

# FROM EXCEL TO REAL TIME INSIGHTS USING DATABRICKS, THOUGHTSPOT & PBI

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GET VALUE FROM YOUR DATA

# Thomas Nakken

## Head of development, data & analytics

- Europris since September 2021
- Worked in the IT industry since y2k, with different roles such as:
  - Backend developer in Telecom
  - Architect and manager of R&D for SaaS EDI and insight solutions
  - CTO for SaaS in HSE with distributed team in Norway, Mexico and Philippines



# Norway's discount variety retailer



Strong brand and loyal customer base



Low prices and powerful marketing and campaign engine



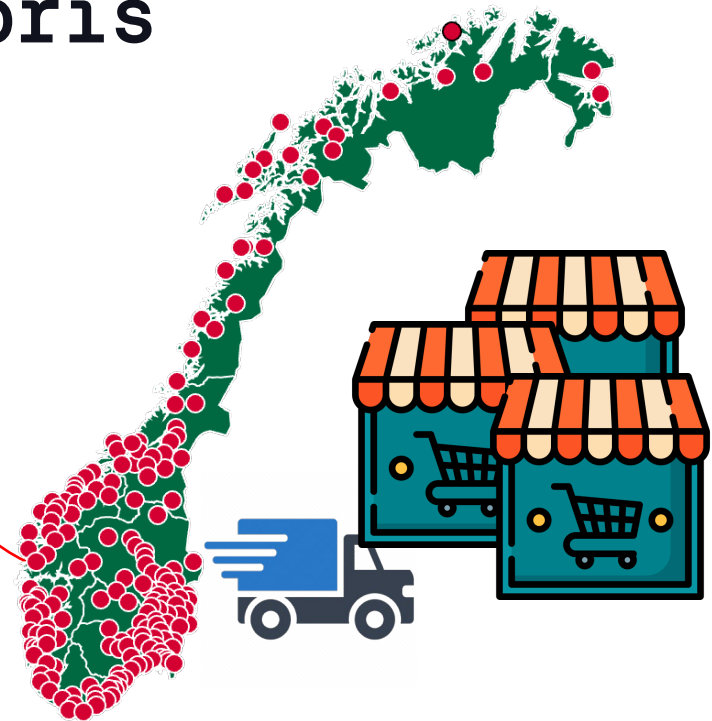
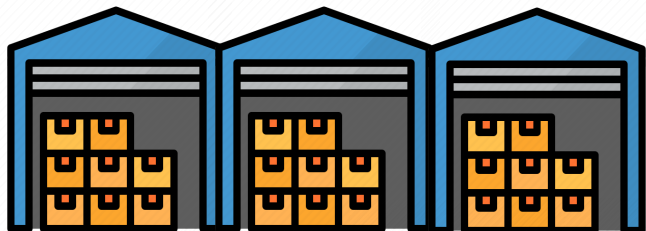
Proven category management model



Expanding store network and e-commerce operation



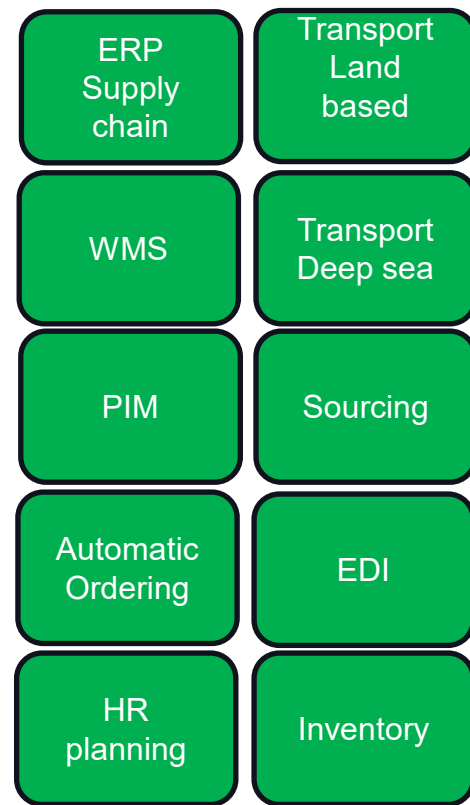
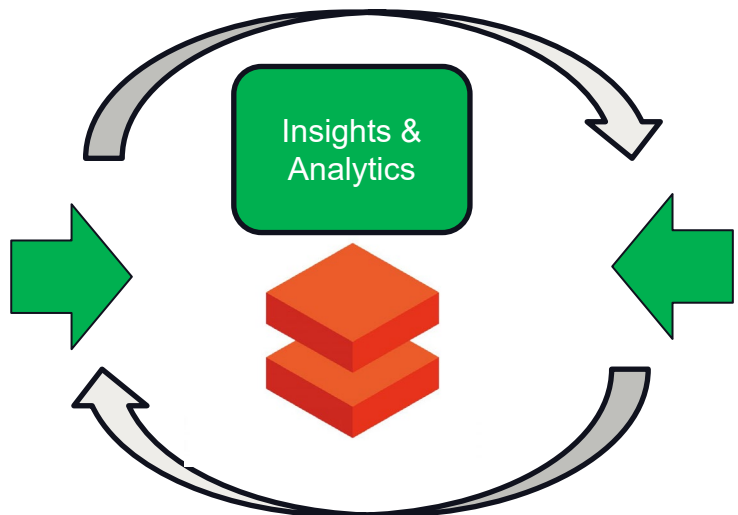
# Business model for Europris



- Import goods from Asia (deep sea)
- One main storage facility
- Drive sales with a well proved campaign machine



# System landscape



We're building a  
cutting-edge cloud-  
based analytics  
platform for **real-time**  
**insights, data-driven**  
**decision-making** and **AI**  
utilization.

CF0: How will it  
look like in  
**EXCEL?**



# Build a team for analytics in retail

Our focus when we choose our tech stack



Developers



Business analyst



Controllers



In the future...

Team of data scientists

Developers need to master our whole tech stack

No one outside dev team master SQL or python

# Analytics platform

## The way we structured it

Predefined reports and semantic models

Aggregation tables

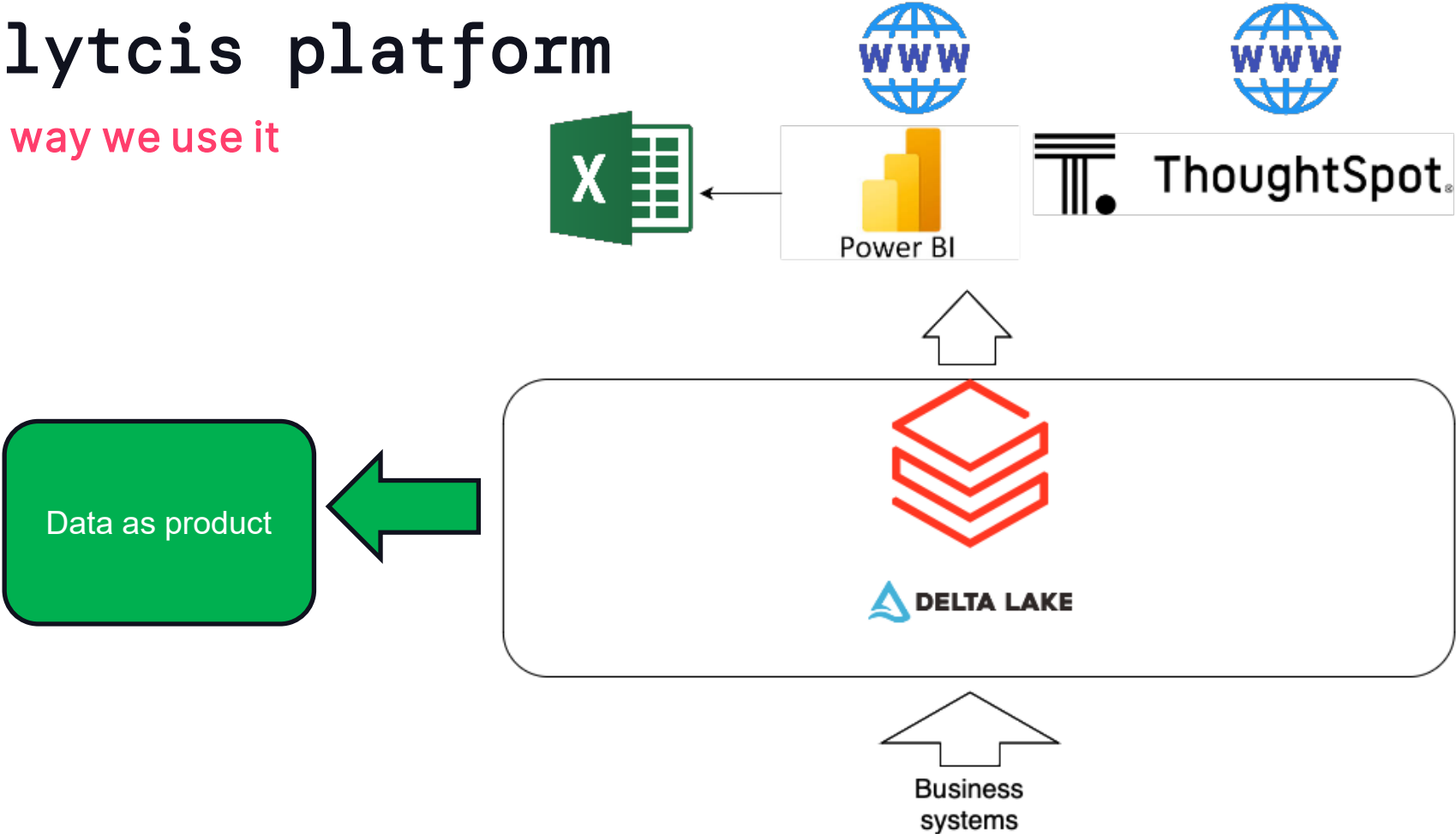
Tables with SCD2

RAW DATA LAYER



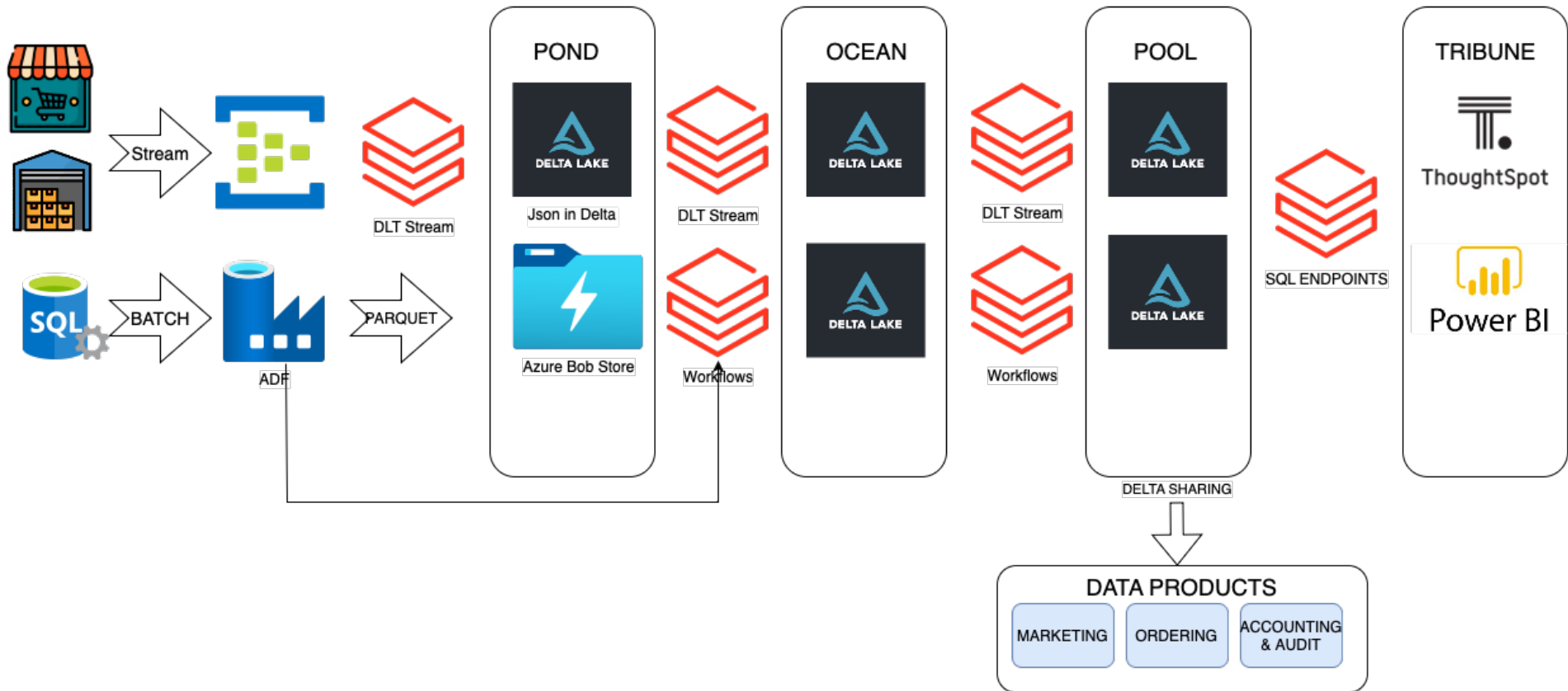
# Analytics platform

The way we use it



# Analytciis platform

The way we built it



# Delta Live Tables & Unity Catalog

## Be aware of limitations

Delta Sharing (open)

Python libs (whitelisted)

UDF not supported

Only delta tables as sink's

Limited streaming functionality



Butikk

- 209 EP FREDRIKSTAD
- 239 EP HALDEN
- 250 EP SARPSBORG
- 279 EP ISEVEIEN
- 295 EP MOSS PLUSS
- 297 EP SVINESUNDPARKEN
- 326 EP ØREBEKK
- 399 EP KRÅKERØY
- 425 EP RÅDE
- 463 EP BEGBY

Omsetning i dag

93,917

Antall kunder

348

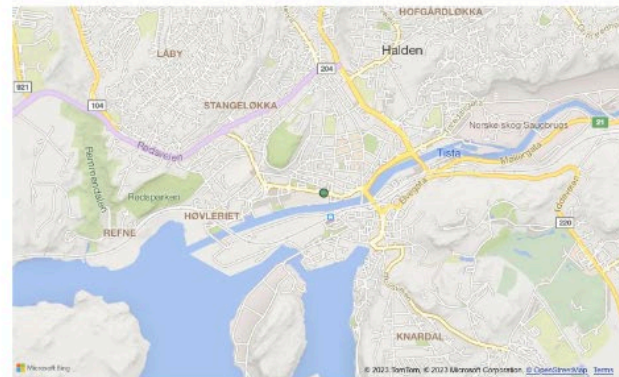
Handlekurv

270

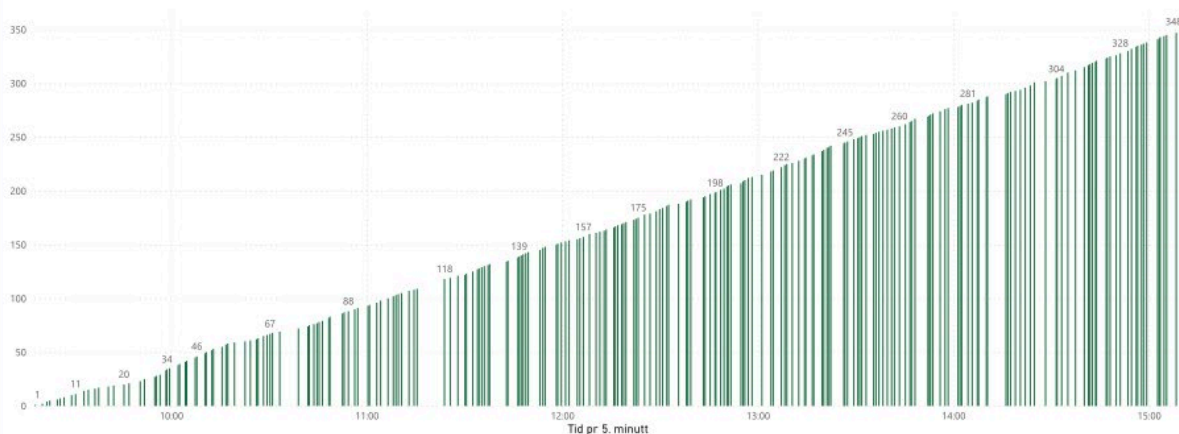
Siste salg

15:09:56

Butikk	Omsetning	Brutto%	Antall enheter	Antall kunder	HK
209 EP FREDRIKSTAD	36,200	18.1 %	930	87	416
239 EP HALDEN	93,917	18.3 %	2,677	348	270
250 EP SARPSBORG	114,410	15.5 %	3,438	398	287
279 EP ISEVEIEN	134,451	16.8 %	3,783	431	312
295 EP MOSS PLUSS	80,613	19.2 %	2,298	239	337
297 EP SVINESUNDPARKEN	100,009	18.0 %	2,688	329	304
326 EP ØREBEKK	131,268	19.6 %	3,711	387	339
399 EP KRÅKERØY	100,164	17.1 %	2,972	361	277
425 EP RÅDE	54,911	20.3 %	1,489	171	321
463 EP BEGBY	83,015	19.4 %	2,213	321	259
<b>Total</b>	<b>928,956</b>	<b>16.8 %</b>	<b>26,198</b>	<b>3,072</b>	<b>270</b>




Antall kunder akkumulert gjennom dagen



# Self service insights


For the Excel people



Uke 17, 2024    DM s 1 - Oversikt

2024

Ukens DM s 1



Velg type

- Antall enheter
- Omsetning
- SM kr

Velg kampanjeuk = [dropdown]

- 15
- 16

	Oms totalt DM s 1	Oms eks kupp	Salg kupp-varer på kupp-dager	SM kr	SM%	Antall solgte enheter
	25,761,607	21,343,168	3,819,492	7,405,220	28.7 %	612,585


Dato	Antall enheter pr dag						Total
	22/04/2024	23/04/2024	24/04/2024	25/04/2024	26/04/2024	27/04/2024	
Bildepunkt	mandag	tirsdag	onsdag	torsdag	fredag	lørdag	
1-1 S Nidar storplate, 4 for 100	35,664	43,108	44,618	47,560	68,496	61,270	<b>300,716</b>
1-2 S Alle potter 40%	8,109	7,849	7,994	8,108	9,625	12,144	<b>53,829</b>
1-3 H Finish 80-pk	1,534	1,578	1,505	1,426	1,344	1,260	<b>8,647</b>
2-1 Omo/ Blenda 3,7 kg	5,065	4,992	5,109	4,475	4,806	5,641	<b>30,088</b>
2-2 Alt fra TRIM 30%	2,863	2,905	2,812	2,731	3,441	4,697	<b>19,449</b>
2-3 Sengesett & laken 50%	3,610	3,777	3,478	3,042	3,358	3,173	<b>20,438</b>
3-1 K Dekorstein, 2 for 100	9,151	9,765	605	528	616	882	<b>21,547</b>
3-2 K Oppbevaringsboks 32 l	375	417	12,793	10,798	561	629	<b>25,573</b>
3-3 K Maarud potetgull	2,019	2,485	2,877	3,842	71,980	49,095	<b>132,298</b>
<b>Total</b>	<b>68,390</b>	<b>76,876</b>	<b>81,791</b>	<b>82,510</b>	<b>164,227</b>	<b>138,791</b>	<b>612,585</b>

Topp 5 bildepunkt etter valgt type

1-1 S Nidar storplate, 4 for 100	300,716
3-3 K Maarud potetgull	132,298
1-2 S Alle potter 40%	53,829
2-1 Omo/ Blenda 3,7 kg	30,088
3-2 K Oppbevaringsboks 32 l	25,573
<b>Total</b>	<b>542,504</b>

DATA AI SUMMIT

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# Self service insights

**Europris**

Nøkkeltall

247 EP STANGE

Tilbakemeldinger?

rapportrommet@europris.no



Logg ut

Hei, PBI.Test.Controller

I dag

dato: Yesterday (22/05/2024)

Nøkkeltall

[Nøkkeltall](#) Kundetyper Budsjettoppnåelse Min region

Salg varegrupper

DM

Årsakskoder

Dagsoppgjør nye kasser

MER kundeklubb

Konkurranser

Ukens produkt

Konkurranser

Budsjett

Driftsmelding

## I går

Oms i år	Oms i fjor (ukedag)	Vekst oms mot i fjor	Budsjett	Budsjettoppnåelse	Brutto %	Brutto kr	Kmp. andel %	Handlekurv	Snitt ant. varer	Antall kunder / bonger
120,110	98,701	122%	100,000	120%	26.2%	31,505	25.7%	244	5.52	492

## Hittil uke

til og med i går

Oms i år	Oms i fjor (ukedag)	Vekst oms mot i fjor	Budsjett	Budsjettoppnåelse	Brutto %	Brutto kr	Kmp. andel %	Handlekurv	Snitt ant. varer	Antall kunder / bonger
250,592	302,789	83%	190,000	132%	26.8%	67,128	23.5%	245	5.26	1,022

## Forrige uke

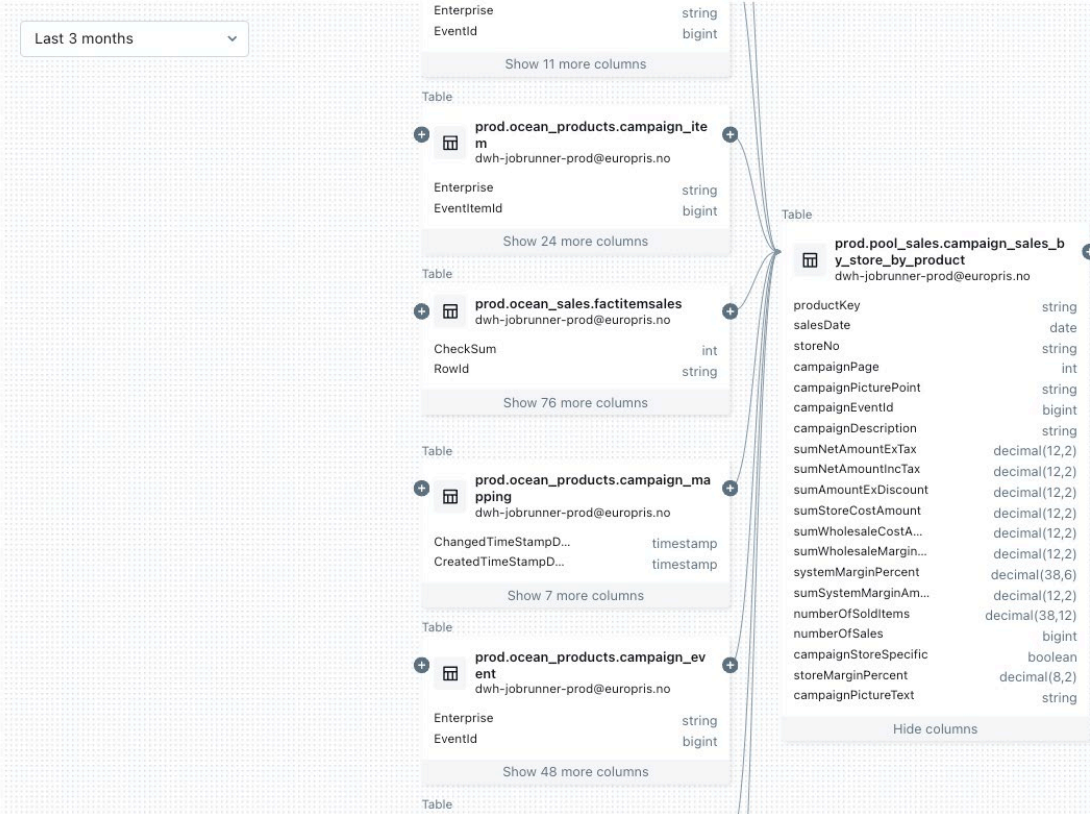
Oms i år	Oms i fjor	Vekst oms mot i fjor	Budsjett	Budsjettoppnåelse	Brutto %	Brutto kr	Kmp. andel %	Handlekurv	Snitt ant. varer	Antall kunder / bonger
834,610	688,782	121%	849,000	98%	28.1%	234,690	29.1%	261	5.34	3,193





# Aggregated data product

Data Lineage for prod\_views.pool\_sales.campaign\_sales\_by\_store\_by\_product\_view





# KEY LEARNING POINTS

## Use software developers

- Highly skilled developers can create everything
- Develop code from data collection to aggregated data products
- Driven by the state-of-the-art technology

## Design aggregated tables for easy analytics

- Aggregated tables optimized for reading
- Total control through CI/CD and unit tests
- Minimized risk for bias introduced by analysts

## Different tools for different people

- Static report solutions for KPI focused people
- Dynamic insight tools for those who need to understand
- Possibility to use fine grained analytics for data scientist

# Next steps...

- **Forecasting within product categories**
  - Predict what to sell where and when by product categories
- **What characterizes the customers who fall into different groups in RFM?**
  - Understand why customers fall into different RFM segments
  - What measures can be taken to "save" the customer?
- **Price Optimization**
  - Was the price right – what should we have done – what should the right price be.
- **Product recommendation**

# Thank you!

