

What's New in Analytics Platform?

DHIS2 Symposium - 2026

Common Problems



System integration and data exchange

High-performance data exploration and visualization

Advanced and flexible analytics and visualizations

Real-time access to data and analytics

Archiving of obsolete data

Analytics Platform



Platform for data **integration** and advanced & embedded data **analytics**

Designed as an **extension** of DHIS2

Open source software

Built on open source technologies - PostgreSQL, ClickHouse, Superset

Can be deployed **on-premise** in-country or in the cloud

Provides an integrated **data lake** and **data warehouse**

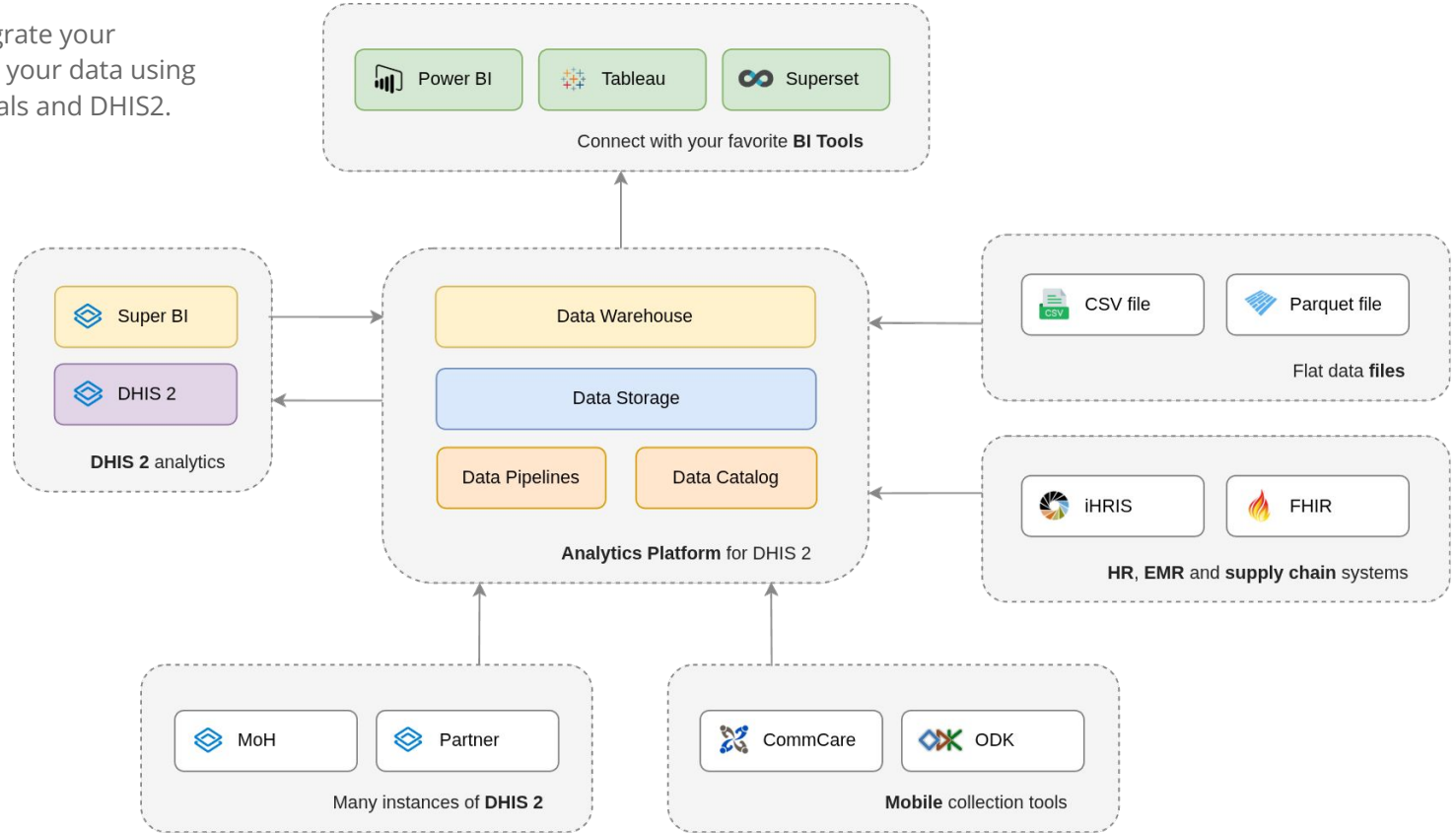
Adopted by Key Partners

Used by 24 countries and organizations, with more to come



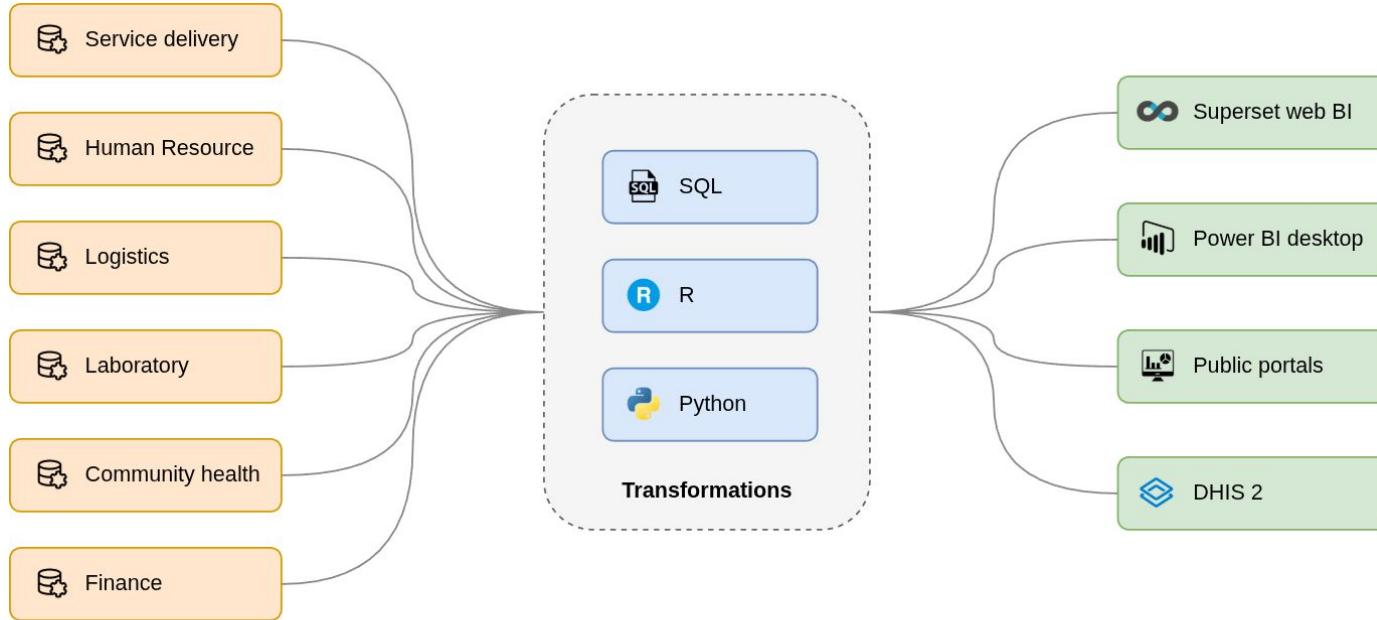
Data Flow

Connect and integrate your systems. Visualize your data using BI tools, web portals and DHIS2.



Data Flow

Load and integrate all data sources, transform data and fuel insights and dissemination



Data sources

Analytics Platform

Output & insights

Deploy Anywhere

Deploy on-premise and across leading public cloud providers



Amazon Web Services

S3 / ClickHouse



On-premise data center

ClickHouse / PostgreSQL



Microsoft Azure

Blob Storage / SQL Database



Google Cloud Platform

Cloud Storage / BigQuery

Multi-Data Warehouse

Wide range of data warehouses supported



AWS Redshift

AWS



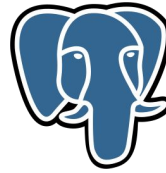
ClickHouse

Any



BigQuery

GCP



PostgreSQL

Any



SQL Database

Azure / on-prem



Synapse

Azure



SQL Server

Azure / on-prem

Data lake and data warehouse can be hosted on-prem, in client-owned cloud account or by BAO Systems

Single Sign-On (SSO)

Sign in once and get access to AP, DHIS2, Superset and Power BI



Power BI



Azure



Superset



Analytics Platform























Keycloak



DHIS2

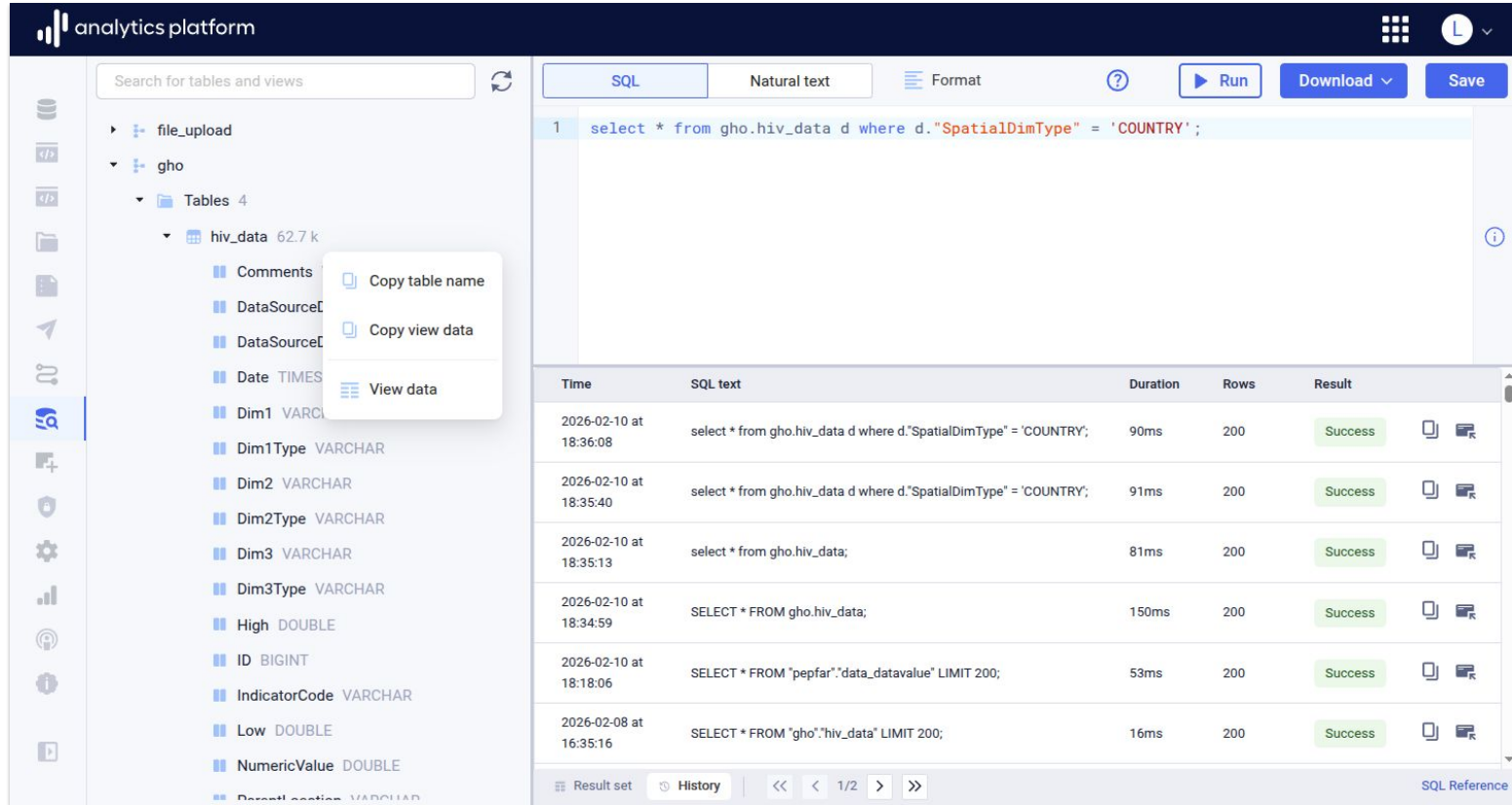
Connectors for Systems used by Development Partners

Scalable, automated and quick and simple to set up, no need for coding

 Microsoft Azure Blob Storage	 BHIMA	 CommCare	 CSV file upload
 dhis2	 FHIR	 World Health Organization	 Google Sheets
 iHRIS	 KoBoToolbox	 Microsoft SQL Server	 MySQL
 OX	 ONN	 ORACLE DATABASE	 Parquet
 PostgreSQL	 Public dataset	 amazon REDSHIFT	 amazon S3

Data Browser

Schema navigator actions, query history and query autocomplete



The screenshot displays the 'analytics platform' interface. On the left is a schema navigator with a search bar and a tree view showing a database structure. A context menu is open over the 'hiv_data' table, offering actions like 'Copy table name', 'Copy view data', and 'View data'. The main area features a SQL editor with a query: `select * from gho.hiv_data d where d."SpatialDimType" = 'COUNTRY';`. Below the editor is a table of query history.



Time	SQL text	Duration	Rows	Result
2026-02-10 at 18:36:08	<code>select * from gho.hiv_data d where d."SpatialDimType" = 'COUNTRY';</code>	90ms	200	Success
2026-02-10 at 18:35:40	<code>select * from gho.hiv_data d where d."SpatialDimType" = 'COUNTRY';</code>	91ms	200	Success
2026-02-10 at 18:35:13	<code>select * from gho.hiv_data;</code>	81ms	200	Success
2026-02-10 at 18:34:59	<code>SELECT * FROM gho.hiv_data;</code>	150ms	200	Success
2026-02-10 at 18:18:06	<code>SELECT * FROM "pepfar"."data_datavalue" LIMIT 200;</code>	53ms	200	Success
2026-02-08 at 16:35:16	<code>SELECT * FROM "gho"."hiv_data" LIMIT 200;</code>	16ms	200	Success













At the bottom, there are navigation controls for the query history, including a 'History' button and pagination arrows. A 'SQL Reference' link is also present in the bottom right corner.

Natural Text Data Queries

Write data queries in natural language and let the platform retrieve and explain the result

analytics platform

-  Data catalog
-  Views
-  Schemas
-  Data quality checks
-  Destinations
-  Workflows
-  Data browser
-  Variables
-  Firewall rules
-  Settings
-  Data visualization
-  Connection information

Powered by BAO Systems

Search for tables and views

- ▶ dataset
- ▼ pepfar
 - ▶ Tables
 - ▶ data
 - ▶ data_anc
 - ▶ data_anc_audit
 - ▶ data_audit
 - ▶ data_categories_categoryopti
 - ▶ data_category
 - ▶ data_category_structure
 - ▶ data_categorycombo
 - ▶ data_categorycombos_catego
 - ▶ data_categorycombos_option
 - ▶ data_categoryoption
 - ▶ data_categoryoption_organits
 - ▶ data_categoryoptioncombo
 - ▶ data_categoryoptioncombona
 - ▶ data_categoryoptioncombos_
 - ▶ data_categoryoptiongroup
 - ▶ data_categoryoptiongroupmer

SQL
Natural text
Duration: 3747ms Start time: 8:18:38 PM
Format
Run
Download



Give me the sum of data values for data items related to PMTCT_STAT and PMTCT_STAT_POS by quarter and OU Region level. Include the data item. Order by data value descending.













DataItem	OU Region	PT Quarterly	TotalValue
PMTCT_STAT	Nigeria	2022Q3	534712
PMTCT_STAT	Mozambique	2022Q2	510314
PMTCT_STAT	Nigeria	2016Q1	504048
PMTCT_STAT	Mozambique	2022Q1	502587
PMTCT_STAT	Nigeria	2018Q3	489830
PMTCT_STAT	Nigeria	2022Q2	481647
PMTCT_STAT	Nigeria	2022Q1	481637
PMTCT_STAT	Mozambique	2022Q3	472817
PMTCT_STAT	Nigeria	2018Q1	472423
PMTCT_STAT	Mozambique	2021Q4	471763
PMTCT_STAT	South Africa	2019Q3	470396
PMTCT_STAT	South Africa	2020Q3	467942
PMTCT_STAT	Mozambique	2021Q3	462895

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Give me the sum of data values for data items related to PMTCT_STAT and PMTCT_STAT_POS by quarter and OU Region level. Include the data item. Order by data value descending.













DataItem	OU Region	PT Quarterly	TotalValue
VARCHAR	VARCHAR	VARCHAR	DOUBLE
PMTCT_STAT	Nigeria	2022Q3	534712
PMTCT_STAT	Mozambique	2022Q2	510314
PMTCT_STAT	Nigeria	2016Q1	504048
PMTCT_STAT	Mozambique	2022Q1	502587
PMTCT_STAT	Nigeria	2018Q3	489830
PMTCT_STAT	Nigeria	2022Q2	481647
PMTCT_STAT	Nigeria	2022Q1	481637
PMTCT_STAT	Mozambique	2022Q3	472817
PMTCT_STAT	Nigeria	2018Q1	472423
PMTCT_STAT	Mozambique	2021Q4	471763
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 - ▶ data_categoryoptioncombo
 - ▶ data_categoryoptioncombona
 - ▶ data_categoryoptioncombos_
 - ▶ data_categoryoptiongroup
 - ▶ data_categoryoptiongroupmer

SQL
Natural text
Duration: 1716ms Start time: 8:23:21 PM
Format
Run
Download

Give me a list of regions (OU Region) and the number of sites (org units) which have at last 100 people on treatment (defined as TX_CURR) in year 2022.

OU Region VARCHAR	Number of Sites NUMERIC
Nigeria	1358
Botswana	86
Uganda	1485
Zimbabwe	1504
Kenya	1894
Burundi	171
Ukraine	181
Vietnam	95
Haiti	141
Zambia	1310
Eswatini	166
Malawi	700
Rwanda	204

Natural Text Data Queries

Generate SQL queries from natural language with the use of Large Language Models

analytics platform

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Powered by BAO Systems

Search for tables and views

- dev_information_campaign_...
- dev_information_campaign_...
- dev_inpatient_morbidity_and...
 - Admission Date TIMEST
 - Age in years BIGINT
 - Age in years_Age 10y int
 - Age in years_Age 15y int
 - Area VARCHAR
 - AttOptCombo VARCHAR
 - CompletedDate TIMEST.
 - Created TIMESTAMP
 - Deleted BOOLEAN
 - Diagnosis (ICD-10) VARC
 - Discharge Date TIMEST/
 - Documentation VARCHA
 - DueDate TIMESTAMP
 - EnrollmentDate TIMEST,
 - EnrollmentID VARCHAR
 - EnrollmentStatus VARC
 - EventDate TIMESTAMP

SQL
Natural text
Duration: 2654ms Start time: 12:38:54 PM
Format
▶ Run
Download

For inpatient morbidity mortality cases, tell me how many individuals were discharged (code MODDISCH) by OU district level, monthly period type, gender and age in 10 year intervals.

OU District	PT Monthly	Gender	Age in years_Age 10y interval	NumberOfDischarges
Koinadugu	202402	Male	0 - 10	4
Kono	202409	Male	60 - 70	7
Moyamba	202406	Male	20 - 30	3
Tonkolili	202303	Female	30 - 40	5
Koinadugu	202407	Male	80 - 90	5
Bombali	202305	Female	50 - 60	9
Port Loko	202305	Male	40 - 50	6
Bombali	202402	Male	30 - 40	3
Bonthe	202401	Male	70 - 80	2
Port Loko	202307	Female	60 - 70	9

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Powered by BAO Systems

Search for tables and views

- ▼ default
 - ▼ Tables
 - ▼ dev
 - Area VARCHAR
 - AttOptComboID VARCHAR
 - AttOptComboName VARCHAR
 - CatOptComboID VARCHAR
 - CatOptComboName VARCHAR
 - Commodities VARCHAR
 - Created TIMESTAMP
 - DataItem VARCHAR
 - DataItemCode VARCHAR
 - DataItemID VARCHAR
 - Deleted BOOLEAN
 - Diagnosis VARCHAR
 - Donor VARCHAR
 - EPI/nutrition age VARCHAR
 - EndDate TIMESTAMP
 - Facility Ownership VARCHAR
 - Facility Type VARCHAR

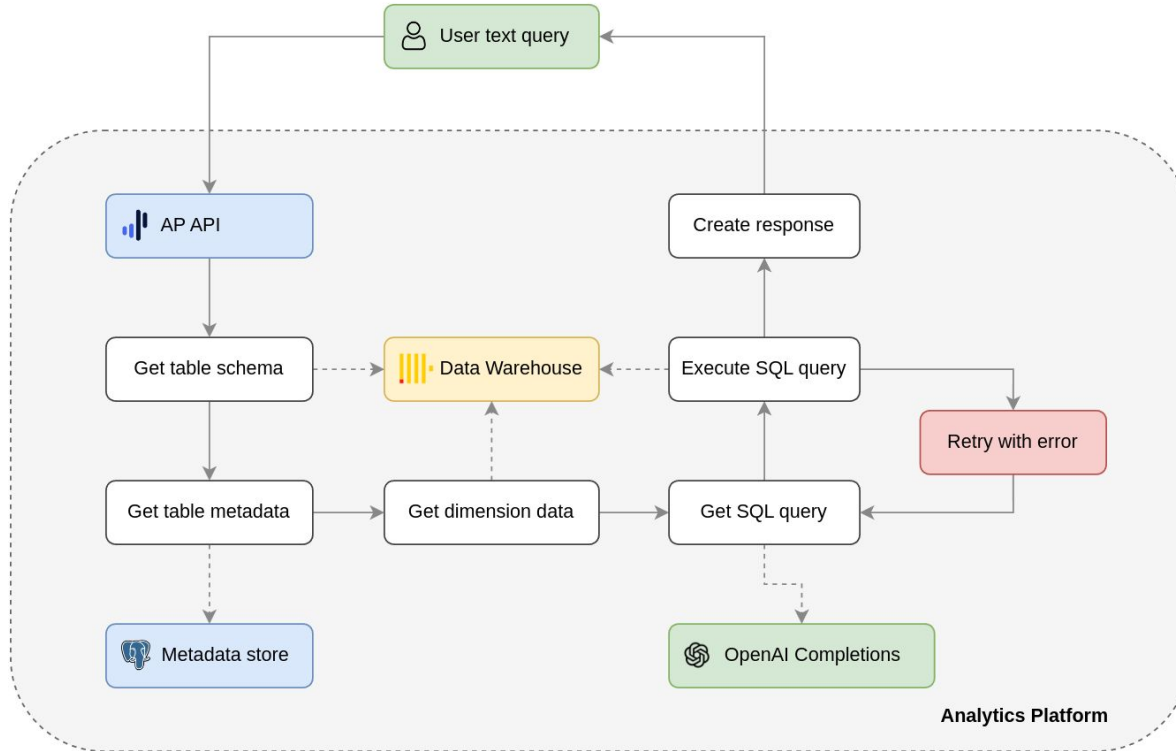
SQL
Natural text
Duration: 25627ms Start time: 12:57:26 PM
Format
▶ Run
Download

For aggregate data, for data element with name 'ANC 1st visit', return data values which are considered outliers based on the z-score statistical method. Calculate the data value mean based on the time dimension. Calculate the z-score in a subquery, and use an outer filter on z-score values greater than 3.0.

OrgUnitName VARCHAR	PT Monthly VARCHAR	Value DOUBLE	z_score DOUBLE
Bandajuma Clinic CHC	202306	364	14.483451947674267
Kissy Health Centre	202306	170	6.442921399670144
Tombo CHC	202306	130	4.785080049566202
Calaba town CHC	202306	134	4.950864184576596
Rokupa Govt. Hospital	202306	209	8.059316716021488
MCH (Kakua) Static	202306	169	6.401475365917546
Lumley Hospital	202306	144	5.365324522102582
Wellington Health Centre	202306	178	6.774489669690933
Gerehun CHC	202306	203	7.810640513505898
George Brook Health Centre	202306	126	4.619295914555807

Text to SQL Solution Architecture

Combine schema and metadata and use OpenAI LLM to generate SQL data queries



Python Scripting

Integrated Python scripting for data scientists to deploy complex data models

<
HIV Positive Outlier Detection Using the IQR Method (Python) | Python Editor

↻

Format

▶ Run

Save

- ▶ dhs
- ▶ file_upload
- ▶ kobo
- ▶ odk
- ▶ pepfar
 - ▼ Tables 68
 - ▶ data
 - ▶ data_anc
 - ▶ data_anc_audit
 - ▶ data_anc_event_values
 - ▶ data_audit
 - ▶ data_categories_categoryoptions
 - ▶ data_categories_categoryoptions_stagin
 - ▶ data_category
 - ▶ data_category_structure
 - ▶ data_categorycombo
 - ▶ data_categorycombos_categories
 - ▶ data_categorycombos_optioncombos
 - ▶ data_categoryoption

```

1  import pandas as pd
2  import numpy as np
3  from sqlalchemy import text
4
5  # --- 1. Connect to data warehouse ---
6
7  engine = connect_datawarehouse()
8
9  # --- 2. Query DHIS2/PEPFAR data ---
10 query = text("""
11     SELECT DataItem, DataItemID, OrgUnitID, OrgUnitName, Value
12     FROM pepfar.data
13     WHERE DataItem = 'HTS_TST_POS'
14     LIMIT 1000
15 """)
16
17 df = pd.read_sql(query, engine)
18
19 # --- 3. Compute outliers using IQR method per OrgUnitID ---
20 def detect_outliers(group):
21     q1 = group['Value'].quantile(0.25)
22     q3 = group['Value'].quantile(0.75)
23     iqr = q3 - q1
24     low = q1 - 1.5 * iqr
25     high = q3 + 1.5 * iqr
26     group['Median'] = group['Value'].median()
27     group['Q1'] = q1
28     group['Q3'] = q3
29     group['IQR'] = iqr

```

Console
⏏

R Scripting

Integrated R scripting for sophisticated statistical computations

< HIV Positive Outlier Detection Using the IQR Method (R) | R Editor

Run
Save

- ▶ dhs
- ▶ file_upload
- ▶ kobo
- ▶ odk
- ▶ pepfar
 - ▾ Tables 68
 - ▶ data
 - ▶ data_anc
 - ▶ data_anc_audit
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 - ▶ data_category
 - ▶ data_category_structure
 - ▶ data_categorycombo
 - ▶ data_categorycombos_categ
 - ▶ data_categorycombos_option
 - ▶ data_categoryoption

≡
Format

```

1 library(dplyr);
2 library(dbplyr);
3 library(knitr);
4 library(tidyr);
5
6 conn <- connect_datawarehouse();
7
8 df <- tbl(conn, sql("select DataItem, DataItemID, OrgUnitID, OrgUnitName, Value \
9   from `pepfar`.`data` where DataItem = 'HTS_TST_POS' limit 100000" ) ) %>% collect()
10
11 # IQR method per facility
12 outliers <- df %>%
13   filter(DataItem == "HTS_TST_POS") %>%
14   group_by(OrgUnitID) %>%
15   mutate(Median = median(Value, na.rm = TRUE),
16          Q1 = quantile(Value, 0.25, na.rm = TRUE),
17          Q3 = quantile(Value, 0.75, na.rm = TRUE),
18          IQR = Q3 - Q1,
19          Low = Q1 - 1.5*IQR,
20          High = Q3 + 1.5*IQR,
21          IsOutlier = if_else(!is.na(Value) & (Value < Low | Value > High), TRUE, FALSE)) %>%

```

Console
⏏

DataItem	DataItemID	OrgUnitID	OrgUnitName	Value	Median	Q1	Q3	IQR	Low	High	IsOutlier
HTS_TST_POS	f0aMW5N6Y2x	P4b18b799f6	N/A	15242	8193.0	6821.00	9927.00	3106.00	2162.000	14586.000	TRUE
HTS_TST_POS	f0aMW5N6Y2x	P5902f6a87e	N/A	5544	3151.0	3036.00	3297.00	261.00	2644.500	3688.500	TRUE
HTS_TST_POS	f0aMW5N6Y2x	P98ac1e633f	Facility 2bb7e5	2528	945.0	912.00	1350.00	438.00	255.000	2007.000	TRUE
HTS_TST_POS	f0aMW5N6Y2x	Pe5e4f73bf6	N/A	2024	423.0	413.00	438.00	25.00	375.500	475.500	TRUE

Natural Text Script Generation

Describe what you want to achieve and have the platform do the Python data science automatically

HIV positive outlier detection - Modified

Search for tables ... ↻ ☰ Format

- ▶ data
- ▶ data_view
- ▶ default
- ▶ demo
- ▶ espen
- ▶ file_upload
- ▶ gho
- ▶ kobo
- ▶ odk
- ▶ pepfar

1 Write your code in Python

Console

	DataItem	DataItem
	7106	HTS_TST_POS
	13671	HTS_TST_POS
	7207	HTS_TST_POS
	7506	HTS_TST_POS
	7313	HTS_TST_POS

Fetch country population data from the World Bank Data API for Tanzania.

- * Order data by year.
- * Provide a forecast for the population for the next 10 years.
- * Print data as a table.
- * Use readable numbers with no decimals.
- * Use thousand separator for population, not for year.

Here's what I've created based on your request:

```
import pandas as pd
import requests
from tabulate import tabulate
from sklearn.linear_model import LinearRegression
import numpy as np

# Fetch Tanzania population data (Country Code: TZA)
url = "https://api.worldbank.org/v2/country/TZA/indicator/SP.POP.TOTL?format=json&per_page=100"
response = requests.get(url)
data = response.json()[1]

# Process data
df = pd.DataFrame(data)
df = df[['date', 'value']].rename(columns={'date': 'Year', 'value': 'Population'})
df['Year'] = df['Year'].astype(int)
df['Population'] = df['Population'].fillna(0).astype(int)
df = df.sort_values('Year')

# Prepare for forecasting
X = df[['Year']].values
```

Enter prompt to generate code

Natural Text Script Generation

Describe what you want to achieve and have the platform do the Python data science automatically

← HIV positive outlier detection - Modified Z-score method - Python | Python Editor

?
▶ Run
Save

- ▶ data
- ▶ data_view
- ▶ default
- ▶ demo
- ▶ espen
- ▶ file_upload
- ▶ gho
- ▶ kobo
- ▶ odk
- ▶ pefpar

Format
?

```

11
12 # Process data
13 df = pd.DataFrame(data)
14 df = df[['date', 'value']].rename(columns={'date': 'Year', 'value': 'Population'})
15 df['Year'] = df['Year'].astype(int)
16 df['Population'] = df['Population'].fillna(0).astype(int)
17 df = df.sort_values('Year')
18
19 # Prepare for forecasting
20 X = df[['Year']].values
21 y = df['Population'].values.reshape(-1, 1)
22
23 model = LinearRegression()
24 model.fit(X, y)
25
26 # Forecast next 10 years
27 last_year = df['Year'].max()
28 future_years = np.array(range(last_year + 1, last_year + 11)).reshape(-1, 1)
29 future_pop = model.predict(future_years).astype(int)
30
                    
```

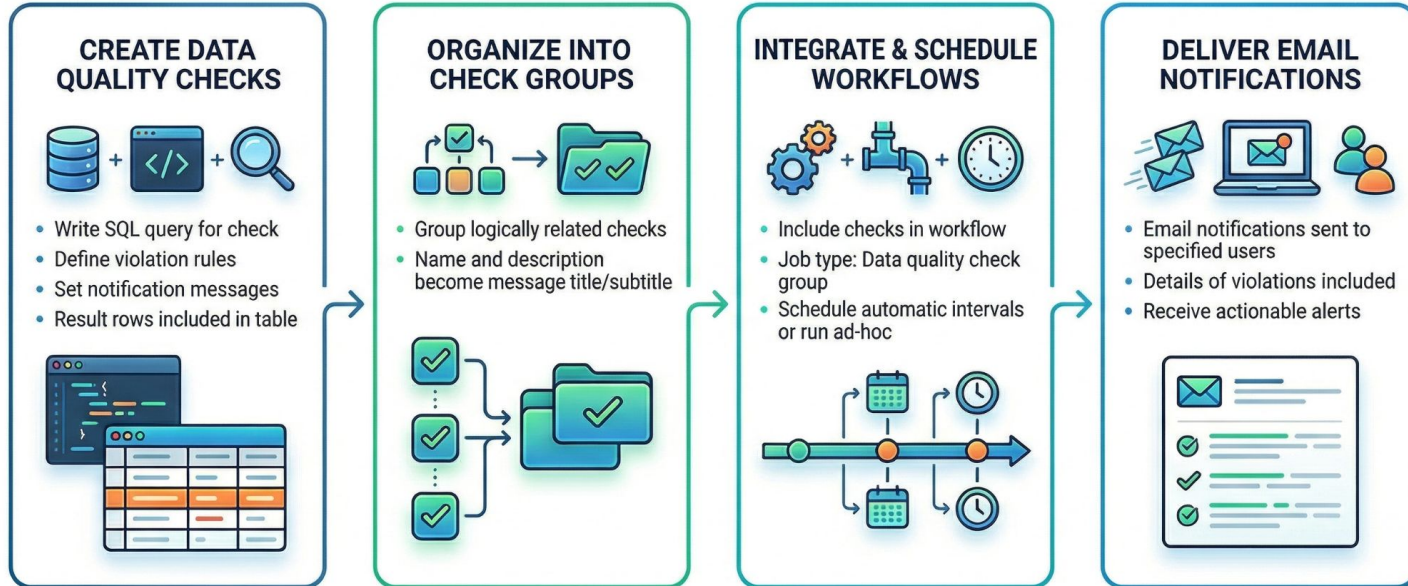
Console
⌵

```

+-----+-----+
|  Year | Population |
+-----+-----+
|  1960 | 9,901,419  |
|  1961 | 10,187,886 |
|  1962 | 10,487,756 |
|  1963 | 10,799,528 |
|  1964 | 11,127,826 |
|  1965 | 11,470,728 |
                    
```

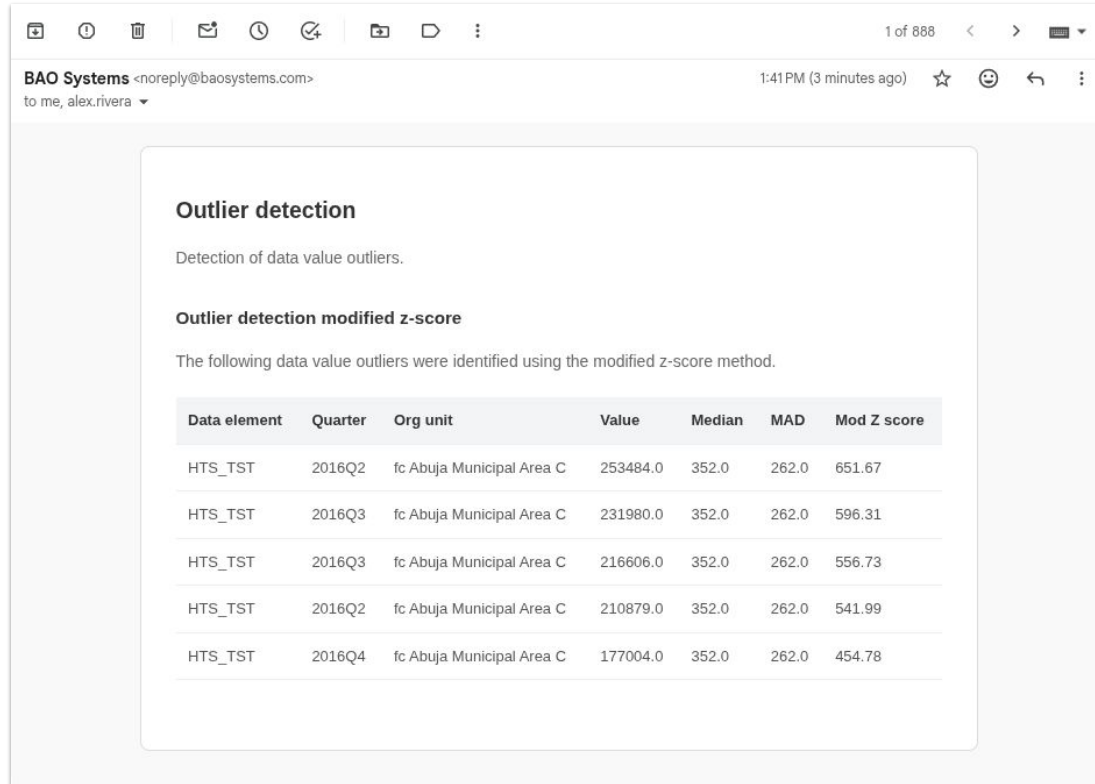
Data Quality Notifications

Instantly get notified about data quality issues and take timely action



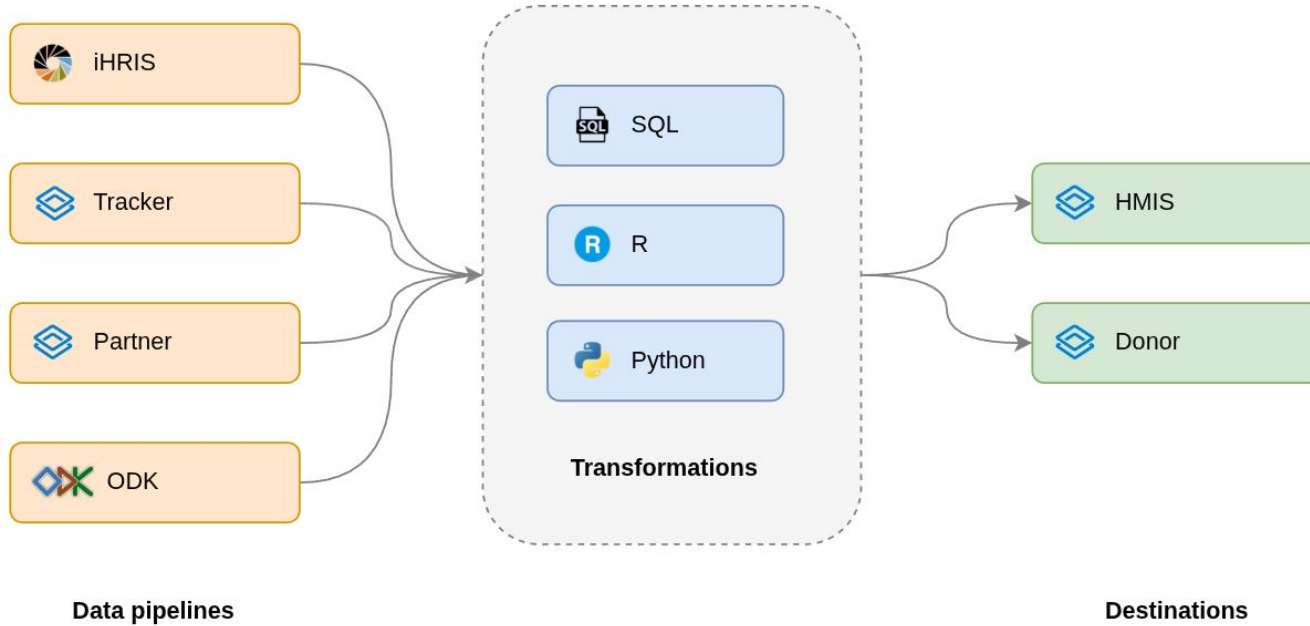
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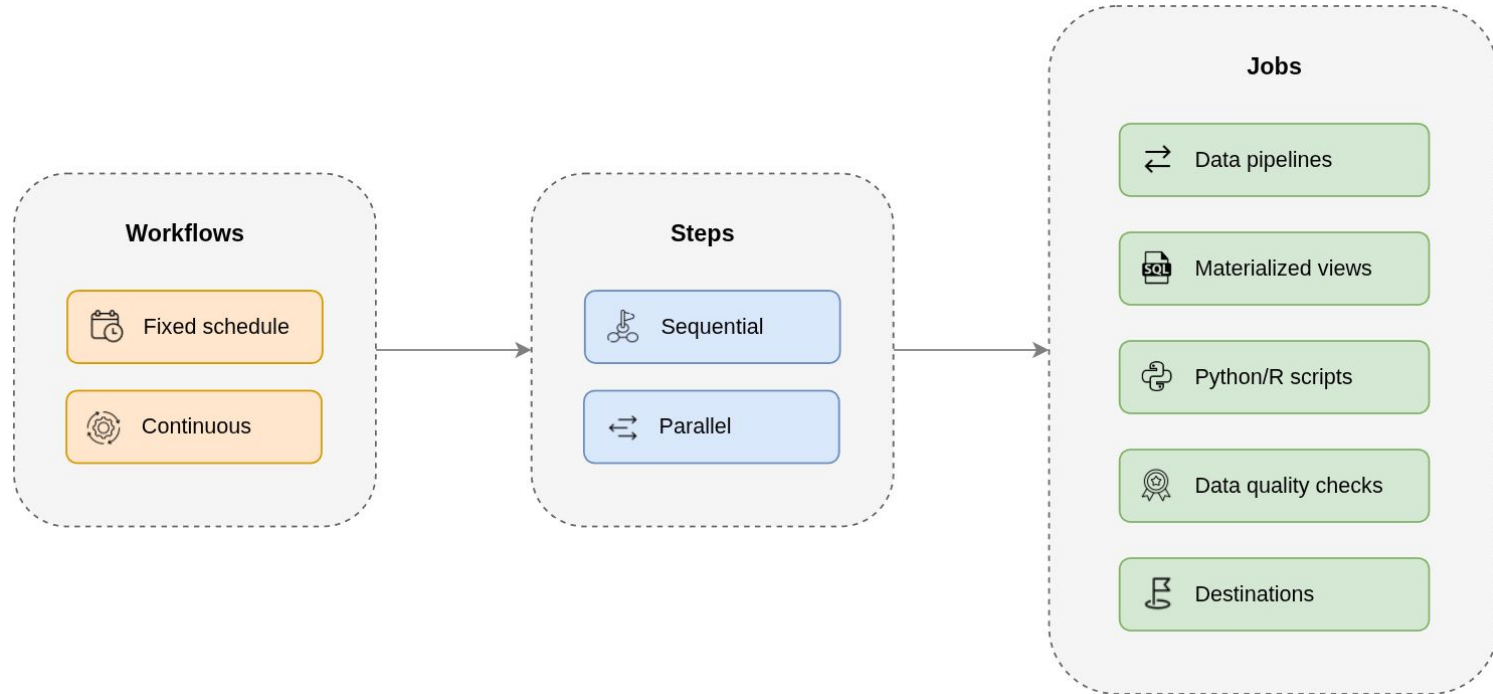
Workflows

Orchestrate data loading, views, data quality checks and destinations with workflows



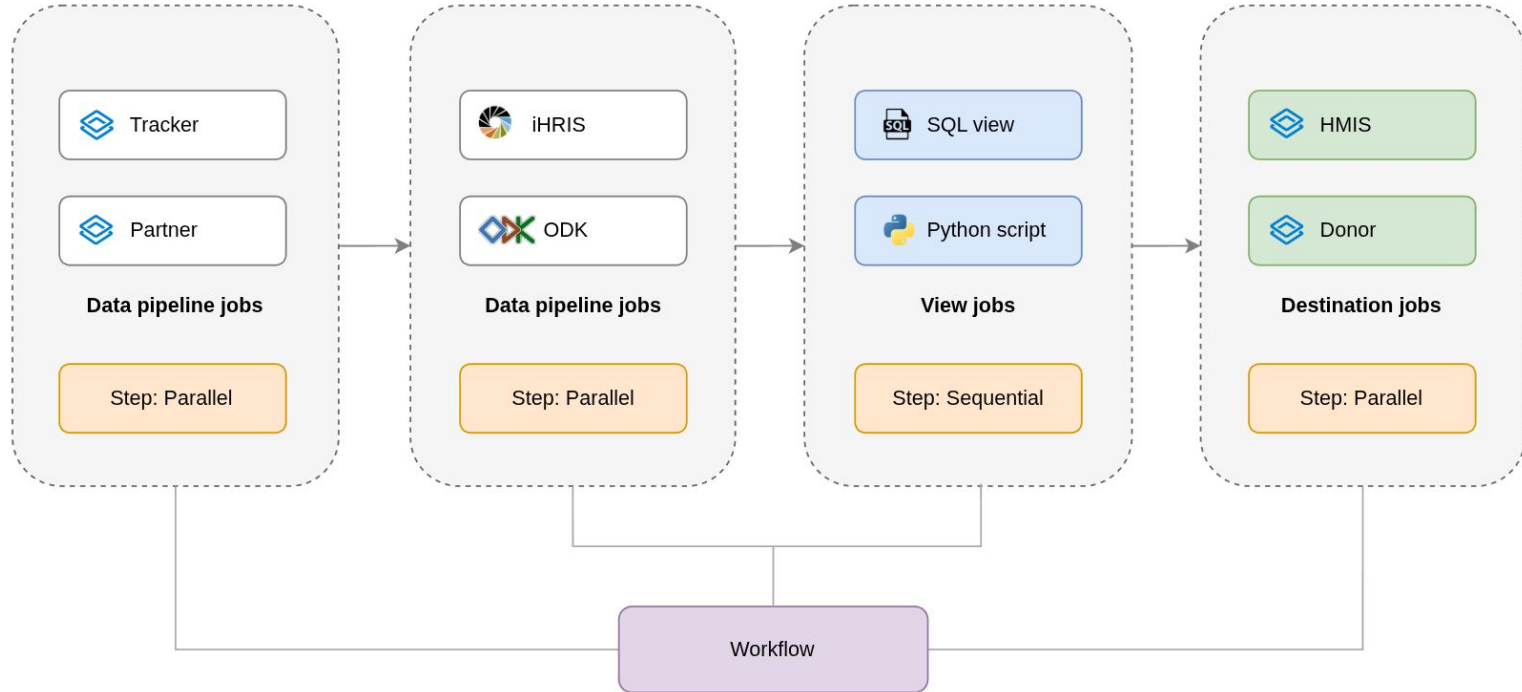
Workflows

Orchestrate data loading, views, scripts, data quality checks and destinations with workflows



Workflows

Orchestrate data loading, views, data quality checks and destinations with workflows



Workflows

Orchestrate data loading, views, data quality checks and destinations with workflows

analytics platform

- Data catalog
- Views
- Scripts
- Schemas
- Data quality checks
- Destinations
- Workflows
- Data browser
- Variables
- Firewall rules
- Settings
- Connection
- System

Main workflow

✓ GENERAL SETTINGS
Main workflow

STEPS

Steps

Type	Source/Target	Name	
Data pipeline	DHIS2	emis.dhis2nigeria.org.ng/dhis	↔ ✎ 🗑️
Data pipeline	DHIS2	registry.dhis2nigeria.org.ng	↔ ✎ 🗑️
Materialized view	-	Data set org unit target	
Materialized view	-	Reporting rates	↔ ✎ 🗑️
Materialized view	-	Total learners	
Materialized view	-	Total teachers	
Destination	DHIS2	EMIS data values	↔ ✎ 🗑️

+ Add step

Save workflow

Change Log

View task start time, duration and status for data pipelines and workflows

analytics platform

Data catalog

Views

Scripts

Schemas

Data quality checks

Destinations

Workflows

Data browser

Variables

Firewall rules

Settings

Data visualization

Connection

System

<
DHIS2 MoH Never
3 Shared

data.baosystems.com



DETAILS
TABLES
DATA STRUCTURE
DATA PREVIEW
INDICATORS
CHANGE LOG

Started	Data load strategy	Duration	Rows	Status	
Feb 6, 2026 2:47:20 pm	Full replace	In progress	In progress	● In progress	>
Feb 6, 2026 2:36:10 am	Full replace	3m 12s	15.8 m	● Successful	>
Feb 5, 2026 8:46:03 am	Full replace	3m 44s	15.8 m	● Successful	>
Feb 4, 2026 8:43:56 am	Full replace	3m 51s	15.8 m	● Successful	>
Feb 2, 2026 6:19:36 am	Full replace	3m 20s	15.8 m	● Successful	>
Feb 1, 2026 6:39:48 am	Full replace	3m 14s	15.8 m	● Successful	>
Jan 31, 2026 1:45:14 am	Full replace	3m 44s	15.8 m	● Successful	>

Log Management

Monitor and troubleshoot incidents efficiently with the log overview

analytics platform

Data catalog

Views

Scripts

Schemas

Data quality checks

Destinations

Workflows

Data browser

Variables

Firewall rules





Settings

Data visualization

Connection

System



< ◆ DHIS2 🏢 MoH 🕒 Never

data.baosystems.com

DETAILS
TABLES
DATA STRUCTURE
DATA PREVIEW
INDICATORS
CHANGE LOG

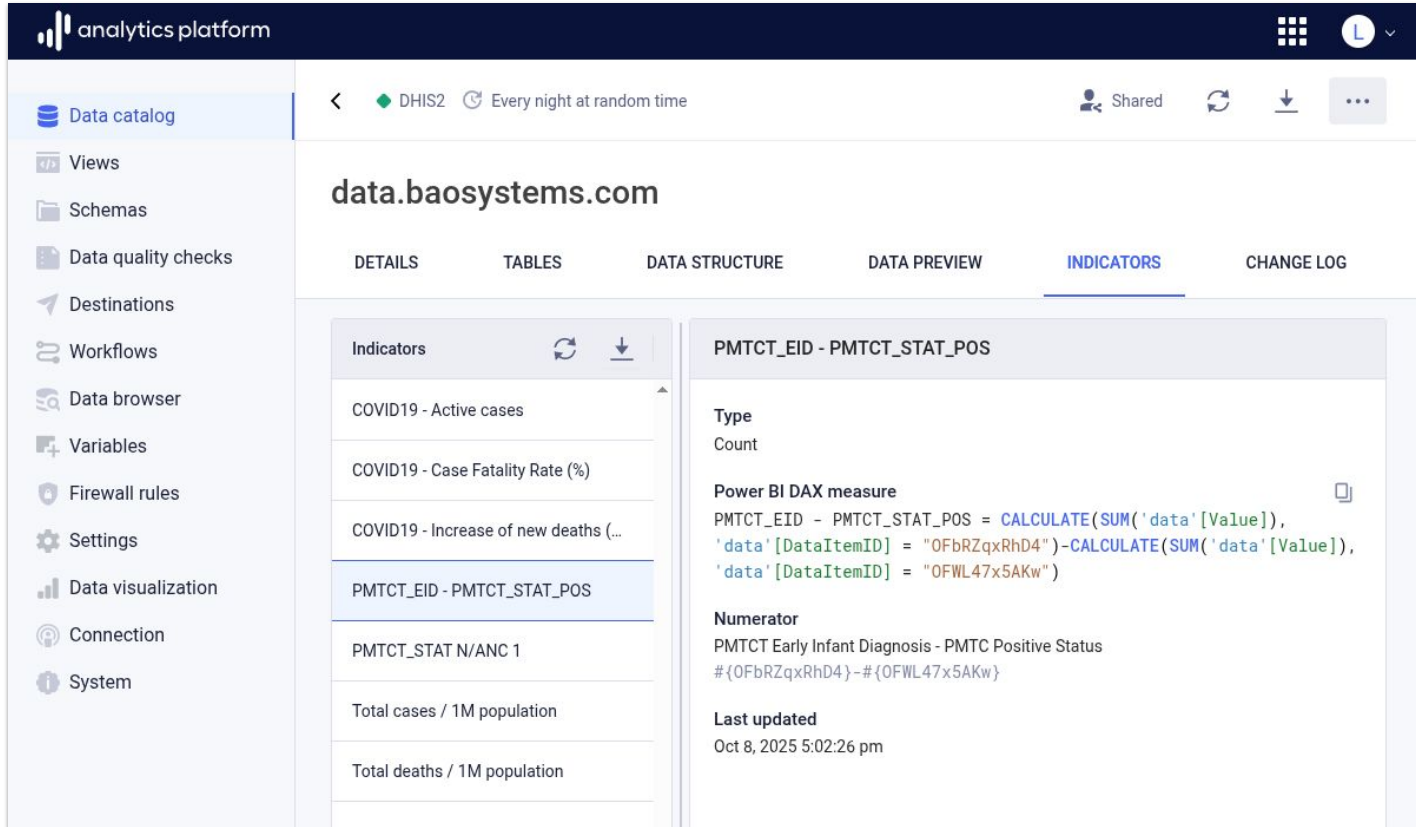
< **Feb 6, 2026 2:39:22 am**

All importances
 Download
 Refresh

Feb 6, 2026 2:39:22 am	DHIS2 data pipeline data load completed, job ID: 'I01T3XmMEvJ', table: [pepfar.data], row count: 15,837,209, time: '00:03:12.449'
Feb 6, 2026 2:39:22 am	DHIS2 AUDIT record load completed, row count: 0, size: 0
Feb 6, 2026 2:39:22 am	Blob store to data warehouse data load completed: 00:00:00.169
Feb 6, 2026 2:39:22 am	Main table rows: 0, size:
Feb 6, 2026 2:39:22 am	Swapping staging table with main table: [pepfar.data_audit]
Feb 6, 2026 2:39:22 am	Swapping with or appending staging table to main table: [pepfar.data_audit_staging]
Feb 6, 2026 2:39:22 am	Staging table columns: 9, rows: 0, size:
Feb 6, 2026 2:39:22 am	Setting access control on data warehouse table: [pepfar.data_audit_staging]
Feb 6, 2026 2:39:22 am	Creating indexes: [pepfar.data_audit_staging]
Feb 6, 2026 2:39:22 am	Data load job 1 of 1, written rows: -1

DHIS2 Indicator to Power BI DAX

Replicate DHIS2 indicators as Power BI DAX measures



analytics platform

← ◆ DHIS2 🕒 Every night at random time 👤 Shared 🔄 ⬇️ ⋮

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DETAILS TABLES DATA STRUCTURE DATA PREVIEW **INDICATORS** CHANGE LOG

Indicators
COVID19 - Active cases
COVID19 - Case Fatality Rate (%)
COVID19 - Increase of new deaths (...)
PMTCT_EID - PMTCT_STAT_POS
PMTCT_STAT N/ANC 1
Total cases / 1M population
Total deaths / 1M population

PMTCT_EID - PMTCT_STAT_POS

Type
Count

Power BI DAX measure

```
PMTCT_EID - PMTCT_STAT_POS = CALCULATE(SUM('data'[Value]),
'data'[DataItemID] = "0FbRZqxRhD4")-CALCULATE(SUM('data'[Value]),
'data'[DataItemID] = "0FWL47x5AKw")
```

Numerator
PMTCT Early Infant Diagnosis - PMTC Positive Status
#{0FbRZqxRhD4}-#{0FWL47x5AKw}

Last updated
Oct 8, 2025 5:02:26 pm

DHIS2 Indicator to Power BI DAX

Add DHIS2 indicators as DAX measures in Power BI semantic model

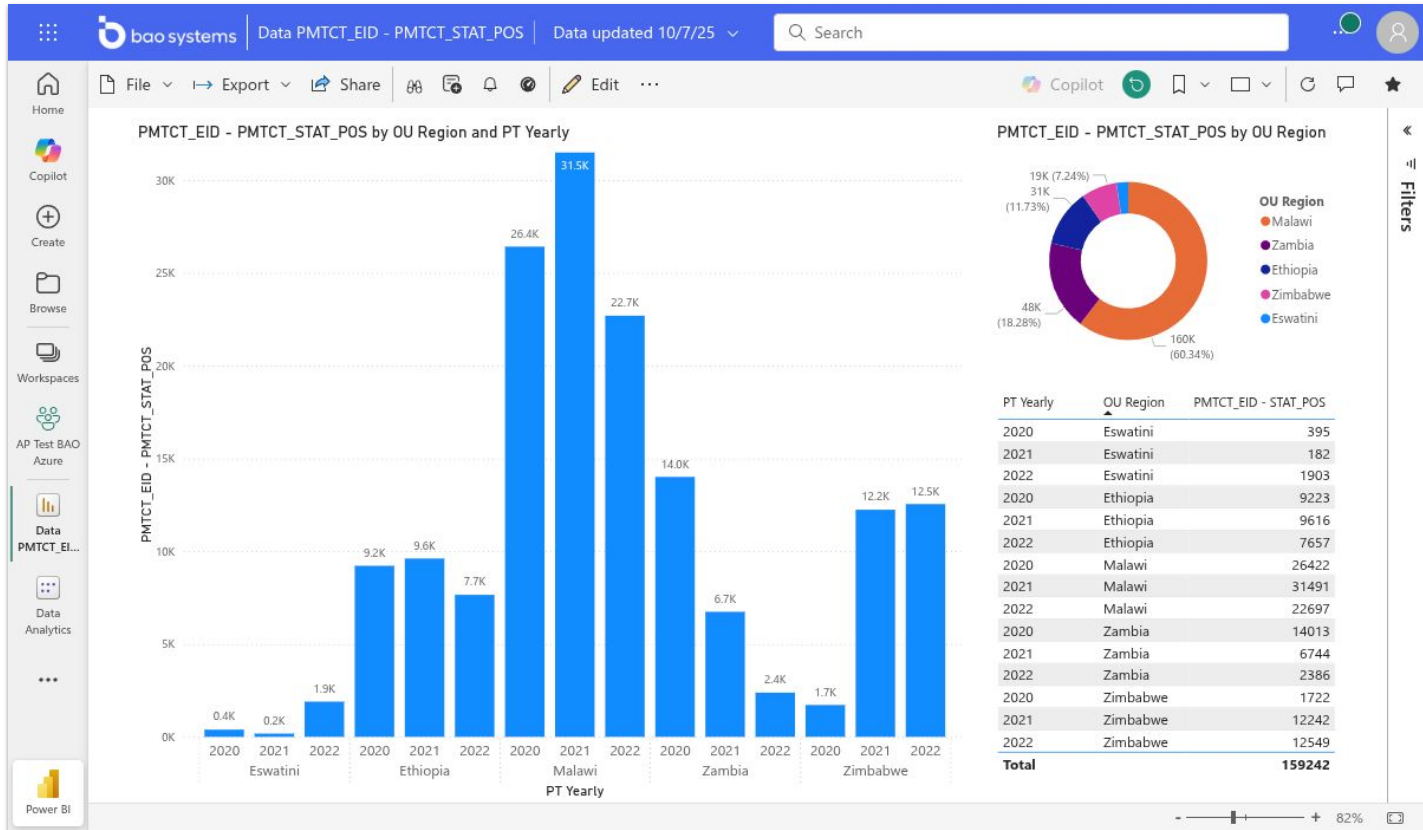
The screenshot shows the Power BI Desktop interface with the following components:

- Top Bar:** Includes the 'bao systems' logo, 'Data Analytics' dropdown, a search bar, and utility icons for notifications, settings, download, help, and user profile.
- File Tab:** Shows 'Home' and 'Help' options.
- Command Bar:** Contains various data manipulation options:
 - Get data (Data)
 - Transform data (Queries)
 - Refresh data
 - New measure (Calculations)
 - New column (Calculations)
 - New table (Calculations)
 - Calculation group
 - New parameter (Parameters)
 - Manage roles (Security)
 - Manage relationships (Relationships)
 - Best practice analyzer (Model health)
 - Memory analyzer (Model health)
 - Community notebooks (Model health)
- DAX Query Editor:** Displays the following DAX formula:


```
1 PMTCT_EID - PMTCT_STAT_POS = CALCULATE(SUM('data'[Value]), 'data'[DataItemID] = "0FbRzqxRhD4") - CALCULATE(SUM('data'[Value]), 'data'[DataItemID] = "0FWL47x5AKw")
```
- Data Table:** A dropdown menu for the 'data' table is open, listing various columns:
 - PT SixMonthlyNov
 - PT Weekly
 - PT WeeklySaturday
 - PT WeeklySunday
 - PT WeeklyThursday
 - PT WeeklyWednesday
 - PT Yearly
 - StartDate
 - StoredBy
 - Technical Area
 - Σ Value
 - PMTCT_EID - PMTCT_STAT_POS** (highlighted)
 - Collapse ^
- Properties Panel:** Shows the 'Data' section with a search bar and a list of tables. The table 'PMTCT_EID - PMTCT_STAT_POS' is selected and highlighted.
- Bottom Bar:** Shows 'All tables' with a plus sign, and 'Model view' and 'DAX query view' tabs.

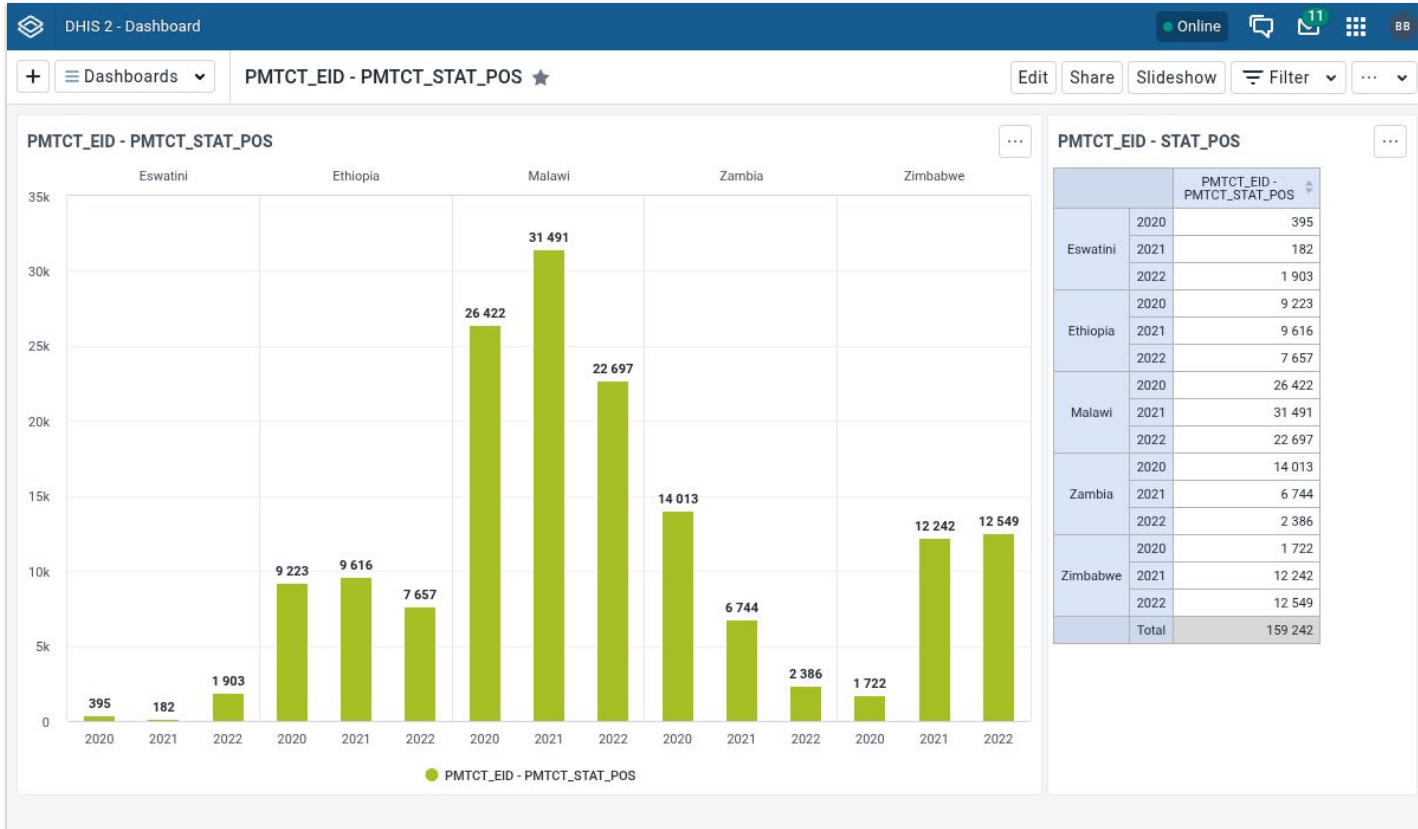
DHIS2 Indicator to Power BI DAX

Easily replicate DHIS2 visualizations and dashboards in Power BI



DHIS2 Indicator to Power BI DAX

Easily replicate DHIS2 visualizations and dashboards in Power BI



Apache Superset Integration

Views automatically become available as datasets in Superset

Superset
Dashboards Charts Datasets SQL
+ Settings

Immunization data pivot table

Added to 1 dashboard
admin admin
now
SAVE

Chart Source: public.immunization_data_v...

Search Metrics & Columns

- abc OU Facility
- abc PT Daily
- abc PT Weekly
- abc PT WeeklyWednesday
- abc PT WeeklyThursday
- abc PT WeeklySaturday
- abc PT WeeklySunday
- abc PT BiWeekly
- abc PT Monthly
- abc PT BiMonthly
- abc PT Quarterly
- abc PT QuarterlyNov
- abc PT SixMonthly
- abc PT SixMonthlyApril
- abc PT SixMonthlyNov

DATA CUSTOMIZE

PIVOT TABLE

Query

COLUMNS

- abc Dataltem

ROWS

- abc OU District

METRICS

- f(x) SUM(Value)

APPLY METRICS ON

UPDATE CHART

117 rows

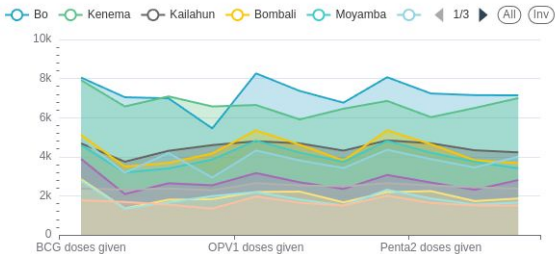
OU District	Metric	SUM(Value)								
	Dataltem	BCG doses given	Measles doses given	OPV1 doses given	OPV2 doses given	OPV3 doses given	Penta1 doses given	Penta2 doses given	Penta3 doses given	Yellow Fever doses given
Bo		9.23k	6.96k	8.1k	7.15k	6.72k	8.03k	7.32k	6.77k	7.13k
Bombali		5.11k	3.68k	5.35k	4.62k	3.8k	5.35k	4.64k	3.82k	3.67k
Bonthe		1.88k	1.25k	1.68k	1.5k	1.25k	1.68k	1.53k	1.31k	1.27k
Kallahun		4.68k	4.3k	4.79k	4.68k	4.31k	4.84k	4.69k	4.33k	4.22k
Kambila		2.78k	1.66k	2.19k	1.81k	1.51k	2.31k	1.86k	1.55k	1.66k
Kenema		7.92k	7.09k	6.65k	5.91k	6.46k	6.85k	6.02k	6.49k	7k
Koinadugu		1.77k	1.55k	1.97k	1.65k	1.5k	2k	1.64k	1.51k	1.5k
Kono		2.85k	1.8k	2.2k	2.22k	1.67k	2.19k	2.24k	1.73k	1.86k
Moyamba		4.58k	3.4k	4.82k	4.21k	3.74k	4.81k	4.2k	3.74k	3.4k
Port Loko		4.91k	4.19k	4.32k	3.81k	3.42k	4.36k	3.88k	3.45k	4k
Pujehun		2.37k	2.38k	2.65k	2.53k	2.48k	2.65k	2.53k	2.43k	2.37k
Tonkolili		3.89k	2.64k	3.16k	2.69k	2.35k	3.07k	2.68k	2.31k	2.81k
Western Area		36.3k	24.6k	28.3k	25.7k	24.4k	28.5k	25.8k	25.1k	24.3k

RESULTS SAMPLES

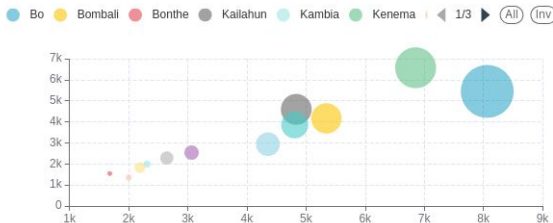
Apache Superset Integration

Explore all of your data in real-time

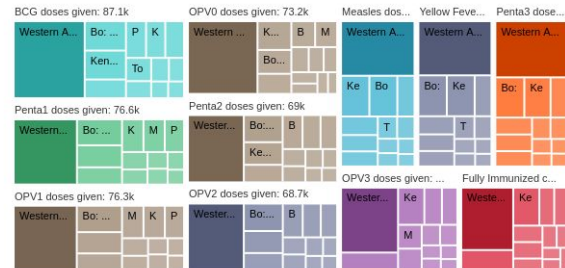
Immunization area



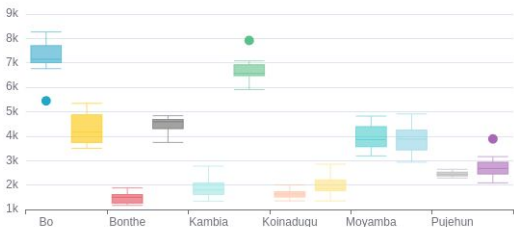
Penta1 vs OPV0 by district bubble chart



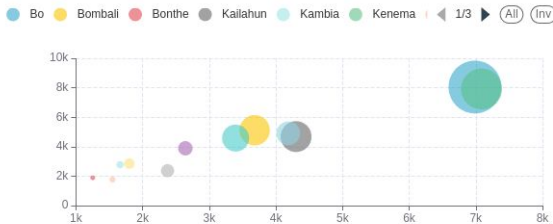
Immunization treemap



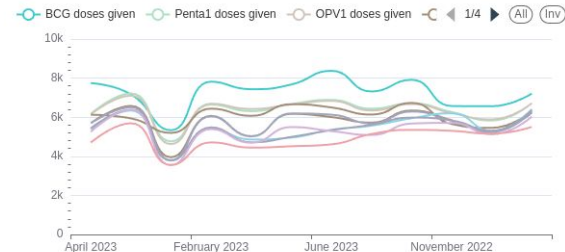
Immunization box plot



Measles vs BCG by district bubble chart

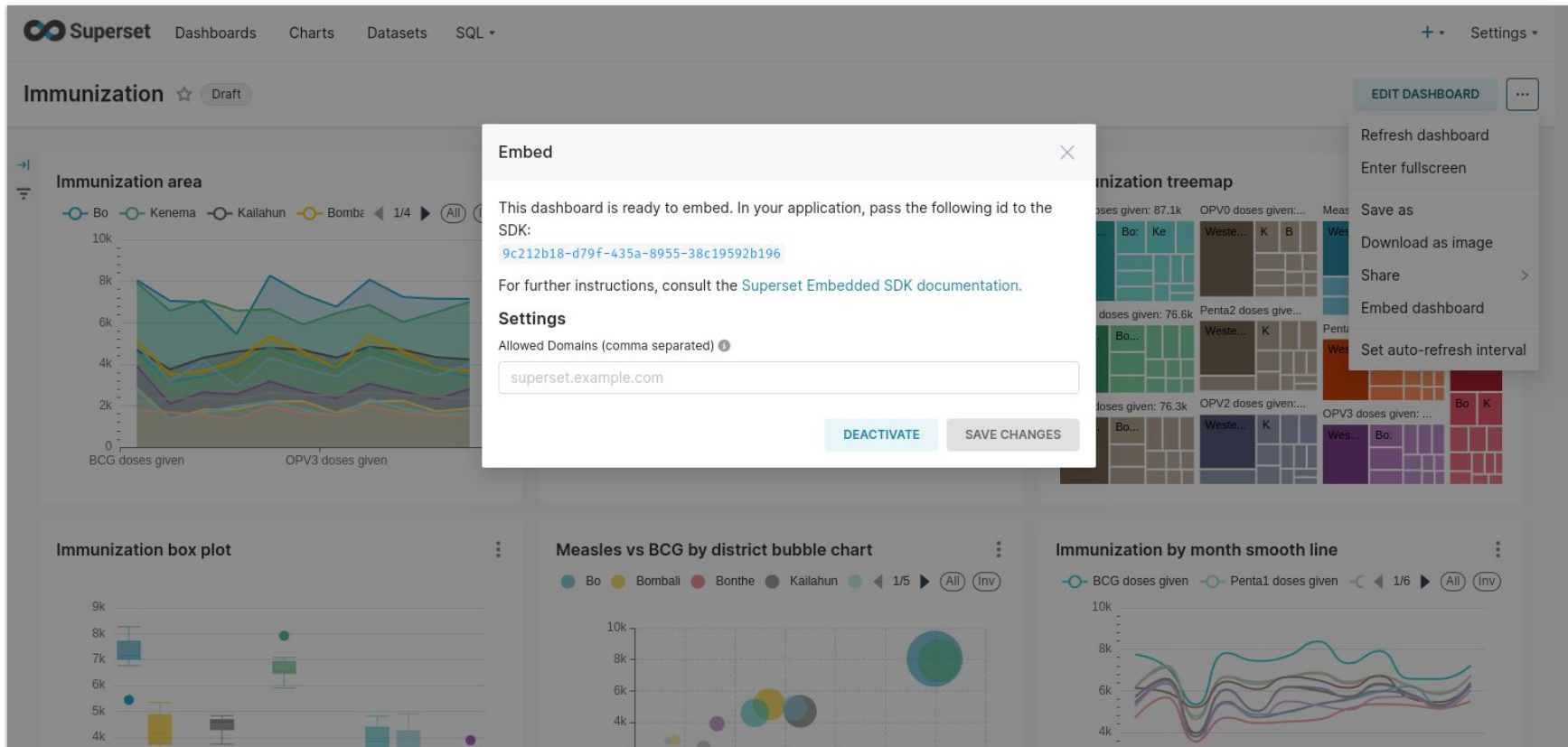


Immunization by month smooth line



Embedded Dashboards with Super BI

Embed and visualize Superset dashboards directly in a DHIS 2 web app



The screenshot shows the Superset web interface with a dashboard titled "Immunization" in "Draft" mode. An "Embed" dialog box is open in the center, providing the following information:

Embed

This dashboard is ready to embed. In your application, pass the following id to the SDK:
[9c212b18-d79f-435a-8955-38c19592b196](#)

For further instructions, consult the [Superset Embedded SDK documentation](#).

Settings

Allowed Domains (comma separated) ⓘ

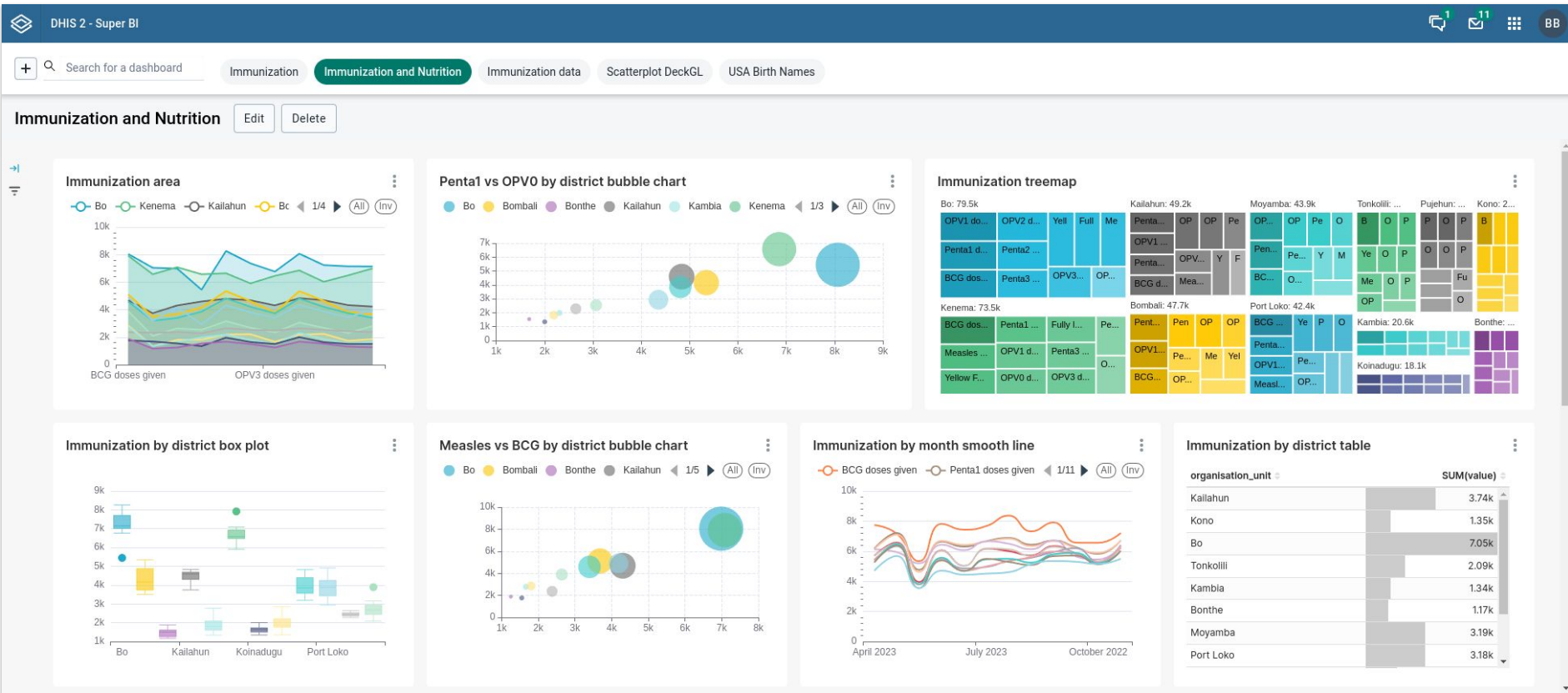
Buttons: **DEACTIVATE** | **SAVE CHANGES**

The background dashboard includes several charts:

- Immunization area:** A line chart showing BCG and OPV3 doses given across various districts (Bo, Kenema, Kailahun, Bombali).
- Immunization treemap:** A treemap visualization showing the distribution of doses across districts.
- Immunization box plot:** A box plot showing the distribution of doses given.
- Measles vs BCG by district bubble chart:** A bubble chart comparing Measles and BCG doses by district.
- Immunization by month smooth line:** A smooth line chart showing BCG and Penta1 doses given over time.

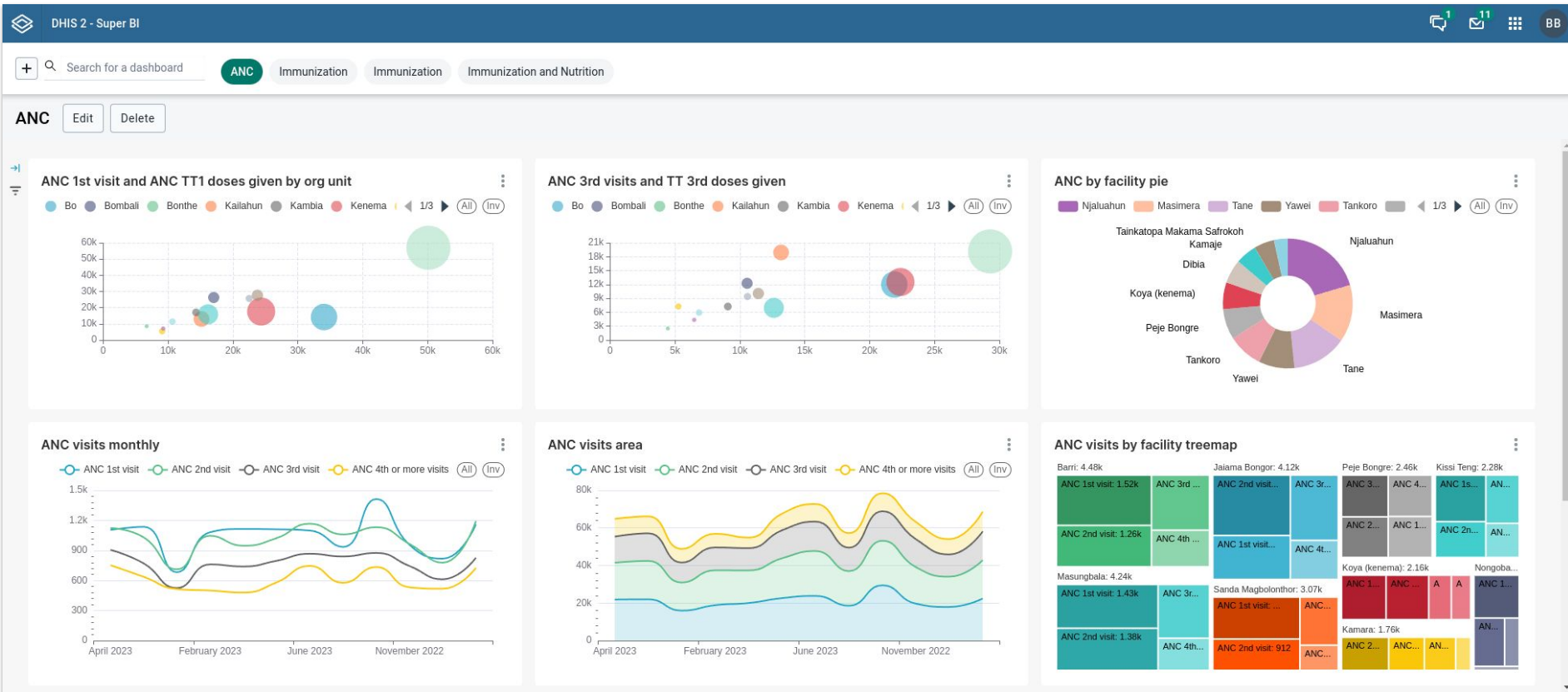
Real-Time Embedded Superset Dashboards

Explore tracker and aggregate data in real-time with the DHIS2 Super BI web app



Real-Time Embedded Superset Dashboards

Explore tracker and aggregate data in real-time with the DHIS2 Super BI web app



Real-Time Apache Superset Dashboards

Explore tracker and aggregate data in real-time

Teachers ☆ Published Bao Admin 2 days ago

Edit dashboard

Total teachers

1.06M

Female teachers in public schools

209k

Female teachers in private schools

239k

Male teachers in public schools

238k

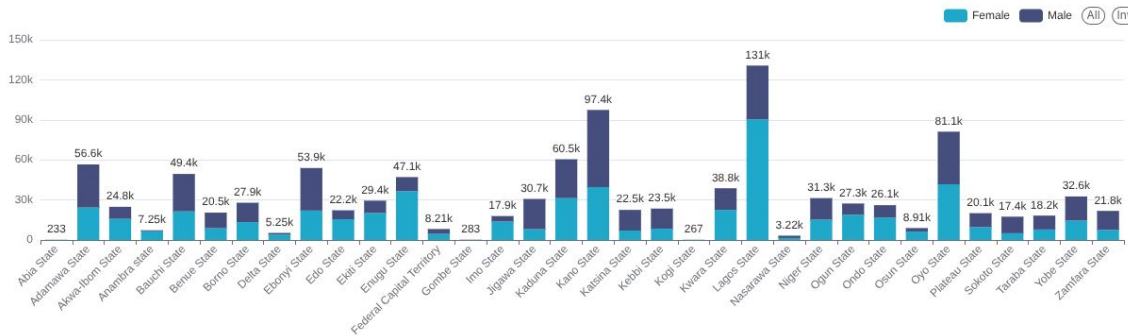
Male teachers in private schools

174k

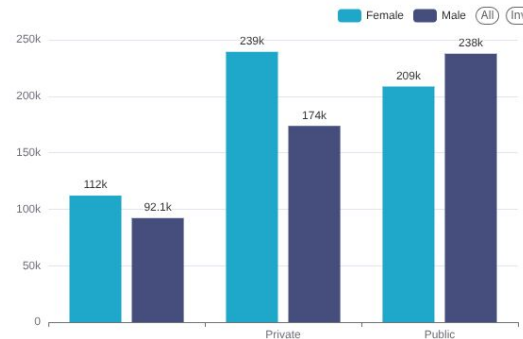
Total schools

218k

Teachers by sex and state



Teachers by sex and ownership



Teachers by sex and state

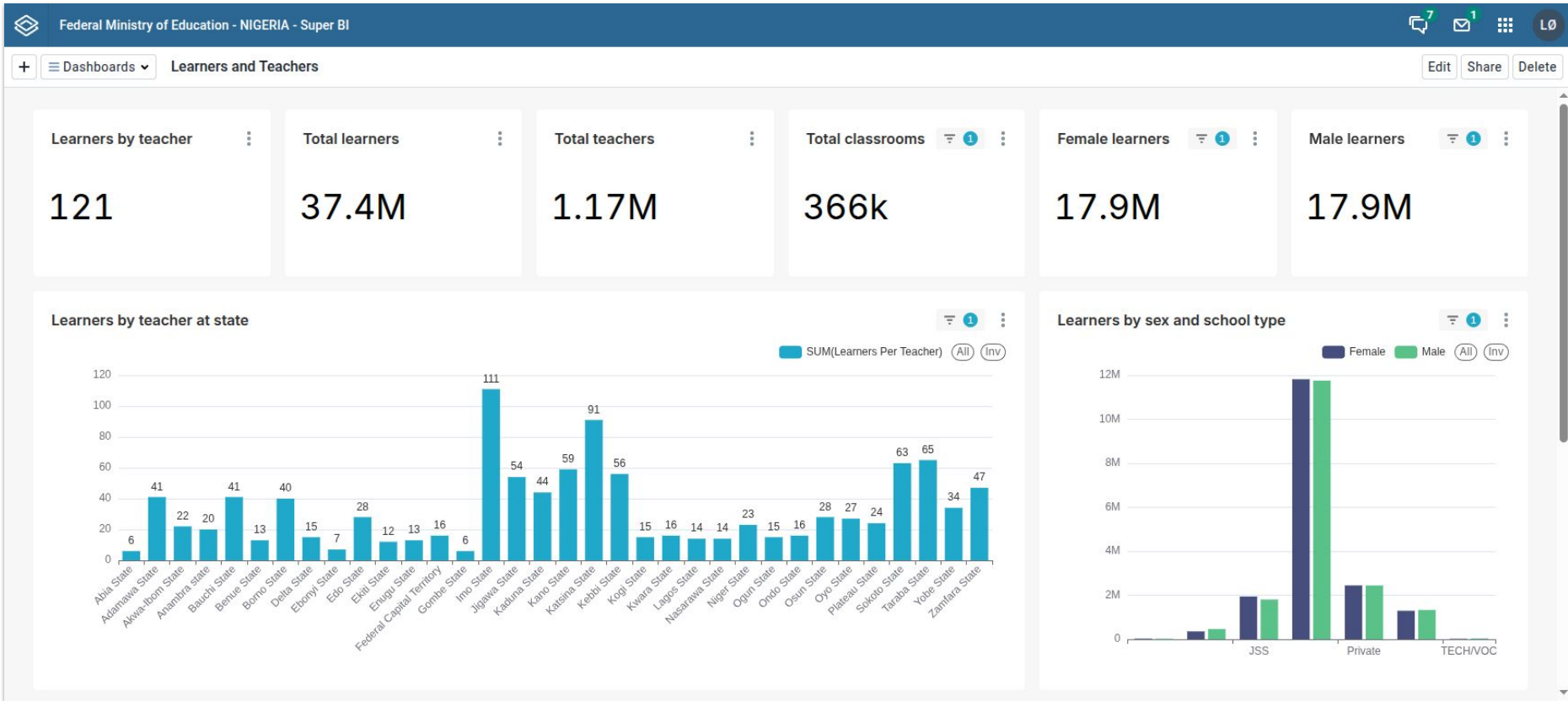
Metric	Teachers		Total (Sum)
Sex	Female	Male	

Teachers by sex and ownership

Metric	Teachers		Total (Sum)
Sex	Female	Male	

Real-Time Embedded Superset Dashboards

Explore tracker and aggregate data in real-time with the DHIS2 Super BI web app



Super BI Aspects



Flexible data analytics integrated in DHIS2 with Superset

End users will see a regular **DHIS2 web app**

Use **existing** DHIS 2 accounts, no need for creating new users

Dashboard and org unit hierarchy access controlled with **DHIS2 users**

Query data directly in **data warehouse** without loading into DHIS2

Near **real-time** data availability

Conversational Analytics for DHIS2

Convo app for DHIS2 lets you ask data questions in natural language

BI tools often have **low adoption**

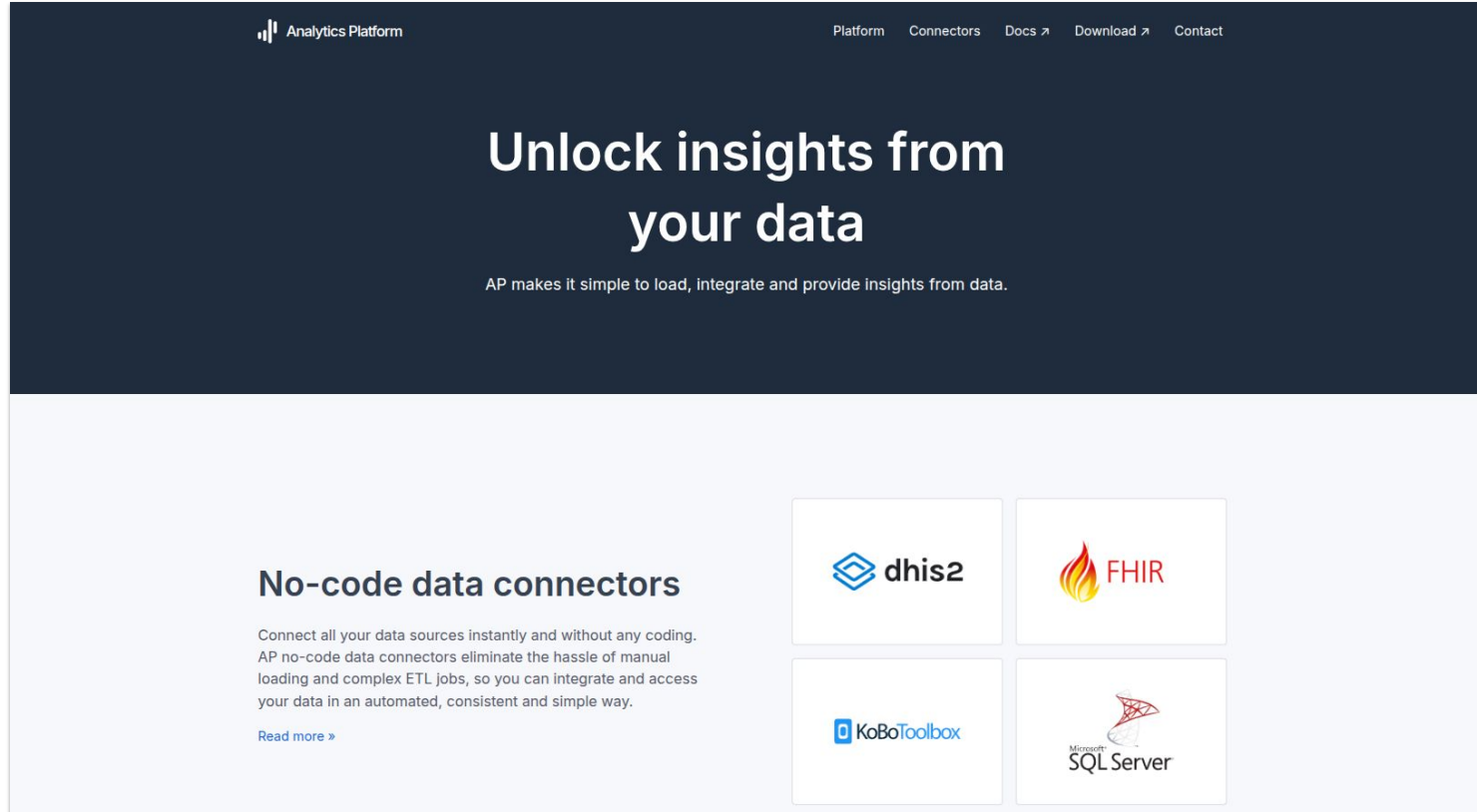
Duplication and **messy metadata**

Proliferation of dashboards making it **hard to find data**



Web Site

Analytics Platform web site at ap.baosystems.com



The screenshot shows the landing page of the Analytics Platform website. The header is dark blue with the 'Analytics Platform' logo on the left and navigation links for 'Platform', 'Connectors', 'Docs', 'Download', and 'Contact' on the right. The main content area has a dark blue background with the headline 'Unlock insights from your data' and a sub-headline 'AP makes it simple to load, integrate and provide insights from data.' Below this is a light blue section titled 'No-code data connectors' with a paragraph of text and a 'Read more' link. To the right of the text are four white boxes, each containing a logo for a data connector: dhis2, FHIR, KoBoToolbox, and Microsoft SQL Server.

Analytics Platform Platform Connectors Docs ↗ Download ↗ Contact





Unlock insights from your data

AP makes it simple to load, integrate and provide insights from data.

No-code data connectors

Connect all your data sources instantly and without any coding. AP no-code data connectors eliminate the hassle of manual loading and complex ETL jobs, so you can integrate and access your data in an automated, consistent and simple way.


[Read more >](#)

-  **dhis2**
-  **FHIR**
-  **KoBoToolbox**
-  **Microsoft SQL Server**

Documentation Portal

Publicly available online documentation portal at docs.ap.baosystems.com

Analytics Platform



analytics-platform-docs

Get started User Sysadmin Developer Downloads

Get started

[Overview](#)

Deployment

Analytics Platform Documentation

Analytics Platform (AP) automates data movement from disparate sources and systems into your central data store, and facilitates advanced data analytics using your preferred data visualization and exploration tools.

It provides turn-key data loading with a set-and-forget data integration approach, and allows you to visualize data with Power BI and Tableau, move datasets back to DHIS2 and embed data analytics directly in DHIS2.

License

The Analytics Platform is released as open source software under the [BSD-3 Clause](#) license. The BSD license is permissive and allows anyone to install the software free of charge.

The platform is also available under a commercial license which provides managed hosting, user support and technical support. A fully managed cloud offering is available from BAO Systems.

Overview

The following guides are available.

Guide	Description
Get started	Get started guide and overview of deployment models

Table of contents

License

Overview

Unified Data for Decision Making

From raw and fragmented data to **insights** and **impact** with Analytics Platform

Fragmented systems

Monthly or quarterly data

Rigid analytics

Slow dashboards



Integrated data systems

Real-time data access

Flexible data analytics

Interactive dashboards



Learn More



AP website

<https://ap.baosystems.com>

AP docs portal

<https://docs.ap.baosystems.com>

Enterprise DHIS2 website

<https://enterprise.baosystems.com>