

## POWER PLATFORM GUIDELINES

### 1 Microsoft Power Platform Guidelines

#### 1.1 Introduction

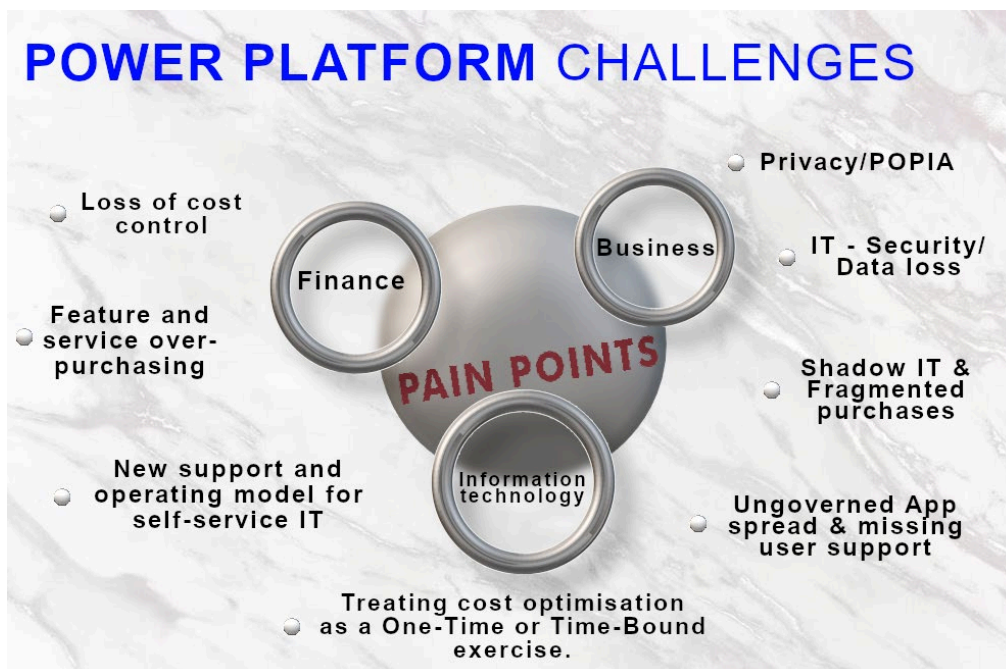
Microsoft Power Platform is a collection of low-code and no-code (LCNC) tools and services designed to empower users to build custom business solutions. It comprises four key components: Power Apps, Power Automate, Power BI, and Power Virtual Agents. This is the preferred solution for enabling the NWU in its Digital transformation path.

#### 1.2 Purpose of this document

This document will form part of a bigger NWU low-code and no-code strategy and will address guidelines for governing the following components of the platform:

1. Power Applications
2. Power Automate
3. Power Business Intelligence
4. Power Virtual agents
5. Artificial Intelligence applications

The guidelines, roles, and responsibilities stipulated in this document aim to ensure that the low-code and no-code platform will be maintainable and comply with industry best practices. The following challenges need to be managed to reach this goal:



### 1.3 Motivation for Guidelines document

Power platform applications can quickly create powerful and functionally rich applications.

The guidelines for Microsoft Power Platform apps should serve as a roadmap for creating high-quality, user-friendly, cost-effective, sustainable, and efficient solutions. Guidelines will contribute to better user experience, reinforce branding, and support collaboration and scalability, ultimately benefiting both app creators and end-users.

The platform offers extensive integration possibilities through Microsoft's connector ecosystem to services such as Azure, SharePoint, Active Directory, Groups, and many third-party vendor platforms like Adobe, Amazon, Dropbox, Google, etc. Over 600 connectors are available. Connectors can be standard (included) or Premium (cost involved). Guidelines will further contribute to reduction of the duplication of apps and data.

The following components of the platform will be addressed:

- Licensing

The Microsoft licensing model has multiple plans that influence usage and cost of applications. Microsoft 365 licensing constantly changes and connectors might be changed to premium connectors.

- Low-code services

Although the platform enables users to build simple applications with its low-code services, applications with complex business logic need to adhere to best practices and be maintainable.

- Security and Privacy

Microsoft has policies that need to be set to help identify and prevent unsafe or inappropriate sharing, transfer, or use of sensitive data (Data loss prevention (DLP) protocol). Connectors to social media platforms like Twitter can cause that organizational data that are not approved to be shared will be shared. Therefore access to these connectors needs to be limited.

- Data and application duplication

From the application already built, information like module, students per module, etc., were used in a few applications. Data was duplicated in lists, excel files, and Dataverse. It is important to have centralized business data sources. This is not the only issue. The risk for applications with similar functionalities can be developed, therefore monitoring the platform is essential.

### 1.4 Background knowledge

Before looking at specific guidelines it is important to understand the following:

#### 1.4.1 Power platform Project classification

Power platform development projects are classified as:

- Enterprise application projects
- Business Unit (Faculty/ Department) applications projects
- Personal Development and Training application projects

**Some guidelines will apply to all project types, but each type will have specific guidelines.**

#### 1.4.2 Types of development tools

This NCLC platform allows for different types of development tools. The following development tools are allowed and do not depend on the project type.

- Canvas apps
- Dataverse apps
- Power Automate
- Power Pages
- Artificial Intelligence services
- Power BI Dashboards

Due to potential cost implications, some types will only be allowed per request. Please see 1.6 General guidelines.

### 1.4.3 Environments in the Power platform

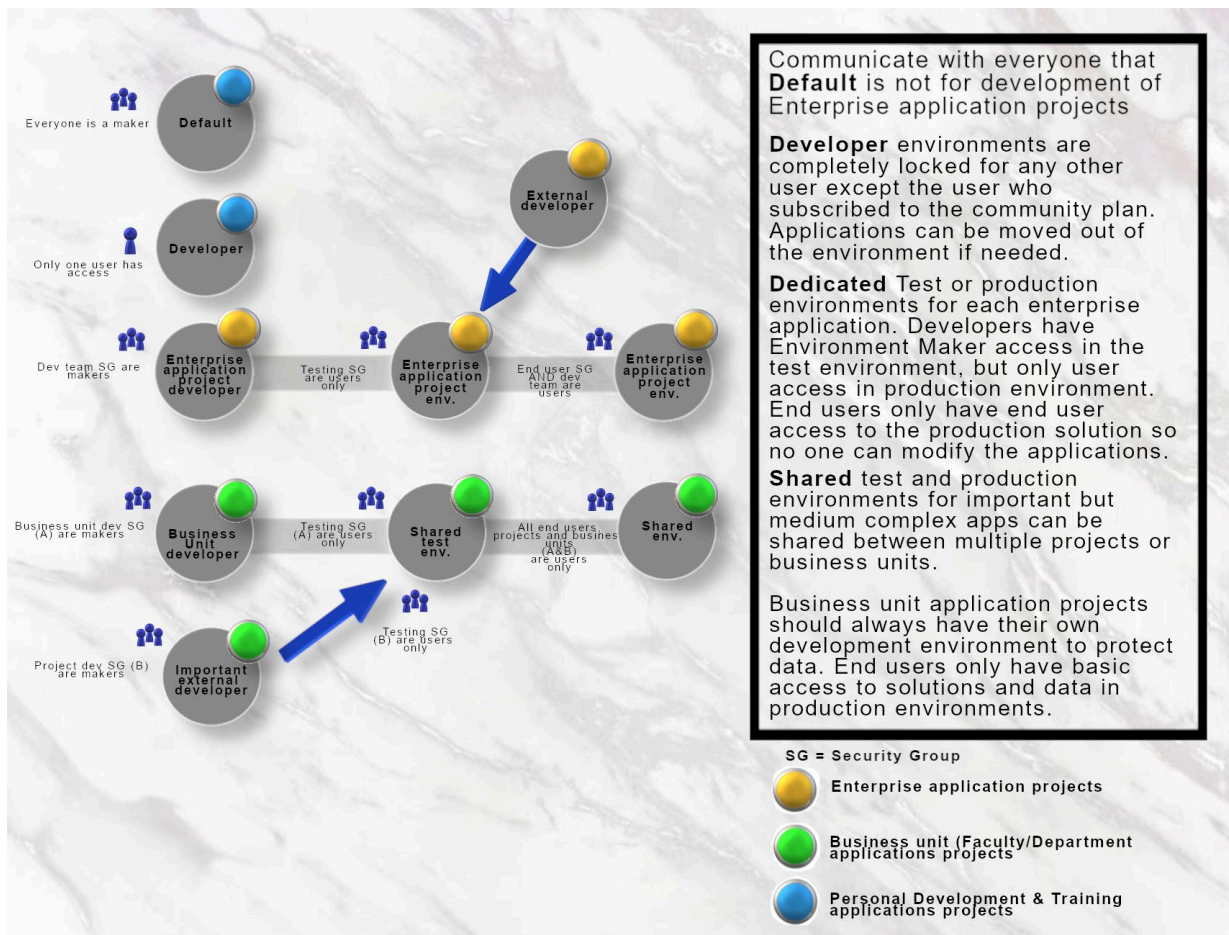
In the Power platform context, environments are the containers in which apps and flows run. They provide a way to separate and manage different stages of the application development lifecycle, such as testing and production. Environments can also control access, licensing and permissions, enabling different teams or individuals to work independently in designated environments.

Overall, Power Platform environments provide a structured and controlled container for building and managing applications, workflows, and data within the Microsoft Power Platform ecosystem.

### 1.4.4 Data Connectors

The platform offers extensive integration possibilities through Microsoft's connector ecosystem to services such as Azure, SharePoint, Active Directory, Groups, and many third-party vendor platforms like Adobe, Amazon, Dropbox, Google, etc. Connectors can be Standard (included) or Premium (cost involved).

## 1.5 Summarised schematic of the Guidelines



## 1.6 General Guidelines

### 1.6.1 Licensing

- Per-user, Per-app, and subscription licenses will be the only allowed license types.
- Premium connectors will only be available per request.
- Requests will be handled via an application distributed via Teams. The information per Addendum 1.8.2 will have to be supplied.

### 1.6.2 Low-code Services

- Canvas apps will be the default development platform without premium connectors.
- Dataverse apps: Per request
- Power Pages: Per request
- AI: Per request.
- Power Automate flows with a premium connector if the flow requires more than the allowed requests in the free license need to be on request

### 1.6.3 Security and Privacy

- To ensure sustainability, each application needs an owner and co-owner.
- If there is more than one application in one environment, it does not influence each other.
- Access to the Environments and Applications will be managed via grouper and security groups within the Tenant.
- Test Environments will only be shared with the developers and a core team of members for testing purposes.
- Production environments will be shared with end users.
- Applications can be distributed in the NWU organisational store within Teams or via a link within a Chat or Team.
- DLP (Data Lost Prevention) Policies
  - Default policy: This will be implemented in all Faculty/Departmental Environments. Only standard connectors will be available.
  - Revised Default Policy: The application owner must submit a request and motivation for activating a premium connector. During the application's approval process, the owner must understand the licensing implications and budget accordingly.
- External developers
  - Access to the NWU tenant as guests will be needed, registered via the guest registration process.
  - Only access to test environments will be granted. IT will promote the applications to Production environments via Azure pipelines.
  - A signed contract between the NWU relevant department/faculty and the developer/company needs to exist before access will be granted.

### 1.6.4 Monitoring

- IT will monitor the Power platform for efficiency and risk management purposes via the Microsoft COE (Centre of Excellence) platform.

## 1.7 Specific Project Type Guidelines

### 1.7.1 Personal Development and Training application projects

- All users have access and can develop in the default environment associated with the NWU tenant.
- Applications developed in this environment will have a retention period of 6 months.
- Applications developed in this environment will have to be promoted to the test environment and then the production environment of the Department or Faculty to assure longevity.
- Support will be the responsibility of the developer(s).

### 1.7.2 Business Unit (Faculty/ Department) applications projects

- A test environment and production environment will be created for every department and faculty Each application needs an owner and co-owner.
- Access to the Environment and Applications will be managed via grouper and security groups within the Tenant.
- A Faculty or Department is responsible for the support of the applications in their environment.
- Applications can be distributed in the NWU organisational store within Teams or via a link within a Chat or Team.
- Standard connectors will be available. Premium connectors per request
- All applications will be hosted in one environment. Applications will not have an influence on each another.
- Support will be the responsibility of the Department or Faculty.

### 1.7.3 Enterprise application projects

- Enterprise applications in the Power platform requires IT involvement from the conception phase of the project.
- The project charter will serve at the IT Committee and will define the scope, support and governance of the project.
- The IT Committee needs to approve the project before development commences.
- The application needs an executive-level (DVC) owner.
- The application will be hosted in its own environment in the NWU tenant.
- Access to the Environment and Applications will be managed via grouper and security groups within the tenant.

## 1.8 Addendums

### 1.8.1 Glossary

#	Focus Area	Description
1	<b>Per-User License</b>	A per-user license is a licensing model where a license is assigned to an individual user. This means the user can access the licensed software or services from any device. The license is associated with the user's identity rather than a specific device
2	<b>Per-App License</b>	A per-app license is a licensing model where a license is assigned to a specific application or software. This means that the license is tied to a particular application, and the user can only access that specific app with the assigned license.
3	<b>Subscription License</b>	A subscription license is a licensing model where users pay a recurring fee, typically on a monthly or annual basis, to access software or services. The subscription model often provides users with the latest updates, new features, and support during the subscription period.
4	<b>Microsoft 365</b>	Microsoft 365 is a subscription-based service that combines various Microsoft products and services, including Office applications (such as Word, Excel, PowerPoint), cloud services (such as OneDrive and SharePoint), and collaboration tools (such as Microsoft Teams). Microsoft 365 offers different subscription plans for individuals, families, and businesses.
5	<b>Microsoft Power Platform:</b>	A collection of tools and services provided by Microsoft that allows users to create, customize, and deploy business applications. It consists of four main components: Power Apps, Power Automate, Power BI, and Power Virtual Agents
6	<b>Low Code No Code (LCNC) Platform:</b>	A collection of tools and services provided by Microsoft that allows users to create, customize, and deploy business applications. It consists of four main components: Power Apps, Power Automate, Power BI, and Power Virtual Agents.
7	<b>Power Apps</b>	A component of Microsoft Power Platform that allows users to build custom business applications using a low-code development approach. Power Apps provides a visual designer, a wide range of pre-built templates, connectors to various data sources, and the ability to extend functionality using formulas and expressions
8	<b>Power Automate</b>	Formerly known as Microsoft Flow, Power Automate is a part of Microsoft Power Platform that enables users to create automated workflows and business processes. It provides a visual interface for defining triggers, actions, and conditions to automate repetitive tasks across different applications and services.
8	<b>Power BI</b>	A business intelligence and data visualization tool in Microsoft Power Platform. Power BI allows users to connect to various data sources, create interactive reports and dashboards, and share insights with others. It supports data exploration, data modelling, and data transformation capabilities
10	<b>Power Virtual Agents</b>	A chatbot development tool within Microsoft Power Platform. Power Virtual Agents enables users to build AI-powered chatbots using a visual interface. It provides pre-built templates, natural language understanding capabilities, and integration with other Power Platform services.



#	Focus Area	Description
11	<b>Dataverse</b>	A cloud-based data storage and management service provided by Microsoft Power Platform. Dataverse serves as a relational database for storing and organizing business data used in Power Apps, Power Automate, and Power BI applications. It offers data security, governance, and advanced capabilities like data integration and data modelling
12	<b>Dataverse App</b>	An application built using Power Apps and backed by the Dataverse data storage. Dataverse apps allow users to create custom forms, views, and business logic to manage and interact with data stored in Dataverse. They can be accessed through web browsers, mobile devices, or integrated within other Microsoft 365 applications. <b>Connectors:</b> Integration points provided by Power Platform that enable communication and data exchange between different applications and services. Connectors allow Power Apps and Power Automate to interact with a wide range of external systems, such as databases, cloud services, social media platforms, and more.
13	<b>Connectors</b>	Integration points provided by Power Platform that enable communication and data exchange between different applications and services. Connectors allow Power Apps and Power Automate to interact with a wide range of external systems, such as databases, cloud services, social media platforms, and more
14	<b>Canvas App</b>	A type of Power App that offers a blank canvas for designing custom user interfaces and interactions. With a canvas app, users have full control over the layout, design, and behaviour of the application, allowing for highly tailored experiences and flexible customization.
15	<b>Model-driven App</b>	Another type of Power App that focuses on building applications using a data-driven approach. Model-driven apps leverage the data structure defined in Dataverse to automatically generate user interfaces and navigation based on the underlying data model. They provide a consistent and structured way of building applications
16	<b>Power Platform Solutions</b>	Bundles of components, configurations, and logic that can be packaged and distributed as a unit. Solutions enable users to package and move applications, flows, dashboards, and other assets across different environments, such as development, testing, and production.

## 1.8.2 Information needed for requests

### 1.8.2.1 How to request

A service manager ticket (IT Help) must be submitted including the information as in 1.2.

### 1.8.2.2 Information needed

- **Requesting the use of premium data connectors, e.g dataverse.**  
The following questions must be answered when an application is requested.
  - Name of the requesting application owner. The owner will be notified of additional costs according to the number of application users.
  - Name of the desired product
    - Power Application with premium connectors
      - Dataverse
      - MySql
      - Web services
      - SQL
      - Mongo

- Converter applications (e.g., Word to PDF)
    - Power pages
  - PowerBi Dashboards with premium connectors
    - Dataverse
    - MySql
    - Web services
    - SQL
    - Mongo
  - Complex Power Automate flows
    - Cloud flow
    - Data flow
  - Artificial Intelligence applications
    - Bot
    - VIVA AI
- Application/Dashboard Name

Describe the application/Dashboard (The purpose of the application/dashboard)