



**स्थानीय विकास प्रशिक्षण प्रतिष्ठान**  
(स्थानीय विकास प्रशिक्षण प्रतिष्ठान ऐन, २०४९ द्वारा स्थापित)

**Local Development Training Academy**  
(Established under the Local Development Training Academy Act, 2049)

"An Autonomous,  
Professional,  
Client Centered,  
Gender Responsive  
National Institute  
of Excellence in  
the area of Local-  
Self Governance."  
**LDTA>>>**

Research Report on:

## Promoting E-Governance at Local Level



Presented to:



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Prepared by:

Mr. Binay Kafle

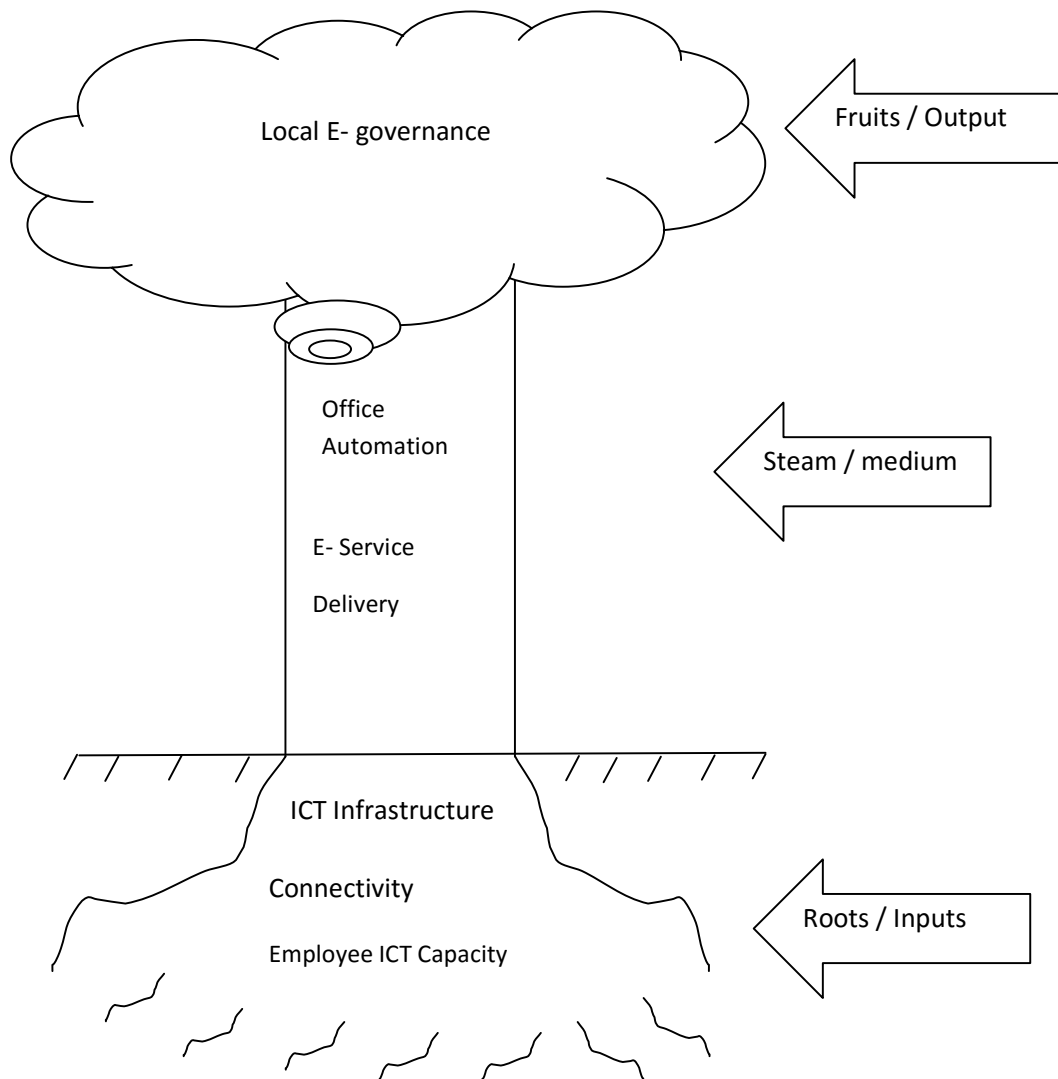
Er. Anupam Paudel

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Jawalakhel, Lalitpur, Nepal.

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## ACKNOWLEDGEMENT

This research report entitled, 'Promoting E-governance at Local Level' is a study of e-governance at the local level, based on the field visit of the Biratnagar municipality. Among the various mandate of the LDTA, ICT and e-governance capacity development is also one. So, it was viewed necessary for the LDTA to gauge status of the ICT implementation in the local body. LDTA being a Training Academy the research section of LDTA conducts research on various field of local governance yearly. This year we have decide to explore the rather unexplored sector of e-governance in local body / local level.

This research report could not have been completed had there not been the continuous support and encouragement of the people around us at LDTA. We would like to express sincere gratitude to Prof. Dr. Bishnu Sapkota, Executive Director, LDTA for taking our research proposal positively and his encouragement was a big motivation. We also would like to thank Mr. Jaya Krishna Shrestha, Director, LDTA, whose continuous curiosity and keen interest encouraged us to complete this report.

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At the end we would like to thank all those who were directly or indirectly involved with this research. We hope this research is the beginning of prioritizing ICT and e-governance at the local body. As, we all know, In this technologically advance world ICT is the only way ahead.

- Mr. Binay Kafle
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## **ABBREVIATIONS:**

MoFALD	: Ministry of Federal Affairs and Local Development
LDTA	: Local Development Training Academy
ICT	: Information Communication Technology
WBRS	: Web Based Reporting System
MIS	: Management Information System
VERS	: Vital Event Registration System
E-governance	: Electronic governance.
M-governance	: Mobile governance.
ICTV	: Information Communication Technology Volunteers
LGCDP-II	: Local Governance and Community Development Program (Phase II)
LB	: Local Body
DPMASS	: District Periodic Planning and Monitoring Analysis System
WiFi	: Wireless Fidelity
SMS	: Short Message Service.
E-government	: Electronic government
DDC	: District Development Community
IBM	: International Business Machines
PC	: Personal Computer
IT	: Information Technology
NITC	: National Information Technology Center.

GIDC : Government Integrated Data Center.

UN : United Nations

Mbps : Megabits per second

Kbps : Kilobits per second

ADSL : Asymmetric Digital Subscriber Line

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## CHAPTER 1

### 1.1 BACKGROUND

New developments in ICT are fundamentally changing the way we live, work and interact with each other. Shifts to digital technology mean that citizens' expectations for technology enabled government services have raised significantly in recent years. This shift in expectations coupled with the financial pressure on Government to transform and “do more and better with less”, presents new opportunities to deliver better outcomes for citizens, and public servants.

The potential for improvements through the innovative use of technology is significant. Implementation will require a transformational program of change, not just technological but administrative and cultural also.

E-governance has various aspects associated with it such as, government portal, national ID, E-Service Delivery, E-education, ICT infrastructure, enterprise architecture, Public Key Infrastructure, Integrated Data and Training Center, etc.

With the emergence of ICT and E-government, it is possible to improve efficiency and effectiveness of internal administration within government and to re-locate government services from government offices to locations closer to the citizens.

#### *Delivering better outcomes and efficiency through innovation and excellence in ICT*

Government of Nepal has also recognized the importance of the ICT, the government public service delivery in long haul is meant to be provided with the collaboration of the ICT for a paperless governance; e-governance.

Local Bodies are the front runners in providing service delivery to the public. Even after the promulgation of new constitution of local bodies still remain the first link between the government and the public.

MoFALD has recognized the impact ICT can have on efficiency of service delivery. MoFALD through its LGCDP –II program currently have ICT Volunteers (Electronics and Computer Engineers) stationed at the DDCs and municipalities across the nation.

If not all, most of the service delivery through local bodies shares a common ground. If we can analyze digitization of one local body then with little derivation this study aims to be a guideline for other local bodies as well.

## **1.2 LITERATURE REVIEW**

### **1.2.1 Past**

Public sector organizations the world over are under pressure to deliver quality public services that are responsive to peoples' needs, choice and access. This has called for adoption of modern technologies to re-engineer work processes and improve on communication channels.

Within the past dozen or so years, governments across the globe and at all levels have adopted electronic government (e-government) as a means of delivering of governmental information and services 24 hours per day, seven days per week.

Nearly all countries across the globe, from the poorest countries to the most advanced ones, have some sort of work done for so-called e-government fundamentals. Nepal is no different.

The first notable step towards ICT in any kinds of governance in Nepal was the use of Computer (IBM PC 1401) for the first time during the Census of 2028 B.S for the purpose of data processing. Yet, still Nepal has not achieved full potential.

However, with the establishment of the National Computer Centre various technical training programs were conducted. With the change in political scenario of Nepal, the policy of Economic Liberalization was adopted which opened the way for private sector involvement in ICT. It further enhanced the ICT usages in Nepal.

In the 9<sup>th</sup> periodic plan(2054-2059 B.S), policy of expanding computer education in schools, high level technical trainings for higher studies, establishment of IT parks were adopted. During this period, the use of computer in Planning and Management section of Government offices was started. The 9<sup>th</sup> periodic plan also saw the promulgation of Information Technology policy 2057.

Grant were made available to the four universities so as to help develop and expand the ICT education in Nepal.

Electronic Transaction act, Cyber laws were made and IT Park was established in the Banepa.

### **1.2.2 Present**

To fulfill the vision undertaken while promulgating the Information Technology policy 2057, [to establish Nepal in the Information Technology Map of the world], e-Governance Master Plan was promulgated, which is in implementing phase. NITC and GIDC was established and which is functional.

This vision of Government of Nepal is collectively supported by its line ministries. Ministry of Federal Affairs and Local Government also have its role to play in it.

Local Bodies are the face of the governance for the public. E-governance can positively affect the public service delivery if and only if the Local Bodies are well equipped to deliver the e-service to the public.

At present, MoFALD is extensively supporting the Local e-Governance. There are Engineers working as ICTVs in 75 DDC and 58 old municipalities under LGCDP-II program of MoFALD. This group of technical personnel is there to support the all ICT activities of the DDCs and Municipalities and help LB adapt to new technology changes, plan those technology changes as well.

### 1.3 INTRODUCTION

E-Governance and e-government are increasingly being emphasized by governments, the private sector, civil society groups and development agencies as critical for strengthening good democratic governance.

E-government is seen as an integral part of e-governance. E-governance defines the ways that government institutions, businesses and citizens are using electronic means for the purpose of enhancing good democratic governance processes and for achieving better public service delivery based on transparency, accountability and public feedback mechanisms. E-governance services involve the interaction between the citizens and the democratic processes such as online public hearings, electronic voting, feedback systems, complaint registration, signature campaigns and participation in decision-making.

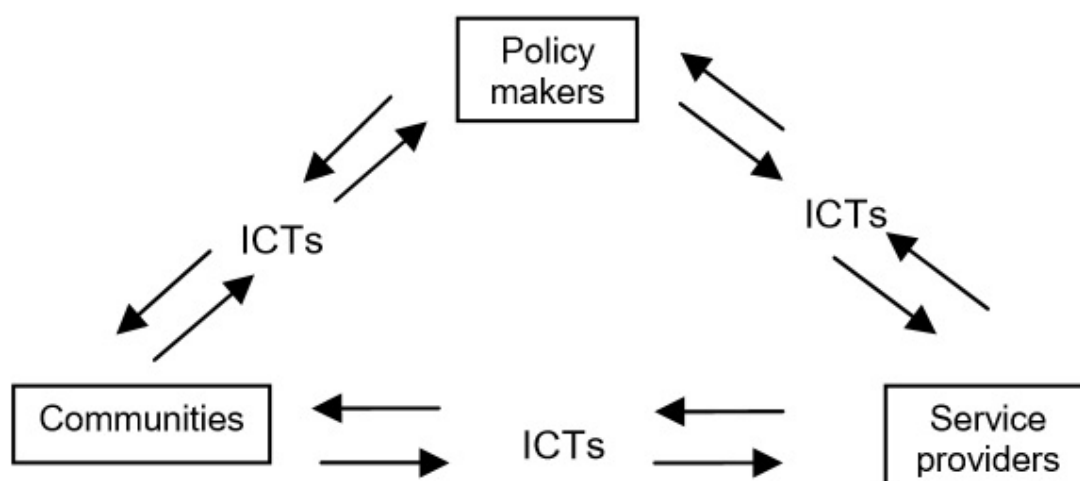


Fig1 : Enhancing accountability, transparency and efficiency with e-governance

Quality ICT infrastructures are essential for service delivery. With the relevant skills accompanied by high levels of ICT usage, quality service delivery is inevitable. Security in ICT is crucial so as avoid unauthorized access to information and malicious damage to ICT infrastructure and electronic information. Management support is needed for successful implementation of e-projects through facilitation and motivation.

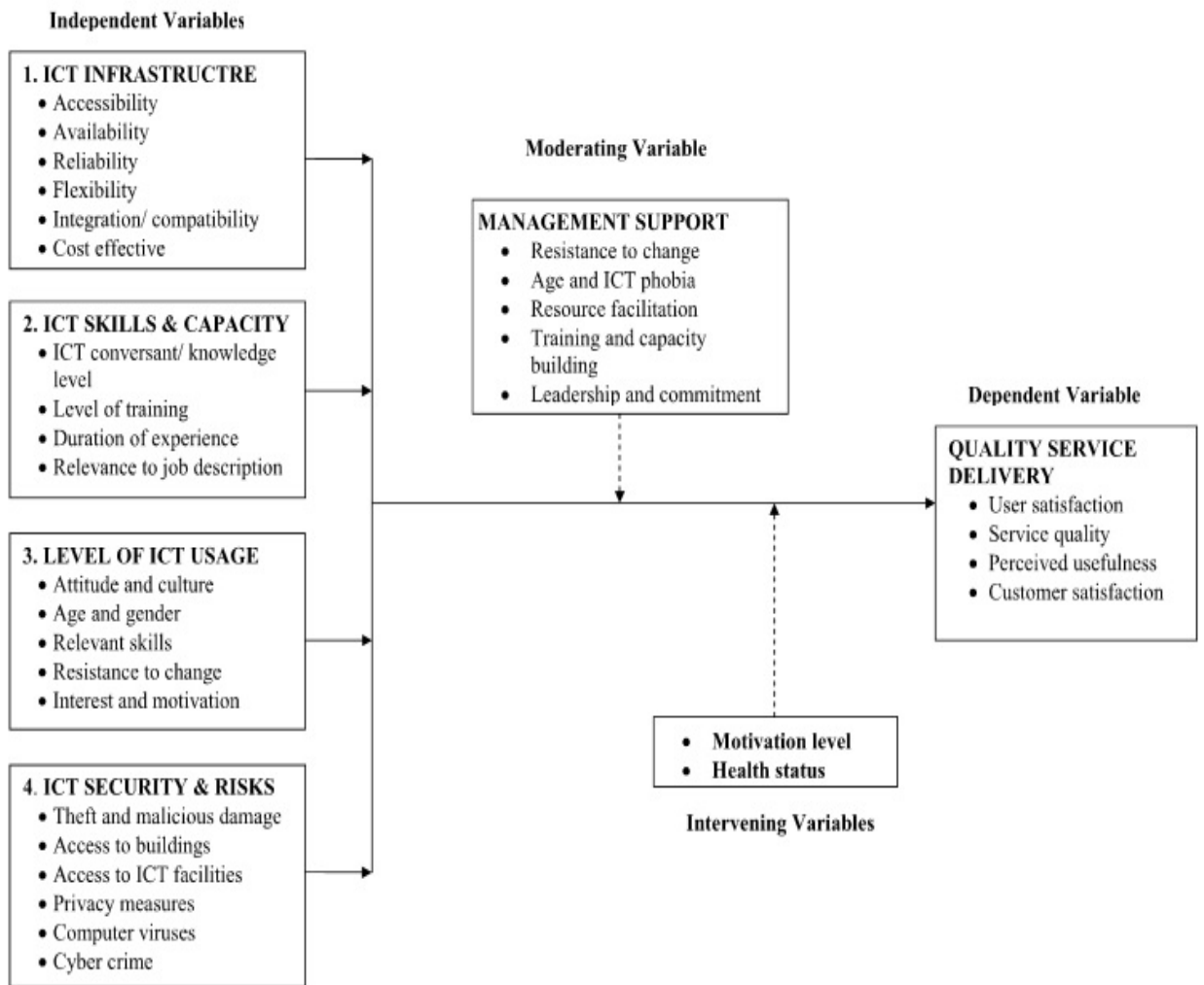


Fig 2: Conceptual Framework

## CHAPTER 2

### 2.1 PURPOSE OF THE STUDY

According to the UN E-Government survey 2014, conducted by Department of Economic and Social Affairs. Nepal's E-Government index was marked below 0.25, and was ranked 164<sup>th</sup>, among the 193 countries of the world. In similar survey on 2003 Nepal was ranked 130<sup>th</sup> and 152<sup>th</sup> in 2010.

This gradual decline speaks itself of how much we have lagged behind. But, this should be perceived as an opportunity.

With The country's IT Policy we have now a broad framework for E-Government transformation with the aim to transform Nepal into a knowledge society that can fully harness the benefits of e-governance to promote good governance and advance socioeconomic development and reduce poverty.

It is the local body from where the government serves its people at the first place, from the event registration of the birth up to the death certification, one complete cycle of service is provided through the local bodies. The governance effectiveness can be felt more at the local level.

With ICT being known for enhancing effectiveness Local E – governance can be an effective way of achieving a level of good-governance.

So, it is both need and necessity to access the current scenario of e-government. And analyze the scope of e-governance; determine the areas in both office automation and e-service delivery where the present technology can be integrated.

This study sought to establish the extent to which ICT adoption has been successful and the factors that impede its full utilization at Local Bodies. The factors such as ICT infrastructure, ICT skills and capacity, level of ICT usage, risks and security issues associated with ICT adoption and management support in ICT integration.

Through this study we not only plan to access the present scenario of ICT implementation but will also try to analyze where and how could the ICT be used for optimal efficiency of the government office (local body) and better service delivery with better reach to the general public.



## **2.2 RESEARCH LOCATION**

### **2.2.1 Location**

Local bodies are the front runners on delivery of public service. With the promulgation of the new constitution roles of local bodies especially municipality is set to be enhanced. Considering these factors it seemed better to concentrate our study in municipality. It seemed better if the study is carried out among the established municipalities rather than newly formed municipality ones. The ICT requires some basic infrastructure and some resources to bring it into practice. In a scenario where newly declared municipalities are finding their feet. The older (established) municipalities will not only provide us with the current scenario of the ICT implementation on local bodies but will also provide a broader platform for our analysis.

Thus, Biratnagar Sub- metropolitan have been chosen as the subject location.

## **2.3 INSTITUTIONS**

### **2.3.1 LDТА**

Local Development Training Academy was established as an autonomous body on 4<sup>th</sup> Ashwin 2050 B.S. It was established under the Local Development Training Academy Act 2049. The aims, objectives of the LDТА are guided by LDТА act and its regulations. It has a long history associated with it. It was associated with rural development since the days of 2009 B.S in ‘Tribhuwan Gram Bikas Karyakram’ and has been since then institutionally working for the capacity development of the local bodies. At present, LDТА has 7 training centers across the nation. Among those 7 training centers, 3 Rural Development Training Academy namely at Jhapa, Janakpur and Doti; 1 Urban Development Training Academy at Pokhara; 2 Women Development Training at Jawalakhel(Lalitpur) and Surkhet; and one head office also known as LDТА situated at Jawalakhel.

After the first (2046) and second (2063) revolution, LDТА has expanded its role on so as to fulfill the contemporary demands of capacity development of the Local Body. In present context, LDТА has been supporting vigorously in Human Resource of the Local Body for a better service delivery and better governance. For this, LDТА has prioritized the Support and Co-ordination of MoFALD and along with the support of various donor agencies. LDТА is an institution which is aware of its increasing responsibility and it is dedicated in achieving its goal.

LDТА being a Training Academy has a Research and Monitoring section at the LDТА Jawalakhel which studies various aspects of the Local Governance. E-Governance being one of the aspect of local governance, and with no any previous study of such kind. The Research and Monitoring section is associated with this research.

### **2.3.2 Biratnagar Sub-Metro**

Biratnagar Sub-metro is situated at the Eastern development Region, Koshi region and is the headquarter of the Morang district. According, to the newly promulgated constitution Biratnagar sub-metro lies on Province no. 1.

Birtanagar shares its border with neighboring country India in the south, Singhiya river in the east, Keshaliya river in the west and Tanki-sinwari VDC in the north. Biratnagar is the second big metro politian after the Kathmandu valley. It is also major Industrial corridor of the eastern region.

Population	201125
Ward	22
Area	58.48 sq. km.
Household	45,131
Literacy	80.49%
Major Language	Nepali, Maithali
Hospital	38
Schools	155
College	63
Religious Buildings	94

Table 1: Biratnagar municipality stats.

## **2.3 OBJECTIVES**

1. To assess the current status of ICT infrastructure at the Local Body and their use on internal administration and service delivery.
2. To assess the possibility on integration of ICT on day-to-day administrative works as well as on service delivery aspect of the Local Body.
3. To assess the aspect of connectivity between the municipality and its subordinate ward offices.
4. To categorize ICT implementation/integration.
5. To explore the impact of risks and security issues associated with ICT adoption for better e-governance.
6. To evaluate the influence of management support in ICT integration.

## 2.4 REASONS FOR E-GOVERNANCE

The main reasons to embrace e-governance are as follows:

- e-governance improves **efficiency**.
- e-governance improves service **quality**.
- e-governance helps achieve **policy outcomes**.
- e-governance can be the major contributor to **reform**.
- e-governance builds trust between **citizens and government**.

Until now, the main drivers for e-governance have been efficiency gains and effective delivery of policy outcomes.

Recently, the focus has shifted to other objectives: improving services, increasing accountability, facilitating engagement.

### 2.4.1 Efficiency

Cost reduction is the major driver for ICT use:

- replacing paper-based application processes with computer applications and Internet applications cut down costs of data re-entry and checking
- improved booking arrangements – more efficient use of scarce resources: skilled staff and facilities
- greater sharing of data within government agencies– eliminate costs of multiple collections, data reconciliation and checking
- reduce publication and distribution costs by relying more on on-line publications, etc.

### 2.4.2 Focus General Public

Public focus is about providing citizens and businesses with a coherent interface with government which reflects their needs rather than the structure of the government.

E-Governance initiatives that can improve focus on general public:

- on-line portals on particular topics or groups, bringing together relevant information and services
- e-mail lists to push customized information to specific groups, whenever the information becomes available
- allowing identified users to carry out routine transactions with the municipality/local body as on-line services.

### 2.4.3 Improved Municipality Policy Outcomes

E-Governance can help achieve better outcomes in major policy areas, such as:

- **taxation policy** - improved collection of taxes through increased sharing of information to the public and achieve better information coverage in municipal area.
- **fiscal policy** - reduced government calls on public funds through more effective programs and its operations, better public participation in yearly plan promulgation and so on.
- **social policy** – promote the better use of social protection money by making social protection database more effective.
- **good governance policy**: with the increase in the efficiency of public service delivery, enhancement in transparency and increased public participation help achieve the objective of good governance.
- **environmental policy** – through better sharing of information between municipality(local body) and central agencies or between municipalities and line agencies the working environments are more conducive. With the better sharing of the information the people involvement in governance is also enhanced.

It is expected that all policy areas will be positively affected by e-governance.

### 2.4.4 Public Management Reform

Public management reform has been on the agendas of many countries long before e-governance emerged.

Reform and e-governance are mutually dependent:

- reform is necessary if e-governance is to deliver.
- e-governance is an enabler of the reform.

#### A. Reform for e-Governancer

Reform is necessary for e-governance to deliver:

- The promise of e- governance will not materialize by simply digitizing government information and placing it on-line.
- Instead, e- governance is about the use of ICT to transform the structures, operations and the culture of government.

### **B. E-Governance for Reform**

E-Governance is an enabler of reform:

- it serves as a tool for reform by :
  - simplifying administrative processes.
  - making such processes more transparent.
  - helping to deliver services in more efficient ways.
  - facilitating the integration of services and processes.
  - enabling seamless government.
- highlighting internal government inconsistencies.
- underscoring commitment to good governance objectives.

Modernizing government structures and processes will have a major impact on how services are delivered.

## **2.4.5 Citizen Engagement**

Building trust between government and citizens is fundamental.

**In the absence of trust:**

- the rule of law
- legitimacy of government decisions
- support for government reforms may be all called into question.

ICT is an enabler to build trust by engaging citizens.

**Ways of engagement:**

- consultation and feedback by service users – web logs, questionnaires and feedback contacts.
- citizen engagement in policy making – consultation and active participation to better address municipal needs.
- helping individual's voice be heard.



## CHAPTER 3

### 3.1 RESEARCH METHODOLOGY

Every research needs analysis and for the analysis requires methodologies. For our research we have opted for following two modes of analysis:

1. Institutional Assessment.

The main aim of the institutional assessment was to gather the information of current status of software and hardware in use. It also aimed to collect the views of Information section (or section related to the ICT). Institutional Assessment was carried out through the field visit to the Biratnagar municipality.

Section I:

➤ ICT structure.

○ Hardware.

- The hardware assessment was focused more on the physical ICT infrastructure of the biratnagar municipality. The electronic devices that the municipality has deployed for better practice of e-governance.

○ Software

- The software assessment was focused mainly on the use of the software(web based, desktop application or any of such kind). The e-service delivery can only be possible if proper and user/client friendly software applications are adopted.

➤ Connectivity status.

- The connectivity status aimed at finding out the connectivity at two phases. First phase being the connectivity within the municipality devices and their access to the internet. Second phase being the connectivity between the municipality and its ward offices.

## 3.2 FINDINGS

### 3.2.1 Preliminary Findings

#### 1. Institutional Assessment Findings:

The main aim of the institutional assessment was to gather the information of current status of software and hardware in use. During our institutional assessment we had the following findings

#### Section I:

- ICT structure.
  - Hardware.
    - Every section of the municipality had a computer and printer available to it.
    - Municipality has digital notice board as a part of digital citizen charter.
    - One server which is used for data backup for the revenue software.
  - Software
    - Revenue section was using the Rajaswa software (Shangrila).
    - Account section was using lekha software.
    - Municipality has its own website which is functional and regularly updated.
    - An official facebook page.
    - Online reporting portal of the MoFALD(i.e WBRS) is used to send yearly progress report to the ministry.
    - MIS-VERS as a database for the vital events for better management of social security allowance.
    - Ghar-naksa Software in the near future(planning).

➤ Connectivity status.

- Intra Connectivity status.
  - Municipality has two Internet connections. A broadband Internet Connections of 1 mbps for municipality and another 512 kbps ADSL internet connection for the purpose of WBRS (Web based reporting).
- Connectivity status with the wards.
  - Currently the municipality has no broadband connection with its ward offices. But, in near future the municipality aims to start revenue collection from the ward offices by expanding rajsawa software that is currently being used.

## 2. Focus Group Discussion (FGD)

In another phase of the research. We conducted a focus group discussion among the section chiefs of the municipality.

In the discussion various aspects related to the ICT of biratnagar municipality was discussed.

In Biratnagar municipality the most striking point was the lack of IT department or lack of any IT personnel to look after the prevailing IT infrastructure. This was the major difficulty as discussed in the FGD.

Another, challenge highlighted was the lack of willingness among the staffs to utilize ICT tools. The major reason for this unwillingness being the fear of increase of work burden on them.

The municipality also lacked any concrete vision on integration of ICT in public administration.

But, in near future the municipality has planned to extend the rajaswa software to its ward offices. At present, people living around the border region of the municipality have to arrive at the municipality building to pay their tax, both time and extra money of the general public is wasted. This could be a discouraging factor for a citizen so as to pay the tax. So, in order to encourage the tax payer the municipality is aiming to start collecting tax from their ward office (which is nearer to them than municipality building) through online system.

This can be a good example of e-governance for other local bodies as well.

## CHAPTER 4

### 4.1 E-GOVERNANCE MODEL at BIRATNAGAR MUNICIPALITY

E-Governance facilitates interaction between different stake holders in governance. These interactions along with their status of implementation in Biratnagar Sub-metro are discussed as below:

#### 4.1.1 G2C (Government to Citizens)

An interface is created between the government and citizens enabling the citizens to benefit from efficient delivery of a large range of public services. This expands the availability and accessibility of public services on the one hand and improves the quality of services on the other. It gives the citizens the choices of when to interact with the government, from where to interact with the government, and how to interact with the government. The primary purpose of this type of interaction is to make government citizen-friendly.

In the regard of Biratnagar municipality, G2C model of E-governance has its presence mainly through the website of the municipality (<http://munbiratnagar.gov.np/>). In the website citizen can not only view the activities, news and notices of the municipality but also can see and download the various forms that need to be submitted to the municipality while acquiring service through the municipality.

The VITAL registration services through the MIS-VERS system.

The municipality also has a digital notice board at its premises. The objective being the information dissemination to the general public regarding the public service delivery of the municipality in a more effective way.

The municipality also has adopted for the social governance in the form of the official facebook page of the municipality. As, it is known the social medias have better coverage than the websites so the information that needs to be disseminated is simply placed at the official facebook page with the link to the website placed below the post. This is a good way to both disseminate information and make people more familiar with the website of the municipality.

### **4.1.2 G2B (Government to Businesses)**

E-governance tools are used to aid business community-providers of goods and services- to seamlessly interact with the government. The objective is to cut red tape, save time, reduce operational costs and to create a more transparent business environment when dealing with the government. The G2B initiatives can be transactional, such as in licensing, permits, procurement and revenue collection. They can also be promotional and facilitative, such as in trade, tourism, and investment. These measures help to provide a congenial environment to businesses to enable them to perform more efficiently.

In the regard of Biratnagar municipality, G2C model of E-governance is adopted as the e-procurement platform of Biratnagar municipality. A web portal is established by the municipality through which all of the biddings and procurement works are done. The e-bidding portal can be accessed through the website of the municipality or through the URL <http://eproc.munbiratnagar.gov.np/>.

Also, the Biratnagar municipality has implemented the Revenue software in the Revenue section of the municipality. The software is primarily a database accessed through a desktop application. It has increased the effectiveness of the staffs and has also reduced the duration of the service for the public.

### **4.1.3 G2E (Government to Employees)**

Government is by far the biggest employer and like any organization, it has to interact with its employees on a regular basis. This interaction is a two-way process between the organization and the employee which helps in fast and efficient service on one hand and increase satisfaction levels of employees on the other.

In the regard of Biratnagar municipality, G2E model of E-Governance is adopted in its derivative form. The computer access to almost every section of the municipality. The municipality also has provided internet access to every electronic device within the municipality.

Along with this, for the purpose of employee growth and better integration of the E-governance in the public service delivery and daily administrative works municipality has had its staffs take

the basic computer training in phases. So, at present municipality human resource can be said to be a computer literate.

The accounting software that is used in the account section helps manage and systematize the accounts of the municipality. For both economic transparency and strengthening the institution.

#### **4.1.4 G2G (Government to Governments)**

Information and Communications Technology is used to increase the flow of information and services within and between different entities of the government. This kind of interaction is only within the sphere of government and can be both horizontal and vertical. Horizontal interaction means between different government agencies, as well as between different functional areas within an organization, and vertical interaction means between national, state, and local government agencies, or different levels within an organization. The primary objective of this type of interaction is to increase efficiency, performance, and output of the government.

MoFALD being the contact ministry for the municipalities (local bodies) most of the G2G model of E-governance is with the MoFALD. So, we can say that in municipality it is mostly Vertical flow of information.

WBRS is the web based portal through which the municipality submits the yearly progress reports of its activities to the MoFALD. Through the MIS-VERS the accord of the vital events are put into the national database through the web portal.

## CHAPTER 5

### 5.1 CHALLENGES TO E-GOVERNANCE

Implementation of e-governance can face a number of challenges.

The following have to be addressed on a whole-of-government basis in order to be overcome:

- **legislative barriers** – e-government processes must have the same standing as paper-based processes. Lack of legislative and regulatory frameworks. Non-prioritization of ICT and e-governance.
- **financial barriers** – better funding arrangements should be made available for e-government, the funding should be vision oriented. The funding of e-government projects are usually fragmented as the political leadership does not understand the importance of e-government transformation.
- **technology change** – adoption of whole-of-government standards, software integration and middleware technologies, standardization of e-government parameters.
- **digital divide** – large differences in the level of access to the Internet, difference in the level of knowledge of ICT (in both general public and municipality staffs) and therefore lower level of ability to benefit from e-government.

## CHAPTER 6

### 6.1 RECOMMENDATIONS

#### 6.1.1 Front Office

Front-office refers to the government (local body) as its constituents(municipal) see it, meaning the information and service providers, and the interaction between government and both citizens and businesses.

Front-office implementation of e-governance involves two issues:

1. on-line services.
2. citizen engagement.

##### A. Online services

Many models for on-line service delivery. But, none is accepted as “standard”.

A four-stage model by the Australian National Audit Office:

1. Information.
2. Interactive Information.
3. Transactions.
4. Data Sharing.

##### Stage 1: Information

The first stage is delivering information to clients or citizens. It can be simple website publishing information about service, procedure and other basic necessary info. It means people know the information about service, when they need.

What can be done:

- Need to digitize the available information and make it accessible through website.
- Rather than only just having downloadable forms on the websites the public should be able to apply for the services online.



- The “Hello Birtanagar municipality” page should be better utilized for feedback/complaints collection from the public.
- With the technology shrinking with passing day, the concept of m-governance should be taken into consideration for information sharing through and from mobile phones.

### **Stage 2: Interactive Information**

Interactive Information is second stage where clients or citizens have more accessibility than just looking static information. So we can say Interactive Information is the combination of Stage 1 and users' ability to access agencies' databases.

What user can do?

- User can browse a data, exploring it and interact.
- Websites can be more interactive.
- Facebook pages can be more responsive.
- User can access required useful information by performing electronic searches and calculations based on the user's criteria.

Challenges for implementing LBs:

- Is this easy for all kind of Citizens? How can they learn?
- How will citizens use the information?
- What are the rules for making certain information public?
- What is the target audience for specific information?
- How to make information easier to find?
- What tools can be used to enrich user's experience?

### **Stage 3: Transactions**

This is more advance stage of online services where user can also do their secure transaction. For this it requires Stages 1: Information, Stage 2: Interactive Information and users' ability to enter secure information and engage in transactions with the agency. This requires real-time

responsiveness by local bodies(Municipality) to the service demands by citizens and businesses. This is always threat from fraud transaction and hacking so the system should ensure security and privacy of individual.

Challenges for the implementing LBs:

- establish online service standards by central agency.
- ensure security and privacy protection.
- prepare back-office processes for on-line delivery.

#### **Stage 4: Data Sharing**

For online service, data sharing between line agencies is very important. Data Sharing is the Stage where agencies' have an ability to share with other agencies personal information, when approved by law and with the users consent. For this stage 1<sup>st</sup> 2<sup>nd</sup> and 3<sup>rd</sup> should be formed. This helps to reduce the redundancy and ensure better and faster services. So it simplifies procedures in government services.

Data-sharing has many benefits.

- simplify procedures:- Use the simple applications like google docs for data sharing within the municipality. The google forms are also simple platform for collecting information from the sections/ sub sections.
- create savings:- utilizing the under utilized server can help store the data in more systematic, secure and easily assessable way. The file sharing within the network of the municipality can also be done. Cloud storage can also be utilized.
- reduce reporting burden for citizens and businesses:- with all these the burden of reporting will definitely fall. And the digital archive of the data that ICT creates surely will be beneficial.

However, there are some challenges:

- sharing of data among might be limited because of privacy protection legislation.
- all data-matching must be legally approved or explicitly permitted to prevent unauthorized /illegal combination of data.

## B. Citizen engagement

The second issue for front office implementation of e-governance is Citizen Engagement. The basic idea behind citizen engagement is engaging the citizen in government duties using ICT tools. So Citizen Engagement tells ICT can be used as a tool for providing information, consulting and engaging citizens in the policy-making.

This can be done through:

- **reaching a wider audience:** First need to find out the large volume of audience, the ICT tool they are familiar with or the ICT tool which has the better coverage among the people living in and around the municipal.
- **tailoring information to the target audience:** Conveying and adopting the information to those targeting audience.
- **engaging citizens through consultation and participation:** Encouraging people for engaging with municipality task. The prime example being the use of official facebook page and website of biratnagar municipality being used as a voting platform about the color of paintings to be painted in the house holds of the municipality. <http://munbiratnagar.gov.np/poll/>
- **facilitating the analysis of citizen contributions:** The value should have given to each contribution of people to further encourage the participation. The best feedback or engagement through the ICT should be recognized to encourage others.
- **providing feedback to citizens:** Need to let the people know about their work. The status regarding their feedback or engagements.

## C. Access and Trust

Increasing citizen trust through access to information:

- information on entitlements and costs of services reduce opportunities for arbitrary behavior, people know what is for them and what not.

- systems that guide applicants through complex entitlement procedures clarify the decision-making process, people have clear idea in every things, so they don't need assist and guide further more.
- on-line tracking of applications, linked to timeliness standards for approval processes, reduce fears of corruption, etc. This help to make automated standardization and reduce extra effort
- All reduce administrative and judicial appeals, which impose costs on both administrations and citizens.

Also increase citizens' confidence that laws are applied fairly and make municipality activities more participative and transparent.

## 6.1.2 Back office

Back-office is the internal operations of an organization that support core processes and are not accessible or visible to the general public.

E-governance versus back-office reform:

- e-governance helps to reform administrative back-office
- e-governance also needs such reform in order to be successful

Back-office implementation issues:

- organizational change
- leadership and coordination
- inter-agency collaboration
- e-government skills
- private-public partnership

### A. Organization change

The introduction of ICT into government requires accompanying process changes in order to make the most of e-governance.

However:

- ICT are often overlaid on an existing organizational structure without any thought how those structures can be improved.
- Local Bodies tend to regard ICT as a patch to seamless interface with users to a complex administrative structure.
- National portals often involve rearrangement of existing information without any change in processes and procedures.

## **A.1 Types of Organizational Change**

Small-scale ICT activity – development of a website as an additional information channel – may not require complex supporting changes.

Far reaching organizational change will be required when:

1. The website begins to offer deeper, more complex services.
2. Agencies are asked to work together to deliver services according to the needs of citizens and not their structure.
3. New work styles - tele-working, virtual teams - emerge.
4. With increased data-sharing and communication:
  - particular data holdings become redundant.
  - more decisions are made at the lower organization levels.
  - special units are established for government-wide projects

## **A.2 Internal Resistance to Change**

Local Bodies structures are traditionally resilient to change.

Two issues to address when planning change:

- 1) The willingness and ability to adopt new ways of working:
  - helping staff understand their role in ICT-enabled processes.
  - providing job redesign and training programs.
  - establishing ownership of reform.
- 2) The need for understanding/support by senior management:
  - more than the statement of principle and good intentions.
  - understanding the impact, benefits and risks of reform.
  - willingness to sell the reform to staff and leaders.

## **B. Leadership**

E-governance implementation can be difficult, risky and expensive.

Governments/Local Bodies are asked to translate a broad vision into effective public services, while facing time constraints, lack of resources and political pressure.

Sustained leadership is essential:

- to motivate employee.
- to create incentives for action.
- to motivate and break down barriers to change.
- to put the right administrative mechanisms for e-governance.

### **B.1 Leadership: Stage**

Depending on the stage of e-government:

- early stage - obtain views on what needs to change, share a common vision with staff, evaluate new ideas.
- middle stage – selling the benefits of the vision, creating personnel commitment.
- late stage – sustain momentum and enthusiasm among stakeholders as benefits take time to emerge.

Many e-government advances were driven in the past by the enthusiasm of individuals and individual agencies.

## **C. Coordination in Implementation e-governance**

Coordination can facilitate efficient implementation:

1. promoting sharing of information and good practices – online registers of projects, seminars, publications, websites, etc.

2. facilitating efficient acquisition of ICT products and services – e-procurement, purchasing, sharing of information.
3. promoting shared frameworks and standards across local bodies and government agencies to facilitate interoperability and efficiencies.
4. taking steps to avoid duplication of efforts – information sharing, expenditure approval, brokering of joint contracts.

#### **D. Interagency Collaboration**

Development of seamless services requires greater collaboration between government agencies: authentication, shared processing, data exchange.

Collaboration is needed in both aspects:

- front-office – better service to the customers(public).
- back-office – efficiency and interoperability in local bodies.

Two complementary views:

- citizens' view – government appears as a single organization.
- local body's view – citizen appears as a single customer.

Attempts to implement seamless services highlight the need for change in internal governance frameworks of public administrations.

##### **D.1 Collaboration**

Close cooperation is necessary for seamless services:

- 1). Common approaches to data presentation.
- 2). Data sharing within government.
- 3). Joint authentication,



Cooperation is imperative when government agencies share customers: the greater the sharing, the greater the level of required cooperation between agencies.

## **E. e-governance Skills**

ICT skills have become a new general skill, like literacy or numeracy.

E-governance increases the importance of ICT skills required by public administration/local body workforces.

Four skills sets are considered essential:

- Information Technology (IT) skills
- Information Management (IM) skills
- Information Society (IS) skills
- updated management skills

### **E.1 Skills for local government work force**

Local body work force must be able to:

- integrate ICT strategy with organizational goals
- match government processes with technical solutions.

To this end, they need to:

- 1) have basic IT skills.
- 2) understand how ICT works.
- 3) understand limitations of ICT.
- 4) understand how ICT can be used.
- 5) manage the local body's information strategy.

- 6) deal with the impact of e-governance on the local body.
- 7) see how e-governance applications can build new services/products.
- 8) see how e-governance applications can open new delivery channels.

## **E.2 Skills Development**

The scale, complexity and rate of e-government-related change require structured initiatives to ensure that skills remain relevant.

Example approaches:

- in-house training.
- hiring of skilled professionals.
- partnering with outside organizations.
- more flexible remuneration arrangements.
- use of contractors and private outsourcing companies.
- more information on skills needs and opportunities.
- new pathways to IT jobs.

Maintaining skill levels is an ongoing process, not a one-time fix.

## CHAPTER 7

### 7.1 E-GOVERNANCE INITIATED/SUPPORTED BY THE ICTVs

MoFALD through its LGCDP-II program have Engineers stationed at the local bodies (DDC and Municipality). Since their arrival they have initiated some ICT practice in their local body, among which some of them are listed below:

S.N	ICT Practice
1.	Darta Chalani software at the Darta Chalani.
2.	Uniform DDC and Municipality website in all local bodies.
3.	Support in the WBRs.
4.	Digital Notice Board.
5.	Audio Notice Board Service.
6.	Update GIS resource Maps.
7.	Support in the MIS-VERS software.
8.	Server setup and operation.
9.	Intra networking within the Local body and file sharing.
10.	Server setup.
11.	Group SMS.
12.	ICT Capacity development trainings for the LB staffs.
13.	Free-Wifi Zone within the LB premises.
14.	Support for the Accounting Software.
15.	Establishment of the official facebook page of the LB.
16.	Live streaming of the annual review workshop through the YouTube.
17.	Starting Bio-metric attendance system in many LB.
18.	QMS (Queue Management System)
19.	Revenue Software
20.	Direct Support in the daily IT work of the LB.

Table 2: ICT initiation by ICTVs

## 7.2 CONCLUSION

The use of e-government as a service delivery enabler will definitely support government's service improvement philosophy, thus putting people first. ICT can put people first, but only if the use of ICT is supported.

E-government is a process that requires a sustained commitment of political will, resources and engagement among the government, private and public sectors.

ICT Service standards	Measure	Comments/Remarks
How is ICT assisting or improving in the delivery of the product or service?		
How is ICT being used to measure service improvement?		
How is ICT being used to measure public satisfaction?		
What ICT initiatives are being used to increase the accessibility of the service or product?		
How accessible is this ICT initiatives to communities who don't have ICT infrastructure?		
In what ways would this ICT initiative reduce unnecessary expenditure for the public?		
How does ICT improve the provisioning of information about products and services?		
How of accessibility of the information to communities?		
How is ICT supporting the public to spend fewer resources in obtaining the product or service?		
In what way is ICT supporting business process reengineering?		

Table 3: Guidelines to Measure ICT Implementations

Another important outcome of this research is a set of guidelines, which can be used as a way to measure whether ICT implementations for service delivery conform to the Batho Pele standards (Table 3).

We can undoubtedly say that ICT and innovations such as e-governance have a lot to offer in developing countries like Nepal. We have potential to take advantage of ICT and initiatives such as e-governance but the government has to establish the innovative atmosphere to take advantages of potentials e-governance has to offer.

## Annex 1

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## Annex 2

### Topics discussed during FGD

- What kind of services municipality is delivering to the public.
- Among those services which services are delivered through the use of ICT
- What kind of software is being used currently
- What is municipality vision regarding to the future use of ICT in service delivery
- Does municipality have any policy vision on ICT
- How much necessary do you think the use of ICT is in the administrative and service delivery of the municipality
- What constraints are there for smooth implementation of the e-governance

Annex 3

Biratnagar Municipality Organizational Chart

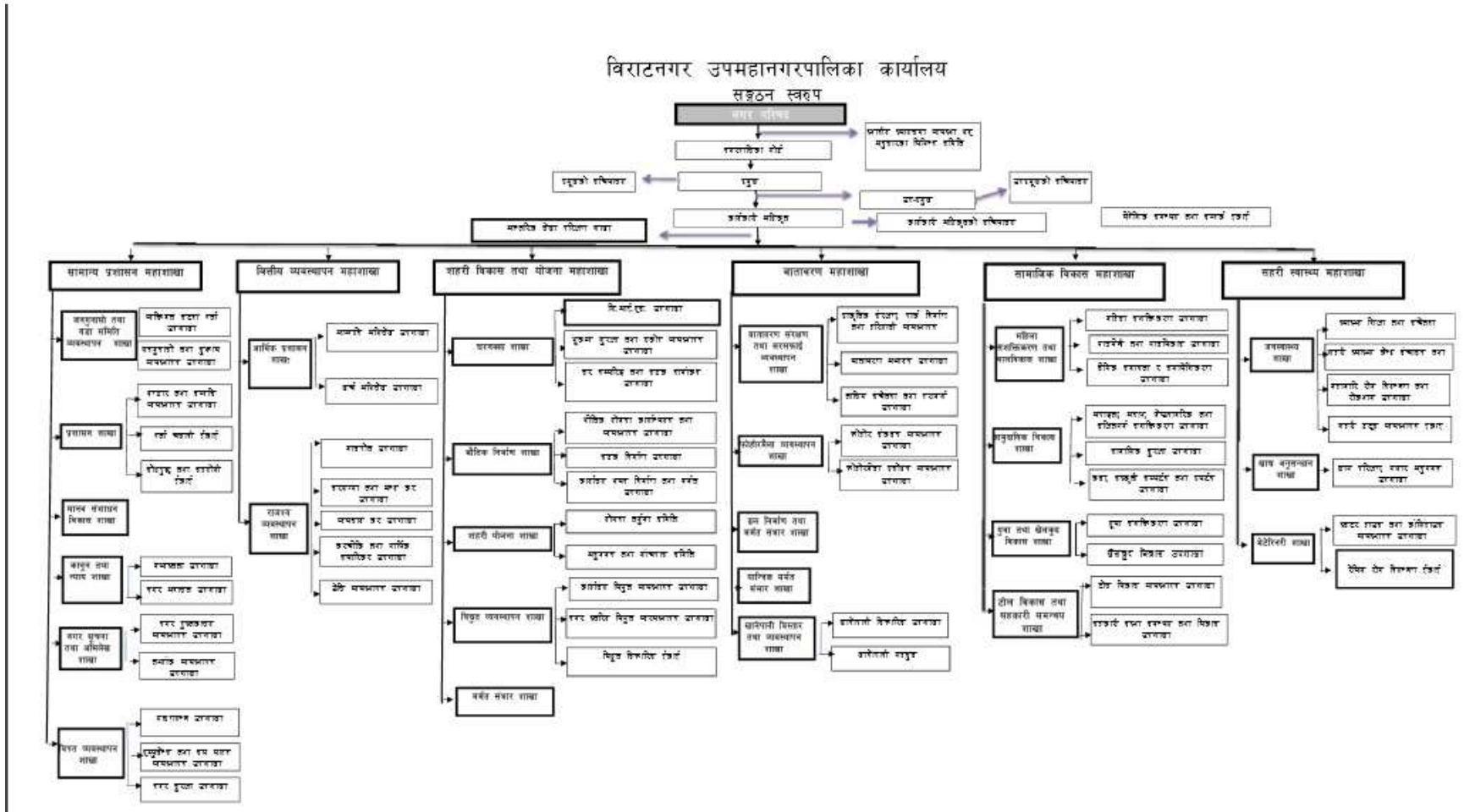


Fig 3: Organizational Chart of Biratnagar municipality



