Global Markets Beyond Legislations

Building ABN AMRO’s Agile Data Foundation

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ABN AMRO
Global Markets Beyond Legislations

Building a data driven and agile foundation

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ABN AMRO Global Markets

Solution Engineer

Data and E-Cluster

Experience

9 Years - Banking – Data, Finance, Risk and Regulations
19 Years - Software Engineering
Building a Data Driven and Agile Foundation

OUR JOURNEY
GLOBAL MARKETS

Not about shouting
WHAT DO WE DO IN GLOBAL MARKETS?

CUSTOMER FACILITATION

Primary Market
- Equity Capital Market
  - Research
  - Issuing/Listing Shares (Primary Market)
- Debt Capital Market
  - Selling Existing Shares (Secondary Market)
  - Advisory Services
  - Creating, structuring and execution of Debt Instruments

Secondary Market
- Product Offerings
  - FX (Spot, Forward)
  - Fixed Income (Bonds, CP etc)
  - Equities (Shares of stock)
  - Commodities (Oil, etc)
  - Interest Rate Derivatives
  - Loan Deposits (Money Market)
- Options
- Swaps
- Investment and Hedging Customer Risk
- Advising, generating or structuring capital-raising solutions via Debt Instruments (Bonds) for corporate and financial institutions
- Financial Institutions
- Corporates
- Public Institutions
- Private and Retail Clients
- Hedging Bank Risk

Hedge our daily position against the exchange or other parties to mitigate risk from market fluctuations.
THE CHANGING WORLD IN WHICH WE OPERATE – NEW WAY OF THINKING

THERE IS A NEED FOR SPEED

Google/Apple, etc
Fintechs

New/Changing technology
Customer expectations

Cost pressure
Market agility / changes / simplification

Changing legislation / regulations

ING, Rabo, etc

ABN AMRO
Global Markets
KEY CRITERIA FOR WHERE WE WANT TO MOVE

No big design upfront
- Must enable a **gradual implementation** of data management in GM, starting from simple store-and-forward, growing towards a sophisticated data management platform.

No direct interfaces
- Data providers **deliver once** to the ODS, and not directly to consumers. The ODS controls and manages the distribution of data to all data consumers.

Query off-loading
- The operational systems provided a **golden copy** that enables off-loading of all requests for GM data, reducing load on expensive operational systems.

Easy upload / raw data
- Data ingestion must be based on **raw data** (preferably in XML or JSON), **without modification** (no filtering / transformation), and using **any technology** (e.g. messages, files, ESB, APIs).

Central data modelling
- The ODS must be optimised for achieving full control on the complex governance of how data is modelled and published.

Multiple delivery models
- Data delivery must support multiple models (i.e. raw but also modelled data) depending on knowledge of the consumer.

Lineage in published data
- Data (i.e. documents) published by the ODS always include the data lineage back to the source.

Security/Rules based
- Regulatory compliance (e.g. GDPR) is ensured by applying rules to queries (e.g. retention, access) that are stored as documents as well.
Becoming more efficient...

GLOBAL MARKETS
FUNCTIONAL DECOUPLE
DATA MOVEMENT PATTERNS USED IN GLOBAL MARKETS

PROVIDING
GLOBAL MARKETS

CONSUMING
GLOBAL MARKETS

ENTERPRISE

CONSUMING

Integrated Data Store

Legend:
- Raw data
- Harmonised data

Streaming Pipeline

ESB / API Gateway

Global Markets Harmonised Data (IDS)

Raw Data Store

Analytics & operational use cases

Other Bounded Context(s), e.g. Payments, Credits

Central Metadata

MarkLogic

MI/BI Reporting

Enterprise use cases (e.g. reporting)
Our experience and challenges

LESSONS LEARNED SUMMARY
DO’S AND DONT’S

DATA IS CHIEF, UNDERSTAND YOUR DATA

EXPERIMENT EARLY, GET PATTERNS THAT WORK FOR YOU. ML IS TOO POWERFUL

NEW PARADIGM, COMMUNICATE OFTEN, WHY? WHAT?

TRAINING... TRAINING... BOTH TECHNOLOGY AND MIND SET. INVEST...

USE TOOLS TO ACCELERATE DEVELOPMENT AND MANAGEMENT
DO’S AND DONT’S

DON’T CREATE A BLACK BOX
DON’T EXPECT ML TO INCREASE THE SPEED OF DELIVERY IN THE SHORT TERM
DON’T USE EXCEL FOR SOURCE TO TARGET
DON’T BUILD SOLUTIONS ON EXPERIMENTS, START CLEAN
DON’T DUMP RAW DATA INTO ML AND EXPECT MAGIC
Thank You