



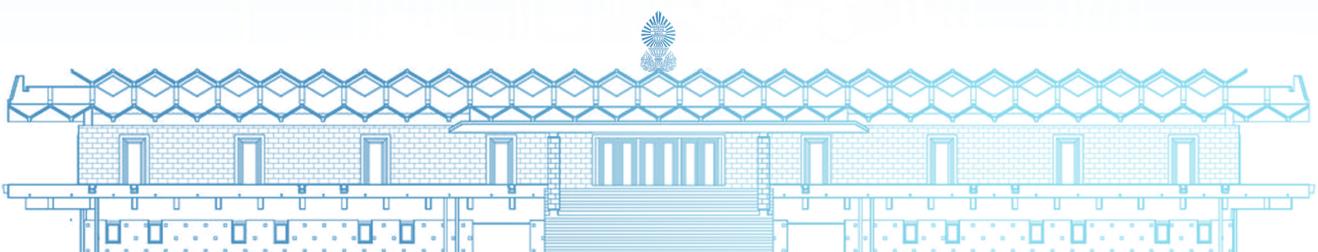
SENATE OF THE KINGDOM OF CAMBODIA

MASTER PLAN

DIGITAL TRANSFORMATION OF THE SENATE

2022-2030

Information Communication Technology for All



**Secretariat General of the Senate
(February 2022)**

CONTENTS

Master Plan on Digital Transformation of the Senate (2022-2030)

I. Introduction.....	01
II. Concept of E-Parliament.....	02
1- Definition.....	02
2- Advantages of E-Parliament.....	03
III. ICT and Parliamentary Functions.....	04
1- ICT and Legislative Function.....	04
2- ICT and Oversight Function	05
3- ICT and Oversight Function	05
IV. E-Parliament Services.....	06
V. Progress of ICT of the Senate.....	07
1- Current State of the Secretariat General of the Senate.....	07
2- ICT Infrastructure.....	07
3- Electronic Devices	08
4- ICT Services and Softwares	08
5- Favorable Factors and Challenges.....	09
VI- Master Plan on Digital Transformation of the Senate	10
1- Vision.....	10
2- Misison.....	11
3- Objective.....	11
4- Significance of the Master Plan.....	11
5- Priority Goal	12
- Priority Objective 1 (Hardening and expansion on IT infrastructure being robust and cloud-based)	
- Priority Objective 2 (Leveraging and expansion its productivity and services toward to support three core functions of the Senate)	
- Priority Objective 3 (Strengthening and reshaping its management and adoption of ICT projects for the Senate)	
- Priority Objective 4 (Strengthening public relations and information by using ICT)	
- Priority Objective 5 (Strengthening human resource being smart)	
- Priority Objective 6 -(Consolidating its extensive cooperation and partnership with all stakeholders in aiming of upraised ICT development of Senate)	
VII- Mechanism for Leading, Coordinating and Implementing the Master Plan.....	18
1- Institutional Mechanisms for Coordination and Implementation.....	18
A. ICT Committee of the Senate	

B. Special Technical Working Group	
C. ICT Center of the Senate	
D. National and International Cooperation	
2- Evaluation and Monitoring of the Implementation of the Master Plan.....	19
A. Monitoring	
B. Evaluation	
3- Opportunities and Challenges	20
4- Expected Outcomes.....	20
5- Focus Area.....	21
6- Target Audiences	21
7- Network and Products.....	22
8- Human and Financial Resources	22
VIII- Risk Management	23
1- Risks Related to the Parliamentary System	23
2- Risks Related to the Use of External Suppliers	23
3- Risks Related to the Human and Financial Resources	23
4- Risks Related to the Rapid Development of ICT.....	24
5- Risks Related to the ICT Security.....	24
6- Risks Related to the Force Majeure	24
IX- Conclusion	25
X- Glossary.....	26
XI- Annex.....	28

I- Introduction

The Senate of the Kingdom of Cambodia was established on 25th March 25 1999. For the past legislatures, the Senate, together with the National Assembly, as the national legislative body, has strived to fulfill its work and achieved noteworthy achievements for the nation. Over the past two decades, Cambodia has made remarkable social and economic progress under the pillars of peace and development. This progress is a driving factor for new changes in parliamentary and political affairs, requiring the Senate to further evolve to be a representative, transparent, accessible, accountable, effective and modern parliament.

In its Strategic Framework and 10-Year Action Plan for Capacity Building of the Senate (2021-2030), the Senate set out a vision to undertake its work as a modern parliamentary system based on the criteria of representation, transparency, accessibility and accountability in line with the values of democracy with the defined objectives including: **Priority goal 1**- Strengthening legislative function, **Priority goal 2**- Strengthening oversight function, **Priority goal 3** - Strengthening Representative Function, **Priority goal 4**- Strengthening international cooperation and public relations function and **Priority goal 5** - Strengthening institutional development function. In addition, the Senate has optimism and vision in adopting IT to contribute to the successful implementation of the five priority goals and more achievements. Moreover, the incorporation of IT into the work of the Senate will not only strengthen the institution work with quality, efficiency and effectiveness, but also contributes to the implementation of the criteria of a modern democratic parliament with high attention to detail and a high sense of conscience and responsibility for the citizens and society.

In light of these important guiding documents, the ICT Department of the General Department of Information and Public Relations, as a supporting unit of the Secretariat General of the Senate, has studied and developed a Master Plan on "**Digital Transformation of the Senate 2022-2030**" in respond to fundamental needs of the Senate and the progress of the society in the context of ICT advancement in the process of strengthening the rule of law and democracy under harmony and peace in Cambodia. The Master Plan focuses on "the Senate's vision towards modernizing the work of the Senate by harnessing the potentials and excellence of ICT to be a modern, effective, efficient, open and innovative parliament." With this vision in mind, this Master Plan sets out the mission with a sense of responsibility and high attention with the main focus on "establishing strong, open and innovative E-Senate to contribute to the development of Cambodian society that is in accordance with the rule of law and civilized, prosperous and developed under the pillar of peace." In addition, to realize above vision and mission, the Master Plan identifies six priority goals for the Senate, namely **Priority Objective 1** - Hardening and expansion on IT infrastructure being robust and cloud-based; **Priority Objective 2** - Leveraging and expansion its productivity and services toward to support three core functions of the Senate; **Priority Objective 3** - Strengthening and reshaping its management and adoption of ICT projects for the Senate ; **Priority Objective 4** - Strengthening public relations and information by using ICT; **Priority Objective 5** - Strengthening human resource being smart; **Priority Objective 6** - Consolidating its extensive cooperation and partnership with all stakeholders in aiming of upraised ICT development of Senate.

The six objectives are set out with a sense of responsibility and in response to the country's needs as the legislative body of Cambodia, and these objectives adhere to the path towards a modern parliament through phase by phase implementation and particularly steering the direction and compass to be an E-parliament (Online Parliament) so as to enhance work productivity and communion of the Senate by 2025 and to become a modern and open parliament by 2030.

II-Concept of E-Parliament

1- Definition

The term “E-Parliament” derives from the letter “E” and the term “Parliament” in which “E” refers to “Electronic”, and generally “E” can be used interchangingly with the word “Digital” which becomes “Digital Parliament” or “Modern Parliament” based on practices and preferences of different parliaments. Nevertheless, the concept of E-Parliament is fundamentally the same: “a parliament that utilizes digital technologies and ICT to enhance its efficiency and effectiveness of work.” In addition, the term “Parliament” is a key term referring to a legislative body and connotating its three main functions: 1. legislative function (law-making and adoption), 2. oversight function (overseeing the implementation of laws and government’s policies) and 3. representative function (representing and working for the citizens). Based on this understanding, “E-Parliament” describes the use of ICT and digital technologies to enhance and strengthen the main functions of a parliament or legislative body to be more efficient and effective. For some parliaments, “E-Parliament” mainly arises from the concept related to digitalization of forms of documents and production chain to support legislative activities of parliamentarians, starting from legislation drafting to translation and verification and translation prior to publication or distribution in digital format (XML content).

In the context of information society which has brought about the emergence of social media and new digital technologies through the use of internet, information dissemination and participation under the view of “E-Democracy and E-Participation” bring the citizens and parliament closer. E-Parliament focuses on a concept that a parliament utilizes ICT for openness, transparency and accountability. With the potentials of ICT as an effective means to connect parliaments with the citizens from all walks of life to receive information and knowledge related to daily activities of parliament. In addition, E-Parliament is an efficient legislative body and a bridge through which all stakeholders of a parliament communicate through the use of communication technologies to perform their work and participate in the main parliamentary functions (legislation, representation and oversight) effectively and practically. Moreover, through softwares and programs of advanced digital technologies, standards and adoption of digital policies of various E-Parliaments have brought about inclusive development and social equality. According to the European Center for Parliamentary and Documentary Research (ECPRD 2008), E-Parliament focuses on an expectation of the legislative body that brings together all actors and processes of the parliament both internally and externally through interactions via IT and digital technologies as well as other standards to achieve transparency, quality, full inputs, efficiency and effectiveness.

For the past 10 years, standards of E-Parliament have changed according to a number of factors including new digital technologies, experiences of various parliaments’ practices and value of effective parliamentary partnership and international cooperation in the age of globalization and regional integration as well as new global trends, all of which have promoted and expanded the value and definition of E-Parliament. According to Inter-parliamentary Union (IPU 2018), E-Parliament is a collection of technologies, knowledge and standards that are used in the process of parliamentary work and that create the value of inclusive partnership, participation and openness for the citizens.

For the Senate, E-Parliament is not only the use of ICT and digital technologies to support the main functions of the Senate: legislative function, oversight function and representative function more effectively and efficiently, but also a step taken forward with determination and commitment for the citizens and nation to contribute to building a Cambodian society towards a vibrant digital economic society, as well as to actively participate and join hands with the Royal Government of Cambodia towards strengthening and building a strong economy under the vision of becoming a middle-income country by 2030 and a high-income country by 2050. In this sense, E-Parliament or E-Senate is the use of ICT or digital technologies to enhance the operation and productivity of the Senate to be more effective and efficient in order to meet the needs of the citizens and society

in an open, accountable and transparent manner by taking into consideration the cooperation and partnership with all stakeholders both nationally and internationally with a high level of partnership spirit.

In addition, based on the practices in various parliaments and the basis of global technical development, E-Parliament is defined in the following phases:

- **E-Parliament Phase 1 or Digital Parliament:** the first phase of E-Parliament, focusing on the use of ICT and digital tools for fast and effective operation and administration of parliament.
- **E-parliament Phase 2 or Online Parliament:** the phase in which a parliament makes a progress with having a strong internal network and ICT services with internet availability for parliamentarians, officials and the public to use efficiently, effectively and economically.
- **E-Parliament Phase 3 or Open Parliament:** this is the phase in which a parliament utilizes ICT in an open database system. It not only provides the citizens with access to information and the work of the parliament in a transparent and efficient manner, but also enhances the interaction between the parliament and the citizens more closely on a fundamental idea that a parliament is dependable for the citizens.
- **E-Parliament Phase 4 or Innovative Parliament:** the phase in which a parliament is highly active, creative and innovative in ICT towards modernizing its work to meet national interests and common affairs at the regional and global level.
- **E-Parliament Phase 5 or Modern and Ubiquitous Parliament:** the phase in which a parliament is widely open and has automatous ICT such as artificial intelligence (AI), big data and new technologies.

2- Advantages of E-Parliament

Information society is generally defined as a society that uses, creates, distributes and regulates information in various activities in a society, and the use of information and ICT have brought about positive impacts on society such as education, economy, health, public services (government) and democracy. In the context of information society, E-Parliament plays a vital role in strengthening the functions of the legislature by enhancing the productivity of the legislative work than the traditional form of parliament, which allows a society progresses with the rule of law, harmony and justice. Under the influence of information society, E-Parliament is an intermediate connection of a society to connect institutions, citizens, services and much more. The continued development and adoption of E-Parliament by various parliaments in both developing or developed countries show that the emergence of E-Parliament has actively contributed to narrowing the social gap between the citizens in the society and the gap among all stakeholders of the parliament through the strengthening of social inclusiveness in a transparent, open and accountable manner on the path of democracy and the rule of law under the slogan "Information Technology for All".

Based on the survey on the development of E-Parliament (2010-2018) of parliaments at global level, Parliamentary Monitoring Organization (PMO) and Non-Parliamentary Monitoring Organization (Non-PMO) which were assessed by the Inter-Parliamentary Union (IPU) showed that the effectiveness and efficiency of E-Parliament have increased significantly in the areas of administration, public relations and international cooperation affairs. Especially, various parliaments have innovated their parliamentary operation actively and with great flexibility. Based on the results, E-Parliament serves as an important foundation for parliamentary life together with innovative ideas and good practices based on the synergy of laws, traditions, customs, culture and ICT of each country and parliament to build trust with its citizens. The use of ICT or E-Parliament is also connected with bilateral or multilateral cooperation that responds to common interests and bilateral interests of each

parliament such as providing technical support and sharing data between parliaments and parliaments and between parliament and international organizations.

III- ICT and Functions of the Senate

1- ICT and Legislative Function

Legislative function is the key function of the Senate in reviewing and giving comments on draft laws or proposed laws in order to respond to common needs of the people and the entire society. The Senate, thus, shall have full competence equipped with sufficient means in examining and commenting on any draft laws or proposed laws by obtaining a comprehensive information, particularly, conducting study on regulatory impact assessments (RIA) through research team and officials as a strong briefing notes for Senators who will refer to, in plenary sessions of the Senate, commission hearing, group discussion and studies by individual senator. In every session of the Senate, all relevant documents and information related to the agenda and content of the discussion must be ready and timely prepared for the session and stakeholders. In addition, the process of the sessions shall be proceeded in accordance with the Constitution of the Kingdom of Cambodia, internal regulation, code of conduct and fundamental of the existing laws, by taking into consideration of the time effective consumption. All the substance of the meetings shall be specifically recorded in a three separate formats: video, audio and text, in order to disseminate to the public after the meetings and documented securely for adjustment and retrievable. Data repository, legal data system, intranet, E-library, E-archive, paperless system meeting management system, minute report database and other softwares shall be gradually developed interactively integrated in line with the priorities of the Senate. Furthermore, the enhancement of the legislative work of the Senate and information distribution to every Senators must be inclusive. The Senate necessitates to establish a ICT system to meet the needs of customers such as 1-establishing ICT-Based Drafting System; 2- Bill Tracking System; and 3- Document Management System. For some specific digital means shall be proactively developed for being ready of available means and more effective digital mechanism in order for ensuring the continuity of the legislative process and works of the institution in case of natural disasters such as political security, state of emergency, natural disaster, health crisis and other risks. The Senate, thus, needs to have its online meeting system and other systems by using high secured, reliable and trust platforms and softwares in order to ensure that they are clearly visual and sound capturable, as well as properly and securely kept, for convenient use by the Senators and officials of Secretariat General of the Senate. Together with this, there are some necessary digital services need to be developed such as an E-voting and approval system that can be operated smoothly, easily, securely and a reliable digital identification.

Each Commission of the Senate serves as a Mini Senate to study and comment on draft laws or proposed laws. In this regard, the Comission is necessary to use all documents and information as referential evidence with reliable sources, and substancial discourse and consultations with the citizens, commune/sangkat councils, and competent authorities by recording and report keeping properly for studying, researching, exposing and seeking for solutions and dissimmenating to the citizens and stakeholders. The specialized commissions of the Senate shall continue to increase quality of their websites by collecting all their vital contents of the commissions in order for being used as a means for storing documents as well as disseminating information to the public understanding about duties and achievement.

In short, meetings and other work procedures for all mechanisms of the Senate related to legislative work shall continuosly adhere to the principles of effectiveness, efficiency and cost-effective, especially by reducing maximum of the use of papers and ink by transforming into digital contents and

electricity consumption as contributory factors of environmental protection as well as global warming. The use of ICT softwares will enable Senators and Commissions of the Senate to search and use information effectively at any time and in all circumstances.

2-ICT and Oversight Function

Oversight function is intertwined with the legislative function. When a draft law or proposed law is adopted and promulgated, the Senate has to oversee the law-enforcement of the government whether the law-enforcement is well done and how its impacts on the citizens and society. In this regard, the Senate needs to have sufficient capacity in research, data collection, analysis, synthesis, evaluation, and recommendation on the process given to the Royal Government. The specialized Commissions and Senators, of course, shall have sufficient possibilities in all type of forms in order to timely gather insightful information and documents from concerned ministries and institutions at national and sub-national level . The Senate, however, shall have a data system which is special and data integration in associated with the national and sub-national digital platform of the Royal Government and Digital-government system by interacting with the Information Center and intranet of the Senate as well as safe and consistent implication of portal in utilization of all data in order to assist the work of each specialized commission of the Senate and Senators are accessible to information and enough input for reviewing and recommending on darft law or proposed law as well as oversight function is more effectively and comprehensively carried out for the great benefits of the society and people. On behalf of the legislative bodies of Cambodia, Senate and National Assembly shall do utmost together develop means and other digital tools, particularly building and a single integrated system for exchange of information and assurance of interflow of documents in timely and fast manner.

The Senate shall collaborate with the National Assembly in oversight of budget execution of the Royal Government through assessment and study on this concern regularly and are necessary to have ability to access to a comprehensive information provided by the concerned ministries of the Government, specially the Ministry of Economic and Finance and ministries/institutions that serve key public services attached with indicators and work output which ease for better reviewing the progress of the Royal Government. For the the statistic documents shall be archived and background of the recorded data in the system which is automatic system and data is schema for providing possibility for better analysis and research as well as compiling as add-memores on annual budget prior to the end of each fiscal year through the Department of Parliamentary Bugdget of the Senate submitting to leaders of the Senate, 2nd Commission of the Senate, and Senators for using as reference to review and provide comments on the law of the national budget properly and comprehensively based on the budget technical standards in reponse to the needs of the Royal Government and the nation.

3-ICT and Representative Function

Representative function is an important function for the Senate, requiring it to fulfill the role as the representative of commune/sangkat councils and the entire population . The Senate shall pay attention on strengthening quality of close relationship with the citizens and media in order to together promoting the prestige of institution also and taking part in the process of strengthening the principles of democracy and rule of law. The development of dissemination methods and diversification of contents and digital new forms such as small booklet, video, audio for broadcasting on radio, television, website, electronic-message, as well as social medias, these factors enable the people wider and faster accessible to the information. Website shall be insightful, flexible and convinient to use, which ensure the effectiveness of gathering key information and general activities of the Senate, especiailly high technical features for group of people with incompetent or disability such as elderly,

illiterate, children and people with disability are accessible to information timely and properly. The legal document, law and other policies shall be continuously stored and disseminated widely to the public through the digital data system (XML) and digital born, etc. In the process of review and comment on the draft law or proposed law, the Senate shall need the participation of the stakeholders through combination of views, requirement, proposal and viewpoint of the citizen, NGOs, other groups of people in the society in order to mainly contribute in the development of policy and laws in quality and inclusive. Generally, mean of effective and popular software in gathering of viewpoint and input from the citizen such as e-petition, e-voting, electronic discussion, online policy consultation project, online questionnaires and discussion with the Senators, etc.

Every Senator, as the representative of citizen and commune/sangkat council, shall have systematic and regular relations with locality in order to obtain new informations from local area concerning the difficulties, and other proposals, particularly impacts of the policy implementation and other law-enforcement, as well as petitions of the citizen and commune/sangkat council as the electoral college of the Senate regularly and in real time by using the social media, social network system, website, Twitter, and Media in order to facilitate relations and gather maximum input from the citizen and diverse groups of people in effectively and friendly manner and look for better solutions for the citizens.

IV- E-Parliament Services

According to a study by Papaloi & Gouscos (2010, p.107), in reference to the contents of services of parliamentary website, people are the beneficiary by checking the website including parliament, parliamentarian, citizen, journalist and media. E-parliamentary service focuses on the following forms:

Parliament to Parliament (P2P)	The exchange of information between parliaments which is necessary in sharing toward each other, especially in regional parliamentary framework or in separate feature . For example, IPEX (www.ipex.eu) is a database website that has been used for sharing information from national parliaments to European parliament.
Parliament-to-Members of Parliament (P2MP)	This service involves the development of technology applications for connecting parliament with parliamentarians, which can be used to facilitate parliamentary work with the speaker through the use of mobile application , webmail, and remote access to legislative documents
Citizen-to-Parliament (C2P)	This service shall provide means for citizens enable to access information for communicating with parliamentarians and citizen can give feedback to parliamentarians.
Parliament-to-Citizen (P2C)	This service is initiated by parliament to attract citizens' interest and participation in the legislative process, especially legislative function. The oversight of the law-

	enforcement in the parliamentary specialized commissions shall have participation of the citizen and electorates' participation in the legislative process of parliament.
Parliament-to-Media (P2Media)	A service was created by the European Parliament for communicating with media for the EU parliament in order to provide important information to journalists on work plans, news briefing and other works of the European Parliament.

Based on the studies and evaluation by the Inter-Parliamentary institutions as well as the practices of various parliaments, we can also add the following services:

Parliamentary Commission to Citizen (C2C)	The service for disseminating and sharing information between parliamentary specialized commissions and citizens such as activities of the commission, legislative work, legislative texts or draft laws or the gathering of citizens' opinions through commission website, digital platforms or social network system.
---	---

V- Progress of ICT of the Senate

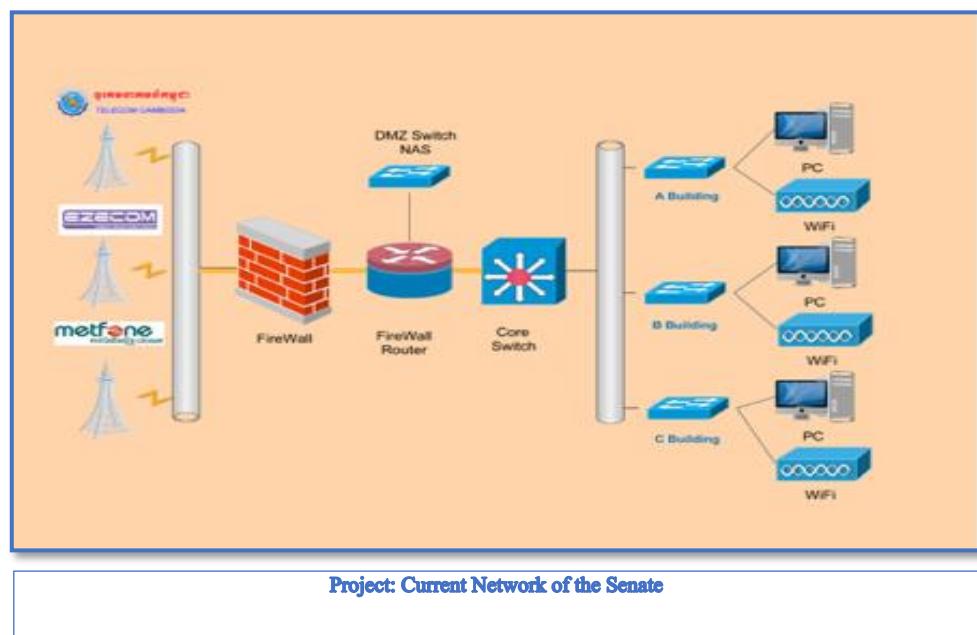
1- Current State of the Secretariat General

The Secretariat General of the Senate, a subordinate of the Senate, has role in charge of administrative and technical work for the Senate, and is led by a Secretary General and Deputy Secretary General as its leaders. At the present, the Secretariat General of the Senate is consisted of five General Departments, namely the General Department of Administration and Finance, the General Department of Legal Services and Territorial Collectivities, the General Department of Information and Public Relations, the General Department of Protocol and International Relations and the General Department of Research, in order for supporting the Senate in undertaking its main functions effectively and with high quality. The General Department of Information and Public Relations is one of the supporting units in charge of providing services to enhance the effectiveness of the Senate's functions through its information dissemination management service, and internal-external public relations that allow the general public to aware of activities and the reputation of the Senate and come to keep in touch with the Senate. The ICT Department as a subordinating department under the General Department of Information and Public Relations is, the department specialized in ICT, in charge of managing, maintaining, strengthening and disseminating ICT of the Senate and the Secretariat General of the Senate as well as enhancing ICT-related knowledge among officials of the Secretariat General of the Senate and Senators. Currently, the ICT Department consists of six offices: Software Development Office, Infrastructure and Security Office, Innovation Office, Digital Meeting Hall Office, IT Maintenance Office and Customer Service-Relations Office.

2- ICT Infrastructure

The great contribution and support by international legislatures, assistance from parliamentary development partners and governments of friendly countries as well as international organizations, in joint self-effort and own investment of the Senate together establish achievement of ICT development for the Senate that have been actively applied with quality, effectiveness and responsibility.

It is truly that the ICT infrastructure is the foundation of networking which enables electronic devices from a location to another mutually interact and exchange of data with each other. Currently, the Senate has intra-network connection in buildings and meeting halls in the Senate compound, and each building has physical connection from one office to another and from one unit to another through using fiber optic as backbone. The Senate has also further invested in firewall that is capable of monitoring and protecting internal system from external interference and monitoring a network operations center (NOC) in the Server of the Senate. The connection provides possibility of usage and distribution of internet service as well as other digital services. In 2021, despite the COVID-19 pandemic, the Secretariat General of the Senate constructed a three-story building using for installing ICT infrastructure to better enhance work effectiveness and safety than before, as well as being used as center for training and ICT knowledge to officials of the Secretariat General and as office of the ICT staff of the ICT Department in a better and more comfortable.



3- Electronic Devices

The General Secretariat of Senate has proper workplace and equipped with , equipment, material and electronic devices such as laptops, desktops, iPads, photocopiers and scanners as well as internet system connection for Senators as means for their fulfillment of daily work. Even though some of the equipment and devices are obsolete, they have been under repair and maintenance for use to their fullest extent of quality, within a high responsibility and attention of sustaining continuity of the work for Senators and officials of the Secretariat General, Senate.

4- ICT Services and Softwares

So far a number of digital services has been put into use and operate such as legal database, Senate website, Library Management System (LMS), websites of the ten commissions, database websites of some departments of the Secretariat General, Accounting System Program, Human Resource Management System (HRMS), Data Storage Service (NAS), Network Operations Center (NOC), Email, Social Media (Facebook, Telegram and Line), studio system for meeting halls (plenary

session hall and permanent committee hall) and online video conferencing system in meeting halls of the Senate (Zoom).

5- Favorable Factors and Challenges

A. Favorable Factors

In the last two decades, Cambodia has achieved progressive economic growth and political stability, peace and prosperity. These factors have great influence on the growth and development of the ICT at the micro and macro level of the nation. Based on measurement of index of E-Government Development Index (EGDI) in the last two decades by the Department of Economic and Social Affairs of the United Nations, the results showed highly positive trends towards a progressive E-Government based on three main criterias: online services (scope and quality), telecommunication infrastructure and the number of internet users. In 2020, Cambodia was ranked 124th out of 193 countries, an increase of 21 places from 2018. With this result, Cambodia has introduced a number of new policies to promote and enhance the process under key pillars towards Cambodian Digital Economy and Society (2021-2035) and formulated new policies such as E-Royal Government and other supporting policies. It can be noted that this factor is an important political indicator contributing to ICT process of E-Senate with a sense of responsibility and clarity.

The favorability of human factors or demography based on the rate of Cambodian population under the age of 35 accounts for 40% who have high possibility to capture and use ICT actively, and young people are major dynamic force taking part actively in the process of national and political development. Cambodia have received another favorable factor through the use of internet, the use of smart devices (mobile phones, computers and other smart devices) based on the data of internet users on smart devices is 16.33 million devices equals to 98.95% of the total population. In this amount, there are registered mobile phone subscribers are 20.82 million, about 126.19% of the total population. Another factor is the present of the online services either public or private service are constantly increasing and flexible to the market and stereotype of living condition of the Cambodian people which is modern, therefore, we are optimistic that IT service or software of the E-Senate will be used and accepted with positive result for the benefit of the public, institution and entire nation.

B. Challenges

Lack of up-to-date policy and inappropriate with new context, the Senate has developed ICT Policy twice, as in the Master Plan on “ICT Development for Cambodian Parliament 2003” through the technical support by the United Nations Development Program (UNDP) in Cambodia and the Master Plan 2003 was modified to be the Master Plan on ICT Development for Senate 2006 and being implemented until today.

Lack of a strong infrastructure the current infrastructure is favorable to fundamentally used such as administration and internet use. However, the main ICT infrastructure is unfavorable to serve web hosting and service applications such as official website of the Senate, website of e-library, legal database and other services which are linked with internet or online service and in replacement, the Senate have used rent service with private sector (domestic and oversea ISP), which are high risks for the lost of documents, privacy and confidentiality.

Investment the institution has been rapidly developed from one legislature to another in which ICT presents its necessity in the progress. The national budget is allocated for the ICT development which is limited compares to the need of Senators and officials of the Secretariat General of Senate. The limited budget is approximately about 1% of the entire budget of the Senate, particularly

in the mid of Covid-19 pandemic, the Senate has contributed with the Royal Government through rationalization of its annual budget in order to take part in the mid of difficulty.

The rapid of ICT advancement and Unceasing Development, the advancement of ICT such as 5G, Artificial Intelligent (AI), block chain, internet of things (IoT) and issues of cyber security have brought possible opportunities and threats for the use of ICT for the Senate, significantly challenges to institutional development, meanwhile level of some users position in slow manner or basic-based.

Lack of Human Capital (HC), HC Factor reserved as a major factor for promoting and enhancing the building and developing of ICT service, particularly dissemination and mainstream understanding of ICT to client internally and externally. Currently, the IT workforce serves this field are yet expertise, and stay still in basic competent knowledges such as programming, database specialist, content creator & media, Project Management (PM) and digital marketing, etc. IT officials have insufficient in experience and understanding of parliamentary affairs and its procedure which is necessity to harmonize in depth between ICT and Senate , and straight to its realistic goal.

VI- Master Plan on E-Senate Transformation

1- Vision

Based on the vision of the Senate 2021-2030, the Senate envisaged policy and action toward the implementation of systematic work of a modern parliament in line with the following criterias:

-Representation: Inclusive society and policy for the diversification of entire population and assure the equal presentation and gender balance for all Senators.

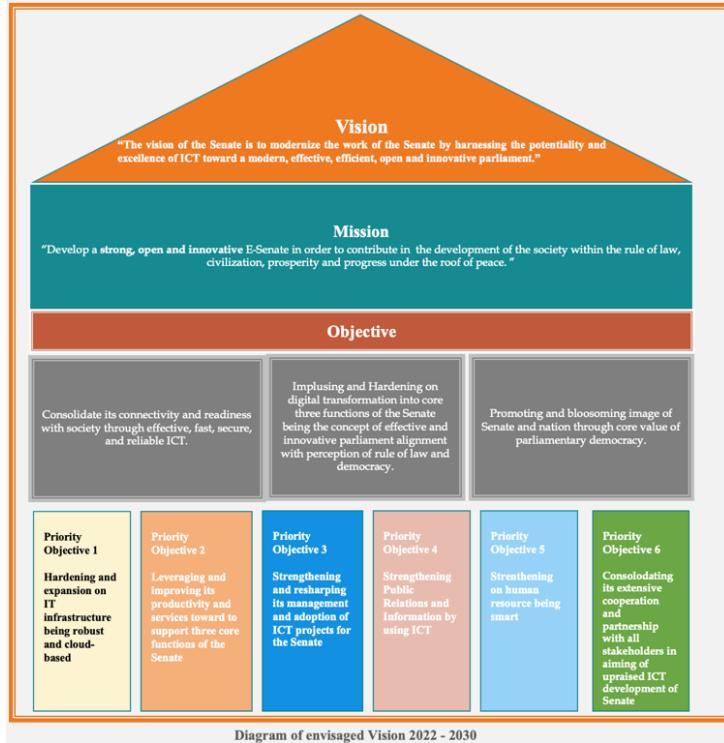
-Transparency: Open communication for the entire citizens through media and social media and transparent in all type of works management of the Senate.

-Accessibility : know-how to encourage citizens, especially the public, youth, children, associations, NGOs and the private sector to get involved in parliamentary work.

-Accountability: Senators shall regularly inform the electorate to acknowledge the way of work and outcomes fulfilled during their mandate for the benefit of the citizen and the nation and about their ideal integrity and absolute will.

- The nomination shall be done in accordance with value of democracy and good fulfillment of legislative, representative and oversight parliamentary function in response to the aspiration of the entire citizens.

In line with the above pragmatic and optimistic vision, the Master Plan on E-Senate Transformation defines that “**the vision of the Senate is to modernize the work of the Senate by harnessing the potentiality and excellence of ICT toward a modern, effective, efficient, open and innovative parliament.**”



2- Mission

With the above vision of the Master Plan, the Senate envisages its mission is to “develop a **strong, open and innovative** E-Senate in order to contribute in the development of the society within the rule of law, civilization, prosperity and progress under the roof of peace. ”.

3- Objective

In order to realize the above vision and mission, the main objectives of the Master Plan are as follows:

- Consolidate its connectivity and readiness with society through effective, fast, secure, and reliable ICT
- Implusing and Hardening on digital transformation into core three functions of the Senate being the concept of effective and innovative parliament alignment with perception of rule of law and democracy.
- Promoting and bloosoming image of Senate and nation through core value of parliamentary and democracy.

4- Significance of the Master Plan

The Master Plan on Digital Transformation of E-Senate has significances as follows:

- Defining compass, direction, plans, actions, and practical resources which are consistent and sequential based on information gathering and analysis of requirements of the Senate and citizen.
- Defining potentials and excellence of ICT in order to maximize scales the gap between the Senate and citizens
- Enhancing ICT products in accordance with the needs of the Senate and society.
- Assurance an expansion and implementation of ICT projects for the Senate based on the principles of “efficiency, effectiveness and cost-saving”.

- Promoting and Boosting ICT digital essential knowledge for Senators and officials of the Secretariat General of the Senate.
- Consolidate cooperation and partnership with all stakeholders of the Senate in the field of ICT

5- Priority Goals

To achieve the above vision, mission and objectives, the Master Plan consists of six priority goals as follows:

Priority Objective 1 : Hardening and expansion on IT infrastructure being robust and cloud-based

Priority Objective 2 : Leveraging and expansion its productivity and services toward to support three core functions of the Senate

Priority Objective 3 : Strengthening and reshaping its management and adoption of ICT projects for the Senate

Priority Objective 4 : Strengthening Public Relations and Information by using ICT

Priority Objective 5 : Strengthening human resource being smart

Priority Objective 6 : Consolidating its extensive cooperation and partnership with all stakeholders in aiming of upraised ICT development of Senate

Priority Objective 1 - Hardening and expansion on IT infrastructure being robust and cloud-based

This objective is to set its direction and activities for hardening core infrastructure and service delivery system (sds) being robust in secure manner as cloud computing system. The cloud based system of the Senate may develop following principles, **1. The once-only principle**, meaning that there are only one principle for applied and followed under unified single database for Senate ; **2. Interoperability as an ecosystem**, a principle that all digital resources and services of the Senate necessitate followed to one standard policy being compatible with both national and international system, duo to its data could deal with two volumes, national level (under the framework of the Royal Digital Government platform & Camdx), and international level (under the framework of international cooperation on data exchange).

Activity 1: Building up cloud computing system being an effective, sustainable, and secured

The Senate needs to deploy high-standard and secure data center, especially in compliance with security standards and equipped with adequate facility based on the standards such as ISO 27001 or ISO 2000-1. It is necessary that the data center has faculties such as power supply & UPS, cooling system, rack floors, fire control, security door, security camera, intrusion prevention system, network monitoring software, end points software, data storage system, data recovery system, file servers and other systems, etc.

Activity 2: Hardening & expansion its campus networking and core system (Internal Security)

The Senate may widen its network connection in all office and buildings for Senators, officials and the public, customers of the library and archive under four principle concepts: 1. Ensuring reliable and fasten data 2. Scalability 3. Quality of Service (QOS) and 4. Safe and Secure. In addition, the management console may be installed such as wireless system, devices management tools, computers (desktops-laptops), peripherals (printers and photocopier machines), and smart devices (mobile phones-tablets), digital identity and monitoring system, and especially any works towards applied internal security policy and bring-your-own-device policy (BYOD).

Activity 3: Building private cloud infrastructure of the Senate

Building its private cloud system are necessitated to invest 1. Software as a service 2. Platform as a service 3. Infrastructure as a service for digital transformation of the Senate. The foreseen stages of SaaS are straight to build core infrastructure by prioritizing identified services to three core functions of the Senate (legislation, representation and oversight) which is aiming to enhance the operation and productivity of the senate effectively and efficiently. Platform as a Service is required to study and formulate its harmonized policy by initiated, the ICT Team of the Senate and stakeholder departments under the Secretariat General of the Senate. Especially, digital platforms is necessary to develop in accordance with guidelines, formats, frameworks, and standards determinated by functional authorities and ministry in ICT sector (Ministry of Posts and Telecommunications Communication).

Activity 4: Building digital identity system and digital signature system of the Senate

To ensure consistency and interaction with data exchange platform and other systems under data sharing cooperation.

Activity 5: Blossoming and expansion on human capital

Widening and expanding its human resource capacity of the Senate and the Secretariat General is a essential activity which determined as success factor of the implementation of the ICT Master Plan with a sense of responsibility and pragmatism. This activity focuses on further lens to expand its specialist and skill of ICT workforce of the Senate based on the concept “keeping old, create new” by keeping quality and increasing quality. The specialists and skills are required such as Network Infrastructure & Cloud Computing Specialist, Cyber Security specialist , Project Management Specialist , Programming Specialist, Database Specialist, Digital Marketing & Strategy Specialist, IT Administration Specialist, Media & Digital creators, ICT supports, Library, Archives, etc.

Activity 6: Strengthening and expanding internet supply

This activity is defined in responds to upraise of internet users and to ensure continuity of the its services and bussiness, those have been developed and grown.

Priority Objective 2 - Leveraging and expansion its productivity and services toward to support three core functions of the Senate

The bond of the Priority Objective 1 and 2 is an inseparable. The Priority Objective 2 is defined activities in respond to enhance its productivity by integrated ICT into its operations, administration, functional works and others of the Senate in order to serve three core functions of the Senate being effective and efficient value for the society.

Activity 1: Strengthening productivity of the legislative function of the Senate by using ICT

A. Strengthening the long-lasting maintenance and classification of the institution's documents by using digital technology

1. Further developing and modernizing E-Library management software (E-Library, ILIS)
2. Developing and creating E-Archive management software (E-Archive)
3. Developing a smart and modern research repository (digital repository)

B. Regulating & formulating the legislative works of the Senate into standardized and effective E-legislative work

1. Carry on developing and improving its legal database to be more convenient and comprehensive.
2. Building and improving data repository of the Constitution of the Kingdom of Cambodia that is standardized and comprised of historical background of the constitutional drafting process at each stage.
3. Developing a software to manage the tracking of reviewing and providing recommendations on draft laws or proposed laws.
4. Carry on developing a software on the process of review and recommendation on law or proposed law management.
5. Developing a software on management of the detailed minutes and summary reports of the Permanent Committee and plenary sessions.

C. Continuing to establish digital means for improving legislative work effectively and with quality to meet the overall goals including 1. Smart meeting halls 2. Minimizing the use of papers and protecting the environment 3. Enhancing the effectiveness of meetings, especially renovating plenary meeting hall, the Standing Committee meeting hall and other meeting halls of the Senate to be modern and friendly environment (Zero use of paper by 2030)

1. Building and developing a software for managing modern meeting halls (Paper Less System)
2. Building and preparing video conferencing solutions for meetings of the Standing Committee, the plenary session and other meetings of the Senate
3. Building and developing an automated studio system for meeting halls of the Senate
4. Building and developing an optical character recognition (OCR) by using artificial intelligence (AI)
5. Building and developing a multilingual translation software and other softwares to support legislative works of the Senate.

D. Building and deployment systems for the Senate under force majeure circumstances (national disaster) to ensure continuity of the institutional operation

1. Constructing a remote meeting system using a reliable digital platform and software
2. Deployment an E-voting and approval system and digital identification system that are easy to use and safe

Activity 2: Strengthening productivity of the Senate oversight function by using ICT

In oversight function, the Priority Objective 2 is defined activities focused its high priority to information and data gathering from ministries/institutions under the royal government. Based on the progress of the sustainable growth on ICT sector of the Royal Government under the framework of the Digital Social-Economy Policy and the Digital Royal Government Policy which is being highlighted and grown. This progress provides opportunity and possibility for development of the Senate in the field of ICT. In this respond to this objective, some actions are defined as below:

- A. Building and synchronizing data management system with functional ministries, especially joint implementing the Sub-Decree on “CamDX data exchange platform” of the Royal Government

through virtual private network (VPN) and online portal, and also joint implementing extra policy toward to interact data of ministries, public institutions and partners, either the private sector and NGOs.

- B. Building and developing a software/database on statistic and data of national budget in result of conducting add-memoire on the national budget through analyzing and researching before the end of each fiscal year, produced by Parliamentary Budget Office (PBO) of the Senate to its leaders, 10 commissions of the Senate and Senators, to offer insights on technical and key-points of the National Budget Law.

Activity 3: Strengthening productivity of the Senate's representative function by using ICT

The third activity is to blend services for the representative function, aiming to bloom the institutional image and reputation in line with rule of law, democracy and transparency, deserved for the citizens by using ICT, the actions are defined as below:

- A. Carry on improving the Senate website with a diverse and abundant contents, especially carry on attention to national-international standards and norms.
- B. Widen & improve its dissemination works by applied the excellence and popularity of internet to conduct tools/system such as online radio & TV through using smart device, computer and smartphones.
- C. Developing a software for reception of citizen complaints, long-distance discussion (e-discussion) and other softwares by applied & adopted AI, Big Data and other technologies.
- D. Enhancing better representative function of the Senate and Senators in addressing difficulties of the citizen in a timely, effective, and fast manner by using social media and other medias for the Senate, Senators and political structure of the Senate.

Priority Objective 3 – Strengthening and Reshaping its management and adoption of ICT projects for the Senate

The objective 3 has key objective is to determine actions in purpose to ensure sustainability and phrases of ICT with a right and clear compass. For assurance its sustainable ICT development and operation is necessitated to reinforce scope activities, management, planning, as well as implementation of ICT reference to the needs of client and meanwhile the budget use in manner of quality and efficient. Also, this objective is defined to strengthen its human resource capacity and other mechanisms are necessitated in decision-making on growth and implementation of ICT project of the Senate reaching to successful and effective. In addition, awareness and dissemination shall operate properly through trainings, workshops and other means for widely open to all stakeholders to take part in ICT development process of the Senate in a diverse and effective manner. There is some necessary actions shall be envisaged as follows:

Activity 1: Strengthening human resource capacity in ICT management and planning

- A. Strengthening management and planning capacity of IT staffs of the Senate
- B. Establishing mechanisms and sharing platforms to get lesson-learned about the practices and experiences of the implementation in ICT projects of Senate.

Activity 2: Regulating & Formulated ICT mechanism, management structure, and new initiatives

- A. Establishing ICT Committee of the Senate to lead and approve on ICT work
- B. Establishing Special Technical Working Team to implement ICT projects for the Senate for each year

- C. Establishing ICT Center of the Senate in order to promote quality and effective implementation of ICT
- D. Organizing and adjusting the management structure of the ICT Department to meet the needs in each phase
- E. Strengthening cooperation with the ICT Department and General Department of the National Assembly to jointly build and develop services for the Cambodian Parliament
- F. Studying, organizing and evaluating the needs and suggestions of the Senate on the use of ICT on a regular basis
- G. Developing annual, trimester and legislature ICT development plans for the Senate
- H. Formulating standards and policies in response to ICT products and growth of the Senate

Priority Objective 4 - Strengthening Public Relations and Information by using ICT

The main purpose of this objective is to strengthen general awareness of members of commune/sangkat council, who are the electorates of Senator and the citizens in about the work of the Senate by using ICT in order to reduce the gap between the Senate, electorates and the citizens. Activities are set out as follows:

Activity 1: Organizing online training programs about the Senate via internet, website, smartphone app and videos

Activity 2: Developing an application and software for managing public visits to the Senate

Activity 3: Developing and Organizing mobility trainings in the eight regions of the Senate in order for promoting digital literacy among commune/sangkat councilors

Activity 4: Developing an application for plenary sessions of the Senate by using virtual digital recording (VDR)

Activity 5: Developing Senate digital gallery & database

Activity 6: Establishing ICT Center for trainings to officials of the Secretariat General of the Senate, commune/sangkat councilors and the public as well as other, in related to ICT of the Senate.

Activity 7: Strengthening relations by using postal and telecommunication system for the citizens such Call Center, communication recording system, social medias and other.

Priority Objective 5 - Strengthening human resource being smart

The main purpose of this objective is to determine key activities in respond to human resource building aligned with institutional vision towards a modern parliament or E-parliament 2022-2030, especially target to officials of the Secretariat General at every levels and Senators in the concept as namely “smart officials and smart senators”. The activities are defined as follows:

Activity 1: Mainstreaming awareness and knowledge on ICT to Senators through workshops, training, other programs, and as well as promoting research activities on ICT by enriching researchs and studies in conducting add-memoire for Senators

Activity 2: Develop and standardize framework being used for trainings and courses in the field of ICT for officials, the Secretariat General of the Senate

Activity 3: Strengthening capacity of officials through ICT training and course organized by functional ministries, specialized institutions, institutes, centers and partners in line with the needs of the Senate and the Secretariat General of the Senate

Activity 4: Strengthening internal capacity training by building training of trainers (ToT) on digital programs

Activity 5: Organizing orientation and dissemination programs and formulating policies on promotion of capacity building for officials of the Secretariat General in the areas of ICT

Activity 6: Strengthening digital capacity and innovation skills for management level of the Secretariat General

Activity 7: Developing softwares of E-administration, E-team and E-planning and other digital means to improve the quality of work in workplace and to strengthen effectiveness of teamwork for officials of the Secretariat General of the Senate.

Activity 8: Developing softwares, training management software, distance learning software, website and digital repository in ICT related

Activity 9: Strengthening digital culture and habits on using digital administration and literacy through workshops and other programs

Priority Objective 6 - Consolidating its extensive cooperation and partnership with all stakeholders in aiming upraised ICT development of Senate

This objective is to define on strengthening cooperation and partnership in agenda of ICT between the Senate and ministry, institution, NGOs and private sector, with common purpose being sustainable and innovative on technical affairs, human resource development and specialist contribution. Some activities are defined to strengthen cooperation on research and development (R&D) with research centers such as Research and ICT centers, universities, NGOs in ICT Domains, researchers and academic scholars, with aiming to the ICT development and innovation for the Senate. International cooperation also focuses on the aspect of strengthening technology, human resources and ICT project implementation of the Senate with other parliaments through study visits, international workshops and other research studies. With addition to this, it also stands attention on exchange of data with parliaments under umbrella of ASEAN-Asia framework, and other continents, particularly straight to strengthening the cooperation in the framework of technical works, library, achieves (parliament-public) of various countries, international research centers, international organizations, and other online journals, with value of increasing resources and digital assets for research and legislative affairs of the Senate, and as well as added value on dissemination of information and data of the Senate to the global community.

Main activities are defined as follows:

Activity 1: Strengthening cooperation with ministries, institutions, national authorities, private sector, research centers, universities and experts in the field of ICT in order to exchange experiences and collaborate in the implementation of ICT projects, research and innovation for the Senate

Activity 2: Integrating data of the Senate and the National Assembly with that of other parliaments and international organizations under mutual exchange of data .

Activity 3: Continuing cooperation with parliaments of friendly countries, international organizations, embassies and partners for support in human resource development and technical supports

Activity 4: Continuing to further strengthening research on good practices on the usage of ICT in parliaments and international organizations in connection with parliamentary works (IPU, AIPA, AP, etc.)

Activity 5: Developing E-portal for sharing document resources with national and international partners (E-portal & Open Data)

Activity 6: Organizing and attending regional and international workshops on ICT development and other experiences that are useful for parliaments on ICT work at regional level

Activity 7: Strengthening cooperation on data exchange within the framework of regional and inter-parliaments, libraries, achieves (national-international) and others under bilateral and multilateral frameworks.

Activity 8: Promoting joint research activities related to ICT and parliamentary affairs between the Senate and other parliaments within the framework of ASEAN countries.

VII- Mechanism for Leading, Coordinating and Implementing the Master Plan

1. Institutional Mechanism for Coordination and Implementation

The Master Plan on Digital Transformation of the Senate has been formulated by defining the compass, action plans and practices that are interconnected and sequential based on information gathering and analysis of the needs of the Senate, citizens and relevant stakeholders. With the objective to successfully achieve this Master Plan in pragmatism and clarity, it is necessary that the Master Plan shall be consisted of key actors such as **1. the ICT Committee of the Senate** with indispensable role in coordinating, leading, monitoring and evaluating on this master plan, especially coordinating and strengthening cooperation with national and international institutions, specialized in ICT as well as other parliaments, **2. The Special Technical Working Team** that has also important role and duties in implementing ICT projects, **3. The ICT Center of the Senate** with a vital role in coordinating the Master Plan, promoting innovation and ICT, and **4. The ICT Department** with a significant role in providing human and technical resources to achieve the implementation of ICT projects of the Senate and cooperate with national and international partners.

A. ICT Committee of the Senate

The ICT Committee of the Senate is a subordinate unit for the Senate, in charge of promoting digital transformation of the Senate by enhancing its success implementation with fruitful results in activities of the Master Plan on Digital Transformation of the Senate. The Committee is led by a leader of the Secretariat General of Senate, comprised of members who are the leaderships of units under the Secretariat General of Senate. The committee is responsible for leading, coordinating, promoting, monitoring and evaluating the Master Plan including policies, strategies, regulatory, standards and action plans related to ICT development of the Senate. The committee shall receive project proposals and plans of units under the Secretariat General by reviewed on their specification, and qualifications before summing into the annual ICT development projects of the Senate. The development projects are divided into three categories: **1.** Investment projects (projects under functional ministries under the digital royal government), **2.** Development projects under own annual budget of the Senate, and **3.** National-international cooperation projects with partners of the Senate and Secretariat General. The Committee has its administrator and technical subordinate units in which consists of ICT Center and the ICT Department under General Department of Information and Public Relations.

B. Special Technical Working Team

The Special Technical Working Team (STWT) is responsible for implementing scope activities and plans in the Master Plan on Digital Transformation of the Senate that are enacted by the ICT Committee of the Senate. The STWT is comprised of a director and a deputy directors who are from ICT Center of the Senate, ICT Department and units involved in ICT projects in each year. include IT technical officials and specialized officials of the units who are owner of the projects. Users and end users of ICT services should be encouraged in part of in the team in result of collected adequate input for the projects. This team may cooperate and execute ICT projects of the Senate in order to achieve well and successful results.

C. ICT Center of the Senate

The ICT Center of the Senate is position of the organizational structure of the Secretariat General of the Senate that plays a significant role in response to the needs of the Master Plan on Digital

Transformation of the Senate and ICT development of the Senate, within both national and international level. There are four reasons for the establishment of the Center **1.** Contribution in strengthen its role and functions through promotion and use of ICT, **2.** Coordinating & facilitating scope activities in the Master Plan on Digital Transformation of the Senate, **3.** Contribution in enhancing of public relations and information of the Senate by using ICT **4.** Contribution in leveraging spiritual of parliamentary cooperation in the area of ICT, especially strengthening its role of the Senate in modernization process of ICT in the parliaments within regional and international level toward improvement of transparency, accountability, participatory and high spirits of partnership and cooperation.

D. National - International Cooperation

National cooperation is a coordination and interaction mechanism at national level that plays an vital role in promoting the Master Plan on Digital Transformation of the Senate to be actively and vibrantly processed through participation of all relevant stakeholders in order for each activity is orderly and periodically carried out in line with the national growth in ICT sector. Mechanism for discussions, consultations, workshops and other programs should be organized regularly and in line with phases of the implementation of activities in the Master Plan with aiming to enhance good inputs and experiences gathering as well as to maximize effectiveness and efficiency.

International cooperation is a mechanism that the Secretariat General of Senate and the Senate has accumulated and strengthen since the inception of the Senate in 1999. International cooperation will continue to play a vital role in strengthening bilateral and multilateral inter-parliamentary organizations cooperation framework at regional and global level . The cooperation focuses on key areas such as technical and human resource development , exchanges of experiences and knowledge, regional and global innovation initiatives, exchange and share information, and other cooperation which are mean for common interests.

2. Evaluation and Monitoring of the Implementation in the Master Plan

To ensure progress, effectiveness, consistency and resolve all issues in a timely manner in the implementation of activities of the Master Plan, the ICT Committee of the Senate shall use neccesary mechanisms as follows:

- Establishing a monitoring and evaluation system for the implementation of activities by identifying indicators that are measurable and in line with the long-term vision, each phase of the strategy and the operation of the Senate
- Studying and idenfitying data sources or data-finding methods for activities in the Master Plan with participation and inputs from all stakeholders to ensure that current activties/ future activities are extentively and comprehensively, covered the scope and needs of all stakeholders
- Building a monitoring and performance evaluation plan with clear descriptions and regular reports
- Creating an easy-to-follow and concise reporting system and template that is easy for reporting by beneficiary to user & end user units and to participation by relevant stakeholders.

A. Monitoring

Monitoring the implementation of the activities in the Master Plan is a review on progress of the implementation of activities and the Master Plan on Digital Transformation of the Senate. The outcome in evaluation shall be based on a comparison between expected outcomes and achieved outcomes of each project to measure actual output and challenges in which hinder the implementation process. In order to strengthen the facilitation of monitoring with quality, the ICT Committee of the Senate could set out a plan

to monitor activities regularly and clearly by creating a simple and easy reporting system and communication method. The ICT Committee of the Senate needs to prepare trimester, semester and annual meetings to review on the consolidated progress report of the implementation and address challenges and suggestions to ensure a smooth and effective implementation of activities and work plans.

B. Evaluation

An evaluation mechanism is important for reviewing the effectiveness and efficiency of the implementation of activities which concluded how is the scope and positive on the operation as well as level of interests to the Senate. This factor is crucial point to ensure continuity and effectiveness in a new circumstance within a rapid development of new technologies. In this regard, the ICT Committee of the Senate needs to continue reviewing activities of the old and new project in order to make adjustment and resolute timely step-by-step in a new context and better improvement than before. The evaluation and adjustment shall be done in accordance with realistic indicators and reliable data sources. In addition, the Committee shall define and envisage evaluation plan through method of data searching and advanced-comparative study prior to making-decision before introducing new strategies as well as other adjustment activities.

3. Opportunities and Challenges

The implementation of activities and objectives of the Master Plan in each phase will reflect either opportunities and challenges as followed:

- The use of ICT will attract the people and public to have a better and closer relationship with the Senate .
- The use of IT will increase interest of women, youth, children and other groups of people in the society to communicate with the Senate inclusively and effectively
- Leveraging the excellence and potential of ICT will lead to a more effective participation as well as fill the gap that hinders the Senate and citizens in advancing the rule of law and democracy
- IT will directly or indirectly change perception of Senators, citizens and relevant stakeholders gradually so as to strengthen the rule of law and democracy with conscience and positivity
- Incorporation of ICT will create a better positive diverse opinion competition in the image of champion or outstanding parliament
- The effectiveness and efficiency of ICT may produce different results depending on qualifications, conditions and acceptance by parliamentarians, citizens and relevant stakeholders.

4. Expected Outcomes

In order to ensure that activities and objectives of the Master Plan are implemented with high effectiveness and efficiency, the expected outcomes are as follows:

- Public relations, information and ICT between the Senate and the general public will be more vibrant, effective, better and increasing number of citizen have more correspondences with the Senate
- Through taking advantage from potentiality and excellence of ICT will create means that can bring effective methods of communication and work performance of the Senate through more networks

- Quantity and quality of voters will continue to increase through voters' participation in the Senate election (indirect election) and national election (direct election)
- Negative comments on the Senate will be decreased while positive comments will be increased and become stronger.
- The use of ICT and parliamentary affairs can be a part of the education for children and youth, who are the bamboo shoots of the nation and bring opportunities for strengthening the economy and society, especially parliamentary culture, rule of law, democracy and peace.

5. Focus Area

In order to implement the activities and objectives in realism and in response to the vision towards a modern parliament, there are focus areas shall be defined as follows:

- Strong and reliable information infrastructure that attracts the usage and acceptance by the citizens as well as users
- Digital services and devices in the three main functions which are convenient and easy to use with parliamentary professionalism and ICT creates a more conducive environment for acceptance and opportunities.
- With well guided and clear action plans can bring lively and attractive activities that attract participation of stakeholders
- Building and strengthening public relations which are core for ICT development process for the Senate
- Fraternity of collaboration and cooperation are essential to strengthen excellence in the implementation of activities in the Master Plan

6. Target Audiences

Ensuring that the Master Plan is responsive to the overall needs of the institution and clients, who are defined as follows:

- **Core customers**: the Senate which represents legitimacy and collectivity. **Senators** and officials of the Secretariat General of the Senate are immediate customers that have direct participation and use and also the primary beneficiaries. In addition, **the Standing Committee** is a key political structure that decides on action plans and work direction of the Senate for each legislature.
- **Key customers**: **Commune councilors** are the electorates of Senators and active actor in using ICT to interact with Senators and the Senate. **Citizens** are also direct users of services between the citizens and the Senate. **Women, youth and children** are the target audiences that need to have a closer relationship with.
- **Participants**: **NGOs** are the customers and collaborative partners in complementary to the effective and adequate input implementation of activities and objectives . **National and international partners** are collaborative partners that cooperate and complement to carrying out the activities and objectives in the Master Plan. **The private sector** is another collaborative partner in addition to technical work such as ICT companies, internet service providers, software developers, ICT infrastructure professionals, researchers and scholars. In addition, media is an actor taking part in dissemination and expanding the scope of ICT usage and public relations of the Senate and for the citizens

- **Implementers:** technical unit (ICT Department), there are subordinate units under the Secretariat General of the Senate and officials are end users who are active customers or the working group in implementing the activities and objectives in order to produce results and achieve objectives in the Master Plan.

7. Network and Products

In order to properly identify actions and objectives in response to customers, there are networks and products of the Senate are listed in the table below:

Audiences	Networks or Digital Means	Examples of the Senate's products that can attract interests
1. Core customers	<ul style="list-style-type: none"> • Senate website • Legal data repository software • E-library • Research data repository • Paperless System • national budget statistics software • Workshops, discussions and consultation 	<ul style="list-style-type: none"> • Digital legal documents • Senate news • Printed Publications • Research documents • Update compilation of laws • Reports on progress of E-Senate
2. Key customers	<ul style="list-style-type: none"> • Website, email, social media • Software for Complaint Reception • Software for Distance-discussion • Online TV and radio • National budget statical software 	<ul style="list-style-type: none"> • Citizens' petitions • Information and comments • News, video and audio of the Senate's activities
3. Participants	<ul style="list-style-type: none"> • Website • Plans and activities • Software for Complaints Reception • Software for Disntance-discussion • E-mail • Workshops 	<ul style="list-style-type: none"> • Operation plan, log frame and work activities of the Senate • Work plan • Digital platforms (Camdex) • Lessons learnt
4. Implementers	<ul style="list-style-type: none"> • Workshops or discussions • Master Plan on Digital Transformation of the Senate • Website • Social media • Workshops 	<ul style="list-style-type: none"> • Work plan, activities, and objectives • Digital culture • Experiences of other parliaments • IPU's studies • Sharing digital platforms

8. Human and Financial Resources

The Secretariat General of the Senate, the administrative and technical subordinate unit for the Senate, has assigned the ICT Department of the General Department of Information and Public Relations as the technical unit that has human resources to implement activities and objectives in the Master Plan. Specialized offices and technical staffs are assigned to be in charge of undertaking technical work and research by working together with customers directly and indirectly as well as other relevant stakeholders. The Secretariat General of the Senate has allocated 2,000 million Riels (two billion Riels) annually for carrying out activities in order to build infrastructure and install electronic equipment and facilities through budget program to support the process of the implementation of the activities in response to its vision towards a modern parliament. The total estimated budget for the implementation of activites from 2022 to 2030 amounts to 16,000 million Riels (sixteen billion Riels)

or equivalent to around 4 million US Dollars (four million) for implementation of the Master Plan. The General Secretariat of the Senate welcomes any supports from national and international partners in making valuable contributions and cooperation to advance ICT development process of the Senate.

VIII. Risk Management

1- Risks related to the parliamentary work procedures

In order to implement the Master Plan as planned successfully , it is necessary that there are active and positive participations from all stakeholders. Stakeholders at both political and technical levels need to work together in promoting and enhancing the ICT usage as well as implementation in order for achieving the outlook and vision of the Senate. As the Senate is defined by the Constitution of the Kingdom of Cambodia with a six-year legislature. In this regard, in all circumstances and legislatures, ICT shall be set up with a sense of responsibility and ownership in order to ensure the continuity of institution and service provisions to Senators smoothly and high flexibly. ICT projects shall be designed on the basis of flexibility and coordination to ensure that ICT services and projects cover the overall needs of the institution in line with customer needs and in all circumstances.

The main feature or purpose of using ICT is to enhance effectiveness and efficiency of the Senate, especially users (direct and indirect). For the traditional ways and habits of work shall be replaced by new way and mode, which are difficult factors for user in the preliminary stage, such as 1.the replacement of digital message instead of written on paper and printed on the paper, 2. Replacement of face-to-face meetings by virtual meetings, 3. Manual work is replaced by digital tools and ICT, etc. In order to prevent and turn these risks into opportunities, it is necessary to expand training for officials at all levels and Senators as well as customers (direct and indirect users) to be more widely and regularly obtaining knowledge and know-how through regular and sequential education methodology.

2- Risks related to the use of external suppliers

Using external suppliers provides benefits and contribution to the efficient use of human resources, budget, equipment, technical skills, space and means. However, using sources of external suppliers without a proper management method such as methods, mechanisms, communication and appropriate resource allocation, there may lead to negative impacts that hinder and disrupt the implementation to a critical number of activities, and affect the ICT productivity, products and services which are necessary for customers. Therefore, activities in the Master Plan need to be carried out by using methods with proper standards and in line with the Royal Government's reforms, especially ICT standards and regulations, administration, budget and procurement. The ICT Committee needs to lead the ICT unit of the Senate to develop technical standards and ICT policies that are suitable for the work environment of parliament by using legal instruments, employment contract for technical service supply, and technical basis related to digital platform, encryption, softwares and ICT services in line with the context of ICT progress at national and international levels.

3- Risks related to the human and financial resources

Human and financial resources are crucial factor for successfully implementing activities of the Master Plan. There are big risks related to human resources, 1. the lack of active, high committed and responsible specialized human resources 2. the move out and transfer of technical officials because of retirement, mortality and personal reasons. On the other hand, there is another two risks of financial

factors, 1. minimum budget for ICT investment to dealt with urgent and high-risk technical issues such as security, safety and quality of ICT services, and 2. uncertainty of the return on investment (ROI) and effectiveness of ICT activities. The human resource management shall have better management policies by focusing on spirit and skill development with a sense of high responsibility and ownership, especially developing a foundation and criteria standard for evaluating key performance outcomes of each official based on their work achievements, knowledge and know-how. In addition, every new needs which are beyond the ability and capacity of human resources of the institution shall be transferred or delegated through cooperation with national and international partners including public and private sectors with terms of cooperation and contract. In order to get rid of budget risks, ICT projects or activities of this Master Plan that have been determined shall be regularly monitored and evaluated, and in any necessary circumstance, these activities shall be reprioritized pragmatically through consultations and properly updated in order to gathering adequate inputs. At every three years, the ICT Committee of the Senate shall update and determine resources (inputs) in appropriate with the progress and other negative impacts as key means for improvement. In this connection, if there is a risk of buget program or ICT projects shall be carried out by employing “Less resource, More activities or Do more with less” approach, particularly by leveraging new and old cooperation in replacement of resources (inputs) which are weak within a period of time (urgent or emergency budget).

4- Risks of the Rapid Development of ICT

The rapid advancement of ICT and automation technology has been constantly progressed that posted threats to security and quality of trusted and reliable provisions of ICT services. In order to mitigate these risks, the Master Plan shall prepare action plan and human resources within specific and insightful through a technical analysis in line with current and future trends of ICT, especially the international trends of the ICT progress for parliaments and citizens' needs. National and international cooperation under the forms of discussions, consultaitons, visits, forums, workshops and others programs should be used for sharing and learn from each other as sense of fraternlity and high-level partnership in areas of ICT and parliamentary affairs.

5- Risks of the ICT Security

In the process of the current ICT implication, assurance of information security and privacy of users which is an important and necessary factor in promoting the usage of ICT. There are some risks occur such as cyber-attacks, penetration into digital systems of public and private institutions, autonomy of parliamentary information, the loss and leak of confidential and anonymous information and the rise of fake news. In this regard, the Master Plan of Digital Transformation the Senate shall be proactively developed focusing on risk of ICT security as priority and in appropriate to the capacity of the institution as well as paying attention on the enhancement of national/international working cooperation under ICT security cooperation to jointly combating the international cyber crimes, protection of internet space, as well as taking part in the risks of security minimum, effective and collective mitigation.

6- Risks of the Force Majeure

Developing a long-term plan, paying attention on the risk of force majeure is very important because of geo-political, political security, economic, international relations, natural disasters, and public health disaster factors. Obviously, the COVID-19 pandemic is a specific instance which has

been happened. Without being ready and proactive that have caused disaster and hinder the process of the world, Cambodia also, and the Senate also has encountered some problems related to operation of legislative, representative and oversight functions.

The Master Plan is led by the ICT Committee of the Senate with vision and ownership under all circumstances in order to ensure continuity of leadership in smoothly and quality services delivery for leaders and Senators. In case of force majeure circumstances, usage of resources and means as planned which shall be redefined by diagnosing on prioritized actions that responds to urgent and immediate tasks. In addition, seeking new resources and added inputs need to be further strengthened continuously through national and international cooperation in order to mobilize resources and finance aims to supplement to the planned activities (as strategic and important).

IX- CONCLUSION

The Master Plan is a key and strategic resource that responds to the Senate's vision towards a digital or modern parliament by 2030. In addition, the scope of the Master Plan aims to meet the advancement of ICT and customer needs in order to improve and modernize the quality its work that can meet its needs in a timely manner under the slogan "**the Senate is a strong backbone of the citizens and society**". Furthermore, activities, plans, resources and means in the Master Plan are pragmatic and practical by incorporating strategic methods and mechanisms of the Senate and taking into consideration the national progress in ICT.

The establishment of new mechanisms and structures such as the ICT Committee of the Senate which is the leading mechanism for implementing activities in the Master Plan effectively, efficiently and with quality, and is accompanied by implementing mechanisms such as the Speical Technical Working Team and ICT Center of the Senate for promoting and enhancing the technical implementation and coordinate the works more effectively in response to the institutional needs and rapid development of ICT in the Fourth Industrial Revolution era.

The development of evaluation and monitoring framework for activities and plans of the Master Plan includes incorporating reports, meetings, discussions, consultations, and other mechanisms that are easy-to-follow and simple and designing indicators that ensure effectiveness and continuity. In addition, risks that may arise are identified such as risks related to parliamentary system, risks related to use of external suppliers, risks related to human and financial resources, risks related to rapid development of ICT, risks related to ICT security and risks related to force majeure. The identification of these risks will allow us to better harness the excellence and opportunities of ICT that align with the long-term vision of the Senate.

In conclusion, the characteristics and excellence of the Master Plan are appropriate and sufficient to ensure a step-by-step progress attached with the commitment and strong will of all stakeholder at both technical and political levels towards digital transformation of E-Senate into a modern parliament that fulfills the expectation of the citizens and society and that actively and firmly joins hands with the Royal Government in building Cambodia into a modern, civilized, progressive and prosperous country under the the pillars of peace and development.



Glossary

No	Alphabet	Words	Definition
01	A	Artificial Intelligence (AI)	Refers the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions
02	B	Big Data	Refers to Data with many fields offer greater statistical power, while data with higher complexity may lead to a higher false
03		Blockchain	Refers to system in which a record of transactions made in bitcoin or another cryptocurrency are maintained across several computers that are linked in a peer-to-peer network
04		Bring Your Own Device (BYOD)	Refers to being allowed to use one's personally owned device, rather than being required to use an officially provided device
05	C	Cloud computing	Refers to the practice of using a network of remote servers hosted on the internet to store, manage, and process data, rather than a local server or a personal computer.
06		Digital Democracy	Refer to the use of information and communication technology (ICT) in political and governance processes by citizen's participation to jointly decision making with its government, parliament, and nation.
07	D	Digital Contents	Refer to any content that exists in the form of digital data.
08		Digital Born or Born-Digital	Refers to material that originate in digital form
09		Digital Repository	Refers to information systems that ingest, store, manage, preserve, and provide access to digital content.
10	E	E-Parliament	Refers to the parliaments use & adopted ICT and Technologies.
11		E-Archive	Refer to a place of storage for the safekeeping of digital information such as files, invoices, deeds or other documents in long-term period
12		E-Government	Refers to the application of Information and Communication Technologies (ICT) to government functions and procedures with the purpose of increasing efficiency, transparency and citizen participation
13		E-Library	Refers to online system or digital repository that use to manage its services and also use in digitize their resource in digital and electronic format.
14	F	Firewall	Refers to the tools and components that use for monitors and controls the external interference to its network and the traffic of upcoming and incoming traffic of users inside organizations and units
15	I	Innovation Parliament	Refer to the phrase of a parliament is highly active, creative, and innovative in ICT towards modernizing its work to meet national interests and common affairs at the regional and global level.

16		Internet of Things (IOT)	Refers to the physical objects with sensors, processing ability, software, and other technologies that connect and exchange data with other devices and systems over the Internet or other communications networks.
17		Intranet	Refers to the computer network for sharing within the organizations or units, is called “internal network”
18		Internet Service Provider (ISP)	Refers to the institution, units or private companies that provide internet services or devices for connected globally to the internet.
19		Integrated Library Information System (ILIS)	Refers to the system or technologies of library or protocol for mobilized or connected to one to others.
20	N	NOC	Refers to the system used in organizations or units to monitor and control traffic flows and data
21	O	Online Parliament	Refers to the phase in which a parliament makes a progress with having a strong internal network and ICT services with internet availability for parliamentarians, officials and the public to use efficiently, effectively and economically.
22		Open Parliament	Refers to the phase in which a parliament utilizes ICT in an open database system. It not only provides the citizens with access to information and the work of the parliament in a transparent and efficient manner, but also enhances the interaction between the parliament and the citizens more closely on a fundamental idea that a parliament is dependable for the citizens.
23		Optical Character Recognition (OCR)	Refers to the electronic or mechanical conversion of images of typed, handwritten or printed text into machine-encoded text, whether from a scanned document, a photo of a document, a scene-photo or from subtitle text superimposed on an image
24	P	Portal	Refers to technologies or web portal that allow the accessing, unless data/database with diversity formats, possibility connected or jointly interchanged together.
25		Parliamentary Monitoring Organization (PMO)	Refers to the group of countries that participated in monitoring and jointly survey related to ICT and its growth questioned by IPU
26		Non-Parliamentary Monitoring Organization (Non-PMO)	Refers to the group of non-countries that participated in monitoring and jointly survey related to ICT and its growth questioned by IPU
27	S	Schema	Refers to the designs or database which has Structure on Database Management System-DBMS
28		Social Network System (SNS)	Refers to digital services is used to serve and improve human interaction being better and socially
29	X	XML Content (Extensible Markup Language) ¹	Refer to digital contents comprised of form and code by extensible Markup Laguage (XML)

ANNEX 1
ACTION PLAN AND BUDGET
MASTER PLAN
ON
E-SENATE TRANSFORMATION
(2022-2030)

GOALS	ACTIVITIES	Time				Deliverable	Progress to E-Parliament			
		2022-2025		2025-2030			Digital Parliament	Online Parliament	Open Parliament	
		2022 -2023	2023 -2024	2022 -2023	2023 -2024					
Priority Objective 1 (Hardening and expansion on IT infrastructure being robust and cloud-based)	Activity 1 (Building up cloud computing system being an effective, sustainable, and secured)	✓	✓			• Competency and comprehensive ICT Data Center	✓			
	Activity 2 (Hardening & expansion its campus networking and core system (Internal Security))	✓	✓			• Intranet Network with fully hardened, secured, and offered trust to its users	✓			
	Activity 3 (Developing private CLOUD Computing infrastructure of the Senate)			✓	✓	• Comprehensive platform and IT infrastructure enables with fully integrated and mitigated.		✓		
	Activity 4 (Developing digital identity and signature system of the Senate)			✓	✓	• Digital identity system • Digital signature		✓		
	Activity 5 (Blossoming and expansion on human capital)	✓	✓	✓	✓	• Specialist within institutional needs • An ICT Team, its specialist up to intermediate level by 2025, and up to senior level by 2030			✓	
	Activity 6 (Strengthening and expanding internet supply)	✓				• The bandwidth of internet offered to 500 Mb in 2024 • 5GB of internet bandwidth is offered by 2030	✓		✓	

Priority Objective 2 (Leveraging and expansion its productivity and services toward to support three core functions of the Senate)	Activity 1 (Strengthening productivity of the legislative function of the Senate by using ICT)		✓		✓			✓		
	a. Strengthening the long-lasting maintenance and classification of the institution's documents by using digital technology	✓	✓			• E-library • E-archive • Research Data Repository	✓			
	b. Regulating & formulating the legislative works of the Senate into standardized and effective E-legislative works		✓			• Legal database in high capacity and reflection its better • Database of Cambodian Constitution • System for management on reviewing and debating of drafting law or proposed law • Software for management on comments/inputs of draft law or proposed law of Senator • Hangsa and summary report system Management for Permanent Committee and Plenary Session of Senate	✓			
	c. Continuing to establish digital means for improving legislative work effectively and with quality to meet the overall			✓	✓	• System for digital plenary session hall (Paper Less System) • Online meeting system for Specialized commissions, Permanent Committee,	✓	✓		

	goals including 1. Smart meeting halls 2. Minimizing the use of papers and protecting the environment 3. Enhancing the effectiveness of meetings, especially renovating plenary meeting hall, the Standing Committee meeting hall and other meeting halls of the Senate to be modern and friendly environment (Zero use of paper by 2030)					plenary session, and other meetings of the Senate <ul style="list-style-type: none"> • Automatic Studio System for the plenary session hall of the Senate • Digitized Voice to letter system (OCR) by using Artificial Intelligent (AI) • Automatic translation system of multi-language and others digital programs toward to supports its legislative affairs 			
d.	Building and deployment systems for the Senate under force majeure circumstances (national disaster) to ensure continuity of the institutional operation		✓	✓		<ul style="list-style-type: none"> • Online Meeting System using independent platform and software • Digital voting, Digital approval system and digital identity system 	✓		
Activity 2 (Strengthening productivity on the oversight function of the Senate by using ICT)		✓							✓
a.	Building and synchronizing data management system with functional ministries,			✓	✓	<ul style="list-style-type: none"> • Platform is capable to access with VPN or Online 			✓

	especially joint implementing the Sub-Decree on “CamDX data exchange platform” of the Royal Government through virtual private network (VPN) and online portal, and also joint implementing extra policy toward to interact data of ministries, public institutions and partners, either the private sector and NGOs.								
b.	Building and developing a software/database on statistic and data of national budget in result of conducting add-memoire on the national budget through analyzing and researching before the end of each fiscal year, produced by Parliamentary Budget Office (PBO) of the Senate to its leaders, 10 commissions of the Senate and Senators, to offer insights on technical and key-points of the		✓	✓		• National budget database system for the Senate			✓

	National Budget Law.								
	Activity 3 (Strengthening productivity on representative function of the Senate by using ICT)		✓					✓	
a.	Carry on improving the Senate website with a diverse and abundant contents, especially carry-on attention to national-international standards and norms.	✓	✓			<ul style="list-style-type: none"> • Official website of the Senate with functional and responsive by followed to the national and IPU standard guideline. 		✓	
b.	Widen & improve its dissemination works by applied the excellence and popularity of internet to conduct tools/system such as online radio & TV through using smart device, computer, and smartphones.		✓	✓		<ul style="list-style-type: none"> • Online radio and TV 		✓	
c.	Developing a software for reception of citizen complaints, long-distance discussion (e-discussion) and other software's by applied & adopted AI, Big Data and other technologies.				✓	<ul style="list-style-type: none"> • Reception/complaints software from citizens • Online debating for citizens 		✓	
d.	Enhancing better representative function of the	✓	✓		✓	<ul style="list-style-type: none"> • Utilize social media with fully & potentially by 		✓	

	Senate and Senators in addressing difficulties of the citizen in a timely, effective, and fast manner by using social media and other medias for the Senate, Senators and political structure of the Senate.					senators and political structure of Senate			
Priority Objective 3 (Strengthening and reshaping its management and adoption of ICT projects for the Senate)	Activity 1 (Strengthening capacity of human resources on ICT management and planning)	✓					✓		
	a. Strengthening management and planning capacity of IT staff of the Senate	✓	✓			<ul style="list-style-type: none"> • Competent human resources on management and leadership • Leading structure and mechanism with equipped effective. 	✓		
	b. Establishing mechanisms and sharing platforms to get lesson-learned about the practices and experiences of the implementation in ICT projects of Senate		✓	✓		Procedure and mechanism are well organized and high responsibility.	✓		
	Activity 2 (Regulating & Formulated ICT Mechanism, Management Structure, and New Initiatives)			✓			✓		

	a. Establish Committee of Information Technology of Senate to lead and approve on IT technical work			✓		• Structure and mechanism of leadership on ICT's construction	✓		
	b. Establish the special technical working team to implement IT project for the Senate each year			✓		• The responsible teams assigned by high senior management	✓		
	c. Establishing ICT Center of the Senate in order to promote quality and effective implementation of ICT			✓		• The center for supportive research and innovation provision of ICT			✓
	d. Organizing and adjusting the management structure of the ICT Department to meet the needs in each phase			✓	✓	• A functional unit designs its structure management with reflection to any circumstance and the needs of Senate			✓
	e. Strengthening cooperation with the ICT Department and General Department of the National Assembly to jointly build and develop services for the Cambodian Parliament	✓				• A better cooperation between IT staffs of Senate and the National Assembly as both units as either			✓
	f. Developing annual, trimester and legislature ICT development plans for the Senate	✓		✓	✓	• Study and awareness on any circumstances and demands as well as challenges which interrupted to the process of ICT Development, Senate	✓		

	<p>g. Developing annual, trimester and legislature ICT development plans for the Senate</p>	✓			<ul style="list-style-type: none"> • Study and awareness on any circumstances and demands as well as challenges which interrupted to the process of ICT Development, Senate 	✓		
	<p>h. Formulating standards and policies in response to ICT products and growth of the Senate</p>	✓			<ul style="list-style-type: none"> • Regulation documents in supportive to digital transformation of the Senate • IT security policy & safety regulation, and other necessity related to ICT 			✓
Priority Objective 4 (Strengthening public relations and information using ICT)	Activity 1 (Organizing online training programs about the Senate via internet, website, smartphone app and videos)				✓	Training Management Software		
	Activity 2 (Developing an application and software for managing public visits to the Senate)				✓	<ul style="list-style-type: none"> • Online Reception/Visiting Schedule Management for the public 		✓
	Activity 3 (Developing and organizing mobility trainings in the eight regions of the Senate in order for promoting digital literacy among commune/sangkat councilors)		✓		✓	<ul style="list-style-type: none"> • Mobility vehicle with equipped capacity for training, aligned with standard and education guideline 		✓
	Activity 4 (Developing an application for plenary sessions of the Senate by using virtual digital recording (VDR))				✓	<ul style="list-style-type: none"> • System or Online Plenary Session of Senate adapted by AI technology and the public 		✓
	Activity 5		✓	✓	✓	Online museum and digital photo gallery of the Senate		✓

	(Developing Senate digital gallery & database)								
	Activity 6 (Establishing ICT Center for trainings to officials of the Secretariat General of the Senate, commune/sangkat councilors and the public as well as other, in related to ICT of the Senate.)			✓		<ul style="list-style-type: none"> The Center has provision ICT education to the public, commune/ sangkat council and the citizens 			✓
	Activity 7 (Strengthening relations by using postal and telecommunication system for the citizens such Call Center, communication recording system, social media and other.)			✓		<ul style="list-style-type: none"> Call Center Effective System for management its historical calls/ records The method of engagement and connection with citizens in better means. 		✓	
Priority Objective 5 (Strengthening on human resource being smart)	Activity 1 (Mainstreaming awareness and knowledge on ICT to Senators through workshops, training, other programs, and as well as promoting research activities on ICT by enriching researchs and studys in conducting add-memoire for Senators)		✓			<ul style="list-style-type: none"> Senators gets awareness related to ICT 			✓
	Activity 2 (Develop and standardize framework being used for trainings and courses in the field of ICT for officials, the Secretariat General of the Senate)	✓	✓			<ul style="list-style-type: none"> Policy for Human Resource Management Human Resources Development Regulatory and its Management on HR Standard HR and compatible technologies 			✓

	Activity 3 (Strengthening capacity of officials through ICT training and course organized by functional ministries, specialized institutions, institutes, centers and partners in line with the needs of the Senate and the Secretariat General of the Senate)	✓		<ul style="list-style-type: none"> • 100 percent of officer Secretariat General with awareness a basic knowledge related to information technology (Smart Staff Program) • 50 percent of officer of Secretariat General is competent to delivery ICT knowledge (policy 1+) 30 percent of officer of secretariat general has core competency on leading and innovation 			✓
	Activity 4 (Strengthening internal capacity training by building training of trainers (ToT) on digital programs)	✓		<ul style="list-style-type: none"> • Up from 10 to 30 trainers of trainee (TOT) in 2024 • All staff of ICT Department will be trainer of trainee in 2026 • Each units under SGS has their own competent and responsible trainer of trainee 			✓
	Activity 5 (Organizing orientation and dissemination programs and formulating policies on promotion of capacity building for officials of the Secretariat General in the areas of ICT)	✓		<ul style="list-style-type: none"> • The incentive policy with creative and warm-hearted • Staffs of units under umbrella of secretariat general has ICT awareness with their responsibility and ownership, by increased upto 10 percent in each years. 	✓		
	Activity 6 (Strengthening digital capacity and innovation skills for management level of the Secretariat General)	✓	✓	✓	<ul style="list-style-type: none"> • Manager level of the unit under the secretariat general has capacity on leading and innovation in approximate 30% of all by 2024 and reaching to 70% of all by 2030 		✓
	Activity 7 (Developing softwares of E-administration, E-team and E-planning and			✓	<ul style="list-style-type: none"> • E-Admin software • E-team software • E-Planning software and other digital systems 	✓	

	<p>other digital means to improve the quality of work in workplace and to strengthen effectiveness of teamwork for officials of the Secretariat General of the Senate.)</p> <p>Activity 8 (Developing softwares, training management software, distance learning software, website and digital repository in ICT related)</p> <p>Activity 9 (Strengthening digital culture and habits on using digital administration and literacy through workshops and other programs)</p>					<ul style="list-style-type: none"> Competent of secretariat general's staffs is fast, smart, and cooperative with high responsibility 			
			✓	✓		<ul style="list-style-type: none"> System for training management Research Data Repository related to information technology 	✓		
			✓			<ul style="list-style-type: none"> The habit and culture of digital are applied to all officials of senate, and meanwhile the traditional works and procedure with replaced to digital works and modern features 		✓	
Priority Objective 6 (Consolidating its extensive cooperation and partnership with all stakeholders in aiming of upraised ICT development of Senate)	<p>Activity 1 (Strengthening cooperation with ministries, institutions, national authorities, private sector, research centers, universities and experts in the field of ICT in order to exchange experiences and collaborate in the implementation of ICT projects, research and innovation for the Senate)</p> <p>Activity 2 (Integrating data of the Senate and the National</p>		✓			<ul style="list-style-type: none"> Memorandum of understanding between Senate and partners Contract and cooperation Better consolidated relations and friendship 			✓
			✓	✓		<ul style="list-style-type: none"> Data platform Memorandum of understanding 			✓

	Assembly with that of other parliaments and international organizations under mutual exchange of data)					• Cooperation and Friendship			
	Activity 3 (Continuing cooperation with parliaments of friendly countries, international organizations, embassies and partners for support in human resource development and technical support)			✓		• Training program • Technical and material assistance			✓
	Activity 4 (Continuing to further strengthening research on good practices on the usage of ICT in parliaments and international organizations in connection with parliamentary works (IPU, AIPA, AP, etc.)		✓	✓		• MoU and Cooperation • Joint research study program and exchange of data cooperation • Cooperation and Friendship			✓
	Activity 5 (Developing E-portal for sharing document resources with national and international partners (E-portal & Open Data))			✓	✓	• E-portal for sharing and data exchange cooperation • Digital platform			✓
	Activity 6 (Organizing and attending regional and international workshops on ICT development and other experiences that are useful for parliaments on ICT work at regional level		✓	✓		• Workshop and training program for Senator and staff in regional parliament		✓	

	Activity 7 (Strengthening cooperation on data exchange within the framework of regional and inter-parliaments, libraries, archives (national-international) and others under bilateral and multilateral frameworks)			✓	✓	• Digital platform and E-library and archive • MoU on library and archive affairs			✓
	Activity 8 (Promoting joint research activities related to ICT and parliamentary affairs between the Senate and other parliaments within the framework of ASEAN countries.)			✓	✓	• Documentary resources and publication • MoU on research study			✓

ANNEX 2
ACTION PLAN AND BUDGET
MASTER PLAN
ON
E-SENATE TRANSFORMATION
(2022-2030)

GOALS	ACTIVITIES	Time				DELIVERABLE	Estimated budget in US Dollar (\$)
		2022-2025		2025-2030			
		2022-2023	2023-2024	2024-2025			
Priority Objective 1 (Hardening and expansion on IT infrastructure being robust and cloud-based)	Activity 1 (Building up cloud computing system being an effective, sustainable, and secured)	✓	✓			• Competency and comprehensive ICT Data Center	≈1.300.00
	Activity 2 (Hardening & expansion its campus networking and core system (Internal Security))	✓	✓			• Intranet Network with fully hardened, secured, and offered trust to its users	≈100.000
	Activity 3 (Developing private CLOUD Computing infrastructure of the Senate)			✓	✓	• Comprehensive platform and IT infrastructure enables with fully integrated and mitigated.	.....
	Activity 4 (Developing digital identity and signature system of the Senate)			✓	✓	• Digital identity system • Digital signature	.....
	Activity 5 (Blossoming and expansion on human capital)	✓	✓	✓	✓	• Specialist within institutional needs • An ICT Team, its specialist up to intermediate level by 2025, and up to senior level by 2030	≈200.000
	Activity 6	✓				• The bandwidth of internet offered to 500 Mb in 2024	≈500.00-600.000/year

	(strengthening and expanding internet supply)					• 5GB of internet bandwidth is offered by 2030	
Priority Objective 2 (Leveraging and expansion its productivity and services toward to support three core functions of the Senate)	Activity 1 (Strengthening productivity of the legislative function of the Senate by using ICT)	✓			✓		.....
a.	Strengthening the long-lasting maintenance and classification of the institution's documents by using digital technology	✓	✓			• E-library • E-archive • Research Data Repository	≈300.000-500.000
b.	Regulating & formulating the legislative works of the Senate into standardized and effective E-legislative works	✓				• Legal database in high capacity and reflection its better • Database of Cambodian Constitution • System for management on reviewing and debating of drafting law or proposed law • Software for management on comments/inputs of draft law or proposed law of Senator • Hangsa and summary report system Management for Permanent Committee and Plenary Session of Senate	≈500.000-600.000
c.	Continuing to establish digital means for improving legislative work effectively and with quality to meet the overall goals including 1. Smart			✓	✓	• System for digital plenary session hall (Paper Less System) • Online meeting system for Specialized commissions, Permanent Committee,	≈1.000.000-2.000.00

	<p>meeting halls 2.</p> <p>Minimizing the use of papers and protecting the environment 3.</p> <p>Enhancing the effectiveness of meetings, especially renovating plenary meeting hall, the Standing Committee meeting hall and other meeting halls of the Senate to be modern and friendly environment (Zero use of paper by 2030)</p>				<p>plenary session, and other meetings of the Senate</p> <ul style="list-style-type: none"> • Automatic Studio System for the plenary session hall of the Senate • Digitized Voice to letter system (OCR) by using Artificial Intelligent (AI) • Automatic translation system of multi-language and others digital programs toward to supports its legislative affairs 	
d.	Building and deployment systems for the Senate under force majeure circumstances (national disaster) to ensure continuity of the institutional operation	✓	✓		<ul style="list-style-type: none"> • Online Meeting System using independent platform and software • Digital voting, Digital approval system and digital identity system 	≈200.000
	Activity 2 (Strengthening productivity on the oversight function of the Senate by using ICT)	✓				.....
a.	Building and synchronizing data management system with functional ministries, especially joint implementing the Sub-Decree on “CamDX data exchange platform” of the Royal		✓	✓	<ul style="list-style-type: none"> • Platform is capable to access with VPN or Online	.....

	Government through virtual private network (VPN) and online portal, and also joint implementing extra policy toward to interact data of ministries, public institutions and partners, either the private sector and NGOs.						
	b. Building and developing a software/database on statistic and data of national budget in result of conducting add-memoire on the national budget through analyzing and researching before the end of each fiscal year, produced by Parliamentary Budget Office (PBO) of the Senate to its leaders, 10 commissions of the Senate and Senators, to offer insights on technical and key-points of the National Budget Law.	✓	✓		• National budget database system for the Senate		≈50.000-60.000
	Activity 3 (Strengthening productivity on representative function of the Senate by using ICT)	✓			.....	

	<p>a. Carry on improving the Senate website with a diverse and abundant contents, especially carry on attention to national-international standards and norms.</p>	✓	✓			<ul style="list-style-type: none"> Official website of the Senate with functional and responsive by followed to the national and IPU standard guideline. 	≈50.000-60.000
	<p>b. Widen & improve its dissemination works by applied the excellence and popularity of internet to conduct tools/system such as online radio & TV through using smart device, computer and smartphones.</p>		✓	✓		<ul style="list-style-type: none"> Online radio and TV 	≈100.000-150.000
	<p>c. Developing a software for reception of citizen complaints, long-distance discussion (e-discussion) and other softwares by applied & adopted AI, Big Data and other technologies.</p>				✓	<ul style="list-style-type: none"> Reception/complaints software from citizens Online debating for citizens 	≈50.000-60.000
	<p>d. Enhancing better representative function of the Senate and Senators in addressing difficulties of the citizen in a timely, effective, and fast manner by using social media and other medias for the Senate,</p>	✓	✓		✓	<ul style="list-style-type: none"> Utilize social media with fully & potentially by senators and political structure of Senate	.....

	Senators and political structure of the Senate.						
Priority Objective 3 (Strengthening and reshaping its management and adoption of ICT projects for the Senate)	Activity 1 (Strengthening capacity of human resources on ICT management and planning)	✓					.....
	a. Strengthening management and planning capacity of IT staff of the Senate	✓	✓			<ul style="list-style-type: none"> • Competent human resources on management and leadership • Leading structure and mechanism with equipped effective.	.....
	b. Establishing mechanisms and sharing platforms to get lesson-learned about the practices and experiences of the implementation in ICT projects of Senate		✓	✓		<ul style="list-style-type: none"> • Procedure and mechanism are well organized and high responsibility.	.....
	Activity 2 (Regulating & Formulated ICT Mechanism, Management Structure, and New Initiatives)			✓			.....
	a. Establish Committee of Information Technology of Senate to lead and approve on IT technical work			✓		<ul style="list-style-type: none"> • Structure and mechanism of leadership on ICT's construction	.....
	b. Establish the special technical working team to implement IT project for the Senate each year			✓		<ul style="list-style-type: none"> • The responsible teams assigned by high senior management	.....
	c. Establishing ICT Center of the Senate in order to promote			✓		<ul style="list-style-type: none"> • The center for supportive research and innovation provision of ICT	.....

	quality and effective implementation of ICT						
d.	Organizing and adjusting the management structure of the ICT Department to meet the needs in each phase			✓	✓	<ul style="list-style-type: none"> A functional unit designs its structure management with reflection to any circumstance and the needs of Senate	.....
e.	Strengthening cooperation with the ICT Department and General Department of the National Assembly to jointly build and develop services for the Cambodian Parliament		✓			<ul style="list-style-type: none"> A better cooperation between IT staffs of Senate and the National Assembly as boths unit as either	.....
f.	Studying, organizing and evaluating the needs and suggestions of the Senate on the use of ICT on a regular basis	✓		✓	✓	<ul style="list-style-type: none"> Study and awareness on any circumstances and demands as well as challenges which interrupted to the process of ICT Development, Senate	.....
g.	Developing annual, trimester and legislature ICT development plans for the Senate		✓			<ul style="list-style-type: none"> Assurance with clear action plan and right compass	.....
h.	Formulating standards and policies in response to ICT products and growth of the Senate		✓			<ul style="list-style-type: none"> Regulation documents in supportive to digital transformation of the Senate IT security policy & safety regulation, and other necessity related to ICT	.....

Priority Objective 4 (Strengthening public relations and information using ICT)	Activity 1 (Organizing online training programs about the Senate via internet, website, smartphone app and videos)				✓	<ul style="list-style-type: none"> • Training Management Software 	≈50.000-60.000
	Activity 2 (Developing an application and software for managing public visits to the Senate)				✓	<ul style="list-style-type: none"> • Online Reception/Visiting Schedule Management for the public 	≈50.000-60.000
	Activity 3 (Developing and organizing mobility trainings in the eight regions of the Senate in order for promoting digital literacy among commune/sangkat councilors)			✓	✓	<ul style="list-style-type: none"> • Mobility vehicle with equipped capacity for training, aligned with standard and education guideline 	≈200.000-300.000
	Activity 4 (Developing an application for plenary sessions of the Senate by using virtual digital recording (VDR))				✓	<ul style="list-style-type: none"> • System or Online Plenary Session of Senate adapted by AI technology and the public	.....
	Activity 5 (Developing Senate digital gallery & database)		✓	✓	✓	<ul style="list-style-type: none"> • Online museum and digital photo gallery of the Senate 	≈50.000-60.000
	Activity 6 (Establishing ICT Center for trainings to officials of the Secretariat General of the Senate, commune/sangkat councilors and the public as well as other, in related to ICT of the Senate.)			✓		<ul style="list-style-type: none"> • The Center has provision ICT education to the public, commune/ sangkat council and the citizens	.....
	Activity 7 (Strengthening relations by using postal and telecommunication system for the citizens such Call Center, communication			✓		<ul style="list-style-type: none"> • Call Center • Effective System for management its historical calls/ records • The method of engagement and connection with citizens in better means. 	≈100.000-200.000

	recording system, social media and other.)						
Priority Objective 5 (Strengthening human resource being smart)	Activity 1 (Mainstreaming awareness and knowledge on ICT to Senators through workshops, training, other programs, and as well as promoting research activities on ICT by enriching researches and studies in conducting add-memoire for Senators)	✓				• Senators gets awareness related to ICT	.....
	Activity 2 (Develop and standardize framework being used for trainings and courses in the field of ICT for officials, the Secretariat General of the Senate)	✓	✓			• Policy for Human Resource Management • Human Resources Development • Regulatory and its Management on HR • Standard HR and compatible technologies	.....
	Activity 3 (Strengthening capacity of officials through ICT training and course organized by functional ministries, specialized institutions, institutes, centers and partners in line with the needs of the Senate and the Secretariat General of the Senate)		✓			• 100 percent of officer Secretariat General with awareness a basic knowledge related to information technology (Smart Staff Program) • 50 percent of officer of Secretariat General is competent to delivery ICT knowledge (policy 1+) • 30 percent of officer of secretariat general has core competency on leading and innovation	100.000-200.000
	Activity 4 (Strengthening internal capacity training by building training of trainers (ToT) on digital programs)		✓			• Up from 10 to 30 trainers of trainee (TOT) in 2024 • All staff of ICT Department will be trainer of trainee in 2026 • Each units under SGS has their own competent and responsible trainer of trainee	≈200.000-300.000

	Activity 5 (Organizing orientation and dissemination programs and formulating policies on promotion of capacity building for officials of the Secretariat General in the areas of ICT)	✓			<ul style="list-style-type: none"> The incentive policy with creative and warm-hearted Staffs of units under umbrella of secretariat general has ICT awareness with their responsibility and ownership, by increased upto 10 percent in each years.	.....
	Activity 6 (Strengthening digital capacity and innovation skills for management level of the Secretariat General)	✓	✓		✓	<ul style="list-style-type: none"> Manager level of the unit under the secretariat general has capacity on leading and innovation in approximate 30% of all by 2024 and reaching to 70% of all by 2030
	Activity 7 (Developing softwares of E-administration, E-team and E-planning and other digital means to improve the quality of work in workplace and to strengthen effectiveness of teamwork for officials of the Secretariat General of the Senate.)			✓	✓	<ul style="list-style-type: none"> E-Admin software E-team software E-Planning software and other digital systems Competent of secretariat general's staffs is fast, smart, and cooperative with high responsibility
	Activity 8 (Developing softwares, training management software, distance learning software, website and digital repository in ICT related)			✓	✓	<ul style="list-style-type: none"> System for training management Research Data Repository related to information technology
	Activity 9 (Strengthening digital culture and habits on using digital administration and literacy through workshops and other programs)			✓		<ul style="list-style-type: none"> The habit and culture of digital are applied to all officials of senate, and meanwhile the traditional works and procedure will be replaced to digital works and modern features

Priority Objective 6 (Strengthening cooperation partnership between Senate and concerned partners for ICT development of the Senate)	Activity 1 (Strengthening cooperation with ministries, institutions, national authorities, private sector, research centers, universities and experts in the field of ICT in order to exchange experiences and collaborate in the implementation of ICT projects, research and innovation for the Senate)	✓				<ul style="list-style-type: none"> • Memorandum of understanding between Senate and partners • Contract and cooperation • Better consolidated relations and friendship	.....
	Activity 2 (Integrating data of the Senate and the National Assembly with that of other parliaments and international organizations under mutual exchange of data)			✓	✓	<ul style="list-style-type: none"> • Data platform • Memorandum of understanding • Cooperation and Friendship	.....
	Activity 3 (Continuing cooperation with parliaments of friendly countries, international organizations, embassies and partners for support in human resource development and technical support)	✓				<ul style="list-style-type: none"> • Training program • Technical and material assistance	.....
	Activity 4 (Continuing to further strengthen research on good practices on the usage of ICT in parliaments and international organizations in connection with parliamentary works (IPU, AIPA, AP, etc.)		✓	✓		<ul style="list-style-type: none"> • MoU and Cooperation • Joint research study program and exchange of data cooperation • Cooperation and Friendship	.....
	Activity 5 (Developing E-portal for sharing document resources with national and international partners (E-portal & Open Data))			✓	✓	<ul style="list-style-type: none"> • E-portal for sharing and data exchange cooperation • Digital platform	.....

	Activity 6 (Organizing and attending regional and international workshops on ICT development and other experiences that are useful for parliaments on ICT work at regional level)		✓	✓		<ul style="list-style-type: none"> • Workshop and training program for Senator and staff in regional parliament	.....
	Activity 7 (Strengthening cooperation on data exchange within the framework of regional and inter-parliaments, libraries, archives (national-international) and others under bilateral and multilateral frameworks)			✓	✓	<ul style="list-style-type: none"> • Digital platform and E-library and archive • MoU on library and archive affairs	.....
	Activity 8 (Promoting joint research activities related to ICT and parliamentary affairs between the Senate and other parliaments within the framework of ASEAN countries.)			✓	✓	<ul style="list-style-type: none"> • Documentary resources and publication • MoU on research study	.....

๖๖๖*

