Research Objectives

The study focuses on recommending inputs to the Skills anticipation and prioritization of skills requirements (SAPSR) Framework and is guided by the following research questions:
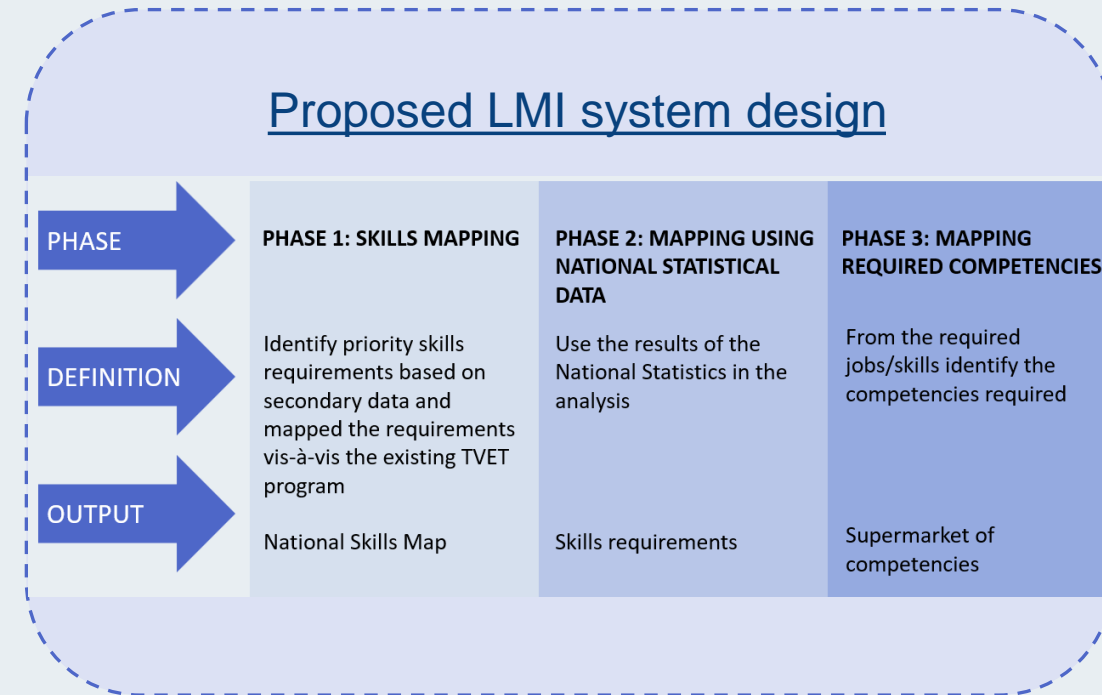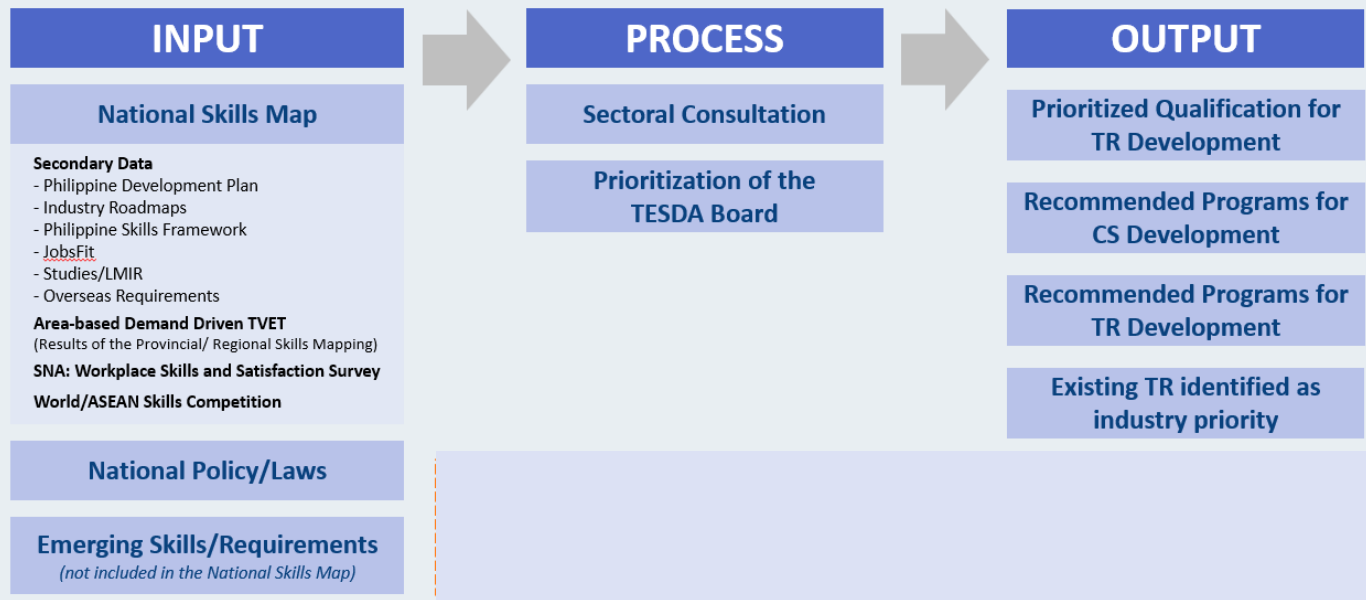
How can the TESDA LMI Framework be validated to be consistent with the Philippine context and its relation to other government initiatives?
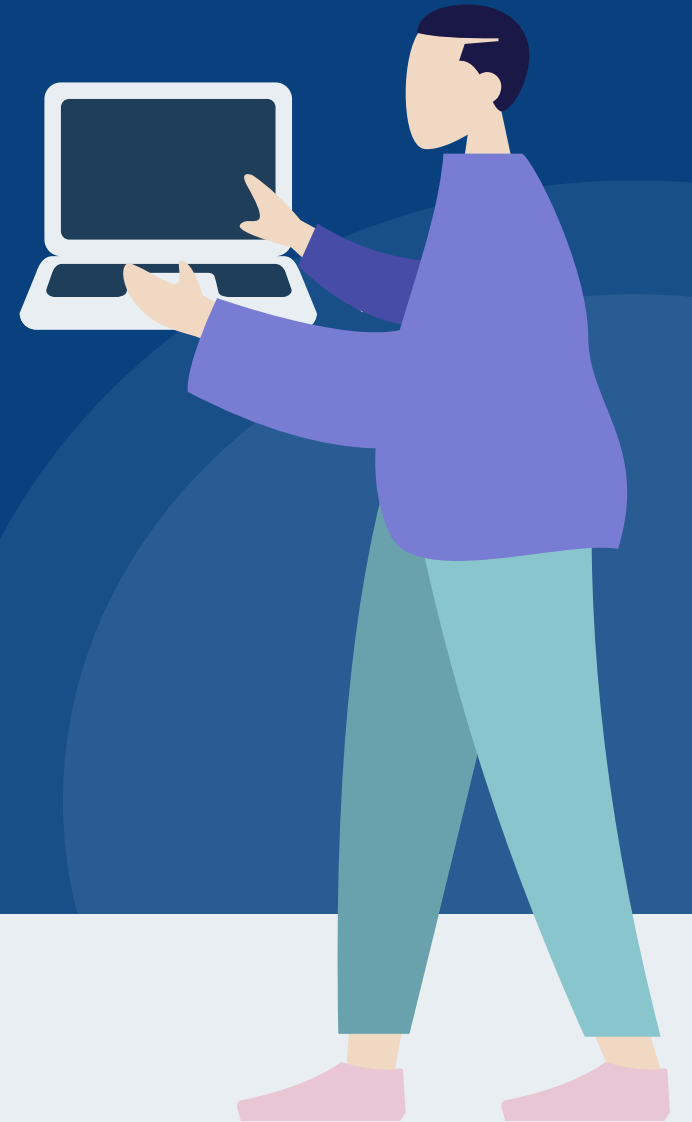
What LMI indicators can be included in the LMI Framework?

What inputs can be recommended in the development of the LMIS?

TESDA's Skills Anticipation and Prioritization of Skills Requirements (SAPSR)

INPUT

National Skills Map

Secondary Data
- Philippine Development Plan
- Industry Roadmaps
- Philippine Skills Framework
- JobsFit
- Studies/LMIR
- Overseas Requirements

Area-based Demand Driven TVET
(Results of the Provincial/ Regional Skills Mapping)

SNA: Workplace Skills and Satisfaction Survey

World/ASEAN Skills Competition

National Policy/Laws

Emerging Skills/Requirements
(not included in the National Skills Map)

PROCESS

Sectoral Consultation

Prioritization of the TESDA Board

OUTPUT

Prioritized Qualification for TR Development

Recommended Programs for CS Development

Recommended Programs for TR Development

Existing TR identified as industry priority

Proposed LMI system design

	PHASE 1: SKILLS MAPPING	PHASE 2: MAPPING USING NATIONAL STATISTICAL DATA	PHASE 3: MAPPING REQUIRED COMPETENCIES
PHASE			
DEFINITION	Identify priority skills requirements based on secondary data and mapped the requirements vis-à-vis the existing TVET program	Use the results of the National Statistics in the analysis	From the required jobs/skills identify the competencies required
OUTPUT	National Skills Map	Skills requirements	Supermarket of competencies

Skills needs anticipation and labor market information system

WHAT IS SKILLS MISMATCH?

Definition: *"discrepancy between the available skills and the skills sought by employers or firms (e.g., skills gaps, skills obsolescence, skills shortages, vertical mismatch, and horizontal mismatch)" – ILO, 2020*

At the individual level

overqualification is associated with wage penalties and lower job satisfaction

+

At the firm level

result in lower firm productivity, underinvestment in innovation, and higher employee turnover rates

=

Whole economy

lower economy-wide productivity, lower national competitiveness, and higher unemployment and underemployment rates

Reason: Incomplete and imperfect information

Solution: Government's intervention (since market failure)

Requires: Participation of the industry, private sector

In the Philippines, skills mismatch has been a persistent issue for decades

As early as the 1970s, the Philippine higher education system was producing a supply of college graduates higher than the economy's capacity to absorb highly educated workers (Perlman, 1978, as cited by Epetia (2018))

Around one-third of college graduates considered overeducated (Epetia, 2018), and around 20% of workers w/ college degrees employed in jobs using basic skills only (Bayudan-Dacuycuy and Dacuycuy, 2021).

65% of graduates not getting jobs from the sector of their choice due to a lack of skills (Aspiring Minds, 2017)

Around two-thirds of TVET graduates are mismatched with their occupations (ADB, 2021)

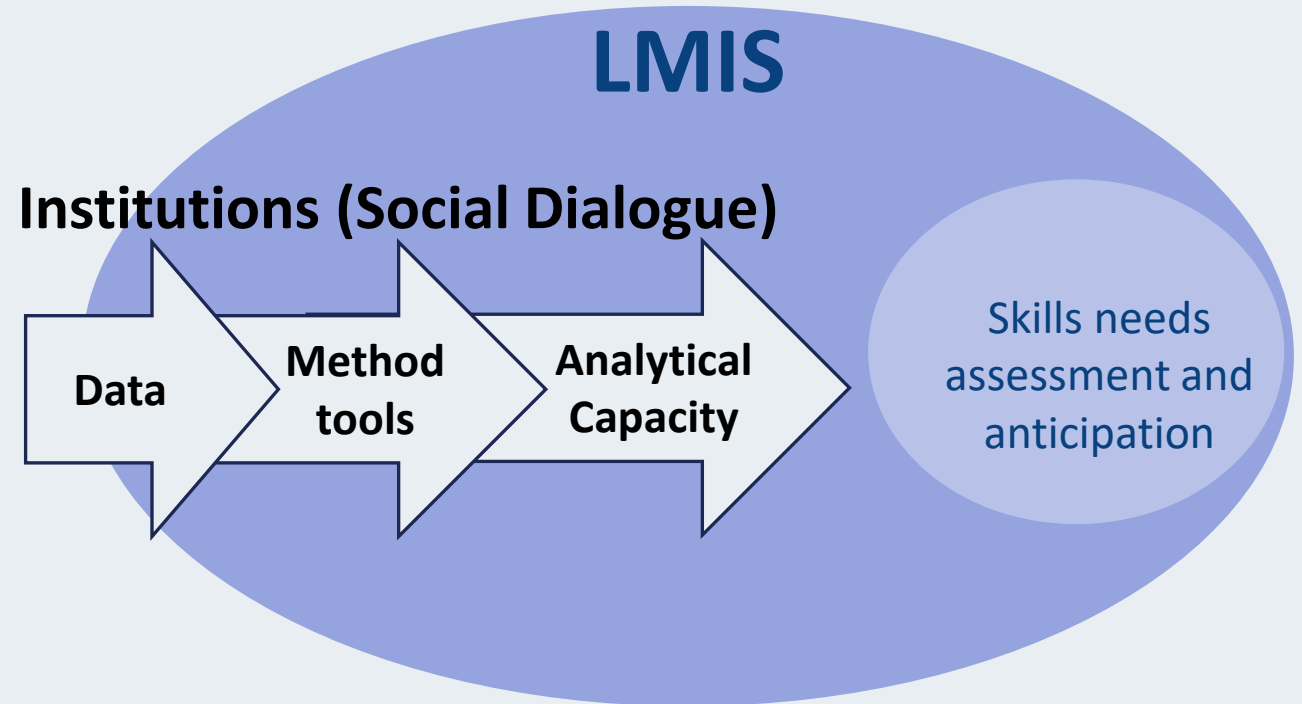Mismatch can be mitigated by a well-functioning labor market information (LMI) system

LABOR MARKET INFORMATION SYSTEM (LMIS)

- **LMI**: includes any quantitative or qualitative information and intelligence on the labor market that can assist labor market agents in making informed plans, choices, and decisions (Schmillen, 2019)

- **LMIS**: institutional arrangements and procedures that coordinate collection, processing, storage, retrieval, and dissemination of LMI (European Training Foundation, 2017)

Labor Market Information System and Skills Need Anticipation

Functions of LMIS *(Sparreboom, 2013)*

1. tool for labor market analysis
2. tool to aid monitoring and reporting on employment and labor policies
3. a mechanism that facilitates information exchange and coordination among stakeholders/institutions

LMIS

Institutions (Social Dialogue)

Data → **Method tools** → **Analytical Capacity** → Skills needs assessment and anticipation

SNA: activities that assess current and future skills needs in the labor market

Good practices in SNA and the LMIS (1/3)

DATA

Graduate tracer study for higher education and vocational courses

Aims to benchmark institutional performance, check the employment outcomes of students, and improve curriculum responsiveness to labor market demand

Public and private employment services

Provides job matching assistance to jobseekers and employers.

BIG DATA ANALYTICS AND NON-TRADITIONAL DATA COLLECTION STRATEGIES

Can supplement traditional data

Traditional data sources, though representative, lack necessary granularity and fail to offer real-time updates.

e.g., online job vacancies (OJV) and jobseekers' credentials

Require analytical and technical skills

Disadvantages: postings from the formal sector only, multiple postings

Good practices in SNA and the LMIS (2/3)

COLLABORATION AND ENGAGEMENTS

Stakeholder and expert consultations

Sectoral involvement

Boundary setting

DISSEMINATION PRACTICES

Leverage dashboards and visualization tools

FINANCIAL RESOURCES AND SUSTAINABILITY

Adequate Funding

Partnerships and strategic financial planning

SKILLS TAXONOMY AND SKILLS-OCCUPATION MAPPING

Skills taxonomy: System to classify skills, provides structures to data collection and perspectives in discussion, forum

- Basic skills? cross-functional skills?

Skills-occupation mapping

Skills mapped with 4- or 5-digit PSOC

- Importance of each skill in each occupational code

Example: Occupational Information Network (O*NET) dashboard

- Contains comprehensive information useful in charting career pathways, such as occupational, career, and hot technologies
- Uses standard occupational classification, facilitates the crosswalking of the O*NET data with survey datasets produced by other countries

Find Occupations	Advanced Searches O*N	O*NET Data Crosswalk	Crosswalks
Bright Outlook	Job Duties	Abilities	Military
Career Cluster	Professional Associations	Interests	Education
Hot Technology	Related Activities •	Knowledge	Occupation Handbook
Industry	Soft Skills	Skills (Basic)	SOC
Job Family	Technology Skills	Skills (Cross-Functional)	DOT
Job Zone		Work Activities	RAPIDS
STEM		Work Context	ESCO
All Occupations		Work Styles	
		Work Values	

- **ESCO**: used O*NET, using big data
- **Canada**: linking its NOC to skills and competencies developed by ESDC
- **National Skills Commission Australia**: leveraging OJV in the Australian Skills Classification (ASC) and mapping skills with the Australian and New SOC

Existing LMI/LMIS initiatives in the Philippines

DOLE Labor Market Reports

DOLE's Labor Market Profile (LMP) uses data from LFS, PEIS, PhilJobNet, PRC, and TESDA to provide a macro view of labor and demand situations.

DOLE-BLE's Jobs and Labor Market Forecast (formerly JobsFit LMI) is a leading report on emerging industries, key sectors, and in-demand occupations.

TESDA

TESDA's LMI report focuses on key sectors, providing trends and issues in labor supply and demand, guiding the development of Training Regulations and TVET programs.

TESDA's skills map incorporates data from various sources, mapping training regulations and identifying emerging and soft skills.

Issue: jobs, broad occupation categories, knowledge, work activities as skills

PhilJobNet and PEIS

PhilJobNet, facilitates online job matching and serves as the platform for PESO employment IS.

PEIS data is locality-specific and provides an opportunity to understand local skills and guide upskilling initiatives.

Issues: The representativeness of the demand for skills, limited capability to provide information (low coverage, issue on the quality of services in PESO)

DTI: Philippine Skills Framework (PSF) Initiative

PSF aims to develop skills frameworks for priority sectors, offering skills maps and technical skills/competencies.

Issues: needs PSOC alignment, dissemination can be improved for better accessibility.

Inputs to the TESDA's Skills anticipation and prioritization of skills requirements (SAPSR) framework

| Elements of the LMIS/SAPSR	Inputs
Data and data sources:	Standard statistics and data sources, Development Plans/Sectoral Roadmaps and Policies/Laws, Skills-specific data sources, Qualitative data sources, Big data
Tools and analytical capacity	Skills foresight, Skills forecast
Institutional arrangements and collaboration	Collaborative Data Collection, Skills-Occupation Mapping, Capacity Building, Real-Time Data Solutions, Communication of Results

Inputs to the TESDA's skills anticipation and prioritization of skills requirements

Note:

⟲ Input within the column

➤ Input to another column

⬯ Output
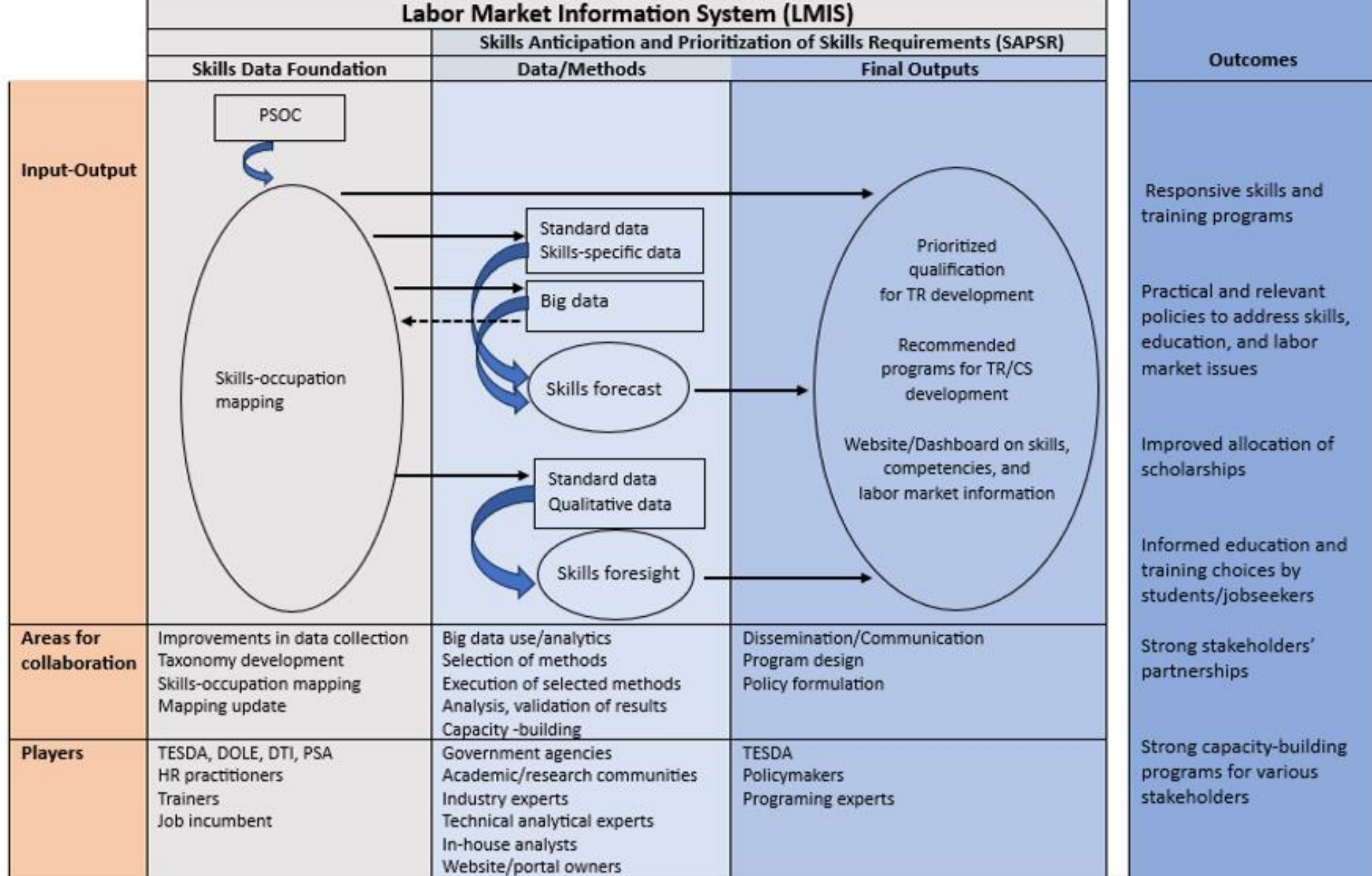
Source: Authors' representation of their inputs to the SAPSR Framework

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Summary and some insights

While the country has good data sources relevant to an SNA initiative and several LMIs are in place, improvements are needed to ensure a relevant and sustainable SAPSR:

- **Establish a system that organizes and classifies skills (i.e., skills taxonomy); Map this with PSOC**

- **Collection of PSOC at higher disaggregation (4 or 5 digit)** in government-initiated surveys/data collection

- **Importance of graduate tracer datasets** are useful in determining the effectiveness of training programs

- **Big data use** can enhance the timeliness and granularity of information; enrich the skills-occupation mapping.

NOTE: Importance of stock-taking regarding available data and human resources as well as capacity-building and multi-stakeholder collaboration at all stages of the SAPSR

Some Insights

DOLE

Oversee the development of skills data foundation, LMIS
- Forge institutional arrangements, international partnerships

Government

Strengthen the PESO Coverage
- PESO partnerships with HEIs in the locality can increase students' awareness of the PESO services and the PhilJobNet-PEIS platform
- LGUs to promote the PESO to businesses in their localities.

Quality of services
- Human resources training and development and enhanced connectivity
- Network effects

DOLE, TESDA, NEDA, and other key agencies

Cultivate a culture of multi stakeholders' collaboration
- Maximize the use of resources and sustain LMIS-SAPSR updating/ improvement initiatives
- Big data use: Needs institutional arrangements and drawing MOAs with partners

Some Insights

DOLE, TESDA, NEDA, and other key agencies

Develop a skills taxonomy as a tool to assign and classify skills across occupations and tasks

- The taxonomy should be anchored to the 4- or 5-digit PSOC
- Skills-occupation mapping requires continuous updating that benefits from stakeholders' inputs.

Agencies collecting LMI data

Use standard classifications (i.e., 4- or 5-digit PSOC) in data collection

- Including standard classifications in data collection initiatives complements the development of skills-occupation mapping.

Government

Institutionalize the collection of the Philippine Identification System (PhilSys) in the administrative data

- powerful tool to match education and employment outcomes when collected at salient entry and exit points
- reduces the need for tracer surveys

Some Insights

DISSEMINATION

SUPPORT

DOLE and TESDA

Improve information dissemination of the LMIS and SAPSR.

- Use website and dashboards with visualization tools and links to other knowledge-generating sources
- Learn from well-established LMIS (e.g., O*NET, ESCO, and ASC)

Proving the usefulness of the LMIS and SAPSR to various players can lead to more support for sustaining the LMIS-SAPSR.

Policymakers

Provide support for capacity building (for sponsoring scholars and bringing international experts to train local talents in using big data is important)

Capacity building is essential at all stages of the SAPSR

Provide continuous support to sustain the LMIS and SAPSR initiative.

- SAPSR is a continuous initiative, and its success hinges on the success of the LMIS.
- Availability of long-term funding for LMIS provides for a well-thought-out data foundation and a coordinated data collection system.

Thank You!

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Service through policy research