Participants in the Conference are invited to review the room document on LMIS projects and express their views as to: (a) whether the topic is of interest to their country; (b) whether their country already has an LMIS in place and whether it is compatible with ILO recommendations and approaches; and (c) whether they consider that this topic should be discussed in greater depth with a view to defining which mechanisms should be put in place to facilitate the implementation process.

Les participants à la Conférence sont invités à examiner le document de séance relatif aux projets SIMT et à exprimer leur point de vue sur les questions ci-après: a) Ce sujet présente-t-il un intérêt pour leur pays?; b) Leur pays dispose-t-il déjà d’un SIMT et, si oui, est-il conforme aux recommandations et approches de l’OIT?; c) Ce sujet devrait-il faire l’objet d’une discussion plus approfondie qui aurait pour but de définir les mécanismes à mettre en place afin de faciliter le processus de mise en œuvre?

Se invita a los participantes en la Conferencia a que examinen el documento de sala sobre los proyectos SIMT y expresen sus puntos de vista en cuanto a: a) si el tema es de interés para su país; b) si su país ya tiene establecido un SIMT y si es compatible con las recomendaciones y planteamientos de la OIT, y c) si consideran que este tema debería discutirse en mayor profundidad con el fin de definir los mecanismos que deberían establecerse para facilitar el proceso de implantación.
1. Introduction to LMIS
2. Implementation framework
3. ILO Support for LMIS
4. LMIS projects overview
5. Concluding remarks
1. Introduction to LMIS
"A network of institutions, persons and information that have mutually recognized roles, agreements and functions with respect to the production, storage, dissemination and use of labour market information and outcomes, so as to maximize the potential for relevant policy application and program formulation and implementation".
Labour Market Information System

3 functions (F)

Labour Market Analysis
Monitoring and Policy Reporting
Coordination and Information Exchange

4 components (C)

1. Collection and compilation of data and information
2. Information repository (data and metadata)
3. Analytical capacities and tools
4. Institutional arrangements and networks

Level 1: Monitoring indicators
Level 2: Relationship Analysis
Level 3: Econometric models and projections

Sources:
- Household surveys
- Establishment surveys
- Administrative records
Labour Market Information System uses

For decision making: provides policy makers with up-to-date and forward-looking information for the formulation and monitoring of policies and actions that have an impact on the workforce and the labour market.

It is a system of alerts about possible gaps between labour supply and demand.

Informs individuals about employment opportunities and companies about the available workforce.

Informs training institutions of unmet training needs.
LMIS Data sources
C1. Data collection

► No single data source can satisfy all needs.
► The LMIS uses all available sources... but the strengths and limitations of each must be taken into account.
► The use of labour statistics from different sources over time requires consistency in terms of:

- Concepts
- Definitions
- Classifications
- Reference periods
- Methodologies
C1. Data collection

MICRODATA → CALCULATION → DERIVED INDICATORS → ETL → STORE & DISSEMINATE → ANALYZE & REPORT

- Input data
- ODRC
- User data

- CSV file
- Excel file
- LMIS.Stat
- DSD

ilo.org/icls
C2. Data repository
C3. Analytical capacity

THREE LEVELS OF ANALYSIS

Basic or first level
It consists of the monitoring of a defined set of indicators.

Second level
It analyses the relationships within the labour market and with the economy in general. It requires both quantitative and qualitative techniques.

Third level
It produces detailed and consistent projections of the development of the labour market. Requires the development of comprehensive econometric models.

KEY PROFILES

- Statistics
- Computers
- Economists
- Sociologists
- Econometrists
C4. Institutional arrangements and networks

- Necessary to ensure access to data
- Without data there is no information and no analysis possible
- Necessary to coordinate a consistent dissemination
- To facilitate the dialogue between users and producers
C4. Governance example

MoL (Ministry of Labour)
NSO (National Statistical Office)
SC (Steering Committee)
DA (Data Administrator)
SA (System Administrator)

MoL is directed by NSO.
MoL advises SC.
SC manages LMIS.
MoL and NSO co-direct agencies.

LMIS provides services to SA and DA.
SA and DA provide services to LMIS.

MoL provides advice to SC.
SC integrates data from agencies.

MoL provides data to SC.
SC manages data provided by agencies.

Legend:
- Strategy
- Data
- Management

Abbreviations:
MoL: Ministry of Labour
NSO: National Statistical Office
SC: Steering Committee
DA: Data Administrator
SA: System Administrator

Governance example
Information flow

EVIDENCE BASED POLICY MAKING

PRODUCTION

DATA MODELLING

PREPARATION (ETL)

DATA STORAGE

ANALYSIS

DISSEMINATION

Input data

LM INFORMATION
2. Implementation framework
LMIS Project principles

- This is **YOUR** Project, not ILO’s
- We are here to **assist you**, at your own pace
- LMIS is **not an IT Project**
- It is important to upload the stock of indicators, but more important is to ensure their **sustained flow**
- Output’s **quality** fully depends on input’s quality
- SDMX is an enabler for data harmonization,
  
  …and **data harmonization is essential** for the LMIS
Implementation checklist for a national LMIS

- Submit an official request to ILO
- Conduct an assessment of data availability and institutional readiness
- Sign a Memorandum of Understanding (MoU) with ILO
- Prepare and submit the project document
- Formulate a governance structure and allocate specific operational roles
- Initiate a data warehouse platform
- Organize targeted workshops for data managers and IT focal points to enhance understanding of data production, modelling, preparation, and platform integration
- Compile, prepare, and upload existing data to the platform
- Tailor and configure the LMIS platform for live production
3. ILO Support for LMIS
LMIS Support from the ILO Team

Methodological framework
- Standardized framework in LMIS implementation, aligning with international standards like SDMX
- Ensure consistent, comparable data and adherence to best practices

Stakeholder engagement
- Assist in identifying and engaging key stakeholders for LMIS projects
- Help establish governance structures and operational roles

Capacity building
- Workshops are provided to strengthen the capabilities of the involved stakeholders

Collaborative tools and platforms
- Data toolkits and software solutions have been developed inhouse or shared by other international communities

Technical assistance
- System architecture, data platform solutions, data availability assessment, and other technical tasks
3.1 Capacity building activities
(Data Management)
Data Production
SDMX & Data Modeling
Data Preparation & ETL
Data Production Workshop

**Objective:** Equip data providers and data analysts with skills to produce and consolidate labour market indicators from various sources.

**Activities:**
- Analysis of the available data sources
- Proposed list of Basic (32) and Extended (52) indicators
- From raw data to the aggregated indicators

**Duration:** 3-5 days, virtual & in-person;
- If administrative registries are used, a special consultancy should be carried out

**Outcome:** Finalize the Master plan and the aggregated LM indicators in Excel/CSV
Data Production
SDMX & Data Modeling
Data Preparation & ETL
SDMX & Data Modeling Workshop

**Objective**: Equip data managers and analysts with skills to model labour market indicators in SDMX.

**Activities**:
- Develop a *harmonized* single concept scheme
- Consolidate varied source code lists
- Master data table modeling within SDMX

**Duration**: 3-5 days, in-person preferred.

**Outcome**: Finalize the structural metadata and upload to .Stat platform.
**Objective:** Equip data managers, system admins, and data providers with skills to prepare data and reference metadata in SDMX format and upload to the central warehouse.

**Activities:**

- **Extraction:** Retrieve and stage diverse data, align indicators with master plan, and finalize consistent data format
- **Transformation:** Centralize data, use SMART tool for SDMX-CSV transformation, archive mapping files, and automate with SMART.cmd tool
- **Loading:** Channel data to .Stat platform via API, synchronize with reporting frequency, and monitor uploads

**Duration:** 5 days, with at least 3 days of hands-on exercise.

**Outcome:** Mastery in data preparation for the LMIS platform, ensuring seamless data uploads.
3.2 LMIS Toolkit
LMIS Data Platform

As one of the key components of LMIS, .Stat Suite is,

- A data warehouse
- A dissemination system
- A data lifecycle management system
- Fully SDMX compliant
- Open-source and SIS-CC community based development

https://siscc.org/
https://sis-cc.gitlab.io/dotstatsuite-documentation/
IT Technical Support

During LMIS implementation, ILO provides technical support and training in,

- System design and assessment
- Deployment and configuration of LMIS.Stat
- System and user administration
- IT and infrastructure management
- Troubleshooting, maintenance, and upgrade
In-house Developed Applications

- **SDMX Constructor**
  - Desktop tool for creating and editing SDMX structural metadata elements like DSD, Codelist, and Dataflow.
  - It functions during the structural data modeling phase and connects directly with the .Stat DLM via its SDMX API.

- **SMART (Statistical Metadata-driven Analysis & Reporting Tool)**
  - Desktop tool for data and metadata preparation and compatible with .Stat.
  - Users can then map SDMX concepts to variables in input files, whether microdata or aggregate data.

- **SDMX Excel Add-in**
  - Facilitating the download or upload of data and metadata from any SDMX registry, including the LMIS platform.
4. LMIS projects overview
LMIS Project status

Production

- Chile: https://stat.ine.cl/?lang=es
  Phase 2 to be launched in November
- El Salvador: https://datasimel.mtps.gob.sv/
  Phase 2 development ongoing
- Uruguay: https://www.simel.mtss.gub.uy

Final stage

- Botswana
- Namibia
- South Africa
LMIS Project status

Work in progress - Next activity

- Cape Verde - Data production workshop
- Djibouti (BRMM2) - MoU and ProDoc
- Jordan – SDMX & data modelling workshop
- Malawi - Data production workshop
- Morocco – Data production workshop / Master plan
- Mozambique – Master plan

- Panamá – Master plan
- Saudi Arabia – Master plan
- Seychelles – Data preparation & ETL workshop
- Uganda (BRMM2) – Master plan
- Zambia – Master plan
- Zimbabwe – Master plan
- SADC (SAMM) - MoU and ProDoc
LMIS Project status

Planning (Official request received)
- Costa Rica
- Côte d’Ivoire
- Dominican Republic
- Ethiopia (BRMM2)
- Guatemala
- Lesotho
- Madagascar
- Nigeria (SKYE / GIZ)
- Paraguay

On hold
- Montenegro
- Peru
- Ukraine
- CARICOM

4
On hold

9
Planning
5. Concluding remarks
Conclusions

- Labour market information are necessary for the formulation and monitoring of public policies.
- ILO’s implementation roadmap focuses on building capacities to ensure the sustainability of the project.
- The tools provided are open source, supported by official statistics producers which ensures sustainability.
- Data modelling methodology, developed at ILO, leverages SDMX features to facilitate data harmonization.
- Upgrade to SDMX 3.0 and adopting semantic versioning will facilitate structural metadata maintenance.
- It is necessary to incorporate new tools and methodologies for reference metadata authoring.
- A dynamic dashboards generator based on SDMX will be incorporated into the LMIS toolkit.

In summary, it is envisaged that LMIS implementation projects will continue to grow in the coming years, while the Office will continue working to improve the methodology and tools with the aim of making it easier for the constituents implementing the systems, as well as improving their end-users’ experience, and ultimately enable evidence-based labour policies to be defined and favour transparency.
Thank you!