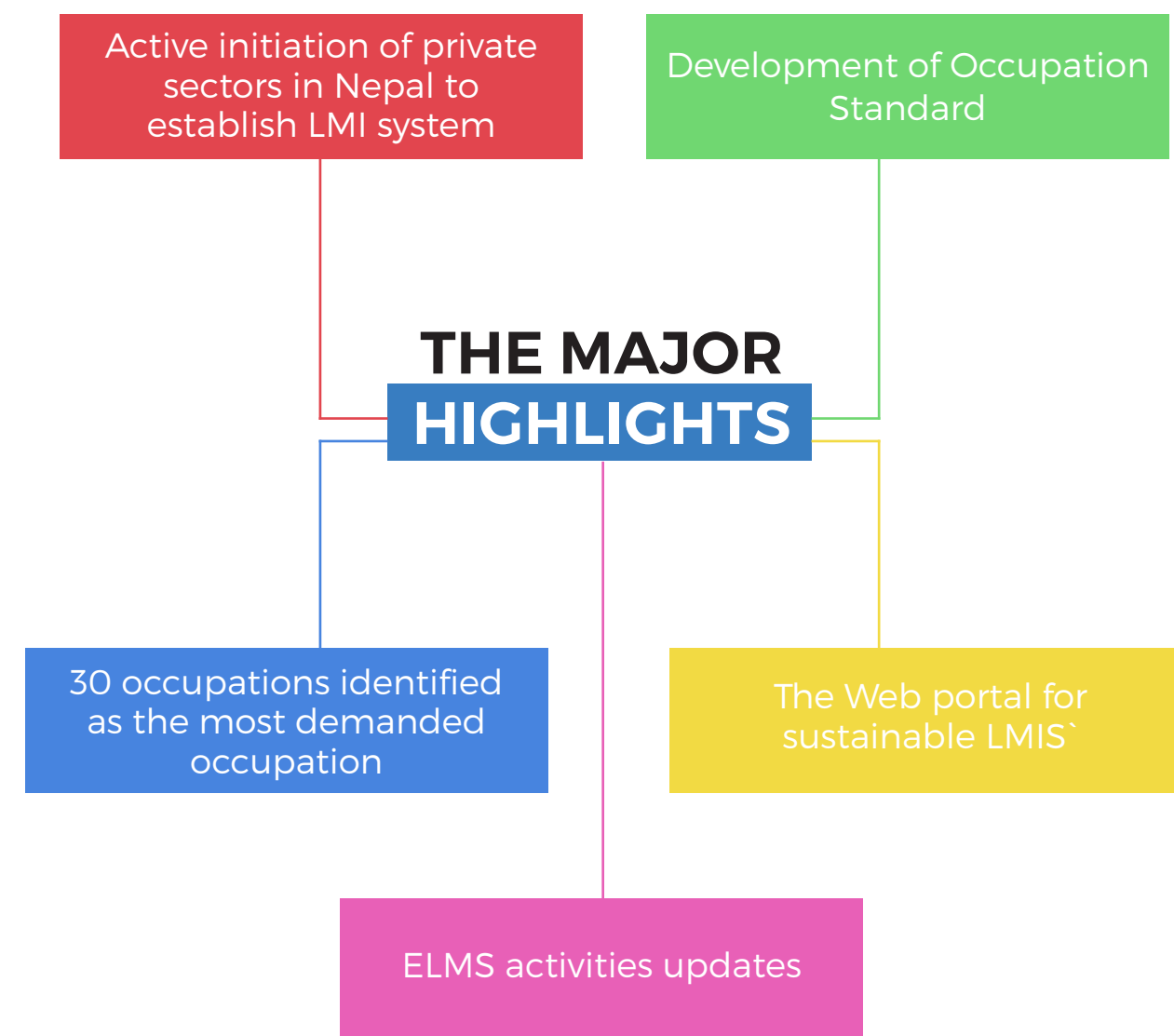


Volume#1 Issue 02

LIST OF ABBREVIATIONS

CAT	Construction Agriculture Tourism Sector
CBS	Central Bureau of Statistics
CLA	Community Livestock Assistant
CNI	Confederation of Nepalese Industries
CS	Competency Standard
CSS	Cascading Style Sheets
CTEVT	Council of Technical Education and Vocational Training
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name System
EA LMI	Employer Association Labour Market Information Unit
EA	Employer Association
ELMS	Employer led Labour Market Secretariat (ELMS)
EOU	ELMS Operation Unit
FCAN	Federation of Contractors Association of Nepal
FNCCI	Federation of Nepalese Chambers of Commerce and Industry
FNCSI	Federation of Nepalese Cottage and Small Industries
GDP	Gross Domestic Product
HAN	Hotel Association Nepal
HDPE	High-Density Polyethylene
HTML	Hypertext Markup Language
ISCO	International Standard Classification of Occupation
IT	Information Technology
JS	JavaScript
JT	Junior Technician
JTA	Junior Technical Officer
KU	Kathmandu University
L - 1	Level One
L - 2	Level Two
L - 3	Level Three
MoEST	Ministry of Education, Science and Technology
NOSS	National Occupation Skill Standard
NRB	Nepal Rastra Bank
NSCO	National Standard Classification of Occupation
NSTB	National Skill Testing Board
OP	Occupational Profile
ORM	Object Relational Mapping
OSS	Occupation Skill Standard
PVC	Polyvinyl Chloride

SME	Small and Medium Enterprises
SQL DB	Structured Query Language Database
SWG	Sector Working Group
TSLC	Technical School Leaving Certificate
TU	Tribhuvan University
UPVC	Unplasticized Polyvinyl Chloride
VLAN	Virtual Local Area Network
Web UI	Web User Interface
Wireless AP	Wireless Access Point



PRIVATE SECTOR IN NEPAL

Private sector is considered as one of the major contributors of the nation's economy. The role of the private sector is even more important in developing countries like Nepal. There are multiple definitions of a private company in academic as well as in practice.

The Company Act, 2063 (2006) of Nepal has defined a private company as "private company" under its Article 2 (B)

Nepal's private sector has been the backbone of the economy throughout its political transformation and has significantly contributed to keep the country's economy going. However, a major component of the private sector includes Small and Medium Sized (SME) enterprises in Nepal. According to the National Planning Commission (2020), it is estimated that about 70% revenue is generated from the Small and Medium Sized enterprises in Nepal. The 15th Periodic Plan of the Government of Nepal 2019/2020 – 2023 /24 states that based on the capital – output ratio, the private sector contributes by 55.6 percent in the total investment of Nepal. The public sector and cooperative sector contribute by 39 percent and 5.4 percent respectively. The labour market has been a basis for the productivity and growth of private sector enterprises in Nepal. In order to do so, availability of demand driven labour / workers is evidently essential. The government as well as the private sector is estimated to produce more than 500,000 skilled human resources. However, the private sectors still have to rely on labour /

workers from either neighboring countries or their own resources.

The unemployment rate of produced skilled human resources is considered to be high in Nepal. As evidence, Nepal Private Sector Engagement Assessment (2020) reveals that the capital inflows in the form of remittances increased from 16 percent (1990) to 83 percent (2020) of annual capital flow in Nepal. It is evident that employable human resources are obligated to leave the country and work on foreign land. Mismatch between trained skilled human resources and required skilled human resources is one of the key factors for such consequences. It is estimated that the private sector in Nepal has about 80 percent capacity to provide employment opportunities to the produced human resources in Nepal. However, it is often stated by the private sector that produced skilled human resources do not have adequate skills, competencies and knowledge required by them.

Federation of Nepalese Chambers of Commerce and Industry (FNCCI), Confederation of Nepalese Industries (CNI), Federation of Nepalese Cottage and Small Industries (FNCSI), Federation of Contractors Association of Nepal (FCAN) and Hotel Association Nepal (HAN) are some of the major private sector stakeholders in Nepal along with other stakeholders who have their network in seven provinces and seventy seven districts of Nepal. These five employer associations have been collaborating with CTEVT and other private sectors for developing *the quality and standards of Technical Education and Vocational Training in Nepal. Establishing an Employer*

led Labour Market Secretariat (ELMS) project is one such attempt which has been jointly implemented by these five EAs with unity and harmony for the first time in Nepal. It has been able to identify 10 occupations each in the construction, agriculture and tourism sectors through a systematic, rigorous and thorough process based on the requirement of private sectors / employers. This bulletin provides a summary of activities conducted by the ELMS project from April 2021 to August 2021.

OCCUPATION IDENTIFICATION PROCESS



CONSTRUCTION SECTOR

Construction sector is defined and understood in academic and practice both in developed and developing countries in their own ways. However, ELMS project defined the construction sector as:

"Construction is a general term meaning the art and science to form objects, systems, or organizations, and comes from Latin "constructio" (from com- "together" and struere "to pile up") and Old French construction. To construct is the verb: the act of building, and the noun is construction: how something is built, the nature of its structure."

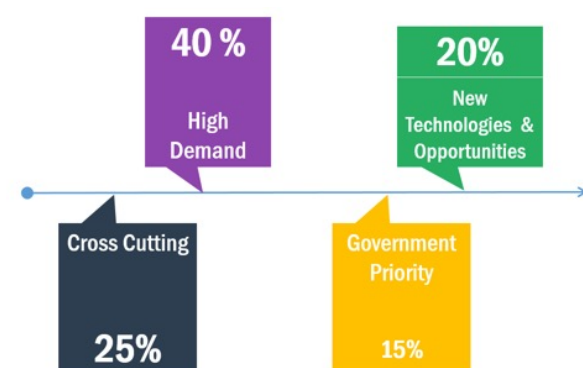
Source: Antonio Spencer (2020)

In its most widely used context, construction covers the processes involved in delivering buildings, infrastructure and industrial facilities, and associated activities through to the end of their life. It typically starts with planning, financing, and design, and continues until the asset is built and ready for use; construction also covers repairs and maintenance work, any works to expand, extend and improve the asset, and its eventual demolition, dismantling or decommissioning.

Occupation identification criteria

Identified Occupations in Construction Sector

The Council of Technical Education and Vocational Training (CTEVT) along with various government and private training providers is providing skill based long term and short term training programs and also developing human resources for the construction sector in Nepal. Currently, the CTEVT constituent institutes and CTEVT affiliated institutes are providing pre-diploma and diploma programs as well as different types of short term training programs in engineering sector. The National Skill Testing Board (NSTB) has 14 NOSS, 21 OSS and 14 OP standards within construction sector. Likewise, there are 15 NOSS and 3 OSS within construction equipment sector within NSTB till date. Previously developed OSS is also understood as NOSS. However, skill requirement of private sector / employer within the construction sector is still in dilemma. Hence, to answer the private sector / employer requirement in the construction sector, the Sector Working Groups (SWG) has identified occupations based on the following given criteria within the ELMS project:



After a thorough discussion and series of scheduled meeting by the sector working groups, ten different occupations within the construction sector has been identified. The identified occupations was shared among private sector stakeholders, occupation specific associations, members of five EAs and private sector employers within construction sector in all seven provinces of Nepal. The identified occupations were also shared among supply side stakeholders such as CTEVT, NSTB, Central Bureau of Statistics, Ministry of Education, Science and Technology (MoEST) through the Technical Advisory Committee (TAC) meetings. A brief with justification is mentioned below:

1. Construction Lab Technician Level - 3

It is a new occupation. Needed to verify the content and the quality of construction materials against the specification provided. Till now OP/ NOSS and academic courses are not found in the system. This is multi task occupation.

2. Site Supervisor Level - 2 (Civil Overseer)

This is a multitask occupation requiring technical knowledge. Needed for monitoring and supervising day to day construction works and labor performance at the site to achieve quality work in given time period. OP is available and Academic course of TSLC level is available.

3. Electrician Level - 2

It is a multitask worker in construction site. Needed for maintaining safe electrical system at construction site and prevent accident from electricity. Needed to ensure the wiring, lighting and electrical components are as

per code and work efficiently and safely. Separate NOSS are available for building electrician L-2 and industrial electrician L-2.

4. Batching Plant Operator Level - 2

This is a new occupation title and needed for high production with quality finishing works thus by increasing work efficiency and time effectiveness. The OSS and NOSS are not found in the system. It is also scarce in the labour market. These are useful workers in different construction sub-sectors.

5. Excavator Operator Level - 2

There is a scarcity of this human resource in the labor market and needed to increase the productivity, save time, reduce cost in repair and maintenance of excavators at site. The infrastructures projects has a high demand of skilled excavator operators. NOSS is available in the system.

6. Welder Level - 2

As the new technologies are being introduced, use of wood in construction is replaced by metals / steel like black pipes, square pipes, and stainless steels. So this occupation is needed for not only fabricating new steel structures but also for general repair and maintenance of basic tools, heavy equipment and plants. NOSS L-2 is available.

7. Scaffolder Level - 2

New technologies are emerging and new materials like aluminum, tubular pipes etc. are in use for scaffolding. This type of workers use special and right techniques and technologies during scaffolding and to prevent possible accidents. Scaffolder (Bamboo-Timber OSS L-1), (Scaffolder -Tubular OSS L-1) are available.

8. Carpentry and Interior Decorator Level - 2

There is an increasing trend of using wood carvings for interior decoration. The Carpenters not only places form work before concrete casting but also makes furniture and wood carvings with new designs and technologies. Carpenters with additional skills in wood carving are highly demanded in the labor market. OP L-2, Construction carpenter OSS L-2, Furniture maker OSS L-2 are available.

9. Aluminum Fabricator Level - 2

There is an extensive use of aluminum in the change context. The worker in this field selects the right sections as per specification and fabricates the elements. They deliver quality works in short time period. OP L-2 is available. It is mostly required in Building construction and bridge construction sub-sector.

10. Plumber Level - 2

It is a multitask worker and needed for selecting right material for water supply, waste water and drainage pipe connection; selecting right fittings and suggests accessories for hot and cold water systems; and fixing sanitary apparatus as per drawing. It is needed to connect pipelines, install hot and cold water supply and drainage system in private and public buildings. It is also required for repairing and maintenance work. NOSS L-2 is available. There is a high demand in building construction, water supply and sanitation and irrigation sub sectors.

AGRICULTURE SECTOR

Agriculture sector has been defined and understood differently in developed as well as in developing countries. It is perhaps one of the traditional sector associated with survival and growth of human as well as all living beings.

“Agriculture sector is the science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation of the resulting products or in other words farming and husbandry of crops and livestock.”

Source: Environmental Science by Dalhousie University (2021)

The agriculture sector is also understood as the science and art of rising / farming crops, livestock, poultry, fish, beneficial insects, their breeding and marketing of the resulting products and their concern occupations are under agriculture sector.

Classification of Agriculture Sector

The Council of Technical Education and Vocational Trainings (CTEVT) along with various government and private training providers are providing training producing skilled human resources for agro-based industries and sub sectors of agriculture in Nepal. The CTEVT along with NSTB has 44 OSS / OP standards currently available in agriculture sector. A brief summary of trainings provided by CTEVT along with are given below:

44

Agriculture Sector
OP/OSS/Curriculum

30

Short Term Training
Curriculum provided
by CTEVT

22

Short term training
offered by FNCSI

11

Pre Diploma/ Diploma
Level Courses offered by
CTEVT

Identified Occupation in Agriculture Sector

The sector working group related to agriculture sector from FNCCI, CNI and FNCSI defined agriculture sector by along with the agriculture sector expert. The sub sectors were also defined. An inventory of existing occupations were prepared by the expert. After that collection of occupation list was done by SWG members. The occupation list was also collected from five LMI unit. The compilation of all available list was done by agriculture sector expert. After that ranking of occupation by SWG meetings was done and shared in seven provinces. The collection of vibrant occupation list with the SSA was also done. Google survey, feedback from consultation meetings was done. Recommendations of sub-sector analysis report was also done. Compilation of SWG and sub-sectors recommendation was done and final list of occupation and ranking by SWG was done. The level of occupation was determined by SWG. After this, a ten identified occupation within agriculture sector is given below:

1. Herbal Farm Technician Level - 2

Needed to provide care and management herbal plant and needed to domesticate and produce wild herbs and medicinal plants.

2. Fruit and Vegetable Processor Level - 2

It is multi task occupation needed to process both vegetable and fruits. Needed to preserve and process surplus vegetable and fruits to reduce farmers loss.

3. Agriculture Farm Technician Level - 2

It is civil agriculture farm worker. It is also multi task performer. Needed for the all types of agricultural farm activities.

4. Nursery & Landscape Technician / Gardener Level - 2

These are multi task performer to raise nursery and floriculture and land scape. Needed to provide care and management of nursery. Needed to propagate horticultural and ornamental flowers and plants. Are also equally useful for beautification of topography and landscaping.

5. Dairy Plant Operator - 3

Dairy is a big industry in Nepal. There is a need to prepare all types of milk products and diversification of milk products. It is essential to save surplus milk and convert it to the value added products.

6. Natural Fiber and Lump Crafter Level - 2

Needed multi task worker for all types of natural fiber and lump crafting. Needed to domesticate commercial fiber plant, their cultivation practices. Perform extraction of fiber, preservation, packaging and marketing of natural fiber.

7. Organic Certification Local Inspector Level - 3

There is a need to certify agricultural organic products. This type of expert is scarce in Nepal and it is new occupation in our context. Till now invited in high cost from outside the country.

8. Fishery Technician Level - 2

Fishery is a big business in Nepal and fishery technicians are hard to find in the market. In order to reduce the trade loss, and to reduce import of fish, fish production is essential.

9. Tea Processor Level - 2

Needed to process tea. Multi task performer are not found in the labour market. Short training course for tea processing is found. Separately NOSS tea processor are found but hasn't met the requirement.

10. Livestock Farm Technician Level - 2

Needed multi task worker to provide care, management of livestock. Prepared to commercial production of all types of livestock.

TOURISM SECTOR

Tourism sector includes culture, travel, adventure and a diverse range of cuisines. It has been defined and understood both culturally and non-culturally both. A more pragmatic definition of tourism is mentioned below:

"Tourism is a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business / professional purposes. These people are called visitors (which may be either tourists or excursionists; residents or non-residents) and tourism has to do with their activities, some of which involve tourism expenditure."

Source: United Nation World Tourism Organization (Retrieved 2021)

Tourism is also understood as a collection of activities, services and industries which deliver a travel experience comprising transportation, accommodation, eating and drinking establishments, retail shops, entertainment businesses and other hospitality services provided for individuals or groups traveling away from home.

Identified Occupation in Tourism Sector

The inventory of occupation was collected within tourism sector. The agreed criteria of most demanding Occupation rating in SWG was done and a preliminary selection of the occupation was done. A brainstorming session for the most demanding occupations identification in CAT sector association was conducted in all seven provinces. Sharing of selected occupation with the provincial level EAs CAT sector members was done for validation. Finalization of occupation, with short description and level required was discussed and decided in the Sector Working Group meetings.

1. Hotel Maintenance Technician Level-2 (Assistant Hotel Maintenance Technician)

Hotel Maintenance Technician keep all equipment in good repair with a minimum of downtime by providing day-to-day maintenance of the large, medium, small hotels, homestays, resorts, family run lodges. Carryout Complete maintenance work i.e. Electrical, Plumbing, Air conditioning, carpentry, masonry, painting on a timely basis by following hotel's standard operating procedures.)

2. Inn-Keeper Level-3 (General Hotel Management Technician)

(Inn-Keepers are responsible for keeping the smooth operation of their establishments efficient and profitable. Their roles vary depending on the size and type of Inn, hotel, bed & breakfast, lodges, homestays & small and family run hotels. This involves greet & interact with the guests, managing staffs, greet guests, check in and out guests, make and serve breakfast, clean rooms, answer phone calls, reply to emails, maintain hotel

and guest account and make sure that all aspects of the guest's stay are satisfactory.

3. Trekking Guide Level-2 (Assistant Trekking Guide)

Trekking Guides are responsible for the day to day itinerary, safety, education and entertainment of the tourist group. They are expected to work to a high level of customer service in line with company standards

4. Tourist Guide Level-3 (Assistant Tourist Guide)

Tourist guides work in the travel industry, giving guided tours to groups of visitors. They are experts on the history of the location and offer their tour groups interesting or enlightening information about points of interest at nature attractions, historic sites, museums, scenic locations, and other travel destinations. Guides may give walking tours, bus tours, or even lead river tours on a boat. Often hired by visitors' bureaus or travel companies, tour guides are typically residents of the region in which they give tours.

5. Tourist Vehicle Driver Level-2 (Assistant Technician)

Tourist Vehicle Driver accompany tourist right from gateway until their departure. They welcome, greet the guests, load unload guest's luggage, provide safety information, maintain and clean tourist vehicle, liaise with concerned stake holders to make memorable visit of the tourists.

6. Nepalese Cuisine Cook Level-2

Cook are the mainstay of the food service industry. They work in different types of kitchen settings where their main task is to plan and cook different types of food. They usually work in places like restaurants, bars,

hotels, casinos, cafeterias and other food-serving establishments. In other words a cook is someone whose responsibility it is to prepare and cook various appetizers, entrees and desserts of varieties of national, international, regional & ethnical cuisine; to ensure the ingredients used are fresh; to make sure the work area is clean; and to have any necessary equipment readily available. Cooks prepare and follow recipes, mix ingredients, and prepare many types of foods, using various cooking methods, such as frying, braising, steaming, baking and broiling.

7. Climbing Guide Level-2 (Assistant Climbing Guide)

Climbing Guide is a trained professional mountaineer who guides climbers (trekkers) above 5500 Meter up in a mountain. Climbing Guide also assist the climbing party with recruitment of porters and other staff, control of porters, local purchase of food. "The role/ duty of a climbing guide is to solve any problem to the best of his/her ability while ensuring that the climbers are following the specified route. They also ensure proper disposal of waste materials and compliance of terms of their permit including safety of the climbers (trekkers).

8. Rafting Guide Level-2 (Assistant Rafting Guide)

Rafting Guides meet and greet guests, load and prepare rafts, execute crash courses in rafting, give safety speeches and most importantly lead a safe and fun rafting trip. Some rafting trips can be overnight, so a rafting guide must have wilderness skills and know the terrain in the area. They are also responsible for the day to day itinerary, safety, education and entertainment of the guests.)

9. Assistant Airlines Maintenance Technician Level-3

Airlines Maintenance Technician assist aeronautic engineers and carry out regular maintenance, defect rectification, aircraft avionics, electrical, electronic equipment, instrument maintenance, and base maintenance.

10. Spa & Wellness Masseuse Level-2 (Assistant Spa & Wellness Massage Therapist)

Spa & Wellness Masseuse massages customers and administers other body conditioning treatments for hygienic or remedial purposes: Applies alcohol, lubricants, or other rubbing compounds. Massages body, using such techniques as kneading, rubbing, and stroking flesh, to stimulate blood circulation, relax contracted muscles, facilitate elimination of waste matter, or to relieve other conditions, using hands or vibrating equipment.

OCCUPATIONAL STANDARD (OS) & OCCUPATIONAL CLASIFICATION

Occupational Standard defines the competences which applies to job roles and occupations in the form of statement of performance, knowledge and the evidence required to confirm competencies. It helps to enhance the quality of workforce as well as classify the occupations. The occupational standard practice was first developed by International

Labour Organization (ILO) in 1988. However, occupational standards are defined and understood differently in developed as well as developing countries.

International Standard Classification of Occupation (ISCO)

The International Standard Classification of Occupation (ISCO) is an international classification under the responsibility of the International Labour Organization (ILO) for organizing jobs into a clearly defined set of groups according to the tasks and duties undertaken in the job

"The first ISCO version, known as ISCO- 58, was adopted in 1957 by the Ninth International Conference of Labour Statisticians. Other versions of ISCO was formed were ISCO-68 in 1966, ISCO-88 in 1987. The most recent version of international standards of occupations is ISCO-08 adopted in December 2007"

Source: Eurostat (27 August 2013) (Retrieved in August 2021)

The major objective of ISCO -08 provides a basis for international reporting, comparison and exchange of statistical and administrative information about occupations. In Nepal, the International Standard Classification of Occupation – 88 was used conducting Nepal labour Force Survey 1998 /99 by the Central Bureau of Statistics (CBS). Based on ISCO-

88, the Central Bureau of Statistics (CBS) has formed the National Standard Classification of Occupation (NSCO) in Nepal. Broadly, the Government of Nepal along with its stakeholders define ISCO as the following:

Occupational standards are the profile of work performance reflecting all the ability and standard of workers successfully complete the functions in an occupations as per the employer's requirement as well as the application of skill, knowledge, attitudes and behaviors in an occupation.

Based on the understanding of ISCO- 88, the Central Bureau of Statistics, Government of Nepal understand National Standard Classification of Occupation (NSCO) as following:

It is further understood as a tool for organizing nationally identified occupations into a clearly defined sets of groups according to the duties and task under taken in the job.

The Council for Technical Education and Vocational Training (CTEVT) initiated skill testing activity in 1983 through forming an autonomous body called Skill Testing Authority (STA). After the formulation of Council for Technical Education and Vocational Training (CTEVT) Act, 2045 (1988) the Skill Testing Authority was constituted as National Skill Testing Board (NSTB). According to CTEVT / NSTB (2021), CTEVT has developed National Occupation Skill Standards (NOSS) / Occupation Profile (OP) in 237 different occupations. In addition, the NSTB has now recently introduced National Vocational Qualification Framework (NVQF). The NVQF is stated to bring about systemic changes in the Technical and Vocational Education and Training (TVET) system in Nepal.

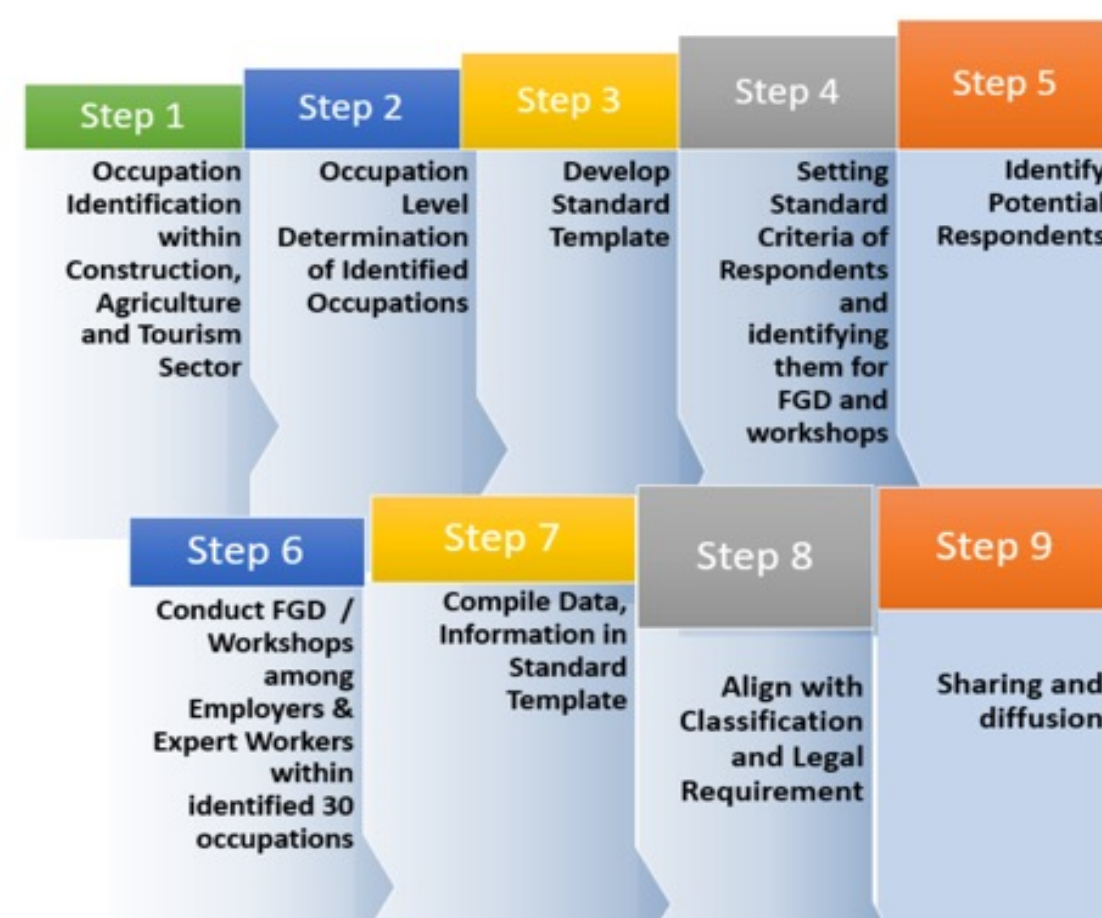
Despite these efforts, the private sector / employers are not able to get required skill resources in their organizations. There is a mismatch between the trained and certified human resources and skill requirement of private sector in Nepal. As a consequence, private sector / employer either rely on skilled labour / workers from neighboring countries or are obligated to operate in under- capacity. Establishing an Employer led Labour Market Project (ELMS) project is an attempt to reduce this mismatch in Nepal. In doing so, ELMS project has identified thirty occupations in construction, agriculture and tourism sector based on the market requirement of private sector employers in Nepal. The project shall formulate occupation standards based on the requirements and also formulate Labour Market Information system in Nepal. The process adopted by ELMS project till date is presented below:

International Standard Classification of Occupation (ISCO) भनेको के हो ?

ISCO भन्नाले कुनै पनि पेशालाई कुनै खास नियम अनुसार सम्पादन गर्नु पर्ने कामको समूह अनुसार समूहकृत गरिने साधन वा पद्धति हो ।

National Standard Classification of Occupation (NSCO) भनेको के हो ?

NSCO भन्नाले कुनै पनि राज्यले पहिचान गरेका पेशालाई कुनै खास नियम अनुसार सम्पादन गर्नु पर्ने कामको समूह अनुसार समूहकृत गरिने साधन वा पद्धति हो ।



The ELMS project is following the above given steps for occupation standard development in Nepal. In doing so, thirty occupations within construction, agriculture and tourism sector has been identified based on the market requirement of the private sector / employers. Secondly, the desired level of each identified occupation has been done. Thirdly, an Occupation Standard template has been developed by Sector Working Group members in CAT sector as well as CAT sector experts. The members of EAs, association, private sector employers were shared with the template. Supply side stakeholders from CTEVT, NSTB, Ministry of Education, Science and Technology (MoEST), Central Bureau of Statistics, Kathmandu University as well as Central Department of Statistics (CBS) were shared with the draft template. The comments, feedback and suggestions received from Government and private stakeholders were incorporated within the template by CAT experts. More details of the template is given below:

OCCUPATION STANDARD (OS) TEMPLATE

Based on the Occupation Standard (OS) Template, ELMS project will be conducting 1-Day Focus Group Discussion (FGD) with employers of five EAs. In doing so, the employers of thirty identified occupations will be recommending skills and competencies required in their enterprises.

In the second phase, the ELMS project shall be conducting 3-Day Workshop with expert workers belonging to thirty identified occupations. These workshops will be done through a DACUM approach and functional analysis.

Occupation Specific Employer Panel

A ten member occupation specific employer panel is formed for each identified occupation in construction, agriculture and tourism sector. The occupation specific employer shall be participating in a 1-Day Focus Group Discussion (FGD) for identifying skills, knowledge, discipline, and attitude required by the worker in each identified occupations.

Expert Workers Panel

The expert worker panel shall consist of a ten member expert workers identified in each occupations within construction, agriculture and tourism sector. The expert workers shall be participating in a 3-Day Workshop for Occupation Standard Development. The panel shall be providing details of skills, knowledge, attitude and work standard through a systematic procedure of functional analysis.

Occupation Skill Standard (OSS) Development Panel

This panel consists of three members which includes facilitator, co-facilitator and moderator for the employer / expert workers occupation standard development workshop / FGDs. ELMS project has hired three facilitators as well as three co facilitators for workshop of construction, agriculture and tourism sectors.

This panel includes the Sector Working Group members within construction, agriculture, tourism sector from FNCCI, CNI, FNCSI, FCAN and HAN. This panel also includes the CAT sector experts. Their major function is to review and justify identified occupations to the concerned stakeholders.

Occupation Skill Standard (OSS) Verifying Panel (Technical Advisory Committee Members)

ELMS project has a 6 member advisory committee who are included as the occupation skill standard verifying panel in this occupation standard development process. Their details are mentioned below:

S.No.	Name	Designation	Organization
1	Mr. Kul Bahadur Phadera	Under Secretary, Ministry of Education Science and Technology	MoEST
2	Prof. Mahesh Nath Parajuli	Dean, KU School of Education	KU
3	Mr. Pravat Upreti	Assistant Professor, Central Department of Statistics	TU
4	Mr. Kishor KC	Statistics Officer, Central Bureau of Statistics	CBS
5	Ms. Sharada Devi Ghimire	Deputy Director, CTEVT Curriculum Development Division	CTEVT
6	Mr. Keshab Ghimire	Deputy Director, CTEVT NSTB	NSTB

Occupation Skill Standard (OSS) Approving Panel

The occupation skill standard approving panel includes head / board members of 5 EAs. Their major function is to approve the Occupation Skill Standards (OSS) formulated by the project on thirty identified occupations within construction, agriculture and tourism sector. The major approach for doing so is by agreeing, harmonizing and understanding by the approving panel members.

The details of the committee is mentioned below:

S. No.	Name	Designation	Organization
1	Mr. Shekhar Golchha	President	FNCCI
2	Mr. Vishnu Kumar Agarwal	President	CNI
3	Mr. Shyam Giri	President	FNCSI
4	Mrs. Shreejana Rana	President	HAN
5	Mr. Rabi Singh	President	FCAN

Occupation Description

This section includes the specific requirements, responsibilities, job duties, and skills required to perform within the identified occupations. It also includes a list of common day-to-day tasks, equipment or tools used, who the role reports to, and overall goals.

Occupation and Environmental Safety

This is a new section within the occupation standard development practices within Nepal. This section highlights the occupations risk and hazards that may arise within identified occupation. This section also suggests mandatory safety measures, procedures, protective gears and safety equipment needed for the worker related to the identified occupation. This section also promotes green and eco-friendly practices for mitigating increasing climate change and reduction in the emission of Green House Gases (GHG). ELMS project has given special priority to the green economy while developing occupation skill standards.

Minimum Entry Requirement

This section highlights the minimum entry requirement, educational qualifications and experiences required for entry into the occupation.

यस खण्डमा उक्त पेशा अन्तर्गतको सेवा / व्यवसाय रोजगारीमा प्रवेश गर्न आवश्यक पर्ने न्युनतम मापदण्ड के हो ? सो को बारेमा छोटो उल्लेख गरिनेछ ।

Worker's Trait

This section highlights the required habits, interests, approaches and necessary characteristics within the workers of identified occupation in construction, agriculture and tourism sector. This section also highlights the workers best characteristics for formulating the occupational profile.

Occupation Career Path

Occupational career paths imply vertical growth or advancement to higher-level positions, but they can also include lateral (sideways) movement within or across occupations. This section states the career development and skill promotion of workers within each identified occupations.

List of Duties and Tasks of the Occupation

This section provides a detail description of the duties and tasks that are required to be performed by each workers within the identified occupations to become a successful performer.

Task Competency Standard

This section includes the task number, terminal performance standards, related required technical knowledge, safety and precautionary measures and tools, equipment and materials needed to perform tasks and duties within the given occupations.

SUB SECTOR ANALYSIS REPORT

Employer-led Labour Market Secretariat (ELMS) Project, with support from Devsuits - a research organization, has recently concluded the sub-sector analysis for construction, agriculture and tourism (CAT) sectors. The purpose of the analysis was to identify potential and vibrant sub-sectors and occupations in the three sectors.

The study is linked with the ELMS objective to “develop a shared understanding of skills, knowledge and behaviours for identified key job roles in three target sectors”. A total of 30 occupations have been identified through a consultative process that involved private sector employers, associations and experts from across all seven provinces of the country.

The study considered six main criteria for identifying the vibrant and potential sub-sectors and occupations - contribution of a sub-sector in the gross domestic product (GDP), government priority accorded to a sub-sector in its latest policies and programmes, number of employment in a sub-sector (private formal sector), volume of investment in a sub-sector, number of member organizations in a commodity association of a sub-sector and emergence of sub-sectors globally and in Nepal.

The identified vibrant and potential occupations in the construction sector include - Mason (brick, stone and retrofitting), Building electrician, Carpenter, Welder/ Ironworker, Supervisor (Civil), Fabricator, Scaffolder, Lab technician (QA Technician) and Heavy equipment operator.

Similarly, in agriculture, such occupations include Fruits and vegetables processor, Dairy plant operator, Meat and fish processor, Agronomical grain processor, Agricultural input supplier, Agricultural credit service provider, Herbal processor, Tea and coffee processor, Spices processor and Junior Technical Assistant (JTA).

In the tourism sector, the occupations include Cook, Waiter/waitress, Housekeeping, Small hotel manager, Homestay operator, Tour guide - TSLC, Trekking guide - assistant, Rafting guide, Tourist vehicle driver and Receptionist - General.

A team of four consultants - a construction expert, an agriculture expert and a tourism expert from Devsuits carried out the study by reviewing existing literature generated by public and private sectors in Nepal, conducting FGDs and KIIs with more than 80 employers, members of associations and experts to come up with the list of sub-sectors and occupations.

The study team consulted relevant employers from 10 districts including Morang, Bara, Chitwan, Kathmandu, Makawanpur, Bhaktapur, Kaski, Rupandehi, Surkhet and Kailali which were selected based on the concentration of CAT sector enterprises in those districts.

NEED ANALYSIS SURVEY REPORT

ELMS project had a scheduled activity of conducting capacity development of staffs. In doing so, a consultant was hired and need assessment survey of PCC, SWG and EA LMI Unit staff was conducted on May 2021. The major objectives of the activity is mentioned below:

- Identify the skills/ competencies and knowledge of project staff that helps to achieve the project goal.
- Identify knowledge, skills, competency and gaps of the ELMS project staff.
- Submit report to the ELMS project with findings (gap identification) and proposed training programs for capacity building of the staff.

In order to achieve the objectives of need assessment among ELMS project staff, literature review was done. In doing so, technical proposal, Terms of Reference (ToR) of project staffs, TVET related documents and organizational profile of five EAs were thoroughly reviewed. The activity was done by implying quantitative and qualitative approach. The Primary data were collected through series of interview between SWG, PCC members, EA LMI Unit Coordinators, Program Officers and Admin / Finance Officers of five EAs. A semi -structured survey was also conducted among EA LMI Unit staffs. The data were analyzed and interpreted using a pragmatic approach. The findings of the study are used to improve the competency gap among ELMS project staff.

The report further recommended to provide capacity building programs to all those officials who are involved in project activities directly or indirectly. Further, ELMS project is new and unique in many ways, capacity building program was stated to be essential at all levels so that desired results can be achieved within the designated time.

WEB PORTAL DIAGRAM - FRAMEWORK

One of the major activities of ELMS project is to develop a Labour Market Information (LMI) System. This is the first time that such system is being established in Nepal. The LMI system provides information about each worker within the identified occupations of construction, agriculture and tourism sector. A brief summary of proposed software interface is given below:

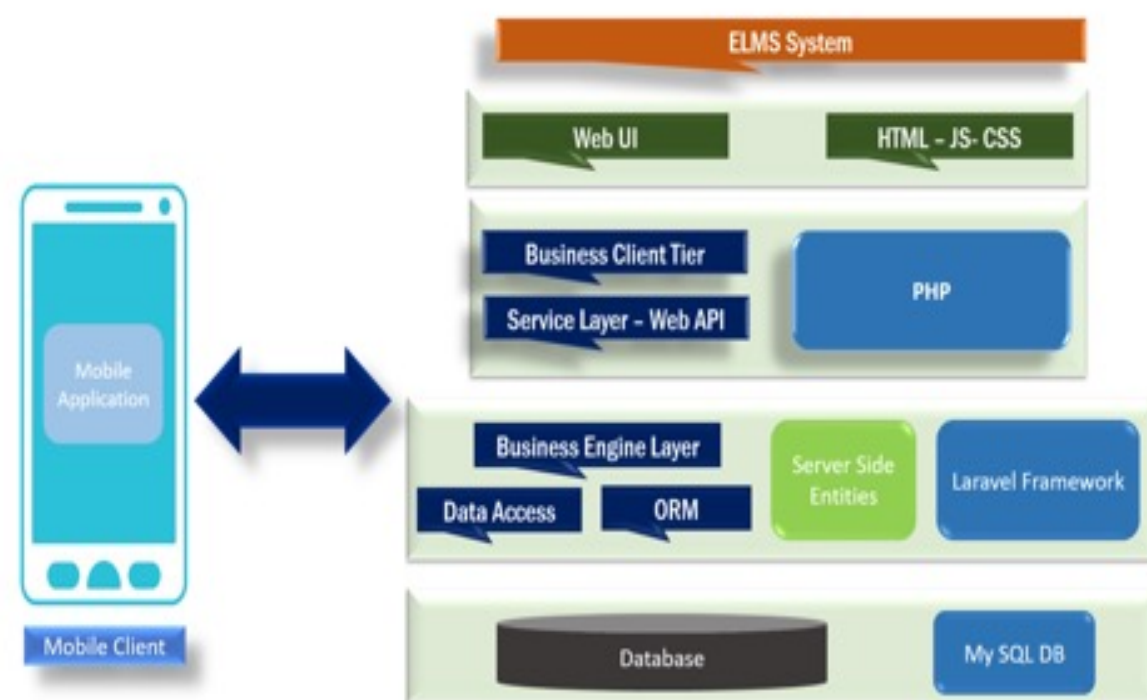
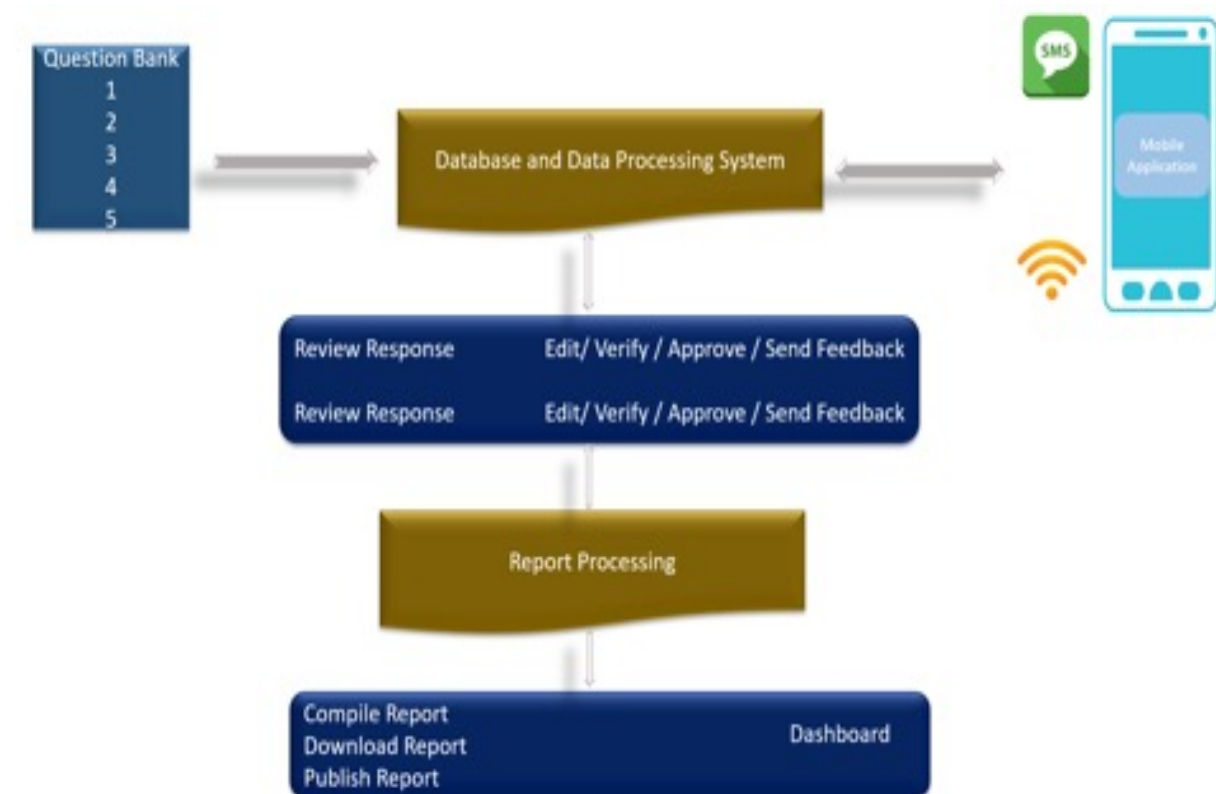


Fig: ELMS System Interface

As shown on the above diagram, the system is expected to create a next generation HTML5 web application using JS framework and bootstrap on Web User Interface layer. PHP Laravel application would be created to host Web Application on business client tier. WebApi will be used to create RESTful services for service layer. Various modules would be created on business layer. Each business layer modules will depend on data access layer projects. Object relation module will be used to generate Server Side Business Entities on data access layer.

FUNCTIONAL ARCHITECTURE FOR ELMS PROJECT

The functional architecture of ELMS system is envisioned as a single system where all the corresponding components are just logical divisions. However, it is suggested that ELMS can be considered as mutual integration of all deliverable components as shown on diagram below:



As shown on the diagram, core module serves as the foundation which manages and will govern all inter and intra modular operations. Core also would contain common data elements to share by all modules so that the qualities of the shared data components are consistent and manageable throughout the system. Generally, end user interacts with the system through Mobile application while authorized users of the system would access to authorized modules and corresponding functionalities.

PROPOSED NETWORK AND HARDWARE INFRASTRUCTURE (PRIMARY DATA CENTER)

The ELMS project has proposed a web portal design and development for the Labour Market Information (LMI) system. The server has been purposed to have six different hard drives which are each classified depending upon the task they handle. The six purpose hard drive includes web driver, server layer server, reporting server, document file server, primary database server and secondary database server. The LMI system includes information systems related to 5 EAs and labour market information based on the thirty identified occupations within the construction, agriculture and tourism sector. The IT infrastructure is designed on the basis of Disaster Risk Reduction Plan. A graphical representation of the proposed network and hardware infrastructure is given below:

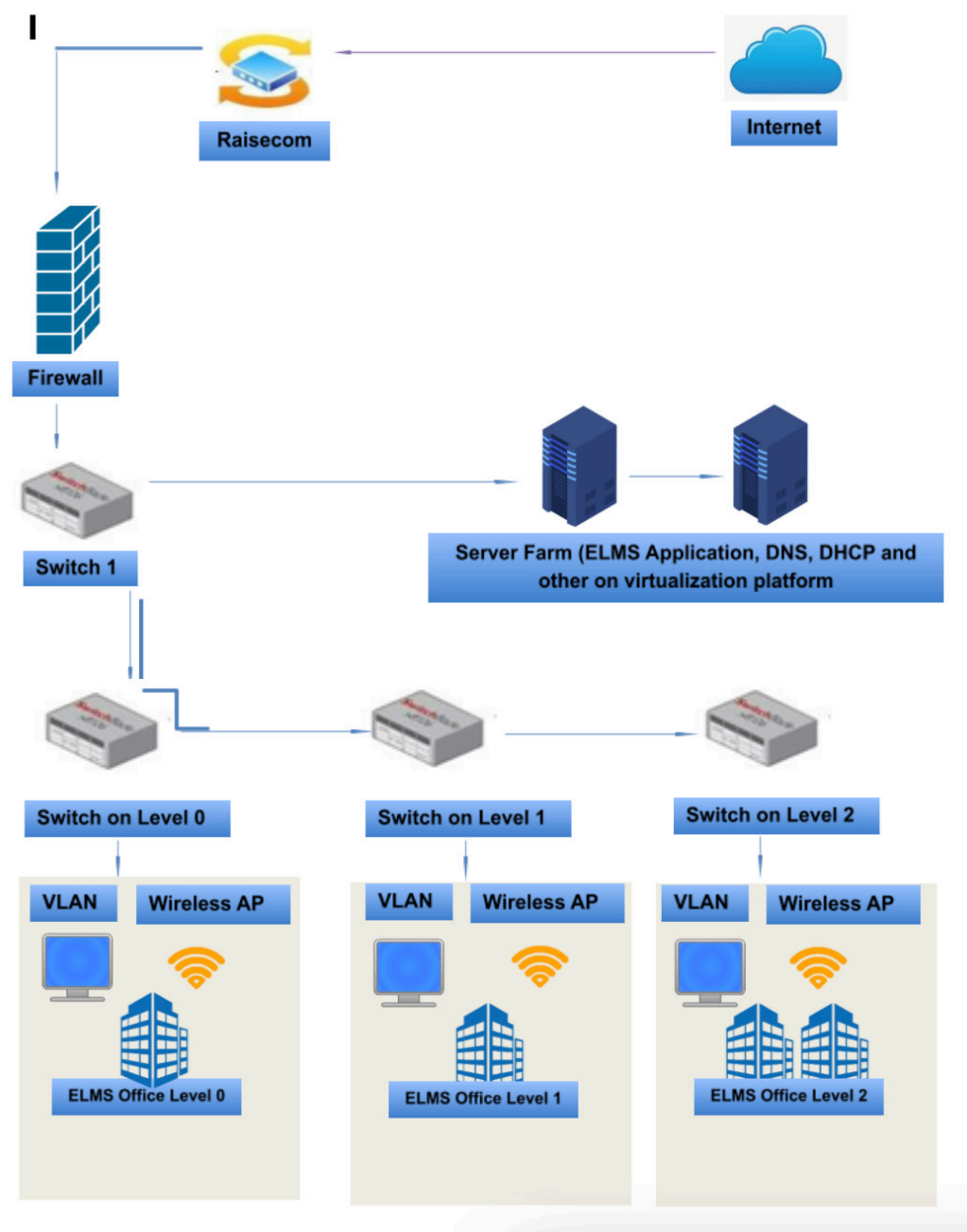
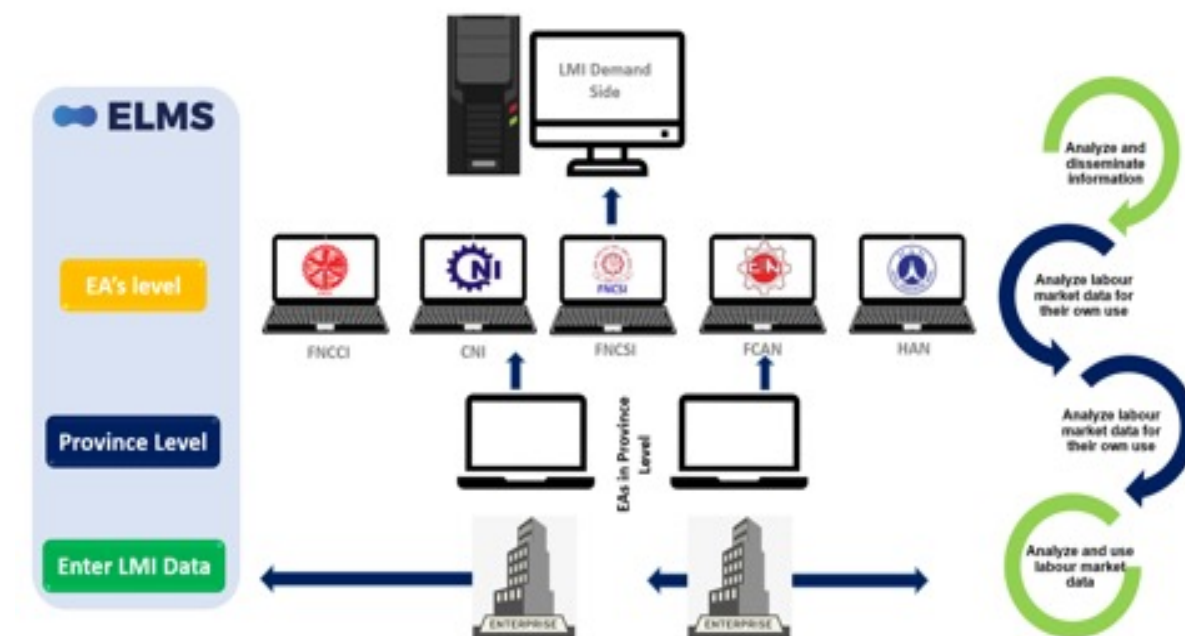


Fig: IT Infrastructure for ELMS Project

The above diagrams represent the proposed hardware setup for ELMS from a logical perspective. The hardware (firewall, switches and wireless AP) will be placed at EAs main office and Server will be collocated in third party data center as primary data center.

TOTAL LABOUR MARKET INFORMATION SYSTEM (LMIS)

One of the major objectives of the project is to develop the Labour Market Information System (LMIS). In doing so, the ELMS project will be conducting a survey among members and enterprises affiliated to 5 EAs (FNCCI, CNI, FNCSI, FCAN and HAN). The project will collect data from individual enterprises from 27 districts of Nepal including industrial corridor. The collected LM data shall be analyzed, summarized and managed in four different levels. The LM data is interconnected and integrated with the web portal as well as network and hardware infrastructure finalized for the ELMS project. A proposed diagram for total LMI system for ELMS project is mentioned below:



The LMI portal for ELMS project shall be controlled and managed within four different layers. Individual enterprises / member of five EAs shall be engaged in LMI survey. They shall be providing LMI data. This shall be done among the construction, agriculture and tourism related enterprises affiliated to five EAs. The field enumerators shall be collecting real time data from these enterprises.

The data then shall be preliminary collected within the provincial level. The provincial level research consultants shall be collecting real time data from these enterprises. The province level shall be coordinating with EA LMI Unit for further processes. The seven province level research consultants shall be collecting data from field supervisors and enumerators.

Thirdly, the real data LMI data shall be managed, organized and controlled by five EA LMI Units. The five EA LMI Unit shall also be coordinating and controlling data collected from their concerned province level and further analyzing those data for further use. EA LMI Units and their staff shall be responsible for collecting coordinating with the main server.

Finally, the data collected from the individual, enterprises, province levels and EA LMI Unit shall be merged within the main server. The real time data collected from enterprises shall be finalized after the finalization of LMI web portal, hardware and infrastructures.

ACTIVITIES UPDATES OF THE ELMS PROJECT

The activities conducted by ELMS project from November 2020 to March 2021 was incorporated in the 1st issue of ELMS Bulletin. The activities conducted by ELMS project from April 2021 is presented in this issue as follows:

Occupation Standard Development Workshops / Focus Group Discussions



ELMS project has done nine occupation standard workshops out of 30 FGDs and 30 3-Day Workshops. The project implementing EA LMI Unit have been conducting FGD and workshops of thirty identified occupations within construction, agriculture and tourism sector. ELMS project has completed occupation standard development workshops and FGD for Scaffolder, hotel maintenance technician, nursery and landscape gardener, Nepali cuisine cook, tourist guide, herbal processor, site supervisor, excavator operator and dairy processor. 1 Day FGD with employer and 3-Day workshop with expert worker has been conducted from by ensuring representation from seven provinces and all five implementing EAs.

Labour Market Information (LMI) Sensitization Workshop conducted in seven provinces of Nepal

Labour Market Information (LMI) sensitization workshops is done in all seven provinces of Nepal. The workshops were attended by province level presidents of EAs, district level presidents, PCC/ SWG members, SSA members as well as members, provincial level members, district industry associations, CAT sector association and others.

The sensitization workshops were conducted in Dhangadi (Sudur Paschim), Birendranagar, Surkhet (Karnali), Rupandehi (Lumbini), Pokhara (Gandaki), Kathmandu (Bagmati), Simara (Province 2) and Biratnagar (Province 1) from August 2021 to September 2021.



There was a good participation from all the five Employer's Associations assuring to contribute to the activities of the project. The participants were found to be interested and encouraged to participate in the upcoming LMI Survey. They were excited to learn about the LMI portal. Additionally, they have shown their positive response towards the value of the project which is expected to be useful for the project sustainability. The workshops contributed to the orientation of LMI and information dissemination to EAs members from different districts and provinces.

Technical Advisory Committee (TAC) Meeting

ELMS project has done 3 Technical Advisory Committee meetings out of 7 meetings. The 2nd TAC meeting was conducted virtually and was attended by members from Ministry of Education, Science and Technology (MoEST), Central Bureau of Statistics, Kathmandu University, Tribhuvan University, Central Department of Statistics and others. Out of 7 total scheduled TAC meetings, the project has completed three scheduled meetings till date.



Project Coordination Committee (PCC) Meetings

Out of 20 scheduled project coordination committee meetings, ELMS project has completed 9 scheduled meetings. The PCC meeting has approved and endorsed thirty identified occupations, approved ten SSA for capacity development and made various decisions related to the ELMS project. The project also provides feedback and suggestions to the ELMS project and also takes the agenda further to the board.



Sector Working Group (SWG) Meetings

Out of 12 scheduled Sector Working Group (SWG) meetings the project has completed seven scheduled meetings. The construction, agriculture and tourism sector working meetings the project has identified thirty occupations in the CAT sector as well as decided location for conducting Focus Group Discussion (FGD) and 3-Day workshops. The scheduled meetings has also come up with rational and valid justification for identified occupations in the construction, agriculture and tourism sector.



Board Meeting:



ELMS project has completed four board meetings out of ten scheduled board meetings until September 2021. The project is also planned for the fifth board meeting in September 2021. The board has been transferring chair on a rotational basis out of five EAs. The 4th board meeting endorsed and approved NSCO template, thirty identified occupations and also made major decisions related to no cost extension of ELMS project.

Formation of Monitoring Committee

The project has formed monitoring committee within all five EA LMI Units. The members of the monitoring committee consists of members from the EA Secretariat. Province office and one most appropriate member from the EAs. Each EA Monitoring Committee shall be conducting five meetings / field visits which will provide guidance and support, supervise, monitor and evaluate and also provide report and recommendation to the project.

The first monitoring committee field visit was made on 5th September 2021 (20th Bhadra 2078, Sunday) at Hotel Ichchha, Simara Bara during the Labour Market Information (LMI) sensitization workshop for Province no 02. The monitoring committee field visit was led by FNCCI monitoring committee coordinator Mr. Hem Raj Dhakal. He also stated that private sector employers from FNCCI, CNI, FNCSI, FCAN and HAN from Province no 02 need to proactively participate in the LMI survey and its development process. The monitoring committee visit was found to add value in sensitization of Labour Market Information (LMI) among concerned stakeholders.

Likewise FCAN monitoring committee members made two monitoring committee field visits till date. Mr. Tirtha Raj Joshi made a monitoring committee visit on 5th - 6th September 2021 at New Anada Hotel, Kanchanpur, and Sudurpaschim Province for assessing the FGD / DACUM workshop for Site Supervisor. Likewise, FCAN monitoring committee members Mr. Tek Bahadur Rai and Mr. Prem Singh Ayer made a visit on 20th - 24th September 2021 for assessing the FGD / DACUM workshop related to Aluminum Fabricator. The committee suggested to involve facilitator and construction expert Mr. Shakya equally while facilitating the workshop. The committee also further recommended to try to invite the participants from all seven provinces.



FNCCI

Mr. Hem Raj Dhakal,
Chairperson, Health &
Skill Development
Committee, Coordinator
Mr. Tika Raj Dhakal,
President, Province
FNCCI, Province 1
**Mr. Padam Bahadur
Shahi**,
President, Province
FNCCI, Karnali
Province
**Mr. Hansa Ram
Pandev**, Senior Expert



CNI

Mr. Rohit Gupta –
Vice President CNI
Mr. Rishi Ram Ghimire
- CNI Bagmati Province
Coordinator
Mr. Naresh Das - CNI
Province no 02
Coordinator
Mr. Sabin Mishra -
Director, CNI Secretariat



FNCSI

**Mr. Netra Prasad
Pathak**,
President, FNCSI
Lumbini
**Mr. Dambar Prasad
Regmi**,
Secretary General,
FNCSI
Mr. Navaraj Khatri,
Chief Administrative
Officer, FNCSI



FCAN

Mr. Prem Singh Ayer -
FCAN Chief executive
officer
Mr. Tej Bahadur Rai –
Executive Member
FCAN and also President
of Aluminum federation
Association
Mr. Tirtha Raj Joshi –
Provincial Executive
member FCAN
(Province 7)



HAN

Mr. Bikal Tulachan –
HAN Pokhara President
Mr. Vishnu Kumar -
Treasurer HAN
**Mr. Tek Bahadur
Mahat** - Chief Operating
Officer (COO) HAN

ELMS UPDATE

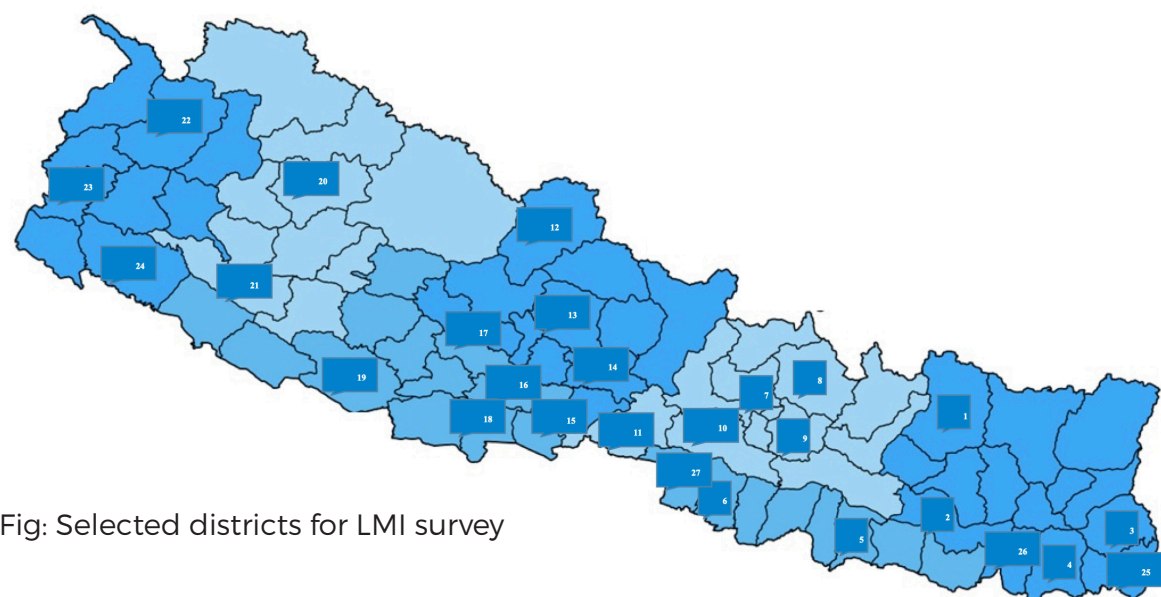


Fig: Selected districts for LMI survey

Selected Districts			
Province	Mountain	Hill	Terai
Province 1	Solukhumbu	Udayapur, Illam	Morang, Jhapa, Sunsari
Province 2			Dhanusha, Bara, Parsa
Bagmati	Sindhupalchowk	Kavre, Makwanpur,	Chitwan
Gandaki	Mustang	Kaski, Tanhun,	Nawalpur
Lumbani		Palpa, Gulmi	Rupandehi, Dang
Karnali	Jumla	Surkhet	
Sudurpaschim	Bajhang	Dadeldhura	Kailali
Kathmandu Valley		Kathmandu	

