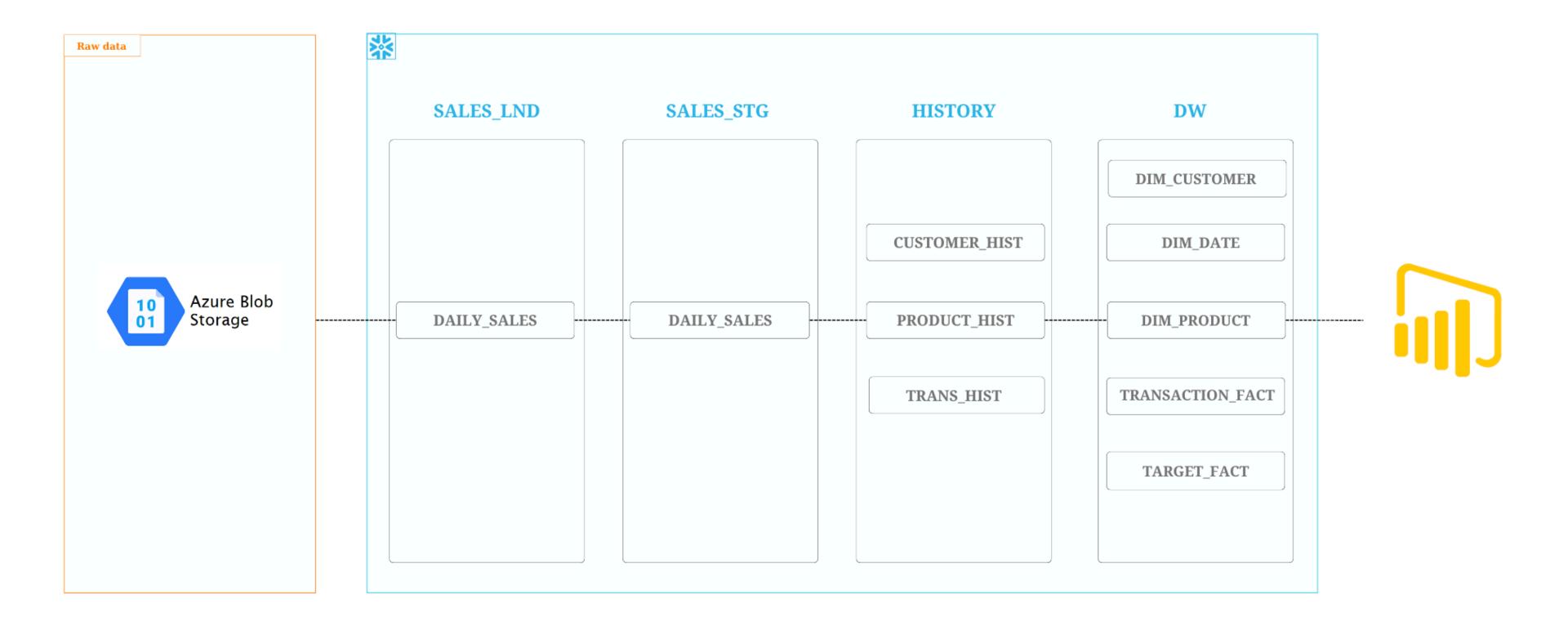
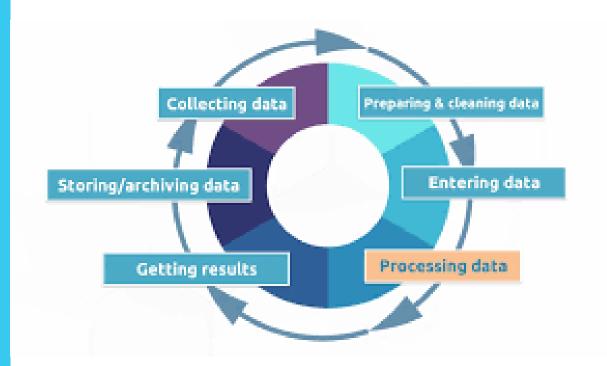
Data Layer

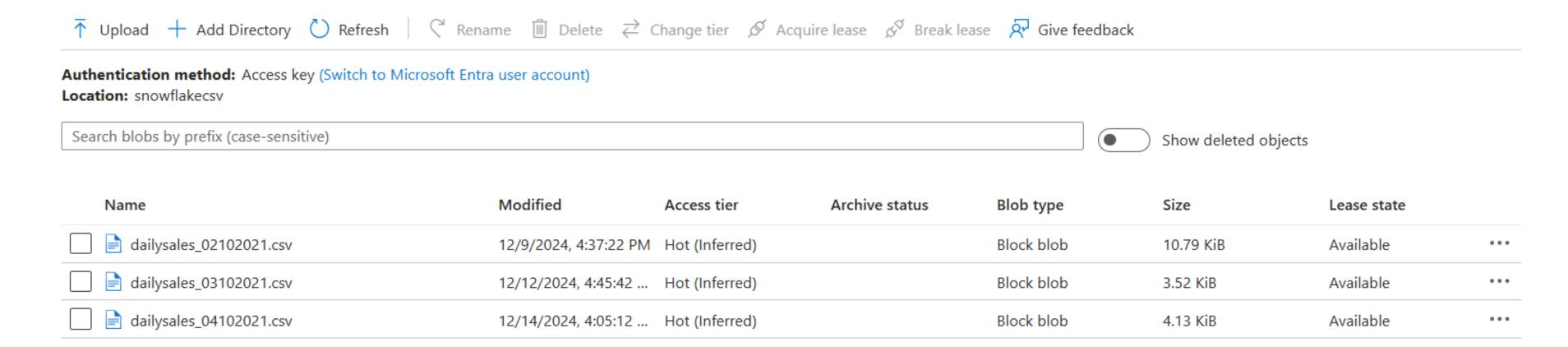




Processing data



Input data



	Α	В	С	D	Е	F	G	Н	I	J	K	L	М	N
1	,Customer	_Code,cust	omer_name	e,custome	r_type_nam	e,area_nam	e,region_n	ame,Invoic	e_Number	,Invoice_Date	e,ZP_ltem_	_Code,Price	,Quantity	
2	0,3019052	1,CN Quay	CPDP Ben T	ai- NT So 0	2 Hello,Bea	uty,Ho Chi	Minh,HCM	C,1225690	651,2021-1	10-02,21085	258,20428	36,1		
3	1,3019141	9,CongTy 1	MDP Huynl	n Kim Hello	,Wholesale	r,Ho Chi Mii	nh,HCMC,1	122569164	0,2021-10-	02,2119395	0,179600,	3		
4	2,3019141	9,CongTy 1	MDP Huynl	n Kim Hello	,Wholesale	r,Ho Chi Mir	nh,HCMC,1	122569163	0,2021-10-	02,2119395	0,179600,	31		
5	3,3017310	2,CongTyC	o Phan NTh	nuong Da K	Thanh Than	hn My Da La	t Hello,Bea	uty Dep,La	m Dong,No	rth,1212577	120,2021-	10-02,2119	3955,5476	27,5
6	4,3017373	7,CongTyC	o Phan TMD	OV Thang Lo	ong Hello,B	eauty Dep,K	hanh Hoa,	North,1212	576969,20	21-10-02,21	193949,20	04286,10		
7	5,3019172	9,CongTyC	PDP Gia Di	nh- NT So 2	21 Hello,Bea	auty,Ho Chi	Minh,HCM	C,1225690	758,2021-	10-02,21085	258,20428	36,100		
8	6,3019172	9,CongTyC	PDP Gia Di	nh- NT So 2	21 Hello,Bea	auty,Ho Chi	Minh,HCM	C,1225690	661,2021-	10-02,21193	946,20374	13,2		
9	7,3018914	4,Chau Tha	nhng Sinh H	lello,Beaut	y,Nghe An,I	Mekong,122	25691005,2	2021-10-02	,21193949	,204286,10				
10	8,3018501	5,Dai Ly Ba	n Cho Quay	CPDP TV.I	aom (To) F	lello,Beauty	,Thai Nguy	en,Mekong	,12256916	87,2021-10-	02,211939	966,169886	,2	

Ingest data

```
CREATE OR REPLACE PROCEDURE DEMO_DB.SALES_LND.SP_LOAD_RAW_TO_LND()
RETURNS TABLE()
LANGUAGE SQL
EXECUTE AS OWNER
AS
DECLARE
   res RESULTSET;
    select_statement VARCHAR;
BEGIN
    create or replace stream DEMO_DB.SALES_LND.stream_lnd on table DEMO_DB.SALES_LND.DAILY_SALES APPEND_ONLY=TRUE;
    COPY INTO DAILY_SALES
    FROM @stage_azure
    FILE_FORMAT = (format_name = azure_fileformat)
    PATTERN = '.*dailysales.*';
    --RETURN 'Successful load';
    select_statement:= 'select * from table(result_scan(last_query_id()))';
    res := (EXECUTE IMMEDIATE :select_statement);
    RETURN TABLE(res);
END;
```

LOAD TO STAGING

```
INSERT INTO DEMO DB.SALES STG.DAILY SALES
SELECT TRIM(s.id) as id,
    TRIM(s.customer_code) as customer_code,
    TRIM(s.customer_name) as customer_name,
    PARSE_JSON(s.customer_info):name::STRING as contact_person,
    PARSE_JSON(s.customer_info):email::STRING as contact_email,
    TRIM(s.customer_type_name) as customer_type_name,
    TRIM(s.area_name) as area_name,
    TRIM(s.region_name) as region_name,
    TRIM(s.invoice_number) as invoice_code,
    TRIM(s.item_code) as item_code,
    TRIM(s.item_name) as item_name,
    s.price,
    s.quantity,
    TO_DATE(s.invoice_date, 'YYYYY-MM-DD') as invoice_date,
    CURRENT_TIMESTAMP() as created_at
FROM DEMO_DB.SALES_LND.stream_lnd as s
WHERE METADATA$ACTION = 'INSERT';
```

SCD TYPE 2



Records in initial load

30172683	NT Thanhng Hello	gregorybooth@example.org	2024-12-12 01:43:26.383	null	1000-01-01	9999-12-31	Υ
			^				

Capture the changes with SCD 2

	CUSTOMER_CODE	CUSTOMER_NAME	CONTACT_EMAIL	INSERT_AT	UPDATE_AT	START_DATE	END_DATE	CURRENT_FLAG
1	30172406	KThanh NThuong Tinh Khanh Thanh Hello	kinganna@example.org	2024-12-12 01:43:26.383	2024-12-14 01:05:30.511	1000-01-01	2024-12-13	N
2	30172406	KThanh NThuong Tinh Khanh Thanh	cory81@example.org	2024-12-14 01:05:30.511	null	2024-12-14	9999-12-31	Υ
3	30174268	Quay Doanh Nghiep Becamex So 131 Hello	sosborne@example.net	2024-12-12 01:43:26.383	2024-12-12 01:46:28.120	1000-01-01	2024-12-11	N
4	30174268	Quay Doanh Nghiep Becamex So 132	sydneysmith@example.com	2024-12-12 01:46:28.120	2024-12-14 01:05:30.511	2024-12-12	2024-12-13	N
5	30174268	Quay Doanh Nghiep Becamex So 131 Hello	svdnevsmith@example.com	2024-12-14 01:05:30.511	null	2024-12-14	9999-12-31	Υ

create checksum values

```
md5(concat_ws('||', customer_code)) as primary_checksum,
md5(
    concat_ws(
        '||',
        coalesce(customer_name, ''),
        coalesce(contact_person, ''),
        coalesce(contact_email, ''),
        coalesce(area_name, ''),
        coalesce(region_name, '')
)
) as record_checksum,
```

check if a record is updated or inserted

```
FINAL_DATA

) as source ON target.primary_checksum = source.primary_checksum

AND source.insert_or_update = 'U'

AND target.current_flag = 'Y'

WHEN MATCHED THEN

UPDATE

SET

target.update_at = current_timestamp(),

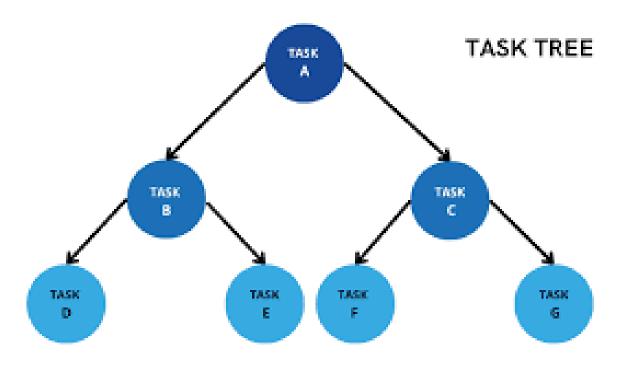
target.end_date = DATEADD(day, -1, current_date()),

target.current_flag = 'N'

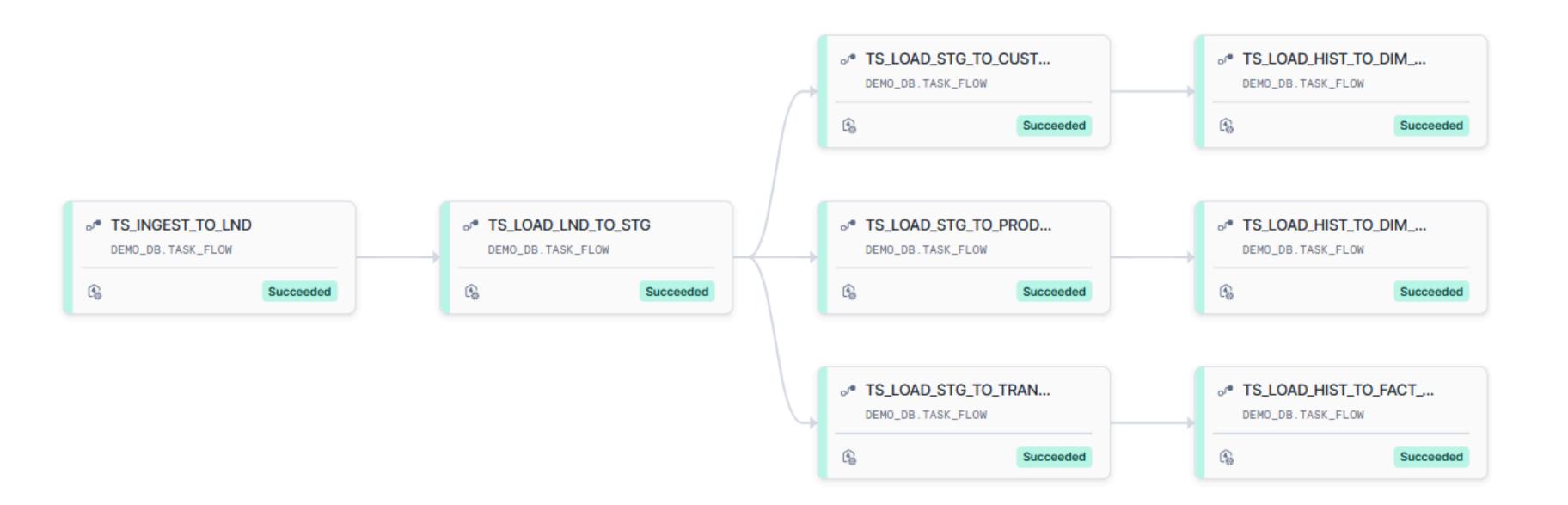
WHEN NOT MATCHED THEN

INSERT
```

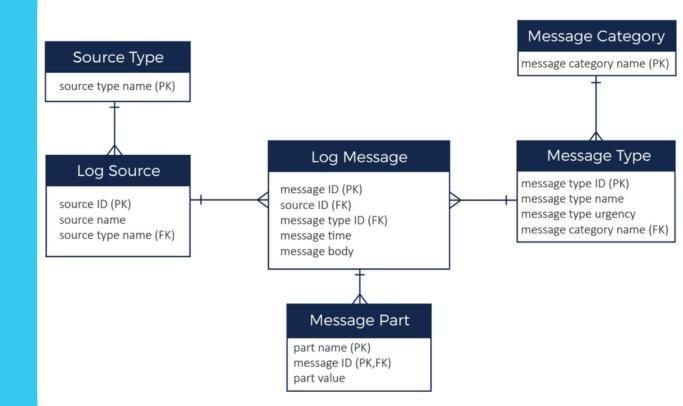
TASK SCHEDULE

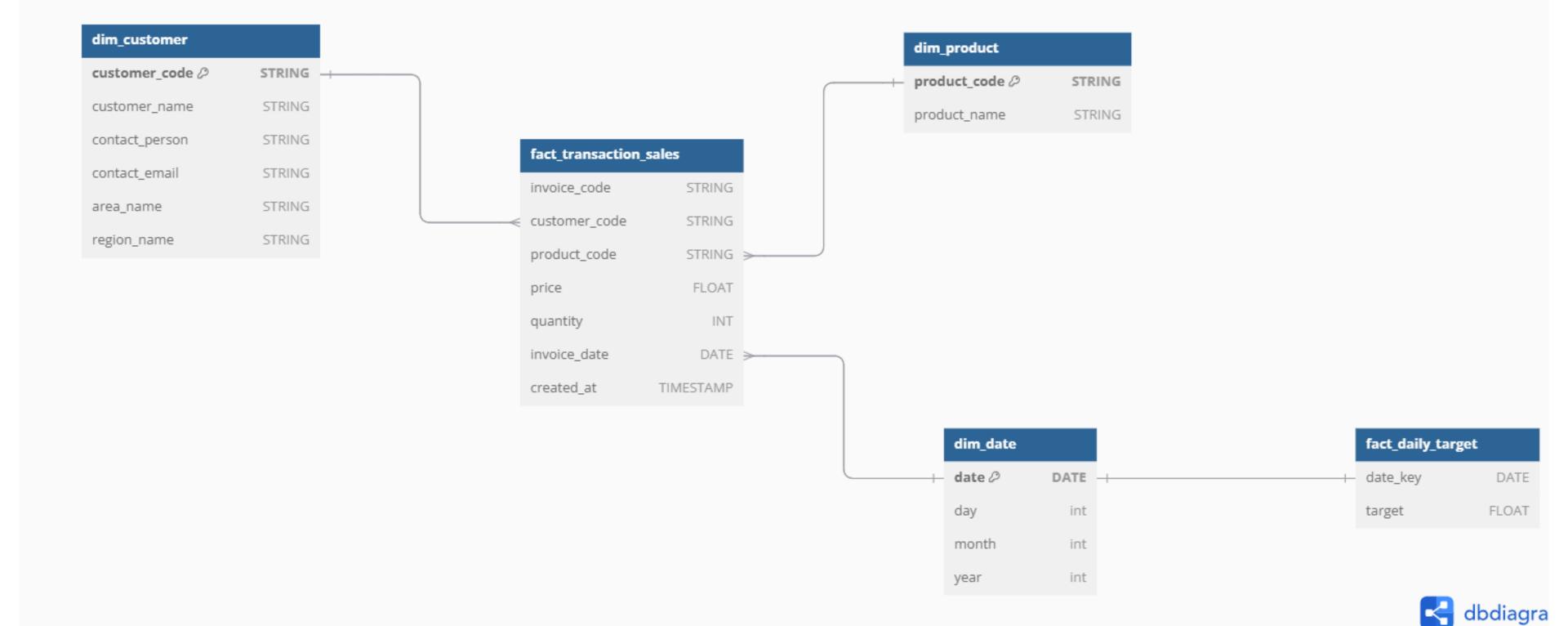


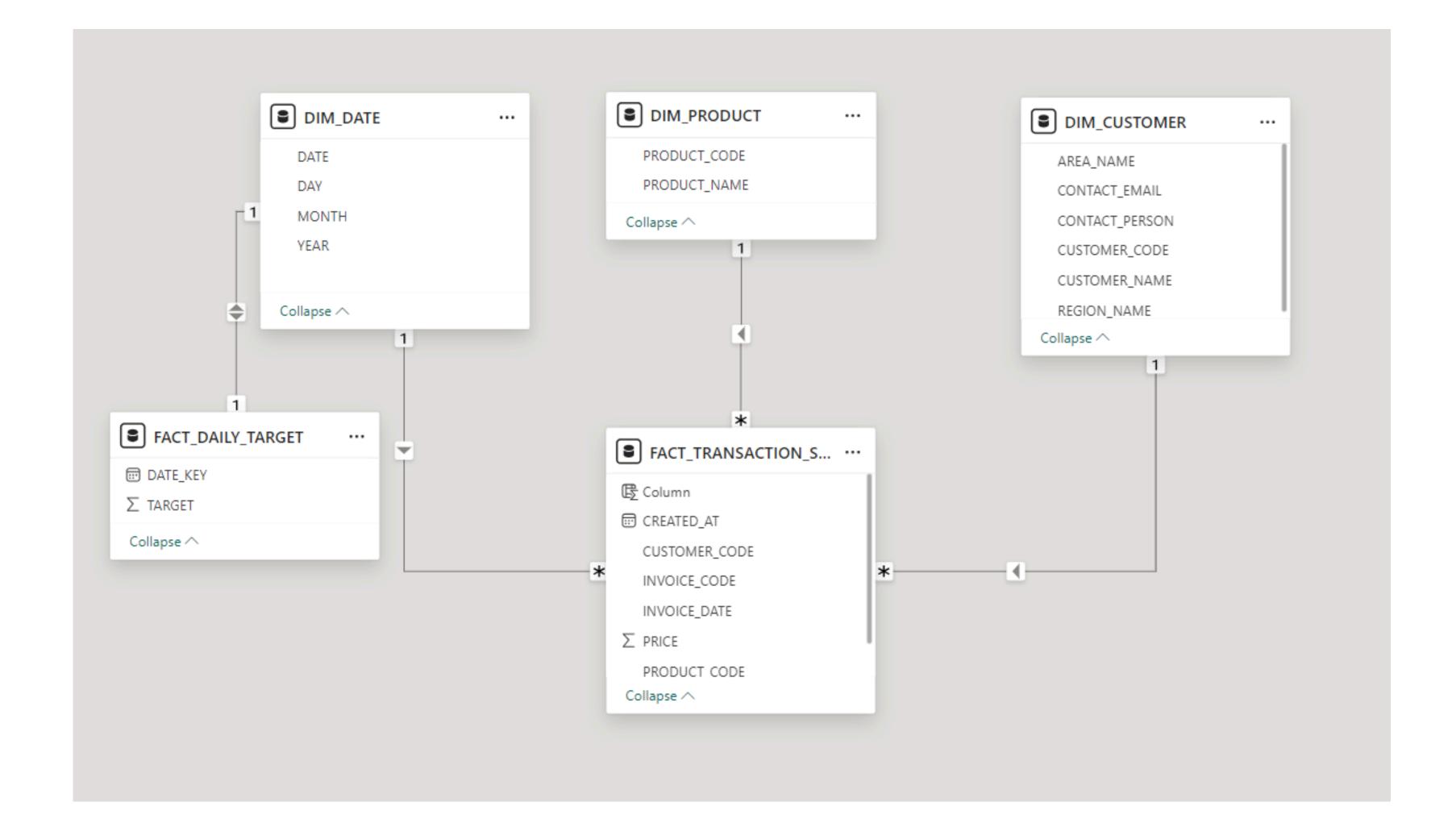
TS_INGEST_TO_LND	SP_LOAD_RAW_TO_LND()
TS_LOAD_LND_TO_STG	SP_LOAD_LND_TO_STG()
TS_LOAD_STG_TO_PRODUCT_HIST	SP_LOAD_TO_PRODUCT_HIST()
TS_LOAD_STG_TO_CUSTOMER_HIST	SP_LOAD_TO_CUSTOMER_HIST()
TS_LOAD_STG_TO_TRANSACTION_HIST	SP_LOAD_TO_TRANSACTION_HIST()
TS_LOAD_HIST_TO_DIM_CUSTOMER	SP_LOAD_TO_DIM_CUSTOMER()
TS_LOAD_HIST_TO_DIM_PRODUCT	SP_LOAD_TO_DIM_PRODUCT()
TS_LOAD_HIST_TO_FACT_TRANSACTION	SP_LOAD_TO_FACT_TRANSACTION()



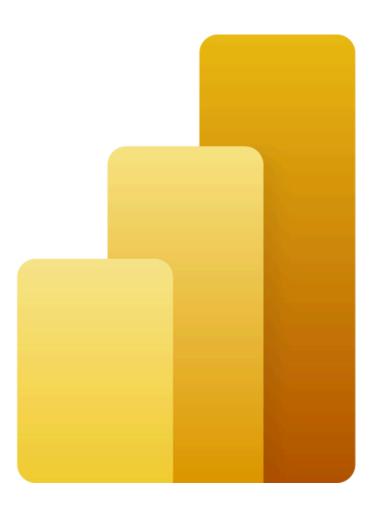
DATA MODELING

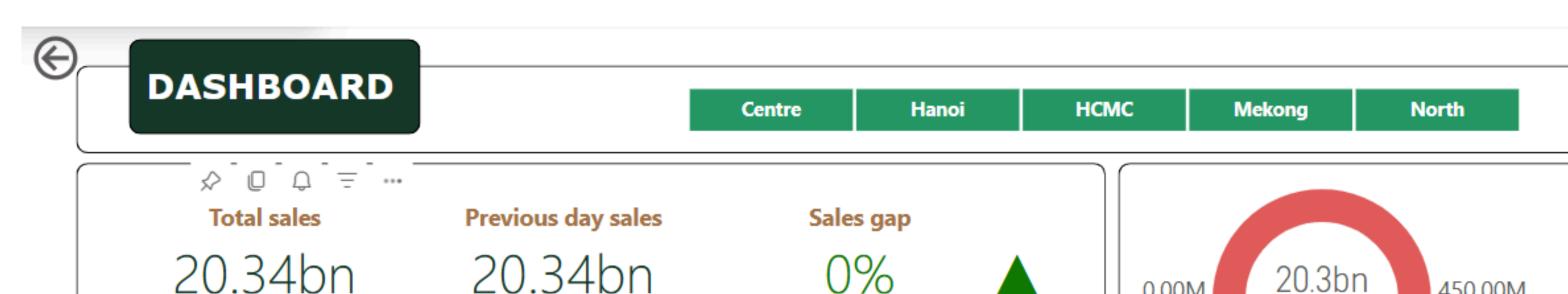


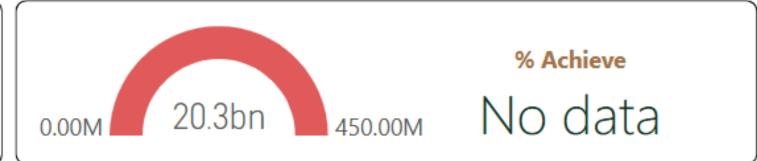




Power BI



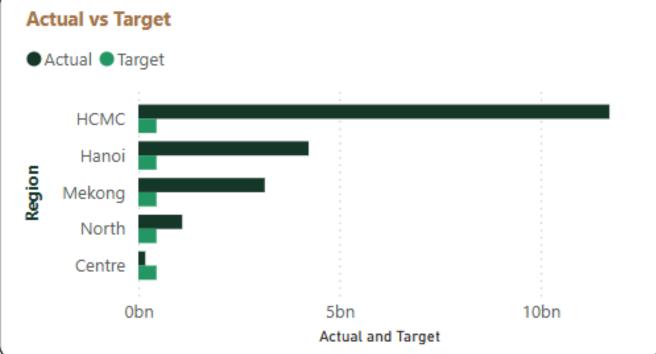


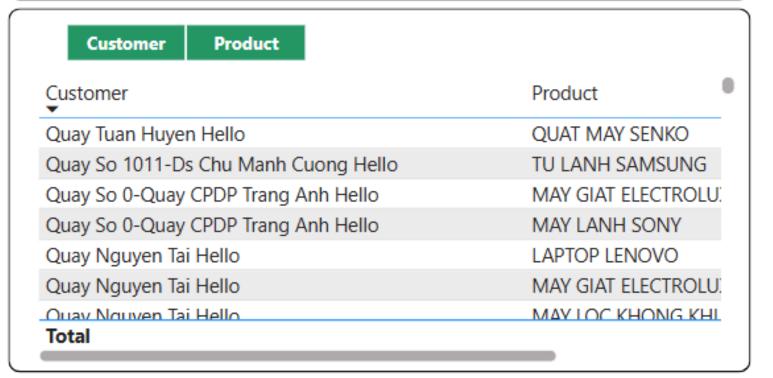


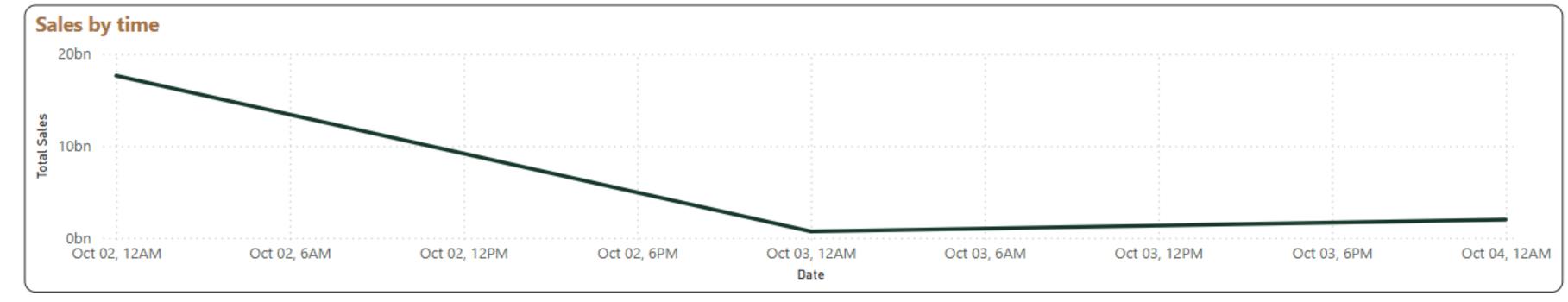
Updated to

04-10-2021













Quay Tuan Huyen Hello

Invoice code	Date	Customer code	Customer name	Region	Product	Unit Price	Quantity	Total Sales	
1225691726	Sunday, October 03, 2021	30184794	Quay Tuan Huyen Hello	Mekong	QUAT MAY SENKO	206,914.00	10		2,069,140
Total						206,914.00	10		2,069,140