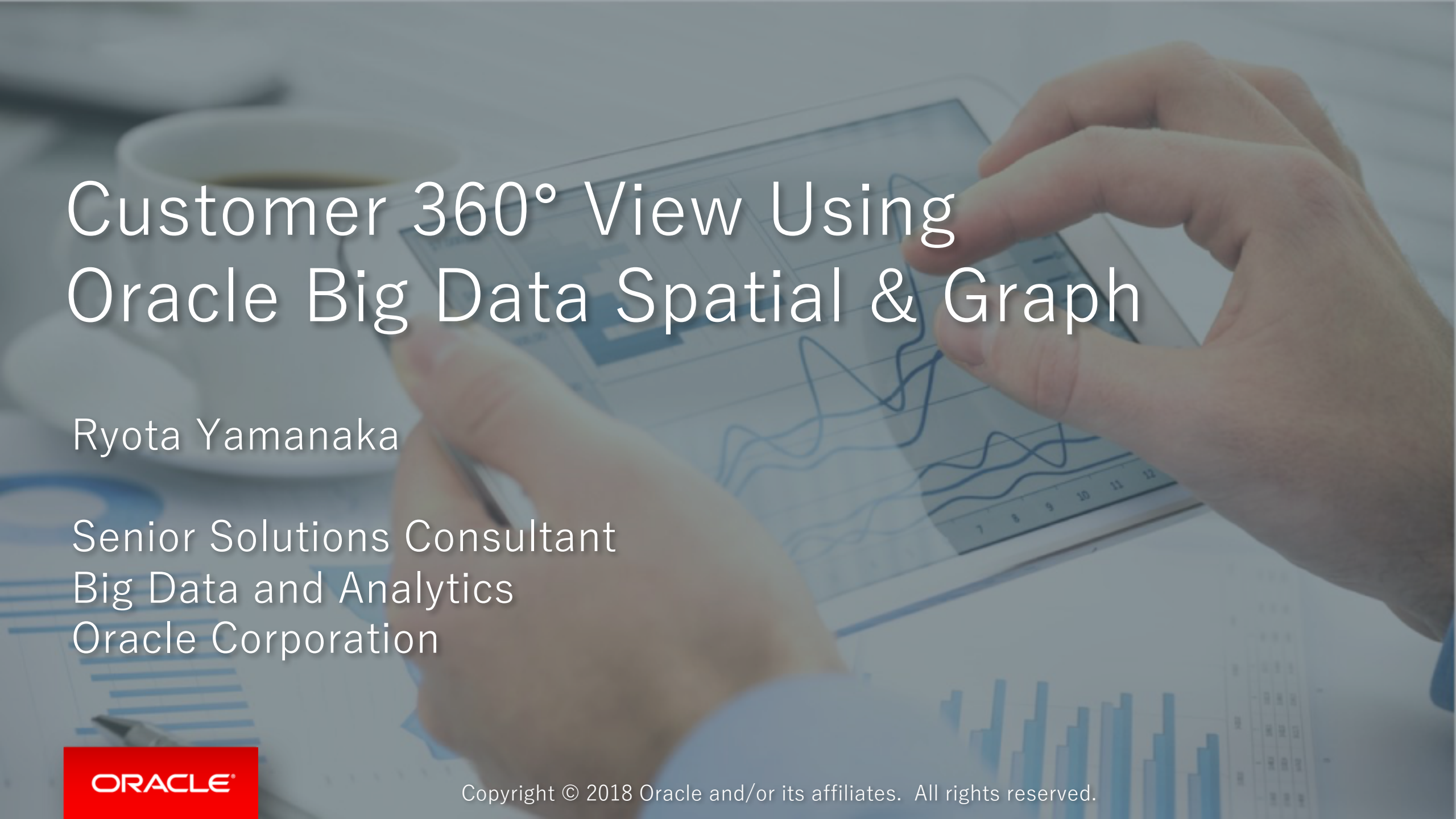

Customer 360° View Using Oracle Big Data Spatial & Graph

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Big Data and Analytics
Oracle Corporation

ORACLE

Safe Harbor Statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

Graph Databases

Oracle Labs
PGX

Amazon Nepture

Azure Cosmos

SAP HANA Graph

...

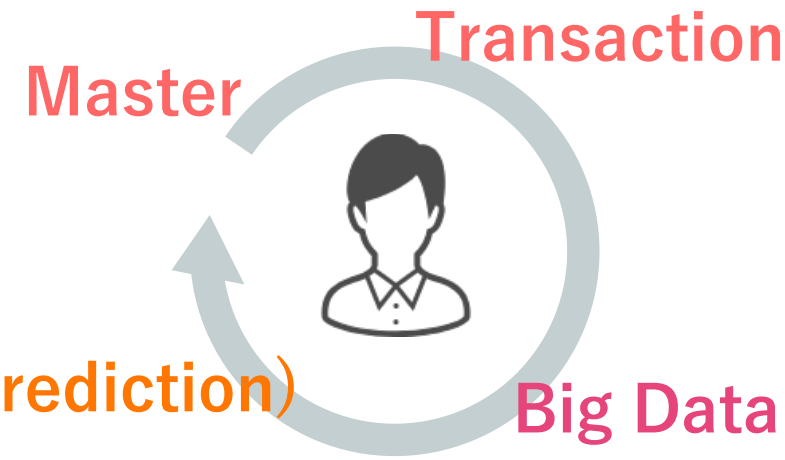
Background & Challenges

Customer 360° View – collects all information

Identity
cust ID, name, email, ...

Basic information
address, gender, age, ...

Transaction
purchase orders,
phone calls, money tx, ...



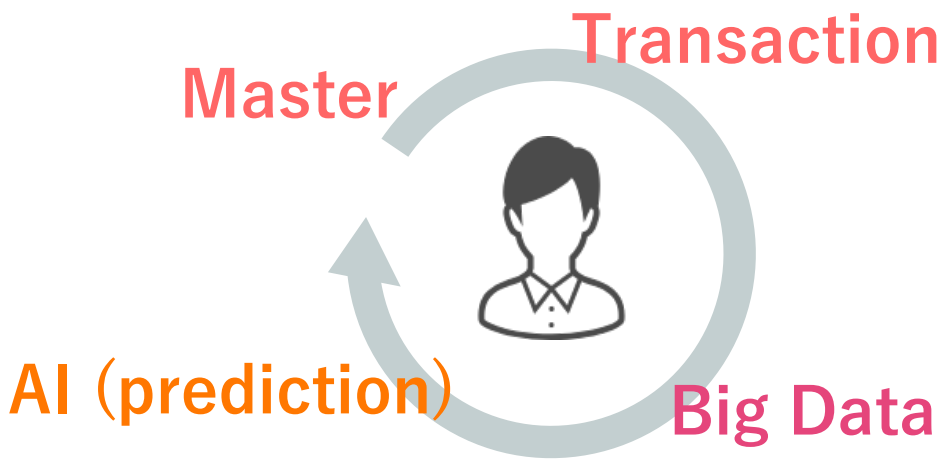
Relationship
family members,
community, ...

Predicted results
customer classification,
taste signature, ...

Text information
voice of customer,
call center, SNS, ...

Activity log
customer traffic line,
click stream, IoT, ...

Customer 360° View – Profits



Better understanding of customers, based on data ..

Personalised Services
recommendation, demand predictions, new user experiences

!

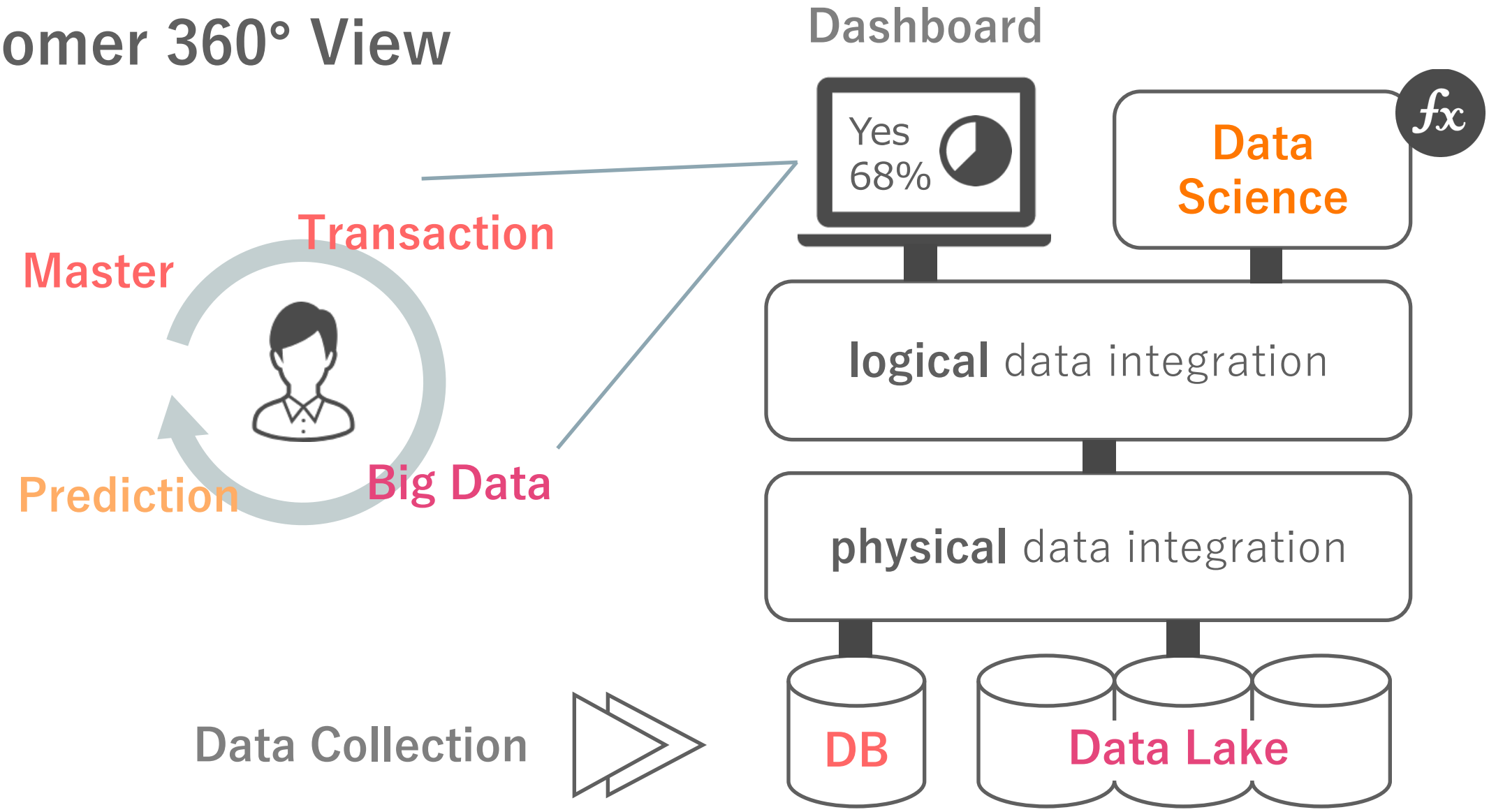
innovation

Investment Planning
optimise ROI of product development, service delivery, marketing, ...

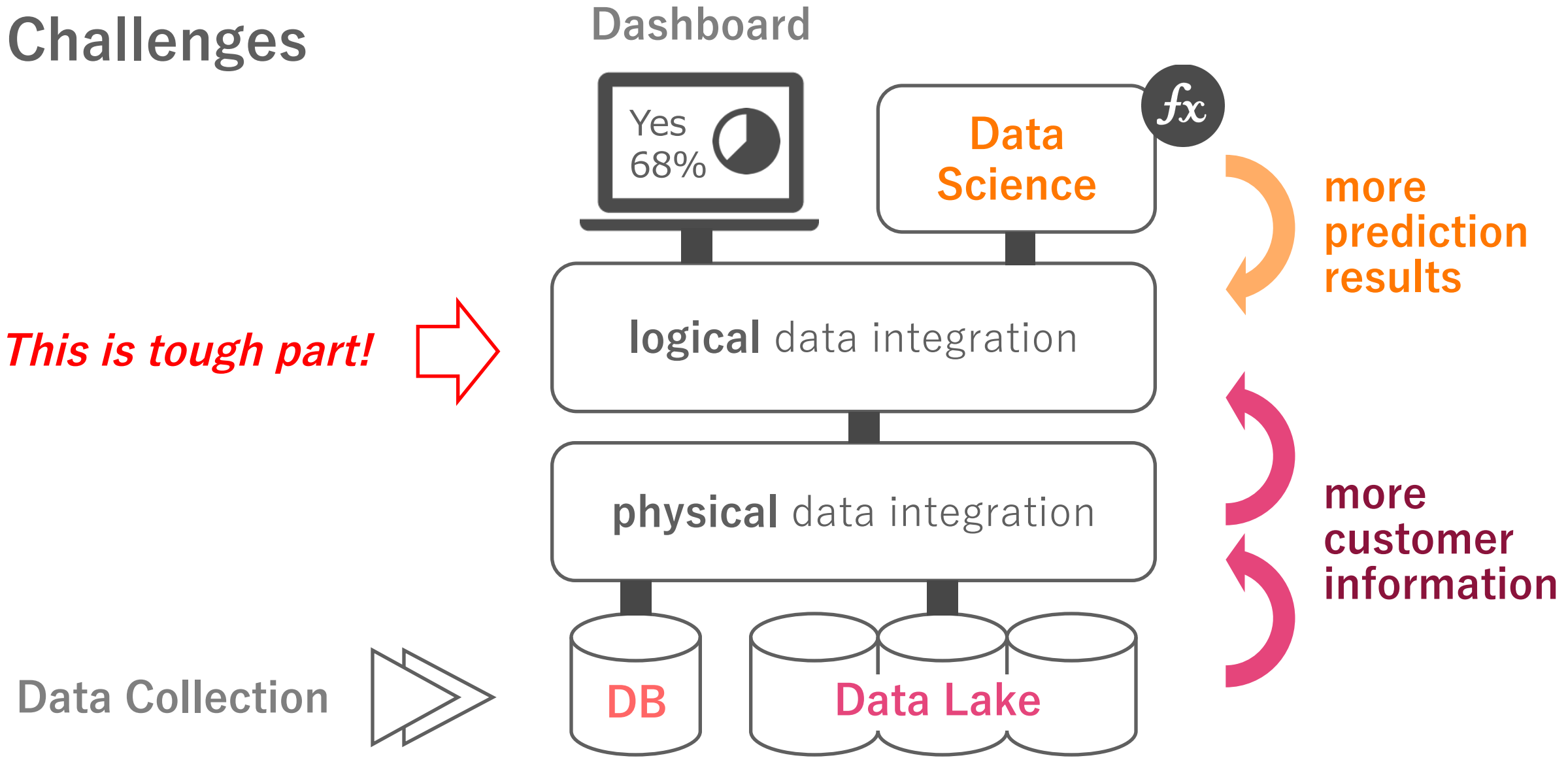
$

cost reduction

Customer 360° View



Challenges



Challenges – Various Data

3xx01

40xx05

credit tx

John

credit tx

Jakarta

name

34

5002xx

age

atm tx

Bangkok

location

visit

page01

visit

page12

possibly buy

complain

ABC Travel

tend to like

internet banking

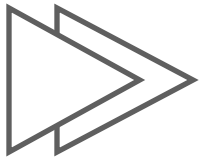
movie

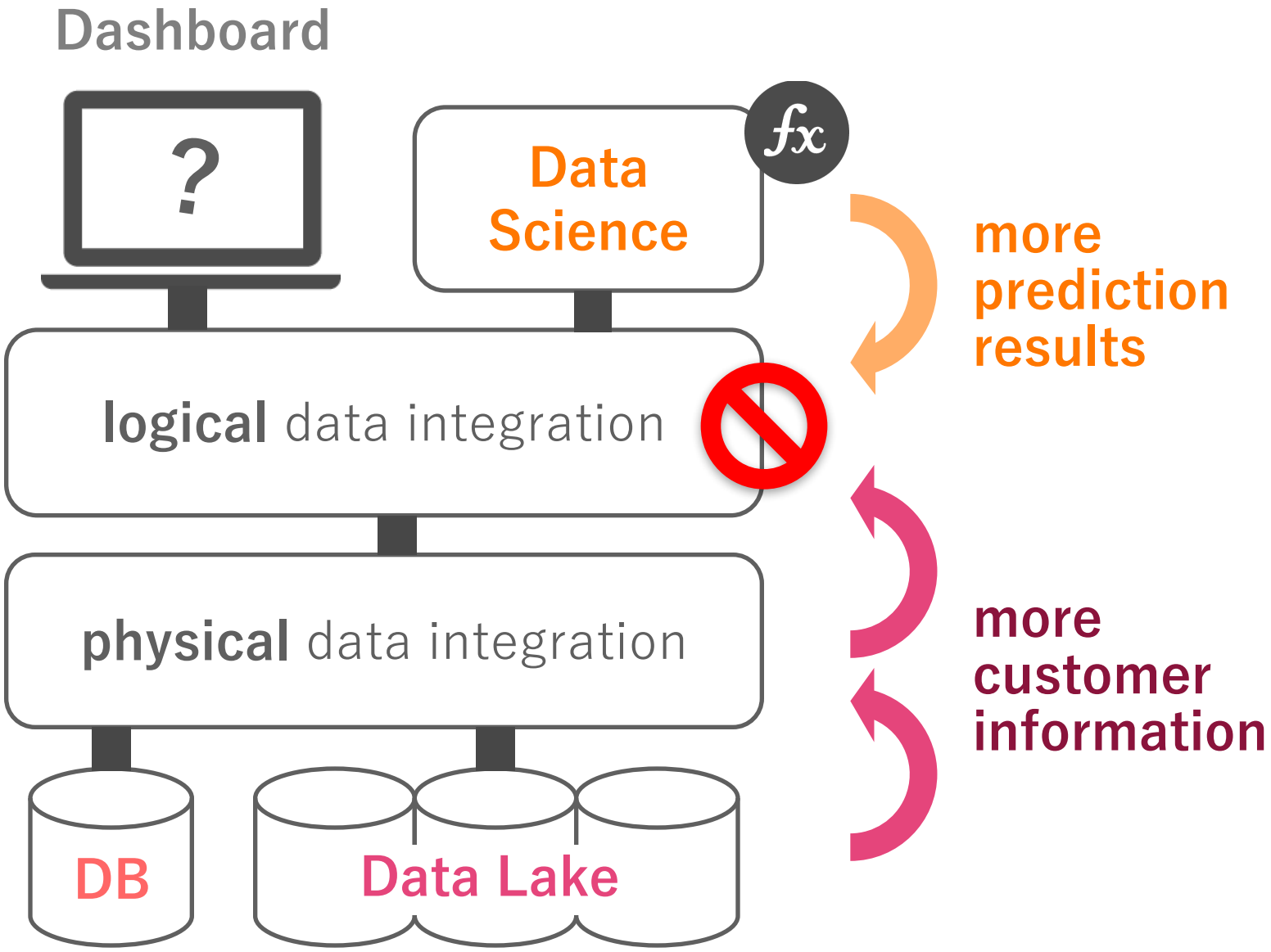
Challenges

?

You don't even know the infomation exists..

Data Collection



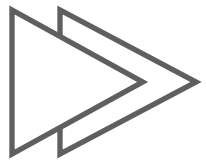


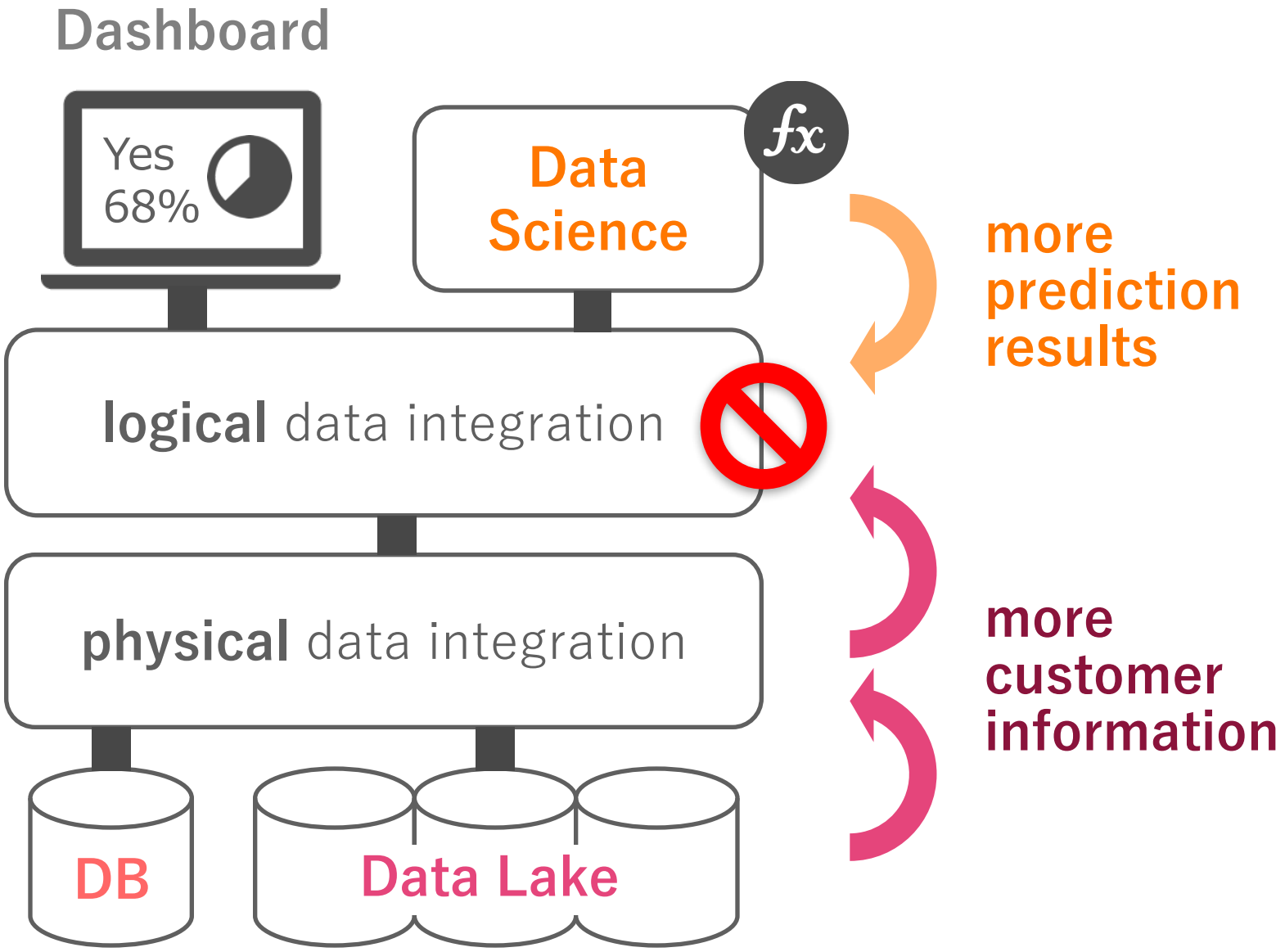
Solutions

Solution

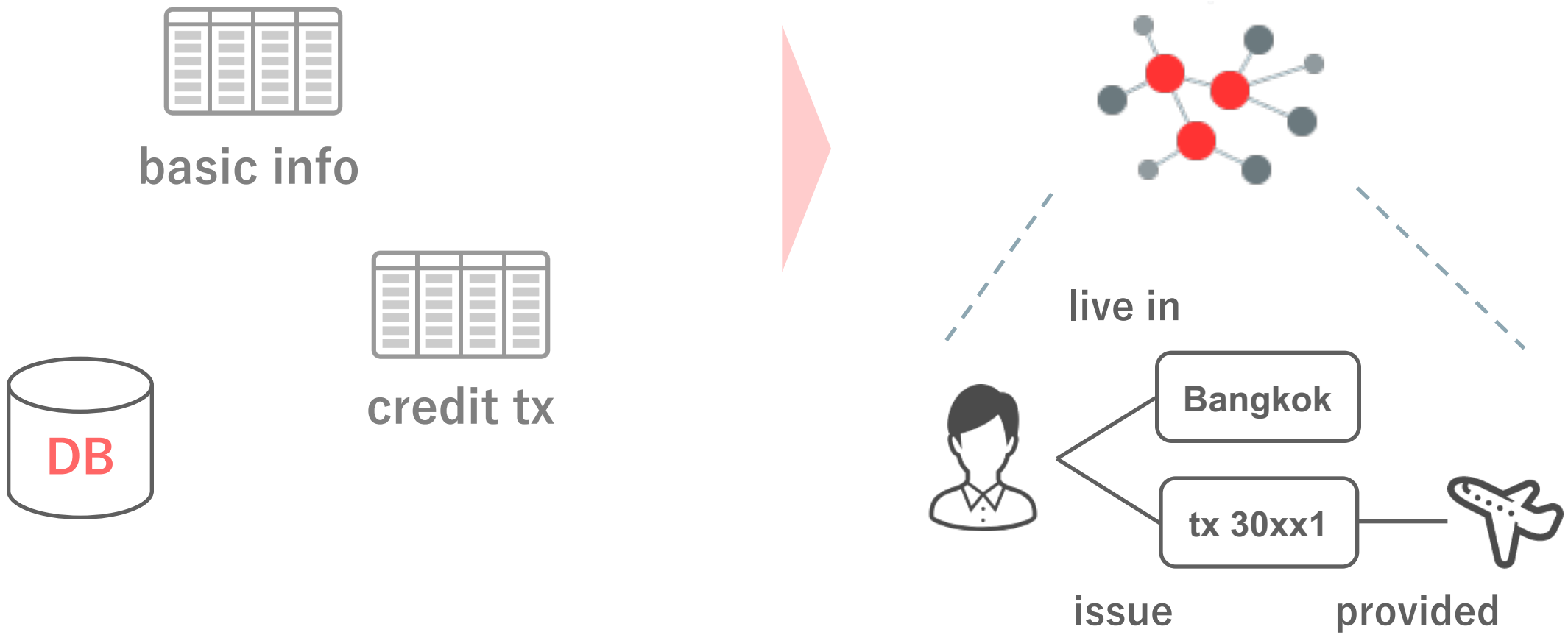
Oracle Big Data
Spatial and Graph

Data Collection

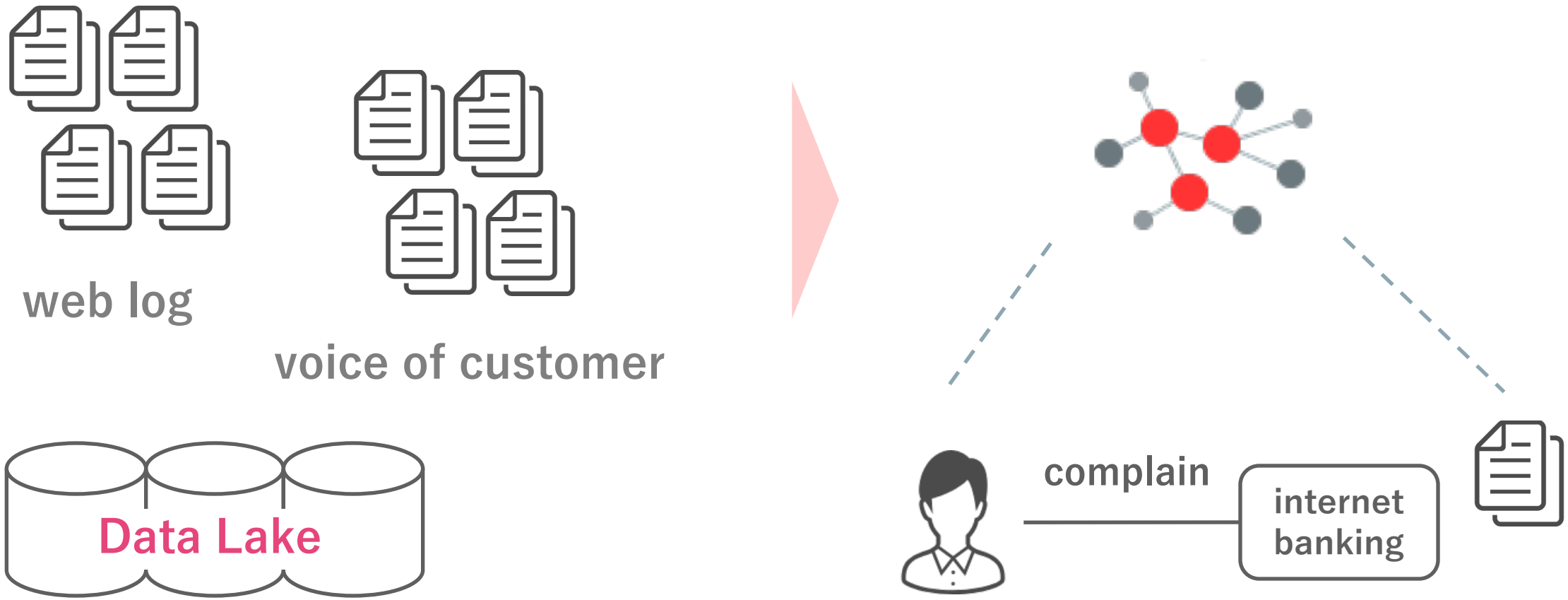




Demo – Database to Graph

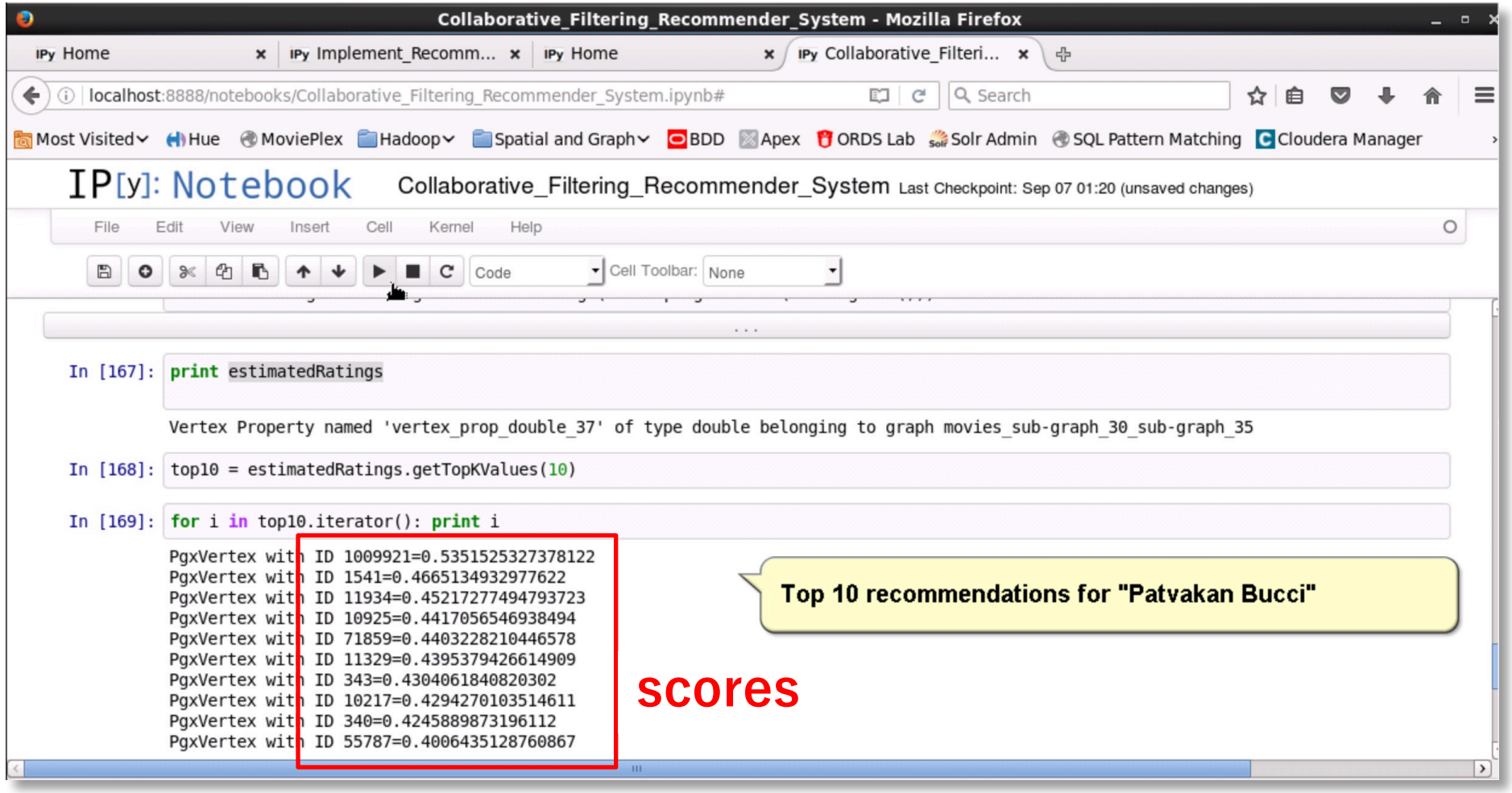


Demo – Data Lake to Graph

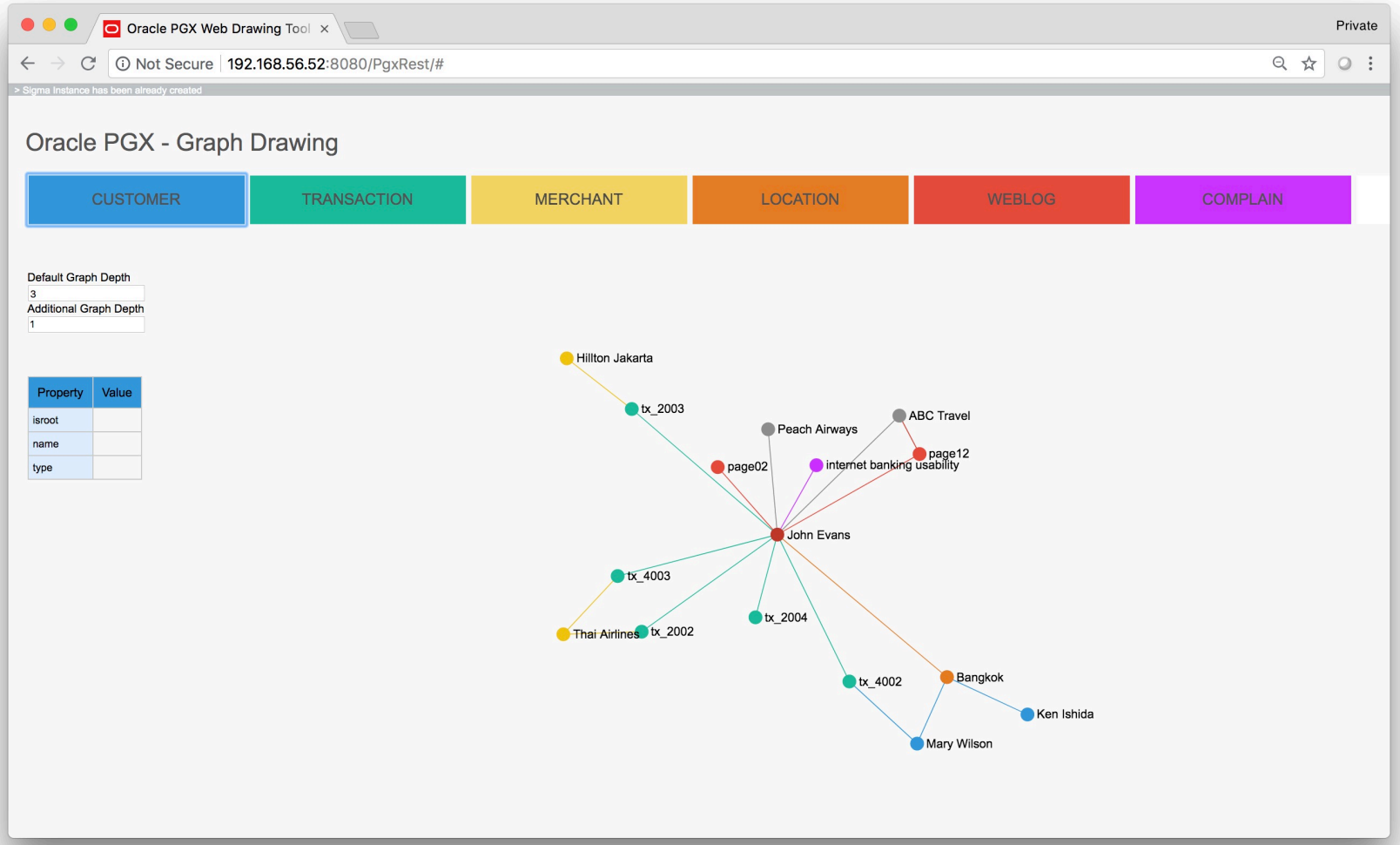


Demo – Data Scinece to Graph

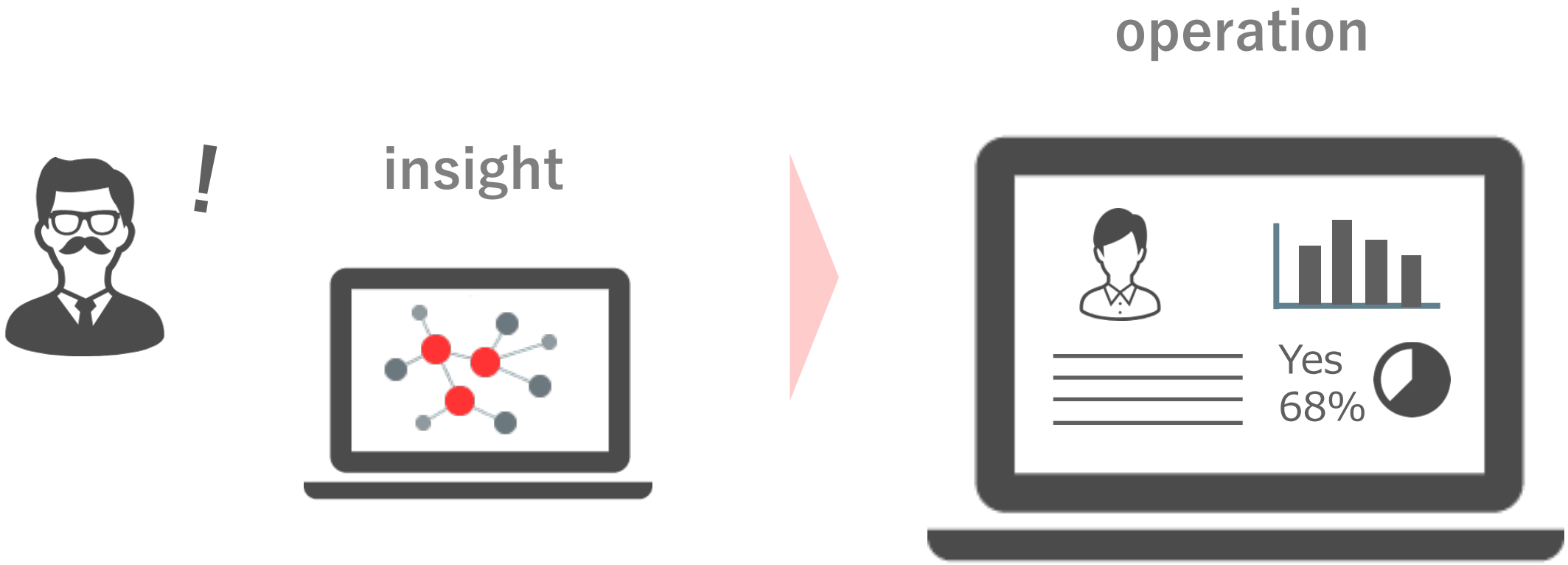
Demo – Data Scinece to Graph



Demo – Graph Representation Example

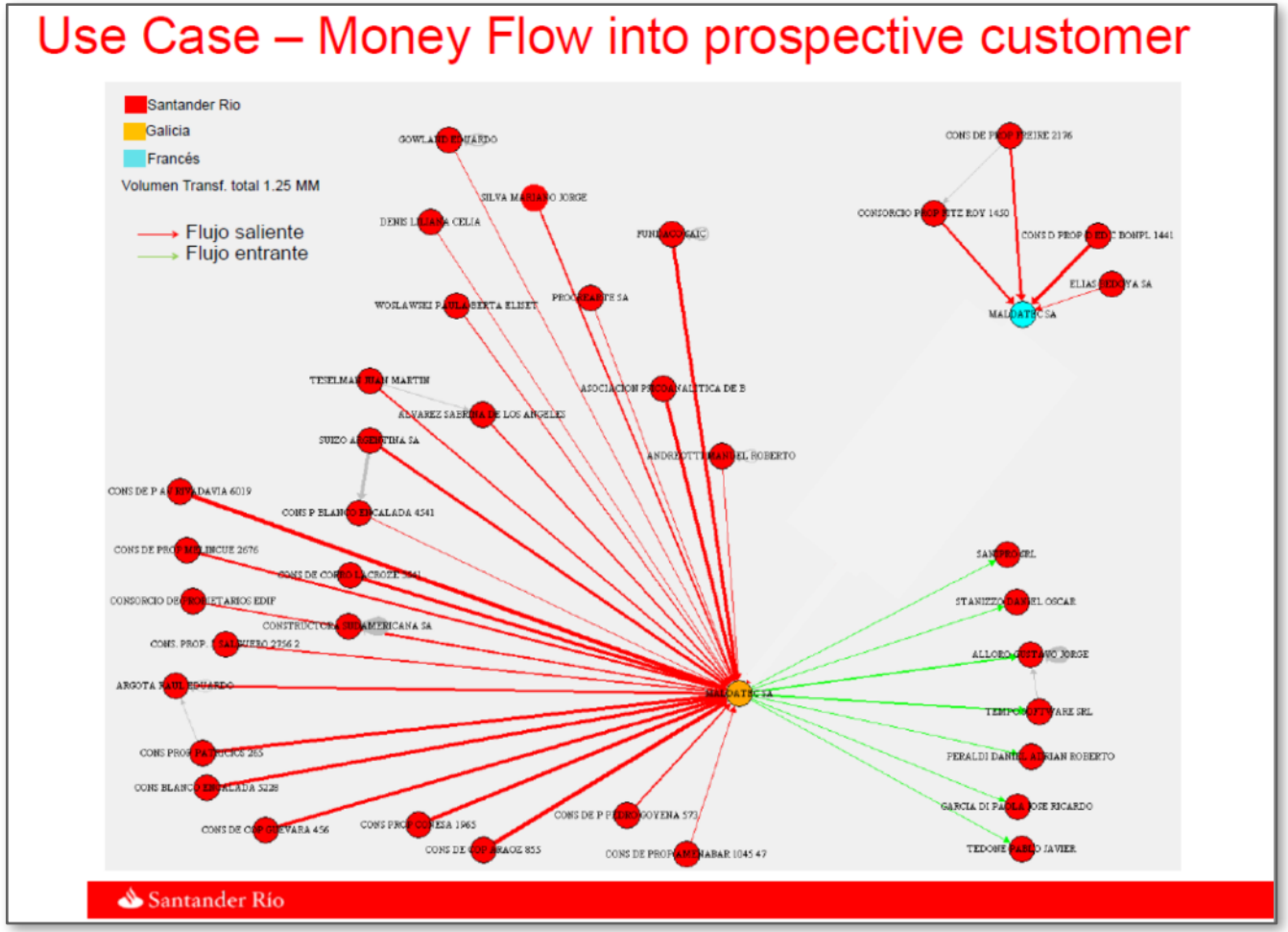


Customer 360° – Dashboard

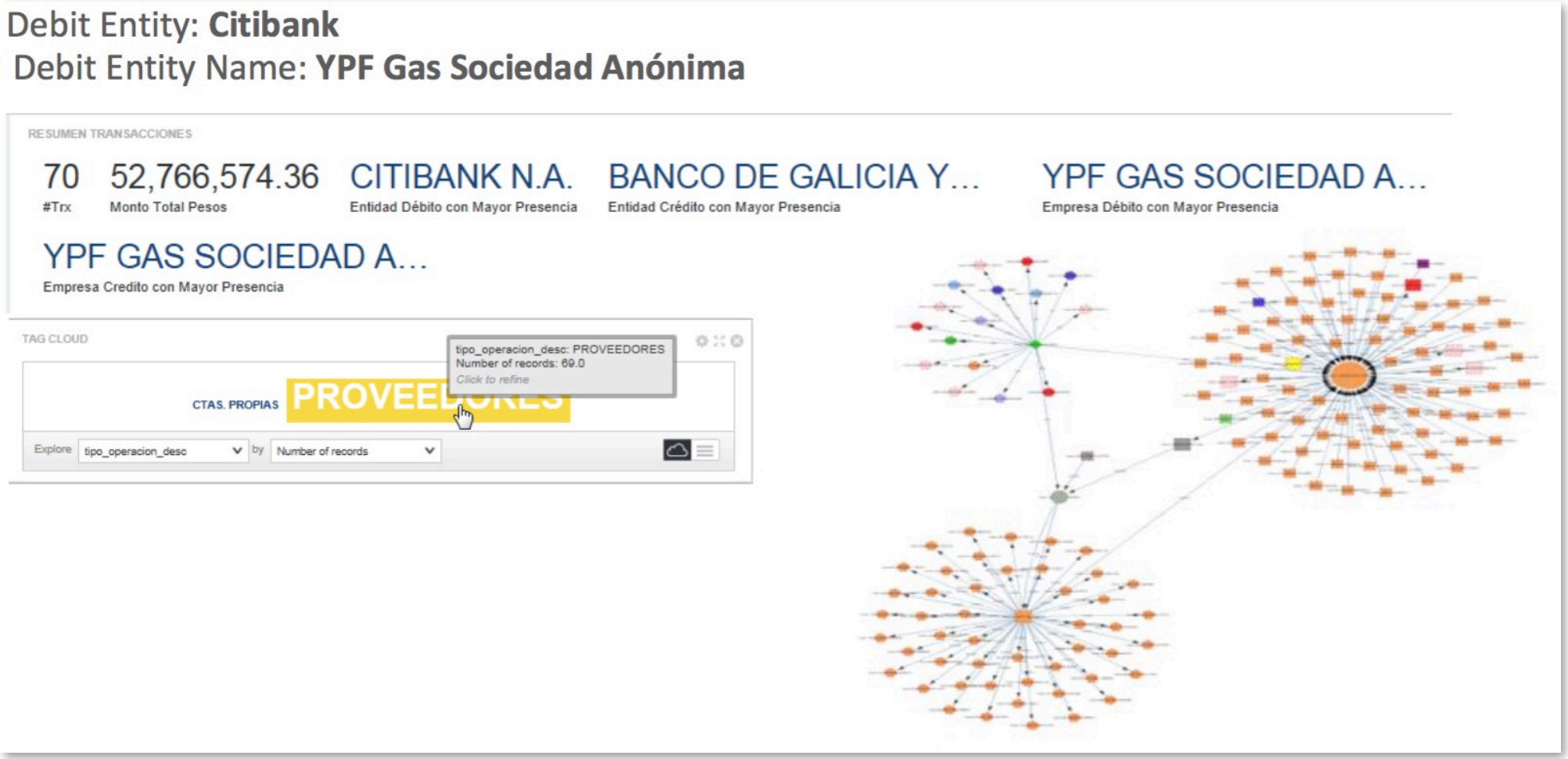


Use Cases

Use Case – Banco Santander Rio

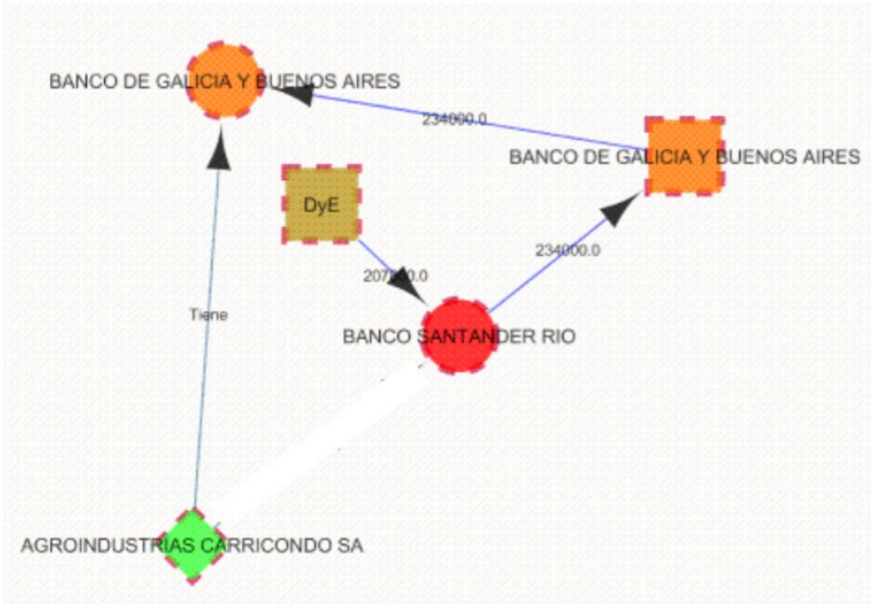


Use Case – Galicia Bank



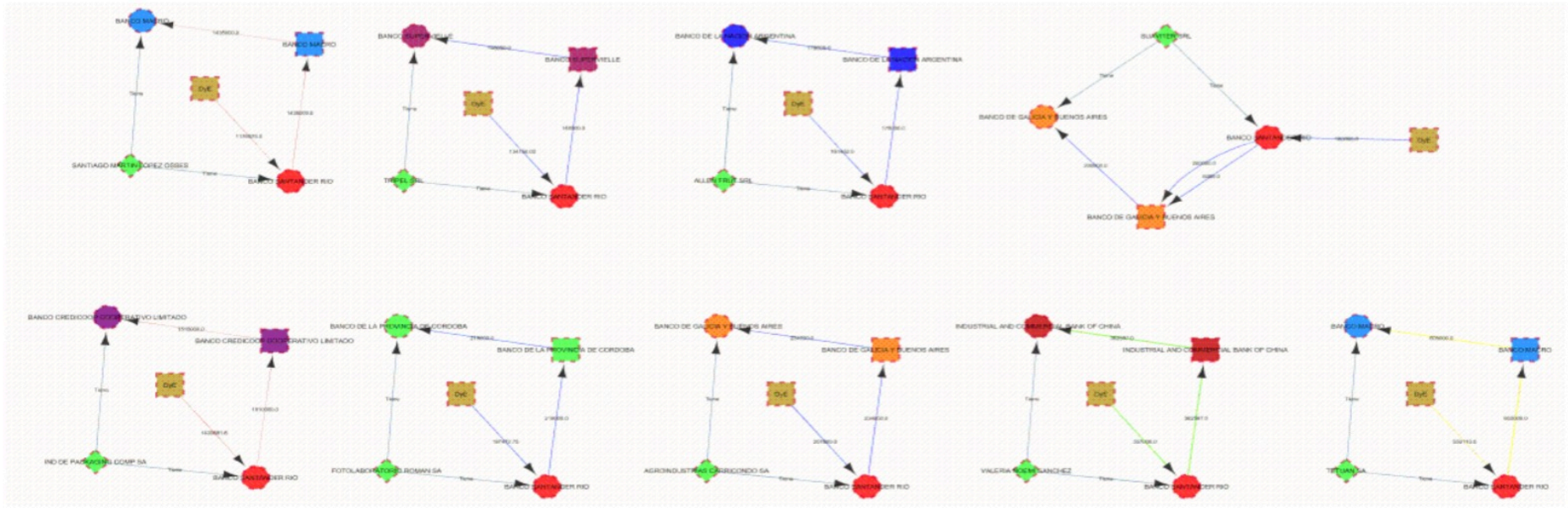
Use Case – Pattern Matching

```
(agrupador1 WITH tipo_nodo = 'AGRUPADOR' AND banco_destino = 'DyE')-[e2 WITH tipo_arco = 'AGRUPADOR - CUIT - ENTIDAD' and tipo_operacion = 'Deposito']->(cuenta1)-[e3 WITH tipo_arco = 'CUIT - ENTIDAD - AGRUPADOR']->(agrupador2 WITH tipo_nodo = 'AGRUPADOR' AND entidad_destino != '0072')-[e4 WITH tipo_arco = 'AGRUPADOR - CUIT - ENTIDAD']->(cuenta2 with tipo_nodo = 'CUIT - ENTIDAD' AND codigo_entidad != '0072')<-[e5 with tipo_arco = 'CUIT - CUIT - ENTIDAD']-(cuit)
```

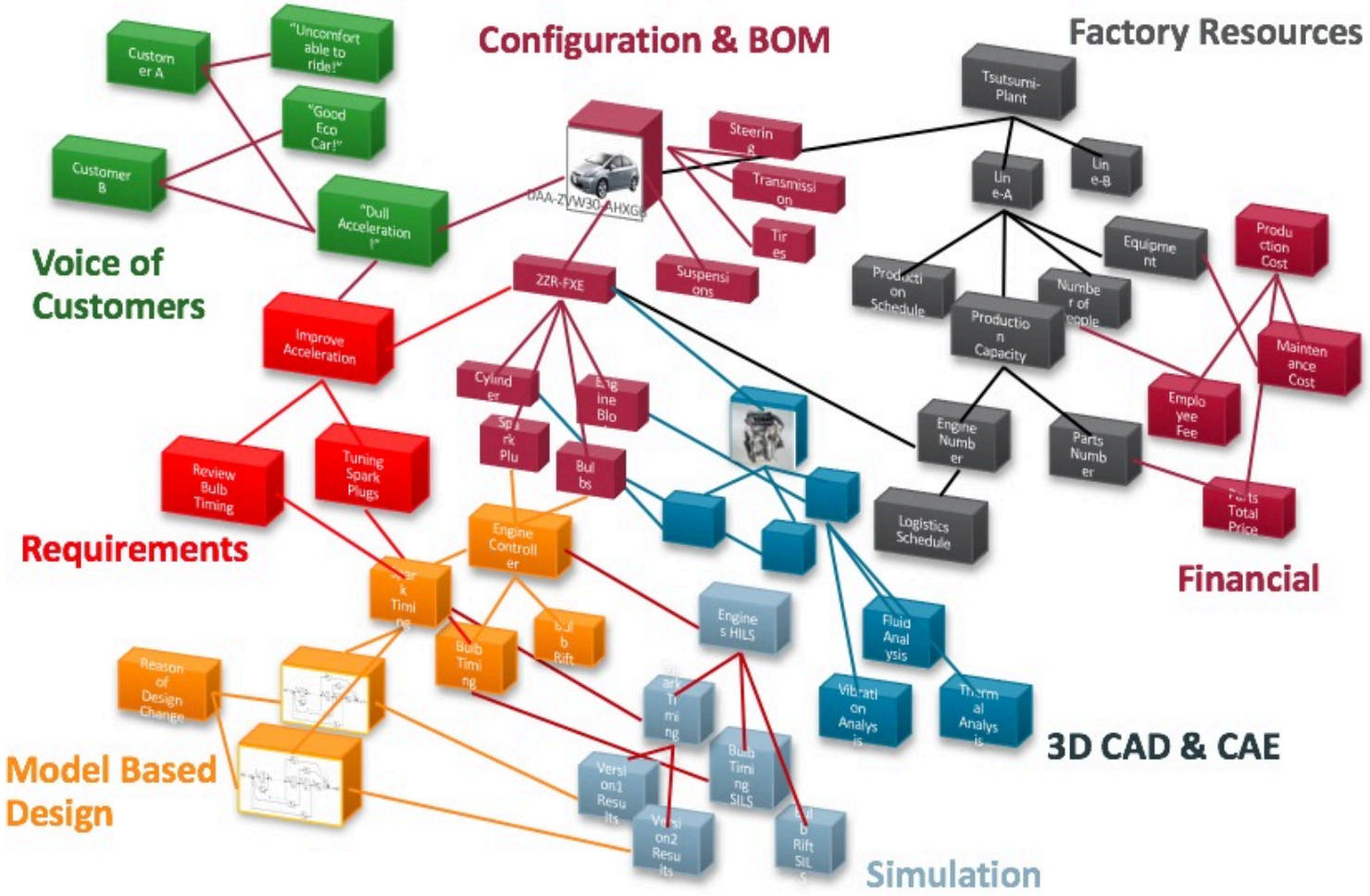


Use Case – Pattern Matching

```
SELECT cuit, e1, cuenta1, agrupador1, e2, e3, agrupador2, e4, cuenta2, e5
WHERE (cuit WITH tipo_nodo = 'CUIT' AND segmento = 'Pymes')-[e1 WITH tipo_arco = 'CUIT - CUIT - ENTIDAD']->(cuenta1 WITH tipo_nodo = 'CUIT - ENTIDAD' AND
codigo_entidad = '0072'),
(agrupador1 WITH tipo_nodo = 'AGRUPADOR' AND banco_destino = 'DyE')-[e2 WITH tipo_arco = 'AGRUPADOR - CUIT - ENTIDAD' and tipo_operacion = 'Deposito']->(cuenta1)-
[e3 WITH tipo_arco = 'CUIT - ENTIDAD - AGRUPADOR']->(agrupador2 WITH tipo_nodo = 'AGRUPADOR' AND entidad_destino != '0072')-[e4 WITH tipo_arco = 'AGRUPADOR - CUIT
- ENTIDAD']->(cuenta2 with tipo_nodo = 'CUIT - ENTIDAD' AND codigo_entidad != '0072')<-[e5 with tipo_arco = 'CUIT - CUIT - ENTIDAD']-(cuit),
(agrupador1.imp_recibido_ars) >= 0.8 * (e4.imp_emitido_ars),
(agrupador1.imp_recibido_ars) < (e4.imp_emitido_ars),
(agrupador1.imp_recibido_ars) >= 0.8 * (cuenta1.imp_recibido_ars)
ORDER BY agrupador1.imp_recibido_ars DESC limit 10
```



Use Case – Automotive



Summary

- Customer 360 View is getting **more information**
  > Activity Log, Text information, Predicted results, …
- **Datasets have to be linked** otherwise you can't find it!
  > **Graph** is a new method to connect information
- Graph shows you **all available information** to help create **insights**
  > BI dashboard can be build on the connected data
- New applications using **graph query and algorithms**
  > Fraud detection, link-based clustering, recommendation

Integrated Cloud

Applications & Platform Services