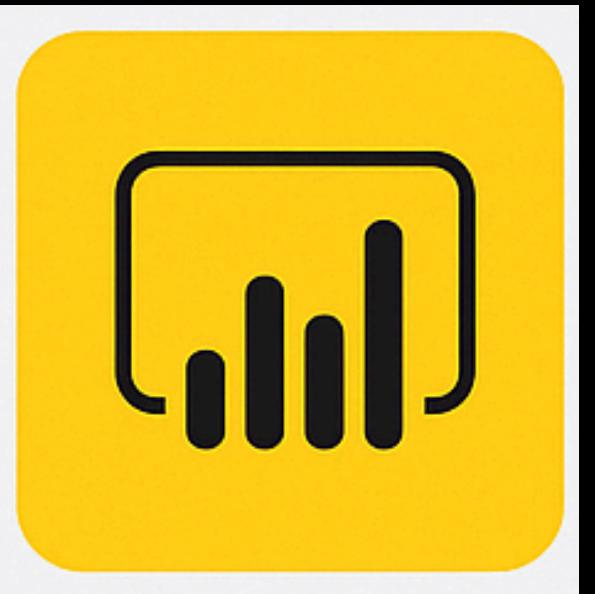


# Azure + Power BI Billing Demo

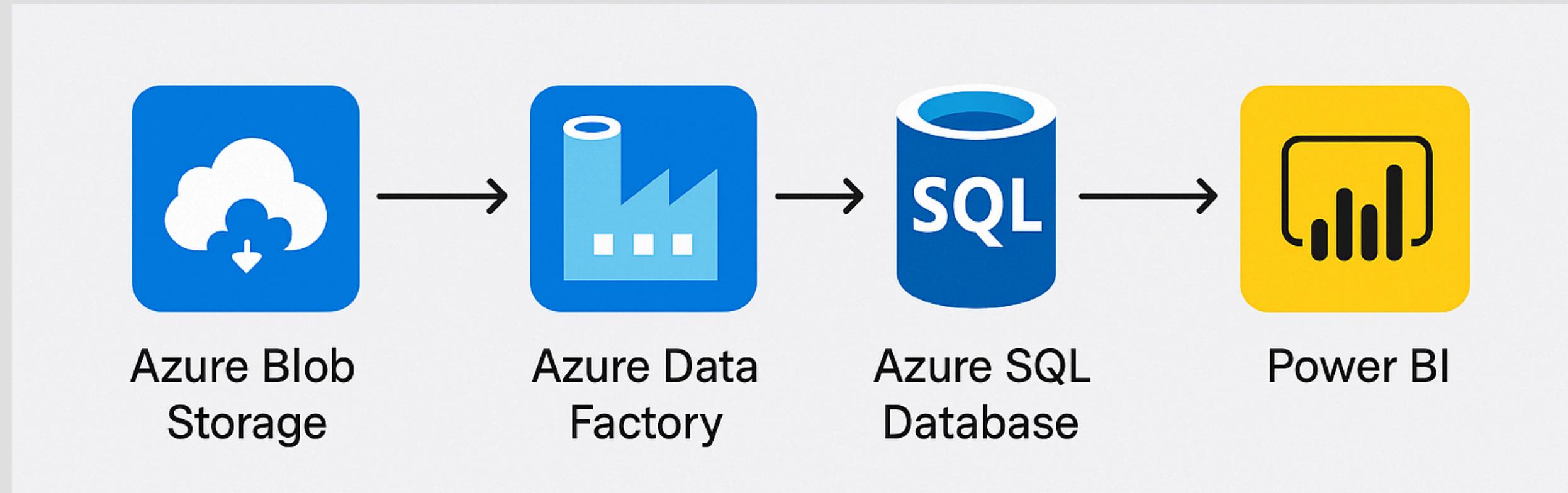
Power BI Developer - Havas

Austin Chia



**Aim:** Demonstrate the use of Azure services and Power BI to simulate a billing dashboard in Havas.

# Data Flow



## Steps:

1. Ingest mock billing data from Blob Storage
2. Use Azure Data Factory for ETL
3. Store data in Azure SQL Database
4. Visualize insights using Power BI

# Azure Blob Storage

Microsoft Azure Search resources, services, and docs (G+/-)

Home > Storage accounts >

## Create a storage account

Basics Advanced Networking Data protection Encryption Tags Review + create

[View automation template](#)

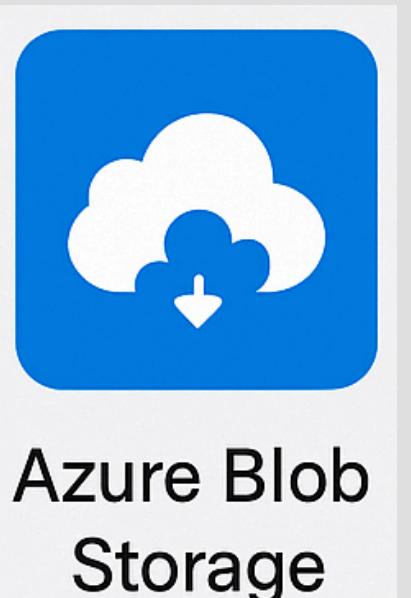
### Basics

Subscription	Azure subscription 1
Resource group	havas-demo-datafactory
Location	Southeast Asia
Storage account name	havasdemoblob
Primary service	
Performance	Standard
Replication	Read-access geo-redundant storage (RA-GRS)

### Advanced

Enable hierarchical namespace	Disabled
Enable SFTP	Disabled
Enable network file system v3	Disabled
Allow cross-tenant replication	Disabled

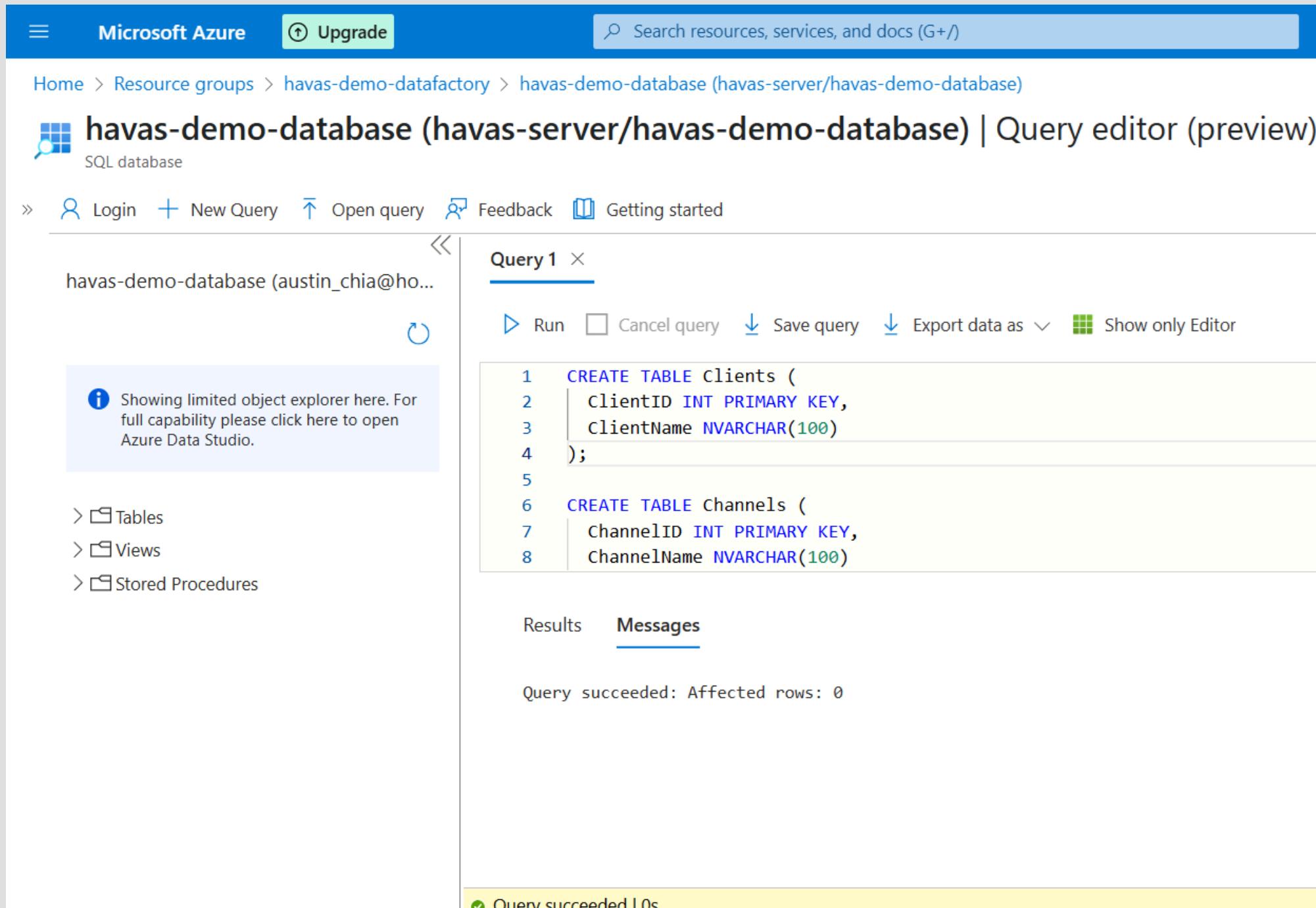
Previous Next Create



## Steps:

1. Create Blob Storage
2. Create container
3. Create dataset
4. Create Linked Services

# Azure SQL Database



The screenshot shows the Azure Query editor interface. At the top, there's a navigation bar with 'Microsoft Azure' and an 'Upgrade' button. Below it, a search bar says 'Search resources, services, and docs (G+/)'. The main title is 'havas-demo-database (havas-server/havas-demo-database) | Query editor (preview)'. On the left, there's a sidebar with 'Tables', 'Views', and 'Stored Procedures'. The main area has a 'Query 1' tab open with the following SQL code:

```
1 CREATE TABLE Clients (
2     ClientID INT PRIMARY KEY,
3     ClientName NVARCHAR(100)
4 );
5
6 CREATE TABLE channels (
7     ChannelID INT PRIMARY KEY,
8     ChannelName NVARCHAR(100)
```

Below the code, under 'Results', it says 'Query succeeded: Affected rows: 0'. At the bottom, a yellow bar indicates 'Query succeeded 10s'.



Azure SQL  
Database

## Steps:

1. Create Azure SQL Database
2. Create tables
3. Create dataset
4. Create Linked Services

# Azure Data Factory

All pipeline runs > ✓ Blob CSV To SQL - Activity runs

Show notifications

Rerun Cancel Refresh Update pipeline List Gantt

```
graph LR; A[Copy data  
Billing Channels CSV to SQL] --> B[Copy data  
Billing Clients CSV to SQL]; B --> C[Copy data  
Billing Transactions CSV to SQL]
```

Activity runs

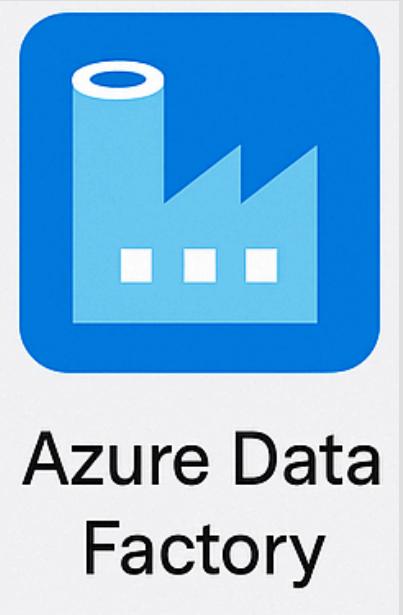
Pipeline run ID 9e3ccf71-6a97-4654-911a-1474acc544b2

All status

Showing 1 - 3 items

Activity name	Activity st...	Activit...	Run start	Durati...	Integration runtime
Billing Transactions CSV to SQL	<span style="color: green;">✓</span> Succeeded	Copy data	6/16/2025, 5:26:21 PM	17s	AutoResolveIntegrationRuntime (Southeast Asia)
Billing Clients CSV to SQL	<span style="color: green;">✓</span> Succeeded	Copy data	6/16/2025, 5:26:04 PM	16s	AutoResolveIntegrationRuntime (Southeast Asia)
Billing Channels CSV to SQL	<span style="color: green;">✓</span> Succeeded	Copy data	6/16/2025, 5:25:47 PM	17s	AutoResolveIntegrationRuntime (Southeast Asia)

Monitor in Azure

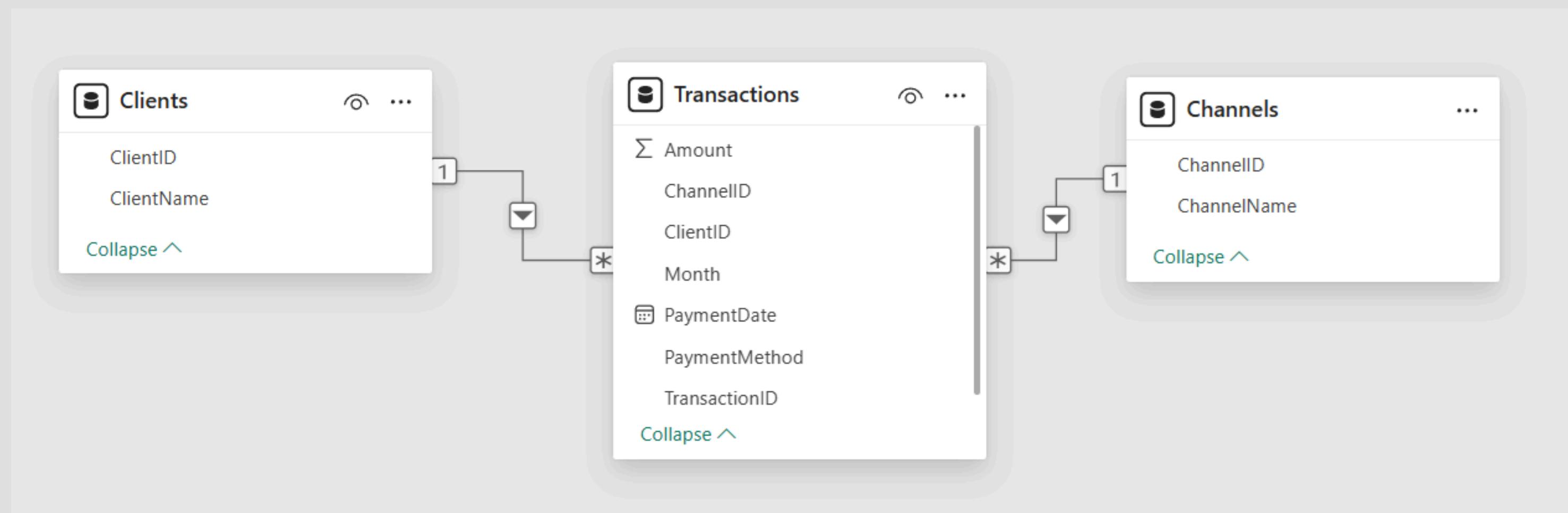


Azure Data  
Factory

## Steps:

1. Create Azure Data Factory
2. Create pipelines to copy data to SQL Database

# Data Modeling



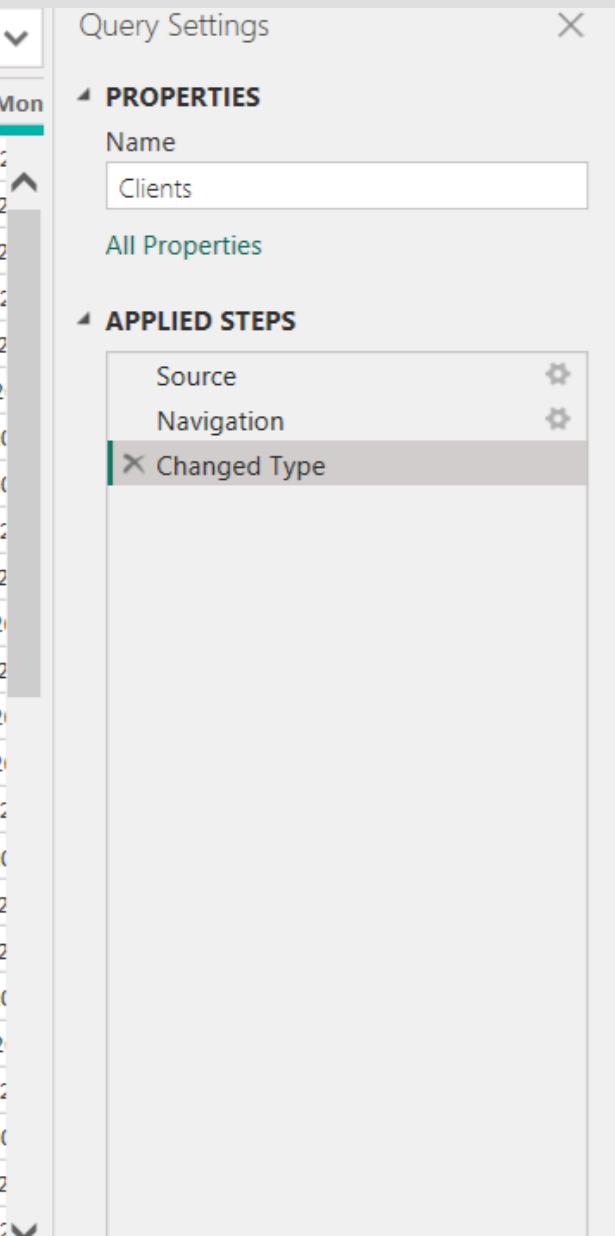
Power BI

**Steps:**  
1. Joined  
tables

# Data Transformation

= Table.TransformColumnTypes(#"7",{{"ClientID", type text}, {"ChannelID", type text}})

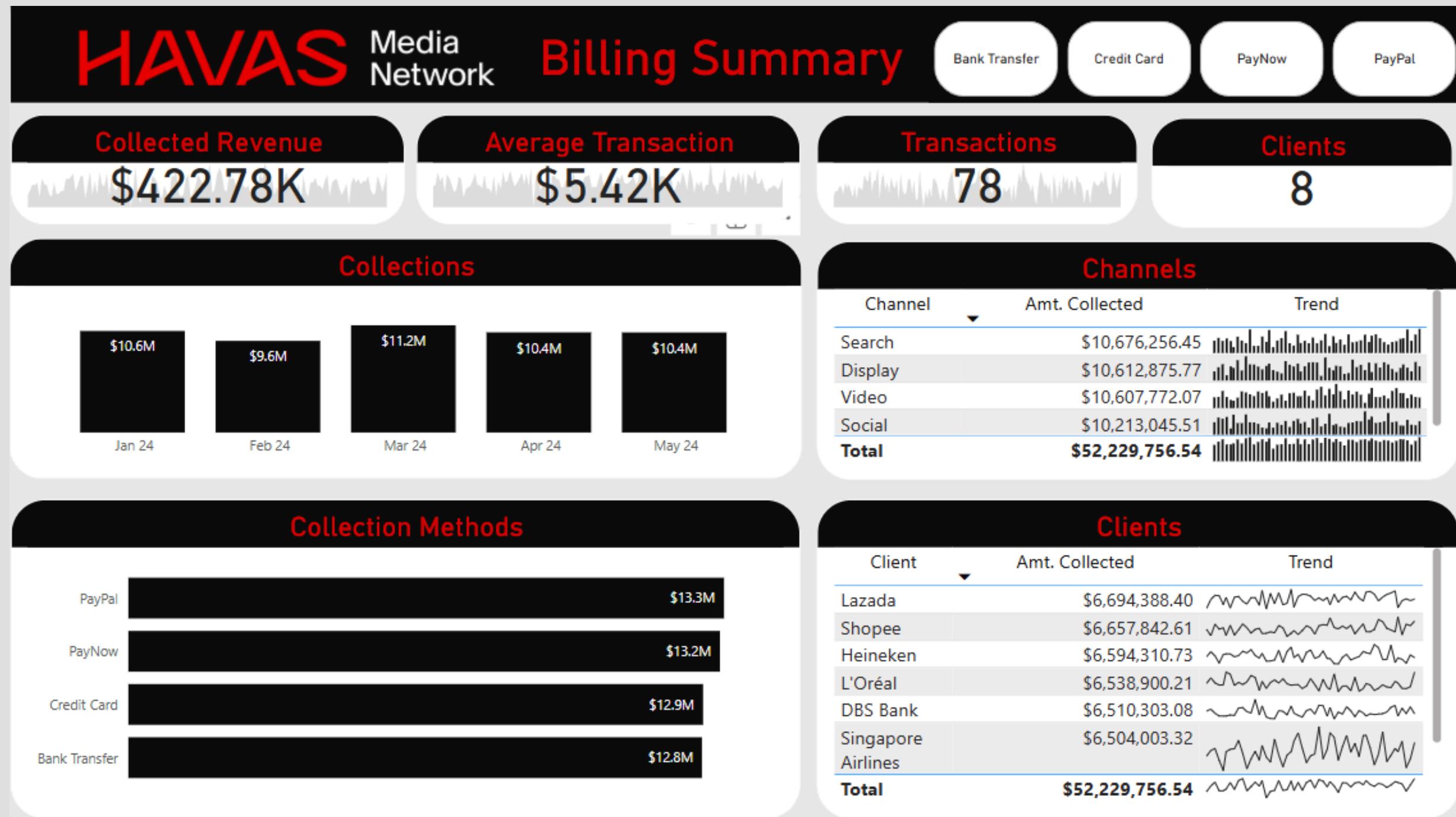
	TransactionID	ClientID	ChannelID	Amount	PaymentMethod	PaymentDate	Mon
1	TXN00019	7	5	4294.3	Bank Transfer	29/5/2024	May 2024
2	TXN00031	7	2	9324.68	Bank Transfer	8/3/2024	Mar 2024
3	TXN00032	7	3	4661.95	PayPal	20/3/2024	Mar 2024
4	TXN00038	7	2	1396.1	PayPal	1/5/2024	May 2024
5	TXN00039	7	4	4936.73	Credit Card	31/3/2024	Mar 2024
6	TXN00045	7	1	2064.05	Credit Card	24/2/2024	Feb 2024
7	TXN00052	7	5	5869.66	PayNow	21/1/2024	Jan 2024
8	TXN00063	7	3	918.82	PayNow	24/1/2024	Jan 2024
9	TXN00069	7	5	7620.04	Bank Transfer	23/5/2024	May 2024
10	TXN00075	7	5	3645.92	Credit Card	30/3/2024	Mar 2024
11	TXN00080	7	1	9514.31	PayNow	3/4/2024	Apr 2024
12	TXN00082	7	3	5766.92	Bank Transfer	24/3/2024	Mar 2024
13	TXN00083	7	2	6347.39	PayNow	17/4/2024	Apr 2024
14	TXN00090	7	5	2347.13	PayPal	26/4/2024	Apr 2024
15	TXN00091	7	2	1901.93	Credit Card	6/5/2024	May 2024
16	TXN00092	7	2	2170.92	PayPal	28/1/2024	Jan 2024
17	TXN00110	7	3	8431.65	PayPal	12/3/2024	Mar 2024
18	TXN00119	7	3	1155.09	PayNow	29/3/2024	Mar 2024
19	TXN00120	7	4	1502.62	PayNow	4/1/2024	Jan 2024
20	TXN00144	7	4	9130.79	PayNow	27/2/2024	Feb 2024
21	TXN00145	7	3	5901.98	Credit Card	30/5/2024	May 2024
22	TXN00148	7	4	7049.03	PayPal	1/1/2024	Jan 2024
23	TXN00161	7	5	848.62	Credit Card	14/3/2024	Mar 2024
24	TXN00175	7	4	9362.1	Bank Transfer	21/5/2024	May 2024
25	TXN00176	7	2	8632.12	PayPal	2/3/2024	Mar 2024



Power BI

- Steps:**
1. Cleaned and formatted data

# Data Visualization



Power BI

## Steps:

1. Created bar charts
2. Created KPI cards
3. Created tables
4. Created filters
5. Used Havas design language

## Collected Revenue

\$422.78K

## Average Transaction

\$5.42K

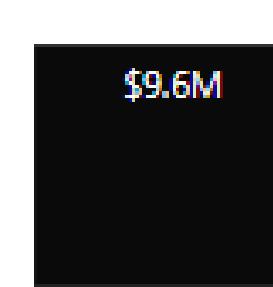
## Transactions

78

## Clients

8

## Collections



Jan 24

Feb 24

Mar 24

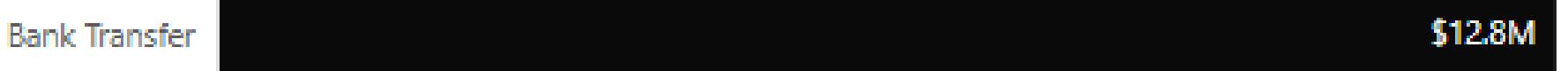
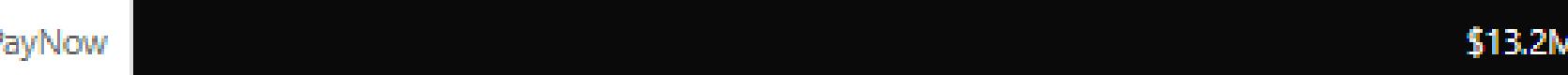
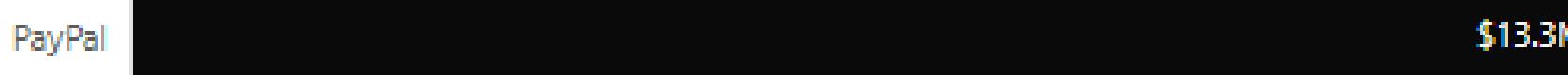
Apr 24

May 24

## Channels

Channel	Amt. Collected	Trend
Search	\$10,676,256.45	
Display	\$10,612,875.77	
Video	\$10,607,772.07	
Social	\$10,213,045.51	
<b>Total</b>	<b>\$52,229,756.54</b>	

## Collection Methods



## Clients

Client	Amt. Collected	Trend
Lazada	\$6,694,388.40	
Shopee	\$6,657,842.61	
Heineken	\$6,594,310.73	
L'Oréal	\$6,538,900.21	
DBS Bank	\$6,510,303.08	
Singapore Airlines	\$6,504,003.32	
<b>Total</b>	<b>\$52,229,756.54</b>	

# Further Development

- Extension to financial reporting
- Pipeline automation with scheduled ADF triggers
- Cross-functional data integration
- Real-time dashboards using DirectQuery

# Contact

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Phone: +65 97702495

