**REPORT ON THE OUTCOME MAPPING METHODOLOGY
TO THE "PAN LOCALIZATION PROJECT,
A REGIONAL INITIATIVE TO DEVELOP LOCAL LANGUAGE COMPUTING CAPACITY
IN ASIA"**

LAO PDR

1.   BACKGROUND

Refer to the the PAN Localization project is a regional initiative to develop local language computing capacity in Asia, which cooperated by The International Development Research Program (IDRC), Canada, through its Pan Asia Networking (PAN) program, and National University of Computer and Emerging Sciences (NUCES), Pakistan, through its Centre for Research in Urdu Language Processing (CRULP).

The project has three broad objectives: to develop sustainable human resource capacity in the Asian region for R&D in local language technology; to raise current levels of technological support for Asian languages; and to advance policy for local language content creation and access across Asia for development.

The scope of the project research work consists of the development of character set, collation and other language standards, fonts, lexica, spell checkers, grammar checkers, search and replace utilities, speech recognition systems, text-to-speech synthesis, machine translation.

One workshop was organized in April 2005, Vientiane, Lao PDR, namely as "Workshop on Lao Localization", supported by: IDRC of Canada, National University Computer and Emergency Science of Pakistan. Through this workshop, the research works done under the PAN Localization project, mainly included Lao Script, Lao

Character Set, Lao Fonts, Lao Keyboard, Lao ASCII to Unicode Converter, Lao Line Breaking Utility and Lao Sorting Utility, were presented by Information Technology Center (ITC). Otherwise, there are many participants in the field of ICT researchers, practitioners, linguistics and policy-makers from government agencies, universities and the private sector, which was also shared the experiences related to Lao language localization.

A Minute of Meeting among the Regional Project Director and Lao localization teams was organized in September 2007, Vientiane, Lao PDR in order to discuss the implementation of the second phase localization project and the overview of theoretical, conceptual aspects and methodologies of the Outcome Mapping of the Lao component country. An analysis of theoretical aspects made it possible to begin the systematic and organized application of Outcome Mapping throughout the entire scope of the project.

2. THE ADAPTATION OF THE OUTCOME MAPPING METHODOLOGY

The project decides to use the OM methodology to monitor its activities of the localization to face the needed of the society, to evaluate the impact of the project in changes their working and researching environment, to evaluate tangible changes in reality and to evaluate the strengthening of local capacities and their influence in the management of local development processes.

Anticipated challenges for the program of OM analysis is Training & Encouraging users to adopt localization and Information Technology as a major enabling tool for day-to-day activities such as useful sources for researching, studying and working; Porting of localization Applications and Data; Interoperation and sharing the experience among international organizations, ministries and department, and educational institutes; Security at Network, Application and Database level; Establishing computing & communication infrastructure; and localization and Information Technology trained manpower for daily upkeep.

2.1. VISION:

In the recent times, information technology has become a very important tool in the development of any society and has been the driving force in growth of economics worldwide. The vision of the program as:
- To adopt online gaining information exchange network that would benefit for boundary partners in their daily lives for their education, working environment, research work and society.

- Project stakeholders such as university's students and lecturers, government officers, private sectors and NGOs are aware of the need for using the local language software and ability to use localized ICTs to be part of information development.
- Increasing the variety efficiency and effectiveness in local language software development and be able to connect with the global information network throughout the ICT systems.
- Facilitating the training related to the information exchange would be provided to local community.

2.2. MISSION:

To support the vision, the program will work under:
- Establish the awareness of the benefits in using local language ICTs within the relevant community.
- The program focuses on the need of information access from local community based on the preferred language throughout the gender analysis.
- Encourage the boundary partners such as government officers, university's students and lecturers and private sector to access to the content and be able to communicate among themselves and with other throughout websites.
- Strengthening the support to the local implementation team for enable the management plan, analysis methodology and tools to success the program.
- Connect to all influential local community, government organizations, academic institutes and private sectors upon the priority to be the members in order to participate in the program activities and exchange the information via website or localized ICTs network.

2.3. BOUNDARY PARTNER:

The program network is an internet-linked group of boundary partners that play the lead role in local community and able to act as a content information provider. Source of supply were identified via the Network and their delivery was also coordinated online. The Network also plays an important long-term role through topic-based virtual discussion forums, institution-to-institution information exchange and development of online data stores. This has led to a strengthening and provided greater opportunities to exchange the information needed in society.

Groups to be act as a development community that needs to require for information exchange through online communication and hardcopy requirement, and work directly encouraging the achievement of the program as following:

1. University and colleges (students and Lectures)
2. Government officers/research projects under government.
3. International organizations: UNDP, NGO, JICA …

The content to be identified collected and managed under the development program are consider as Agriculture and Forestry, Biodiversity (Body), Education, Environment, Health care, Information Technology (IT), Labour, Science and Technology, Trade and Commerce and Tourism.

2.4. OUTCOME CHALLENGE:

2.4.1. BOUNDARY PARTNER: *University and colleges (Students and Lecturers) / Specify in Male.*

The program intends to see students and lecturers such study in university and college as National University of Lao (NUOL) and Sousaka Institute to research for information they needed for major study or interested and become familiar with computer and internet. The program intends to explore the use of search engines and different types of searches which specify in providing in Lao language searching that would be useful for local students and lecturers who are not familiar with foreign language (technical word). The Internet café is where students can access to the internet but have to spend money. More than that university also provide the internet access for free cost but limited seat. For the new generation has knowledge on IT and knows how to use computer especially knows the benefit of using Internet for finding what they needed.

2.4.2. BOUNDARY PARTNER: *Government officers/research projects under government / Specify in Male.*

The program intends to see Government Officers to gain the expertise in their development projects and research works. There are many development projects under the Government upon each field and be implemented by Government officials. They are able to find the funding supported in conducting and implementing the development projects and research works. In order to gain the reality data, they conduct the searching related to their field such as information technology, local software development and localization. Almost of government officers use Internet in their office. However, the source of information needed for developing is limited in Lao language contents. That is why; the Lao software is needed to support the format the Lao content for users (e.g., Linguistic Research Institute, Ministry of Information and Culture …).

2.4.3. **BOUNDARY PARTNER:** *International Organizations: UNDP, NGO, JICA … / Specify in Male.*

The program intends to see International organizations to gain the expertise in research works and projects for developing the country. They are conducting their works on the environment, natural resource, agriculture, education, economic, social and health with emphasis on vulnerable groups of youth and women. They are competently in distributing the results of research works and developing projects in the appropriate format to the general public, NGOs and government officials. They are successfully obtaining funding from multiple sources to conduct the research works and developing project.

2.5. PROGRESS MARKETS

Marketing and publicity are essential successful parts of the program initiatives. Marketing efforts should focus on creating brand awareness of the online presence. Using traditional media methods and outlets to create the right image for this new delivery channel can accomplish this kind of "branding". One branding strategy is to use an advertising agency.

2.5.1. **BOUNDARY PARTNER:** *University (Students and Lecturers) / Specify in Male.*
EXPECT TO SEE:
- Students and Lecturers become familiar with computer, internet and searching engine.
- Students and lecturers aware of the development Lao language software and localized ICTs.
- Identify opportunities for students and lecturers to participate with research development.

LIKE TO SEE:
- Students concentrate more on study and learn from finding the source information from Internet and Localization.
- Lecturers improve the teaching environment and method by learning through the effective case study.
- Organize meetings or seminars for lecturers to discuss about software issues and development.

LOVE TO SEE:
- Share lessons and experiences in order to encourage more students and lecturers participated in local software research in developing countries.

2.5.2. **BOUNDARY PARTNER:** *Government officers/research projects under government / Specify in Male.*

EXPECT TO SEE:

- Identify opportunities for undertaking an Localization research project
- Obtain new skills for involvement in researching the software development for local users.
- Participate in meetings with Government officers and projects under government on research findings related to local software development.

LIKE TO SEE:

- Identify opportunities for conducting participatory research projects with other related ministries.
- Present research findings in different formats for different audiences.
- Seek technical support from other software researchers and government officers.
- Participate in conferences or meetings with other ministries.
- Organize meetings or seminars for government officials to discuss about software issues and development.

LOVE TO SEE:

- Engage national and international donors to financially contribute to future local software research and development in their institutions.
- Share lessons and experiences in order to encourage more and better local software research in developing countries.

2.5.3. *BOUNDARY PARTNER: International organizations: UNDP, NGO, JICA.../Specify in Male.*
EXPECT TO SEE:

- Identify opportunities for undertaking an Localization research project
- Obtain new skills for involvement in researching the software development for local users.
- Participate in meetings with International organizations on research findings related to local software development.

LIKE TO SEE:

- Identify opportunities for conducting participatory research projects with local women / youth groups.
- Request new opportunities for participatory research resources or training.
- Present research findings in different formats for different audiences.
- Seek research advice or technical support from other software researchers nationally or internationally.
- Participate in conferences or meetings with other researchers.
- Organize meetings or seminars for the scientific community and international organizations to discuss about software issues and development.

LOVE TO SEE:

- Engage national and international donors to financially contribute to future local software research and development in their institutions.
- Share lessons and experiences in order to encourage more and better local software research in developing countries.

2.6. STRATEGY:

The strategy to be followed in this endeavor are as under:
- Technology should be used as an enabler and not an end in itself
- The program should be sensitive to the culture, values, structures and infrastructure of the country and local communities upon the reality
- It should be participative focusing on involving key users, operators, beneficiaries to increase chances of success
- The services of program should be implemented step by step in accordance with local acceptability and implementation capability
- A clear plan should be formulated for enforcement of changed practices
- Monitoring and evaluation stage should be instituted as a feedback stage to examine the progress from time to time and reallocate resources in line with actual performance and requirement
- A prioritized operational strategy should be developed based on realistic cost benefit assessments that would lead to system interoperability

Strategy Map:

	CAUSAL	PERSUASIVE	SUPPORTIVE
1. BOUNDARY PARTNER: *University and colleges (Students and Lecturers) / Specify in Male.*			
Individual	Provide the Certificate to students and lectures	– training on Local Language Software – competition based on individual level: Best Student Award	– technical assistance – training feedback form – Training material
Environmental	Lab infrastructure + connectivity	– organize seminar/ workshop – training material distribution based on the relevant level.	– online community for students and lecturers (freq: 6 monthly), – institutional involvement (curriculum revision, computer class)

2. BOUNDARY PARTNER: *Government officers/research projects under government / Specify in Male.*			
Individual and	Provide the Certificate and help desk to ministries	– training on Local Language Software – training on more ICT technology to support – exchange the experiences	– technical assistance – training feedback form – Training material
Environmental	Lab infrastructure + connectivity	– organize seminar/ workshop – training material distribution based on the relevant level.	– online community for government officers (freq: 6 monthly), – institutional involvement (computer lap)
3. BOUNDARY PARTNER: *International organizations: UNDP, NGO, JICA…/Specify in Male.*			
Individual	Provide the Certificate and help desk to ministries	– training on Local Language Software – exchange the experience on more ICT technology to support	– technical assistance – training feedback form – Training material
Environmental	Lab infrastructure + connectivity	– organize seminar/ workshop – exchange the experience	– online community among the organization and the level to access from general people – institutional involvement (computer class)