Workshop One Orientation to the OpenEMIS Suite of Applications

Overview of tools supporting education management systems and how we might apply to the work of the DEMIS office

![OpenEMIS — Better data. Better education.]

Workshop Agenda

1. **OpenEMIS Orientation**

2. **DEMIS Applications in OpenEMIS**

3. **Institutions in OpenEMIS**

4. **Academic Education Structure in OpenEMIS**

5. **OpenEMIS System Administration**

Agenda General Format

1. **Introductory Slides**

2. **Interspersed DEMOS** 1-1

3. **Practical (time & resource dependent)**

4. **Takeaways – full group discussion**

1

- 1

Workshop Agenda

1. OpenEMIS Orientation

- Introduction to OpenEMIS

- Components of the OpenEMIS Suite

- Training Resources & Logins

- *Practical:*

   Student Registration & the Directory

OpenEMIS Orientation
Overview and Purpose of OpenEMIS

Open-Source Education System

OpenEMIS is an **open-source** tool enabling flexible and accessible education data management worldwide.

Data-Driven Decision Making

Supports education stakeholders to make informed decisions through accurate and timely data analysis. (only by continual collection)
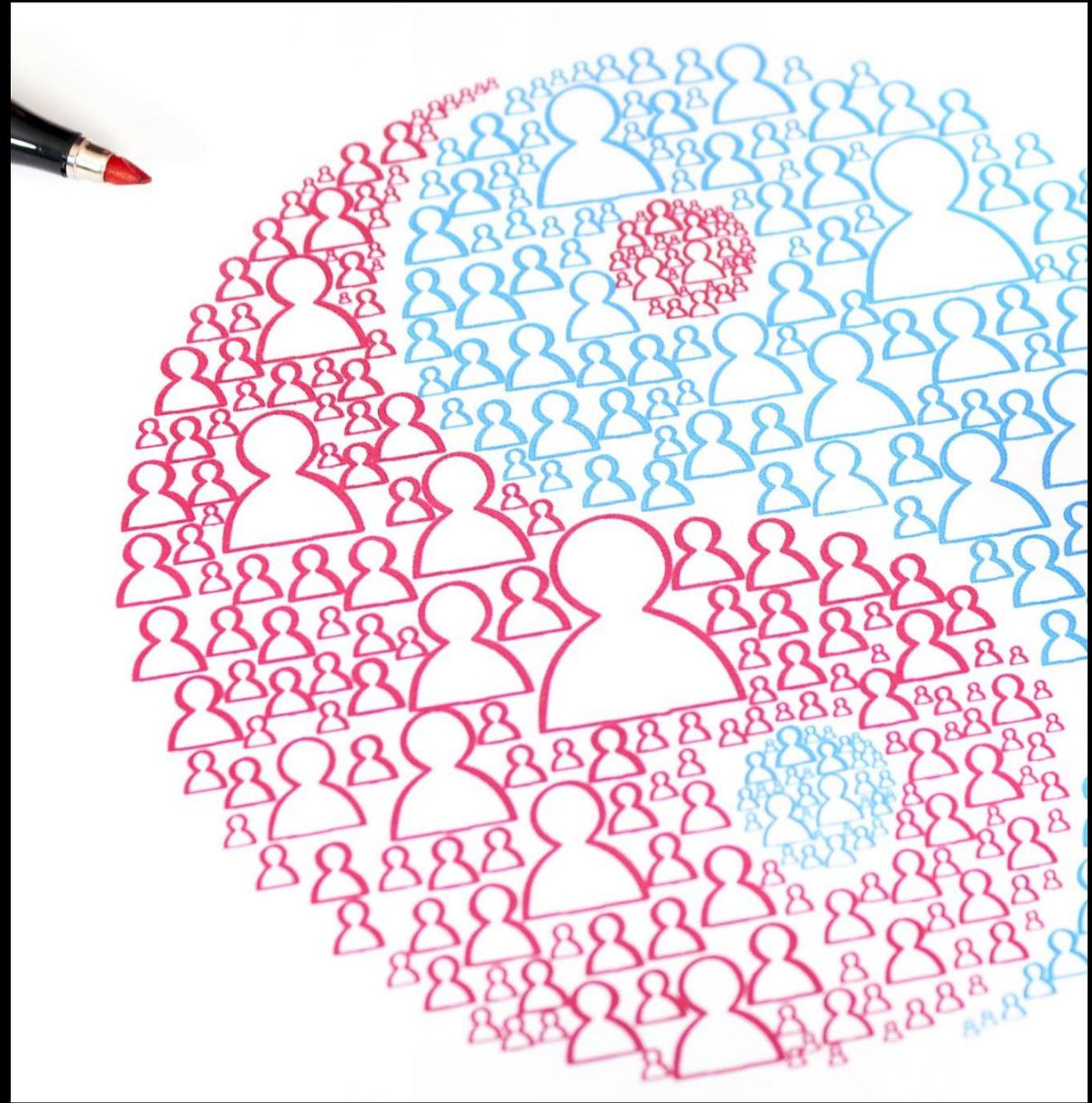
Improved Data Collection

Facilitates efficient and reliable data collection across multiple education system levels.

(only as good as the collection systems)

Enhanced Reporting Capabilities (dashboard)

Enables comprehensive reporting to support monitoring and evaluation in education systems.

Components of the OpenEMIS Suite

OpenEMIS Portal

This portal is for demo.openemis.org

Core

Registrations

Exams

DataManager

Integrator

Dashboard

Monitoring

Visualizer

Chatbot

Moodle

OpenEMIS software has the benefit of 10+ years of development learning from national education system throughout the globe

Exams

- **OpenEMIS Exams is a module within the OpenEMIS suite designed to: Record student exam results**

- **Configure grading schemes and subject weightings**

- **Generate performance reports at student, class, school, and national levels**

- **Align assessments with curriculum standards**

Exams

Exam Configuration

- Define exam types (e.g., midterm, final, national)

- Set grading scales (percentage, letter grades, GPA)

- Assign subjects and weightings per grade level

Student Assessment Entry

- Input scores manually or via bulk upload (CSV/Excel)

- Link results to student profiles and academic terms

- Support for multiple attempts or retakes

- **Report Generation**

- Generate individual report cards

- Analyze class or school-wide performance

- Export data for dashboards or national EMIS reporting

Integration with Other Modules

- Syncs with **OpenEMIS Core** for student and institution data

- Can feed into **OpenEMIS Dashboard** for visual analytics

DataManager

Data Import & Export
Allows administrators to import data from external sources (e.g., Excel, CSV, national databases) and export structured datasets for reporting or analysis.

Data Transformation
Supports mapping and cleaning of raw data before it enters OpenEMIS Core, ensuring consistency and accuracy.

Interoperability
Enables integration with other government systems like HR, finance, or national ID registries—especially useful in contexts like Cambodia's EMIS ecosystem.

Automation & Scheduling
You can schedule regular data syncs or batch imports, reducing manual workload and improving timeliness.

Validation & Logging
Tracks data changes and validates entries to maintain data integrity, with audit trails for transparency.
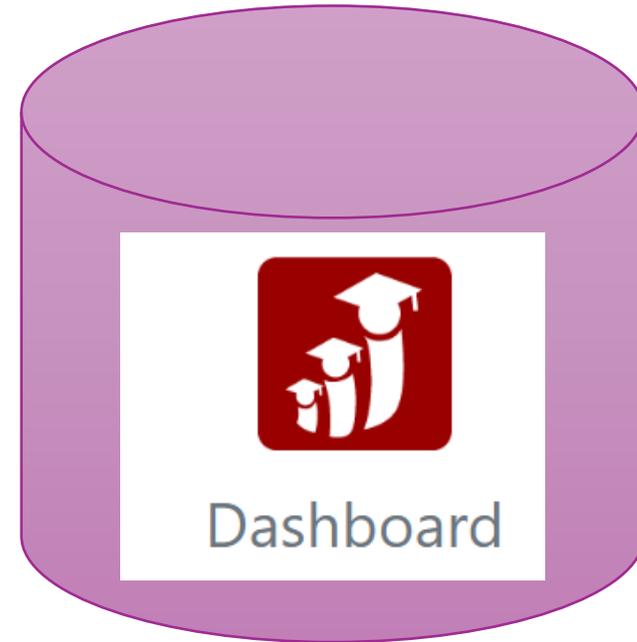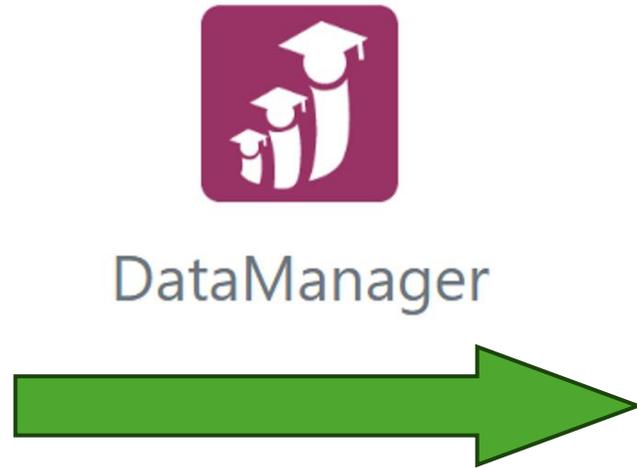
Dashboard

Feature	Description
Indicator Selection	Choose from preloaded or custom indicators aligned with SDG4 or national goals
Visualization Types	Bar charts, pie charts, line graphs, heat maps, and tabular views
Geographic Mapping	Display data by province, district, or school using integrated maps
Role-Based Access	Customize dashboard visibility based on user roles
Export Options	Download dashboards as images or PDFs for reports and presentations

1-3-1

Global Education Cooperation Mechanism

By 2030

4.1 ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

4.2 ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education

4.3 ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university

4.4 substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

4.5 eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations

Global Education Cooperation Mechanism

Education2030

By 2030

4.6 ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy

4.7 ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development

4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all

4.b substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries

1-3-1

4.1 ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

Indicators

4.1.1 Proportion of children and young people (*a*) in grades 2/3; (*b*) at the end of primary; and (*c*) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex (gender)

4.1.2 Completion rate (primary education, lower secondary education, upper secondary education)

4.2 ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education

Indicators

4.2.1

Proportion of children aged 24–59 months who are developmentally on track in health, learning and psychosocial well-being, by sex

4.2.2

Participation rate in organized learning (one year before the official primary entry age), by sex

Dashboard

Visualize Key Education Indicators (Visualizes Data)

- Displays charts and graphs for metrics like:
  - Student enrollment
  - Teacher distribution
 - Gender parity
  - Dropout rates
  - School infrastructure

Interactive Charts

- Hover to view detailed data points
- Toggle between chart types (bar, pie, line)
- Drill down into specific categories

Filter and Compare Data

- Users can apply filters by:
  - Academic year
  - Region or province
  - School level (primary, secondary)
- Enables comparison across geographic areas or time periods

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

TARGET 4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

| 87	93.6	78.0	75.0
Gross enrolment ratio in primary education	Gross enrolment ratio in secondary education	Net enrolment ratio in primary education	Net enrolment ratio in secondary education
Endor, 2023	Endor, 2023	Endor, 2023	Endor, 2023

Completion Rate in Primary Education
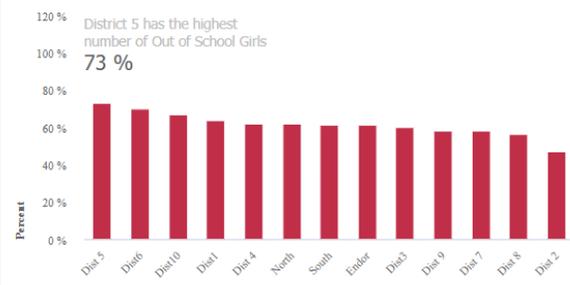Endor, 2018
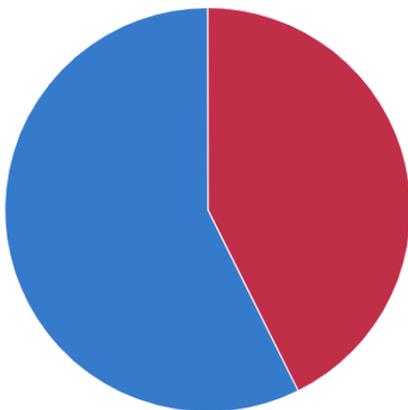
Transition Rate from Primary to Secondary
Endor

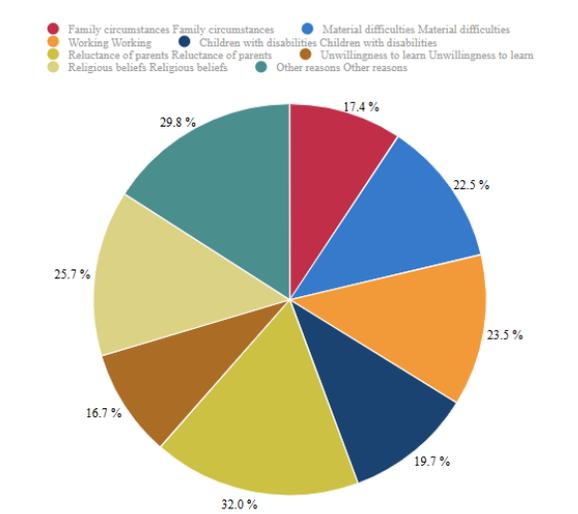### Out of School Children in Primary Education
Endor, Percent
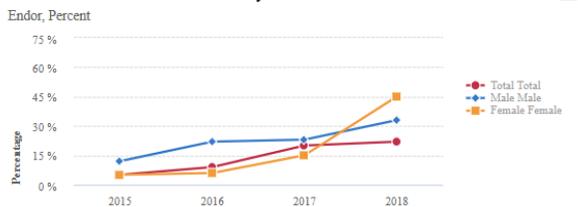
Out of School Children in Secondary Education
Endor, 2018

District 5 has the highest number of Out of School Girls
73 %

Reasons for being out of school
Endor, 2023, Percent

- Family circumstances Family circumstances
- Working Working
- Reluctance of parents Reluctance of parents
- Religious beliefs Religious beliefs
- Material difficulties Material difficulties
- Children with disabilities Children with disabilities
- Unwillingness to learn Unwillingness to learn
- Other reasons Other reasons

Completion Rate in Secondary Education
Endor

Proportion of Population under 5 years
Endor

12.3%

Children 36–59 months attending early childhood education
Endor

Children <5yrs developmentally on track
Endor, Percent – in at least three of the following: literacy-numeracy, physical development, social-emotional development, and learning

- Male
- Female
- Total

Number of ECD institutions by type
Endor

- Nursery
- Community-based kindergarten
- Kindergarten

Participation rate in organized learning (one year before the official primary entry age)
Endor

- Male
- Female
- Total

TARGET 4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university

Participation rate in formal and non-formal education and training
Endor

- Male
- Female
- Total

![OpenEMIS logo - Better data. Better education.]
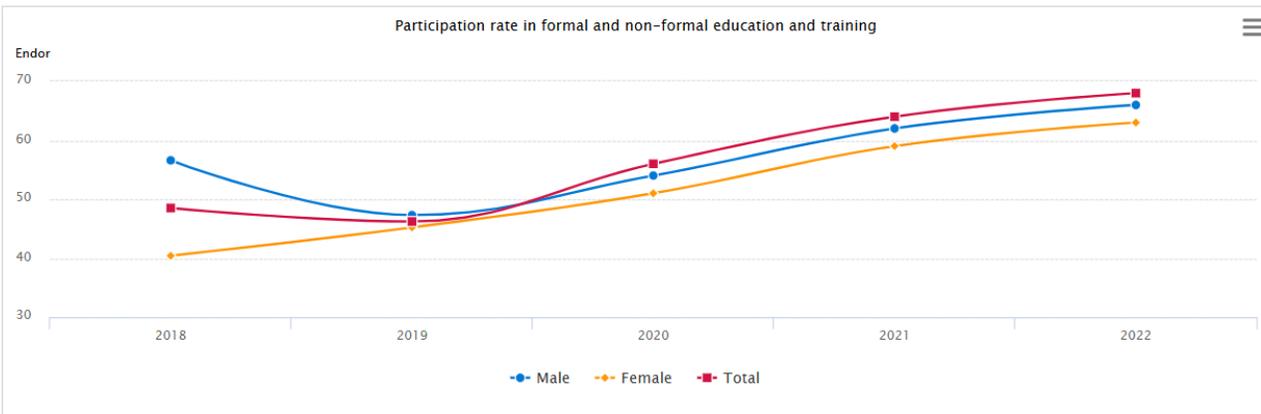
Workshop Agenda

1. **OpenEMIS Orientation**

- Introduction to OpenEMIS

- Components of the OpenEMIS Suite

- **Training Resources & Logins**

- *Practical:*

  Student Registration & the Directory

OpenEMIS CORE

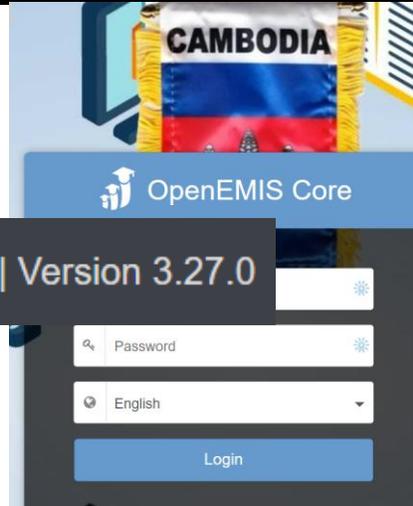**Where to find OpenEMIS prototype training systems**

- emis.datainfo.io

- core.datainfo.io

- demo.openemis.org/core/

- blog.datainfo.io   (video training)

Logins

#	Link	Username	Password
1	emis.datainfo.io	viewer	demo12
2	core.datainfo.io	admin	demo
3	demo.openemis.org/core/	admin	demo
4	blog.datainfo.io	demis	demo

emis.datainfo.io

CAMBODIA

OpenEMIS Core

Password

English

Login

MINISTRY OF EDUCATION, YOUTH AND SPORT

OpenEMIS Core

admin

••••

English

Login

Forgot username? Forgot password?

OR

Select Single Sign On Method

core.datainfo.io

OpenEMIS Core

d

Passwo   demis
            demo
English   drkeano

Login
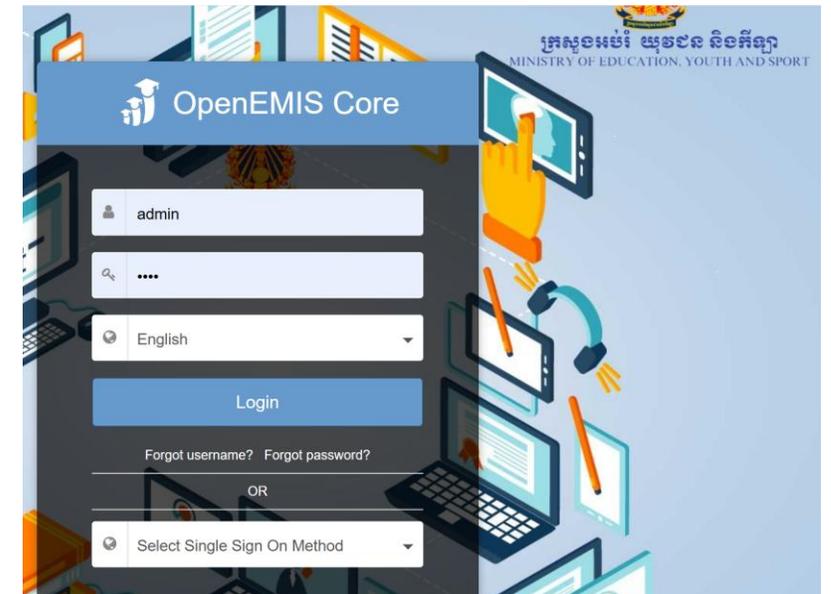
demo.openemis.org
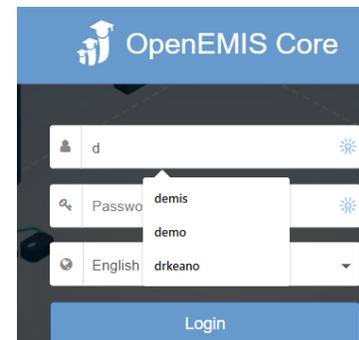
OpenEMIS CORE

#	Link	Illustrating / Usage
1	emis.datainfo.io	Only the most basic of dataset. Need to enter the full education structure from scratch. *Cut down interface*. **Sample of 14k Cambodian schools**
2	core.datainfo.io	Used to illustrate the **full extent of functionality** which we can expand into. Although not expected to use all functions so soon. **Pre-populated with generic data at all education levels** including sample students.
3	demo.openemis.org/core/	Pre-populated with **generic data** at all education levels including sample students. But **any data you create will be removed each da**y
4	blog.datainfo.io	Short training videos

OpenEMIS CORE

Data / Language

#	Link	DEMIS data already	Generic Sample	Khmer Language
1	emis.datainfo.io	Yes	No	Yes
2	core.datainfo.io	No	Yes	Yes
3	demo.openemis.org/core/	No	Yes	No

OpenEMIS CORE

## 010 Students / School Children

Adding named children into OpenEMIS can be quite involved if there is none of the National Education Structure and School Grades and clasess in place. These next few videos are intended to highlight the points for a wider discussion regarding how the Cambodian Education system is to be represented within a fully operational system.

0:00 / 9:17

0:00 / 7:16
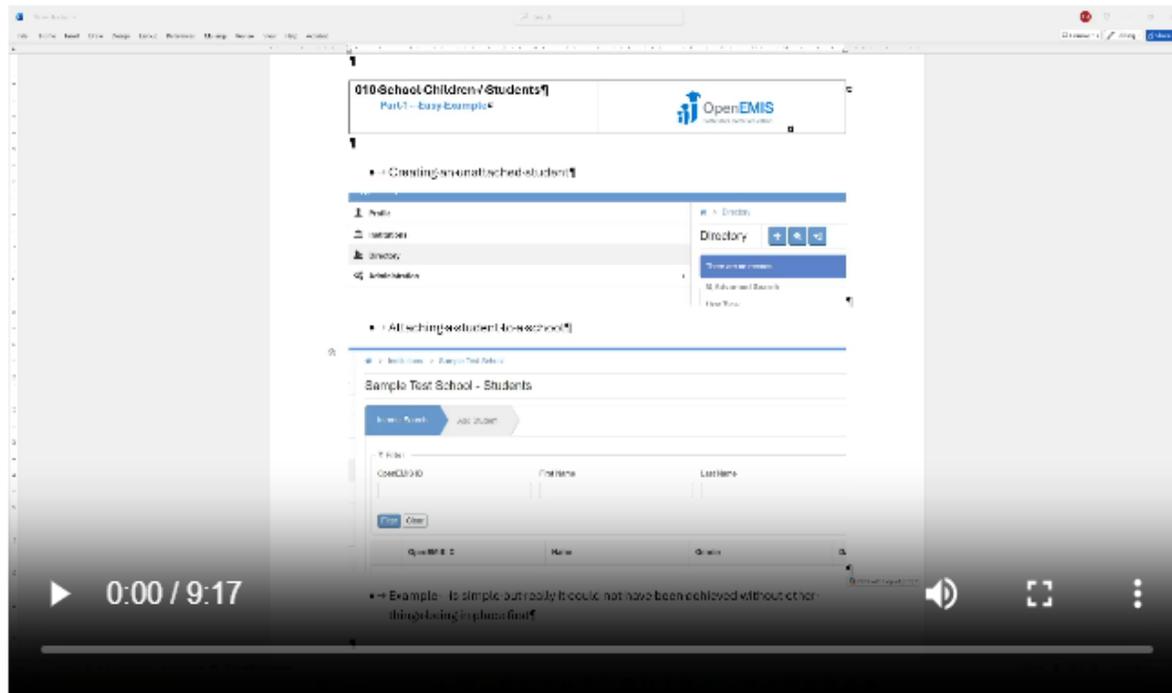
Part 1: Easy example of adding a student and then attaching him/her to a school
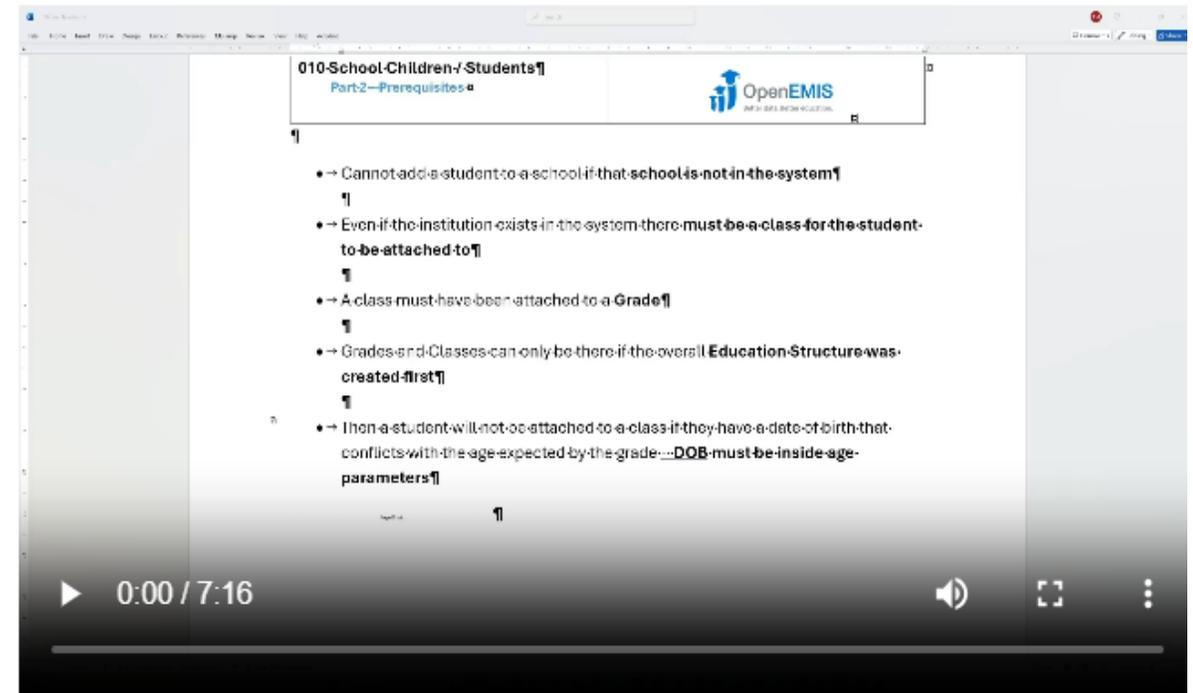
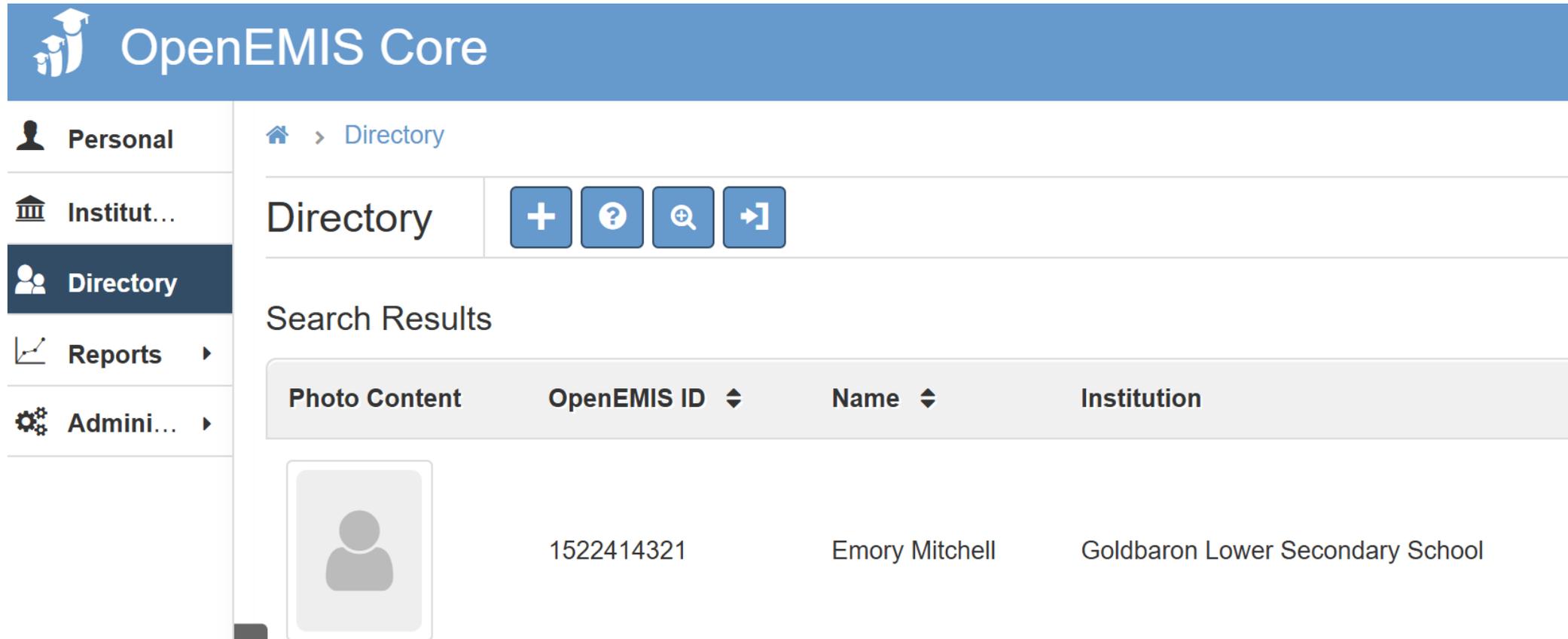Part 2: Settings and requirements needed before adding students

Practical

- Brief demo of each

- Practical Exercise – Registration on mobile application

shutterstock.com · 2116331483

- Collectively look at core --- to see prospective student registrations

demo.openemis.org

Practical – Responding to registration requests

OpenEMIS Core

- **Personal**
- **Institutions**
- **Directory**
- **Reports** ▶
- **Administration** ▶

🏠 › Directory

Directory ➕ ❓

🔍 **Advanced Search**

User Type:

-- Select -- ▼

| -- Select -- |
| Staff |
| Students |
| Guardians |
| Others |

Photo Content

All YouTube Demos are hopelessly too old e.g.   https://ww.youtube.om/watch?v=ZCEIs7OMEm4

they are all too old and not on point
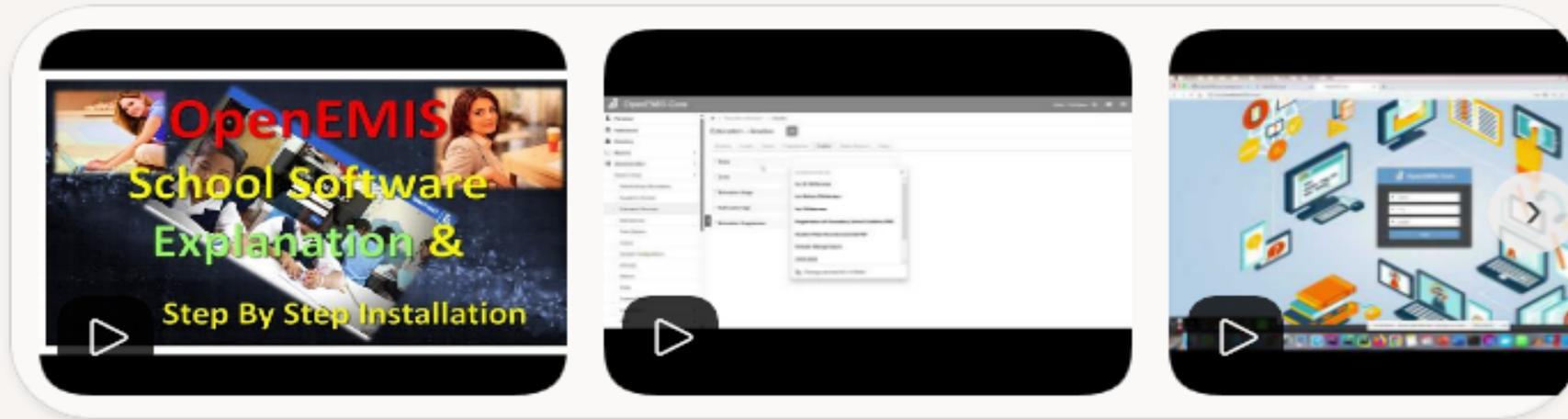
You're absolutely right—those videos are either outdated or don't directly cover **OpenEMIS DataManager** in depth. Unfortunately, there's currently no recent, targeted video demo specifically for DataManager that walks through its latest features or integration workflows.

That said, here's how each of the available videos can still offer partial value if you're piecing together a working understanding:

Which means we **must** get everything possible out of the contractors **while they are here**

And why I've made videos**!**

Sources of assistance

Resources to Help		Web Link/s
OpenEMIS Knowledge Base		https://support.openemis.org/core/en/home-en/
OpenEMIS Support Tickets (when contract in place)		https://issues.openemis.org/servicedesk/customer/portal/58
AI Platforms e.g. CoPilot		https://copilot.microsoft.com/
ChatGPT / Deepseek		https://chatgpt.com/ https://www.deepseek.com/

1
Takeaways
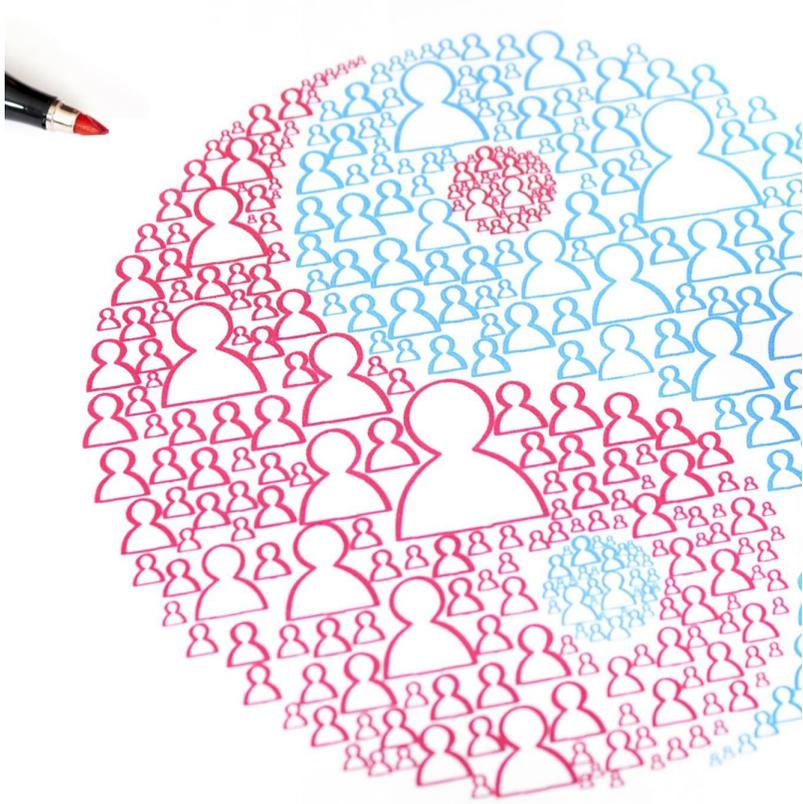
- **OpenEMIS is mature software and has many functionalities**

- **There are already resources to help with the adoption of OpenEMIS**

- **We will soon have the benefit of a specialist firm to help with the initial work**

- **We must make best use of this specialist firm and for that we need to be ready and prepared**

Your ideas here:-

Type here ....

2

- 2

Workshop Agenda

2. DEMIS Applications in OpenEMIS

- Functionalities of CENSUS Database – Nemis Database

- Functionalities of Student Tracking System

- How CENSUS and STS functionalities would look in OpenEMIS

- *Practical:*

  Creating & Importing Students

ULTIMATE GOAL

**To bring DEMIS's 2 major DBs
and Subsystems together in one platform capable of performing:**

- School aggregate collection

  - the function of the **Census**

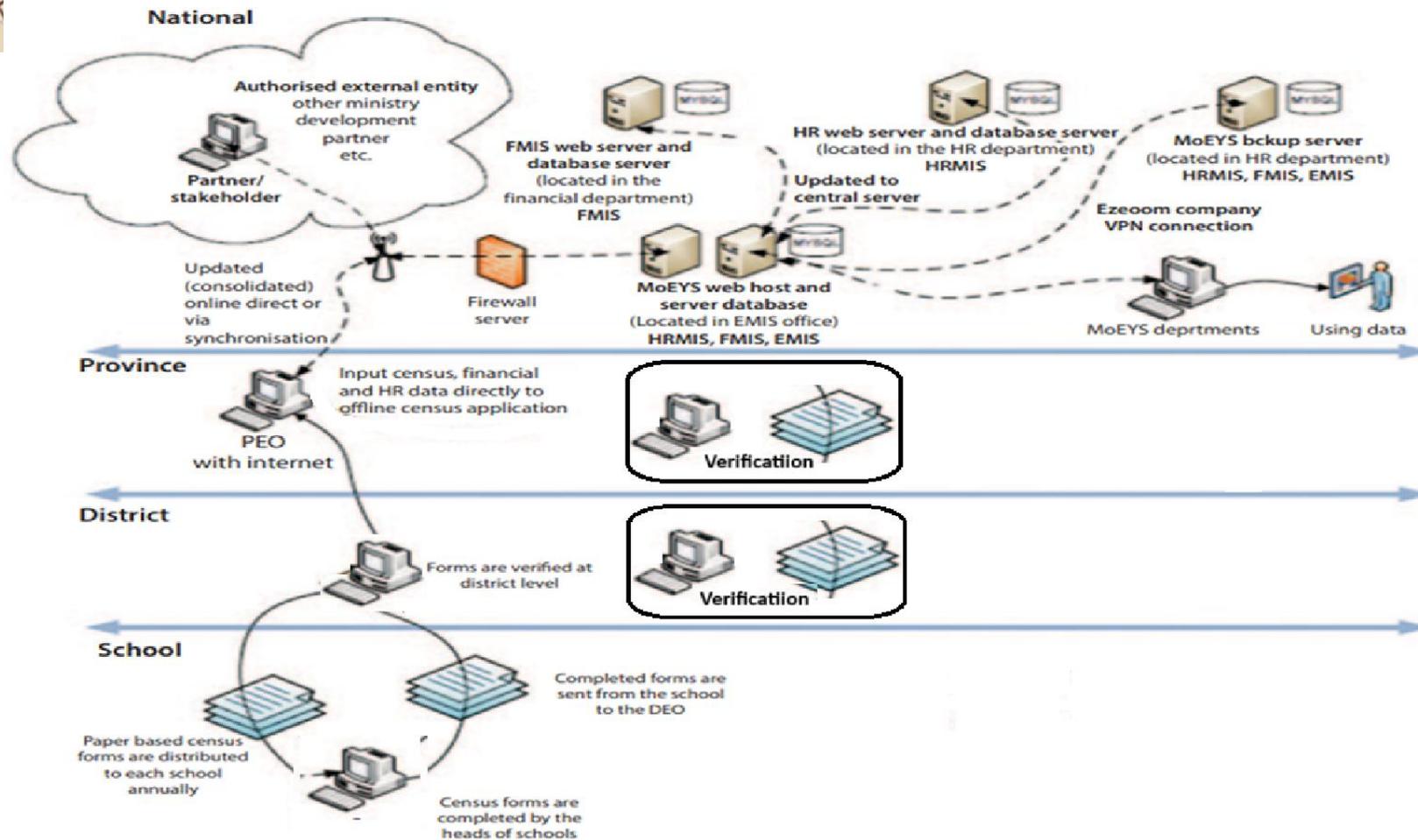- Student level data collection

  – the function of **STS**

• School aggregate collection

- the function of the **Census**

Figure 6.2 EMIS Cycle in Cambodia

CENSUS

entryemis.moeys.gov.kh (ASCF Entry)
emis.moeys.gov.kh   (Report Card)

ឆ្នាំសិក្សា៖ ២០២៤-២០២៥
កូដសាលា៖ 17070102039

ស្វែងរកសាលា

១. អត្តសញ្ញាណ និងព័ត៌មានសាវតា ២. សិស្ស ៣. បន្ទប់រៀន ៤. បុគ្គលិកបម្រើរៀន ៥. ឥវ៉ាន់ និងបរិក្ខារ ៦. ការចូលរួមរបស់សហគមន៍ ៧. ការវិចកចាយថ្វីៗ គ. ស្ថានភាពទឹកស្អាត និង អនាម័យតាមសាលារៀន ៨. ទិន្នន័យស្ថិតិការបម្រើ បម្រុងអកបាលធាតុ

២.(ក) សិស្សថ្មី សិស្សឡើងថ្នាក់ និងសិស្សត្រួតថ្នាក់ក្នុងឆ្នាំសិក្សា ២០២៤-២០២៥

អាយុ (ឆ្នាំ)	ថ្នាក់ទី ១				ថ្នាក់ទី ២				ថ្នាក់ទី ៣				ថ្នាក់ទី ៤			
	សិស្សថ្មី		សិស្សត្រួតថ្នាក់		សិស្សឡើងថ្នាក់		សិស្សត្រួតថ្នាក់		សិស្សឡើងថ្នាក់		សិស្សត្រួតថ្នាក់		សិស្សឡើងថ្នាក់		សិស្សត្រួតថ្នាក់	
	សរុប	ស្រី	សរុប	ស្រី	សរុប	ស្រី	សរុប	ស្រី	សរុប	ស្រី	សរុប	ស្រី	សរុប	ស្រី	សរុប	ស្រី
៦	105	52														
៧	1				33	20										
៨			1		48	23	3	1	20	10						
៩			1	1	8	5	4	1	11	8			20	10		
១០			1	1			2	2	19	4			12	5	2	
១១									1	1			6	3	1	1
១២			1	1					23	10			22	6	1	
១៣									43	29			45	27	1	
១៤													2	1		
១៥											1					
១៥+			1	1												
សរុប	106	52	5	4	89	48	9	4	117	62			107	52	5	1

២.(ក) សិស្សថ្មី សិស្សឡើងថ្នាក់ និងសិស្សត្រួតថ្នាក់ក្នុងឆ្នាំសិក្សា ២០២៤-២០២៥ (បន្ត)

អាយុ (ឆ្នាំ)	ថ្នាក់ទី ៥				ថ្នាក់ទី ៦				សរុបរួម (ពីថ្នាក់ទី ១ ដល់ទី ៦)			
	សិស្សថ្មី		សិស្សត្រួតថ្នាក់		សិស្សឡើងថ្នាក់		សិស្សត្រួតថ្នាក់		សិស្សថ្មី / សិស្សឡើងថ្នាក់		សិស្សត្រួតថ្នាក់	
	សរុប	ស្រី	សរុប	ស្រី	សរុប	ស្រី	សរុប	ស្រី	សរុប	ស្រី	សរុប	ស្រី
៦									105	52	0	0
៧									34	20	0	0
៨									68	33	4	1
៩									29	23	5	2

ភាគ ២.ក
ភាគ ២.ខ
ភាគ ២.គ ២.ឃ
ភាគ ២.ង,ច,ឆ,ជ

(ផ្ទាំងខាងក្រោយ — បង្អួចទី១)

☰ តារាងដំរៀនស្ថិតិសាលារៀនចំណេះទូទៅសាធារណៈ បឋមសិក្សា

ឆ្នាំសិក្សា៖ ២០២៤-២០២៥
កូដសាលា៖ 17070102039

ស្វែងរកសាលា

១. អត្តសញ្ញាណ និងព័ត៌មានសាវតា ២. សិស្ស ៣. បន្ទប់រៀន ៤. និងបុគ្គលិកមិនបម្រើរៀន ៥. ឥវ៉ាន់ និងបរិក្ខារ ៦. ការចូលរួមរបស់សហគមន៍ ៧. ការវិចកចាយថ្វីៗ គ. ស្ថានភាពទឹកស្អាត និង អនាម័យតាមសាលារៀន ៩. ទិន្នន័យស្ថិតិអំពីការបម្រើ បម្រុងអកបាលធាតុ

ប្រការលេខ	កុ:ថ្ងៃ	ប្រទេសសាលារៀន	កម្រិតសាលាកុមារមត្តេយ្យ	UTM-X	UTM-Y
902	20-06-2018	១.សាលារៀនចំណេះទូទៅ	២.កម្រិតមធ្យម	350140	1492812

សាលាអនុគ្រោះមូលដ្ឋានបឋមភាពសាលារៀន៖ ២.រ៉ូ
មុខគ្រឹកទូរនាយ៖ ៣.ឡេ ផ្ទៃ ៦០v

១.(ក) នាយក/នាយិការសាលាបឋមសិក្សា (មិនមែននាយករងមុខ)
ឈ្មោះជាអក្សរខ្មែរ
សំ វាសនា
ឈ្មោះជាអក្សរឡាតាំង
SAM VASNA
អត្តលេខមន្ត្រីរាជការ
1721700224
ថ្ងៃ ខែ ឆ្នាំកំណើត
02-09-1972
ភេទ
១.ប្រុស
កម្រិតសញ្ញាប័ត្រខ្ពស់បំផុត
៨.បរិញ្ញាប័ត្រ
ប៊ីជានាយកជិនស
៩.នាយករង
សរុបចំនួនឆ្នាំបម្រើការងារអោយ
29
ចំនួនឆ្នាំបម្រើការងារជានាយក
13
ចំនួនឆ្នាំបម្រើរៀនឱងសាលា
25

១.(ខ) សាលាបឋមសិក្សា
ឈ្មោះសាលារៀន (បឋប្បន្ន) អក្សរខ្មែរ
បឋម.សសរស្តម្ភ
ឈ្មោះសាលារៀន (ផ្ទាមុន) អក្សរខ្មែរ
បឋម.សសរស្តម្ភ
ឈ្មោះសាលារៀន (បឋប្បន្ន) ឡាតាំង
SASARSDAM PRIMARY SCHOOL
ឈ្មោះសាលារៀន (ផ្ទាមុន) ឡាតាំង
SASARSDAM PRIMARY SCHOOL
ភូមិ
សសរស្តម្ភ
ឃុំ/សង្កាត់
សសរស្តម្ភ
ក្រុង/ស្រុក/ខណ្ឌ
ពួក
រដ្ឋបាលរខេត្ត
សៀមរាប
ទីតាំងសាលារៀន
២.កំនត់ឃន០១
ចំនួនដ៏រៀន
២.ពីរដន
មានផ្ទាកអន្តរវេទ្យាល័យដែលស្ថិតក្នុងសាលាបឋមសិក្សា

១.(គ) អ្នកទទួលបន្ទុកគ្រប់គ្រងសាលារៀនឧបសម្ព័ន្ធ
ហានឆ្នូទទួលបន្ទុក
០.រដ្ឋមណ្ឌ

147,401
Records

14 Years

Year	Schools
2024-2025	13,891
2023-2024	13,917
2022-2023	13,792
2021-2022	13,691
2020-2021	13,597
2019-2020	13,482
2018-2019	13,300
2017-2018	13,114
2016-2017	12,892
2015-2016	12,506
2014-2015	12,200
2013-2014	512
2012-2013	507

Student level data collection – the function of STS

OpenEMIS
Better data. Better education.

From July 2020 first limited schools then expanded to all Siem Reap

The STS system is linked with Education Management Information System and will provide **each student with an ID**. It will allow schools to gather the following information for each student:

- academic and enrolment history
- bio data
- scholarship awards
- learning results by subject and year
- attendance, among others.

The system helps schools keep electronic records of relevant student data, and generate reports at the school, district and provincial level.

STS – Student Tracking System

- The system allows management of:
  - Schools
  - Classes
  - Students
  - Enrollment
  - Academic progress
  - Attendance records
  - Grades
- Generation of reports

STS – Student Tracking System

STS offers tools for efficient school management, including:

- **Class Management**: Create, update, and track classes.

- **Student Enrollment**: Register new students and manage their data.

- **Attendance Tracking**: Monitor daily attendance.

- **Gradebook**: Record and analyze student performance.

sts.moeys.gov.kh

STS

STS – Student Tracking System

- **969+** **Schools**
- **229,327** **Pupil records**
- **5** **Years of operation**

Workshop Agenda

2. DEMIS Applications in OpenEMIS

- Functionalities of CENSUS Database – Nemis Database

- Functionalities of Student Tracking System

- **How CENSUS and STS functionalities would look in OpenEMIS**

- *Practical:*

    Creating & Importing Students

OpenEMIS for DEMIS

Essentially there are 2 major elements involved in the migration to OpenEMIS aligned to the functionality of:

- the **Backend** database serving the client application and
- the **Frontend** client web accessible application

Backend itself consisting of two parts:
- **Data schemas** *(a must)* required to service the client and the
- **Migration** of older existing data into these data schemas *(optional)*

Frontend client application will of course be a tailored version of **OpenEMIS**

OpenEMIS for DEMIS

DEMIS Application	Backend		Frontend
	Schemas	Existing Data	
Census-NEMIS	New OpenEMIS Hybrid Schema	With significant data cleaning and reorganisation	Future Collections OpenEMIS - Survey
STS Student Tracking	OpenEMIS Schema	Siem Reap schools Migration to OpenEMIS	OpenEMIS with DEMIS Settings

OpenEMIS for DEMIS

Effort Level Required	Backend		Frontend
DEMIS Application	**Schemas**	**Existing Data** (Technical Resources)	(Human Resources)
Census-NEMIS	Considerable initial effort	Probably the most the significant challenge. Best make good use sub-contractors	Effort in mastering OpenEMIS – Survey functionality
STS Student Tracking	Minimal effort since schemas already exist	Moderate technical effort. Siem Reap school's data Migration to OpenEMIS	Effort needed concerns brining teachers and schools onboard and up to speed

OpenEMIS for Census

The **Survey module** in OpenEMIS allows administrators to create and distribute **custom data collection forms** to institutions, staff, students, or other user groups. It's designed for gathering information that isn't captured through standard EMIS modules

Surveys - Questions

Questions | Forms | Rules | Filters | Status | Recipients

Code	Question	Description	field Type	Is Mandatory	Is Unique
51bfca04	What is the average number of days that the truants miss from school?.		NUMBER	✔	✖
51bfcb94	From which community do most of the truants come?		DROPDOWN	✖	—
51bfcc48	Prepare a table showing the teachers from different dinominations attending the open EMIS on Aug. 3 & 4?		TABLE	—	—

OpenEMIS for Census

Administration

Survey

Forms

Questions | Forms | Rules | Filters | Status | Recipients

Rubrics

-- Select --

Text
Number
Decimal
Textarea
Dropdown
Checkbox
Table
Date

Time
Student List
Coordinates
File
Repeater
Note
Staff List
Placeholder - Gender
Placeholder - Date Of Birth

Questions

Forms

OpenEMIS for Census

![OpenEMIS - Better data. Better education.]

Administration

Survey

Forms | Questions | Forms | Rules | Filters | Status | Recipients

Rubrics

1. Filters: Create a filter for the **Form** of those expected to complete

2. Status: make the filter active/open with dates

OpenEMIS for STS

What STS elements are repeatable in OpenEMIS?

Sidebar menu:
- Academic Year
- School
- Enrollment
- Class
- Student
- Score
- Attendance
- Transfer
- Graduation

Administration

Institutions

Academic Periods

| Institutions | Students |
| Institutions | Academic |

User Details | Internal Search | Confirmation | Add Student | Summary

| Classes | Class Name ⇕ | Home Room Teacher | Secondary Teacher | Multi-grade | Capacity |

| Institutions | | Students |
| Institutions | | Performance |

Attendance

| Institutions | | Students |

| Institutions | | Examinations | | Students |

2-2 STS -> OpenEMIS

OpenEMIS for STS

OpenEMIS has been adopted in over 15+ countries globally through UNESCO and Community Systems Foundation partnerships

Cambodia even with UNESCO backing took a different path by developing its own **Student Tracking System (STS)** under MoEYS and DEMIS.

Bringing Advantages
- Local Ownership: STS is built in-house by MoEYS with support from STEPCam and UNESCO, allowing for tighter control and customization.

- Khmer-first Design: STS is being localized from the ground up, with bilingual interfaces and training materials tailored for Cambodian schools.

Now reaching its limitations
- Every new or amended feature requires further software development and testing

consists of a full suite of software benefitting from 10+ years of evolution, development and improvement. History of already being employed by nation state education systems and is considered **'battle tested'**

Background & Development

Feature	STS (Cambodia)	OpenEMIS
Developer	Web Essentials (Cambodia)	UNESCO (Global, open-source) Community Systems Foundation (CSF)
Target Region	Cambodia (MoEYS-specific)	15+ countries (e.g., Caribbean, Pacific, Jordan, India - Karela)
Customization	Tailored for Cambodian schools	Modular, adaptable to any country
License	Proprietary (government-contracted)	Open-source (free to modify)

Core Features
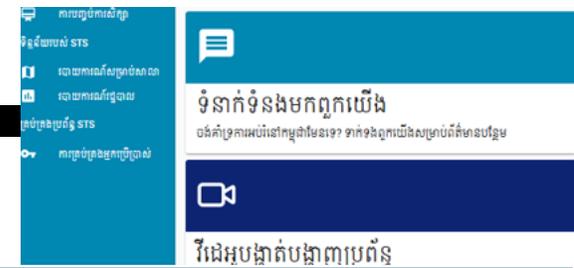
Feature	STS	OpenEMIS
Student Records	✅ Enrollment, attendance (but only by month), grades	✅ More comprehensive and attendance real time (health, disabilities)
Teacher Management	❌ Not available	✅ Advanced (training, certifications)
Reporting	✅ Predefined reports for MoEYS	✅ Customizable dashboards & analytics
Data Integration	??Syncs with Cambodia's EMIS??	Integrates with national ID systems
Mobile Access	❌ Limited (web-based)	✅ Mobile-friendly (offline capabilities) Mobile Apps available

Core Features

Feature	STS	OpenEMIS
Language	Khmer-English (data in Khmer)	Multilingual (English, French, etc.)
Deployment	MoEYS servers	Cloud or on-premise
Offline Use	❌ Requires internet	✅ Offline data collection
APIs	❌ Closed system	✅ Open APIs for integration

![OpenEMIS logo - Better data. Better education.]

Workshop Agenda

2.   DEMIS Applications in OpenEMIS

- Functionalities of CENSUS Database – Nemis Database

- Functionalities of Student Tracking System

- How CENSUS and STS functionalities would look in OpenEMIS

- *Practical:*

   Creating & Importing Students

Practical - Demo importing into directory

Levels and types of effort (as new system)

OpenEMIS adoption	TEAM - STS	TEAM - CENSUS
As a new system without existing Data Migration	**Effort is in User Adoption:** Requiring roll out and training across the country	**Effort is Central Team:** Design of the forms and organisation of data formats
Needing	DEMIS need to become expert admin users of OpenEMIS	Central Team @ DEMIS to have a deep understanding of OpenEMIS and data structures underneath
Rollout	Training of Provincial & District Officers, School Principals, Teachers	Similar to Census effort except collection online @ school level

Levels and types of effort (with existing data)

OpenEMIS adoption	TEAM - STS	TEAM - CENSUS
With Data Migration	**Effort is in Technical:** Central DEMIS Team help from Contractors	**Effort is Central Team/Contractors:** **Considerable** technical detailed effort
Needing	DEMIS need to become expert OpenEMIS data structures and import. Collaborating and learning from Contractors	Central Team @ DEMIS working closely with contractors. May need data preprocessing of existing NEMIS

Effort:
Relationship determining knowledge & Function

OpenEMIS @ STS Function Level
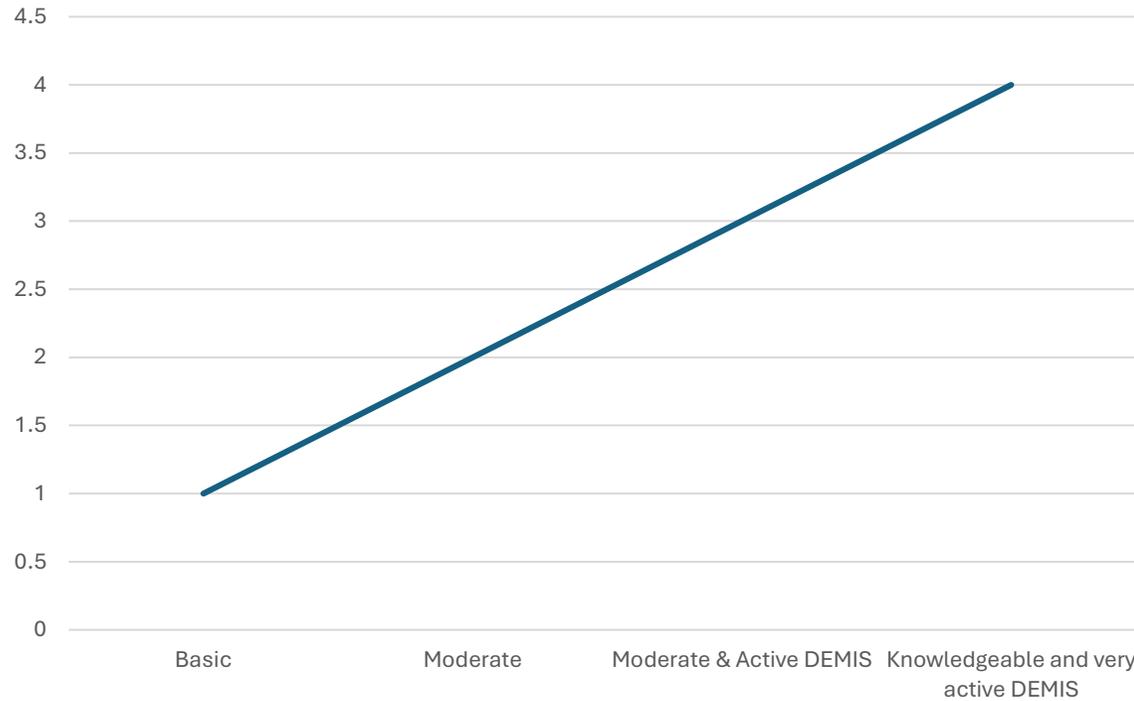
Functionality
1 STS as new application
2 STS with Siem Reap Data
3 STS to Upper Secondary Schools
4 STS to most schools

OpenEMIS @ Census
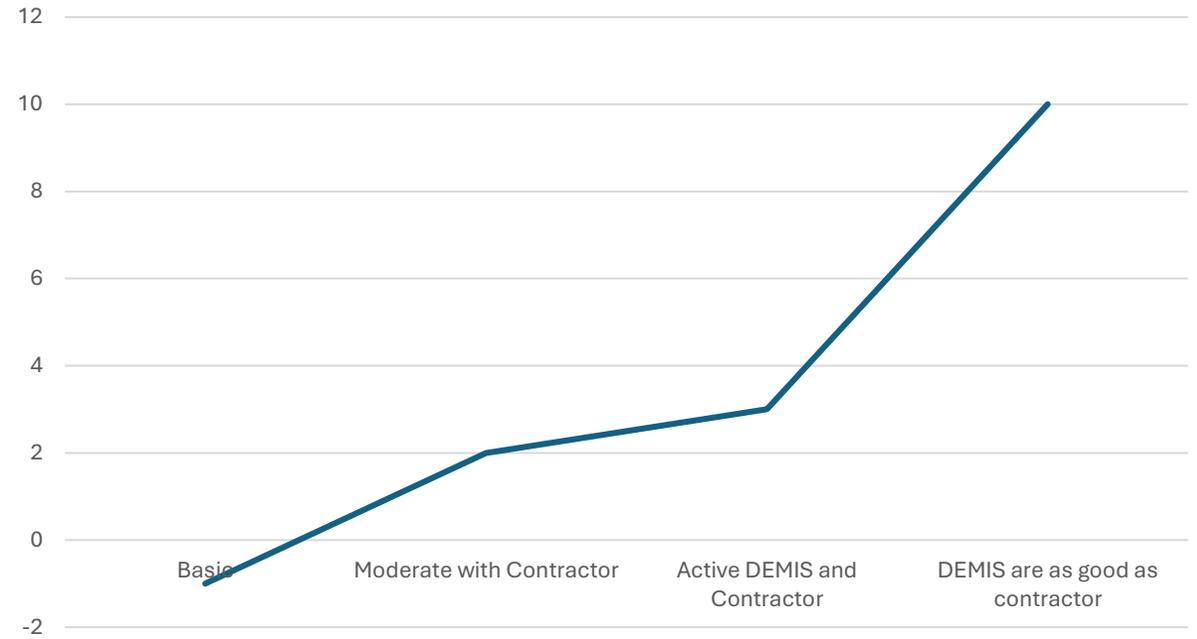
Functionality
-1 Failed Attempt
2 For a new Census
5 To Dashboard new Census
10 Census with Data back 3 years
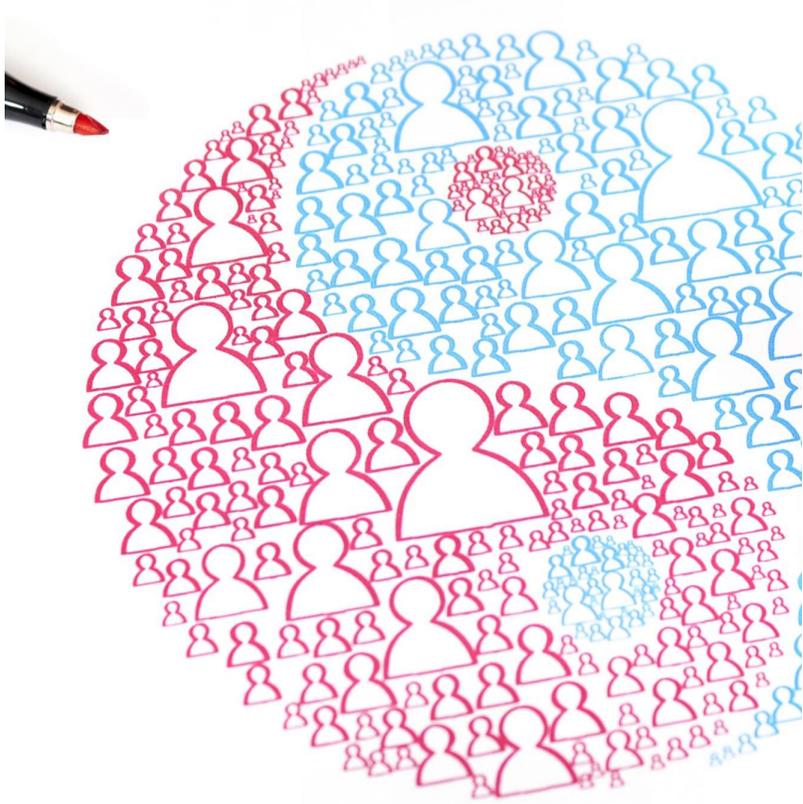
2
Takeaways

- OpenEMIS can be used both for **school/student level** data collection and **aggregated census** collection

- Big tasks of **migrating data** and **large user base** needs to learn to use new system

Your ideas here:-

Type here ....

3

- 3

Workshop Agenda

3. Institutions in OpenEMIS 🏛

- General TAB- Overview / Field Options & Custom

  Information

- Students & Staff Attendance

- Other menu options - Overview, Contacts, Profiles

- *Practical:*

  Adding custom field
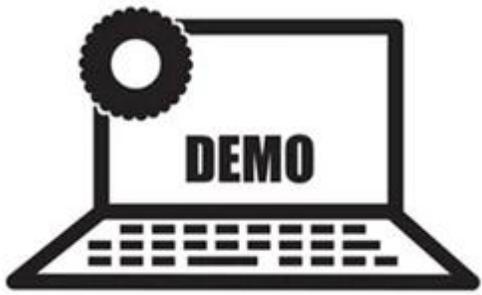
3-1 emis – institutions/map/search
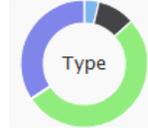
Institutions – Types: primary, lower and upper secondary

Total Institutions: **14,868**

- actions
  - View
  - Edit
  - Delete
  - History

- list, pages and basic search

- advanced search

- edit options

Edit

Institutions

Advanced Search

Shift Type:	Classification:	Area Education	Area Administrative	Locality:	Type:
-- Select --	-- Select --	-- Select --	-- Select --	-- Select --	-- Select --

Ownership:	Status:	Sector:	Provider:	Gender:	Education Programme:
-- Select --	-- Select --	-- Select --	-- Select --	-- Select --	-- Select --

Code:

Name:

Search Reset

OpenEMIS Core

3-2 emis – students, staff, attendance

Institutions –

Total Students:
16

- Add staff and students from Directory

  Directory

- Directory Search

  There are no records.

  Advanced Search

User Type:	First Name:	Middle Name:	Third Name:	Last Name:	OpenEMIS ID:
-- Select --					

Genders:	Contact Number:	Birthplace Areas:	Address Areas:	Identity Type:	Identity Number:
-- Select --		-- Select --	-- Select --	-- Select --	

  Search Reset

  - Connecting directory entry to a school ----------→

    | Internal Search | Add Student |

    Filter

OpenEMIS ID	First Name	Last Name	Identity Nu
	Fred		

    Filter Clear

	OpenEMIS ID	Name	Gender	Date Of Birth
○	1757676617	Fred Friday	Male	01-02-2000

  - Attendance

    | Attendance | Absence |

    Total Students: **16**   No. of Students Present: -   No. of Students Absent: -   No. of Students -

    | 2024-2025 | Week 1 (November 01, 2024 - November | Friday (November 01, 2024) | Class G13 - A Band |

OpenEMIS ID ⇕	Student ⇕	Type
1748530970	Dith Pran	Present
		Present
		Absence - Excused
1748531473	Iv Noun	Absence - Unexcused
		Late

3-2 emis

OpenEMIS Core

3-2 demo – students, staff, attendance

Institutions –

Total Students:
16

- Add staff and students from Directory

  Directory

- Directory Search

There are no records.

Advanced Search

User Type:	First Name:	Middle Name:	Third Name:	Last Name:	OpenEMIS ID:
-- Select --					

Genders:	Contact Number:	Birthplace Areas:	Address Areas:	Identity Type:	Identity Number:
-- Select --		-- Select --	-- Select --	-- Select --	

Search   Reset

- Connecting directory entry to a school ------------→

Internal Search   Add Student

Filter

OpenEMIS ID	First Name	Last Name	Identity Nu
	Fred		

Filter   Clear

Attendance   Absence

Total Students: **16**   No. of Students Present: -   No. of Students Absent: -   No. of Students -

	OpenEMIS ID	Name	Gender	Date Of Birth
○	1757676617	Fred Friday	Male	01-02-2000

2024-2025   Week 1 (November 01, 2024 - November)   Friday (November 01, 2024)   Class G13 - A Band

- Attendance

OpenEMIS ID	Student	Type
1748530970	Dith Pran	Present
1748531473	Iv Noun	

Present
Absence - Excused
Absence - Unexcused
Late
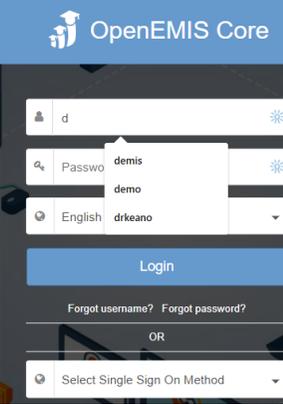
3-2 demo

demo.openemis.org

3-3 demo – institution set ups/customisation

Administration Setup

- **field options – institution types →**

- **custom field**

Custom Field ▼

Institution

- **administrative boundaries**

- **custom field** ------------------------------------→

- **labels**

Visible	Default	Editable	Name ⬍
✔	✖	✔	Pre-primary
✔	✖	✔	Primary
✔	✖	✔	Lower Secondary

Custom Field (Institution) - Fields

Fields | Pages

Field Type	-- Select --
	-- Select --
Name	Text
	Number
	Decimal
Description	Textarea
	Dropdown
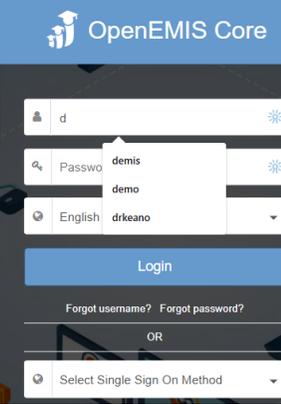
Labels

* Module Name | Institutions

* Field Name | Area Administrative

3-3

OpenEMIS Core

3-3 demo – institution set ups/customisation

Administration Setup

- **field options – institution types** →

- **custom field**

Census Return	
First Census (Academic Code)	12
Last Census Year	11
Status of 2025-2026 Census	Forms sent
Notes regarding census collection	
Upload Census Summary check	

3-3 Extra

demo.openemis.org

3-4 demo – institution associated data

Many options associated with institutions and a great depth of data collection

General
Overview
Map
Calendar
Contacts
Attachments
Profiles
Shifts

Academic
Programmes
Classes
Subjects
Schedules
Textbooks
Houses
Institution Curriculars
Feeders

🏛 Institutions

- Dashboard
- General
- Academic
- Students
- Staff
- Attendance
- Scanned
- Behaviour
- Performance
- Messaging
- Risks
- Examinations
- Report Cards
- Appointments
- Finance
- Infrastructures
- Meals
- Survey
- Visits
- Transport
- Cases
- Committees
- Statistics

3-4 demo – institution Academic

Academic overlaps with our next section:

4.   **Academic Education Structure in OpenEMIS**

Schools are required to conform to the national curriculum

standards when establishing subjects and classes. We will

be further demonstrations later.

Here – we will demonstrate what a school can do given that

the national standards have already been installed earlier

Academic

Programmes

Classes

Subjects

Schedules

Textbooks

Houses

Institution Curriculars

Feeders

1 institution Academic

3-4

2 institution
Academic
Textbooks, Houses

3-5

https://www.infoschools.net/
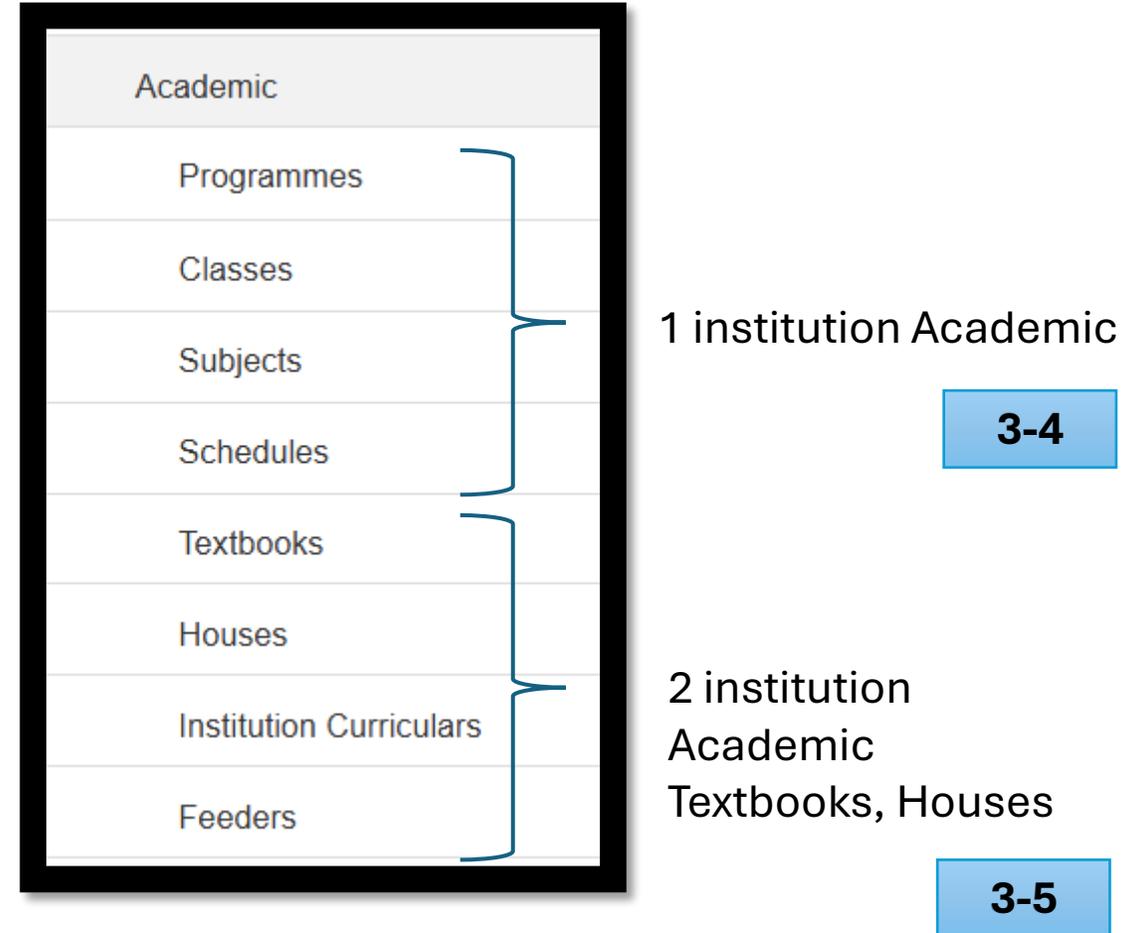
- URN Unique reference number: **128511**
- School name: **Hustler School**
- Type of establishment: **Community school**
- Establishment type group **LA maintained schools**
- School status: **Closed**
- Phase of education **Secondary**
- Statutory low age: **11**
- Statutory high age: **16**
- Boarders **No boarders**
- Gender **Mixed**
- Religious character **Does not apply**
- Religious ethos **Does not apply**
- Admissions policy **Non-selective**
- Federation flag **Not under a federation**
- Last changed date: **18-10-2018**
- Street: **Hall Drive**
- Locality: **Acklam**
- Town: **Middlesbrough**
- Postcode: **TS5 7JY**
- GOR code: **A**
- GOR **North East**
- District administrative code: **E06000002**
- District administrative **Middlesbrough**
- Administrative ward code: **E05001482**
- Administrative ward **Acklam**
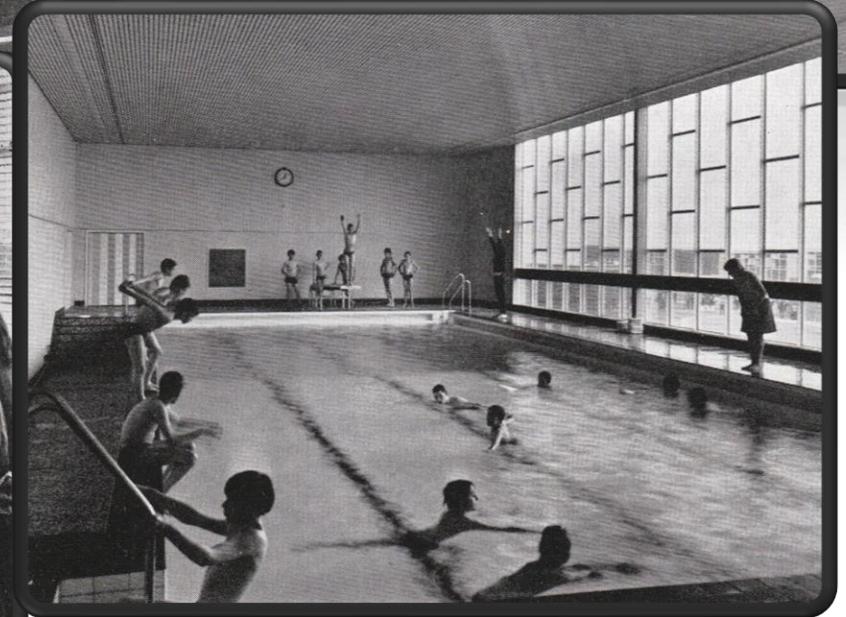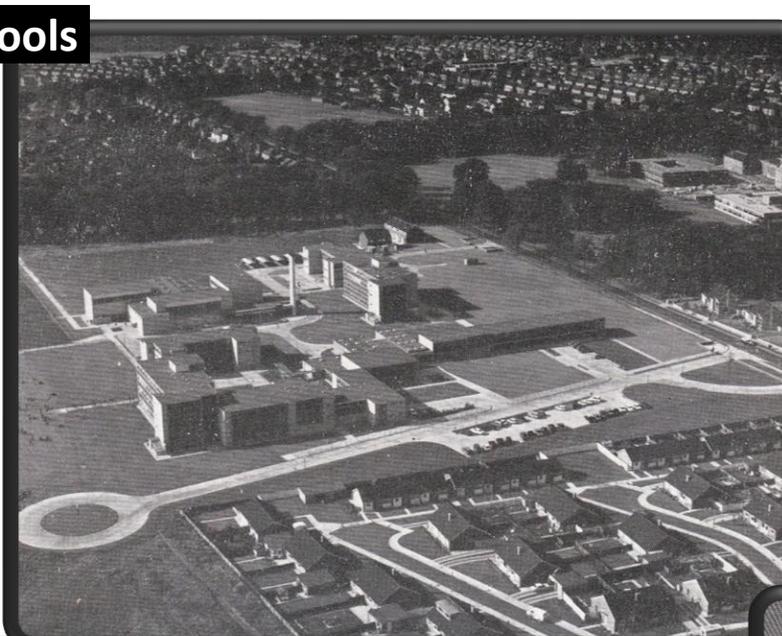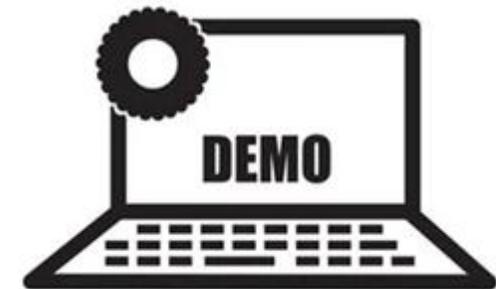
Ashmore, Cummins, Dorman, Hunter

Stream Ashmore,Cummins,Dorman,Hunter by onemanband1968 | Listen online for free on SoundCloud

3-6

https://www.get-information-schools.service.gov.uk/Establishments/Establishment/Details/128511#school-location

demo.openemis.org

3-4 demo – institution attachments

🏠 › Institutions › Clearcrest Upper Secondary... › Institution Attachments

Clearcrest Upper Secondary Scho... [<]

Name	
* **Type**	photo ▼
Description	-- Select --
	photo
	leaflet
* **File Content**	[📁]
	* File size should not be larger than 10MB.
	* Format Supported: jpeg, .jpg, .gif, .png, .rtf, .txt, .csv, .pdf, .ppt, .pptx, .doc, .docx, .xls, .xlsx, .zip
* **Date On File**	[📅]

[Save] [Cancel]

🏛 **Institutions**

👥 **Directory**

📈 **Reports** ▶

⚙ **Administration** ▼

System Setup ▼

   Administrative Boundaries

   Academic Periods

   Education Structure

   Attendances

   Field Options

   Labels

Field Options - Institution Attachm...

Institution Attachment Types ▼

Visible	Default	Editable	Na

Clearcrest Upper Secondary Scho... [+] [?] Search [🔍]

Name ⇕	Type	File Type	Date On File ⇕	Uploaded On ⇕	Actions
professor	photo	Unknown	September 13, 2025	September 13, 2025 - 10:17:21	Select ⌄
flyer	leaflet	Image	September 13, 2025	September 13, 2025 - 10:18:08	Select ⌄

Workshop Agenda

3. Institutions in OpenEMIS

• General TAB- Overview / Field Options & Custom Information

• Students & Staff Attendance

• Other menu options - Overview, Contacts, Profiles

• *Practical:*

Adding custom field
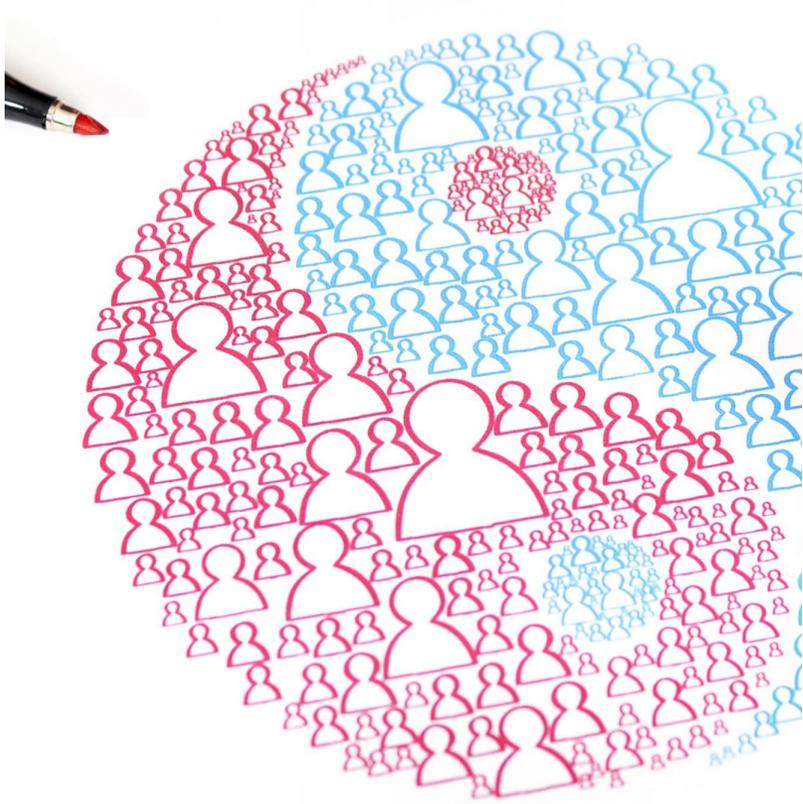
3
Takeaways

Data about Schools can be tailored to our needs

Custom fields, Labels to change display, selection list changeable

Data about Students can be tailored to our needs

Connections between entry data and other parts of the system -> interconnected validations

Maybe too many options for our immediate needs → detailing school level management

Your ideas here:-

Type here ....

4

- 4

![OpenEMIS logo — Better data. Better education.]

Workshop Agenda

4. Academic Education Structure in OpenEMIS

- Administrative Boundaries

- Academic periods, education structure, institutions

- Education Structure connection to institutions & students

- *Practical:*

    Setting up academic years, classes

Area - Areas

[+] [?] Search [×] [🔍]

| Area Levels (Education) | Areas (Education) | Area Levels (Administrative) | Areas (Administrative) |

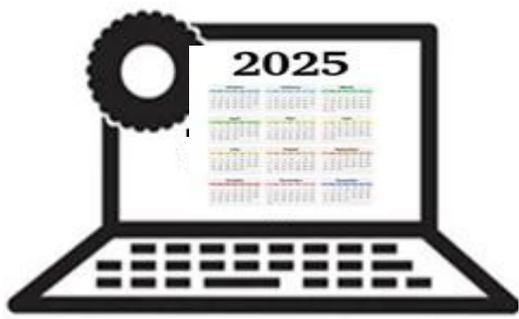| **Visible** | **Code** ⇕ | **Name** ⇕ |

Education Governance / Admin

MoEYS

PEO Prov Ed Office

DEO District Education Office

Can be configured for Cambodia Geo codes

Area Levels: Province, District, Commune, Village

Areas: 01 02 01 01

demo.openemis.org

Academic Period - Periods [+] [Search] [x] [🔍]

| Levels | Periods |

Visible	Current	Editable	Code ⇕	Name ⇕	Start Date ⇕	End Date ⇕	Academ
✔	✔	✔	YR2025	2025	January 01, 2025	December 31, 2025	Year

Levels: typically, Year

| Academic Period Level | Year |
| Code | |

Academic Period Level
- -- Select --
- Year (Year)

| Levels | Periods |

Academic Period Level	Year
* Code	YR2026
Visible	Yes
* Name	Year 2025-2026
* Current	No
Editable	No
* Start Date	13-10-2025 📅
* End Date	31-07-2026 📅

4-2 demo – Academic Periods

4-2
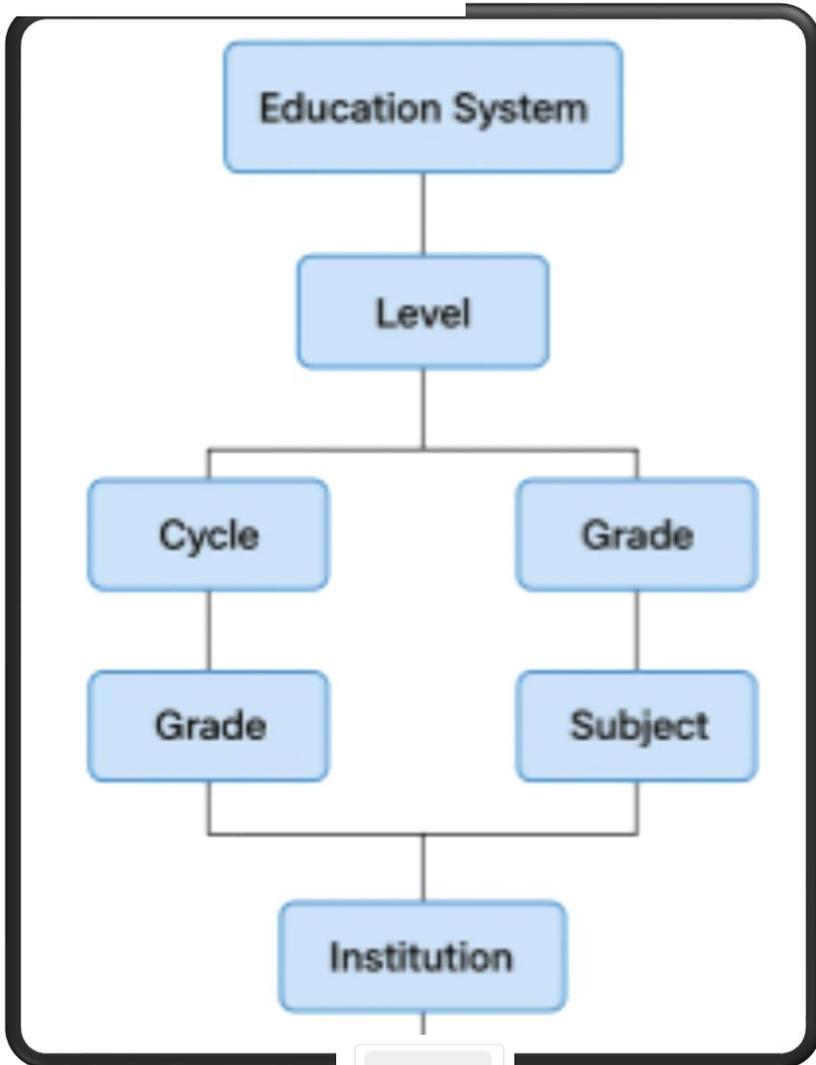
Step	Component	Description
1	**(Education) System**	Define the national or institutional framework (e.g., Cambodian General Education)
2	**Levels**	Major stages like Pre-primary, Primary, Lower Secondary, Upper Secondary 7-9, Upper 7-12
3	**Cycles**	Optional grouping of levels (e.g., Basic Education Cycle = Grades 1–9)
4	**Programs**	Tracks or streams within levels (e.g., General, Technical, Vocational)
5	**Grades**	Specific years within each level (e.g., Grade 1 to Grade 12)
6	**Grade Subjects**	Assign subjects to each grade/program combination (e.g., Math in Grade 7 General)
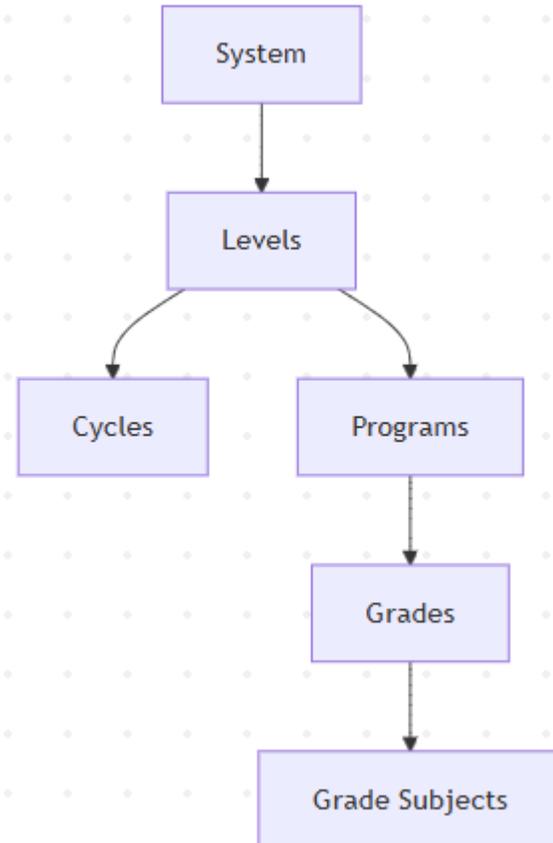
Step	Component	Example Entry
1	**(Education) System**	2026 System
2	**Levels**	Level Lower Secondary 2026
3	**Cycles**	2026 Cycle
4	**Programs**	26Prog
5	**Grades**	26-Grade7
6	**Grade Subjects**	Combined Mathematics

https://mermaid.live/

```
graph TD
    A[Education System] --> B[Levels]
    B --> C[Cycles]
    B --> D[Programs]
    D --> E[Grades]
    E --> F[Grade Subjects]
```

4-3

Systems | Levels | Cycles

Education - Systems

[+] [⧉] [?] | Search [×] [🔍]

| Systems | Levels | Cycles | Programmes | Grades | Grade Subjects | Others |

2025 ▼

Visible	Name ⬍
✔	National Education System 2025

| Systems | Levels | Cycles | Programmes | Grades | Grade Subjects | Others |

2025 ▼ | National Education System 2025 ▼

Visible	Name ⬍	Education Systems ⬍
✔	Early Childhood Education	National Education System 2025
✔	Primary Education	National Education System 2025

| Systems | Levels | Cycles | Programmes | Grades | Grade Subjects | Others |

2025 ▼ | National Education System 2025 - U ▼

Visible	Name ⬍	Admission Age
✔	Upper Secondary - General	15

Hierarchy
Academic Year has
  1. **Systems has**
    2. **Levels has**
      3. **Cycles**

4-3

| Programmes | Grades | Grade Subjects | Others |

Programs: Specialized tracks or curricula (e.g., General, Technical, Vocational)

Need ->

Academic Year	System and Level	Programme
Year 2025-2026 ▼	2026 System - Lower Seconday 202 ▼	2026 Cycle ▼

Must already be ->

1. Academic Year
2. System
3. Level for (2) System
4. Programme

Education Cycle	-- Select --
	-- Select --
Education Certifications	2026 Cycle

4-4

Programmes	Grades	Grade Subjects	Others

Grades: Specific years or stages within each level (e.g., Grade 1 to Grade 12)

Need ->

Academic Year	System and Level	Programme
Year 2025-2026 ▼	2026 System - Lower Seconday 202 ▼	2026 Cycle - 26Prog ▼

Must already be ->

1. **Academic Year**
2. **System**
3. **Level for (2) System**
4. **Cycle for a**
5. **Programme**

Dependencies: Grades must be linked to Levels, and Subjects must be linked to Grades and Programs.

4-4
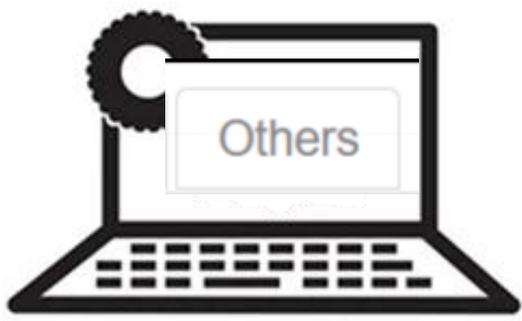
Others

Others

Stages

Stages
Subjects
Certifications
Field Of Studies
Programme Orientations

- **Stages:** Define broad phases of education (e.g., Early Childhood, Primary, Secondary). Used to group Levels and Programs under a common developmental or policy framework. **UP7-1**

- **Subjects:** Core academic or vocational subjects taught within Grades or Programs. Linked to Grade Subjects and used in curriculum mapping and assessments

  AI Programming - AI, Vocational and General

- **Certifications**: Formal qualifications awarded upon completion of a Program or Grade (e.g., Diploma, Certificate). Essential for tracking student outcomes and staff qualifications.

  Top of Year Award

Fields of Studies: Academic or vocational domains (e.g., Engineering, Agriculture). Linked to Programs and Subjects to support specialization and reporting.
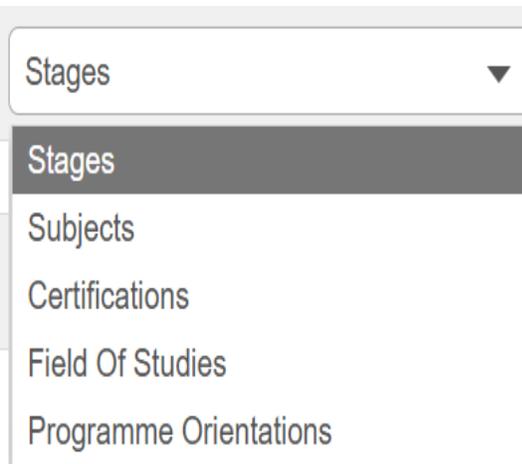
  Basic Framework, General

- **Programme Orientations**: Define the focus or intent of a Program (e.g., General, Technical, Vocational). Used to categorize Programs and align them with national education strategies.

  Hybrid

4-5

Others

Others

Stages ▼

Stages
Subjects
Certifications
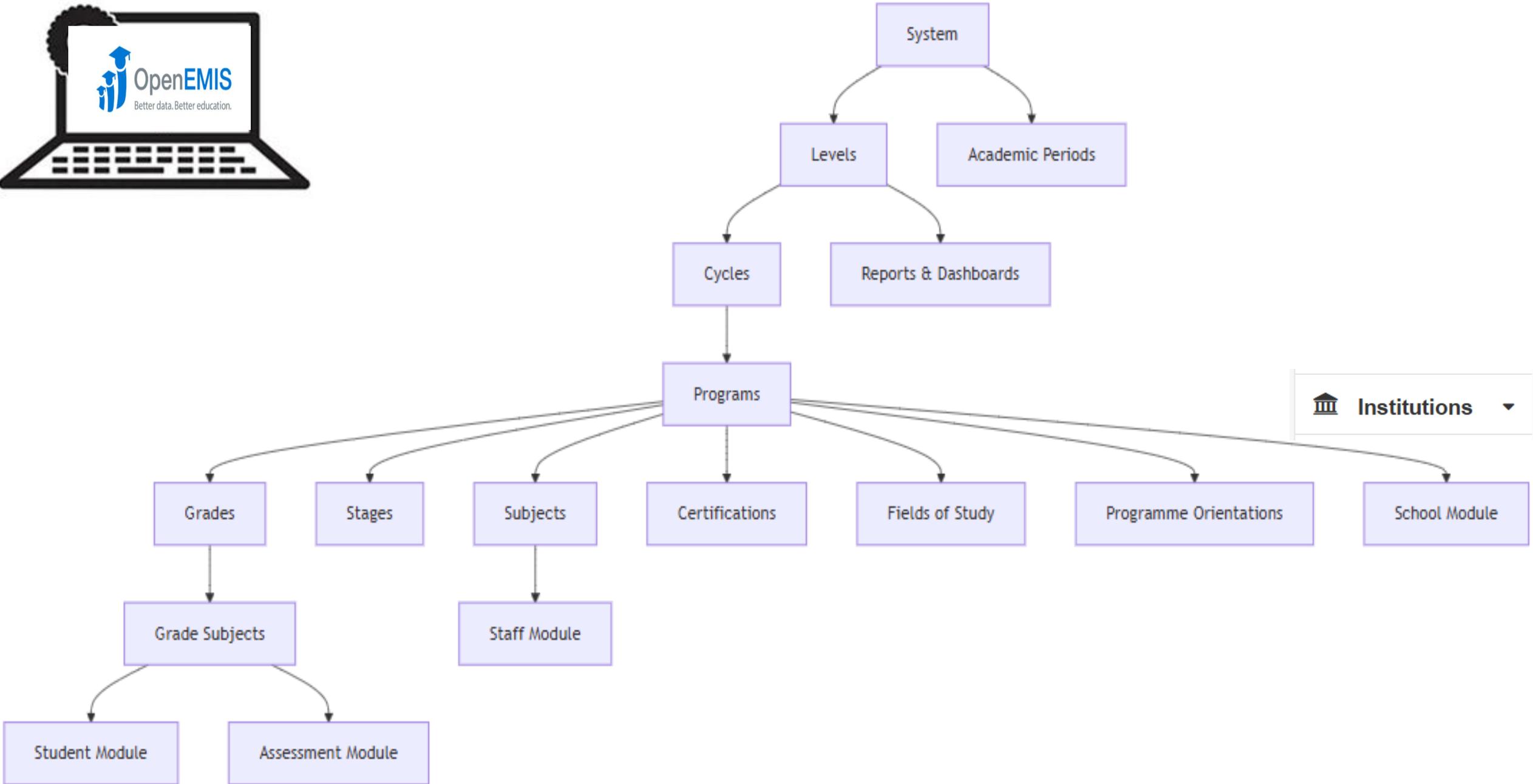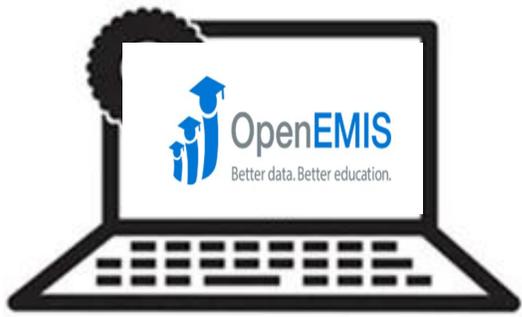Field Of Studies
Programme Orientations

These elements are **not hierarchical** like Levels → Grades → Subjects, their purpose

- **Enrich program metadata** for reporting, filtering, and curriculum design

- **Support TVET and post-secondary tracking**, especially in systems like Cambodia's OpenEMIS TVET configuration

- **Enable nuanced analysis** of student pathways, qualifications, and institutional offerings

🛠 **Example Use Case**

- You'd assign it a **Programme Orientation** = "Vocational"

- Link it to a **Field of Study** = "Construction"

- Add **Subjects** like "Masonry" or "Blueprint Reading"

- Define a **Certification** = "Level 1 Masonry Certificate"

- Group it under a **Stage** = "Upper Secondary"

Institutions: School offerings (e.g., which grades or programs are taught) are mapped to the structure.

🏛 **Institutions** ▾

Academic **Academic Year**

Programmes **Grade, Programme, Level Education Subject**

Classes **Grade, Subject**
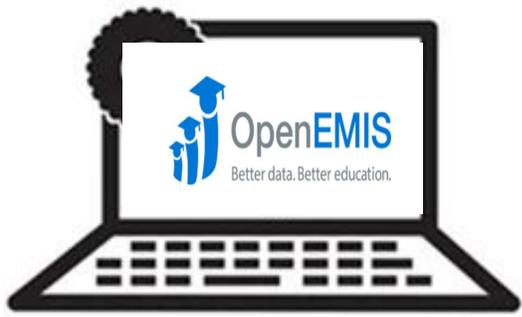
Subjects

Schedules **Grade**

Textbooks **Grade, Subject**

Houses

Institution Curriculars

Feeders

Institutions: School offerings (e.g., which grades or programs are taught) are mapped to the structure.

Institutions ▾

Academic — **Academic Year**

Programmes — **Grade, Programme, Level Education Subject**

Classes — **Grade, Subject**
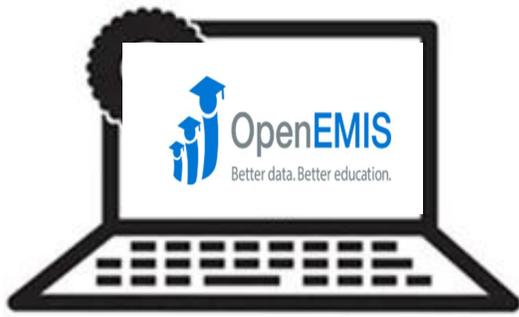
Subjects

Schedules — **Grade**

Textbooks — **Grade, Subject**

Houses

Institution Curriculars

Feeders

Assessment Module: Grade Subjects and Certifications define what's assessed and how.

Institutions ▼

Academic Year

Examinations ▼

Exams

Programme, Grade

Centres

Students

Results

Textbooks: dependent on Level, Programme and Subject

Institutions ▼

Academic Year

Textbooks
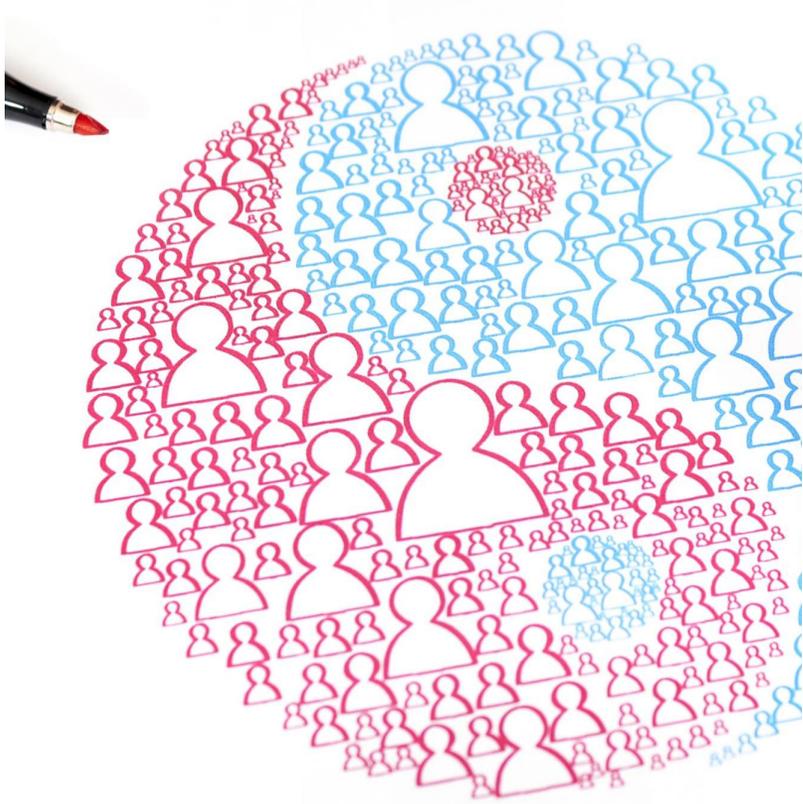
Level, Programme, Subject

4-6

Workshop Agenda

4. Academic Education Structure in OpenEMIS

- Administrative Boundaries

- Academic periods, education structure, institutions

- Education Structure connection to institutions & students

- *Practical:*

    Setting up academic years, classes

4
Takeaways

Education Structure Cornerstone of OpenEMIS

Not much can work if the academic structure in terms of years, education programmes, school grades, classes and so on.

Education Structure is determined by admins and can be very complex. But it must be set up first with full knowledge of structure and national curriculums

Your ideas here:-

Type here ....

5

- 5

Workshop Agenda

5. OpenEMIS System Administration

- Users and security

- Levels of access – Groups and roles

- Localising OpenEMIS

- *Practical:*

    Editing Khmer Language Translations

OpenEMIS SECURITY

CakePHP **Is a MVC (Model–View–Controller) framework**

Administration

System Setup

Security

Users

Groups

Roles

- **Built on the CakePHP framework (https://cakephp.org/), which includes native protections against common vulnerabilities**
  - **SQL injection** SQL scripts that access the backend DB to steal data in DB
    SELECT * FROM Users WHERE UserId = 35 **or 1=1;**
  - **Cross-site scripting (XSS)** Hacker inject malicious scripts that execute in client browser that then steal sensitive information
  - **CSRF attacks -** Cross-Site Request Forgery - typically by trick getting authenticated users of a web application to executing actions of the attacker's choosing maybe by sending them a phishing email asking to log on for a prize/deal. Attacker then stealing users' credentials in the process.

- **Uses password hashing with salt, making it extremely difficult for attackers to reverse-engineer stored passwords.**

  > **password:**   **password123**
  > **generates a salt:** **D;%yL9TS:5PaIS/d**

- **Follows OWASP Top 10 guidelines to guard against the most critical web application threats.**

Release of the **OWASP Top 10:2025** in the late summer/early fall 2025.

Administration

System Setup

Security

Users

Groups

Roles

2021 List

1. Broken Access Control

2. Cryptographic Failures

3. Injection

4. Insecure Design

5. Security Misconfiguration

6. Vulnerable and Outdated Components

7. Identification and Authentication Failures

8. Software and Data Integrity Failures

9. Security Logging and Monitoring Failures

10. Server-Side Request Forgery

https://www.cloudflare.com/learning/security/threats/owasp-top-10/

Groups organize users by function or institution
- Clearcrest Upper Secondary School Group
- System Administrators
- Provincial Office

Roles exist so Groups and associated users can inherit permissions. Defines what a user *can do*
- Admin / Principal
- Teacher
- Student

Users are assigned to Group and Role determining access across to functions, menus and modules. **BUT can make a User without assigning user to group or roles**

5-1

Groups in OpenEMIS

Define the access scope and institutional context

are the **organizational glue** that binds users to roles and defines their operational scope.

Containers that help manage access, responsibilities, and visibility across the system.

A **Group** is a collection of users who share a common scope. It simplifies permission management by allowing administrators to assign access rights at the group level rather than individually.

By **default**, a new institution creates a new **Group** to which all users associated with that group

What groups now in demo/core:

P1007 - Whiteshore Academy
P1008 - Khundo Primary School
P1009 - Kinda Primary School
P1010 - Standard Primary School
S2001 - Clearcrest Upper Secondary School
S2002 - Boster Lower Secondary School
S2003 - Woodford Upper Secondary School
S2004 - Fairlyn Lower Secondary School

Example notional groups:

- Battambang PEO
  (PEO = Provincial Education Officers)
- Mongkol Borei DEO
  (DEO = District Education Officers)

5-1

Types: **User and System**

Manually created group for assigning users and roles.

Automatically created group for each institution added to OpenEMIS

Administration

System Setup

Security

Users

Groups

Roles

User Groups	System Groups
Name ⬍	

User Roles	System Roles

Aaron School ▼

1. GROUPS

Types: **User and System**

Manually created group for assigning users and roles.

Automatically created group for each institution added to OpenEMIS

User Groups   **System Groups**

Name ⬍

Aaron US School User Group

Select ⌄

🔑 Manage Users

👁 View

✎ Edit Group

🗑 Delete

Click on Group name to see User in Group

US00000001 - Aaron Upper Secondary

code

Select ⌄

👁 View

System Groups are auto-managed To find staff in group indirectly

🏛 Institutions

Staff

5-2

🏛 **Institutions**

Students

Staff

Aaron Upper Secondary - Students

User Details 〉 Internal Search 〉 Confirmation 〉 **Add Student** 〉 Summary

* Academic Period	2024 ▼
* Education Grade	-- Select -- ▼
Class	-- Select -- ▼

Can't add students yet to new group as there is no Education schema nor Class set up

Aaron Upper Secondary - Staff

User Details 〉 Internal Search 〉 Confirmation 〉 **Add Staff** 〉 Summary 〉 Staff Transfer

* Position	-- Select -- ▼
* Position Grade	-- Select -- ▼

Can't add staff yet to new school as there is no positions for the staff users to be assigned to

5-2

3. USERS

User can belong to Group/s →

1. GROUPS

Group/s can apply one or more role permissions→

2. ROLES

3. USERS
Assign users to groups and roles

Make User without assigning user to group or roles

Administration

System Setup

Security

Users

Groups

Roles

Directory

Example – system allows staff as users (to login) but students as directory entries without ability to login
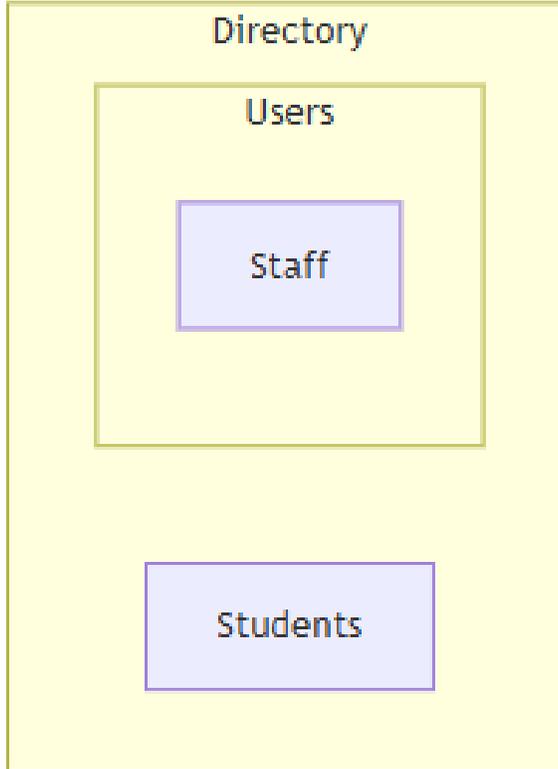
Directory

Users

Staff

Students

All in Directory

Staff

1525763160 Aaron Cook

Student

1522416599 Aaron Altman – not assigned (01-01-2002)
1522413076 Aaron Butler - Avory Primary School

DEMO 5-3
1. Aaron Aaron Created 2735262726
2. Aaron Aaron give password
4. Aaron Aaron user group with role

All users exist in the DIRECTORY but most will not have Logins.
User will be allowed to log in when:

 a). They have a password set
 b). They belong to a group with a role allowing them access

5-3 demo – Directory & Users

5-3

3. USERS

Assign users to groups and roles

User assigned auto to group & roles

All in Directory
Staff
1525763160 Aaron Cook

Student
1522416599 Aaron Altman – not assigned (01-01-2002)
1522413076 Aaron Butler - Avory Primary School

Avory Primary School - Students

Student Details	Internal Search	Confirmation	Add Student	Summary

DEMO 5-4
1. Check Aaron Altman 1522416599
2. Aaron Altman to Avory Primary
3. Aaron Altman - System Role associated with institution

2. ROLES

O⊤ Define what users can do within a group

are the foundation of its **access control system,** determining what each user can see, do, and manage across the platform.

Role defines a set of permissions — essentially, what actions a user is allowed to perform. Roles are assigned to Groups, and Groups are linked to Users, creating a layered security model.

Roles give permissions → Groups ← Users belong to groups

Roles:
- They define the scope of access (e.g., view-only, edit, admin)
- They are reused across multiple Groups
- They ensure consistency in permission management

Superrole
Administrator
Group Administrator
District Officer
Principal
Deputy Principal
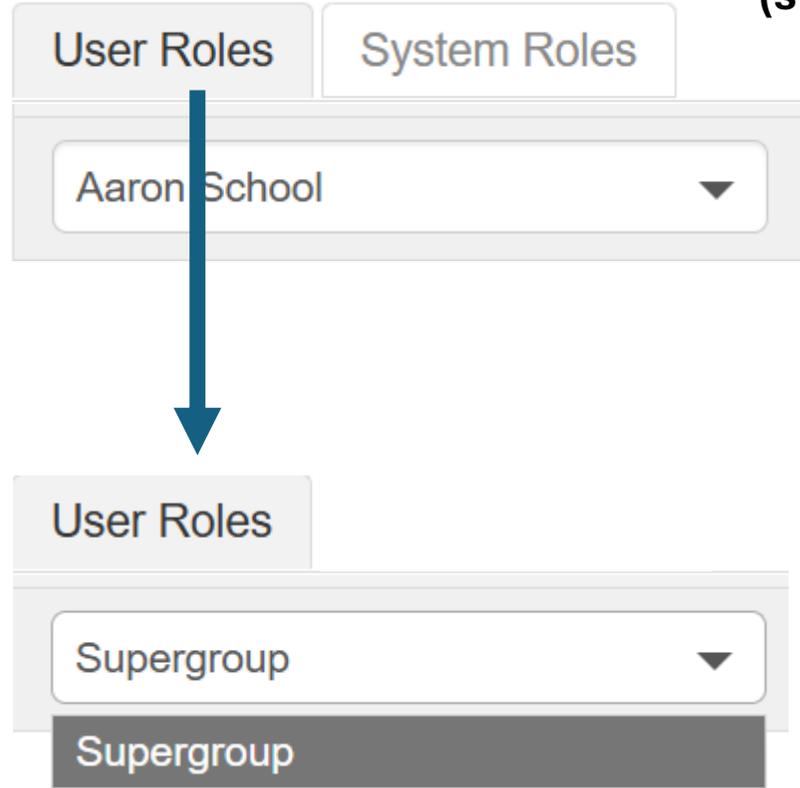Homeroom Teacher
Teacher
Staff
Guardian
Student

2. ROLES

Define what users can do within a group

Types: **User and System** (like groups)

Automatically assigned role when attaching staff or a student to a school (staff / student roles)

⚙️ **Administration**

System Setup

Security

Users

Groups

Roles

User Roles | **System Roles**

Aaron School

Superrole, Administrator, Group Administrator, District Officer, Principal, Deputy Principal, Homeroom Teacher, Teacher, Staff, Guardian, Student

User Roles

Supergroup

Supergroup

Manually created role by system administrators

User roles are associated with a groups. Need to select group from dropdown to get a list of made-up roles

2. ROLES

Define what users can do within a group

Security - Example User Role [<] [✏]

| Institutions | Directory | Reports | Administration | Personal | Guardian | API |

General

Function	View ○	Edit ○	Add ○	Delete ○	Execute ○
Contacts - People	X	X	X	X	X

2. ROLES

Define what users can do within a group

Select ▾

🔑 Permissions

👁 View

✏ Edit

| Institutions | Directory | Reports | Administration | Personal | Guardian | API |

🏛 Institutions

Dashboard

General

Academic

Students

Staff

Attendance

Scanned

Behaviour

Performance

Messaging

Function	View ○	Edit ○	Add ○	Delete ○	Execute ○
Institution	✓	✗	✗	✗	✗

Students

Function	View ○	Edit ○	Add ○	Delete ○	Execute ○
Student Profile Completeness	✗	–	–	–	–
Student Attendance Archive	✗	–	–	–	–

5-5

2. ROLES

Define what users can do within a group

Actions

Select ⌄

- 🔍 Permissions
- 👁 View
- ✏ Edit

1 Create **Group** of a school – Avory Primary School UG

2 Create **Roles** under group - Avory Primary School UG

- **Temp Teacher** having permissions:
  - Institution.View
  - Student.View
  - Attendance.View

- **Acting Principal** having all Temp Teacher permissions plus
  - Staff.View
  - Position.Manage
  - Institution.View
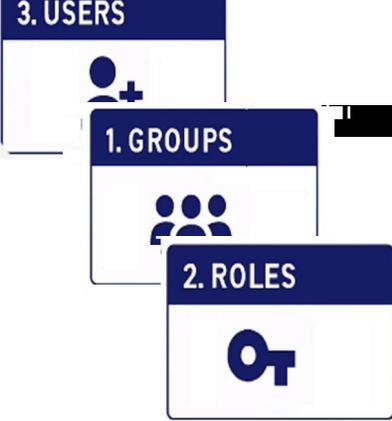
Create a district officer views all in district
S2001   Clearcrest Upper Secondary School
K0004   Redhaven Preschool
P1010   Standard Primary School

Area Education	
Country	: Endor
Region	: South
District	: District 7

User: test DEO
2382818287

1 **Security Role with Institution.View Permission**
Confirm the user's **assigned role** includes Institution.View
This is set in Administration > Security > Roles

Make Role and make & sure it has
Institution.View

2 **User Assigned to a Security Group**
The user must be added to a **Security Group**
Go to Administration > Security > Users → Select user → Assign group

Assign User Group

3 **Group Linked to Institution or Area (Education)**
The group must be linked to:
The **specific institution**, or An **Area (Education)** that includes the institution

Create Group

Workshop Agenda

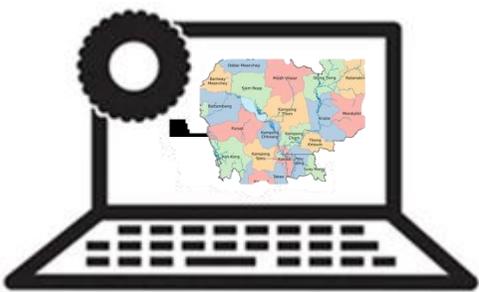**5. OpenEMIS System Administration**

- Users and security

- Levels of access – Groups and roles
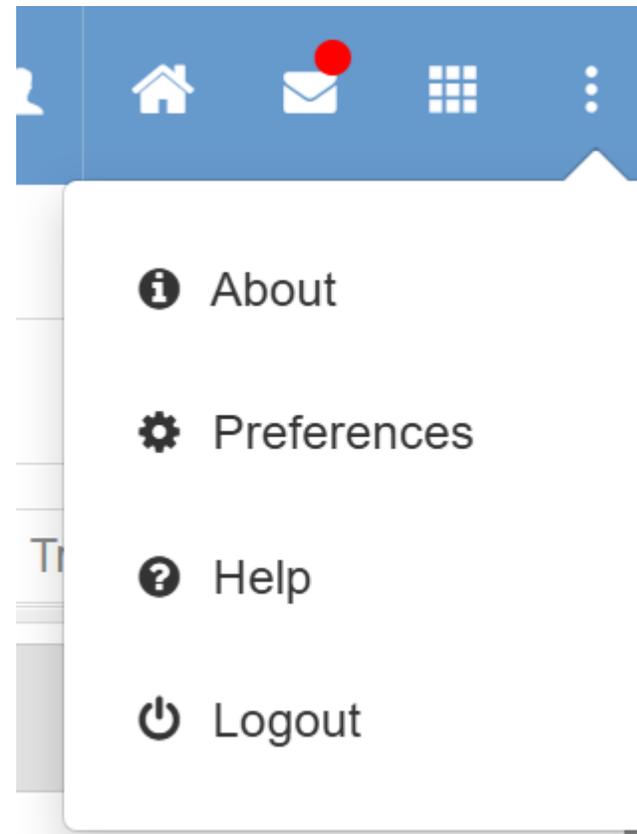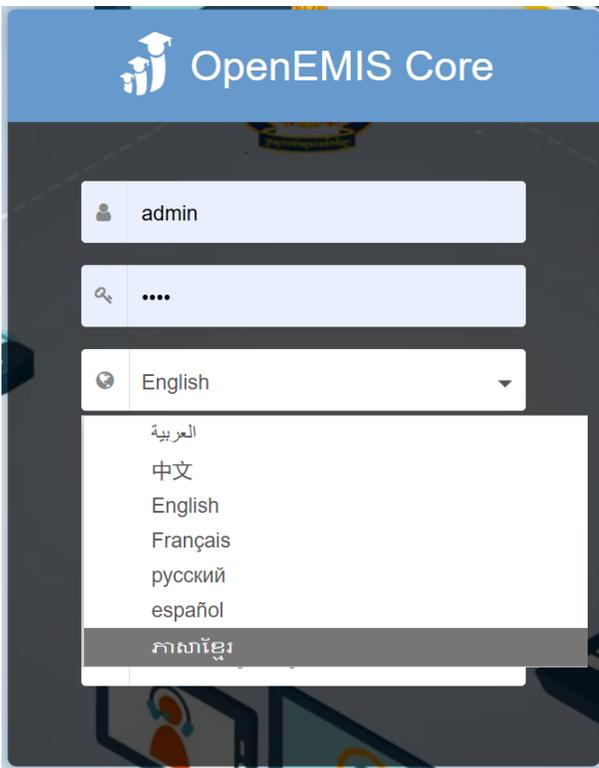
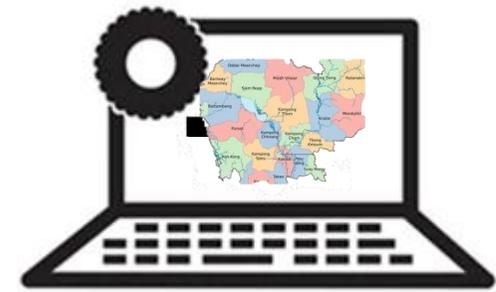- **Localising OpenEMIS**

- *Practical:*

    Editing Khmer Language

    Translations

emis.datainfo.io

core.datainfo.io

5
Takeaways

**Complexity and interconnected-ness of User Management**

- Hierarchy: **Groups → Roles → Users**

- System & User for **Groups → Roles**

- Users cannot be added to institutional (and their system groups) unless other things are in place first (education & positions)

Given what we know about OpenEMIS, we should be planning user, groups and roles (on paper at least) before the arrival of the sub-contractors.

Your ideas here:-

Type here ....
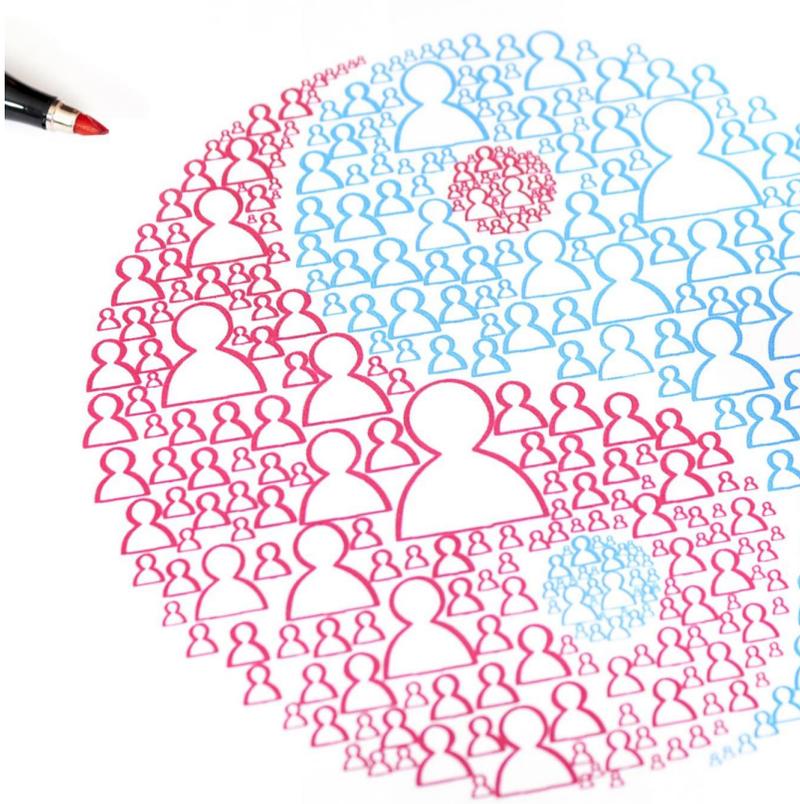
Implementation and Best Practices

Steps for Successful Deployment

Comprehensive Planning

Effective deployment begins with thorough planning to address all project requirements and potential risks.

Stakeholder Engagement

Involving stakeholders early ensures their needs are met and fosters collaboration throughout the process.
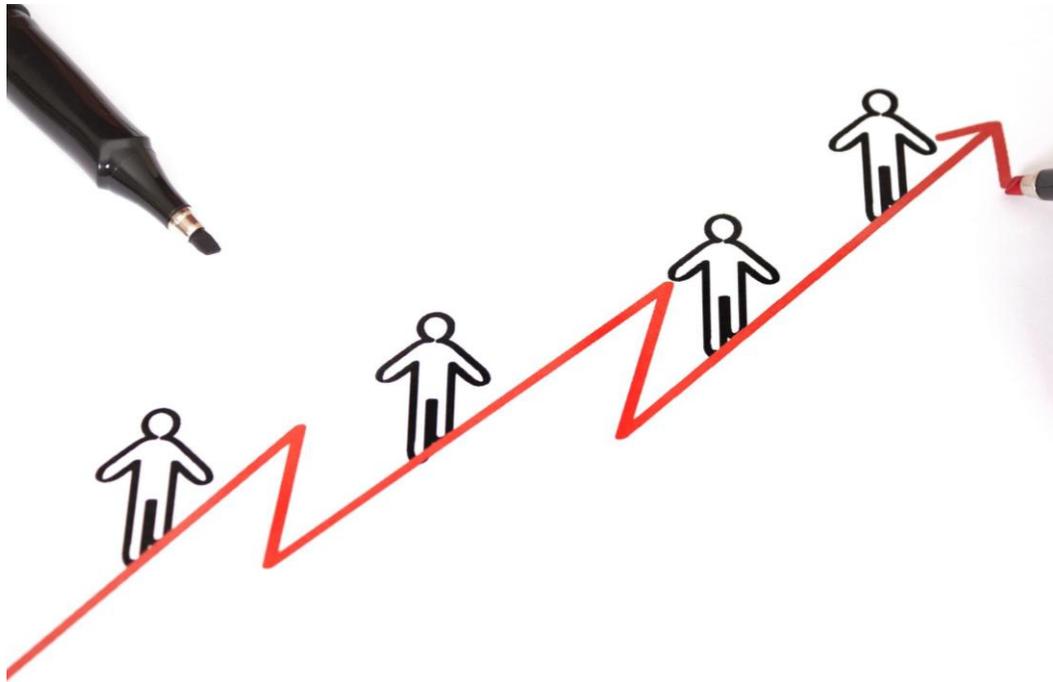
Customization and Training

Tailoring solutions and providing training empowers users for a smoother transition and better adoption.

Phased Rollouts

Implementing deployment in phases helps identify issues early and ensures a controlled rollout.

Challenges and Lessons Learned From Real-World Case Studies

Resource Constraints

Limited resources often hinder project progress, requiring efficient allocation and prioritization strategies.

Data Quality Issues

Poor data quality impacts decision-making and requires robust validation and cleansing processes.

User Adoption

Achieving user adoption involves training, support, and addressing resistance to change effectively.

# Continuous Improvement and Future Developments

Regular Updates

Continuous software updates ensure OpenEMIS remains efficient and adapts to new educational requirements.

Feedback Incorporation

Incorporating user feedback helps tailor OpenEMIS to real-world education sector needs and challenges.

Evolving Functionalities

Evolving features enable OpenEMIS to support emerging technologies and changing education landscapes effectively.
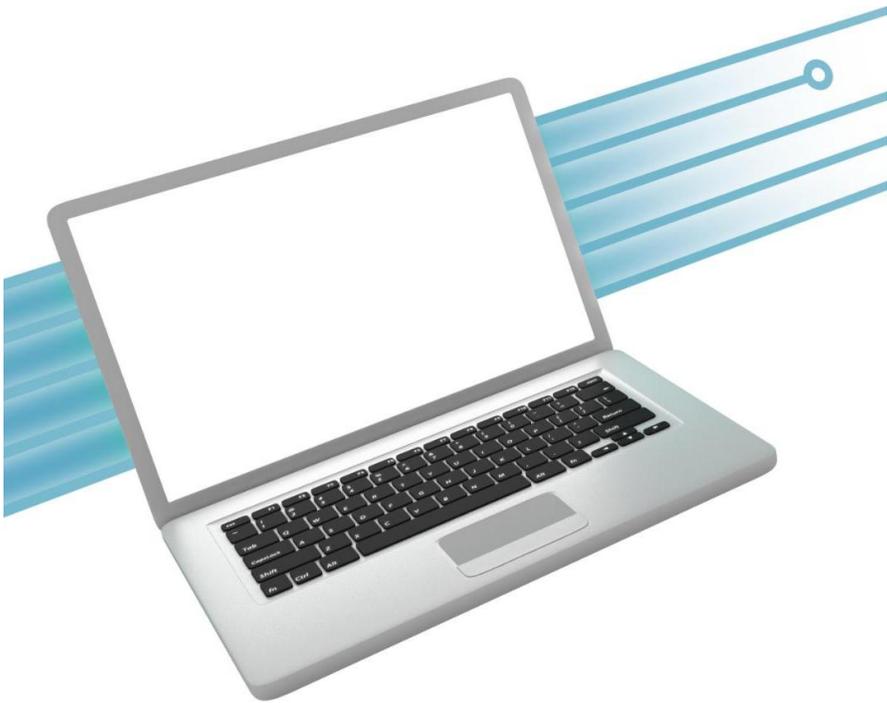
Conclusion

Powerful Data Management

OpenEMIS provides robust and flexible education data management capabilities for informed decision-making.

Security and Privacy

Strong security measures protect sensitive education data and ensure user privacy across the platform.

User Roles and Access

Distinct user roles enable proper access controls, facilitating smooth and secure system operation.

Effective Implementation

Proper implementation practices are essential to fully leverage OpenEMIS's capabilities in education management.
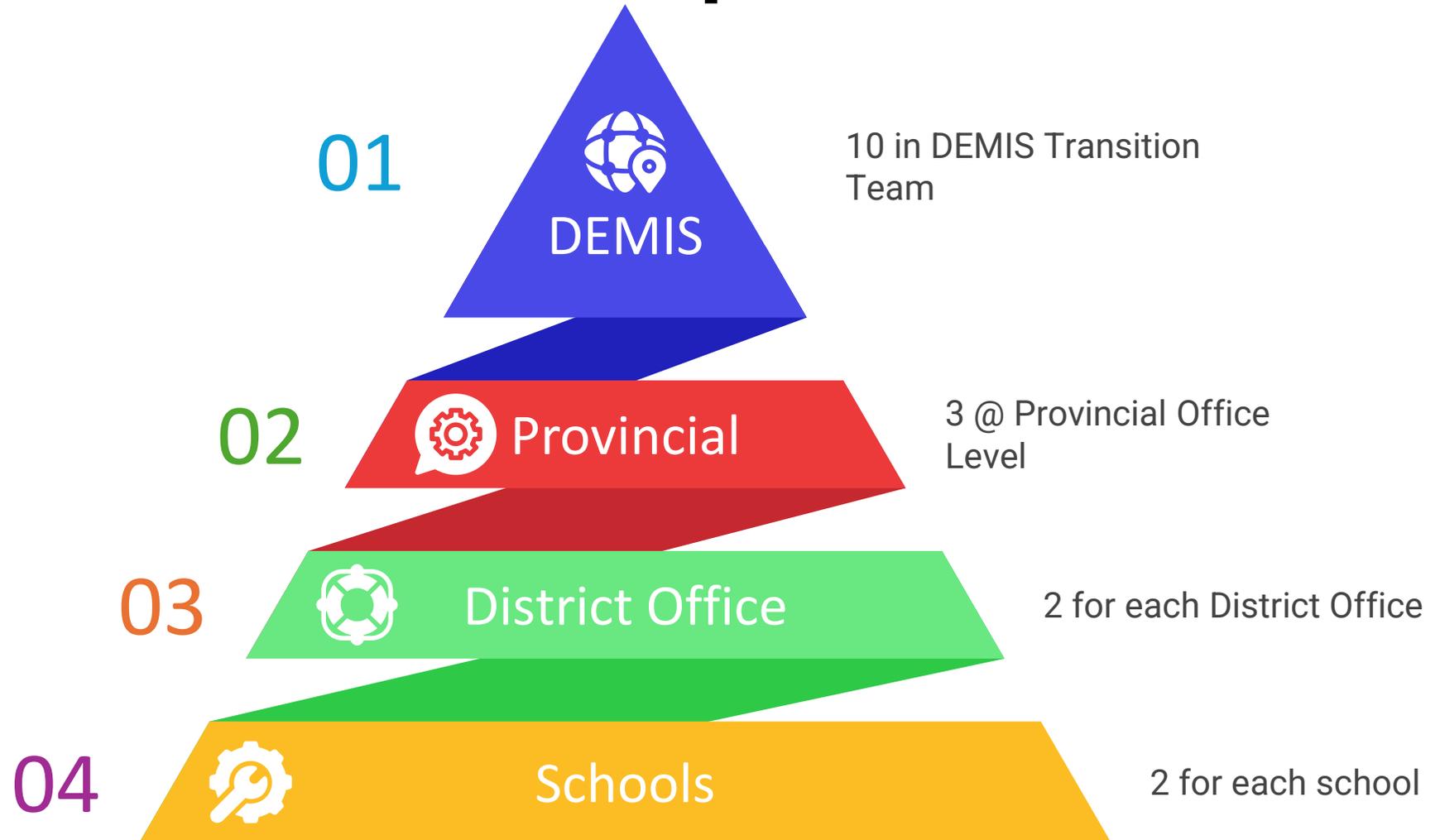
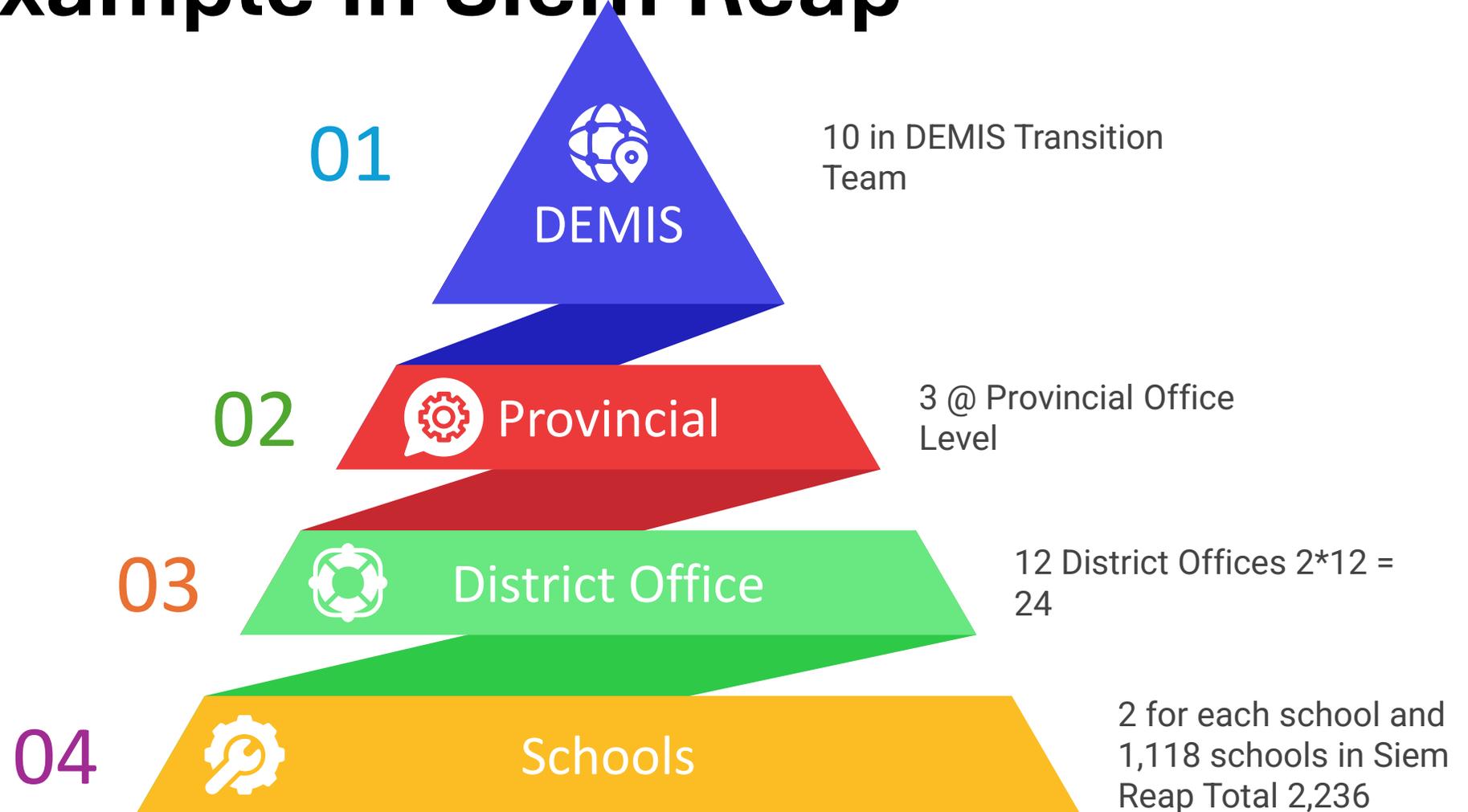# Epilogue

- 6

Workshop Epilogue

Preparations and Readiness

- **Technical Capacity**

- **Human Capacity**

- **Data Readiness for Migration**

Human Resource – OpenEMIS Cascade

01 DEMIS — 10 in DEMIS Transition Team

02 Provincial — 3 @ Provincial Office Level

03 District Office — 2 for each District Office

04 Schools — 2 for each school

STS Example in Siem Reap

01 DEMIS — 10 in DEMIS Transition Team

02 Provincial — 3 @ Provincial Office Level

03 District Office — 12 District Offices 2*12 = 24

04 Schools — 2 for each school and 1,118 schools in Siem Reap Total 2,236

STS Siem Reap

STS in Siem Reap

	Office#	Persons/Office	Total
DEMIS	1	10	10
Provincial Office	1	3	3
District Office	11	2	22
Schools			
All	1,118	2	2,236
		Total	**2,261**

All Cambodian Schools

All of Cambodia

	Office#	Persons/Office	Total
DEMIS	1	10	10
Provincial Office	25	3	75
District Office	211	2	422
Schools			
All	14,000	2	28,000
		Total	**28,497**

259 Step Up Schools

StepUP 259

	Office#	Persons/Office	Total
DEMIS	1	10	10
Provincial Office	25	3	75
District Office	150	2	300
Schools			
All	259	2	518
		Total	**893**

581 Upper Secondary

Upper Secondary 581 Target

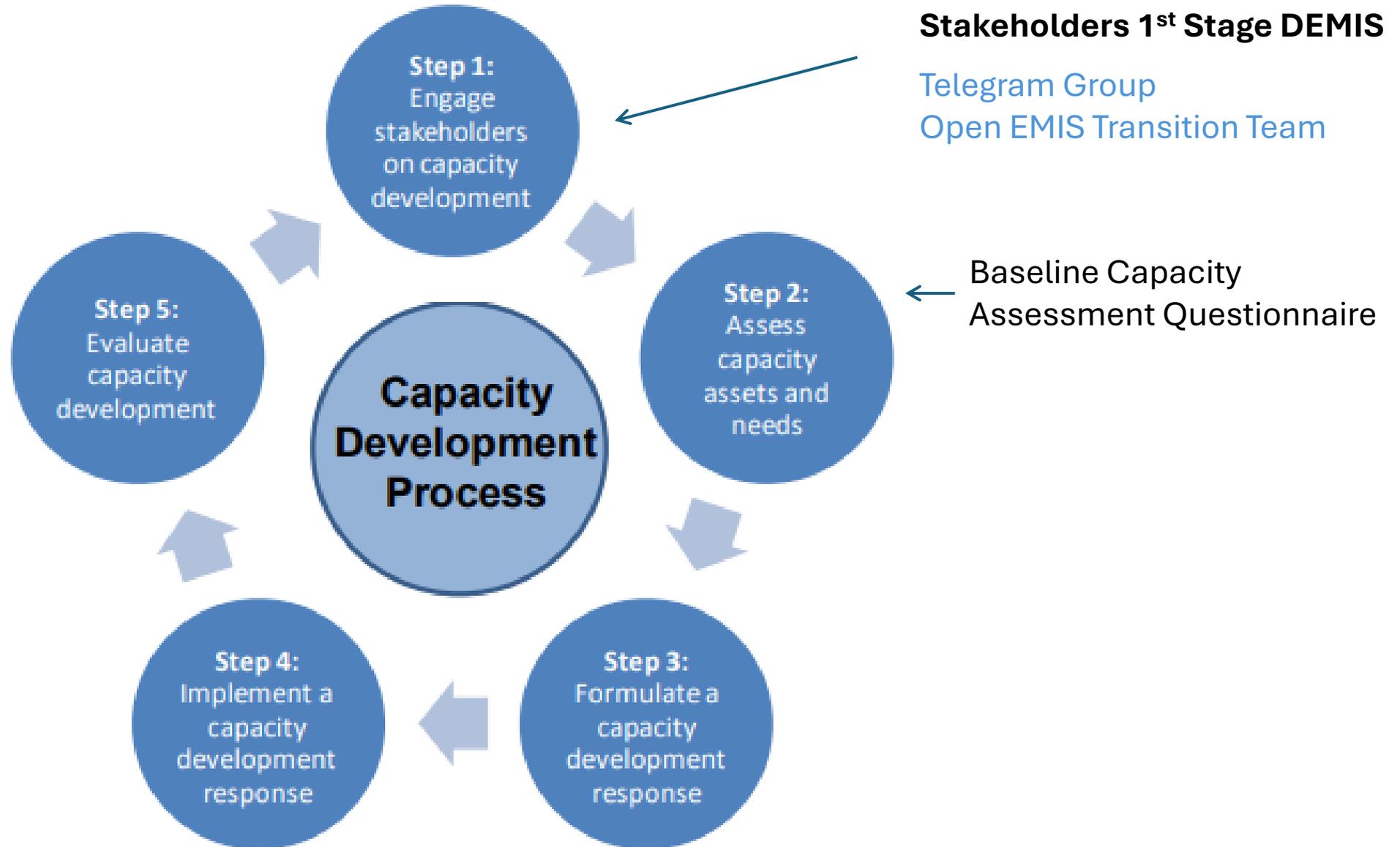|	Office#	Persons/Office	Total
DEMIS	1	10	10
Provincial Office	25	3	75
District Office	211	2	422
Schools			
All	581	2	1,162
		Total	**1,659**

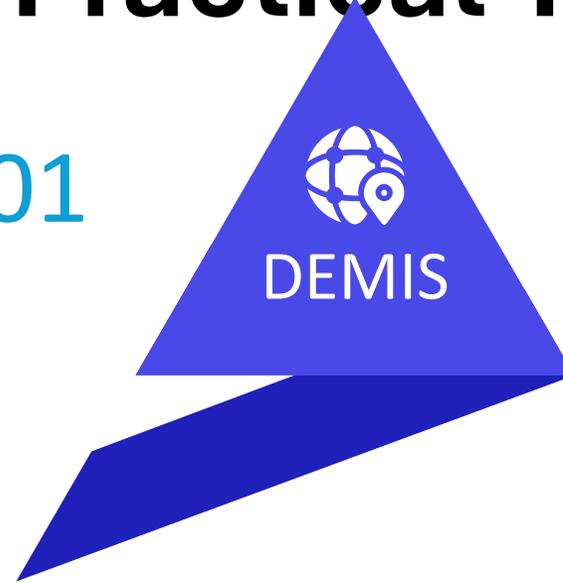# September – Practical Target

01

DEMIS

10 in DEMIS Transition Team

Figure 1. The UNDP capacity development process

September – Practical Target

01

DEMIS

10 in DEMIS Transition Team

Test & Trial – 2 Schools (Dec-Jan)

04

Schools

2 Local USS Schools