

# Enterprise Data Knowledge Governance for more Value



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Acceliance 2024

With the kind  
permission from  
NexusData South Africa

# The market & opportunities improvement

## Why We Exist

↓ 4 out of 5  
Projects Fail

Data analytics projects  
face a very high failure rate.

↑ 25% EBITDA  
Opportunity

Opportunity – based on data analytics  
projects reported by successful data  
analytics companies

↓ \$280 Billion  
Wasted

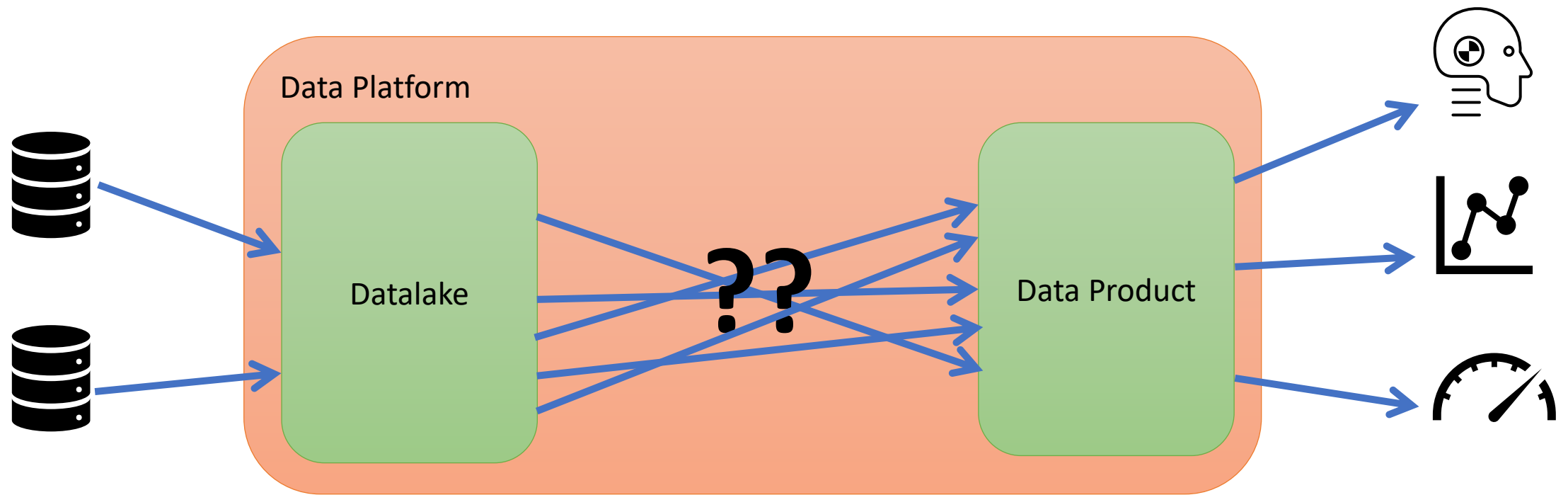
In 2024, spend on data analytics  
projects globally is estimated at  
\$350 billion. With an 80% failure  
rate, that's a lot of wasted  
investment.

We improve the financial results of our clients  
by taking them on a value-driving data analytics journey.



The Value of Data not clearly identified

# What Value in the Data Platform ? Which real cost ?



*Aggravating factors:*

- *Data platform size increase*
- *Number of Data Engineers acting/having acted on the Pipeline Code*





***“It is not the **domain experts’**  
**knowledge** that goes to production,  
it is the **assumption** of the  
developers »***

*- Alberto Brandolini*

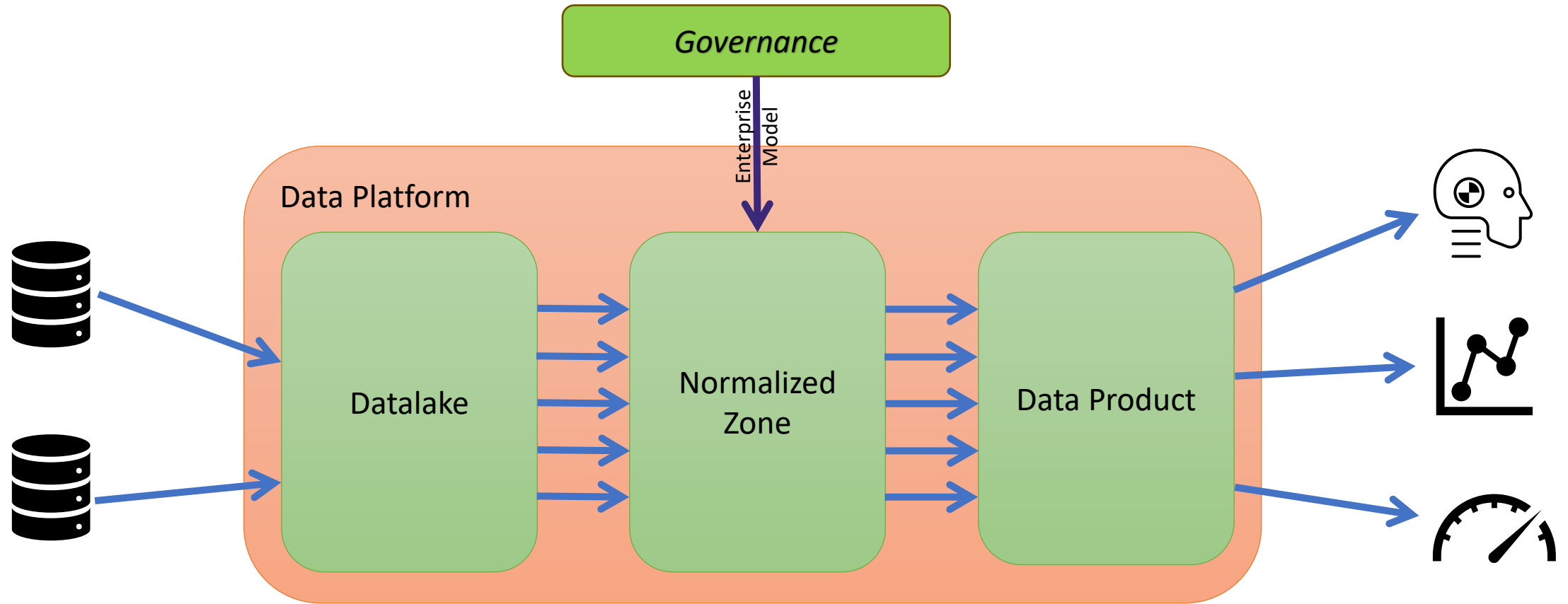




# Need for Governance



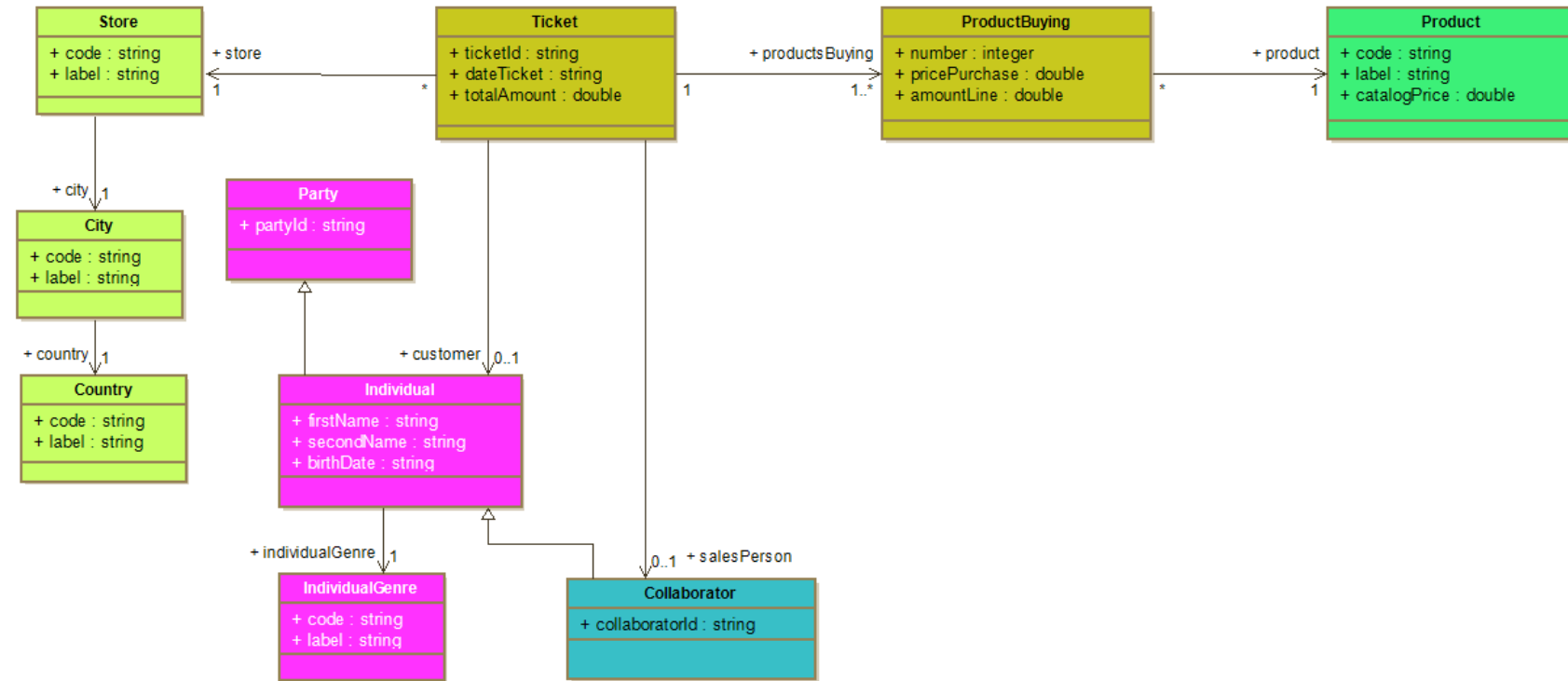
# Data Knowledge under Governance in the Data Platform



The Data Knowledge by  
The **Enterprise Data**  
Model highlights  
**Enterprise Knowledge**

The Business Model  
presented makes  
Knowledge **easy to grab**

product  
retail  
sales  
hr  
party





# Enterprise Data Model with Datavault Builder automatic generation

The screenshot displays the Datavault Builder application interface for a project named "Modèle Retail - Modelio 5.4".

**Project's modules parameters:**

Name	Value	Scope
<b>Datavault Builder Generator</b>		
Datavault Builder Path	\$(Workspace)\DatavaultBuilder	User
Generate DVB Domain From PackageColor	<input type="checkbox"/>	User
Generate ZIP File	<input checked="" type="checkbox"/>	User
Target Database	PostGre	User
DatavaultBuilder Version	7.0.0	User
DVB Generation Version	Version 2	User
Create Dimensions	Generation Attribute+ Object	User

**Model Tree:**

- Store
  - logistic
  - online
  - sales
    - Ticket
      - +ticketId : string
      - +dateTicket : string
      - +totalAmount : double
- ProductBuying
  - finance
    - StoreOwner
  - hr
- Diagrams
  - Domains
    - View - Party
    - View - City Country
    - View - Sales in Store

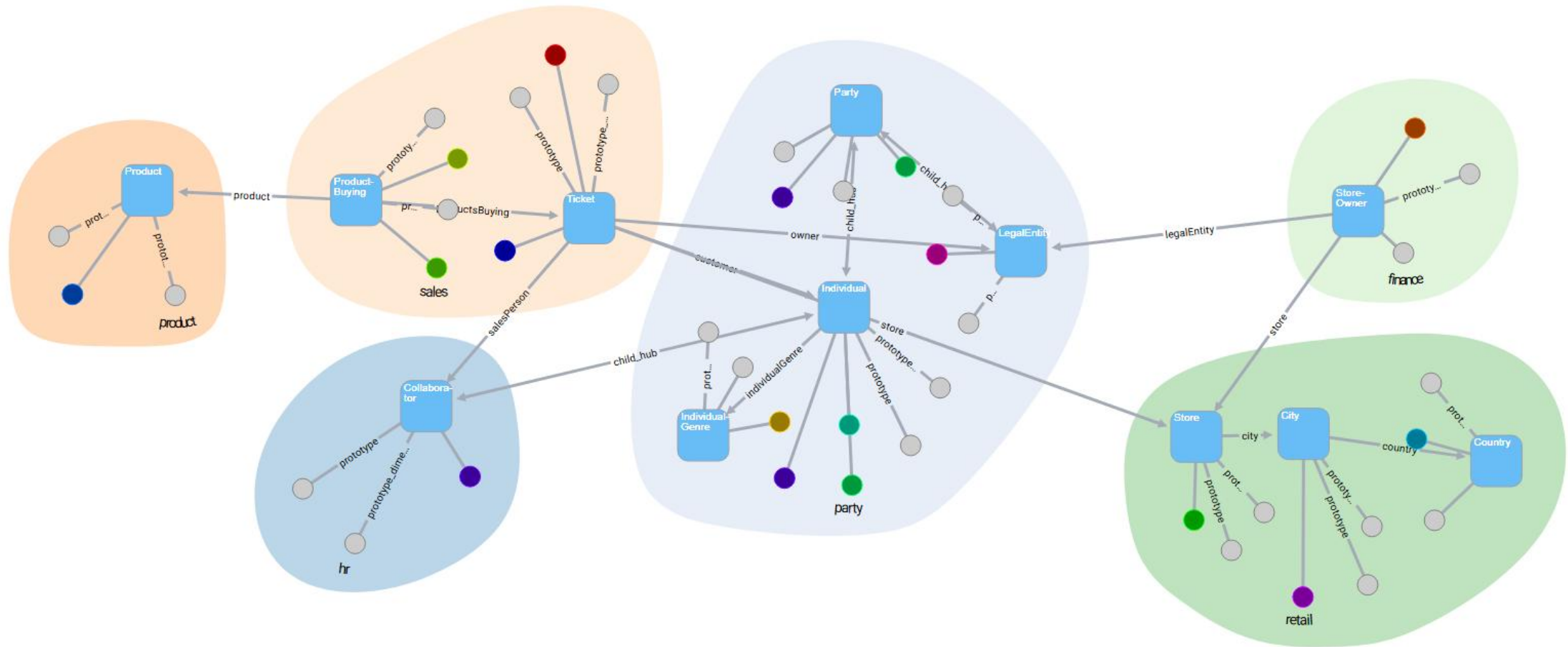
**UML Class Diagram:**

- Store** (green box): + code : string, + label : string
  - Associates with **City** (green box): + code : string, + label : string (1 to 1 relationship labeled +city)
- Party** (pink box): + partyId : string
  - Associates with **Ticket** (yellow box): + ticketId : string, + dateTicket : string, + totalAmount : double (1 to \* relationship labeled +store)
- Ticket** (yellow box): + ticketId : string, + dateTicket : string, + totalAmount : double
  - Associates with **Party** (pink box) (1 to \* relationship labeled +individualGenre)

**Tools and Actions:**

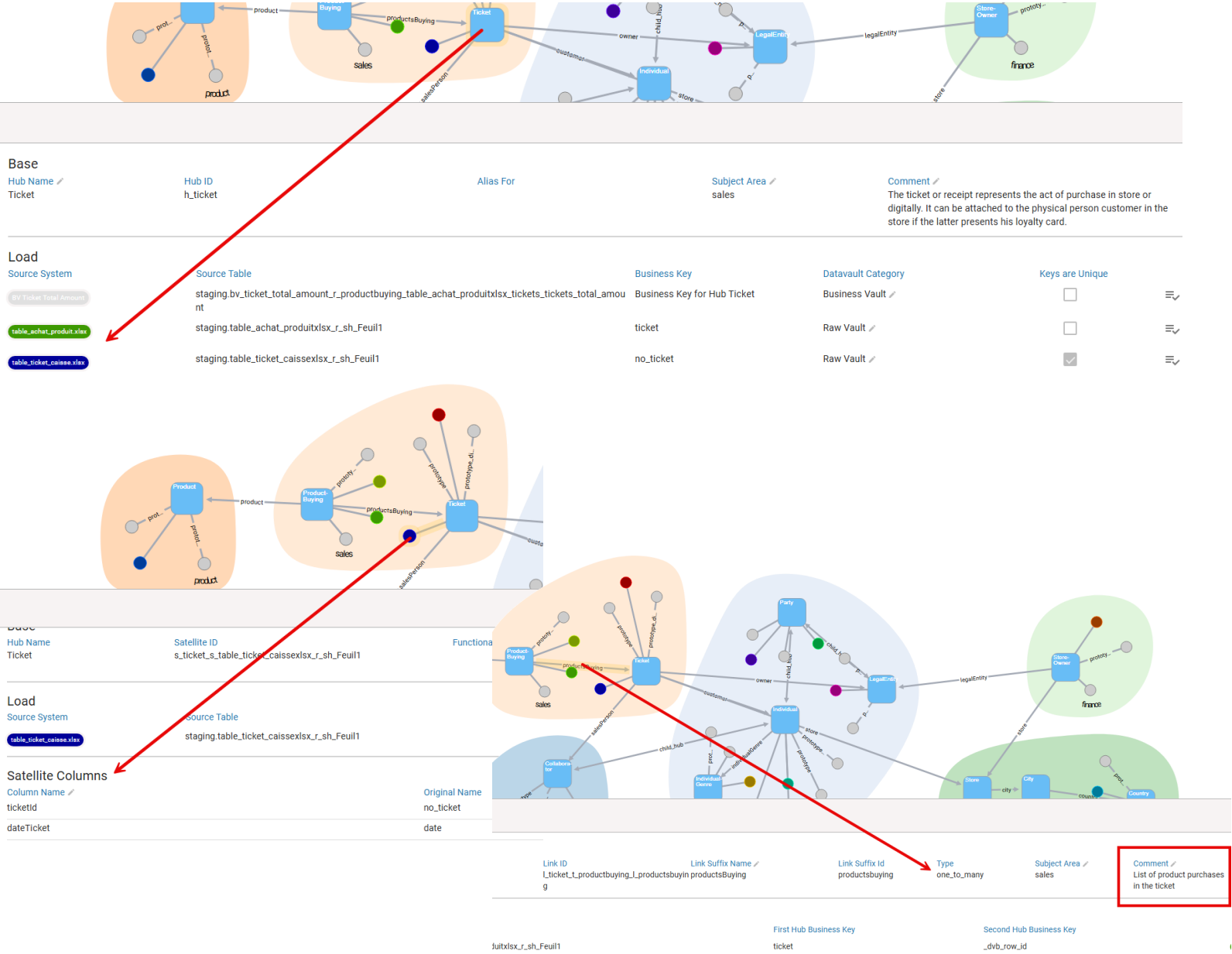
- Default: product, retail, sales, hr, party
- Accelerance - R...: a: 12...
- Drawings: A, [document icon], [image icon], [arrow icon]
- Context Menu:
  - Datavault Builder Generator
  - Java Odm Generator
  - Diagram Colorizer
  - VaultSpeed Builder Generator
  - Cartography Manager
  - Add stereotype
  - Rename (F2)
  - Generate Datavault Model (highlighted)
  - Ingest (Model generation on disk)
  - Dump Datavault Configuration
  - Clean Model
  - Deploy full model
  - Deploy for Use Cases

# The enterprise Data Model automatically instantiated



The Enterprise Model fed with the Data from all the needed source Systems

Datavault Business Model designed as Normalized Zone

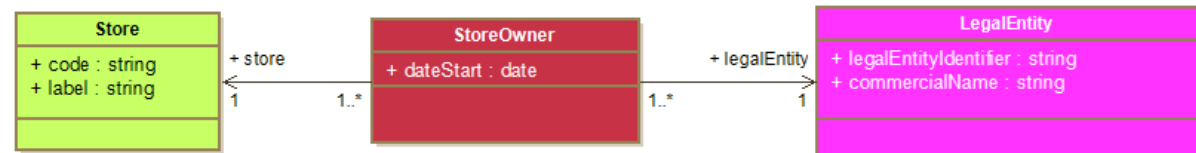




Data Product - Reaping the benefits of the Normalized Zone – **Live Demo**

# How Data supports the company's strategy

- Progressive franchising of the store network
- Normalized Zone support for smooth Data Platform alignment to Enterprise Transformation



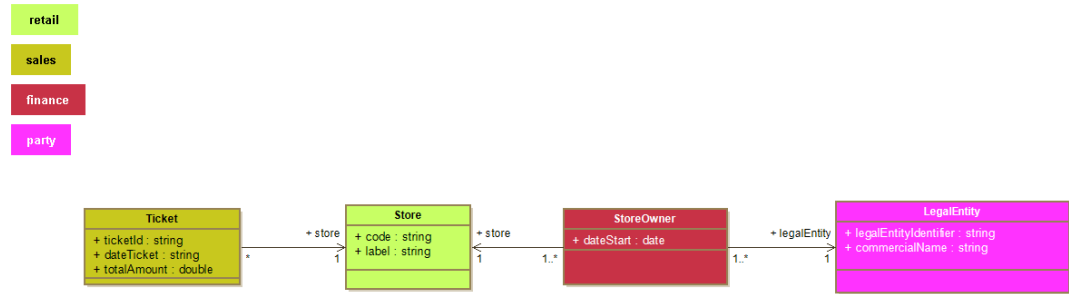


	A	B	C	D	E	F	H	I
1	Domaine	Objet Métier	Attribut Métier	Type	Obligatoire	Tableau	LocalModule.CartographieUsage.Retail	LocalModule.CartographieUsage.Finance
2	retail	Store	code	string	Yes		Sprint1	
3	retail	Store	label	string	Yes		Sprint1	
4	finance	StoreOwner	dateStart	date	Yes			
5	finance	StoreOwner	legalEntity	LegalEntity	Yes			
6	finance	StoreOwner	store	Store	Yes			
7	party	LegalEntity	legalEntityIdentifier	string	Yes			
8	party	LegalEntity	commercialName	string	Yes			
9	sales	Ticket	ticketId	string	Yes		Sprint1	
10	sales	Ticket	dateTicket	string	Yes		Sprint1	
11	sales	Ticket	totalAmount	double	Yes		Sprint1	
12	sales	Ticket	store	Store	Yes		Sprint1	
13								
14								

Governance is  
integrated –  
Sprints & Data  
Mesh 2.0

- New Data Product : Financial report on franchised Legal Entities
- Domains or Data Mesh : Retail & Finance
- Reaping the benefits of the Normalized Zone : 6 out of 11 data already present, effort needed for only 5 new data
- Data Mesh 2.0 : Federal Model-driven

# Data Product, Usage Data & Very Low Code



Linking Ticket to Owner Legal Entity as Usage Data

Business Ruleset

```
1 CREATE VIEW business_rules.ticket_s_table_ticket_caissexlsx_c_ticket_on_store_b_ticket_on_owner
2 AS
3
4 SELECT
5   bo."Business Key for Hub Ticket", (select bo3."Business Key for Hub LegalEntity" from businessobjects.storeowner_s_store_owners as bo3
6   where bo."codeStore" = bo3."codeStore" and
7   bo3."dateStartStoreOwner" = (select MAX(bo2."dateStartStoreOwner") from businessobjects.storeowner_s_store_owners as bo2
8   where bo."codeStore" = bo2."codeStore" and bo2."dateStartStoreOwner" < bo."dateTicket"
9   )
10  , (select bo3."LegalEntityIdentifierLegalEntity" from businessobjects.storeowner_s_store_owners as bo3
11  where bo."codeStore" = bo3."codeStore" and
12  bo3."dateStartStoreOwner" = (select MAX(bo2."dateStartStoreOwner") from businessobjects.storeowner_s_store_owners as bo2
13  where bo."codeStore" = bo2."codeStore" and bo2."dateStartStoreOwner" < bo."dateTicket"
14  )
15  )
16 FROM businessobjects.ticket_s_table_ticket_caissexlsx_c_ticket_on_store AS bo
17
18
```

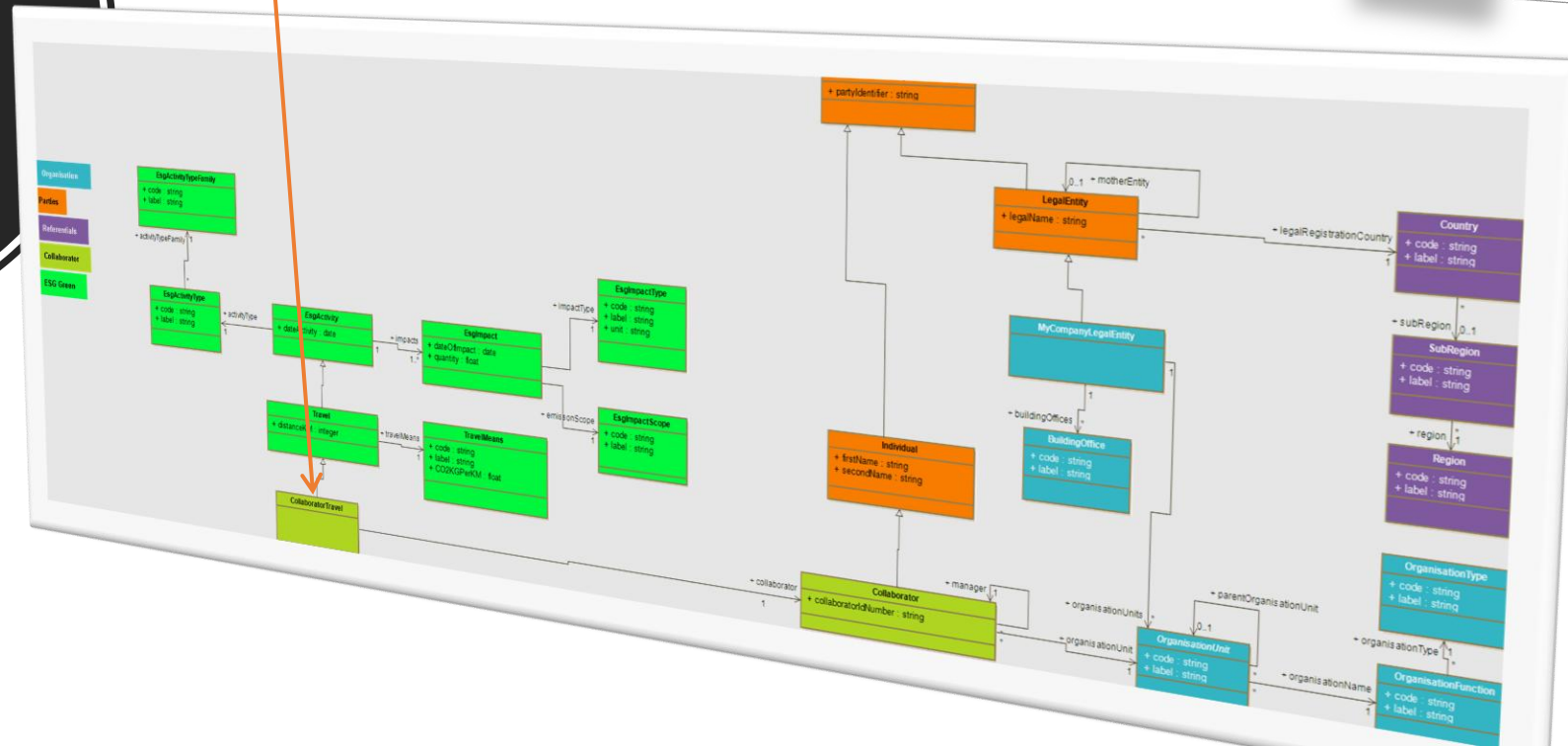
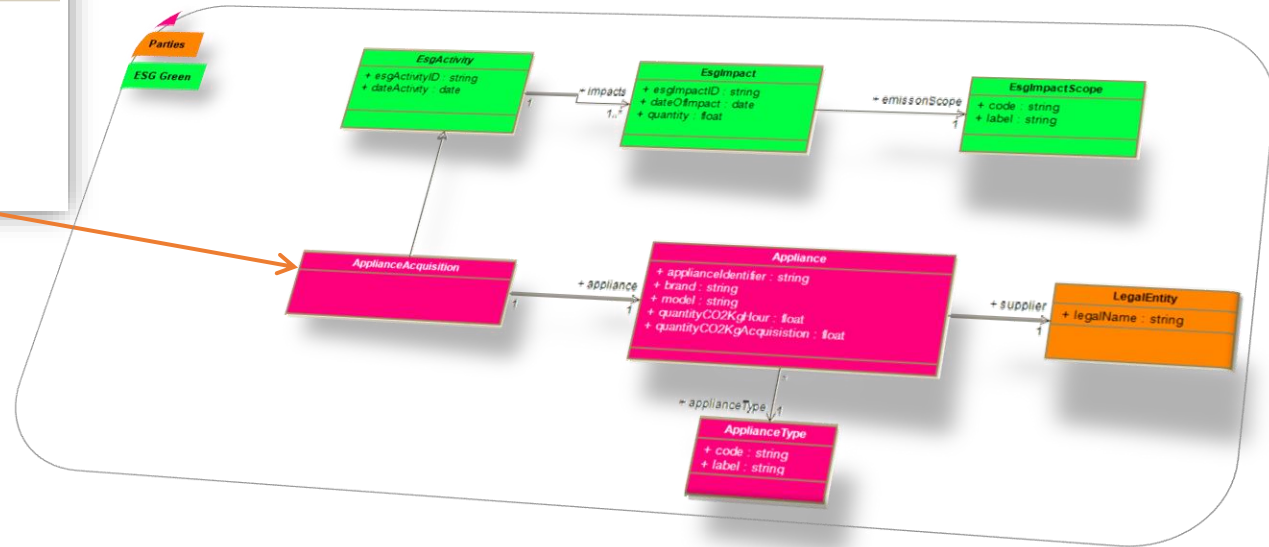
Business Key for Hub LegalEntity	Business Key for Hub Ticket	legalEntityIdentifierLegalEntity
45205431	TICK_4	45205431
45205431	TICK_1	45205431
45205431	TICK_5	45205431
623984609	TICK_2	623984609
45205431	TICK_3	45205431

A-Z Business Key for Hub Ticket	dateTicketTicket	A-Z legalEntityIdentifierLegalEntity	A-Z commercialNameLegalEntity	A-Z codeStore	A-Z labelStore	123 totalAmount
TICK_4	2023-06-20 00:00:00.000	45265431	My Enterprise	MDCTR	Madrid Center Store	20
TICK_1	2023-01-02 00:00:00.000	45265431	My Enterprise	PARRIV	Magasin Rivoli	100
TICK_5	2023-07-02 00:00:00.000	45265431	My Enterprise	SHCTR	Shanghai Center Store	140
TICK_2	2023-03-05 00:00:00.000	623984609	Enterprise Franchised 1	PARRIV	Magasin Rivoli	250
TICK_3	2023-05-05 00:00:00.000	45265431	My Enterprise	SHCTR	Shanghai Center Store	120



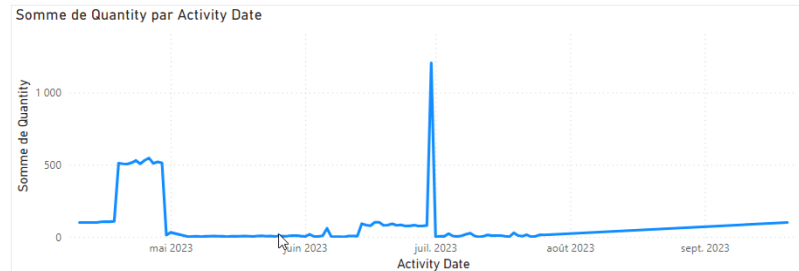
# Similar Concepts & Levels of Knowledge

- Organizational
- Fishes
- Referenceable
- Collaborative
- ESG Green



# Reporting on Levels of Knowledge

- labelActivityTypeFamily, labelActivity...
- ☒ Green IT
    - ☒ Computer Buying
    - ☒ Printer Buying
    - ☒ Smartphone Buying
  - ☒ People Transportation
    - ☒ Automotive Travel
    - ☒ Metro Travel



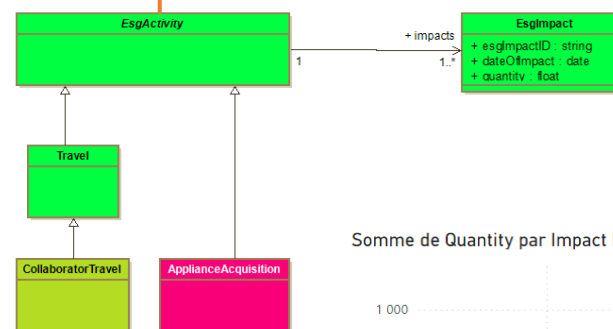
- labelImpactScope
- ☒ Direct Emissions
  - ☒ Indirect Emissions in the Value Chain

- labelImpactType
- ☒ CO2 emissions

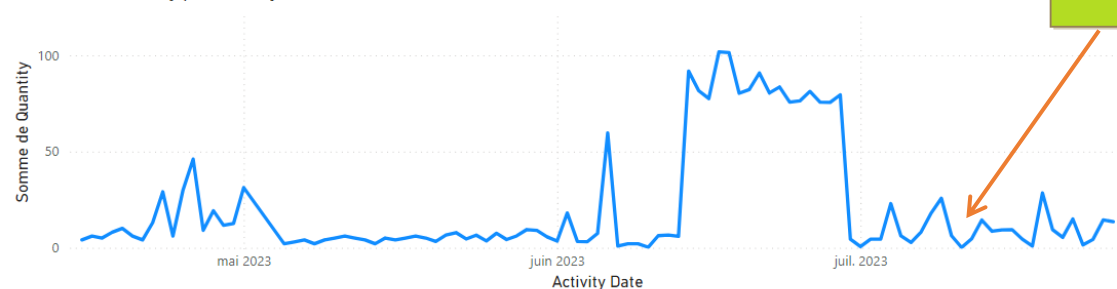
IT

Collaborator

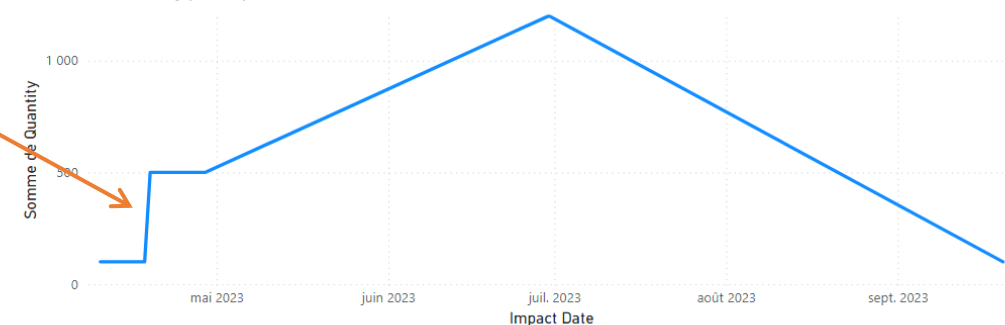
ESG Green



Somme de Quantity par Activity Date



Somme de Quantity par Impact Date



labelOrganisationType, labelOrganisationName, labelOrg...

- ☒ Business
  - ☒ Executive
  - ☒ Marketing
    - ☒ Marketing in Switzerland
  - ☒ Sales
    - ☒ Sales in France
- ☒ Support
  - ☒ Information Technology
    - ☒ IT in France

labelTravelMeans

- ☒ Bus
- ☒ Diesel Car
- ☒ Electric car
- ☒ Hybrid Car
- ☒ Metro
- ☒ Petrol Car

labelRegion, labelCountry, legalName

- ☒ Europe
  - ☒ France
    - ☒ My Company France Branch SA
  - ☒ Switzerland
    - ☒ My Company Swiss Branch AG

labelActivityTypeFamily, labelActivity...

- ☒ Green IT
  - ☒ IT Product & Services buy

labelImpactScope

- ☒ Indirect Emissions in the Value Chain

labelApplianceType

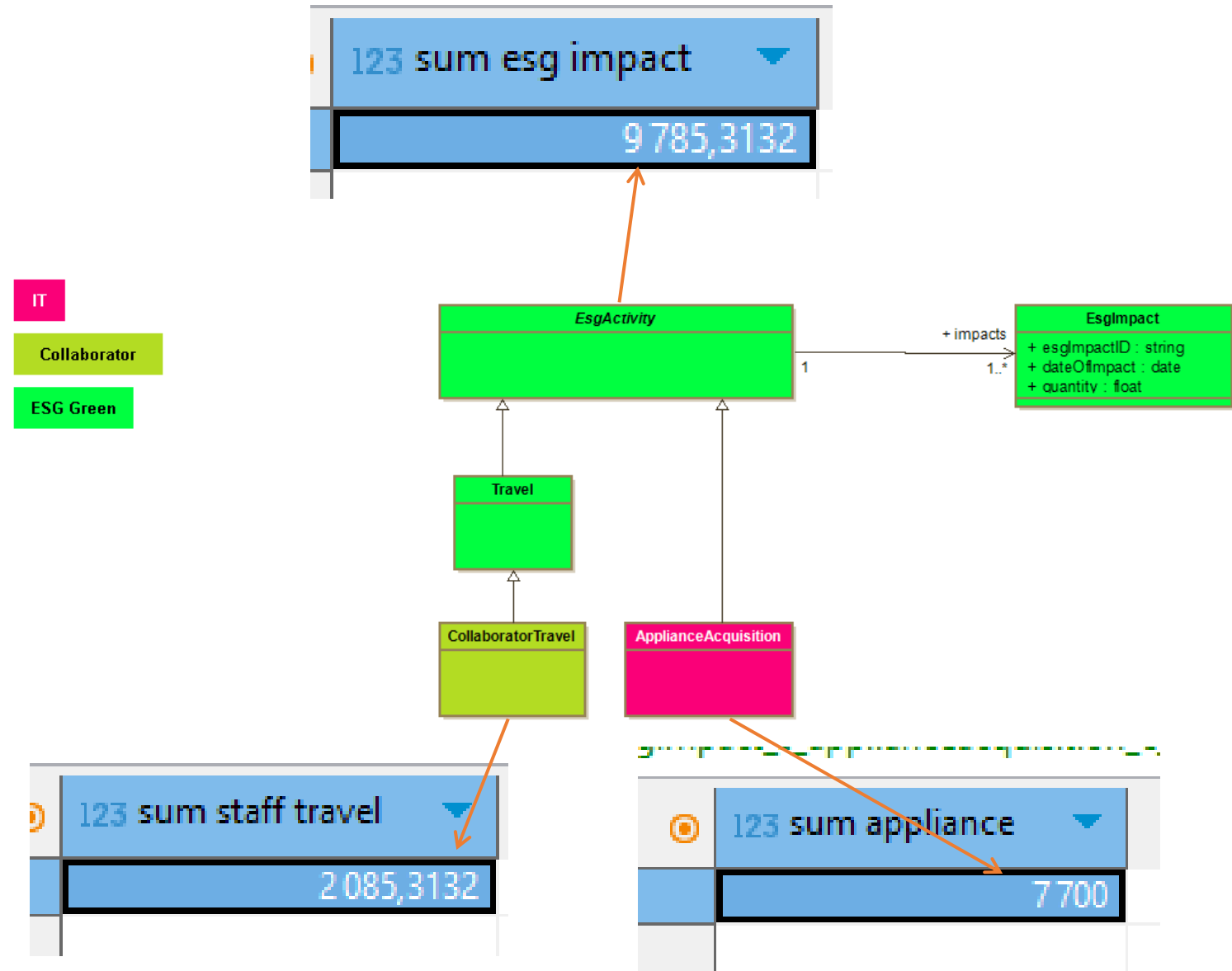
- ☒ On Premise Server
- ☒ Portable Computer
- ☒ Printer
- ☒ Smartphone

brand, model

- ☒ Apple
  - ☒ Iphone 14
- ☒ Dell
  - ☒ Laser
- ☒ IBM
  - ☒ Server
- ☒ Lenovo



Reaping the  
benefits of the  
Enterprise Data  
Model as real-life –  
Always Coherent  
Values





# Data Cataloging

- Business Data Catalog
  - Cataloging most focusing on Terms/Wording
  - Catalog elements randomly mapping to different levels of actual Data artefacts
  - Catalog elements not consistently staged to Data Products
  - Cataloging often referring as Mind-Mapping
  - Documentation-scope
- Data Model
  - Enterprise Data Model instantiated brings it to real life into Production
  - Actual Data Products alignment to Enterprise Data Model



# Key success factors

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- Governance
  - Enterprise Data Knowledge
  - Reporting Values Always Coherent
  - Smooth Sprint/DataMesh integration
  - Synergy between Organisations
  - Most value Quality / Data Product driven
  - Holistic
- Normalized Zone
  - Natively designed in Datavault Standard
  - Data Product mandatorily based on it
  - Physical Data Alignment
- Smart Automation
  - Reduced Time To Market
  - Cost Efficiency



# Datavault Builder – Integrated Data Knowledge platform

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- State-of-the-Art Data 3-stage Pipeline Architecture
- Datavault is Normalized Zone-Centered (Business Model)
- Smoothly Incrementable Business Model
- Hot Deployment of New Data Products
- Finops Cloud Storage
- GIT CI/CD fully JSON/SQL scripted
- No Hidden Costs





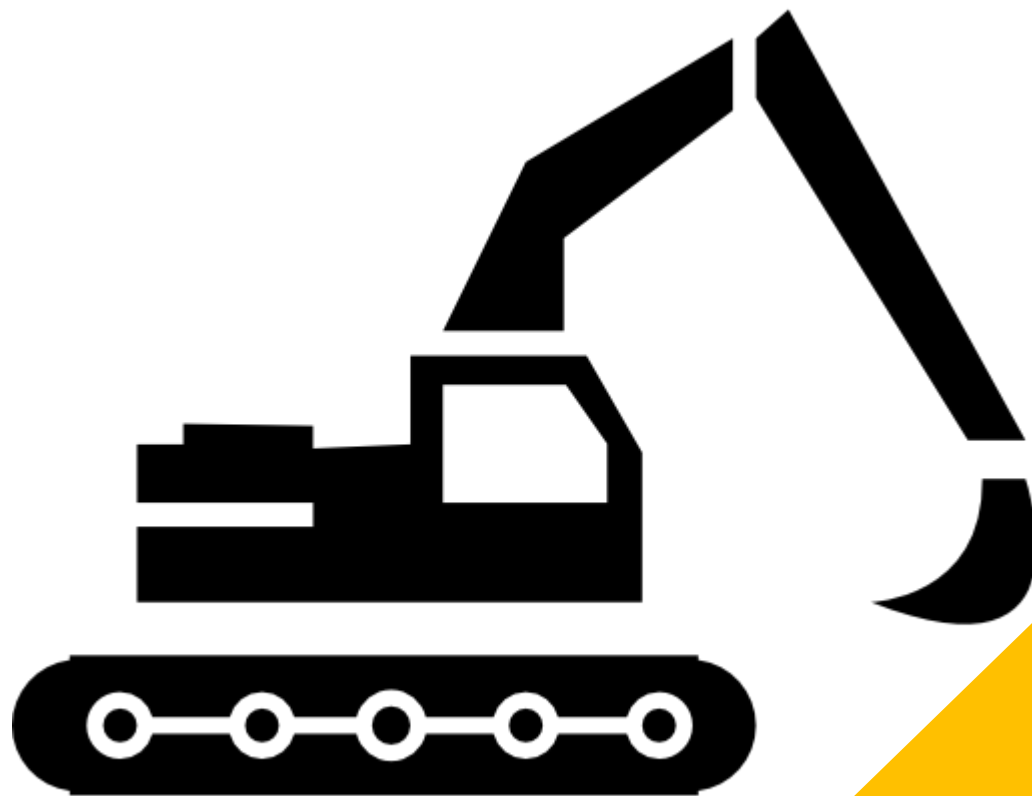
# How to organize yourself in the IT department?

- 2 ETP, 3 Roles
- Architect Role: organizes business workshops, organizes sprints by Data Product in relation to the Business, configures the Datavault
- Data Analyst role: has knowledge of data systems in the Company
- Technical Architect Role: Provisions environments, deploys and sets up log exploitation for production monitoring
- Not forgetting Self-Service Data Marting accessible to any authorized person





**VS**





“

***“Data Knowledge should not be taken for granted, it must be governed”***

- Jose Torres



## *To go further*

- Consider a 20-40 day POC
- Website:  
<https://www.acceliance.fr>

Acceliance  
Accélérateurs d'innovation