



HSE24



IWS Consulting and HSE24 Data Analysis Modernization

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Agenda



- IWS and HSE24
- Previous Analytics environment for HSE24
- Modernization: Project benefits
- Next tasks

Propose end to end IT & Software System Integration and advisory solutions

We carefully listen to our customers needs.

Innovate.

IWS uses heavily scouting to propose innovative and robust technologies, avoiding a disruptive approach on the preexisting environments

Work.

Work hardly to supply tech and business knowledge, projects, team working, full communication and sharing

Succeed.

Adopting 'Agile' methodologies and fast iterative working cycles, fully successfully arrive to the desired results, step by step



To Business

Analytic applications.

Master Data management
Traditional analytics: BI, Data Warehouse
Data Mining, Data Science
Big Data & NoSql

Operational applications.

Document and content management
Business Process management
Agile. DevOps. 3° Platform Apps.



IT System Integration Management.

Service management, Creating and managing an efficient IT Infrastructure.
On premise. On cloud.

End to end solution and partnership



From IT

Project Areas Portfolio.

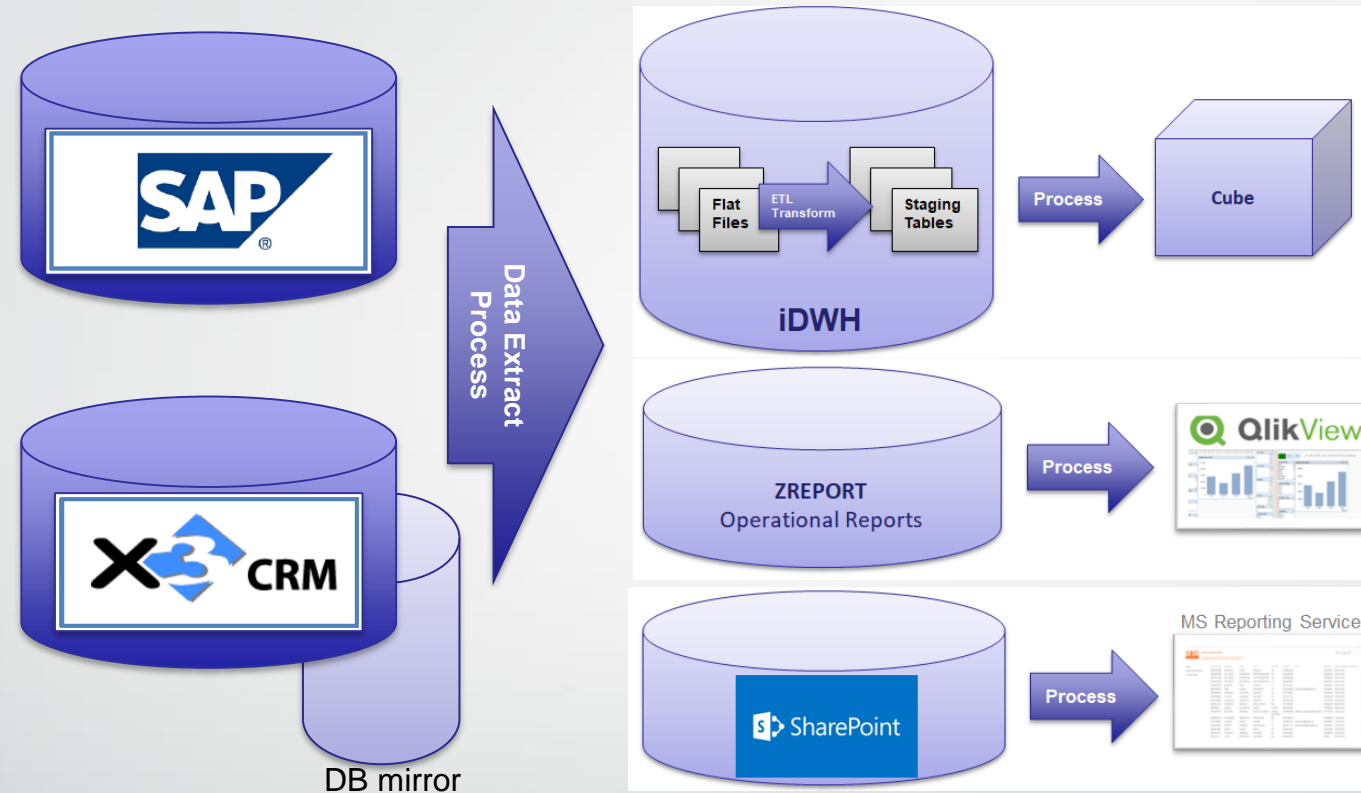
Methodology, Advisory and Strategic Consulting

The best reality in European TV retail companies

A short video presentation of HSE24 to explain how the company works and is positioned on the market



HSE24 – Preexisting architecture for Analytics



- ☐ Managed from Germany
- ☐ Obsolete Clients
- ☐ Needed "data refresh" for out of time clients
- ☐ No action on regards of GDPR

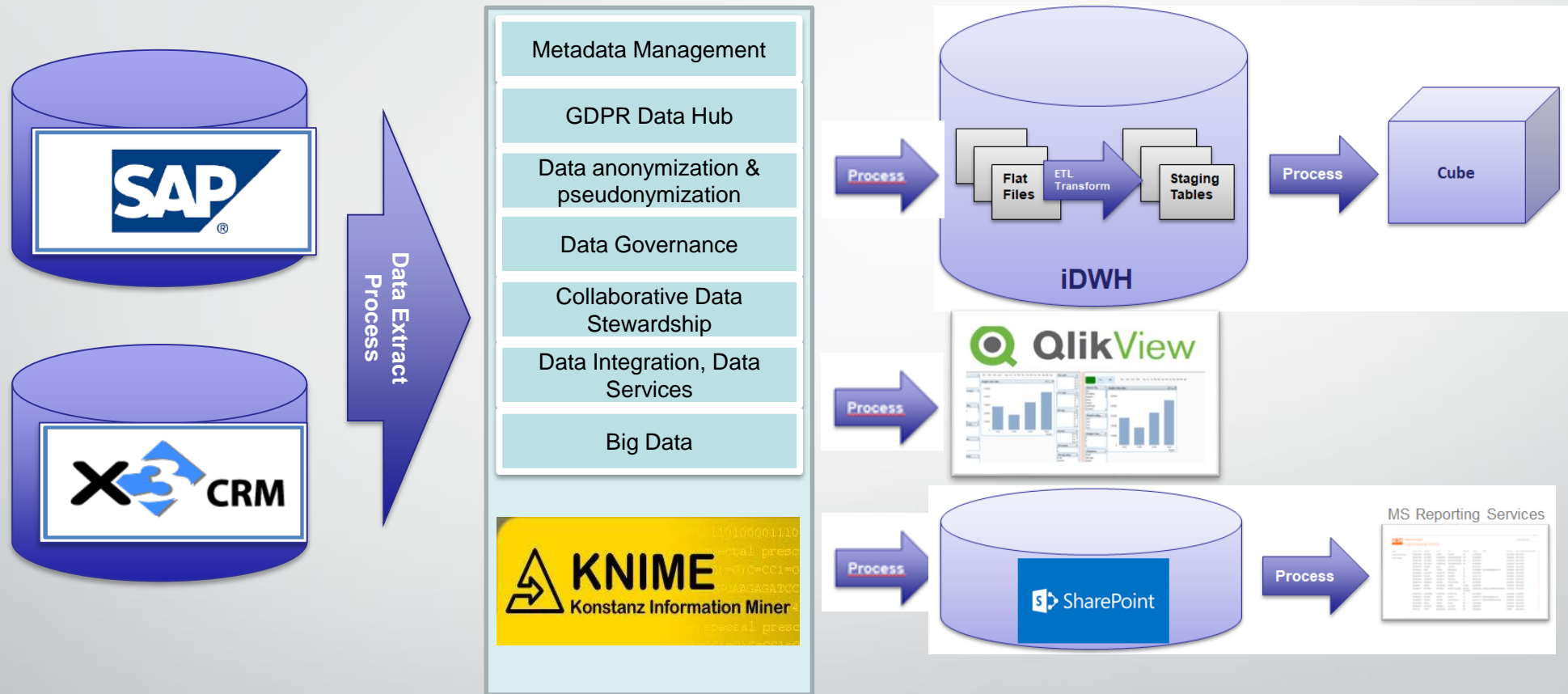
- ☐ Local Data warehouse
- ☐ No staging area
- ☐ To be disrupted but should be the focus point looking at the data protection through GDPR rules

- ☐ To be analyzed in order to be compliant with GDPR

HSE24 – As is before the Analytics Modernization

- **Customer Data fragmentation**
- **Multi Platform architecture**
- **ETL job Proliferation**
- **No way to fulfill GDPR requirements**
 - **Customer Data Accessibility (Identification)**
 - **Customer Data Portability**
 - **Customer Data Deletion**

HSE24 – The new architecture for Analytics



HSE24 – Benefits from the Analytics Modernization

-30%

**ETL Data Jobs
Reduction**

-40%

**Data Cleaning and
Deduplication**

-25%

**ETL Data Jobs
Execution**



GDPR Compliance!

GDPR requirements fully
satisfied.



**Improved Data
Governance!**

Redundancy of flows and
entities reduced.



Architecture improved!

Deployment of a staging area
to introduce Golden Records
and simplify workflows



Better performance!

Moving most of the logic into
backend improves user
performances

How was it possible?

4 main factors for Success

INNOVATIVE
TECHNOLOGY

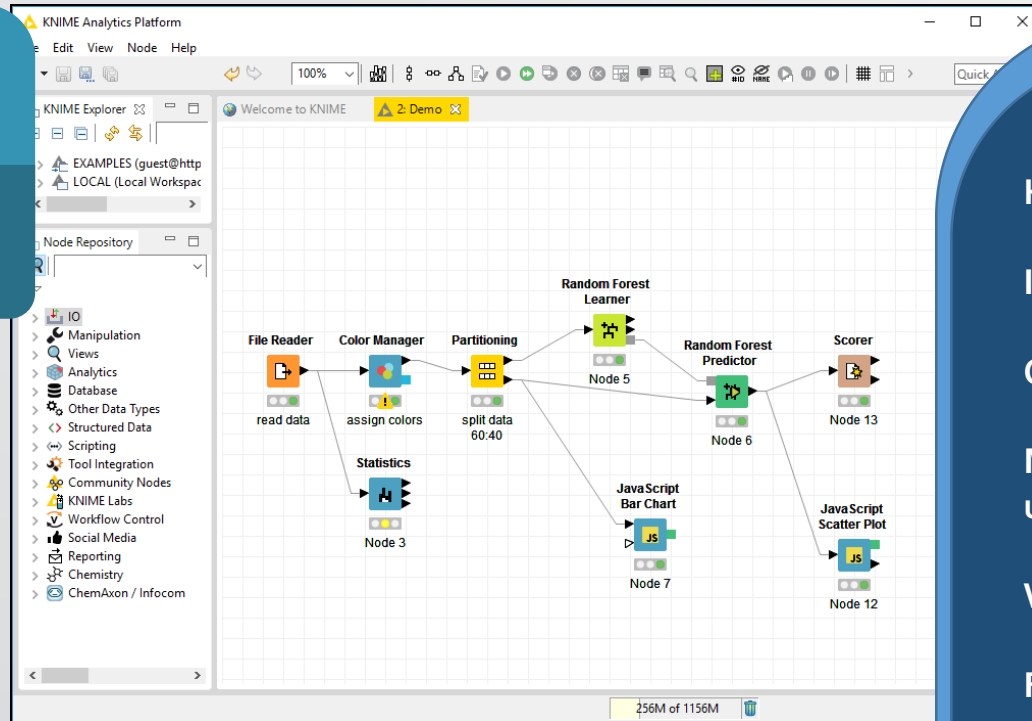
RIGHT
METHODOLOGY

RIGHT TEAM

CUSTOMER
COLLABORATION



INNOVATIVE
TECHNOLOGY



Knime = Konstanz Information Miner

Initial development at University of Konstanz, Germany

Open source and Enterprise support

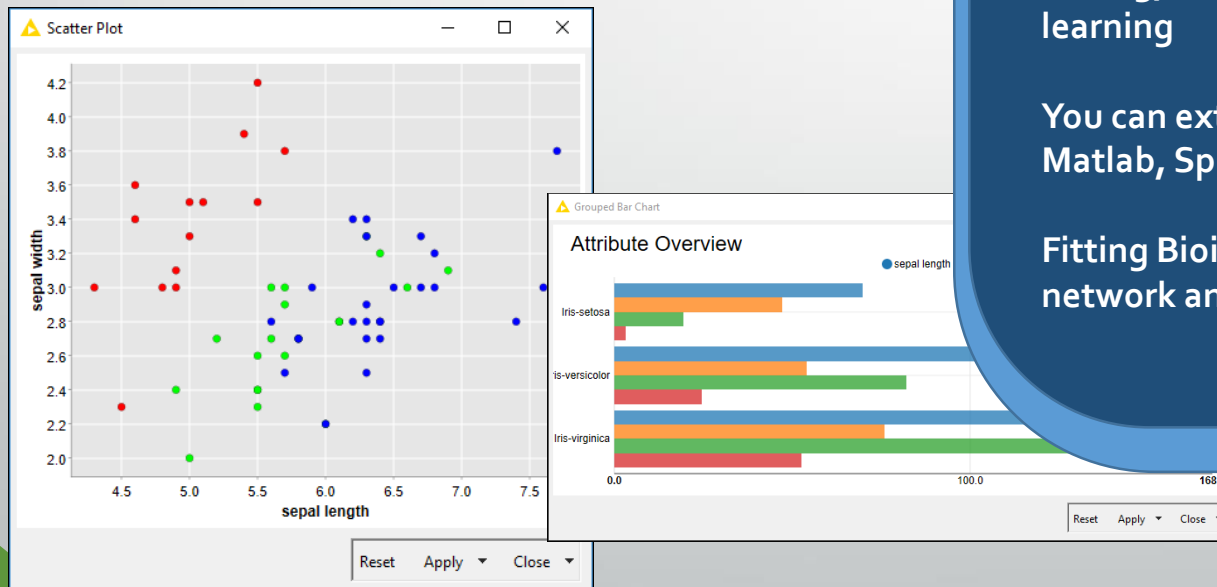
Modular platform for building and executing workflows using predefined graphical components, nodes

Written in Java based on the Eclipse SDK platform

Functionality available for tasks such as standard data mining, data analysis, data manipulation, machine learning

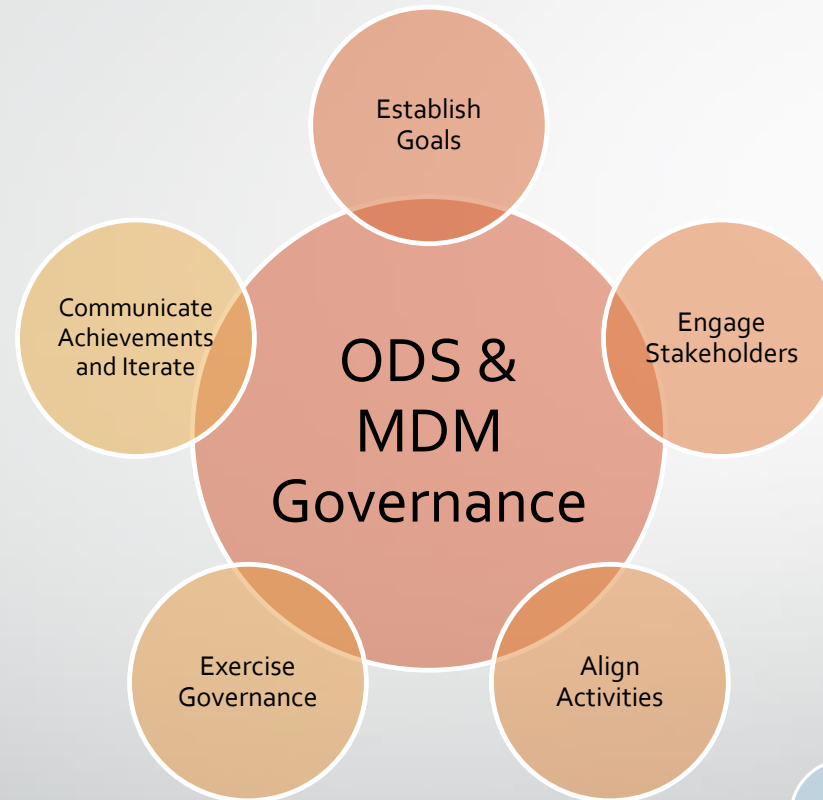
You can extend scripting integration (R, Perl, Python, Matlab, Spark, etc.)

Fitting Bioinformatics, image analysis, text mining and network analysis



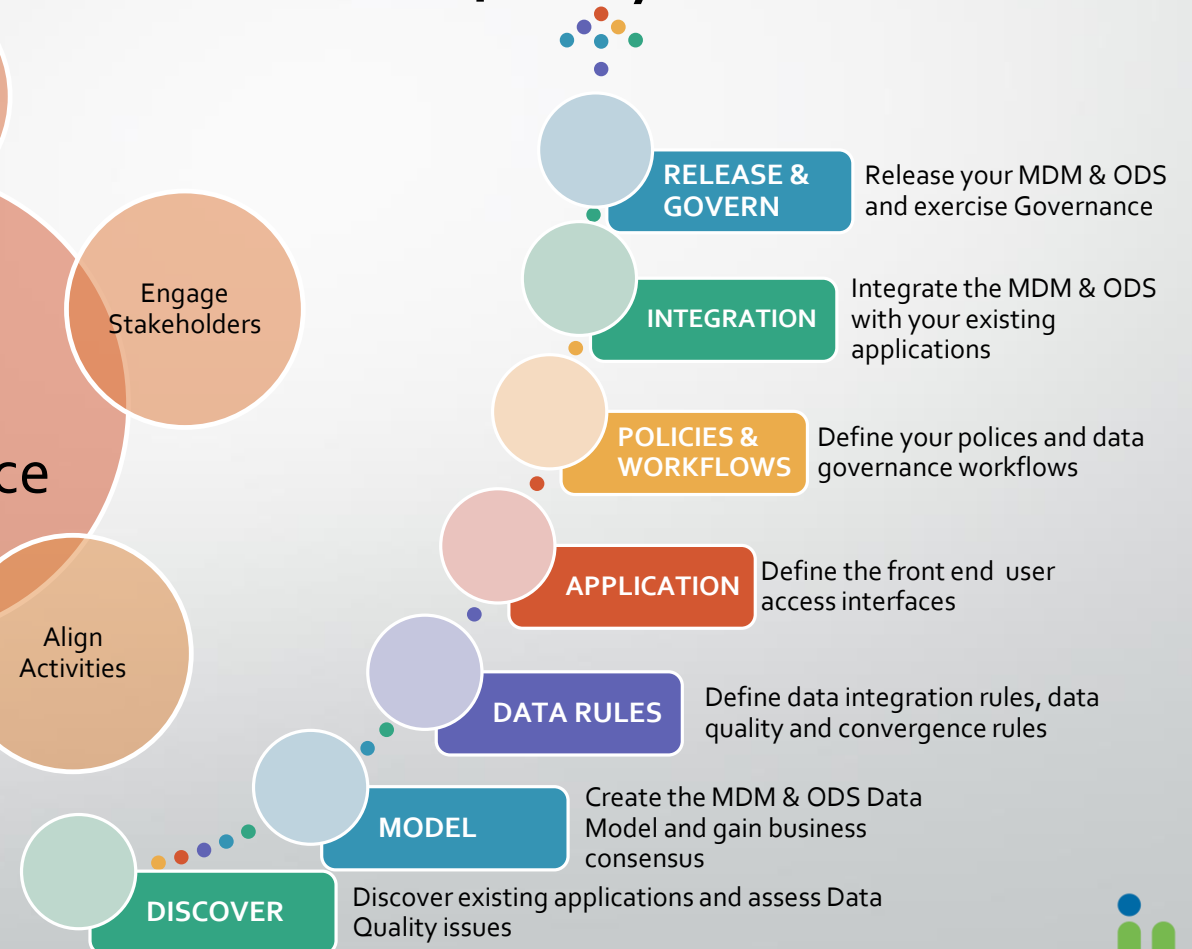
RIGHT
METHODOLOGY

HSE24 – Agile recycle: few objectives per time are a successfully strategy



Successfully Implement
Analytics Modernization

HSE24 Analytics Modernization



RIGHT
TEAM



Analytics System and Operations Engineers

Data Ingestion specialists and Data Engineers:

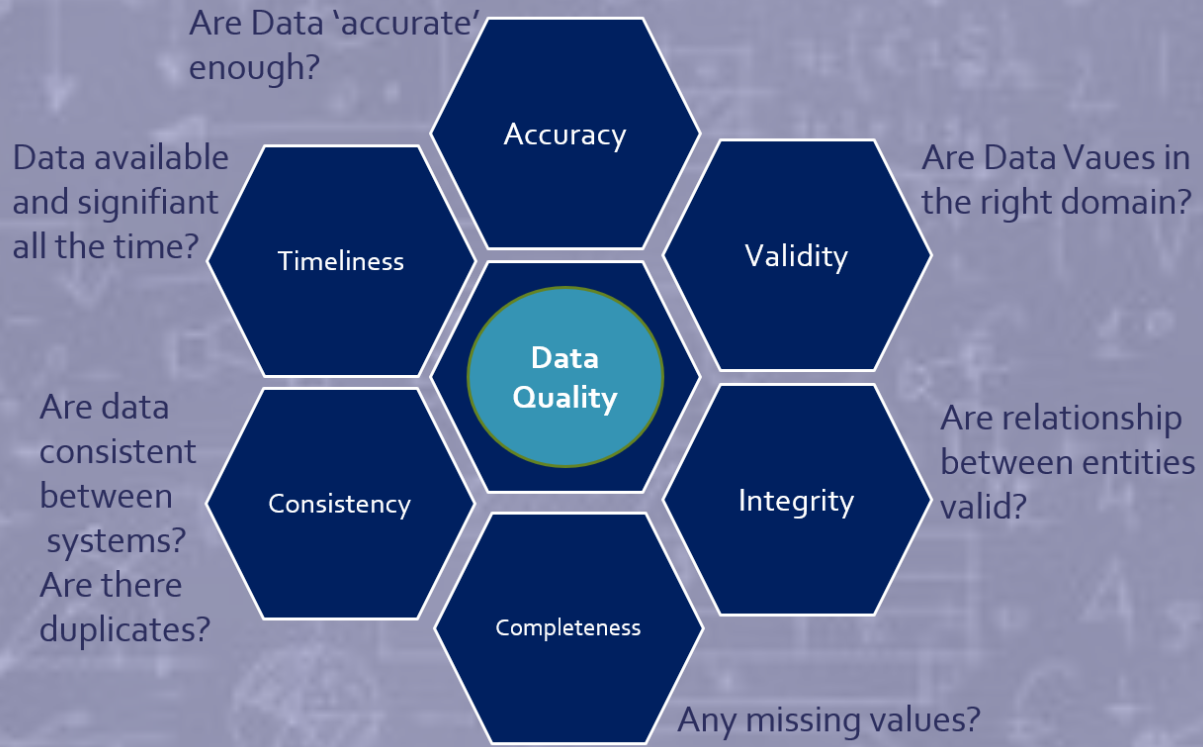
Porting Pre-existing legacy code and fine tuning, Master Data and Governance experts

Data Scientists:

Data Wranglers, preparing data for Analysis; gaining Insight throughout Statistic Modeling and Front end

Type of resources for Analytics tasks.
Best practice suggestion on the workgroup composition

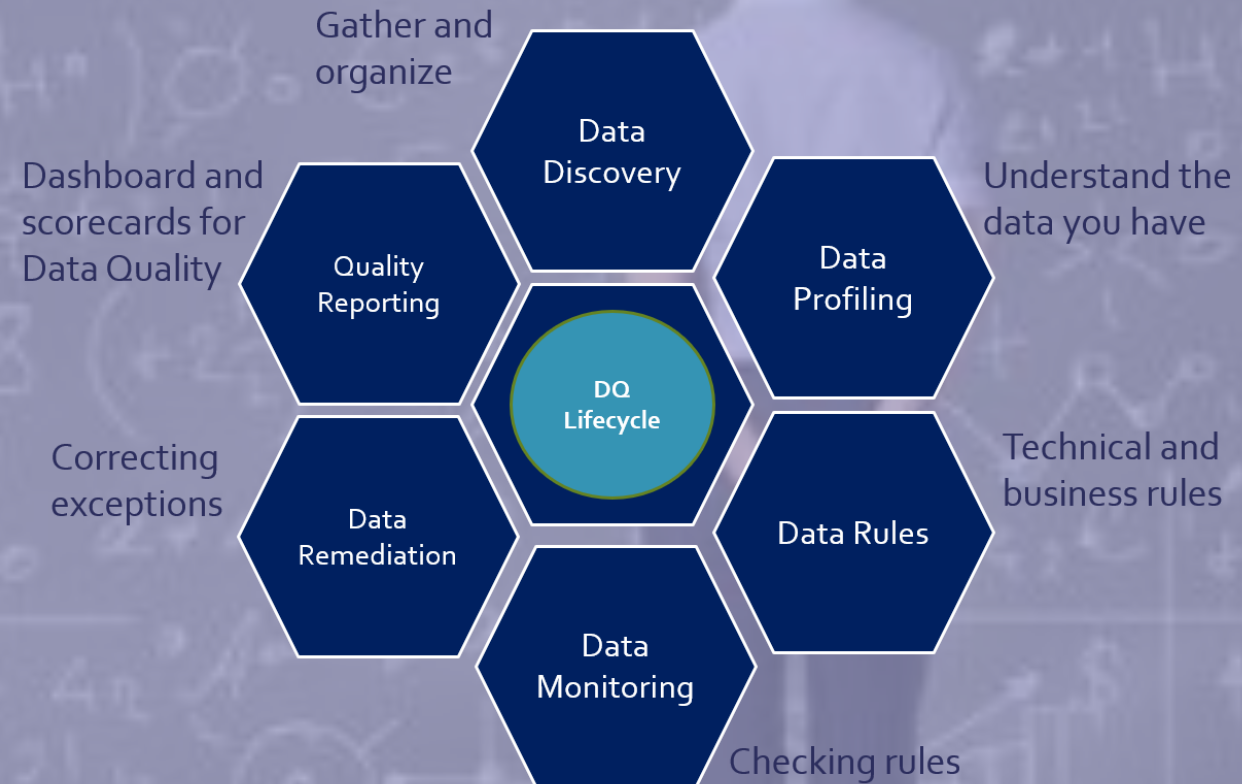
Data Quality Life Cycle started in HSE24



Data Quality Dimensions

Adopt a Data Quality approach to reach success for Analytics initiatives

Data Quality is a continuous process life cycle, if need to take in consideration the cost of not using it in terms of analysis and decisions, strategy



Following steps for Analytics in HSE24



Predictive analysis use statistical models and forecasts techniques to understand the future (what could happen?)

Here's some of the use cases we're starting with HSE24

Market Basket Example



Use case 1:

A Priori analysis examining Order and Order Lines.
Considering different time periods, Try to find significant rules for Marketing Campaigns



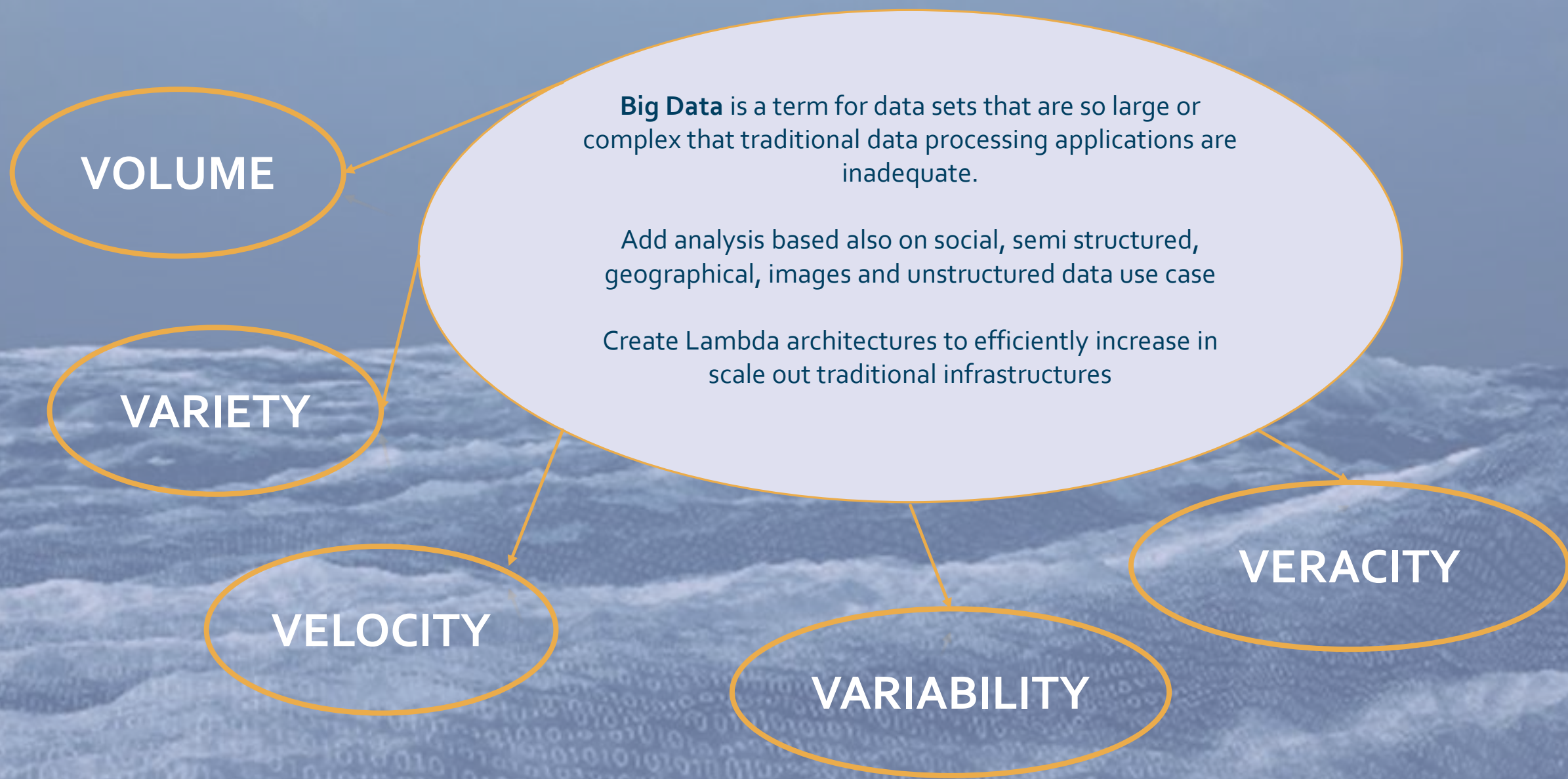
Use case 2:

Clustering models: study if it's possible to group HSE24 customers based on the probability of the predisposition to buy



Use case 3:

Prediction (and related classification) models: study how to optimize buyers process and minimize warehouse



Future Steps: approaching Hadoop and NoSql ecosystems.

Extending analysis. Data Exploration. Big Data

Questions?

Questions?





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