

Unleashing the Power of Data

The Africa Information Highway's
Approach to Implementing SDMX
in Africa.





AIH Ecosystem



Data Innovation Lab

Towards data driven Africa

Open data Ecosystem

Beyond data provision paradigm
Integrate other stakeholders' perspectives
Starts with creating community around data

SDMX

Standardize data structures and
enhance their quality

Open Data Portals

Enhance data accessibility and
usability

Africa Information Highway Principles

01 Reduce Friction



reduce friction by implementing SDMX to automate data exchange

02 Data Augmentation



Implementing SDMX contributes to the improvement of data quality.

03 Collect once, Use and Reuse

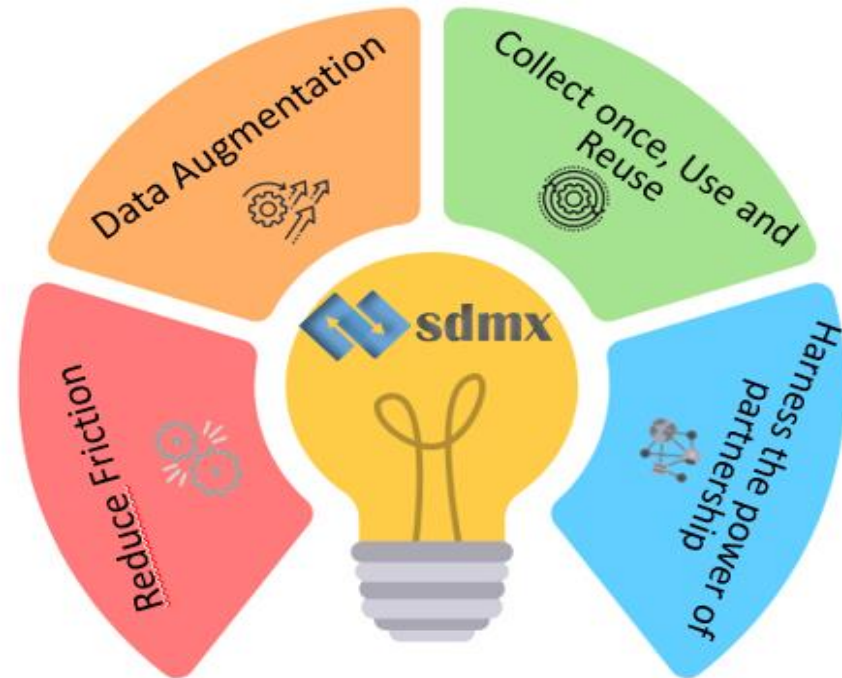


efficient and sustainable practice of gathering data with the intent of maximizing its utility by employing it across various applications

04 Harness the power of partnerships



emphasizing the importance of using collaborations to amplify the impact of data initiatives and innovation, enabling collective efforts to address complex challenges effectively





Tools

- Providing **free open** source tools
- **Easy** to deploy and use



Sub regional hubs

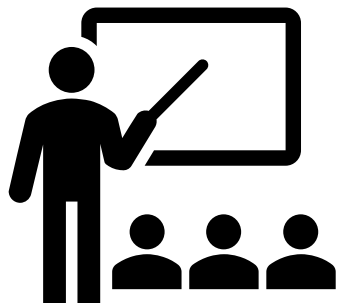
- Sub regional **partnerships**
- Building a **network** of SDMX experts



Knowledge sharing

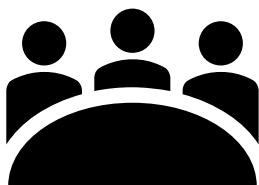
- **Clustering** countries
- Providing technical **assistance**

Technical assistance



- No African country left behind
- **Clustering** countries with similar capabilities
- **Hybrid** approach (remotely and physical country missions)
- Annual SDMX **work plan**
- **Sustain** skills and knowledge
- Encourage **innovation** in the use of SDMX

Capacity building



04

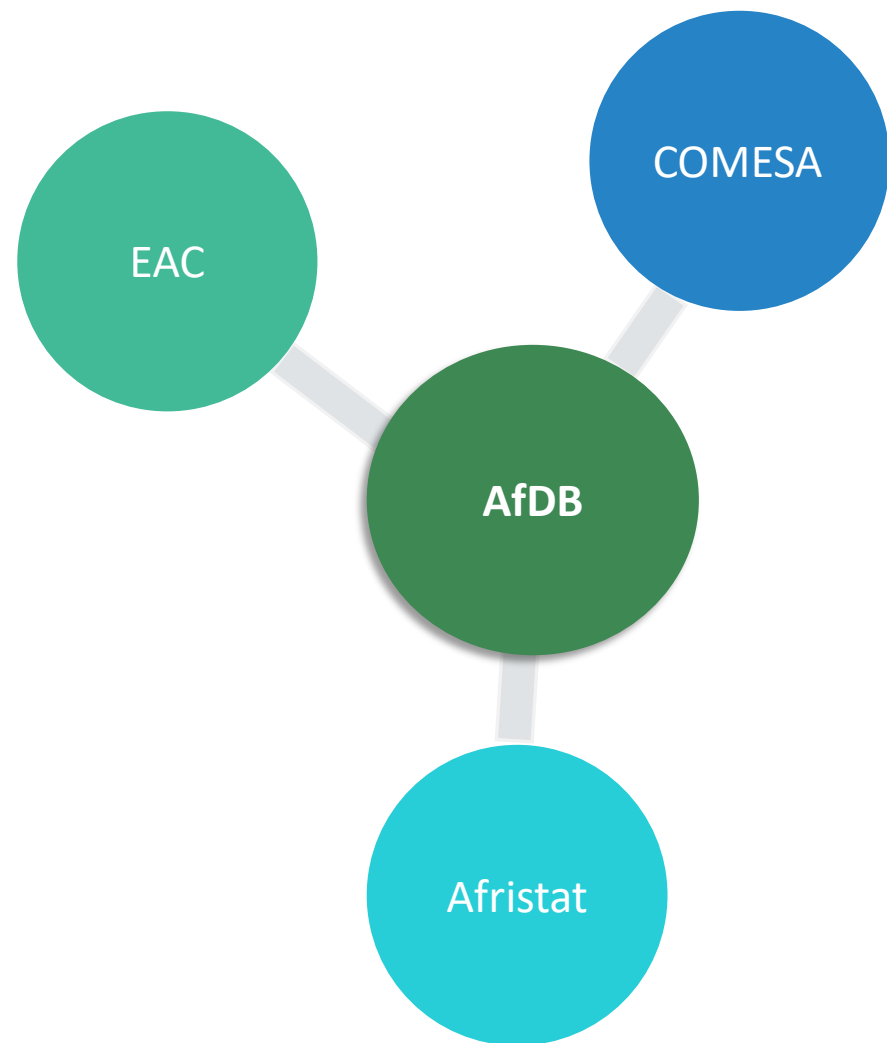
SDMX Regional Workshops

25

Trained countries

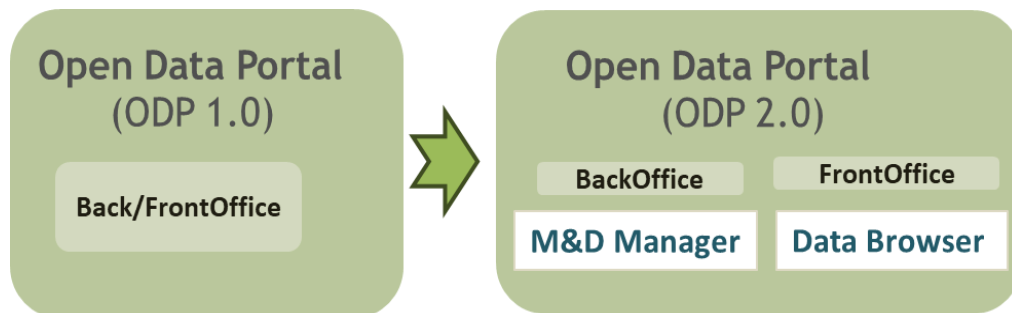
- AfDB acts as a **relay** to transfer SDMX knowledge and skills to Africa
- Workshops, trainings and country missions (country and regional level)
- Build countries' capacities to **manage, disseminate** and **report** data in SDMX format
- Offer a solid understanding of SDMX and **skills** to **harmonize** data structures
- **Simplify** learning SDMX path by mapping SDMX vocabulary with used terminologies
- **Streamline** data modeling process using generic Data Structure Definition

Sub regional hubs



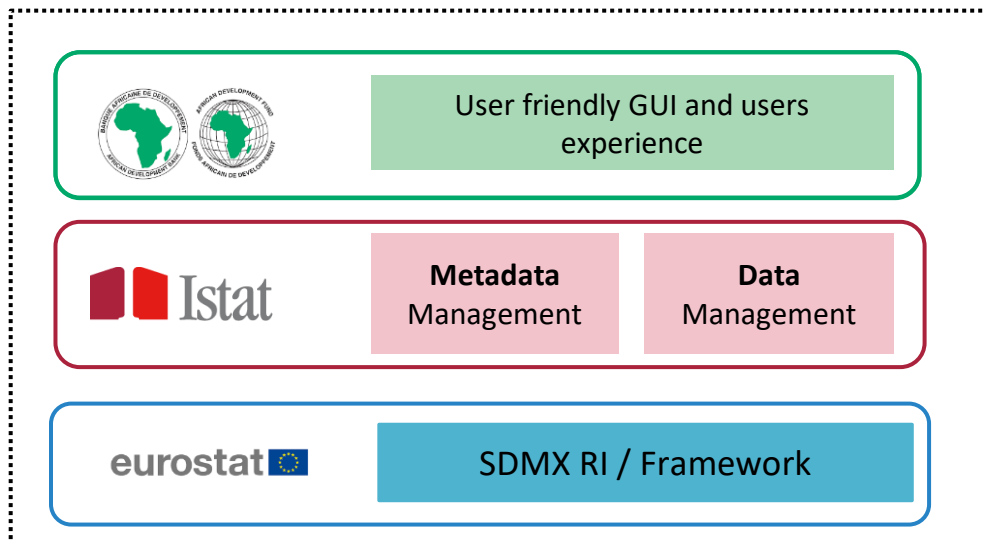
- The **hubs** are hosted by the sub regional organizations
- Build countries' capacities within the region to **manage, disseminate** and **report** data in SDMX format
- At least one staff of the sub regional organization should be **certified** as an AIH trainer
- A **network** of experts from the hubs to better support countries

SDMX tools and technologies

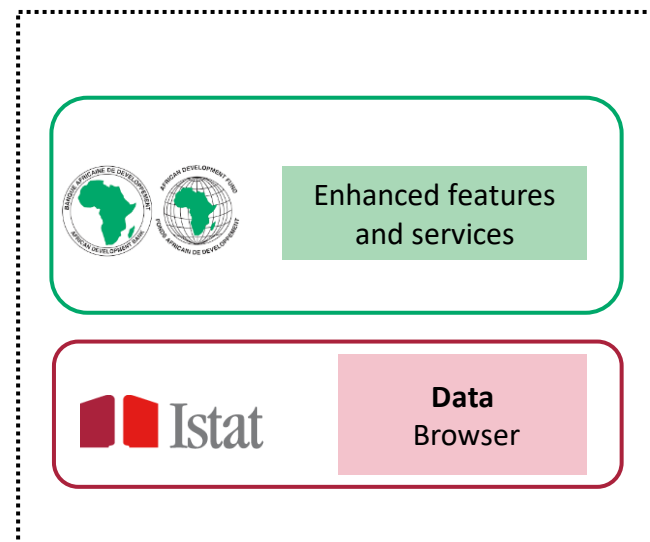


- **Open** source
- **Easy** to install and configure for African countries
- **Interoperability** & scalability
- **Multilingual** & customizable
- **Hybrid** deployment (countries' premises or AfDB Data centers)

Backend



Frontend



API



Open Data Portal (ODP 2.0)

M&D Manager

Metadata Manager

- SDMX Registry
- Nomenclature server
- DCAT data catalogs
- Structural metadata management
- Reference metadata editor

Data Manager

- Data cubes
- Mapping
- Data loading
- Data flows
- **Plugin Manager**
- **Mapping Handler**
- **Transformation** ^{NEW}
- **Processing (aggregation/derivation)**
- **Easy loader**

Data browser Manager

Dissemination

- GUI (Data Browser)
- ^{NEW} Custom pages
- M2M (APIs)
 - SDMX
 - CKAN (DCAT)

Reporting

- Ad-hoc utilities

SDMX tools and technologies

Building Structures

	A	B	C	D	E	F
1	ROLE	ID	FIXED_VALUE	DIMENSION	NAME_XX	
2	CUBE	<i>id_Cube</i>			<i>nameCube</i>	
3	FREQ	<i>FREQ</i>			<i>nameFREQ</i>	
4	DIM	<i>id_Dim1</i>	<i>itemDim1_A</i>		<i>nameDim1</i>	
5	DIM	<i>id_Dim2</i>	<i>itemDim2_B</i>		<i>nameDim2</i>	
6	DIM	<i>id_Dim3</i>			<i>nameDim3</i>	
7	DIM	<i>id_Dim4</i>			<i>nameDim4</i>	
8	FOOTNOTE	<i>id_Footnote1</i>		<i>id_Dim2, idDim4</i>	<i>nameFootnote1</i>	
9	FOOTNOTE	<i>id_Footnote2</i>			<i>nameFootnote2</i>	
10	FLAG	<i>id_Flag1</i>	<i>itemFlag1_B</i>		<i>nameFlag1</i>	
11	FLAG	<i>id_Flag2</i>			<i>nameFlag2</i>	
12	TIME	<i>TIME_PERIOD</i>			<i>nameTime</i>	
13	VALUE	<i>OBS_VALUE</i>			<i>nameValue</i>	
14	DATASET	<i>nameSheetDataset1</i>				
15	DATASET	<i>nameSheetDataset2</i>				
16	DATAFLOW	<i>nameSheetDataflow</i>				
17	DSD_MAPPING	<i>ID+AgencyID+Version</i>				
18	DATA_MAPPING	<i>nameSheetDataMapping</i>				
19	DATAFLOW_MAPPING	<i>nameSheetDataflowMapping</i>			<i>name NSDP</i>	<i>datacategory</i>

Mapping data cubes on ECOFIN DSD

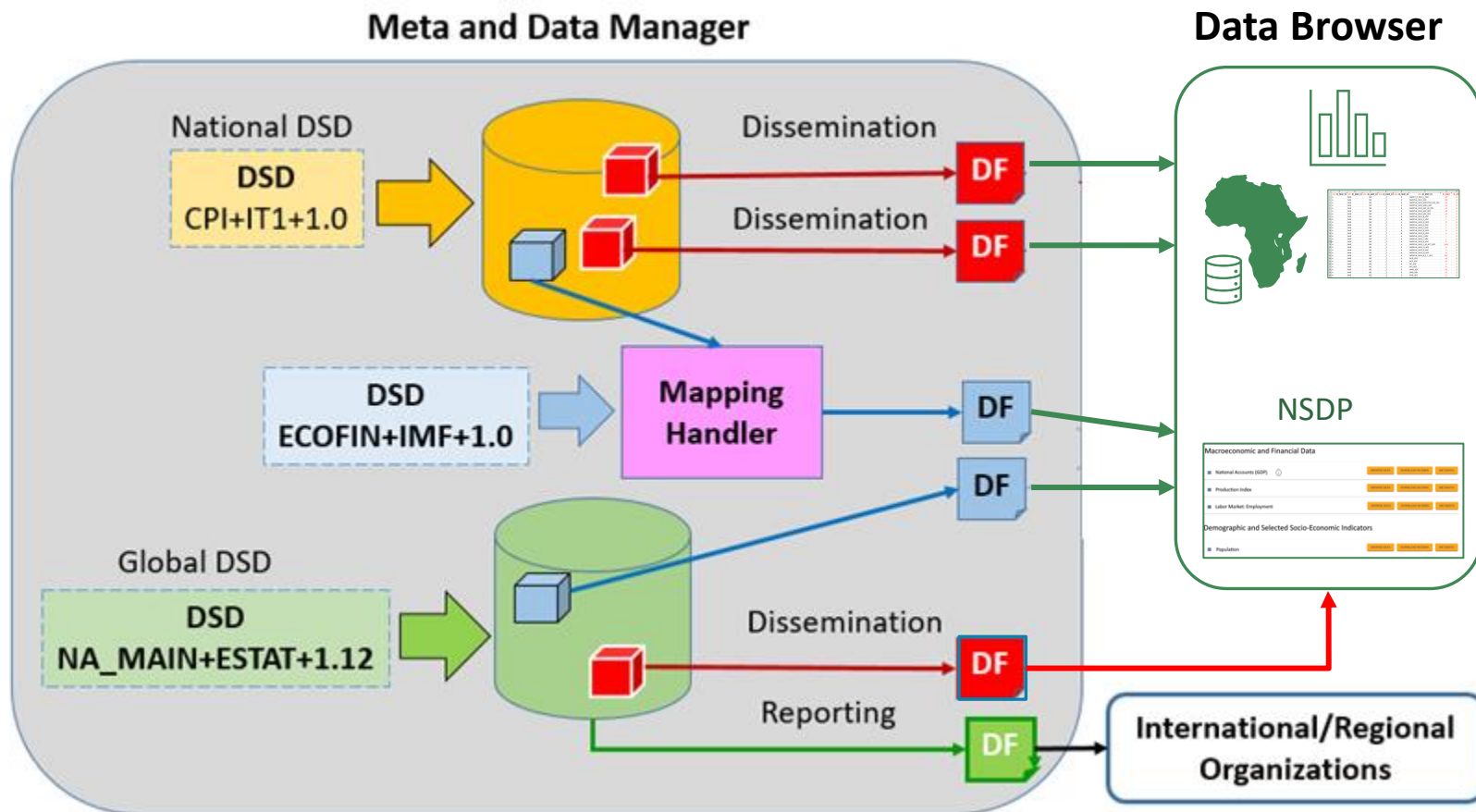
	A	B	C	D	E	F	G	H
1	IMF+ID_MAP_D1	IMF+ID_MAP_D2	IMF+ID_MAP_D3	IMF+ID_MAP_D4	IMF+ID_MAP_A1	IMF+ID_MAP_D5	ID_DIM2	ID_DIM
2	A	NAG	MZ	_Z	6	NGDPT_R_ISIC3_I_XDC	ISP	I1
3	A	NAG	MZ	_Z	6	NGDPVA_ISIC3_XDC	PIB	I1
4	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_A011013_016_XDC	A2	I1
5	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_A014_XDC	A3	I1
6	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_A01_02_XDC	A4	I1
7	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_A02_XDC	A4	I1
8	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_A03_XDC	A5	I1
9	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_B_XDC	B	I1
10	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_C_XDC	C	I1
11	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_D_XDC	D	I1
12	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_E_XDC	E	I1
13	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_F_XDC	F	I1
14	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_G_XDC	G	I1
15	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_H_XDC	H	I1
16	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_I_XDC	I	I1
17	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_J_XDC	J	I1
18	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_K_XDC	K	I1
19	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_L_M_N77_XDC	LMN	I1
20	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_O_XDC	O	I1
21	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_P_XDC	P	I1
22	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_Q_XDC	Q	I1
23	A	NAG	MZ	_Z	6	NGDPVA_ISIC4_R_S_T_XDC	RST	I1
24	A	NAG	MZ	_Z	6	NCG_XDC	A2	I1
25	A	NAG	MZ	_Z	6	NCP_XDC	A1	I1
26	A	NAG	MZ	_Z	6	NC_XDC	A	I1
27	A	NAG	MZ	_Z	6	NFI_XDC	B	I1
28	A	NAG	MZ	_Z	6	NMG_XDC	D1	I2
29	A	NAG	MZ	_Z	6	NMS_XDC	D2	I2
30	A	NAG	MZ	_Z	6	NXG_XDC	C1	I2
31	A	NAG	M7	7	6	NXS_XDC	C2	I2

Publishing Data categories

	A	B	C	D	E	F
1	CATEGORYSCHEME_ID	CATEGORY_ID	DATA_DOMAIN	ID	NAME_EN	NAME_PT
2	EGDSDS	MEFDD	NAG	NAG00	National Accounts (GDP)	Contas Nacionais - PIB

Example of feature ODP 2.0- Easy Loader

SDMX tools and technologies



Example of feature for ODP 2.0- Mapping Handler

Way forward



Formalize
the hubs



data modeling
capacity building



Migration to the
new system

Partnerships



- In collaboration with sub-regional organizations, the Bank will continue to implement its ambitious program with the aim of making a tangible impact in Africa
- Considering the vast size of the African continent and the substantial need for skills, the Bank remains open to collaborating with all SDMX sponsor agencies for a mutually impactful partnership to drive effective SDMX implementation in Africa.



Reveal the Power of Data in Africa

Thank you

Contact us

A.AIH@AfDB.org