

# Managing the Complexity of Processing Financial Data at Scale

An Experience Report //

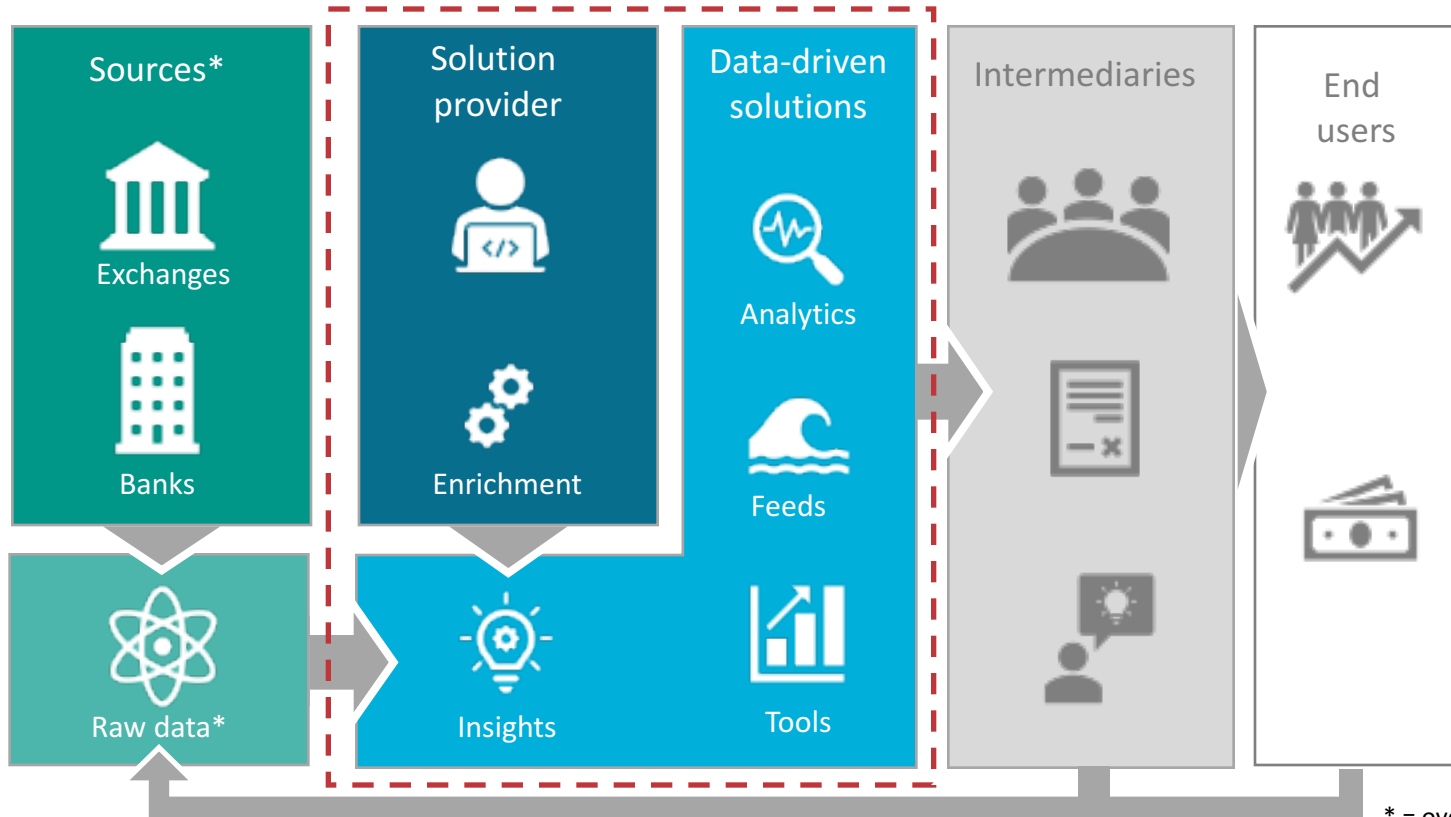
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# Financial data processing in a nutshell\*

Financial data providers collect & enrich raw market data

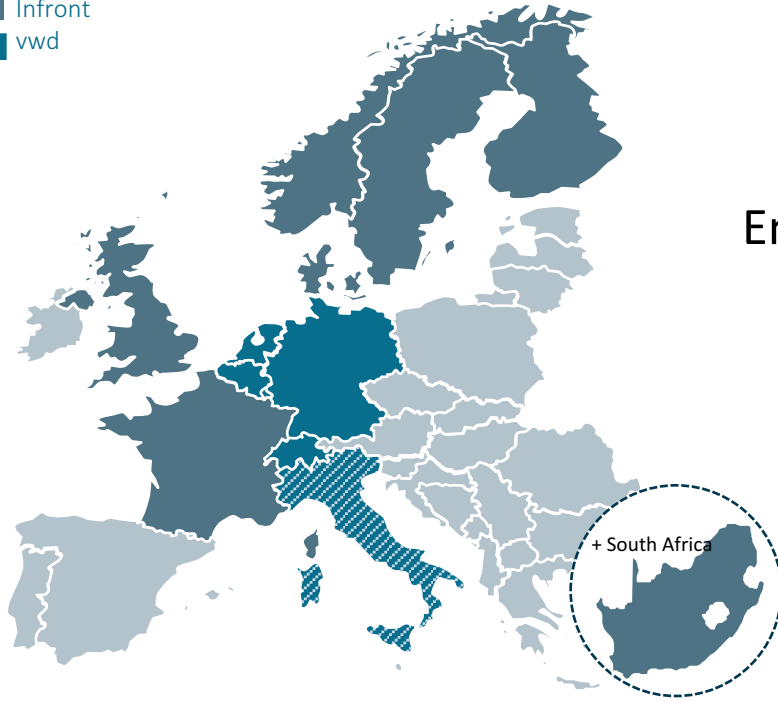




# The leading European alternative

Infront and vwd join forces to deliver high quality solutions

■ Infront  
■ vwd



> 500

Employees



13

countries



3,600

customers



90,000

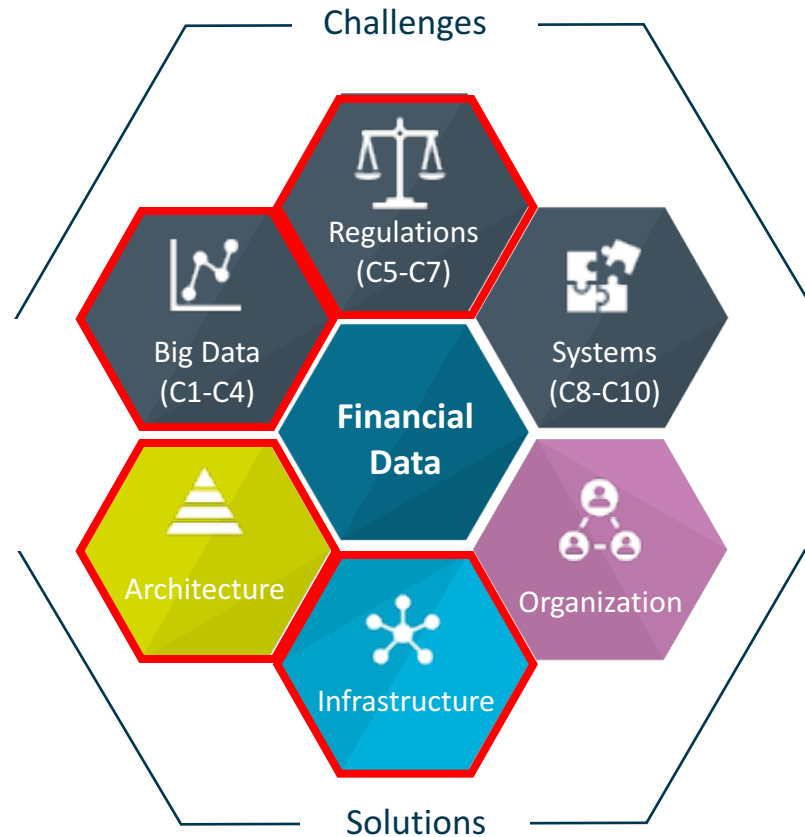
professional  
users

Infront is listed on the  
Oslo Stock Exchange.



# Challenges processing financial data at scale

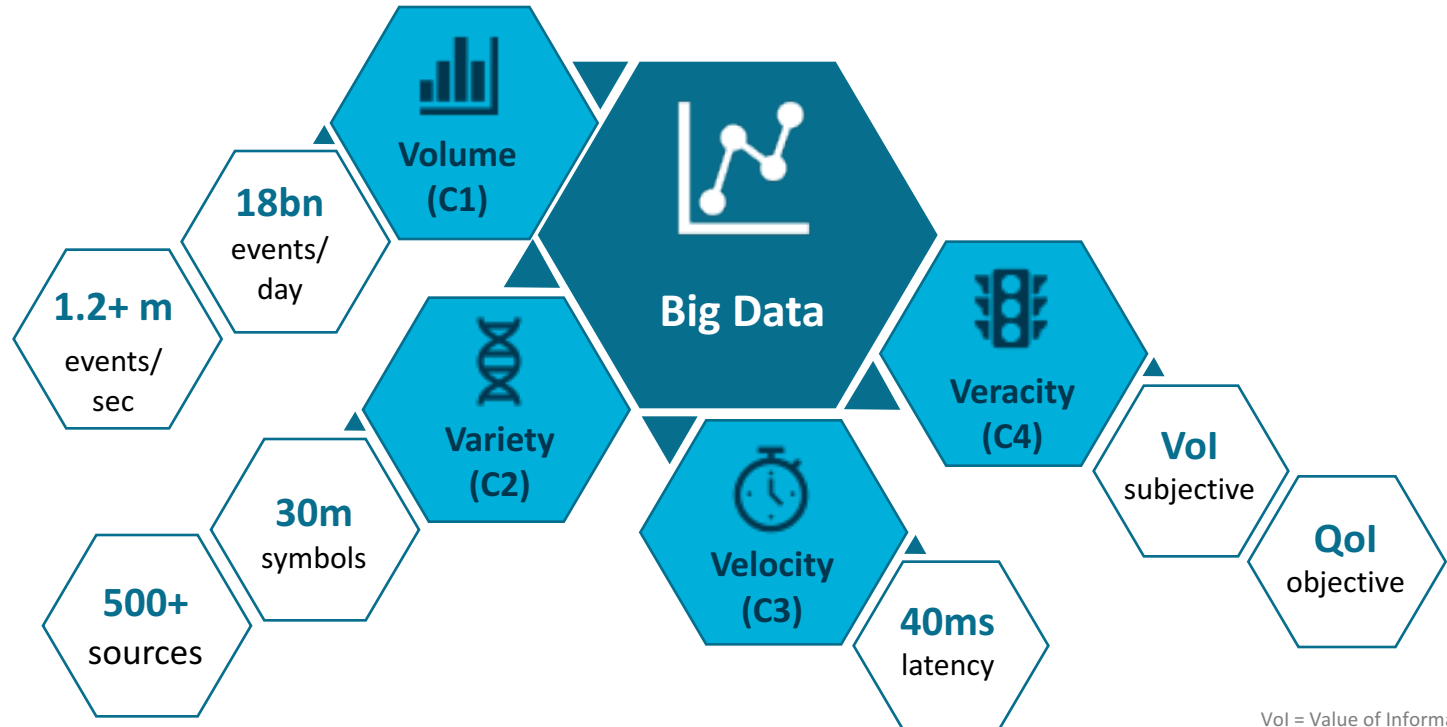
## Approaches to tackle data, systemic & regulatory challenges





# Big Data: volume, variety, velocity, veracity

## 4V challenges facilitated by streaming nature of data

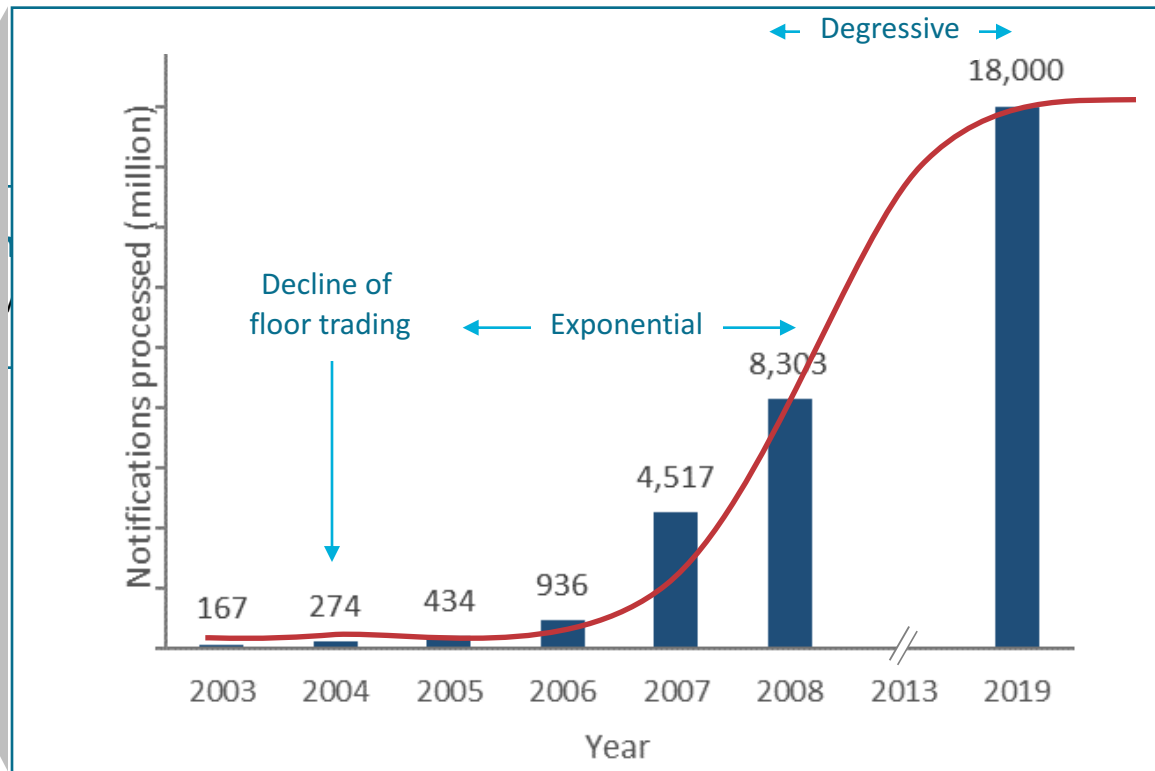
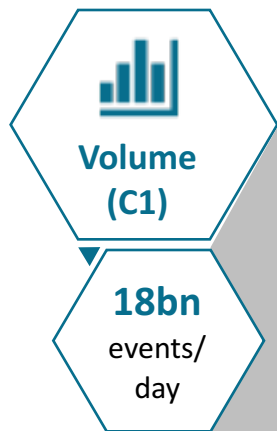


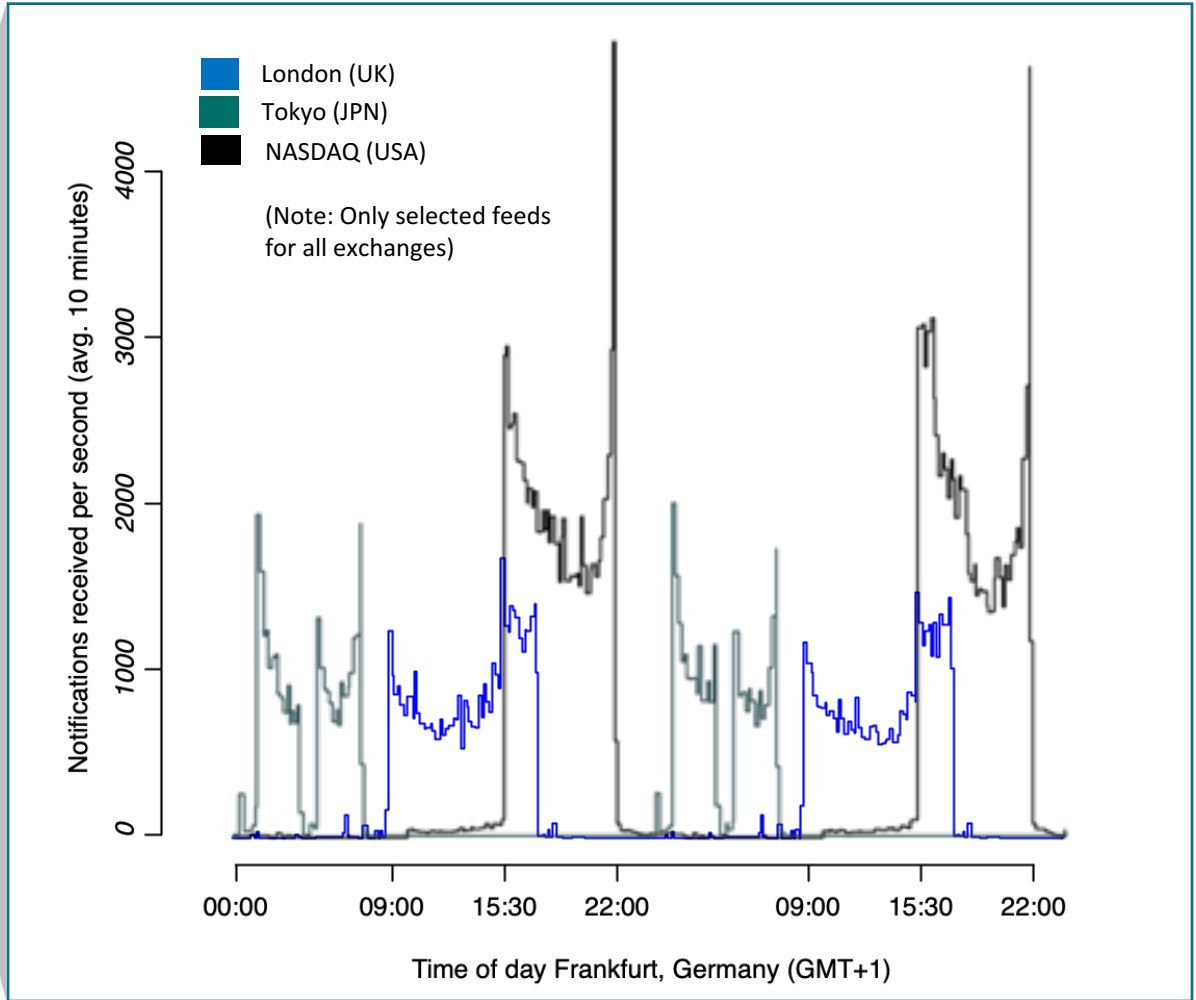
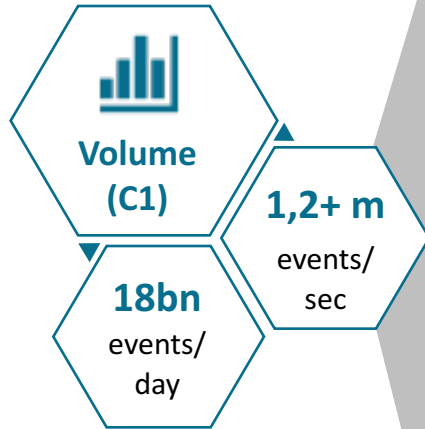
Vol = Value of Information  
Qol = Quality of Information



# Deep dive: volume (C1) total and daily

Total increases exponentially with daily throughput varying

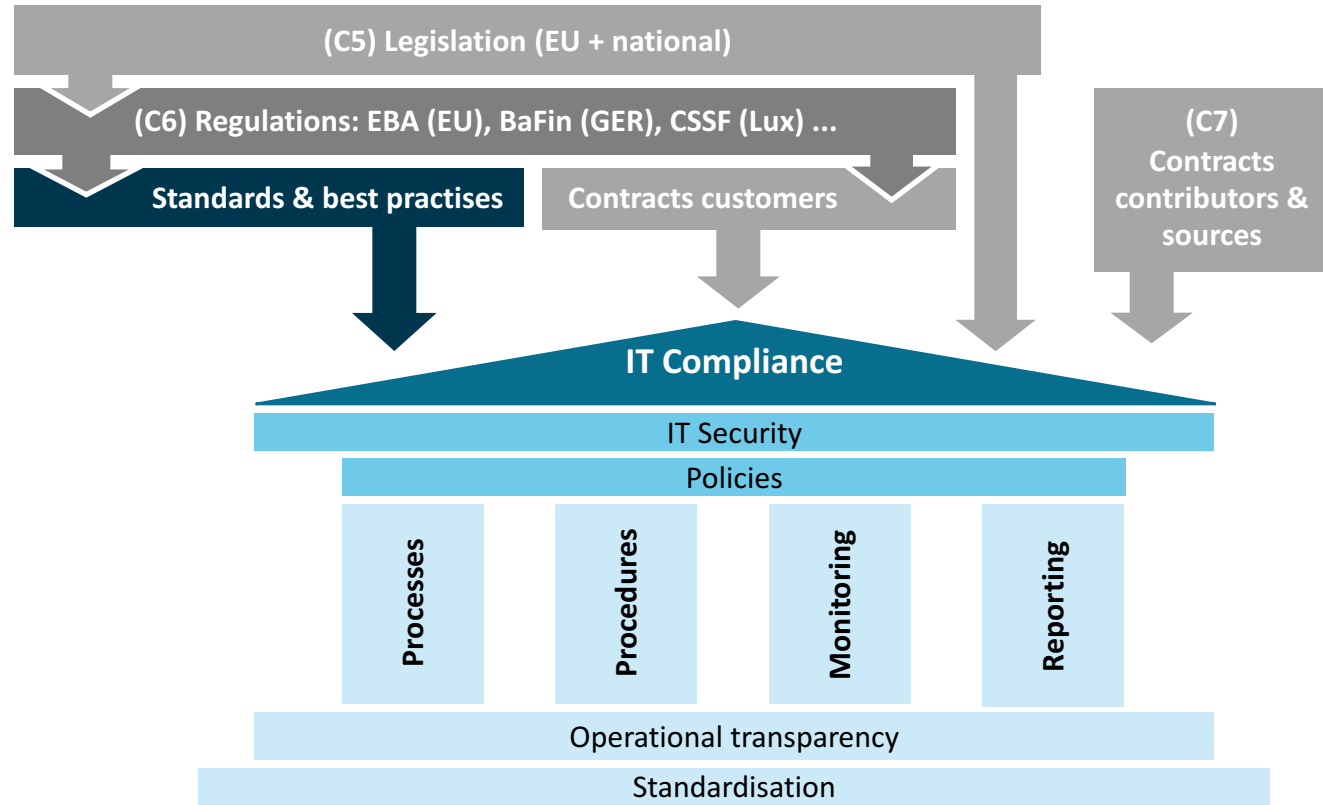






# Regulatory challenges enforce transparency

International legislation vs. business-specific regulations



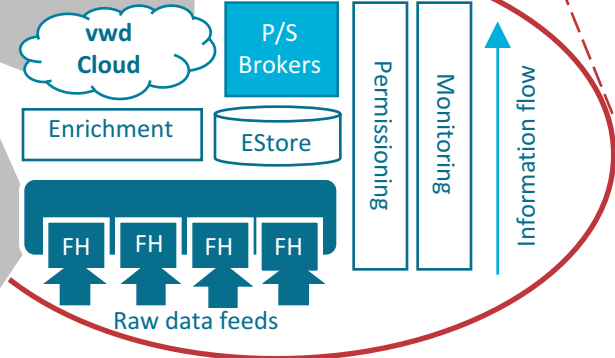
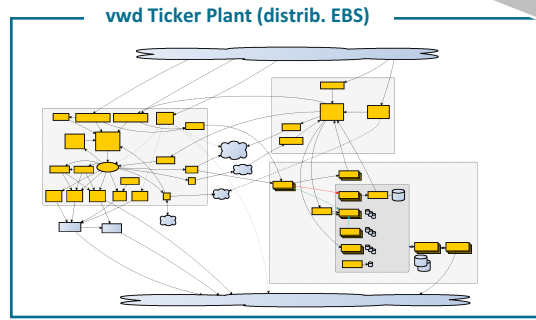
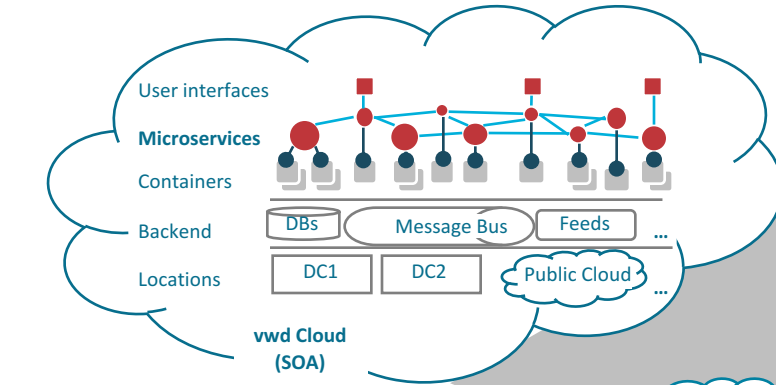




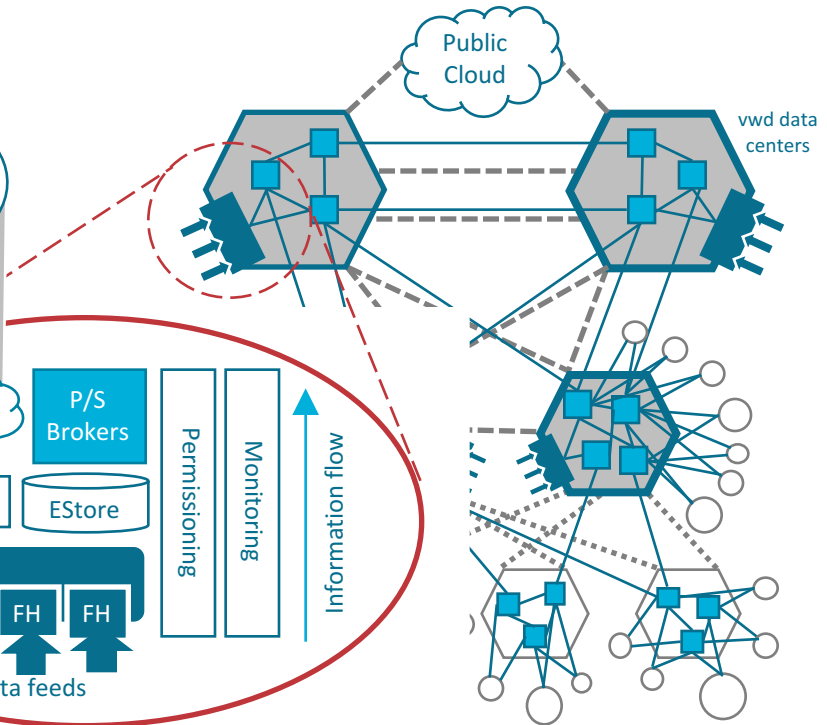
# Reactive systems in geo-distributed setup

We operate hybrid push- and pull-based architectures

## Pull- and push-based reactive architecture



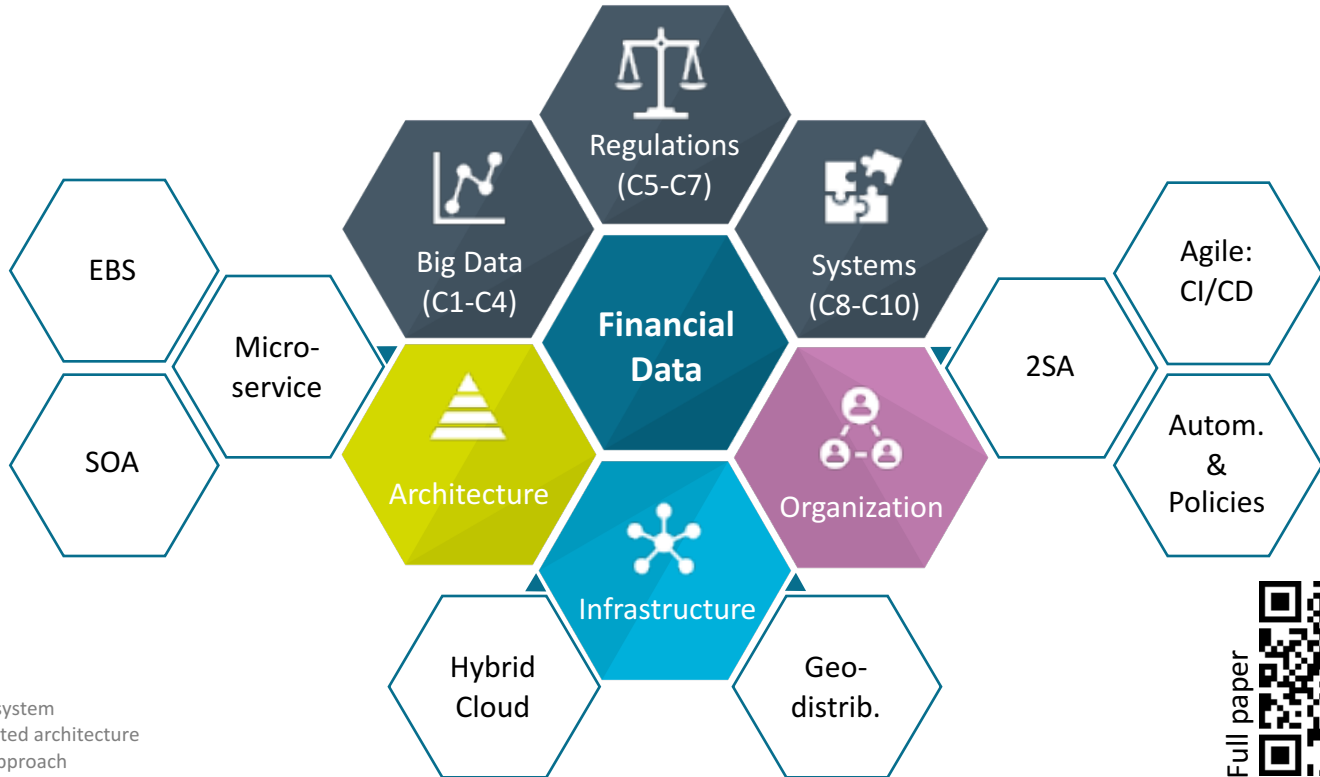
## Geo-distributed Infrastructure





# Data, systems & regulations foster complexity

Approach: reactive architecture, Cloud & agile organisation



EBS = Event based system  
SOA = Service oriented architecture  
2SA = Two-speed approach





vwd:

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