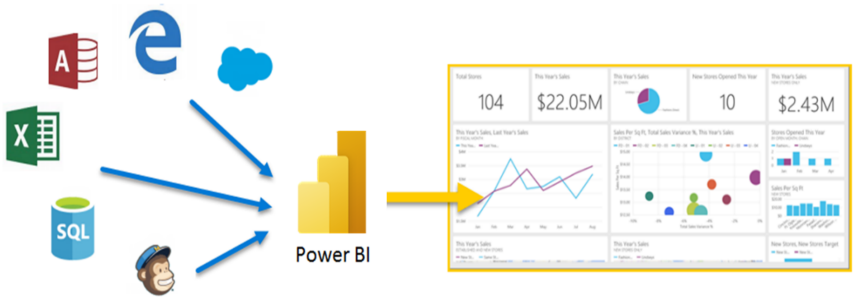
1. Get started

1.1. Introduction

This guide has been created for all Solvay employees, providing detailed insights on how to effectively use Microsoft Power BI and access to internal resources such as essential documents and forms, which play a crucial role in tasks such as license requests. Often described as Excel on "steroids", Power BI is anticipated to become an indispensable asset in daily business operations.

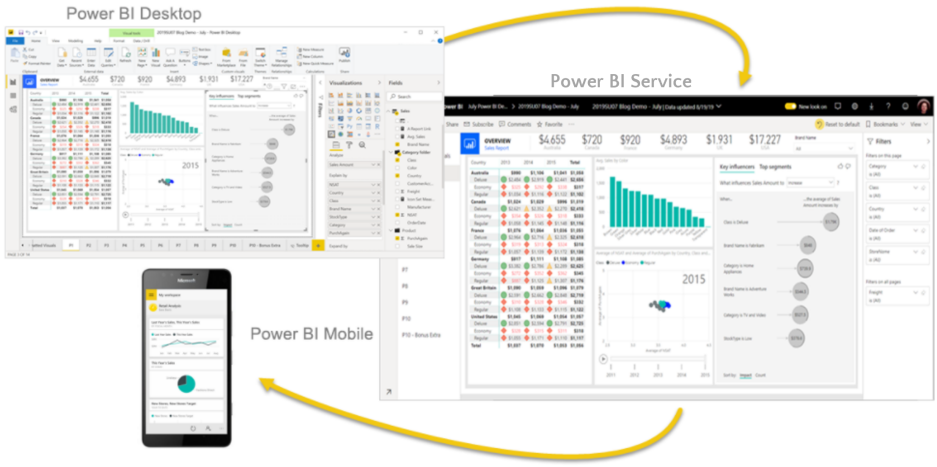
Microsoft Power BI stands as a powerful suite comprising software services, applications, and connectors designed to convert a variety of data sources into cohesive, visually engaging, and interactive insights. Acknowledged as a growing presence in business analytics, Power BI empowers users to visually represent their data and disseminate insights throughout an organization. This makes it an indispensable tool for SOLVAY employees.



With its user-friendly interface, Power BI efficiently consolidates data from diverse sources such as Excel spreadsheets and databases. It transforms this information into actionable insights, presented through easily comprehensible graphics. This streamlined approach not only enhances decision-making but also simplifies daily tasks, thereby improving services for SOLVAY employees.

Microsoft Environment

Microsoft Power BI is essentially composed of three key components: **Power BI Desktop**, used for creating reports on the computer; **Power BI Service**, an online platform that enables the sharing and interaction with these reports; and **Power BI Mobile**, which grants accessibility to these reports on mobile devices.



1.2. Power BI Desktop

Power BI Desktop serves as the starting point for data exploration. You can download this application from **Software Center**, and it is available free of charge and do not need license to use. There is no requirement for an account to utilize it, as it is accessible to anyone globally without the need for sign-up.

At **SOLVAY**, each user is granted authorization to access Power BI through their respective accounts. However, a dedicated procedure for installing this application is established. Details regarding this installation process will be provided later in this document.

> **Installation**
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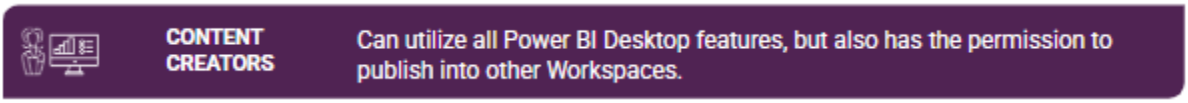
> Details regarding this installation process will be provided later in this document.

Within Power BI Desktop, you can establish connections to diverse data sources, structure your data, and create visual reports. The generated reports are saved as **.pbix files**, providing the flexibility to store them either on your computer or using online platforms such Data Ocean Platform and Google workspace. This enhances collaboration convenience during the development phase.

Although the application is accessible to be downloaded by all users, it's essential to emphasize that Power BI Desktop is primarily designed for users in the organization with a focus on the report development process.

This process covers several key phases:

1. Establishing connections and transforming data to ensure it is in the appropriate format for analysis.
2. Engaging in data modeling and employing DAX (Data Analysis Expressions) for advanced calculations.
3. Crafting visualizations to proficiently present the insights derived from the data.

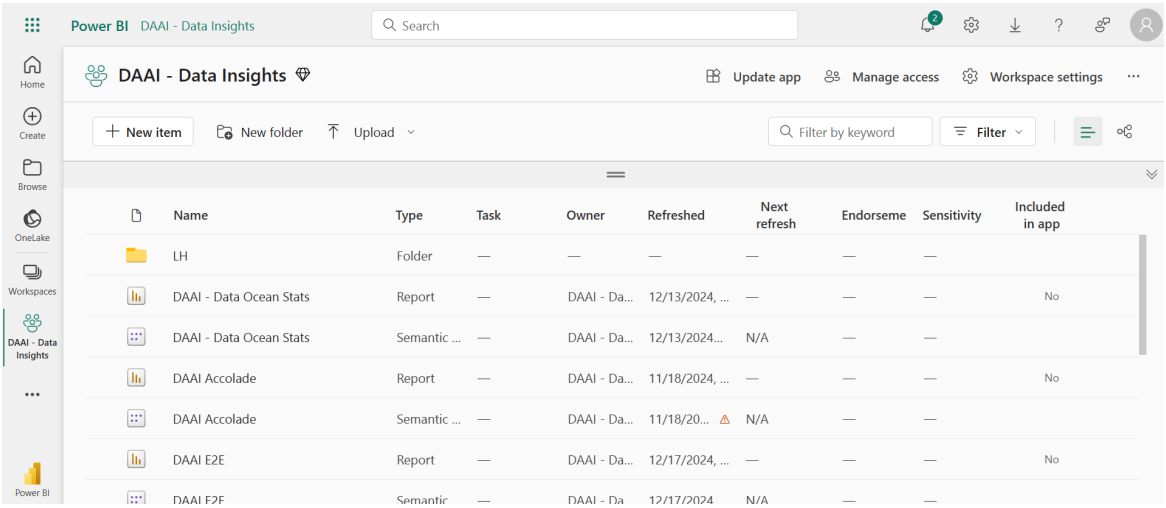


1.3. Power BI Service

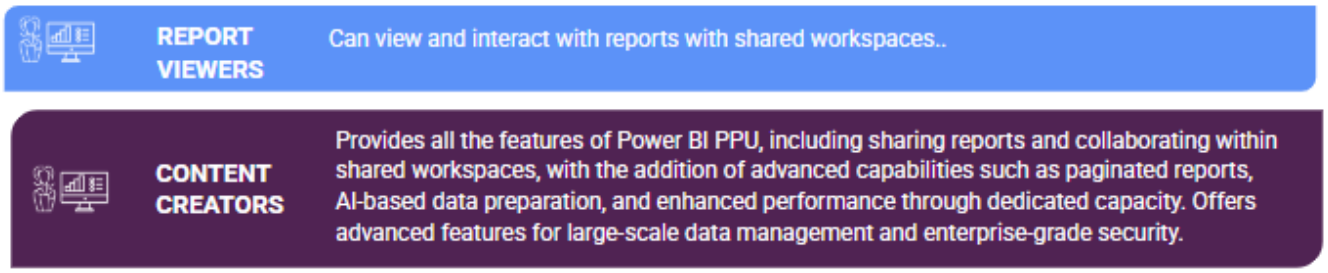
Turning the focus to **Power BI Service**, it's important to understand its role as the **core platform for sharing and accessing Power BI reports.** This platform serves as a pivotal hub for collaborating and interacting with your Power BI content.

It goes beyond being solely a repository for reports, providing numerous features to enhance your approach when working with reports. In this tool, the emphasis transitions from report creation to encompass dissemination, consumption, and collaborative engagement. This marks a notable shift from the development-oriented environment of Power BI Desktop.

While it is technically feasible to **generate reports from scratch in Power BI Service, we discourage this approach.** It is more suitable to use Power BI Service for making minor edits to pre-existing reports, assuming you have the required privileges. Nevertheless, it's crucial to note that changes made in Power BI Service won't be reflected in the original Power BI Desktop (.pbix) file. Therefore, for significant report creation and modification, Power BI Desktop continues to be the recommended tool.



Within **Power BI Service,** there are diverse user roles each possessing distinct capabilities. Organizations need to take this differentiation into account when defining access levels and responsibilities in Power BI. This ensures that everyone's access corresponds to their specific role and platform requirements.

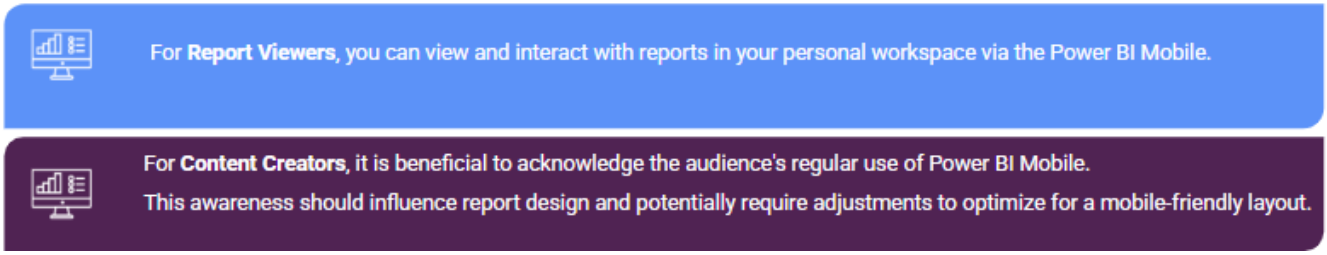


1.4. Power BI Mobile

Power BI Mobile enhances the accessibility of Power BI on both iOS and Android platforms, providing users with the flexibility to access and interact with their data while on the move. Key features include:

- Instant Access: Access your data and reports at your fingertips, ensuring constant availability from any location.
- Real-Time Sync: Stay in touch with real-time data updates, as reports on Power BI Service seamlessly synchronize with the mobile application.
- Interactive Experience: Enjoy a fully immersive experience as you interact with your reports and dashboards on your mobile device.
- Alerts and Sharing: Receive timely data alerts and easily share reports directly from your smartphone.

When numerous users access reports through the application, you have the flexibility to customize layouts, enhancing the mobile experience and ensuring optimal presentation. Power BI Mobile integrates smoothly with Power BI Service, providing real-time data connectivity.



Understanding how your audience engages with reports on mobile devices is essential for delivering effective data presentations.
In the subsequent sections of this document, it will be explored the tracking of these statistics and guiding adjusting reports for optimal mobile viewing.
This ensures that the reports remain user-friendly and impactful on mobile devices, just as they are on desktop platforms.

1.5. Objects

In Power BI, different **types of objects** play a distinct role in creating, managing, and sharing analytics and reports. Find more information about them in bellow.

A **workspace** is a collaborative environment in Power BI where users can create, manage, and share datasets, reports, dashboards, and apps.

- **Purpose**: Acts as a container for Power BI content.
- **Features**:
  - Collaboration among team members.
  - Staging area before publishing content as an app.
  - Access management for controlling who can view or modify the content.
- **Examples**: Marketing Workspace, Sales Workspace, or a specific project workspace.

Use case - Marketing Workspace, Sales Workspace.
An **app** in Power BI is a packaged collection of reports, dashboards, and datasets from a workspace.

- **Purpose**: Designed for distribution to a broader audience.
- **Features**:
  - End-users interact with the content without needing to access the workspace.
  - Easily updated when workspace content changes.
  - Controlled access to the audience (specific individuals or the entire organization).

Use Case - A Sales Performance app containing a dashboard summarizing key KPIs and detailed reports for in-depth analysis.
A **report** is an interactive collection of visuals based on a dataset or semantic model.

- **Purpose**: Provide detailed, interactive insights and data visualizations that help users analyze and interpret data in a meaningful way.

- **Features**:
  - Can span multiple pages, with each page containing a set of visuals like charts, tables, and maps.
  - Allows **interaction** through slicers, filters, and drill-through/drill-down capabilities.
  - Frequently used for detailed analysis and storytelling.

Use Case - A Product Sales report showing revenue trends, product category breakdowns, and regional performance.
A **dashboard** is a single-page, interactive canvas that aggregates visuals and insights from various reports.

- **Purpose**: Provides a high-level view of key metrics and trends.
- **Features**:
  - Tiles: Each visual, such as charts, KPIs, or images, is a tile that links to the underlying report.
  - Cross-source integration: Combines visuals from multiple datasets or reports.
  - Real-time updates for streaming data.

Use Case - An Executive Dashboard showing revenue, customer satisfaction, and operational metrics.
The **semantic model** is the underlying data model in Power BI, which provides the structure and logic for querying and analysis.

- **Purpose**: Transforms raw data into meaningful insights.
- **Features**:
  - Relationships: Defines connections between tables.
  - Measures and Calculations: Uses DAX (Data Analysis Expressions) to create calculated columns, measures, and KPIs.
  - Metadata Layer: Offers a user-friendly abstraction, such as renaming columns or creating hierarchies.
  - Power BI Dataflows: Can act as a reusable layer in the semantic model.

Example Use Case - A sales data model with relationships between Customers, Orders, and Products, with pre-built measures for Total Sales and Year-to-Date Revenue.