



Become Data Driven with Azure Synapse Analytics

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 **Microsoft** in partnership with **CAPGEMINI**

Q&As from the Live Webinar

- **Where can I find learning resources about Azure Synapse?**

You can start with below learning paths (free and digital): - Work with Data Warehouses using Azure Synapse Analytics <https://docs.microsoft.com/en-us/learn/paths/work-with-data-warehouses-using-azure-synapse-analytics/> - Perform data engineering with Azure Synapse Apache Spark Pools <https://docs.microsoft.com/en-us/learn/paths/perform-data-engineering-with-azure-synapse-apache-spark-pools/> - Build data analytics solutions using Azure Synapse serverless SQL pools <https://docs.microsoft.com/en-us/learn/paths/build-data-analytics-solutions-using-azure-synapse-serverless-sql-pools/> - Realize Integrated Analytical Solutions with Azure Synapse Analytics <https://docs.microsoft.com/en-us/learn/paths/realize-integrated-analytical-solutions-with-azure-synapse-analytics/> - Work with Hybrid Transactional and Analytical Processing Solutions using Azure Synapse Analytics <https://docs.microsoft.com/en-us/learn/paths/work-with-hybrid-transactional-analytical-processing-solutions/>

- **Is the data volumes reasons why you choose Synapse over other database options?**

No. Its is rather easy of management and a single point operations for data engineers.

- **Where can I read more about the pricing of Azure Synapse?**

You can read about the pricing of Azure Synapse Analytics here: <https://azure.microsoft.com/en-us/pricing/details/synapse-analytics/> For estimating various scenarios I recommend the Azure Calculator: <https://azure.microsoft.com/en-us/pricing/calculator/> There is also a limited-time offer for free quantities of Azure Synapse Analytics available now if you want to test it: <https://azure.microsoft.com/en-us/blog/limited-time-free-quantities-offer-for-azure-synapse-analytics/>

- **Any interesting integration scenarios that are worth a mention? I mean integrating data from SharePoint, Dynamics and others**

Synapse is easy integrable with Dynamics and sharepoint, a single connector within the interface. 80+ sources are also available by default. From does linked services it is very easy to load data.

- **What is your take on Azure DevOps, pros/cons vs i.e. Github w/ Teraform and other approaches? Is it more well-integrated? How about more complex environments?**

For IaC and CI/CD, Teraform is still catching up in terms of functionality of data services in Azure, hence Powershell scripts and ARM is better at this point. Azure DevOps has quite a lot of features not yet available in Github, it is also easier to integrate Azure DevOps with the Azure tenant/subscriptions.

- **Thanks for a great presentation. When building your data warehouse using the Spark engine, what tools did you use for building the data warehouse (other than ingest with ADF)? And how did you approach data quality and data governance (i.e. lineage and ownership)?**

Thank you. Raw data was transformed with mapping data flows and spark notebooks depending on the complexity. Nothing special within synapse was done in regard to quality and governance. This is handled outside in documentation and following Backes own guidelines. There is flexibility here on how companies want to organize these topics.

- **Can ADF load Sharepoint lists into the data lake?**

Yes! Here is a documentation for Copying Data from SharePoint Online List using ADF <https://docs.microsoft.com/en-us/azure/data-factory/connector-sharepoint-online-list>

- **Approximately what would you say were the percentage of time used for Pipeline engineering compared to Report building and operationalizing?**

Pipeline planning and building approx 55-60%. Reports are migrated from previous solution meaning it takes less time. Coming up with new reports from scratch might be more time consuming.

- **Where can I read (non-tech) to best understand what Synapse is in comparison to Data Factory?**

Azure Data Factory is mostly focused on ETL and is near identical to the integration layer in Azure Synapse, but as mentioned Synapse is a lot more than integration, with a DWH solution, Big data processing and more. You can see feature differences here: <https://docs.microsoft.com/en-us/azure/synapse-analytics/data-integration/concepts-data-factory-differences>



Data as a strategic asset



Today's data realities



Volume



Variety



Velocity

What **data** do I have?

Is it **trustworthy**?

Can people access the **data** needed
to make the right decisions?

How can I **enable faster**
business insights?

What's my **compliance exposure**?

Digital feedback loop



**Data
culture** + **Data
capabilities** = **Data-Driven
Transformation**



Data culture

Driving data-centric, impact-oriented behavior



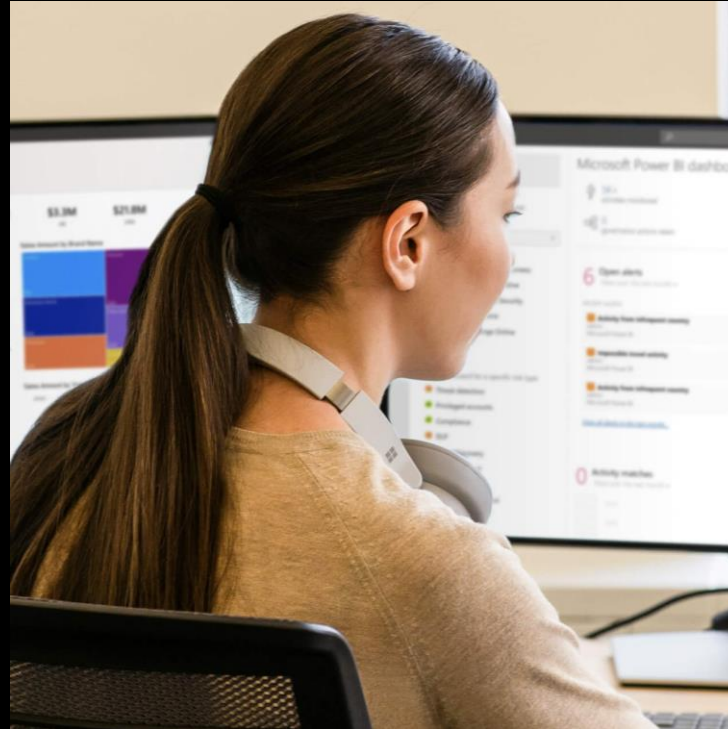
Data capabilities

Enabling innovation excellence

Characteristics of a data culture



Democratize access to data,
while responsibly governing



Data insights is an expected
part of all roles



Continually building skills,
unlearn and learn



Data culture

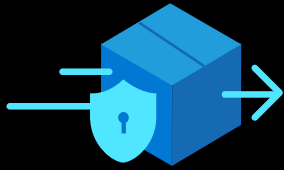
Driving data-centric, impact-oriented behavior



Data capabilities

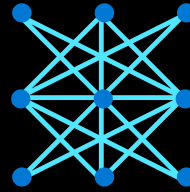
Enabling innovation excellence

Data capabilities



Data Modernization

Future-proof data platform, connect all data, key metrics



Analytics & Insights

Understanding customer behaviours to generate insights



Data Science

AI powered connected experiences



Data foundations

Enterprise grade security, high quality, discoverable data



The background features a conceptual diagram of the Azure Synapse Analytics architecture. At the center is a circular hub with a gear-like border, containing a server rack icon and a bar chart. Four lines radiate from this central hub to four distinct isometric platforms. The top platform shows a globe and interlocking gears. The bottom-left platform displays various 3D bar and line charts. The bottom-right platform depicts a cloud icon, a server rack, and several data storage cylinders. The entire scene is rendered in a dark blue, monochromatic style with a subtle grid pattern.

Azure Synapse Analytics

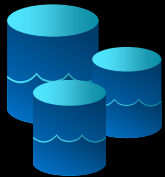
Data Science and Business Analytics

view data in very different ways

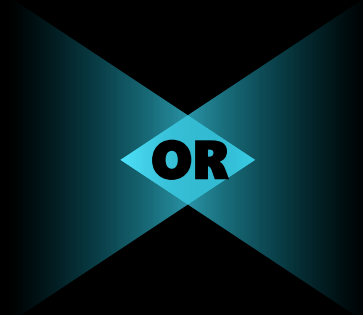


DATA SCIENCE

Big data
Experimentation
Fast exploration
Semi-structured



DATA LAKE



BUSINESS ANALYTICS

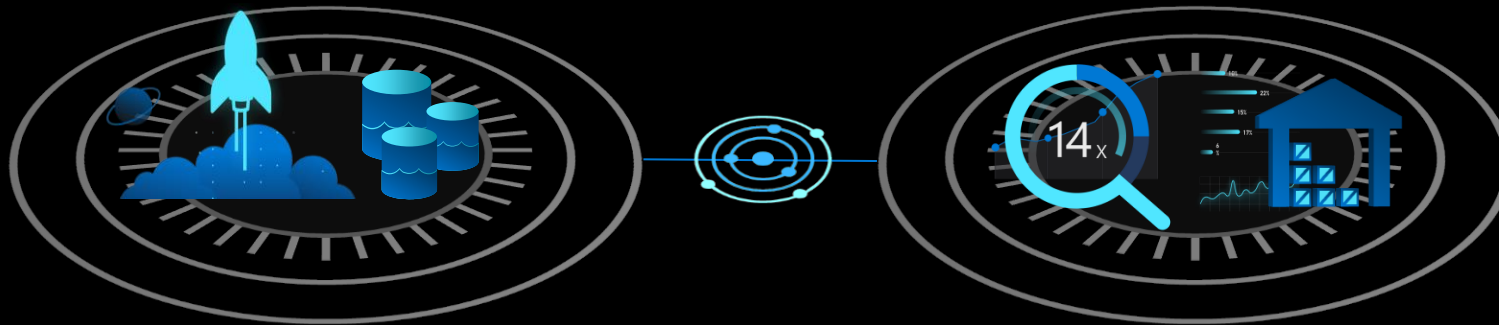
Relational data
Proven security & privacy
Dependable performance
Structured



DATA WAREHOUSE

Azure Synapse Analytics meets these challenges

with a single service to provide limitless analytics



Ease of use

Fast exploration

Quick to start

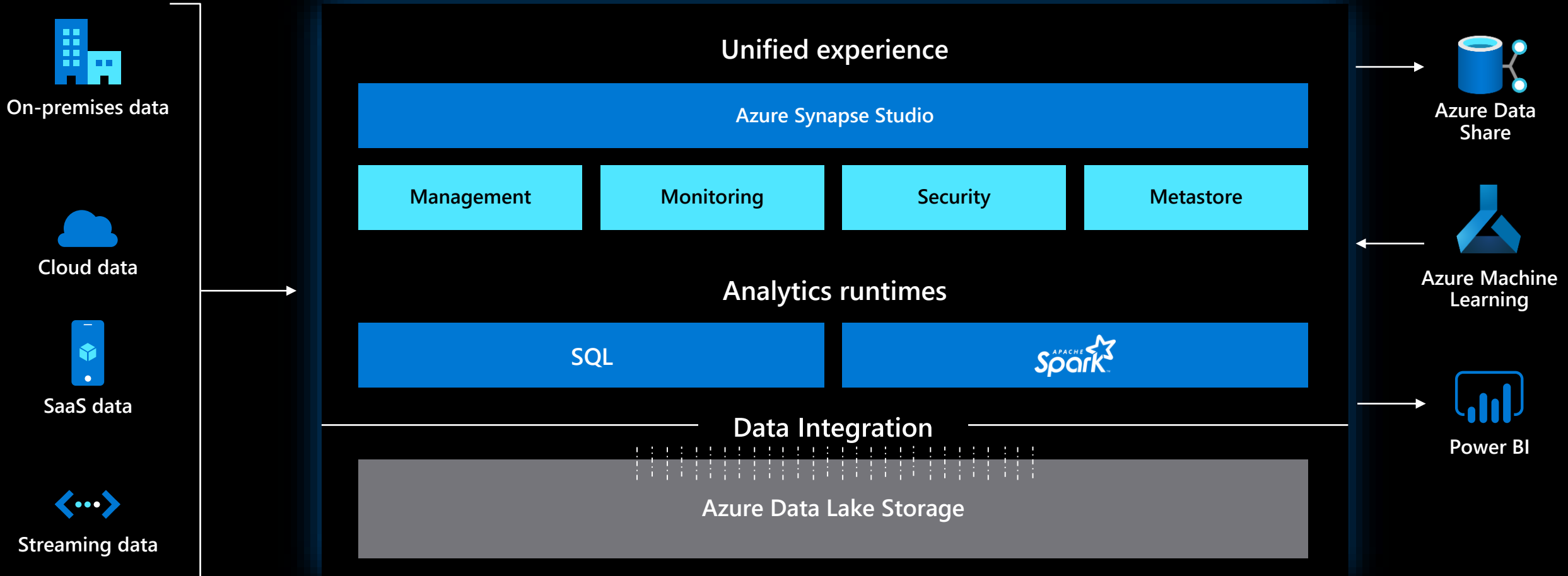
Proven security

Airtight privacy

Dependable performance

Azure Synapse

Limitless analytics service with unmatched time to insight



Synapse Analytics
Dynamics 365
Power BI



By building on **sector, strategy and transformation** expertise..

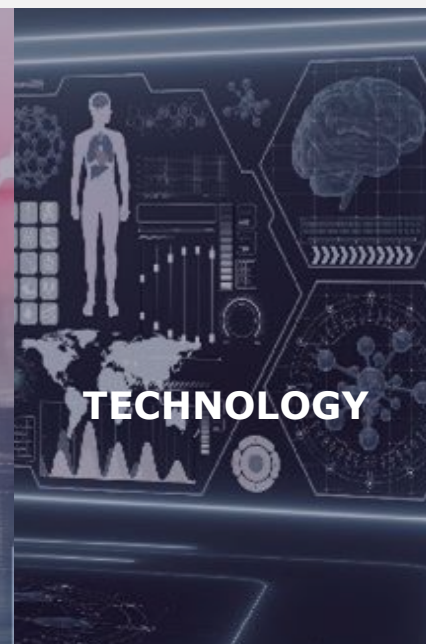
..competence on **business innovation** realisation..

..creative and iterative **design**..

.. expertise for **data and insight**..

..strong competence within **technology development, implementation and IT modernisation**..

..and **testing**...



...we can deliver unique end-to-end solutions

Capgemini Insights and Data



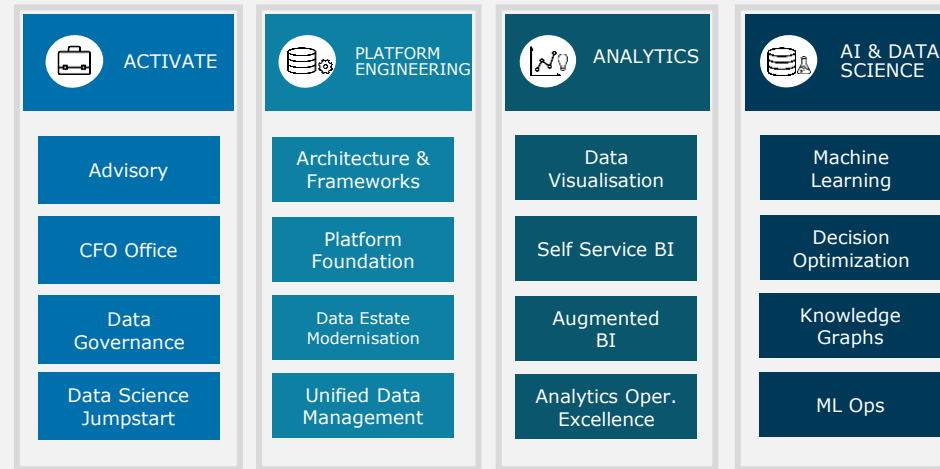
Capgemini Insights & Data

- Delivering Insights at the Point of Action



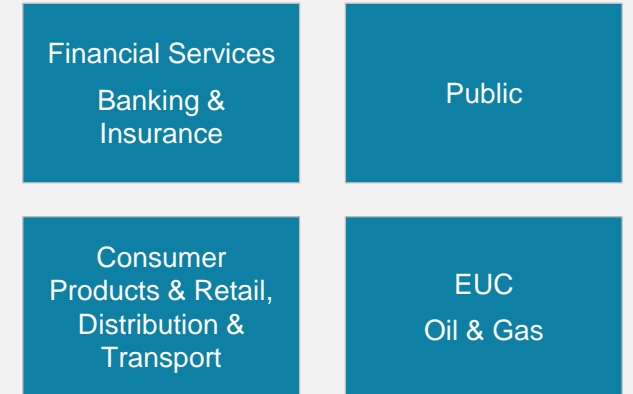
- Counting over 16 000 dedicated professionals across 40+ countries
- Strong foothold in Norway, with **220 consultants working on Norwegian clients**
- Capgemini named as **Leader in Gartner's Magic Quadrant 2020 for Data and Analytics Service Providers, Worldwide**

Full-service capabilities across Platform Engineering, Analytics and AI



- ACTIVATE** – ensuring the enterprise is mobilized and ready to leverage insights from data
- PLATFORM ENGINEERING** – building rock-solid foundations to ingest, store, access and analyze data – with a cloud first principle
- ANALYTICS** – Visualizations and reporting through state of the art vendors
- AI & DATA SCIENCE** – delivering powerful insights through business intelligence, analytics, AI and enterprise content management solutions

Local sector expertise, collaborating closely with global sector communities



Delivers across all relevant technology platforms





BACKE PROSJEKT AS

Established 1995

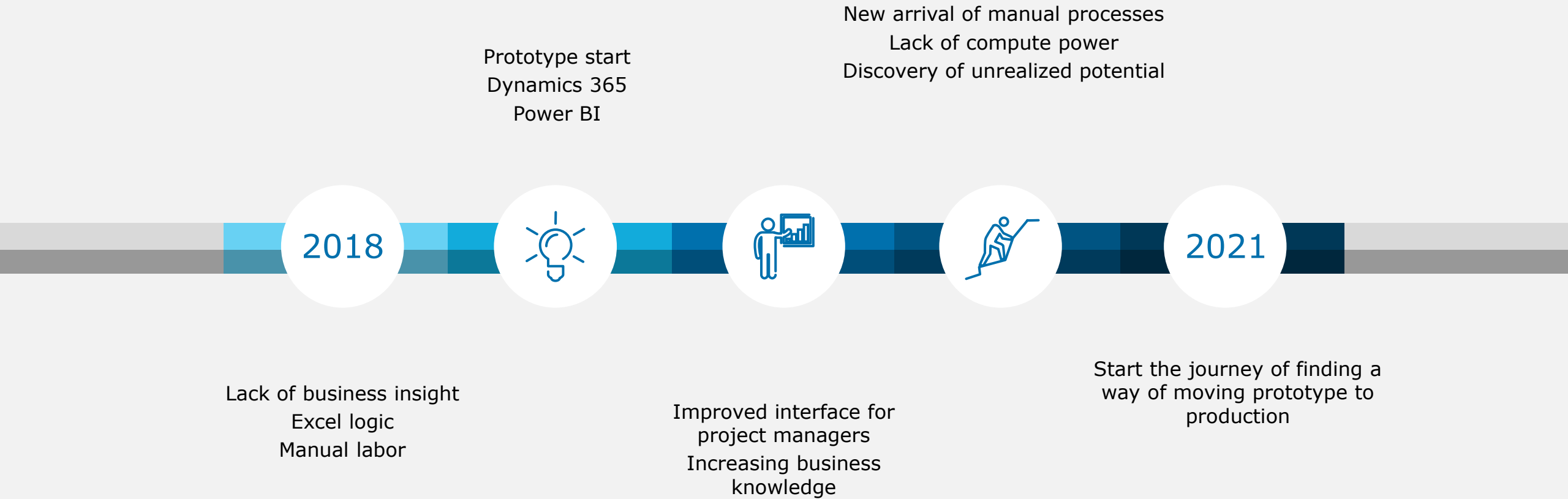
Active developer of housing, commercial real estate and public buildings.

Independent project development or in collaboration with landowners, partners and investors.

Ownership and business management for approximately 120 subsidiaries



History





Finance

Project financials
Budgeting
Transactions
Employees
Tax rules



Business

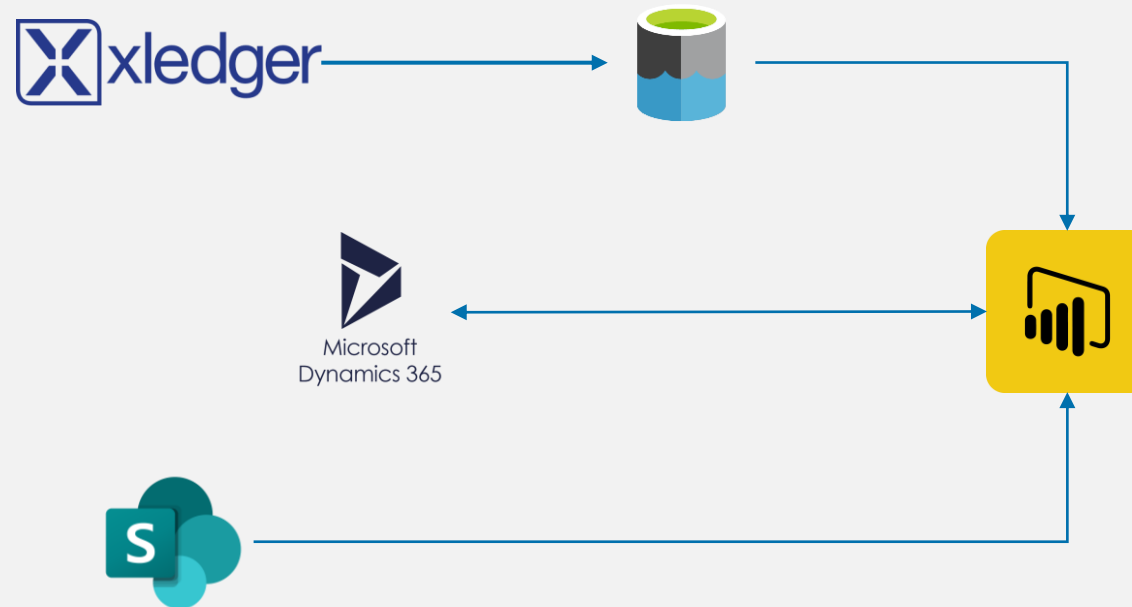
Sales information
Contracts
Construction phases



Reporting

Project reports
Financial reports
Project Managers
Forecasting

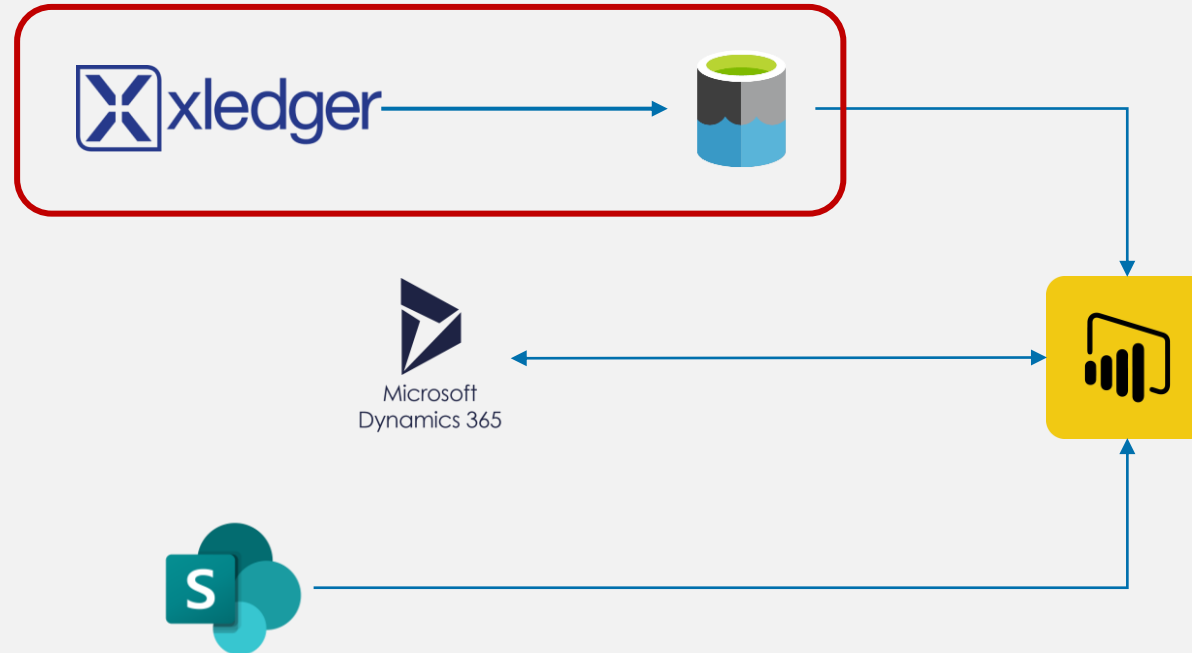
Prototype Architecture



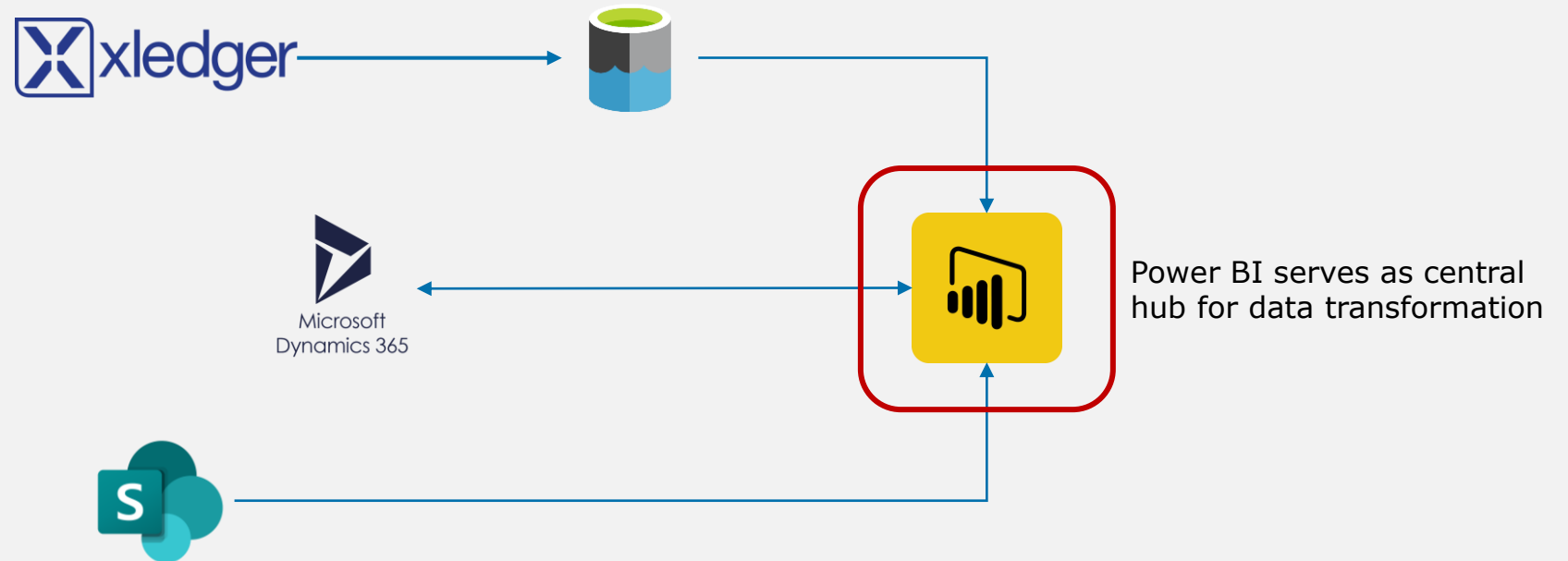
Prototype Architecture



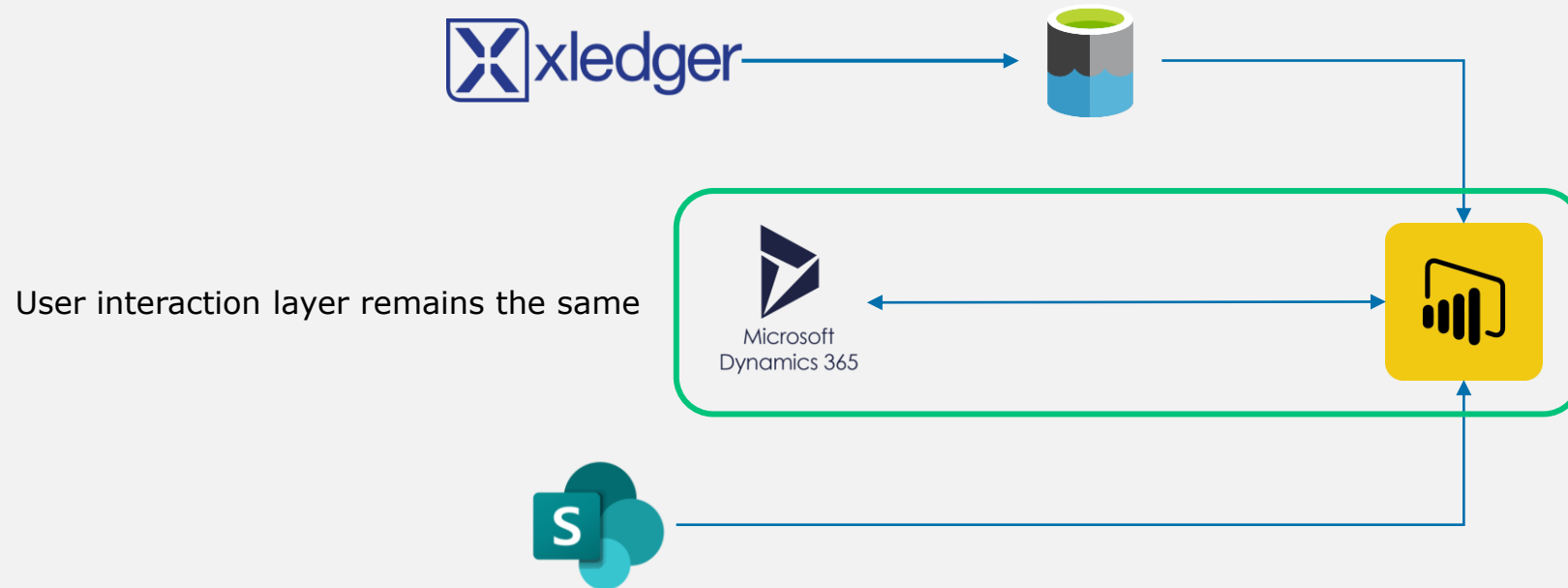
Manual processes to load data into data lake



Prototype Architecture



Prototype Architecture



Revised Architecture





Ingestion

Pipelines copying data from source

Scheduling, monitoring and automation

80+ sources available for direct connection



Transformation

Merge and transform data using spark technology

High on-demand scalability

Combine data from xledger, Dynamics 365 and Sharepoint in single interface



Reporting

Transformed data delivered to databases

Simplified and improved report building

Row-level security



Security

Azure Active Directory across all systems

Ease of management and control



Cost

Pay as you go

Pricing models for different services and usage



Control

Re-usability with Azure DevOps

Working environment for developers

Synapse Workspace



Synapse Analytics workspace
bp-t-synapse-workspace

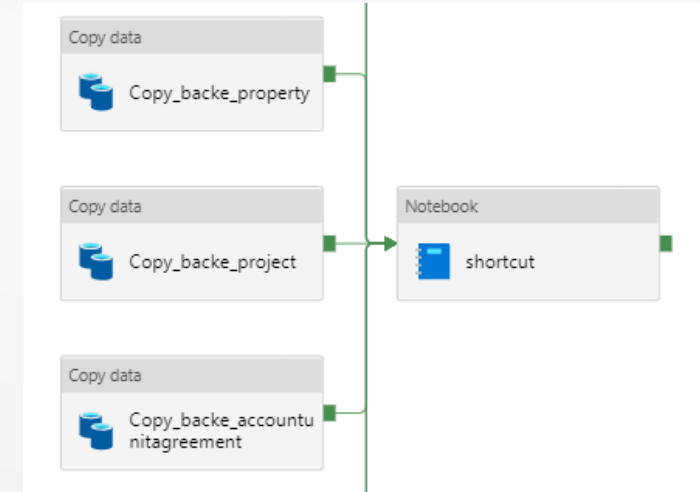
New ▾

Ingest
Perform a one-time or scheduled data load.

Explore and analyze
Learn how to get insights from your data.

Visualize
Build interactive reports with Power BI capabilities.

Learn
Start with Azure Open Datasets and sample code.



Microsoft Azure | Synapse Analytics | bp-t-synapse

» / main branch ▾ Validate all

Develop + ▾

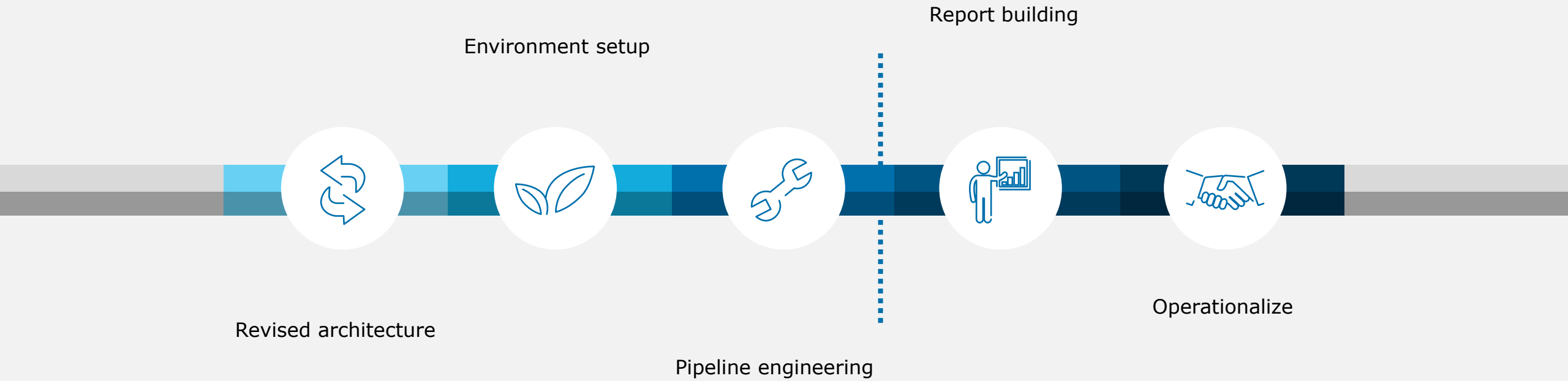
Filter resources by name

- SQL scripts 13
 - CreateTableScripts
 - Account
 - Backe_AccountUnitAgreements
 - Backe_ConstructionPhase
 - Backe_Projects
 - Backe_Properties

Run Undo ▾ Committed Query plan Connect to Built-in ▾

```
1 IF EXISTS (SELECT * FROM sys.external_tables WHERE name = 'Backe_Properties')
2   DROP EXTERNAL TABLE Backe_Properties
3
4 CREATE EXTERNAL TABLE Backe_Properties (
5   [backe_comment] varchar(8000),
6   [backe_constructionphaseid] varchar(8000),
7   [backe_constructionphaseidname] varchar(8000),
8   [backe_id] varchar(8000),
9   [backe_netvalue] numeric(38,18),
```

Timeline





THANK YOU

