

# Journey to the Cloud

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# Agenda

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The Project

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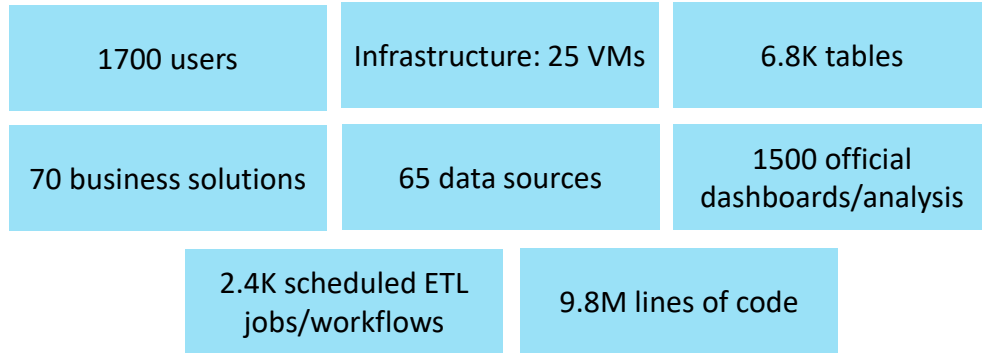
The Goal

The Journey

Q&A



# The Project



## 2022

- As-is vs. To-be analysis
- Pilot new technologies
- Establish new environments (Snowflake, ADF)

## 2023

- Started re-developing prioritized nextgenERP impacted analytics solutions (Edge scope)
- Establish new environments (Viya 4)
- Viya 3.5 >> Viya 4

## 2024

- Started re-developing remaining prioritized analytics solutions

## 2025

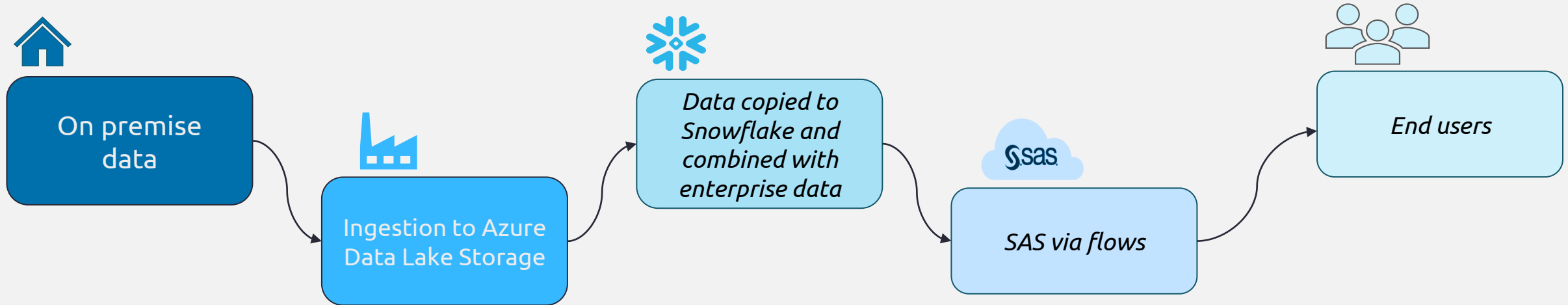
1st July: Go-live nextgenERP

1st January: Completed Modernisation





# The Goal





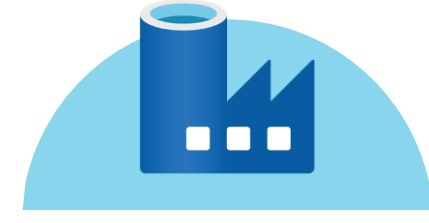
# Microsoft Azure



**Azure Data Factory**  
Data Copy from  
On-Prem to ADLS



**Azure Data Factory**  
Snowflake Scripts



**Azure Data Factory**  
Trigger SAS Flows  
via REST API



**Azure DevOps**  
Version Control

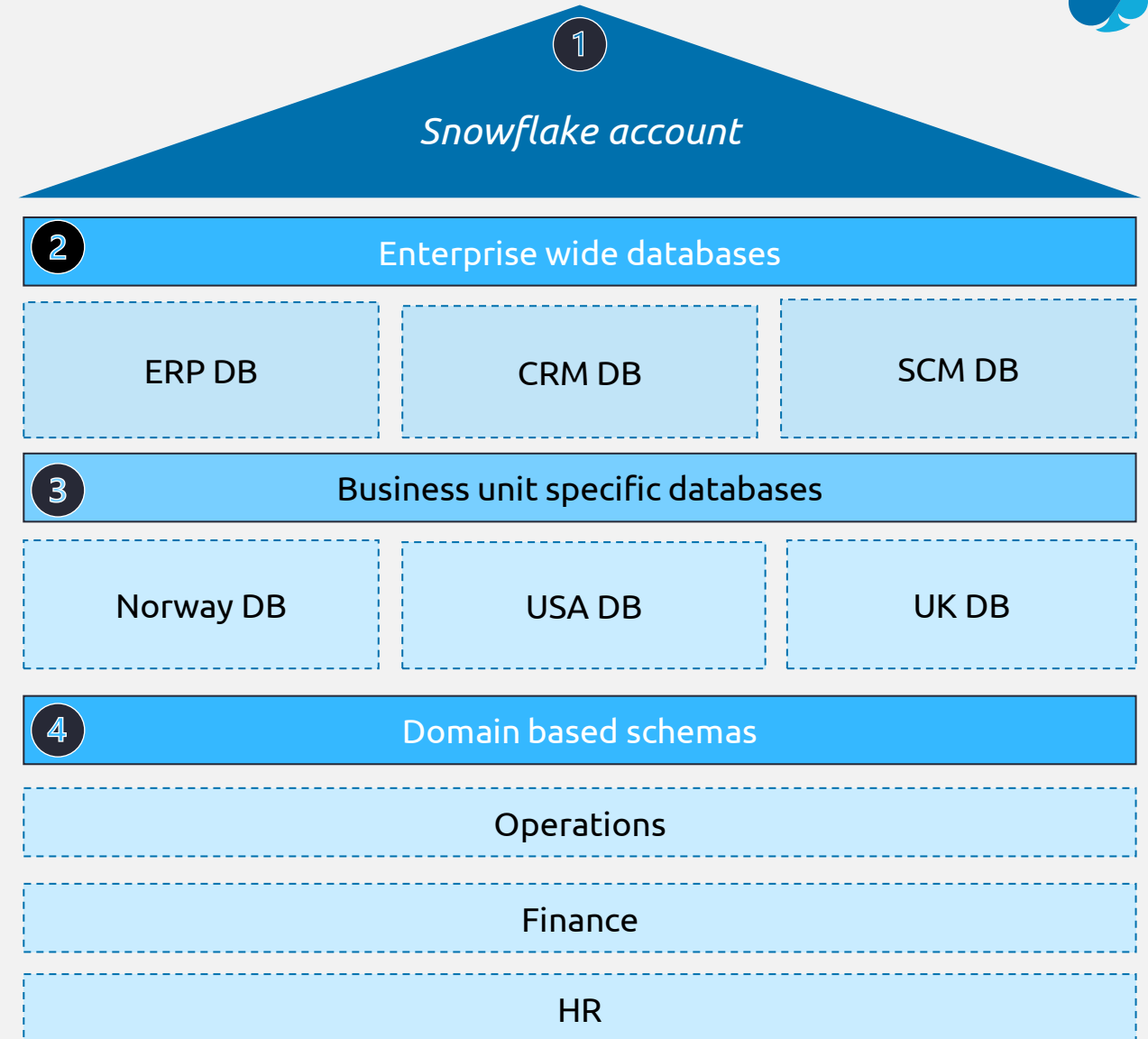


**Azure DevOps**  
Promotions b/n  
Platforms



# Snowflake Data Architecture

- 2 Enterprise wide database layer for easy consumption
- 3 Business unit specific databases managed individually
- 4 Domain specific schemas for individual business areas



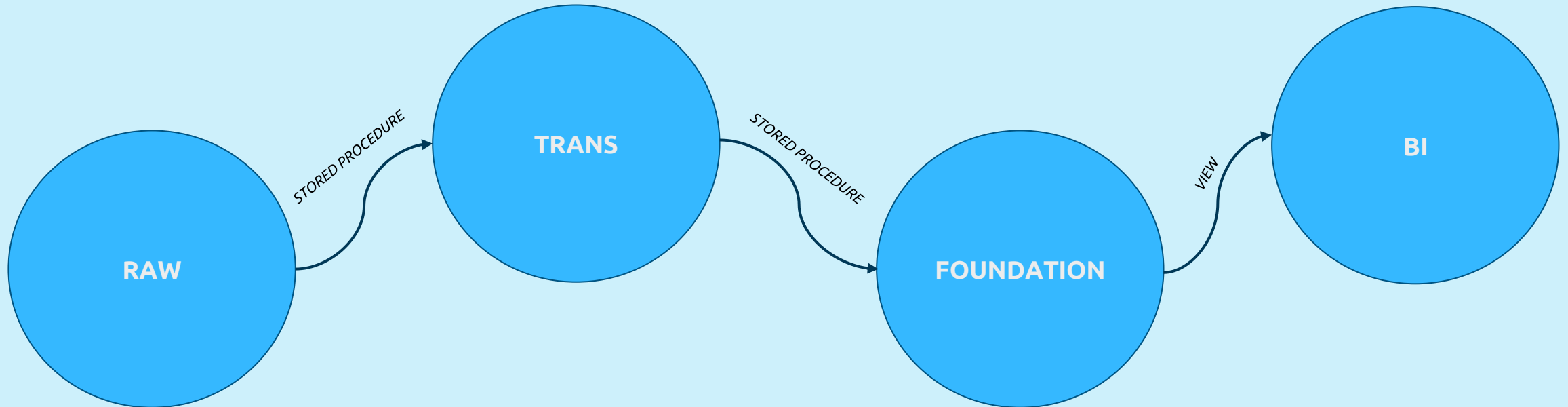
***Data availability managed in Snowflake by role and user policies***



# Schema Layers

*Initial cleansing, validation and transformation of raw data*

*Top layer containing data marts*

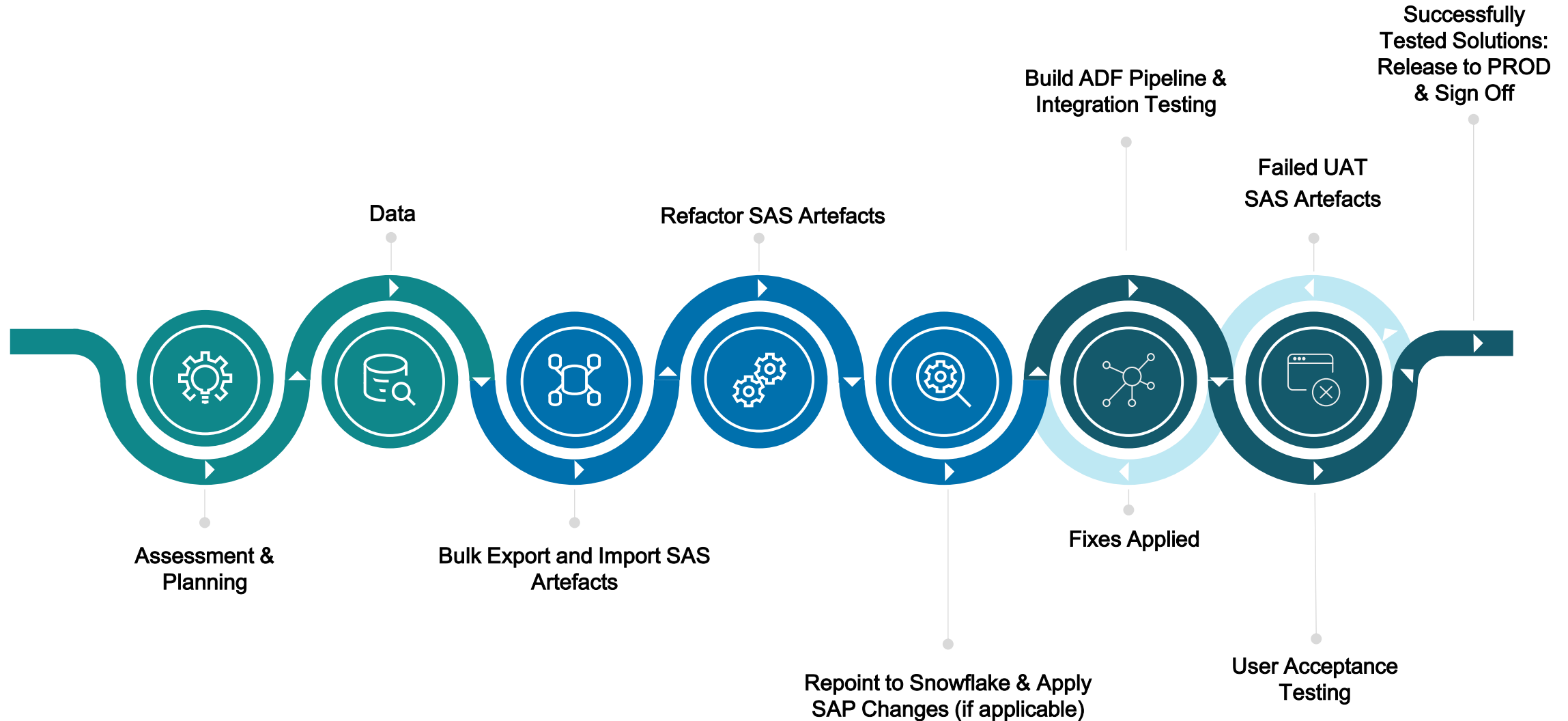


*Raw data from ADLS using COPY INTO / External tables*

*Cleand and formatted data*



# Process for Modernising Business Solutions

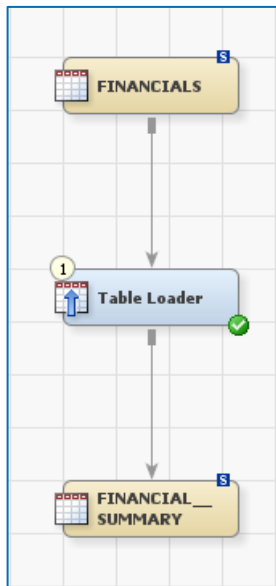




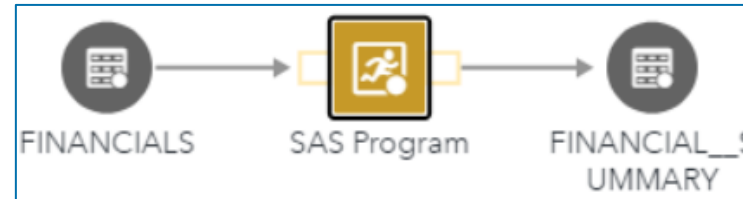


# SAS Program Step vs SAS Studio Step

## SAS 9.4

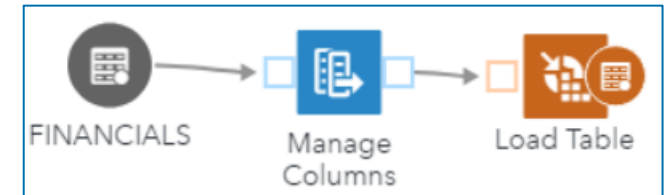


## SAS Program Step (High Code)



```
SAS Program
Code Node Notes
1 /*-----*/
2 * Step: Table Loader ASELUBD6.B50001Y *
3 * Transform: Table Loader (Version 2.1) *
4 * Description: *
5 *
6 * Source Table: FINANCIALS - FINDATA.FINANCIALS ASELUBD6.BG00003I *
7 * Target Table: FINANCIAL_SUMMARY - ASELUBD6.BG00003H *
8 * FINDATA.FINANCIAL_SUMMARY *
9 *-----*/
10
11 %let transformID = %quote(ASELUBD6.B50001Y);
12 %let trans_rc = 0;
13 %let etls_stepStartTime = %sysfunc(datetime(), datetime20.);
14
15 /* Access the data for Financial Data */
16 LIBNAME FINDATA BASE "D:\workshop\gelcorp\finance\srcdata";
17 %rcSet(&syslibrc);
18
19 %let SYSLAST = %nrquote(FINDATA.FINANCIALS);
20
21 /* Runtime statistics macros */
22 %etls_setPerfInit;
23 %perfstrtr(txnname=%QUOTE(_DISARM|&transformID|&syshostname|Loader), metrNam6=_DISROWCNT, metrDef6=Count32) ;
24
```

## SAS Studio Step (Low Code)



Load Table

Target Table Options Column Structure Column Resolution Preview Data Node Notes

Load technique:

- Insert rows
- Update rows
- Upsert rows

If a physical table does not exist, create a table

Insert method:

- PROC SQL INSERT statement
- PROC APPEND

- Force concatenation of source and target tables
- Suppress warnings

Preprocess actions:

- No action
- Truncate table
- Delete all rows
- Replace the target table if it exists

Output Table Options

Advanced table options



# Key Lessons Learned



## Data

Get data ready before migrating SAS objects



## Communication

One big team with one goal



## Snowflake development

Split up logic into manageable chunks



## SAS Viya Cadences

Stable SAS Viya cadence during the modernization project



## Automation

Automate or semi-automate migration and building activities



## Collaboration with the business

Close collaboration with the business is essential to achieve a successful migration



Martin Gilje Sørbo



Kristin Chirica

# Thank you!



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