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

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.

Project Areas Portfolio.
Methodology, Advisory and Strategic Consulting
A short video presentation of HSE24 to explain how the company works and is positioned on the market.

The best reality in European TV retail companies
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

Metadata Management
GDPR Data Hub
Data anonymization & pseudonymization
Data Governance
Collaborative Data Stewardship
Data Integration, Data Services
Big Data
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
Knime = Kostanz Information Miner

Initial development at University of Kostanz, 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
HSE24 – Agile recycle: few objectives per time are a successfully strategy

Successfully Implement Analytics Modernization

HSE24 Analytics Modernization
Type of resources for Analytics tasks.
Best practice suggestion on the workgroup composition

**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
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.
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

**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

**Big Data** is a term for data sets that are so large or complex that traditional data processing applications are inadequate.

Add analysis based also on social, semi structured, geographical, images and unstructured data use case.

Create Lambda architectures to efficiently increase in scale out traditional infrastructures.
Questions?
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