.50%	Small medium-sized urban settlement
26	Podujeva	Prishtina	88,499	632	140.03	5.00%	Small medium-sized urban settlement
27	Prishtina	Prishtina	198,897	520	382.49	11.30%	Large medium-sized urban settlement
28	Prizren	Prizren	177,781	626	284.00	10.00%	Large medium-sized urban settlement
29	Rahovec	Gjakovës	56,208	276	203.65	3.30%	Small medium-sized urban settlement
30	Ranillug	Gjilan	3,866	77	50.21	0.30%	Large medium-sized rural settlement
31	Shterpce	Ferizaj	6,949	247	28.13	0.50%	Large rural settlement
32	Shtime	Ferizaj	27,324	134	203.91	0.20%	Small urban settlement
33	Skenderaj	Mitrovica	50,858	374	135.98	3.00%	Small medium-sized urban settlement
34	Suhareka	Prizren	59,722	361	165.43	4.00%	Small medium-sized urban settlement
35	Vitia	Gjilan	46,987	270	174.03	3.00%	Small urban settlement
36	Vushtrria	Mitrovica	69,870	344	203.11	3.50%	Small medium-sized urban settlement
37	Zubin Potok*	Mitrovica	6,616	334	19.81	0.40%	Very small urban settlement*
38	Zvecan*	Mitrovica	7,481	123	60.82	0.45%	Very small urban settlement*
Kosovo (KS)			1,780,021	10,886	163	100 %	

(* -Settlements data are missing, and data presented are at municipal level)

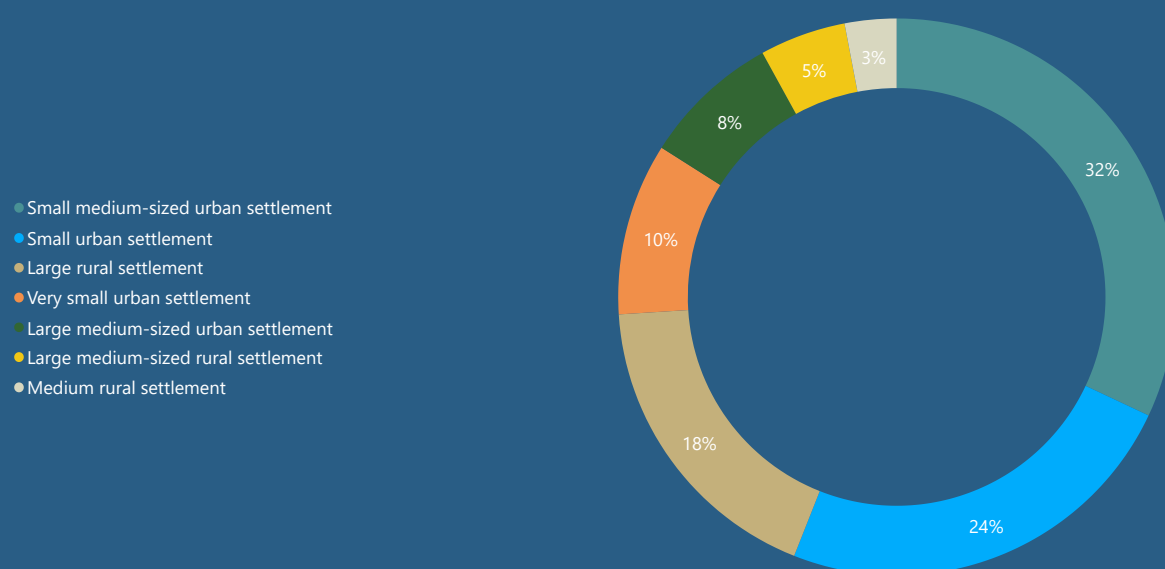


Diagram 1. Number of municipalities by classification in %

From the 2011 official census data, only three Kosovo municipalities (ordered by size: Prishtina, Prizren and Ferizaj) are considered as large medium-sized urban settlements and only one municipality (Partesh) as a medium rural settlement. Kosovo is dominated by small medium-sized urban settlements and small urban settlements, altogether making almost 2/3 of Kosovo's population. According to administrative divisions, Prishtina is considered as the region with the largest population followed by Prizren and Mitrovica, while Peja is considered as the region with the lowest population. The region of Prishtina is also considered to be the largest by surface area, followed by Mitrovica and Prizren, and Ferizaj region with the smallest surface area.

It is worth mentioning that during the analysis of the population and surface area of municipalities, there are cases when municipalities have a large territory but the number of population is small, such as the municipalities of Leposaviq* (very small urban settlement), Istog and Dragash (small urban settlements). Contrary is the case with the municipalities of Ferizaj (large medium-sized settlement), Mitrovica South and Gjilan (small medium-sized settlements) which have a large population number and a small territory. In terms of population density per km², Mitrovica North* (very small urban settlement) has the highest number of inhabitants per km² followed by Mamusha (large rural settlement) and Fushe Kosova (small urban settlement).

Table 3. Basic functions

Capital city/metropolis	Prishtina
Regional centre	Prishtina, Gjilan, Ferizaj, Prizren, Gjakova, Peja, Mitrovica
Municipal centre	Decan, Dragash, Drenas/Glogoc, Ferizaj, Fushe Kosove, Gjakova, Gjilan, Gracanica, Hani i Elezit, Istog, Junik, Kacanik, Kamenica, Klina, Klokot, Leposaviq, Lipjan, Malisheva, Mamusha, Mitrovica South, Mitrovica North, Novoherde, Obiliq, Partesh, Peja, Podujeva, Prishtina, Prizren, Rahovec, Ranillug, Shterpce, Shtime, Skenderaj, Suhareka, Vitia, Vushtrri, Zubin Potok, Zveqan

Table 4. Categories and number of population by classification based on AI 08/2017

1	Large medium-sized urban settlement	Prishtina, Prizren, Ferizaj			
2	Small medium-sized urban settlement	Gjakova, Gjilan, Drenas / Glogoc, Lipjan, Malisheva, Mitrovica South, Peja, Podujeva, Rahovec, Skenderaj, Suhareka, Vushtrria.			
3	Small urban settlement	Decan, Dragash, Fushe Kosove, Istog, Kacanik, Klina, Shtime, Vitia, Mitrovica North*, Leposaviq*.			
4	Very small urban settlement	Gracanica, Obiliq, Zubin Potok*, Zveqan*.			
5	Large rural settlement	Hani i Elezit, Junik, Mamusha, Novoherde, Shterpce,			
6	Large medium-sized rural settlement	Klokot, Ranillug			
7	Medium rural settlement	Partesh			
Number of population according to the classification based on AI 08/2017					
Categories according to 08/2017		Population	Population %	Number of settlements (NS)	(NS) %
1	Large medium-sized urban settlement	485,288	27.26	3	8
2	Small medium-sized urban settlement	848,691	47.68	12	32
3	Small urban settlement	330,433	18.56	9	24
4	Very small urban settlement	58,631	3.29	4	10
5	Large rural settlement	48,769	2.74	7	18
6	Large medium-sized rural settlement	6,422	0.30	2	5
7	Medium rural settlement	1,787	0.10	1	3
Total		1,780,021	100	38	100 %

(*-Settlements data are missing, and data presented are at municipal level)

Table 5. Surface areas and population by administrative regions

Administrative region	Surface are	Surface area %	Population	Population %
1 Ferizaj	1,020	9.37	185,695	10.43
2 Gjakova	1,233	11.33	196,867	11.06
3 Gjilan	1,202	11.04	181,459	10.19
4 Mitrovica	2,049	18.82	232,833	13.08
5 Peja	1,365	12.54	174,235	9.79
6 Prishtina	2,280	20.94	477,312	26.81
7 Prizren	1,737	15.96	331,620	18.63
Total	10,886	100	1,780,021	100

Problems identified

During the process of developing the online questionnaire for GIS assessment in Kosovo municipalities, several problems were identified and categorized based on their content, information technology and interest in completing the questionnaire.

Questionnaire volume - Given that many municipalities lack human resources to provide daily services to citizens, it was estimated that the questionnaire contained a large number of questions that required too much time to complete.

Subject of the components - The number of questionnaire topics was approved by the members of the Collegium but during the filling process it was noted that some answers had to be provided by other departments which caused delays in completing the questionnaire.

Information technology

IT Network - In some municipalities, the process of filling in the questionnaire answers took longer due to poor internet connectivity or because some municipalities failed to complete the entire questionnaire. This identified problem led to the assessment of the results based on the number of municipalities that completed the questionnaire. Likewise, the SurveyMonkey website did not provide the possibility for them to proceed from the same question in case of interruptions during the questionnaire filling process. This was the reason that some municipalities completed the questionnaire after the deadline since they had to refill the questionnaire from the start.

Access to the questionnaire - Some of the municipalities did not have access to the questionnaire website due to restrictions by the administrator who manages the technological infrastructure. The problem was at local level and questionnaire access was only possible with the consent of the administrator and during the time it was being completed. As a result, the difficulties in completing the questionnaire in one go without discontinuances caused further delays.

Interest - most municipalities responded to the questionnaire deadline set by the members of the Collegium, but some municipalities exceeded the deadline. Some municipalities completed the questionnaire partially. Interruptions during the completion of the questionnaire impacted the extraction of final results on time. In addition, a small number of municipalities did not complete or submit the questionnaire.

3.

Results obtained from the questionnaire

The results of the questionnaire were processed for 30 participant municipalities out of 38 in Kosovo. Out of 30 municipalities that completed the questionnaire, only the municipality of Mitrovica North is not a member of the AKM, respectively the Collegium on Spatial Planning. Mitrovica North decided to complete the questionnaire as a means of self-assessment of their situation and comparison with other municipalities. Out of 8 municipalities that did not complete the questionnaire, 5 municipalities are members of the Collegium for Spatial Planning. All results obtained from the questionnaire were classified, ranked, evaluated and summarized. In certain cases, in order to obtain the most accurate results, empirical calculations had to be made. The results are elaborated and summarized for each individual component (not for each question) and then complemented with recommendations. The total response rate of all municipalities that completed the questionnaire was 81%. Some answers are missing because some questions were interconnected (e.g. if the answer to question 24 was negative, respondents moved to question 26, skipping question 25). From the calculation of all unanswered questions (about 19%), 98% are interconnected questions while there are different assumptions as to why the remaining 2% were not completed. The assessment was established for AKM member municipalities only.

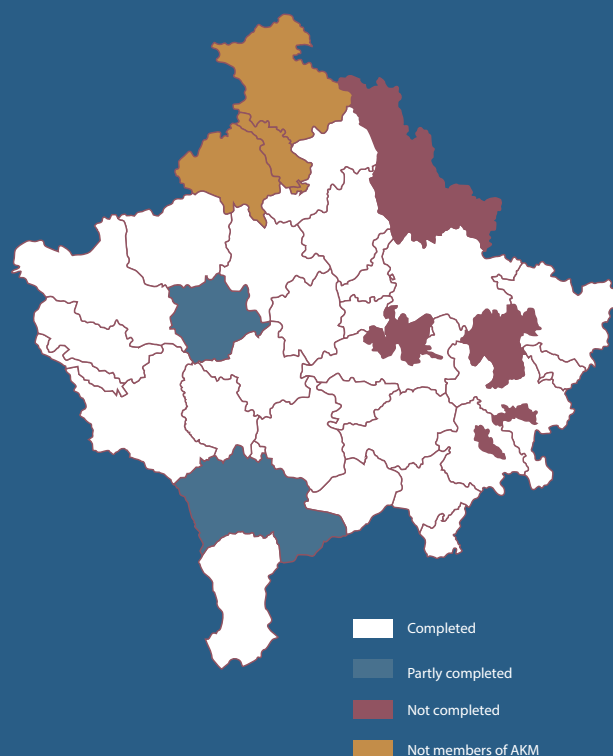


Figure 3. Kosovo municipalities that completed the questionnaire

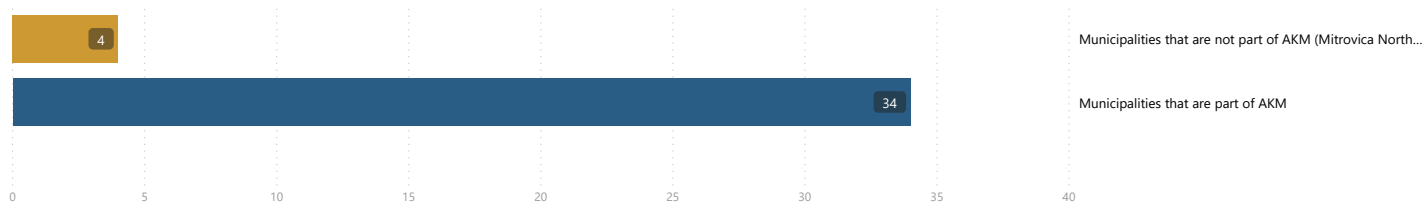


Diagram 2. Kosovo municipalities

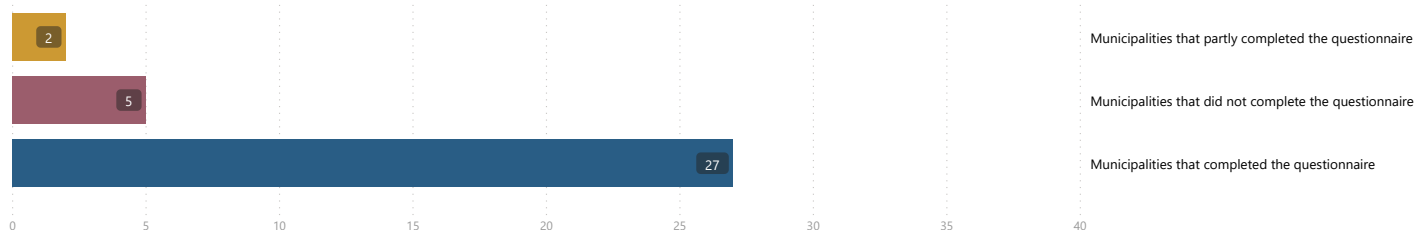


Diagram 3. Completion of the questionnaire by AKM member municipalities

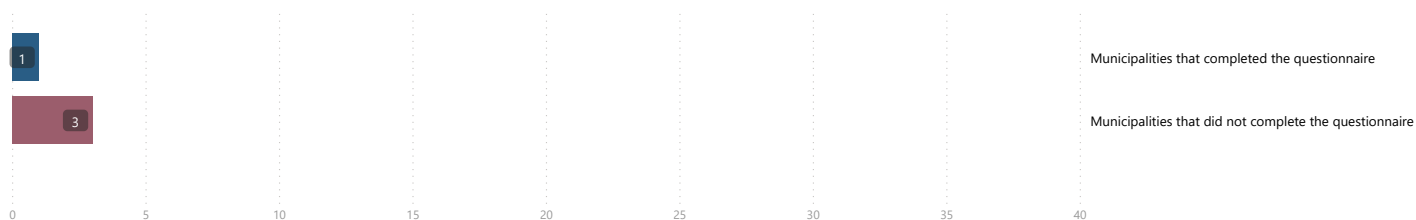


Diagram 4. Completion of the questionnaire by non-member municipalities

Results from the administrative component

The administrative component focused on the sectorial composition of the department, working space, working conditions and needs to improve services. Assessment of the answers showed that the difficulties encountered during the questionnaire completion were different across municipalities. Large municipalities did not encounter many technical difficulties in completing the questionnaire. The main reason is that the internal organization of the Department of Urbanism in these municipalities is more sustainable in terms of human/professional capacities, logistics and interaction.

Departments are organized within municipalities based on the requirements for better functioning (in larger municipalities) and the number of officials (in smaller municipalities). Internal structuring varies across municipalities. Questionnaire assessment displays that the Department of Urbanism in some municipalities consists of up to 5 sectors, while in 3 municipalities it has only one sector. The main sectors of this department across municipalities are urbanism, urban planning and environmental protection. The data show that in most municipalities in Kosovo (40%), the Department of Urbanism is divided into three sectors followed by those with two and one sector (23% and 20% respectively) and more than four sectors (16% of the municipalities). Alongside the differences noted in terms of internal organization of work, the questionnaire assessment also pointed the differences in the naming of the department.

Most departments use common terms such as "urbanism" and "planning" as well as "reconstruction" and "development". Discrepancies were also found in the naming of the Departments of Urbanism and the sectors they cover. As a result, uncertainties have emerged:

- The sectors within the Department of Urbanism do not fit the name of the department. If the term Environmental Protection, Planning or Development is included in the name, there are no sectors in the internal structures of the department to which the name refers; meaning that, they might take responsibility for performing the functions but not necessarily providing them.
- The sectors within the Department of Urbanism do not coincide with the department name however, there are professional civil servants dealing with environmental, planning or development matters despite their inadequate job positions.
- Some sectors divided within the Department of Urbanism correspond more to the requirements of other departments (infrastructure, construction and inspectorate) rather than the process of planning, construction management or environmental protection. As the legal framework changes, some sectors within the Departments of Urbanism do not have any function yet they still exist.

Table 6. Municipality and name of the department

Municipalities that completed the questionnaire		
	Municipality	Department
1	Deçan	Department of Urbanism, Spatial Planning and Environmental Protection
2	Glllogoc / Drenas	Department of Urban Planning and Environmental Protection
3	Fushe Kosove	Department of Urban Planning
4	Gjakova	Department of Urbanism and Environmental Protection
5	Ferizaj	Department of Urbanism and Environment
6	Prizren*	Department of Urbanism and Spatial Planning
7	Kamenica	Department of Urbanism and Spatial Planning
8	Prishtina	Department of Urbanism
9	Skenderaj	Department of Urbanism and Environmental Protection
10	Shtime	Department of Urban Planning, Cadastre and Geodesy
11	Lipjan	Department of Planning, Urbanism and Environmental Protection
12	Junik	Department of Urbanism, Cadastre and Environment
13	Vushtrria	Department of Urbanism and Environmental Protection
14	Suhareka	Department of Urbanism and Planning
15	Hani i Elezit	Department of Urbanism, Cadastre and Environmental Protection
16	Gjilan	Department of Urbanism, Planning and Environmental Protection
17	Peja	Department of Urbanism and Environmental Protection
18	Klina**	Department of Urbanism and Environmental Protection
19	Kaçanik	Department of Urbanism, Cadastre and Environmental Protection.
20	Istog	Department of Urban Planning and Environment
21	Malisheva	Department of Urbanism
22	Vitia	Department of Urbanism, Planning and Environmental Protection
23	Mitrovica South	Department of Planning and Urbanism
24	Mamusha	Department of Development, Planning, Urbanism, Geodesy and Cadastre
25	Obiliq	Department of Urban Planning, Cadastre and Property
26	Shterpce	Department of Planning, Reconstruction, Urbanism and Environmental Protection
27	Ranillug	Department of Urbanism, Planning and Environment
28	Dragash	Department of Urbanism, Cadastre and Environmental Protection
29	Rahovec	Department of Urbanism, Planning and Environmental Protection
Municipalities that did not complete the questionnaire		
30	Gracanica	No information
31	Klllokot	No information
32	Novoberde	No information
33	Partesh	No information
34	Podujeva	No information
Other municipalities that are not part of the Collegium of Directors for Spatial Planning		
35	Mitrovica North	Directorate of Urbanism, Cadastre and Geodesy
36	Zvecan	No information
37	Zubin Potok	No information
38	Leposaviq	No information

• In some cases, the terms '*reconstruction*' and '*development*' are noticed in the naming of urbanism departments but no such sectors operate within them. For the one that holds '*reconstruction*' in its label, the period of emergency for reconstruction has long passed and the municipality is not recognized as being subject to various natural hazards or disasters. For the one that holds the term '*development*' it is recommended that such cases coordinate development policies, strategies, and promotion of municipal values under the Department of Economic Development which has been an umbrella for such matters.

Some of Departments of Urbanism also manage the Cadastre and Geodesy sectors. These two sectors are professionally related to the spatial planning and construction management process, but in terms of action-implementation of plans and response to daily management and construction requirements,

these sectors only overload the management process and the implementation of spatial plans. With these two sectors within the Department of Urbanism, the daily work routine is only operational and less strategic. These problems are more common in small municipalities and this shows that the internal organization of the Department of Urbanism was inevitable due to the small number of civil servants and lack of workspace. For quality services in the Department of Urbanism, officials should be provided with relevant working conditions which means that aspects of safety, health and workspace must be taken into account. This is regulated to some extent by the Kosovo legal framework (Law No. 03/L-212 on Labour and AI No. 08/2017 on Spatial Planning Technical Norms).

The questionnaire assessment also displays the number of offices within the municipal Departments of Urbanism; most of them have 3 offices, followed by 4 and eventually 6 offices in larger municipalities. Consequently, workspace problems are more evident in smaller municipalities. Performed analysis displays that the problem with the workspace lies in the large number of sectors and small spaces/offices or the small number of offices for the placement of civil servants, which according to AI no. 08/2017 on Technical Spatial Planning Norms (chapter 4, paragraph 5 for public administration buildings) should be at least 0.62 m² per / inhabitant.

Table 7 shows that a number of sectors don't match the name 'Department of Urbanism'. The majority of the municipalities face this issue. In most cases, the sectors consist of one officer (e.g. the environmental sector) and no cases were identified that hold two positions in two different sectors. However, the narrative comments emphasize that work overload in certain urbanism sectors provided negative impact on the daily work of civil servants/officers in construction management and the implementation of spatial documents. In two cases, the name 'Department of Urbanism' included geodesy and cadastre, but even so inactive within the internal organization of the respective departments due to not being divided into sectors.

Table 7. Key terms of urbanism departments, division of (internal) sectors and comparison of their designations

Terms of the Departments of Urbanism		Sectors of the Urbanism Department	
Urbanism	24 Municipalities	Urbanism	17 sectors
Planning	9 Municipalities	Planning	14 sectors
Urban planning	5 Municipalities	None	None
Spatial planning	3 Municipalities	None	None
Environment	4 Municipalities	Environment	2 sectors
Environmental Protection	15 Municipalities	Environmental Protection	8 sectors
Cadastre	5 Municipalities	Cadastre	3 sectors
Cadastre and Geodesy	2 Municipalities	Cadastre and Geodesy	2 sectors
Property	1 Municipality	None	None
Reconstruction	1 Municipality	None	None
Development	1 Municipality	None	None
None	None	Legalization	5 sectors
None	None	Construction permit	5 sectors
None	None	Construction	2 sectors
None	None	Legal office	2 sectors
None	None	Housing issues	2 sectors
None	None	Project Management	1 sector
None	None	Infrastructure projects	1 sector
None	None	Construction and housing	1 sector
None	None	Construction conditions	1 sector
None	None	Construction and supervision	1 sector
None	None	Joint services	1 sector
None	None	Not divided	2 sectors

Table 8. Recommendations for the administrative component

		Large medium-sized urban settlement	Small medium-sized urban settlement	Very small urban settlement	Large rural settlement	Large medium-sized rural settlement	Medium rural settlement
1	Unify the designation of all Departments of Urbanism in Kosovo. According to the questionnaire assessment, the most common name is 'Department of Urbanism and Environmental Protection'.	●	●	●			
2	Sectors that match the designation 'Department of Urbanism' should merge some sectors and allocate human capacities to the necessary positions within the Department of Urbanism.	●	●	●	●	●	●
3	Create sectors with officials responsible for environmental protection although this sector may have only one official.	●	●	●			
4	Many municipalities cannot reach the rate of 0.62 m ² per person, but must provide appropriate working space, i.e. at least one office per sector. The director's office should also be added to these sectors. (It is not necessary for the Departments of Urbanism to have a secretary).			●	●	●	●
5	Remove some sectors that are more responsive to the requirements of other departments other than the urbanism one. This action gives the DU a good opportunity to direct human resources to strategic planning and construction management.	●	●	●	●		
6	Prioritize the actions of the DU at the municipal level and build cross-sectorial networking of strategic actions. It is the task of MESP and MLGA to organize meetings or workshops with the Mayors to inform and provide concrete plans for prioritizing the Departments of Urbanism.	●	●	●	●	●	●

Results from the civil servants component

This component is focused on the composition of the number of civil servants in each sector including profession, gender composition and competencies. Completion of the questionnaire from 30 municipalities (including Mitrovica North) shows the real situation of civil servants in these municipalities, respectively the Departments of Urbanism. According to the municipalities that participated in the questionnaire, 42% of them have 2-5 civil servants in the Department of Urbanism. Given the workload these departments face in a daily basis as well as changes in the legal framework (especially in the area of spatial planning and legalization), this number is considered very small especially for municipalities that are classified as small medium-sized urban settlements and very small urban settlements. During the assessment of the questionnaire, the Department of Urbanism was divided into two groups:

- (1) *Departments that do not have the sector of cadastre, respectively geodesy and cadastre;*
- (2) *Departments that have the sector of cadastre, respectively geodesy and cadastre.*

Assessment was done separately for both groups and the final results display the insufficient number of civil servants dealing with spatial planning and construction management. Concerning is the fact that very small urban settlements face this phenomenon which has a negative effect in the process of spatial planning, management and monitoring. There are Departments of Urbanism that have only one civil servant. For most municipalities, increasing the number of civil servants for the provision of services to municipal residents is a certain solution. From the narrative assessment of the answers, the first signals of the proposal show that the number of civil servants in the department should not depend on the number of the population because the nature of the work is at the spatial level. Another problem identified for increasing the number of civil servants is the regulation coming from the Ministry of Finance that prohibits individual contract employees in the municipalities.

The professional background of civil servants was also defined based on sectors that contain or do not contain geodesy and cadastre. Architecture backgrounds occupy 34% of all Departments of Urbanism followed by civil engineering (15%) and law (12%). The dominance of architects is usual in these cases and generally sufficient for performing day-to-day work, but the lack of engineers, whether in construction, electricity or hydrology is concerning.

There are many municipalities (very small urban settlements), namely Departments of Urbanism that do not have a civil engineer in their staff thus causing negative impact in construction management and the process of issuing construction permits. Also, the small percentage of law practitioners in these departments creates delays in the processes of construction management and monitoring of the daily work, in line with Kosovo's legal framework. In some cases, the law officers are not present at all. It is recommended that the departments hire a law officer and not use services from the local legal office; it is not necessary to establish a separate sector for these civil servants, but it is recommended to engage them in the existing sectors such as planning or construction permits.

The surveyors in the Urbanism Departments are few in number. Exceptional are the cases when the department includes cadastre and geodesy sector in its internal structures. The position of the surveyor in this department is of great interest especially in supporting the sectors for construction permits. Lack of surveyors in urbanism departments obliges them to send requests to the Departments of Geodesy and Cadastre through the mayor's office or regular meetings of the Collegium of Directors. There are certain cases where the Department of Urbanism is also obliged to hire private companies to record the factual situation on the ground. The professional background of civil servants indicates that about 11% of them are of secondary education. For these categories, educational advancements can be offered through possibilities of cooperation between the AKM, respectively the Collegium of Directors for Spatial Planning with the Kosovo Institute for Public Administration (KIPA), the University of Pristina or private colleges in Kosovo ¹.

¹UN-Habitat, MESP and KIPA officially signed the cooperation for anchoring MuSPP training modules in KIPA training program. The MuSPP Guide contains four modules: Public Participation in Spatial Planning, Drafting of Municipal Development Plans, Drafting Strategic Environmental Assessment, and Management of Capital Investment Projects. However, these modules can be expanded even more based on the needs and requirements of municipalities by cooperating closely with MEI respectively with ISP.

^(*) 22/03/2016 on 23, the cooperation between UN-Habitat, MESP and KIPA was officially signed for the anchoring of the training modules of MuSPP in the training program of KIPA. Through this memorandum, all three parties pledged to work closely together in the process of transferring MuSPP/UN-Habitat training modules to the KIPA training program. The main results expected from this cooperation are: the institutionalization of the MuSPP Guide; review and approval of training modules by the Joint Evaluation Commission, certification of potential candidates as KIPA coaches; registration of training modules and certified trainers in the KIPA program / database.

Gender equality in the urbanism departments differs based on the level of classification of settlements. In large medium-sized urban settlements and small medium-sized urban settlements, gender equality and representation are at a satisfactory level, with the female gender dominating in some cases. On the other hand, in municipalities classified as very small urban settlements, large rural settlements, large medium-sized rural settlements and medium rural settlements, male dominance is detected.

The final result of gender composition assessment in the Departments of Urbanism shows that 61% of employees are male and 39% are female. The situation is almost the same with the sector leaders as well, 65% male and 35% female respectively. If we look at the level of leading in the departments of urbanism in country level, then the gender situation is not good. In fact, there are 28 departments of urbanism, or 82% of which are run by men, while only 6 or 18% of them are run by women. In northern Serb-majority municipalities, 3 (75%) are run by men and only 1 (25%) is run by women. Gender dominance varies by municipality, both in terms of civil servants and sector leadership. Referring to Sustainable Development Goals (SDG), Goal 5: Achieving Gender Equality and Empowering Women and Girls foreseen to be achieved by 2030, we observe that women's representation in decision-making in the field of urbanism at the local level is far from being reached and further commitment should be made and opportunities provided to reach that goal.

Communication between the local level and the central level needs to be strengthened in the future. Proper communication, coordination and cooperation can bring positive results and facilitate work at and between both levels.

The professional capacity of the Departments of Urbanism around Kosovo to use GIS would greatly impact the work facilitation of the central level, namely MESP, in terms of data collection to inform spatial document drafting. In the meantime, receiving spatial information from the central level would greatly help the local level. The questionnaire results show that only 45% of urbanism departments are aware of GIS trainings facilitated by the central level and only 21% have used these opportunities. This is considered relatively positive hence the possibility that all future GIS trainings are facilitated through AKM and the Collegia for Spatial Planning will be reviewed. Around 60% of the departments (from large medium-sized settlements, small medium-sized settlements and very small settlements) have attended GIS trainings.

Out of them, 16% were trained by NGOs and only 21% were trained by the central level. Trainings were organized on a daily basis and lasted from 1 to 4 days. They were mainly in-house trainings, but there were cases when the trainings would be held in different organizations or other municipalities. Almost 1/3 of the municipalities have responded that their departments lack civil servants capable of using GIS. These are evident in municipalities characterized as very small urban settlements, large rural settlements, medium-large rural settlements and medium rural settlements, while large urban medium settlements and small urban settlements have from 1 to 9 civil servants capable of using GIS. Around 68% of the Departments of Urbanism received invitations to attend the trainings and 60% of them attended. The rest could not attend the training due to various reasons, mainly logistical (lack of transport, lack of hardware, irregular attendance, lack of software, etc.).

The interest in participating in future trainings is high but only when these trainings are provided free of charge, otherwise only a small number of municipalities can provide financial support for GIS trainings (only 3 departments have stated that they can provide funding for training). Almost all participants assessed that the trainings should be organized outside the municipality so their daily work won't become an obstacle, while a small part of them do not see it as an obstacle (2 DU have stated that they own the adequate facilities for organizing a training). In conclusion, it is recommended that after the completion of trainings, officers are monitored in terms of application of professional capacities and offered on-the-job assistance.

Table 9. Recommendations for the civil servants component		Large medium-sized urban settlement	Small medium-sized urban settlement	Very small urban settlement	Large rural settlement	Large medium-sized rural settlement	Medium rural settlement
1	Reorganize the functioning of the Department of Urbanism through the organogram of this department, and describe the work and tasks (planning processes, issuing of construction permits, legal framework decisions, environmental decisions, etc.) for each civil servant. This description includes how to engage civil servants outside the Directorate of Urbanism.	●	●	●	●	●	●
2	Departments of Urbanism should hire lawyers and engineers (construction, electrical, hydro and surveyors) for construction management processes and support of spatial planning processes. The best option is to hire new staff but due to the restrictions set by the Ministry of Finance, it is recommended to switch jobs between municipal departments thus complementing each other.		●	●	●	●	●
3	To start with the cooperation with KIPA for the training of local staff. There are now several training modules from the MuSSP programme available as a result of the collaboration of KIPA, MIE and UNHABITAT. According to the needs of the municipalities, this cooperation can produce other modules which will help the municipalities in increasing the knowledge, work performance and quality of service to the citizens.	●	●	●	●	●	●
4	Capacity building through training or vocational training at private colleges. Most private colleges are present in major cities and have flexible work plans. The AKM, namely the Collegium of Directors for Spatial Planning, may reach agreements with private colleges to enhance the professional capacity of civil servants.			●	●	●	●
5	Provide opportunities for gender equality in the management of sectors or the Department of Urbanism both in recruitment and decision making.			●	●	●	●
6	Inform Departments of Urbanism on GIS trainings organized by the central level. In this case, MESP is required to launch an information campaign on free training opportunities on GIS, in order to build the professional capacity of civil servants in municipalities.	●	●	●	●	●	●
7	Monitor and provide assistance to civil servants in the use of GIS by MIE. Representatives of the Collegia of Directors for Spatial Planning should as soon as possible reach an agreement on cooperation and coordination with MEI, to provide municipalities with GIS software and at the same time be offered assistance, while municipalities should on the basis of periods of two or three months report to MEI on the state of use of GIS applications.	●	●	●	●	●	●

Results from the Information and Networking Communication Technology Component

The component of communication, information and networking technology is focused on internal institutional and sectorial networking. It is one of the key nodes that enables the Department of Urbanism to function and connect in real time with other civil servants at the national level, including access to data for relevant institutions. The need to access and store data as well as the assessment of technological conditions in Departments of Urbanism in Kosovo will be discussed and presented below.

The findings show that only 3 departments own a server. Owning a server is important due to the storage, maintenance and use of relevant data. This server can be used to manage the database and digitize the entire inventory of the department. It can also be used together with other municipal departments to improve services for citizens.

If the Departments of Urbanism do not have a dedicated server for their work, they should at least have separate space within the municipal servers, a common network for inter-municipal connections. According to the questionnaire results, 7 municipalities do not have municipal servers. Out of 22 municipalities that own such servers, only 9 have separate space dedicated to the Department of Urbanism while 13 others do not own such privileges. Municipalities, regardless of their classification, should invest in servers as creating archives and storing the data of these specific departments or sectors is essential. Network access creates more efficient communication within the department and other relevant structures and enables faster access to data. 96% of the participants stated that they are connected to the IT network however the departments do not have an internal network and use alternative ones for communication.

The situation is more complicated when it comes to databases; only 13 departments have stated that they own a database within the Department of Urbanism while 16 of them don't. The data is stored on the server or officials' computers. Regarding the possession of the database at municipal level, the assessment shows that 18 departments submit their data to their local database based on certain administrative requirements. The existence of a database would assist municipalities in their daily operations and the Department of Urbanism in spatial planning processes by harmonizing spatial data or other information according to AIs that are compiled by the Ministry of Environment and Spatial Planning (MESP), as well as the Ministry for Local Government Administration (MLGA).

Only 5 departments participated in the drafting of the AI on spatial database, while about 20 of them stated that they have heard about the Kosovo Spatial Planning Application (SPAK). In the meantime, the presentation of SPAK was made in 7 municipalities only. In the narrative sections of the questionnaire, participants explained that presentations were made in different time periods ranging from 30-minute presentations to 8-day workshops regarding the efficient use the app. The data shows that many urbanism departments need to be informed and trained on how to use the application effectively. When asked about the Central Spatial Planning Database, it resulted that the situation of informing municipalities is almost the same as in the case of the SPAK; 9 participants stated that they were aware of the CSPD while 20 others stated that the first time they read about it was during this questionnaire. Given the importance of the CSPD for the work on urbanism departments, it is highly recommended that MESP organizes workshops or trainings for civil servants regarding this subject.

So far, only one department has been provided a central level presentation for this subject. In addition, 22 departments responded that MESP manages the CSPD, while another 7 stated that they don't know who manages this process. Based on the answers to the previous questions, it was clear that very few municipalities have migrated data to the CSPD, precisely 3 Departments of Urbanism, while the rest was not able to migrate them through the SPAK.

Internet access and faster access to the data is of primary importance. Faster internet is needed to upload and download the data that a municipal official may need during their daily work. This questionnaire enabled data collection regarding the internet speed in urbanism departments. To uniformly assess the internet speed, the link www.fast.net was shared. As a result, about 40% of the departments reported that they were unable to access the link because a firewall network security stopped them, about 10% responded to the narrative that the internet speed is very poor and 5% said they have unlimited internet. Internet speed in 20% of the departments was 40 - 100 mbps and in 25% of them 0 - 20 mbps.

These findings indicate that lack of freedom sometimes restricts municipal officials to deliver quality performances at work. The inability to access certain sites because of administrative restrictions/blocking for security issues may create future problems in terms of data migration to CSPD through SPAK. Also, poor internet speed indicates that measures must be taken to increase the quality of technological communication services if the quality of services is to be increased.

Table 10. Recommendations for the information and networking communication technology component		Large medium-sized settlement	Medium small -sized settlement	Very-small settlement	Large-rural settlement	Large medium-sized rural settlement	Medium-rural settlement
1	Allocate budget to purchase a server for the Department of Urbanism for data collection, storage, filling and use.		●	●	●	●	●
2	Create spaces on the central server of the municipality for all municipal departments where data collection, storage, filling, and use will take place. The structure of the database should be developed in advance where the data collection space will be allocated to the department as needed.			●	●	●	●
3	Strengthen the IT network for easier communication.					●	●
4	Build a database in the Department of Urbanism through the process of collecting all the materials both physical and digitized in their possession.					●	●
5	Organize workshops or trainings on using the Kosovo Spatial Planning application for all civil servants in the Department of Urbanism.	●	●	●	●	●	●
6	Organize broader information on the National Consolidated Spatial Planning Base and present it centrally.	●	●	●	●	●	●
7	Adjust the level of internet security (firewalls) for Departments of Urbanism especially when starting data migration into the Central Spatial Planning Database.		●	●	●	●	●

Results from the hardware component

This component is focused on the current hardware situation in the Department of Urbanism because the work of this department, in addition to the fieldwork, is related to the hardware condition and performance. Since this questionnaire was designed for GIS evaluation in Kosovo municipalities, it was considered important to assess its hardware condition because lack of good performance hardware delays efficient use of the system. The nature of the work in the DU compared to other departments, requires the provision of new hardware and robust performance because the trend of technology developments offers better software development opportunities each year. It is difficult to follow this trend due to low budget and other bureaucracies therefore it's recommended to provide the minimum software required for performing project design, urban planning and daily departmental jobs.

Considering the financial situation of municipalities in Kosovo, the questionnaire assessment shows that 10% of departments have not provided all civil servants with personal computers. These problems are noticeable in municipalities, namely very small urban settlements, large rural settlements, medium-large rural settlements, and medium rural settlements. Printer status assessments also show that not every personal computer has a printer. The assessment identified two cases: the lack of printers as a result of lack of budget for their purchase and maintenance, and centralization of computers in a general printer with reduced costs.

Some departments are equipped with printers for up to 100% of the staff; this is detected in smaller municipalities because the number of civil servants is small, while in larger municipalities the percentage is lower. Only 8 departments have 1 to 2 printers and 3 others have more than 10 printers (larger municipalities).

Consequently, the situation of scanners is even worse compared to that of the printers; 4 departments have stated that they do not own scanners at all, 3 have more than 5 scanners (mainly large-medium urban settlements) and 12 of them have only 1. Possession of scanners plays an important role in the digitization of physical data for the creation of archives and databases.

Finally, the state of plotters was also assessed as equipments that are very expensive to buy and maintain. In spite of this, 6 Departments of Urbanism own a plotter which is in functional conditions, 6 departments possess plotters that are malfunctioning but the repair is costly, and 16 other departments of urbanism have no plotter at all.

In general, all the equipments possessed by the Urbanism Departments, on average meet the requirements of civil servants for their daily work. Specifically, 6 departments stated that the equipment meets their requirements for completing daily tasks while 6 of them do not meet them at all. Despite this, only 12 Departments of Urbanism have allocated budgets for the purchase of computers in the next two years while the rest have not included for these two years.

		Medium large sized urban Settlement	Medium small-sized urban Settlement	Very-small urban Settlement	Large-rural Settlement	Large medium-sized rural Settlement	Medium rural Settlement
1	Every official of the Department of Urbanism must have a computer	●	●	●	●	●	●
2	Plan the budget for hardware purchases every two years for project design and planning software (CAD and GIS).	●	●	●	●	●	●
3	Each Department of Urbanism must have at least one A3 format scanner.	●	●	●	●	●	●
4	Organize printing through the distribution of the network for each computer, in a single printing device for each office of the Department of Urbanism. By doing so, Urbanism Departments will significantly reduce annual costs.	●	●	●	●	●	●
5	Budget allocation for the purchase of plotters for the Department of Urbanism			●	●	●	●
6	If there is a lack of budget for the purchase of computers, it is recommended to reinforce existing computers every two years. This only applies where computer performance meets the requirements for project design and planning software.			●	●	●	●
7	Every Department of Urbanism has a projector. must have projector.			●	●	●	●

Results from the software component

The software component is focused on the current state of the software which was included in this questionnaire for the purpose of studying software programmes used by the Departments of Urbanism in Kosovo, as well as the level of advancement in technology and the urban planning field so far. In terms of advancement, the results are positive showing that the departments are equipped with relevant programs necessary to use for the completion of daily urban and spatial planning tasks.

Based on the collected data, it results that 20 municipalities use AutoCAD software, respectively 23 municipalities use ArchiCAD as professional design software; 2 municipalities stated that they also use Sketchup, while 6 municipalities used other software such as CorelDraw, AutoCAD Civil 3D, Geomedia, etc. The number of municipalities that do not use design programs is 3. In conclusion, the most commonly used software in the Departments of Urbanism is ArchiCAD (43%) and AutoCAD (37%).

Regarding the use of planning software, the situation is different as these are scarcely distributed in these departments. The results show that only 25 % of the departments (7 in number) use ArcGIS while 50 % (14 in number) use QGIS for spatial analysis and planning. Concerning is the fact that 33% (12) of the departments stated that they do not use any planning software while the rest use different types. The advantages of these planning software programs are observed during the tracking of parcels (21%), map production (19%), spatial planning (15%), building permits (12%), data updating (9%) and other services (9%).

Out of all project design software's (AutoCAD and ArchiCAD) only three are licensed while the others are without license. In terms of planning software (ArcGIS) only 5 out of 7 are licensed as long as QGIS is a free and open-source cross-platform desktop geographic information system application. The National Geoportal placed on the website of the Kosovo Cadastral Agency is considered as the official site used by all Departments of Urbanism for obtaining spatial information (50%), tracking parcels (46%) and other services (4%). However, low network speeds often render the site useless.

It is worth mentioning that 72% of the departments have installed Quantum GIS but only 39% use this software while 28% have not installed it at all; two municipalities have installed the software in other departments besides that of urbanism. Of the departments that have installed QGIS, only 16% are familiar with the Layer Mapping Structure of Municipalities, 15% are scarcely familiar and the majority (69%) are unaware of this structure. Many departments use ArchiCAD and AutoCAD; 56% have encountered many difficulties in using the products from these programs in QGIS and 44% stated they did not have such problems.

Regarding the trainings in QGIS, 69% of the departments attended and 31% of them were not able to attend (mostly cases in large rural, medium rural and high rural settlements). Most trainings were provided by GIZ, MESP and UN-Habitat programmes, as well as European Commission and the municipalities themselves.

		Medium large-sized urban Settlement	Medium small-sized urban Settlement	Very-small urban Settlement	Large rural Settlement	Large medium-sized rural Settlement	Medium rural Settlement
1	All Directorates of Urbanism must allocate the budget for purchasing licenses for project design and planning software (or at least one project design and planning license). In this case, the role of the Association of Kosovo Municipalities is to lobby the Collegia of Myor's and Collegia of Directors for Budget and Finance to organize a meeting with the Collegia of Directors for Spatial Planning and to prioritize the purchase of licenses for above mentioned software's.	●	●	●	●	●	●
2	Distribute application for converting ArchiCAD and AutoCAD software documents to GIS software. For this, assistance from MEI should be requested, but in advance the cooperation agreement in this direction should be signed.	●	●	●	●	●	●
3	Organize free GIS trainings from central level.	●	●	●	●	●	●
4	Install QGIS (free and open-source) in all municipalities.		●	●	●	●	●
5	Organize a workshop on the Layer Structure of the Municipal Zoning Map.	●	●	●	●	●	●

Results from the data component

The component of data and their availability is of crucial importance for the development process in the municipality. Decision-making towards future territorial developments and investments that can be made are based on municipal data availability. It is therefore important that the municipality holds data on past investments, aerial data and photographs of developing constructions which take place each year in the municipal urban and industrial area. These developments are important both for economic development and future planning. Other information extracted from this questionnaire also relates to the possession of orthophotos by municipalities, including those purchased or distributed free of charge through Kosovo Cadastral Agency.

The number of municipalities that own orthophotos (by year): 2 municipalities own orthophotos of 2001, 8 municipalities own orthophotos of 2004, 15 municipalities own orthophotos of 2009, 23 municipalities own orthophotos of 2012, and 2 municipalities own orthophotos of 2013.

The number of municipalities that purchased orthophotos (by year) before MEI distributed them: 2 municipalities purchased the 2001 orthophotos, 5 municipalities purchased the 2004 orthophotos, 6 municipalities purchased the 2009 orthophotos, 5 municipalities purchased the 2012 orthophotos, and 1 municipality purchased the 2018 orthophotos (for Municipal Zoning Map purposes).

The number of municipalities that received orthophotos free of charge (except for the orthophotos of 2001): 3 municipalities received the 2004 orthophotos, 9 municipalities received the 2009 orthophotos, 18 municipalities received the 2012 orthophotos.

It's important to mention that at the end of 2019, MIE distributed the 2018 orthophotos to all 38 municipalities (free of charge) on the condition that they use them only for the process of treatment of buildings without a construction permit (local level).

Hence, 2012 marks a growth of orthophotos available to the municipalities and an interest in possessing aerial photography in order to gain access to the data. Certainly, municipalities need to be supplied with updated orthophotos rather than the ones from 2012 which play an important role in the data collection process when drafting the MDP and MZM. Most municipalities use the geoportal for access to aerial photography, while other available formats are GIS (ECA) and other setups.

The type of data owned by the Department of Urbanism in a softcopy format goes as follows: economy related data (13 municipalities), agricultural land data (17 municipalities), data for the identification of settlements (20 municipalities), social housing buildings data (16 municipalities), infrastructure and transport data (16 municipalities), data for technical buildings and infrastructure (13 municipalities), and environment and nature data (15 municipalities). Just a few municipalities owned hardcopy data and the other issue identified was that municipalities did not have photo documentations of the place and time the data was collected.

Regarding the source and methods of receiving the data, most municipalities responded that they collected the data from other departments, mainly during the process of drafting the MDP and in digital format. Nevertheless, the number of municipalities responding to this question was significantly low hence the need for training the civil servants on how to maintain or store departmental data. Nearly all municipal departments, 23 respectively, stated that they maintained the digital data within the Department of Urbanism. Other choices include: the data maintained in other departments (3 municipalities), the data maintained in the municipal database (2 municipalities) and, the data are not maintained (1 municipality). The assessment also revealed information about the administrator of the database (if such structures existed within relevant departments) finding that only 3 municipalities have administrators. Municipalities that had no database within the department were asked whether they had direct access to a database and only one municipality responded positively.

In conclusion, interventions shall be provided to improve this component, namely the training of staff (i.e. trainings on spatial data management and analysis) and necessary database-related investments. Building human capacities in data processing would also be a step towards serving the department and the municipality positively for future investment projects and plans. But what is important for this issue is to have an inter-department organization, strengthening cooperation and coordination between the directorates through the construction of a regular data exchange system, regularly monitored and accountable.

Table 13. Recommendations for the data component		Medium, Large-size Urban Settlement	Medium, Small-size Urban Settlement	Very small-size Urban Settlement	Large-size Rural Settlement	Medium, Large-Size Rural Settlement	Medium-size Rural Settlement
1	Allocate budget for the purchase of orthophotos in the future since this is continual process (e.g. orthophotos 2022, 2026 etc). It is recommended that municipalities that are unable to purchase orthophotos look at all the possibilities of cooperation and coordination with the MEI, the Kosovo Cadastral Agency and the Collegia of Directors for Spatial Planning to enable them to be equipped with orthophotos for next 4 years (example 2022 -2026)	●	●	●	●	●	●
2	Build a sector for collection of data and information (with its administrator) which would be embedded within the office of the Mayor and at the service of all departments and other stakeholders.	●	●	●	●	●	●
3	For more advanced and financially sustainable municipalities, it is recommended to build a GIS cabinet.	●	●				
4	Build collaboration with stakeholders outside the municipality and regularly exchange data every three months, only in case of emergencies when this rule goes down.	●	●	●	●	●	●
5	Train civil servants in data collection and their documentation in order to create a database.	●	●	●	●	●	●

Results from the methodological component

The methodological component is the last component of the questionnaire and concerns the methodology of data collection from previous spatial document drafting processes. According to the questionnaire, most municipalities have approved the Municipal Development Plan except four of them that haven't done so yet. Approval years are different for each municipality and cover the period from 2007 to 2017. The 10 year difference between the first municipality and last municipality to have approved the MDP is not due to the lack of budget or staff because many of these municipalities (categorized as medium, small-size urban settlements, very small-size urban settlements, and large-size rural settlements) have drafted these documents way before the municipalities which are categorized as large-size urban settlements. The reason for that might be political unwillingness to complete the process of drafting the MDP and municipalities categorized as medium-large urban settlements subject to larger and more complex problems that require more time to address. The planned development period also varies from one municipality to another, but the long-term development is estimated at up to 20 years and average term at up to 15 years (the latter is more dominant in municipalities).

It's positive that all municipalities that drafted the MDP received the consent of MESP. The MDP drafting process has helped municipalities to collect data in the fields of economy, agriculture, settlements, housing, infrastructure, technical infrastructure and the environment. The data have been collected in softcopy and hardcopy formats while in certain cases they possess photo-documentation.

The data maintained in softcopy and hardcopy are mainly for settlements, agriculture, housing, infrastructure, technical infrastructure and environment; there are a few data available in softcopy and hardcopy formats on the economy, settlements and housing. Regarding the photo documentation, only three municipalities possess them for certain areas while the rest of them do not possess them at all. After completing the drafting and approval process of the MDP, municipalities continued to collect data in different software programs thus 6 municipalities collected data in AutoCAD, 3 in ArchiCAD, none in Sketchup, 11 in GIS and 10 in other unspecified formats.

The UDP approval is different compared to the MDPs. Some municipalities have drafted both plans simultaneously, others separately. 19% of the municipalities that drafted/approved the MDP, did not proceed with the development of the UDPs. In some cases, municipalities have drafted and approved the UDP before the MDP while some others (30% of them) have adopted the UDP in 2008 and 2009. Development periods last up to 15 years in most municipalities and 20 years to a few of them. The data collected during the UDP drafting process in softcopy and hardcopy is mainly for settlements, housing and environment; less data is found for the economy, agriculture, infrastructure and technical infrastructure. Regarding photo documentation, only 2 municipalities have UDP files although uncompleted. Following the drafting and approval of the UDP, only 6 municipalities continued to collect data in AutoCAD, 3 in ArchiCAD, 9 in GIS, 8 in other formats and none in Sketchup.

The approval of the UDP in Kosovo municipalities is lower compared to the MDPs. Only 69% of municipalities have drafted and approved the UDP in line with Law No. 2003-14. Of these municipalities, 9% did not draft any Urban Regulatory Plans (URP), 24% only one, 14% only two, 29% only three, 10% six to eight and 14% drafted more than 15. Coverage of the territory with URP is different between municipalities. Also, the data below show that no municipality has covered the whole territory with regulatory plans: 1 km² (29% of municipalities), 1-3 km² (29% of municipalities), 2-4 km² (10% of municipalities/mainly rural areas) and over 10km² (18% of municipalities).

Data collection for URPs is done in different formats. The most and least used formats are GIS and AutoCAD respectively. About 23% of URPs are in PDF format, 10% are ArchiCAD-based and 2% are print-only regulatory plans. Also, 45% of the municipalities participating in the questionnaire stated that their territory is included in national interest plans related to National Parks, with the rest consisting of memorials, protected areas, mining areas, and others. Only 73% of urbanism departments possess cadastral data in digital format; out of this, 54% in AutoCAD format, 38% in GIS and 8% in JPEG (the latter can be used in GIS, AutoCAD, ArchiCAD, SketchUp software, etc. only in photo/image quality). Also, municipalities need to request most of the data from the central level so communication between them should be strengthened. As per questionnaire results, 70% of Departments of Urbanism did not receive data from the central level (out of which only 17% requested data and did not receive it, 61% did not request data and 22% communicated with the central level but did not follow up until the end).

The last component and item of this questionnaire concerns the methodological aspect and the development process of MDP and UDP, including preparations for MZM. At the same time, the problems municipalities encounter in the course of their work are also addressed including the lack of data. The Municipal Development Plan is required to be drafted and implemented according to Law No. 04/L-174 on Spatial Planning. The results of the questionnaire illustrate that 25 municipalities have approved the MDP's while 4 of them failed to do so. Municipalities tend to have different approval years but the first MDPs have mostly been approved between 2007 and 2013 period. In terms of document validity, MDPs have been approved for a period of 7 to 10 years, respectively during 2008 - 2015 and 2010 - 2020. Another aspect considered was the approval of the MDP by MESP. The findings show that 25 municipalities have received the approval while 4 municipalities failed to do so.

During the drafting of the MDP, the type and format of the data were also taken into consideration. Many municipalities stated that the data (economic, agricultural land, settlements and social housing, infrastructure, environment and nature) were mostly in softcopy and hardcopy format, but without photo documentation of the date of data collected. Regarding the format of the produced data after the MDP approval, GIS format dominated in 11 municipalities, AutoCAD in 6 municipalities and other formats in 10 municipalities.

When asked about Urban Development Plans approvals in municipalities, 22 responded that they had approved these types of plans, while 5 others said they never did. There was an increase in the number of approved URPs during 2008, 2009, 2010 where 11 municipalities had approved URPs with an average of 8 years validity (e.g. 2004 - 2012, 2008 - 2017, 2010 - 2020). Likewise, approximately 14 municipalities produced data on economy, agricultural land, settlements and social housing and infrastructure in softcopy and hardcopy format, but the problem of photo documentation was still present (only 2 of them possessed photo documentation of the data collected). Computer-based format of the produced data after UDP approval was as follows: GIS in 9 municipalities, AutoCAD in 6 municipalities, ArchiCAD in 3 municipalities.

Regarding the results of the drafting and approval of Urban Regulatory Plans, it appears that 20 municipalities have approved them and 9 have never done so. The number of approved URPs by municipalities goes as follows: in 2 municipalities no URP, in 5 municipalities only one URP, in 3 municipalities two URPs, in 6 municipalities three URPs, in 2 municipalities from 6 to 8 URPs, and only 3 municipalities approved more than 15 URPs. Regarding the coverage of the urban area with URP in km², the responses are as follows: 2 municipalities had no records, 5 municipalities up to 1km², 5 municipalities between 1 and 3 km², 2 municipalities between 4 and 6 km², and 3 municipalities covered over 10km² of the urban area. The situation for the rural areas is slightly different where 18 municipalities stated that they had no data and 2 municipalities covered from 2 to 4 km² of the territory with regulatory plans. After the approval of the URP, the data were produced in the following formats: ArchiCAD in 4 municipalities, AutoCAD in 10 municipalities, GIS in 12 municipalities, PDF in 9 municipalities and printout in 1 municipality.

Asked whether the territory of your municipality is included in any plan of national interest, the following answers were given: 7 municipalities are part of the "National Parks", 2 municipalities contain protected areas, 1 municipality contain a plan for war monument, 1 municipality has a plan for "Germia Park", 1 municipality is part of mining area and 1 municipality has another national interest plan that was not mentioned during their response. However, in all the cases mentioned above, no municipality possesses digital data or digital graphics for these plans. In fact, municipalities only have the final written version approved or the final draft of these plans in softcopy format.

Digital cadastre maps are important for the day-to-day work of the Department of Urbanism. 19 municipalities stated that they own such maps while 7 of them did not. The format they own were mainly GIS in 9 municipalities, AutoCAD in 11 municipalities, DWG in 2 municipalities, and JPG in 2 municipalities. These data were obtained from the central level by 8 municipalities while 19 others did not receive anything from the central level; most of them data are in a softcopy format (7 municipalities, agricultural land) and in hardcopy (5 municipalities, mainly infrastructure) however no municipalities had photo documentation.

On the other hand, only 3 municipalities responded that they had requested data from the central level and 11 others stated they did not do so. The comments provided by them suggested that they were either not provided with data or did not receive any response. They also indicated that in some cases they were required to pay for the data, but the municipality did not have the financial means to purchase them. The data the municipalities requested from central level was mainly about the city borders (the border between the urban and rural area), the environment, land categories and infrastructure. It is worth mentioning that 9 municipalities received support in collecting data on respective thematic areas, but 9 others stated they did not. Of the municipalities that received assistance, 7 municipalities were assisted by UN-Habitat², 4 by GIZ³, 1 by USAID⁴, others by NIRAS⁵, MLGA⁶, and the draft plan for the Historic Centre of Vushtrri was supported by CHwB⁷.

A large number of municipalities are in the process of drafting the MDP, but much remains to be accomplished. 16 municipalities are in the process of drafting it, processes that started in 2014 (1), 2016 (2), 2017 (2) and 2018 (6); 8 municipalities stated that they had not started this process yet, 2 municipalities stated that they had engaged consultants to draft the MDP and the other 2 were in the drafting process.

The process of drafting the MDP varies between municipalities as a result of the limited staff in the department and the workload that civil servants must perform. This prevents them from being engaged at the same time in drafting the new MDP. For this reason, most of the municipalities find it necessary to hire consulting companies to perform this service. Consequently, 9 municipalities are working on the drafting of the document themselves, while 11 municipalities have engaged consulting companies for this service. Periods when MDP was approved vary: in 2017 it was approved in 2 municipalities, in 2018 it was approved in 1 municipality, while in 2019 the MDPs were expected to be approved in 9 municipalities. According to the data from MESP, in December 2019 only four municipalities were granted consent for the MDP while 2 were in the process.

The Municipal Zoning Map is a technical document required by the Law No. 04/L-174 on Spatial Planning. The responses to the questionnaire identify 13 municipalities that have begun drafting the MZM, while 14 municipalities haven't started this process yet. One municipality started the process in 2016, 3 municipalities in 2017, and 5 others in 2018. Only 4 municipalities are drafting it with their own municipal staff, while 11 others have engaged consulting companies to carry out this process. During 2019, 10 municipalities were planning to approve the MZM in Municipal Assemblies, while 3 municipalities are expected to complete this process during 2020. According to the data from MESP, only one has received consent for the MZM and 4 other for the MDP. While in 2020 one municipality received consent for MDP and another one is in the process. As for the MZM, 4 municipalities are in the process until this document is published (March 2020). Even in this case, municipalities have received support from different partners for the MDP processes, more specifically 6 municipalities did receive help while 13 others didn't. In the meantime, for the MZM process, 10 municipalities have received support and 11 municipalities didn't. Supporting organizations or programs are UN-Habitat (5 municipalities), GIZ (5 municipalities).

In conclusion, this questionnaire also considers the challenges and difficulties encountered by the Urbanism Departments in the process of drafting these planning documents.

²United Nations Human Settlement Programme

³Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

⁴United States Agency for International Development

⁵Consulting agency

⁶Ministry of Local Government Administration

⁷Cultural Heritage without Borders

When asked what were the major challenges from past MDP drafting processes, 22 municipalities responded that they lacked data, 14 municipalities lacked central level data, 20 municipalities faced lack of human capacities and professional staff, while 6 municipalities provided other reasons for the difficulties during this process. Basically, comparable scenarios are anticipated during the preparations for the drafting of the new MDP: 15 municipalities stated that they would be faced with lack of data, 10 municipalities with lack data from the central level, 12 municipalities with lack of data from the previous process.

17 municipalities noted lack of staff for this process, while 4 municipalities foresee other problems to be faced during this process. Regarding the drafting of the MZM, the situation is comparable to the previous one: lack of data (14 municipalities), lack of data from the central level (14 municipalities), lack of data from the previous process (17 municipalities), lack of adequate staff (19 municipalities), other problems (6 municipalities).

Table 14. Recommendations for the methodological component		Medium, Large-size Urban Settlement	Medium, Small-size Urban Settlement	Very small-size Urban Settlement	Large-size Rural Settlement	Medium, Large-Size Rural Settlement	Medium-size Rural Settlement
1	Prioritization in all Kosovo Municipalities for the drafting of MDPs and MZMs. Concerning this matter, MESP, MLGA and other responsible institutions should look at options to provide additional budget, professional support, etc. so that by 2022 municipalities will be equipped with spatial planning documents.	●	●	●	●	●	●
2	Mayors should consider the drafting of MDPs and MZM mandatory by holding accountable both the local staff and the central level.	●	●	●	●	●	●
3	The central level should be engaged in concluding agreements between local, regional and central institutions, and press them to provide the necessary data and information in full compliance with the requirements of the Law on Spatial Planning, or assume being in the coordination seat to make it happen	●	●	●	●	●	●
4	All municipalities should start with the process of creating photo documentation (for technical infrastructure, traffic, environment, economy and industry, social one etc.) and be supplemented every two years. To this end, MEI should play a key role in organizing all ministries to provide their own photo-documentation data, and to encourage all public and private companies/enterprises and privatized but government-monitored to provide their own photo-documented data. The Collegium of Directors for Spatial Planning can also play a role in building the cooperation network.	●	●	●	●	●	●
5	Evaluation of the implementation of the URP and their integration into the MZM, with particular emphasis on informal settlements.	●	●	●	●	●	●
6	Prioritization from the central level to supply all Urbanism Departments with ArcGIS, provide intensive training and monitoring the process for the next two years. In addition to training, the local staff should also be accountable for the process of supplementing, maintaining and using the data. If the central level cannot offer this opportunity for various reasons, then the other option remains QGIS for which the central level should provide intensive training to all municipalities.	●	●	●	●	●	●
7	Securing the budget or co-financing from the central and the local level for the purchase of cadastral maps (in digital format) and orthophotos for all spatial planning processes.	●	●	●	●	●	●
8	Budget allocation from the central level in order to equip all Departments of Urbanism with sectorial server in an organized fashion where data will be collected, maintained and used in GIS system. Data monitoring should be done regularly every year by MLGA through the Mayor office and Department of Administration.	●	●	●	●	●	●
9	Regular exchange of data and information between the local and the central level.	●	●	●	●	●	●
10	Increasing the number of employees in the Department of Urbanism by considering the principle of proportionate number of civil servants in the Department of Urbanism to the area of the municipality.	●	●	●	●	●	●
11	Engaging in lobbying with various international programs to develop programs and projects to support local levels in the field of planning. The aim is to build professional capacities in institutions and in drafting spatial planning documents in line with the legal framework.	●	●	●	●	●	●
12	To make it compulsory for all consulting companies to submit to MESP and the Municipality all data and information in an organized fashion according to the legal framework prior to applying for MESP and MDP consent.	●	●	●	●	●	●

Conclusions

Recommendations from the 7 components of “Assessment of the GIS situation, facilities and capacities in Kosovo municipalities” indicate that in order to increase the functioning and service of the Department of Urbanism, there should be inclusive cooperation and coordination, which means that:

- The Departments of Urbanism must first have good internal organization and complete with human capacities, inter-sectoral cooperation within the municipality;
- Inter-municipal cooperation where the Collegium of Directors for Spatial Planning plays an important role;
- Cooperation and coordination with the central level.

It does not mean that it is mandatory to meet all the above-mentioned points, but it is very important that internal organization and cross-sectoral cooperation in the municipality is at the right level and thus facilitate decision makers to coordinate projects towards sustainable development.

It is recommended that all Departments of Urbanism be designated alike, under the name '*Department of Urbanism and Environmental Protection (DUEP)*', since this is the term that dominates in all Kosovo municipalities, respectively the departments of urbanism. This would make it easier to identify and reorganize the internal structures within the urbanism departments, with sectors that respond to its demands, i.e. inhabited territories, the regulation and use of territory, calculations and analysis (scientific), expertise (professional), and treatment of social problems (society) thus providing the best possible, comfortable and aesthetic solutions of the living space (art). As a result, unnecessary and dysfunctional sectors would be removed. This action would also help the departments to have clear tasks for civil servants and open the possibility to fill the sectors with new professional human capacities such as lawyers or engineers, and to increase the service and quality to its citizens.

It is recommended that the working space for the Department of Urbanism be based on the job requirements of this department. However, an office should be dedicated to the environmental protection sector, with at least one civil servant; the sector is part of most urbanism departments in Kosovo and also prioritized as a sector over the next 10 years.

During the opening of new job positions in the Departments of Urbanism, it is recommended to give priority to the female gender, especially in large rural settlements, medium-large rural settlements and medium rural settlements.

During internal organization of the Department of Urbanism in municipalities, it is recommended that this department be close to the Department of Geodesy and Cadastre, Department of Inspection, Department of Public Services and Department of Agriculture. Depending on the size of the municipalities, the Department of Budget and Finance and the Department of Economic Development are placed near as well. In this way, a network of municipal directors is formed which creates convenience and flexibility for the participants in coordinating the projects or general work.

At inter-sectoral level, it is important that each municipality starts allocating the budget while taking into account work priorities of the Department of Urbanism as well. More specifically, the municipalities should allocate budget for purchasing desktop computers for each civil servant as well as new hardware for GIS operators every two years; if there is lack of budget, an amount should be allocated for upgrading the existing desktops as necessary for CAD and GIS softwares (for which licenses should also be considered in next years). Same goes for printing and scanning equipments.

A strategic administrative move would be to allocate budget to purchase a server for spatial database, respectively the data which is collected, stored and maintained. Having a server not only increases the quality of work but also provides data and spatial planning analysis to each relevant department. At the same time, it is necessary that all municipalities start building their basic database structure for the municipal data in the central server of the municipality. Of course, the initiative cannot be arranged by the Department of Urbanism alone, but it can be supported by the Departments of Administration within each municipality. AKM might also be the entity to call for such initiatives in all municipalities. In this regard, it is important to mention the improvement of IT working conditions by providing good services of the internet network and reducing the level of security of the administrator for data collection work. Budget allocation planning is also recommended for orthophotos to be purchased every 4 years and establishment of GIS cabinets.

In cross-institutional level, in addition to collecting department data within municipalities, it is necessary to start cooperating with public companies that operate in municipalities. For this reason, it is important to classify the data that can be exchanged in advance, therefore it is recommended to draft protocols for the exchange of data between municipalities and public companies.

Raising professional human capacity is one of the main challenges for the Department of Urbanism, but also for municipalities in general. There are many opportunities for trainings that increase professional human capacity but the use of these opportunities is relatively low. Therefore, it is recommended to start cooperating with KIPA which offers several trainings, among which the MuSPP/UN-Habitat modules that are directly related to spatial planning processes.

It is recommended to increase the coordination with MIE which provides free trainings for GIS software (ArcGIS and QGIS), trainings for civil servants in data collection and documentation for the purpose of creating a database, workshops or trainings on using the SPAK and NCSPB, and Layer Structure of the MZM etc. The role of MIE is important in regularly monitoring the work of QGIS and challenges encountered as well as the installation in Departments of Urbanism. To assess the situation of QGIS, MIE can design a survey every three months for each municipality. In certain cases, MIE should support municipalities by enabling the conversion of all spatial plans that have been drafted in AutoCAD or ArchiCAD in GIS software (QGIS or ArcGIS) in the KosovaRef01 system. In addition to supporting the establishment of professional human capacity, it is important that MIE supports all municipalities in obtaining a licensed ArcGIS software.

Besides the central level, it is recommended to increase cooperation with private and public universities and colleges which offer many free programs for building professional human capacity, in terms of knowledge and people (as in students from the Faculty of architecture, Civil Engineering, etc). The Collegium of Directors for Spatial Planning can play an important role in arranging this.



INCLUSIVE DEVELOPMENT PROGRAMME
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PROGRAM SVEOBUH VATNOG RAZVOJA