Evolution of the .Stat architecture using CSPA
SIS-CC: Building an Inclusive Data Ecosystem
**SIS-CC: Building an Inclusive Data Ecosystem**

**2002-2005:** SQL-based DWH with OLAP Cubes accessible internally from within Excel and externally through an OLAP web plug-in.

**Since 2005:** SQL-based DWH with web services accessible through web application, direct SQL interface and Excel.

Main feature: Allow hosting and disseminating flexibly multi-dimensional datasets and their referential metadata.

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**SIS-CC**

Distributed Information System Collaboration Community
Monolithic

Lacking reusability
**Component Architecture Model**

- Enforce Full SDMX & CSPA Compliance
- Ensure reusability and feasibility

**Statistical Information System** to provide solutions for statisticians to process the data through steps of the GSBPM

<table>
<thead>
<tr>
<th>Collect (incl. Validate)</th>
<th>Process (incl. Edit &amp; Calculate)</th>
<th>Disseminate</th>
</tr>
</thead>
<tbody>
<tr>
<td>StatWorks/MetaStore</td>
<td>.Stat</td>
<td>.Graph</td>
</tr>
<tr>
<td>Data Wizard</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Component Architecture Model

**Enforce Full SDMX & CSPA Compliance**

**Ensure reusability and feasibility**

The central repository ("warehouse") of validated statistics and related metadata

It is the organisational source of data for data sharing and dissemination purposes.

It is the central hub connecting data production, sharing & dissemination processes.
Component Architecture Model

Enforce Full SDMX & CSPA Compliance
Ensure reusability and feasibility
Component Architecture Model
- Enforce Full SDMX & CSPA Compliance
- Ensure reusability and feasibility

Extended Community Support Model
- Ensure long term capacity building and federation of entities

Extended Lifecycle Coverage
- Design, Collect, Process & Disseminate

Open Source Model
- Ensure long term financial sustainability and affordability for countries
Common Statistical Production Architecture “CSPA”: built by the Statistical Community for the Statistical Industry
Reusable Components for the Web

Component Architecture Model

Enforce Full SDMX & CSPA Compliance
Ensure reusability and feasibility

SIS-CC: Building an Inclusive Data Ecosystem
What are **Reusable Components for the Web?**

**Reusability**
each (type of) piece can be reused

**Encapsulation**
no piece can modify another piece

**Interoperability**
each piece has a standard interface

**Composition (static)**
with simple pieces, more complex pieces can be done

**Chaining (dynamic)**
with simple pieces, complex workflow can be done
Reusable Components for the Web
Component Architecture Model

Enforce Full SDMX & CSPA Compliance
Ensure reusability and feasibility

**Reusable Components for the Web**

- Chart Engine D3.js
- React JS layer
- Chart styling
- Chart configuration
Component Architecture Model

- Enforce Full SDMX & CSPA Compliance
- Ensure reusability and feasibility

Reusable Components for the Web – Chart Generator

- Chart Engine D3.js
- React JS layer
- Chart styling
- Chart configuration

SIS-CC: Building an Inclusive Data Ecosystem
Reusable Components for the Web in Excel (PoC)

Chart Engine D3.js
Component Architecture Model

Enforce Full SDMX & CSPA Compliance
Ensure reusability and feasibility

Eased creation of new products and user interfaces
Component Architecture Model

Enforce Full SDMX & CSPA Compliance
Ensure reusability and feasibility

2017-18 delivery plan

The .Stat Suite
Enforce Full SDMX & CSPA Compliance
Ensure reusability and feasibility
Component Architecture Model

Enforce Full SDMX & CSPA Compliance
Ensure reusability and feasibility

.Stat Core
Data Store
Mapping Store
SDMX Web Service
Share Web Service
Search Web Service
Configuration

Data Store
Storage of Observations, Attributes and Referential Metadata
Management of Constraints and Annotations

Mapping Store
Storage of structural information

SDMX Web Service
Retrievers and submitters for Data Store and Mapping Store
Readers and writers (SDMX-CSV)

Share Web Service
Store and retrieve tables and chart configurations for sharing

Search Web Service
Third-party open-source solution with indexing and storage

Configuration
Allow the application to be configured for the context of INS
The international standards agenda

Strong contribution by SIS-CC to the HLG agenda

Increase the adoption of international standards

CSPA

SDMX

Statistical Data and Metadata eXchange
Use Cases

UC1: PROXY MEMBER

ILO project to develop Labour Statistics portal for CARICOM countries.

UC2: FULL MEMBER

MENA Fund (Deauville partnership) to overhaul Tunisia’s INS based on Stat and SIS-CC support.
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