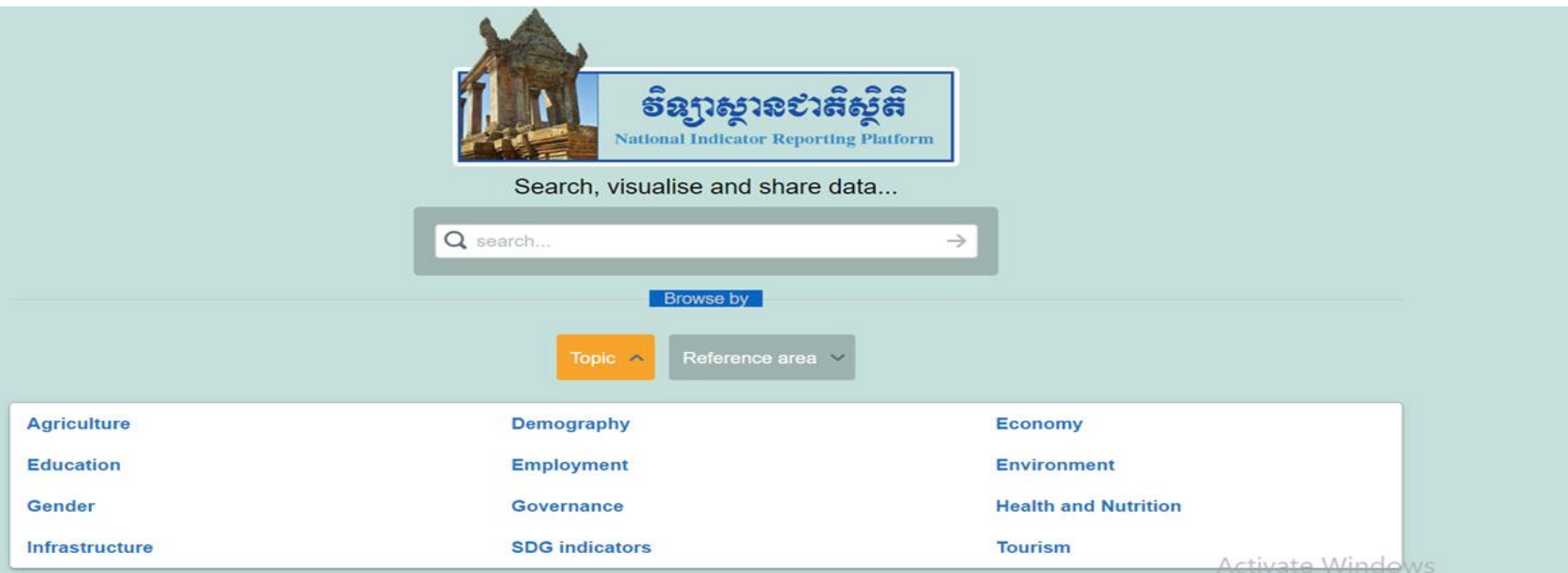# International Workshop on SDG monitoring
Virtually, <u>January 12-13, 2022</u>

Experience on Development of CamStat, CAMBODIA's National SDG Reporting Platform
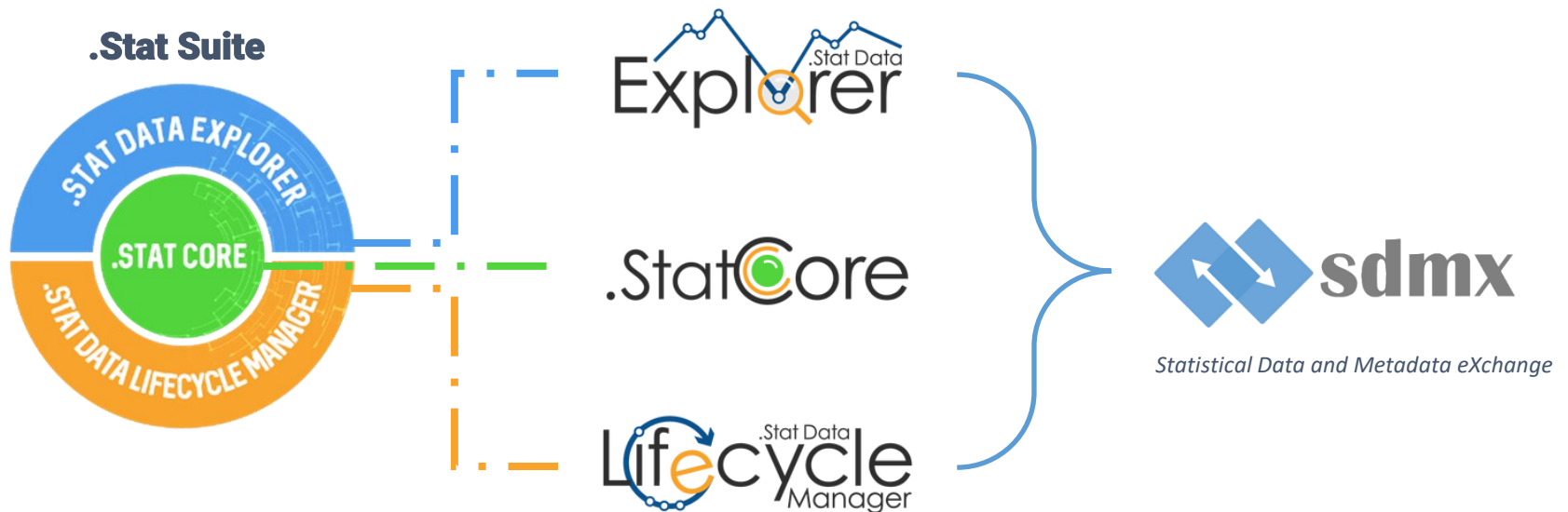

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Presentation Outline

1. The Implementation Experience

2. The Key Outputs

3. Lesson Learnt

4. Current Update & Maintenance Exercise

5. Next Step

Stat Suite and SDMX/CAMSTAT

.Stat Suite

Explorer .Stat Data

.StatCore

Lifecycle .Stat Data Manager

sdmx
Statistical Data and Metadata eXchange

➤ Data modeling and SDMX Information Model,
➤ .Stat Data Explorer and DLM
➤ .Stat hosted at the UN Global Platform (UNGP) cloud environment

Migrating into CamStat Production

Extract from CamInfo

Populate in .Stat

Pilot Exercise (2018-2019)

Flash Back to The Pilot Missions of OECD, UNICEF, PARIS21 and UNSD

Mar 2018

- Structured *SDG* DSD,

- *Structured Education Data*
- *Uploaded data to .Stat Suite*

Oct 2018

. Structured *Demography* Data & uploaded data to .Stat Suite.

. Built skills in SDMX standards and tools good practices

Dec 2018

. Structured Agriculture data and upload to .Stat Suite

. Deepened skills in data standards and tools good practices

May 2019

Full migration of CamInfo data, including NSDP and CSDG/SDG data.

STANDARD STANDARD STANDARD STANDARD

Tool Used

- DSD Constructor
  - Create Concept Scheme
  - Create Code list
- Mapping Assistant
  - Mapping all data of CamInfo database
- SDMX Converter
  - Create data flow

2 Key Outputs

- 898 indicators and about 170,000 data observations uploaded to CamStat using the .Stat Data Lifecycle Manager (DLM)

- CamStat running in the cloud and publicly available (http://camstat.nis.gov.kh/#/)

- Number of NIS Subject Matter staff/team trained on data standards and tools, .Stat DLM

- Training workshop on data sharing protocol and CamStat reporting platform, such as the fundamentals of data modeling, SDMX Information Model

- CamStat running on UNGP using AWS cloud services

- Data exchange has been established for SDG indicators with the SDG Global Platform

API query

- API query can be automatically generated base on SDMX standard
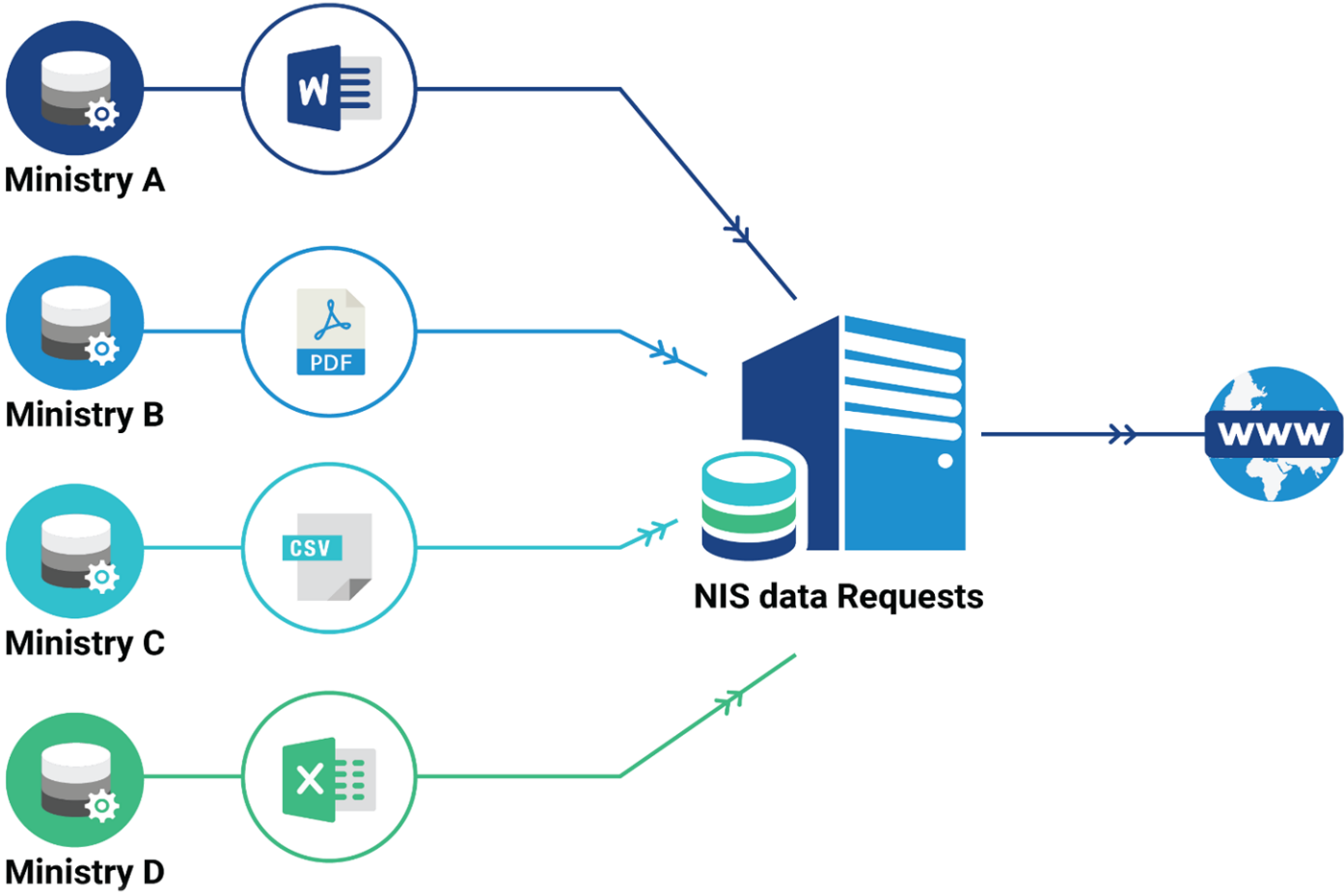
SDMX standard

```xml
<!-- NSI Web Service v7.13.2.0 -->
▼<message:Structure xmlns:message="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/message" xmlns:structure="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/structure"
  xmlns:common="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/common">
  ▼<message:Header>
    <message:ID>IDREF42591</message:ID>
    <message:Test>false</message:Test>
    <message:Prepared>2021-01-20T12:38:22.7506325+00:00</message:Prepared>
    <message:Sender id="Unknown"/>
    <message:Receiver id="Unknown"/>
  </message:Header>
  ▼<message:Structures>
    ▼<structure:Dataflows>
      ▼<structure:Dataflow id="DF_SDG_KH" agencyID="KH_NIS" version="1.2" isFinal="false">
        ▼<common:Annotations>
          ▼<common:Annotation>
            <common:AnnotationType>NonProductionDataflow</common:AnnotationType>
            <common:AnnotationText xml:lang="en">true</common:AnnotationText>
          </common:Annotation>
          ▼<common:Annotation>
            <common:AnnotationTitle>TIME_PERIOD</common:AnnotationTitle>
            <common:AnnotationType>LAYOUT_COLUMN</common:AnnotationType>
          </common:Annotation>
          ▼<common:Annotation>
            <common:AnnotationTitle>FREQ,REPORTING_TYPE,OBS_STATUS=A,UNIT_MULT=0</common:AnnotationTitle>
            <common:AnnotationType>NOT_DISPLAYED</common:AnnotationType>
          </common:Annotation>
          ▼<common:Annotation>
            <common:AnnotationTitle>REF_AREA,SEX,AGE,URBANISATION</common:AnnotationTitle>
            <common:AnnotationType>LAYOUT_ROW</common:AnnotationType>
          </common:Annotation>
        </common:Annotations>
        <common:Name xml:lang="en">National SDG Indicators</common:Name>
        ▼<structure:Structure>
          <Ref id="SDG" version="1.2" agencyID="KH_NIS" package="datastructure" class="DataStructure"/>
        </structure:Structure>
      </structure:Dataflow>
    </structure:Dataflows>
    ▼<structure:CategorySchemes>
      ▼<structure:CategoryScheme id="CAM_CAT" agencyID="KH_NIS" version="1.0" isFinal="true" isPartial="true">
        <common:Name xml:lang="en">Topic</common:Name>
        <common:Name xml:lang="km">ប្រធានបទ</common:Name>
        ▼<structure:Category id="SDG">
          <common:Name xml:lang="en">SDG indicators</common:Name>
```

3 Lesson Learnt

- ✓ Much effort required on SDMX artefact maintenance and versioning
- ✓ Expert knowledge of SDMX required with current interface and tools to model, map and upload data structures and dataset
- ✓ Different requirements for dissemination vs reporting when using global Data Structure Definitions (DSDs)
  - **Code descriptions**
  - **Unused dimensions**
  - **National extensions**
- ✓ NIS will need further technical assistance to use and maintain CAMSTAT

Current general situation for reporting (LMs/LAs)

Current Updating & Maintenance Exercise

Updating timeseries data from LMs, Survey and census report

Prepare indicators template for respective line ministry to be updated.

CamStat data have been reviewed (codelist dimension, customization) adapt to new feature of .StatSuite

1. Prepare mapping file with inclusive parameter sheet
2. Using DSD Matrix Generator
   - *To add/edit the required code list*
   - *Or To upgrade the version (DSD, CL, DF…)*
3. SDMX converter
   - *Using the generated DSD*
   - *Using the mapped file*
4. Upload into DLM

Generate SDMX Artefacts

Generate? 0=no, 1=yes	Action	Prerequisites	Parameters for SDMX-ML Generation	
1	Generate Dataflows	Fill the Dataflows and DSD-Concept Matrix worksheets to create the Dataflow/DSD relationships	**Output folder**	C:\temp
1	Generate Categorisations	Fill the category columns on the Dataflows worksheet for attaching the Dataflow to a Category	**Create separate files?**	0
0	Generate Codelists	Fill the CL_ worksheets for all required codelists, following the CL_template	**Filename prefix**	SDG_NEW
0	Generate Concept Scheme	Fill the Concept Scheme worksheet	**XML app for opening file**	C:\Program Files\Oxygen XML Editor 16\oxygen16.1.exe
0	Generate DSDs	Fill the DSDs worksheet	**Dataflow for Dataset stub**	IAEG_SDGS@SDG
1	Generate Constraints	Fill the Constraints worksheet		
0	Generate Dataset stub	Same as Generate Dataflows. Choose a Dataflow in the Parameters		

Other actions

| How to use | Generate SDMX & Actions | Concept Scheme | DSDs | Dataflows | DSD-Concept Matrix | ConstraintsSummary | CL_FREQ | CL_OBS_STAT | ... |

CamStat's Migration to UN Global Platform

- In 2020, CamStat was migrated from temporary hosting to the UN Global Platform with assistance from UNSD, OECD, UNESCAP, and UNICEF

  - it provided a home for CamStat in a robust cloud environment,

  - the technical aspects of the .Stat installation and maintenance is addressed by the UNGP community.

- CamStat now running on UNGP using AWS cloud services

- Working with FAO to disseminate Agricultural Survey on CamStat.

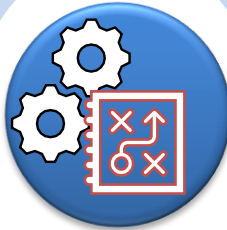- Future integration with Open SDG front-end through CamStat API (SDMX).

5 Next steps

CAMSTAT new version launching

Requested new data for updating time series data in CAMSTAT

Adapt flows throughout NSS to regularly update CAMSTAT (e.g. SDMX standard)

Need for continued technical support/capacity building (1-2 years), for example adopt/implement MOU/data sharing tools to automate data reporting/exchanging

Continued technical support for .Stat on UNGP Cloud

Provide training on using Data Explorer to the NIS subject matter team and line ministries/other agencies to ensure sustainability over the long term

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Thank you!