HUMAN CENTRIC SAP DEVELOPMENT AND ANALYTICS

THROUGH DIGITAL TRANSFORMATION

TAMÁS OROSZ

DEPARTMENT OF DATA SCIENCE AND ENGINEERING
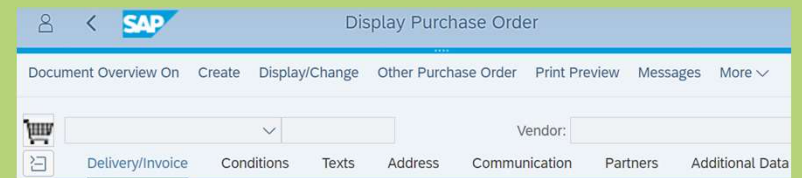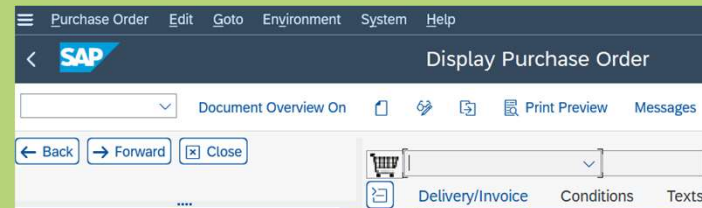
FACULTY OF INFORMATICS

Typical requirements for user friendly SAP interactions integrating external tools

SIMPLIFICATIONS

Business transactions:

- Complex GUI business transactions

- Screen Personas: provision of existing business logic

- Fiori user interfaces: transactional and analytical SAP Apps

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Governance of emerging technologies in organizations

Emerging technologies:

scientifc and industrial progress
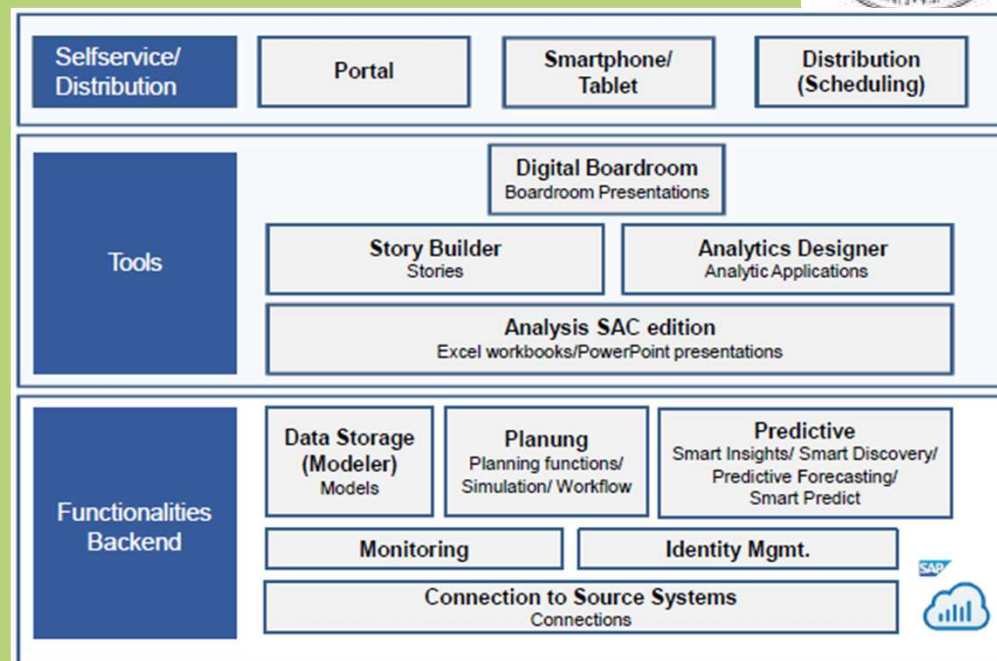
➤ **Predictive Analytics**

Forecasts, patterns of behavior

➤ **SAP Analytic Cloud**

Data analysis, planning, and value prediction.

Components for

selfservice/distribution;

tools;

functionalities

Data Lake and Analytic solutions applying SAC

➢ **Data integration, storage and connections**

  Collecting Data in the Data Lake

  ➢ **Transfer Data to SAP Analytic Cloud:**

    ○ **Import Files**

    ○ **Data storage in the SAC repository**

    ○ **Encrypted storage of data**

  ➢ **Connection is established between SAC and external systems (e.g. BW)**

  ➢ **Selecting available built-in SAC data models (account-based / key-figure –measure based model)**

SAC Stories (Story Builder)

Building convenient SAC web reports and small dashboards

- applying integrated templates for specific requirements

Available design elements (widgets) predefined

- diagrams, tables, text, pictures
- easy customasitation of the widgets

Analytical possibilities

- data filtering
- creation of restricted and calculated key figures
- Rankings
- Conditional formatting

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Authorization

SAC applies the Authorisation system handling

- ➢ User (Identity) Management
- ➢ Creating adequate roles
    - o assigning predifined function permission to roles
    - o Specifying desired type of access
            (create, read, update, modify, share)
- ➢ Assigning the roles to users or teams
- ➢ Assigning the folder shares
    - o should be made on team level to ensure easy maintenance
    - o specifying the desired type of access for the team to the folder
            (display/modify / full access)
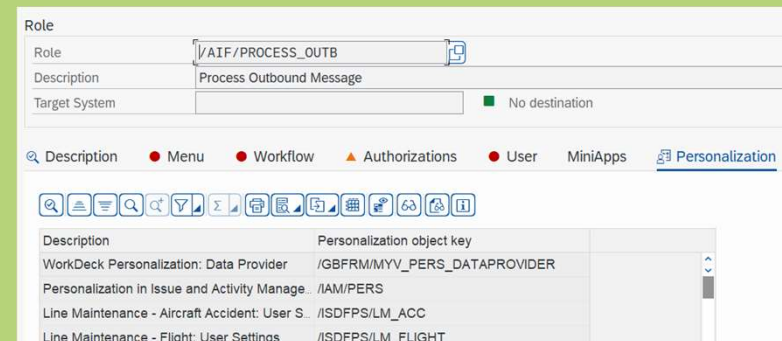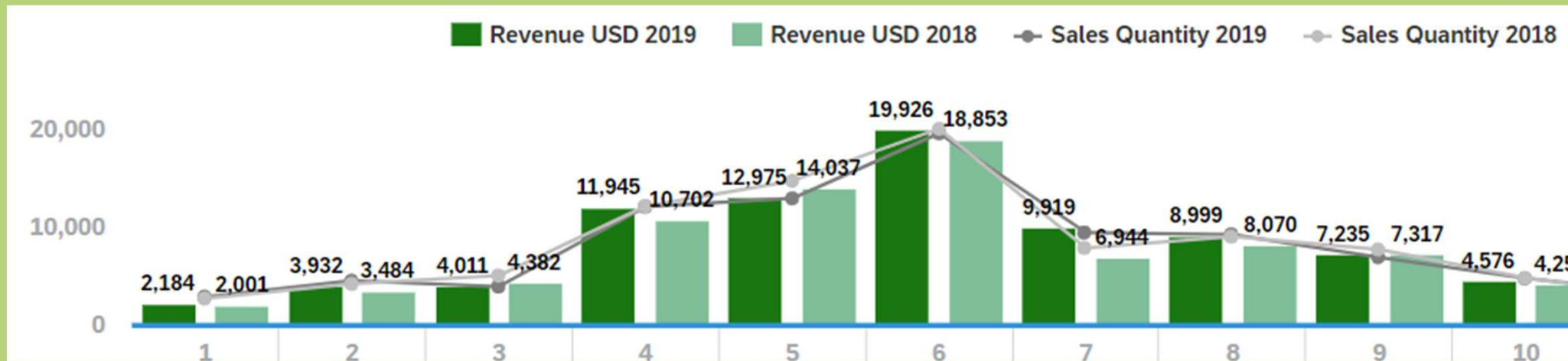
Sales Dashboard

Creating a new model

Analytic model consisting of a fact table with a single measure.
The SAC Modeler contains 4 areas:
- Dimension overview shows the included dimensions.
    o List of values of the dimensions
- Dimension Settings – display of properties of the selected dimensions
- Data Scheme – allows the model to be visualizedas a star schema with fact table and surronding dimensions
- Data Foundation – Provides a view of the transactional data
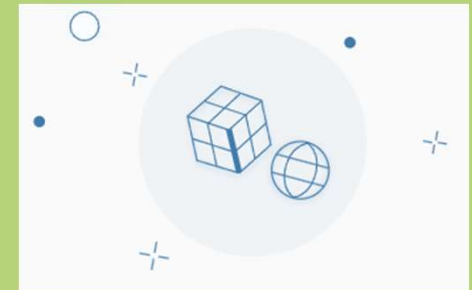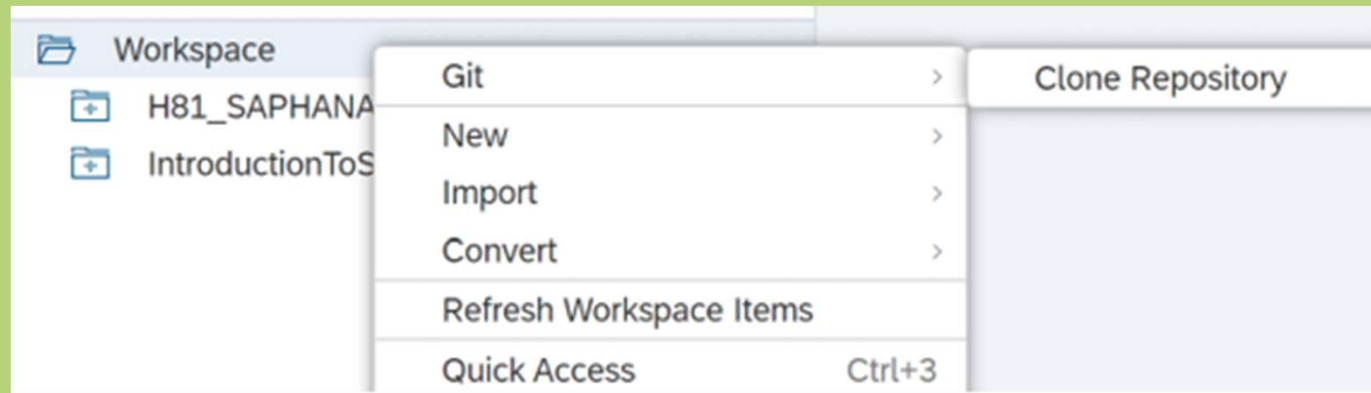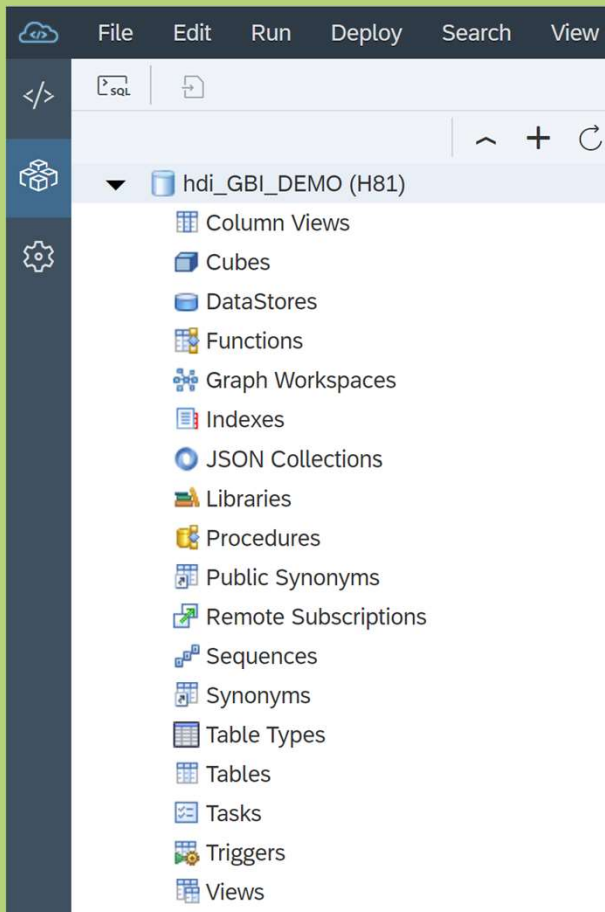
Creating an Analytic Application

SAP | Analytic Applications | **New Analytic Application** ☆

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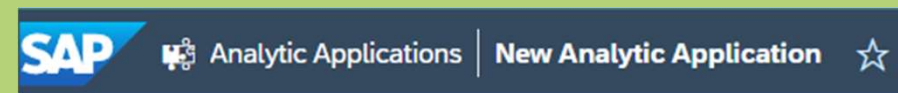
Development of SAP applications in WebIDE

Development in SAP HANA: Reporting & Analysis

Three Types Information Views in HANA

Attribute View

Analytic View

Calculation View (CV)

Information views are used for analytical use cases such as operational data smart scenarios or multidimensional reporting

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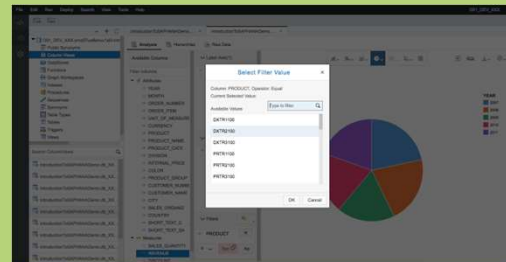HUNGARY

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Web IDE – Data Visualization

1. Select Data Set
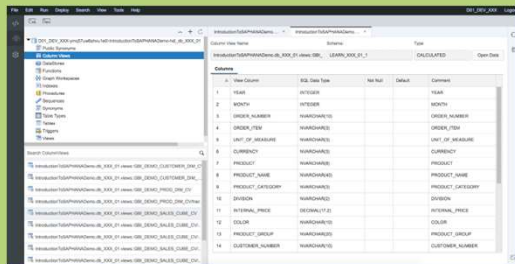
2. Add Filters

3. Build Visualization
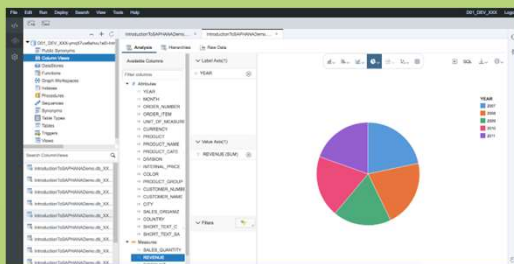
4. Export
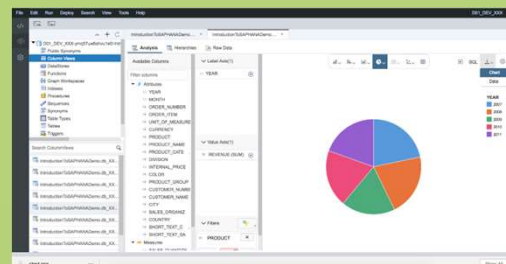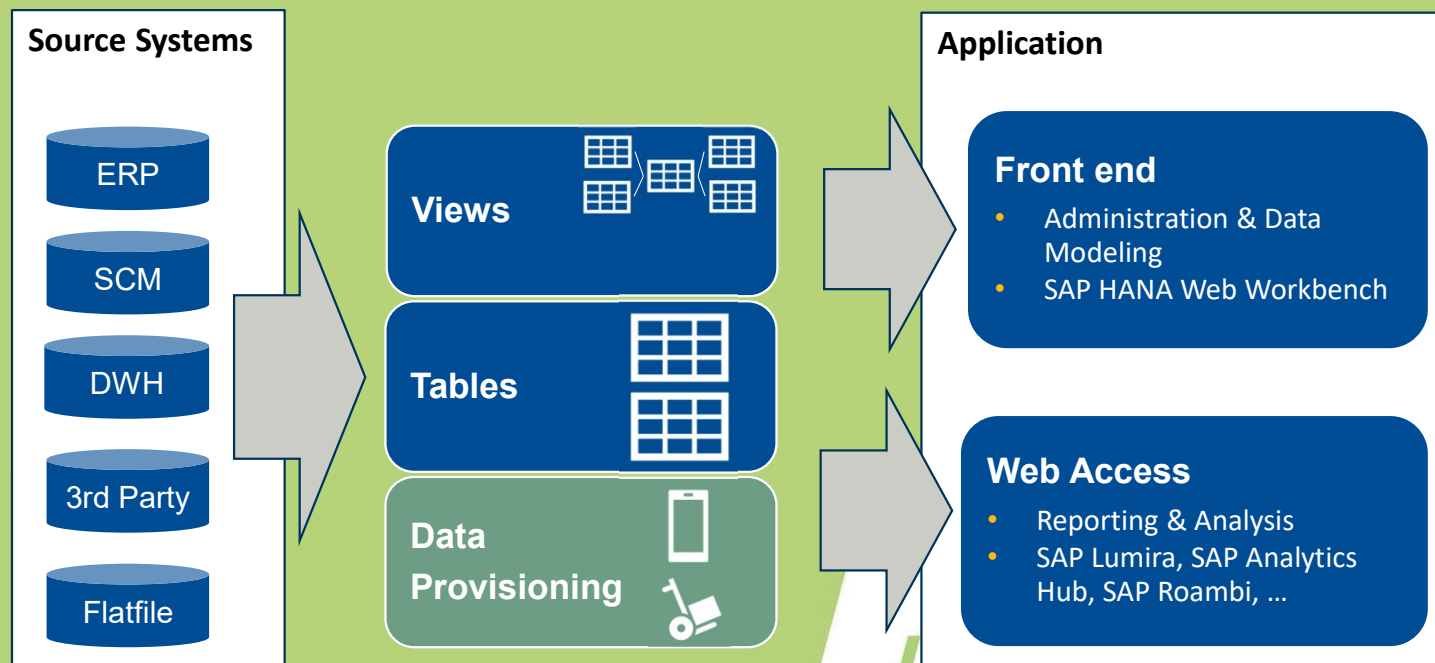
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SAP HANA Data Modeling

Source Systems
- ERP
- SCM
- DWH
- 3rd Party
- Flatfile

Views

Tables

Data Provisioning

Application

Front end
- Administration & Data Modeling
- SAP HANA Web Workbench

Web Access
- Reporting & Analysis
- SAP Lumira, SAP Analytics Hub, SAP Roambi, …

Digital Transformation driven by Strategy

Digital strategy drives digital maturity.

- Digital maturity is achieved in an organization where digital has transformed processes, talent engagement and business models through a coherent digital strategy

The power of a digital transformation strategy lies in its scope and objectives.

- Digital strategies are developed with an eye on transforming the business, not on individual technologies

Digital organizations build skills to realize the strategy.

- Recognizing and promoting skills and competencies a key task of the digital transformation

Taking risks becomes a cultural norm.

- Taking risks by trying new strategies, business models, products and approaches is the key to digital transformation

The digital agenda is led from the top.

- Digital fluency must be a key skill of the management

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Efficient SAP UX

- Build Smart User Interfaces in SAP HANA Environement
  - **HTML**
  - **CSS**, and
  - **JavaScript**

  − SAP Fiori app using SAPUI5 (HTML5)

  − Fiori: modern user experience

  − Benefits of smart user experience:
    - **improve productivity due to ease of use**
    - **automatic data corrections ensuring good data quality**

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Native applications on SAP HANA extended application services

Web application development in SAP HANA

- o A database layer (SAP HANA database)
- o An application server layer
- o A user interface (Fiori technologies)

Scope of our investigation:

Build a data-driven, user friendly architecture adjusting usiness finctions and

information to an arbitrarily chosen Enterprise.

- First apprpoach: Build a DataLake enviromenet and process the information in SAP Analytical Cloud, Data Warehose Cloud, SAP HANA

Submissions

Ádám Tarcsi and Tamás Orosz: Impact of applying user friendly technologies and tools in SAP Analytic Cloud environment, 17th IEEE International Symposium on Applied Computational Intelligence and Informatics, 2023 (in progress).

THANKS FOR YOUR ATTENTION