

# ENVISIONING A MODERN DATA PLATFORM SOLUTION



# DELIVERABLE

## WORKSHOP

### Preliminary talk

1  
hour

Collect general information about customer processes and existing IT infrastructure

Evaluate data transformation strategy

Identification of Pain Points

Discussion about potential Use Cases

### Big Picture

4  
hours

Investigation of existing data sources and IT infrastructure

Select fields of application to be covered by the Data Analytics Platform

Definition of use case for each field

Development of a common vision based on use cases

### Roadmap

4  
hours

Requirement engineering for use case  
Specify technical prerequisites  
Describe implementation strategy

Definition of MVP\* based on use case

Create architectural design of the data warehouse based on the requirements of the use case(s)

Development of a project plan

### Results Call

1  
hour

Management summary

Workshop Recap

Solution Design

Project Plan

Effort estimation & Offer

\* A working prototype with minimal functionality that allows it to be delivered quickly, providing initial experience for project stakeholders.



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## TECHNICAL SOLUTION DESIGN

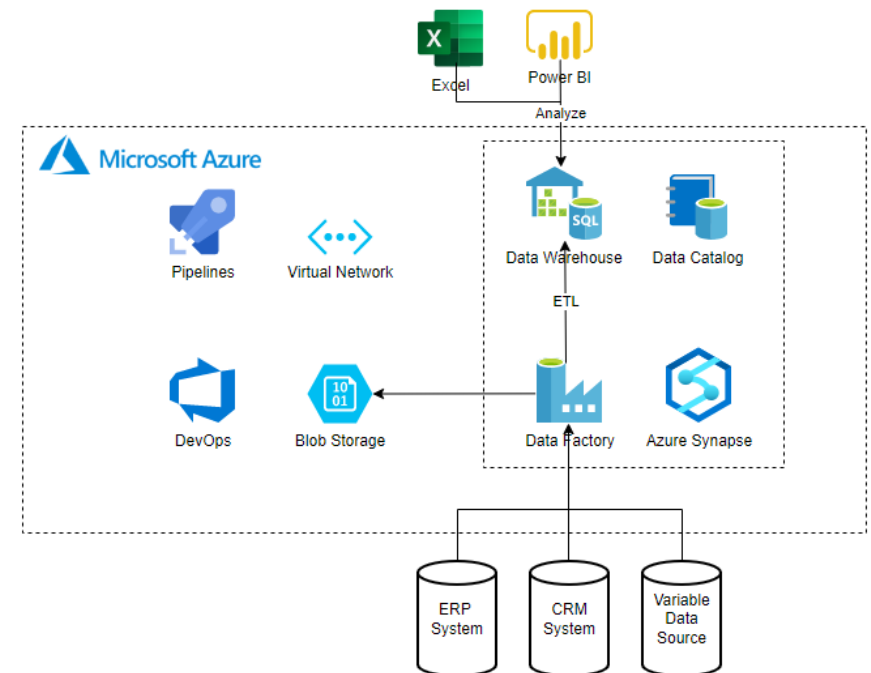


### Solution Design

Our architects build technical design solutions according to established best practices in coordination with your requirements. We focus on the customer's specific needs and challenges in order to find the most optimal solution. The source systems are treated agnostically, and the solution is optimally adapted to their use.

### Implementation Use Case

Data is pulled from various data sources on a scheduled interval. An Azure Data Factory Pipeline is being used to process custom made tasks. Within Azure Synapse, ETL Pipelines build up the different layers of the Data Warehouse. A Unified Data Model harmonizes the differently treated entities to present a single point of truth to the endusers. Business Users connect to the Datawarehouse using PowerBI. Users will be eligible to view only their respective Data. Data manipulation done by endusers will not persist on the Data Warehouse level.



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## BACKLOG

TinyHouse Team

Board Analytics View as Backlog

To Do

- 3 Build trigger function (0/3)
  - Define input folder structure
  - Azure BLOB Storage trigger for Azure Functions
  - Extract BLOB Storage content
- 8 Visualize with Power BI (0/2)
  - Connect to Power BI
  - Visualize

Doing (3/5)

- 4 Archive file (1/2)
  - Define folder structure
  - Save file to folder
- 6 Transform data with ADF (6/7)
  - Determine which format is to be used
  - Cut-off source file header
  - Transform xlsx file to SQL appropriate format
  - Create Master Pipeline
  - Create Data Flow for transformation
  - Create pre-processing Python script
  - Create Azure Batch Service/Azure Functions for Python script
- 7 Creation of DWH structure (3/3)
  - Determine which technology is to be used as Data Warehouse
  - Create table blueprint
  - load data into table

Won't Do (2/5)

- 22 DevOps - CI/CD (0/3)
  - Organize Git Repository
  - Organize DevOps Board
  - Build CI/CD Pipeline
- 24 Database Modelling (5/8)
  - Determine Data Model
  - Determine foreign keys
  - Creation of Staging tables
  - Creation of table structure
  - Link tables through foreign keys
  - Fill dwh tables with stg tables
  - Create views for Power BI connection
  - Link Resource Allocation with other tables

Done

- 32 Build Infrastructure with Terraform (3/3)
  - Write main.tf
  - Write variables.tf
  - Apply scripts
- 25 Build trigger in ADF (2/2)
  - Build trigger
  - Implement Trigger to Pipeline

### Roadmap - User Stories

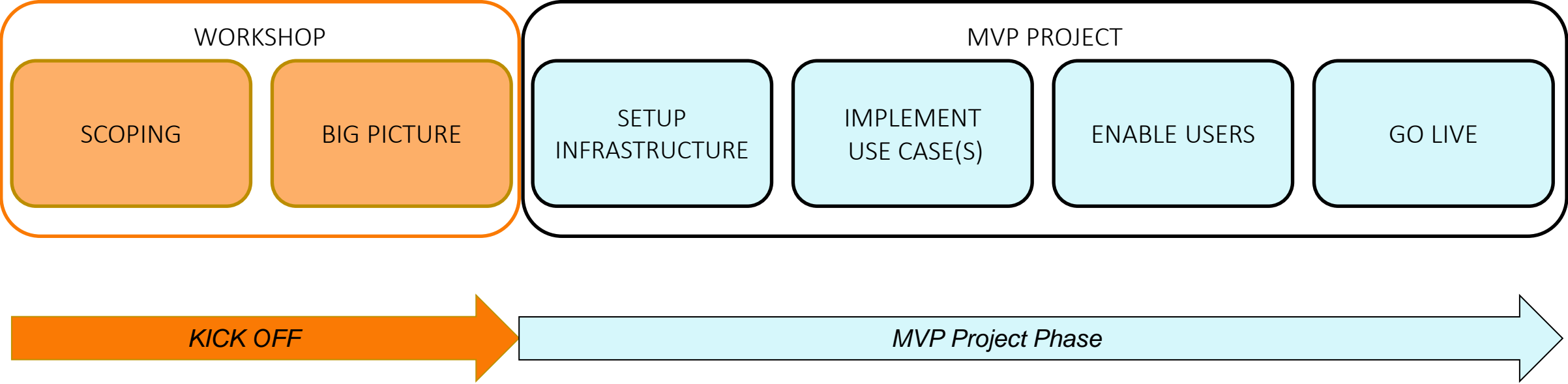
An agile backlog not only simplifies release and iteration planning, but includes all tasks for a team. The Product Backlog consists of a list of items that need to be completed during the development of the product.

A well-maintained backlog provides complete transparency of tasks and planning for each team member. In addition, it opens full control over the tasks, the distribution and processing of tasks.



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## PROJECT PLAN



# ONE PAGER

## Workshop Format

### Preliminary Talk – 1h 1

Introduction of customer processes, contexts and data strategy. Discussing the pain points and Use Cases.

### Big Picture – 4h 2

Overview of the existing data sources and IT infrastructure, with the selection and definition of application use cases.

### Roadmap – 4h 3

Identify the main technical prerequisites and architectural design for the implementation strategy of the MVP.

### Results – 1h 4

Mgmt. summary for stakeholders to support a decision and presentation of solution design and roadmap for next steps.

## Business Problems and Added Value

**Unification:** Turn consolidated view across multiple systems into a single Point of Truth for the entire Enterprise.

**Harmonization:** Turn not harmonized and error-prone data, with too many different KPI definitions into harmonized KPI definitions with little to no error probability.

**Reporting:** Turn necessary manual post-processing and manually created reports into automated procedures.

**Time-to-Market:** Turn time intensive development of new use cases into short termed solutions.

**Lack of Know-How:** Turn knowledge gaps into knowledge bases.

**Time Delay:** Eradicate time delays of current data and the business transactions to become visible.

Achievable by

## Deliverable: Solution Design and Project Plan

Our architects build technical design solutions according to established best practices in coordination with your requirements. We focus on the customer's specific needs and challenges in order to find the most optimal solution. Using the best tailored technology solution based on the Azure Stack, we combine data from all possible data sources and visualize it for further utilization. We use agile methods to deliver successful projects of various forms.

