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Breaking down barriers: How to integrate D365 with External  
Systems

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# Agenda

- Introduction
- Antipatterns
- Best practices
- Real-Life Scenarios
- Q&A

# Introduction

Let's start from the same page!



# Why integrations?

- Improve business processes from end to end
- Maximize the power of Microsoft ecosystem, both with external services, but also within the D365 ecosystem itself
- Data consistency across multiple platforms



Lot's of options – we show you some!



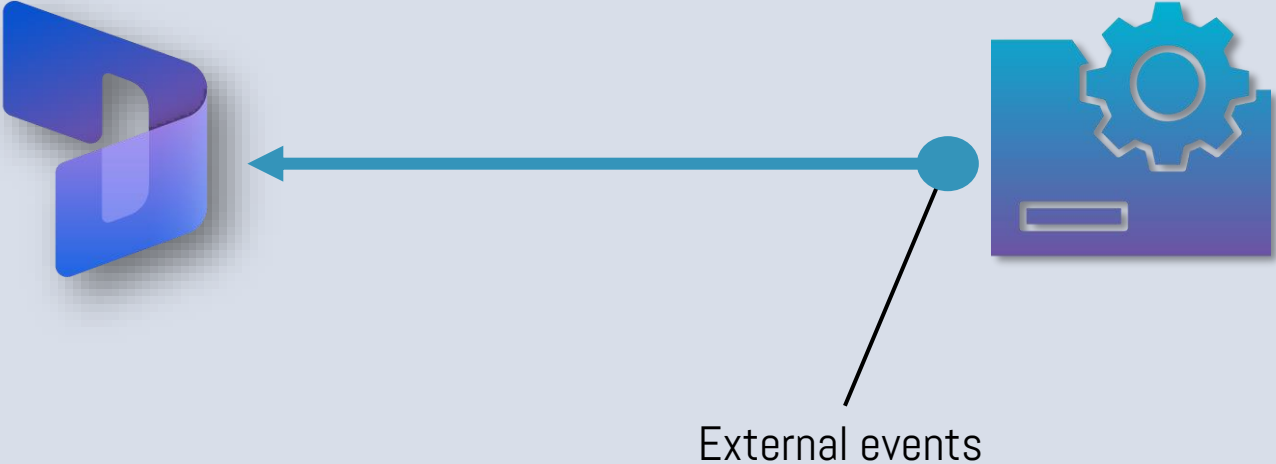
# Introduction

## Understanding integrations



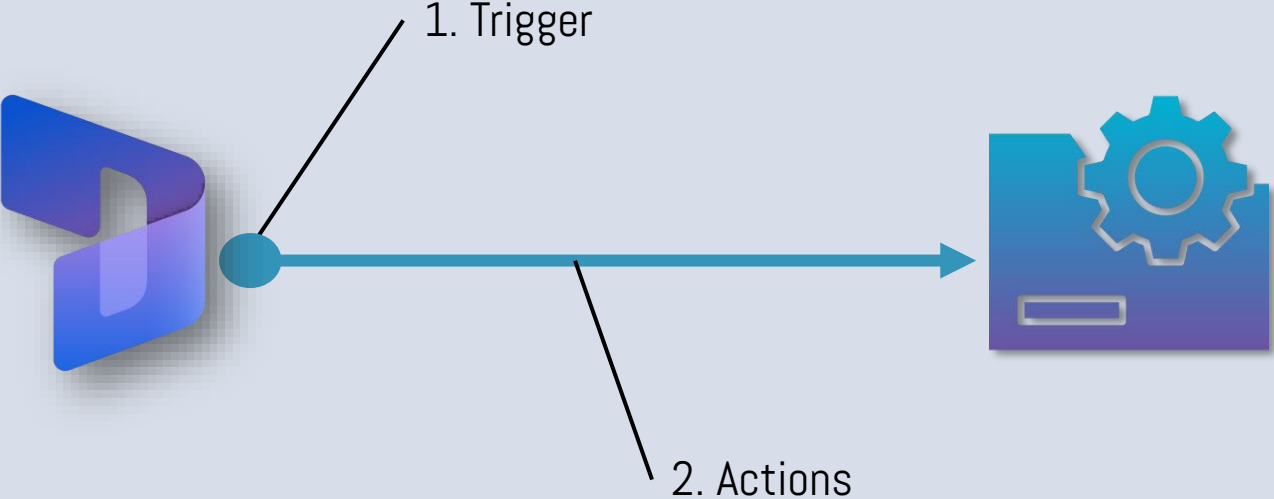
# Introduction

## Inbound integrations



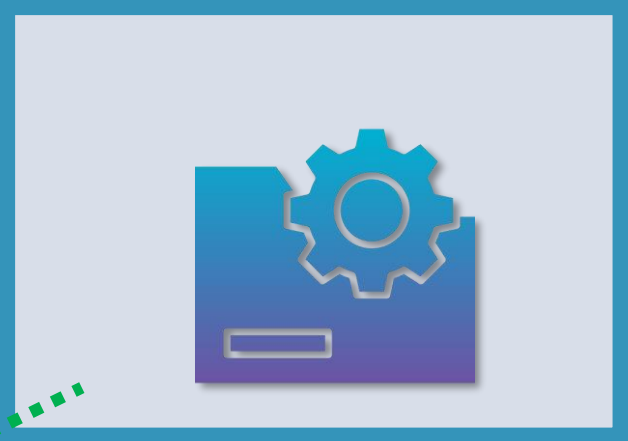
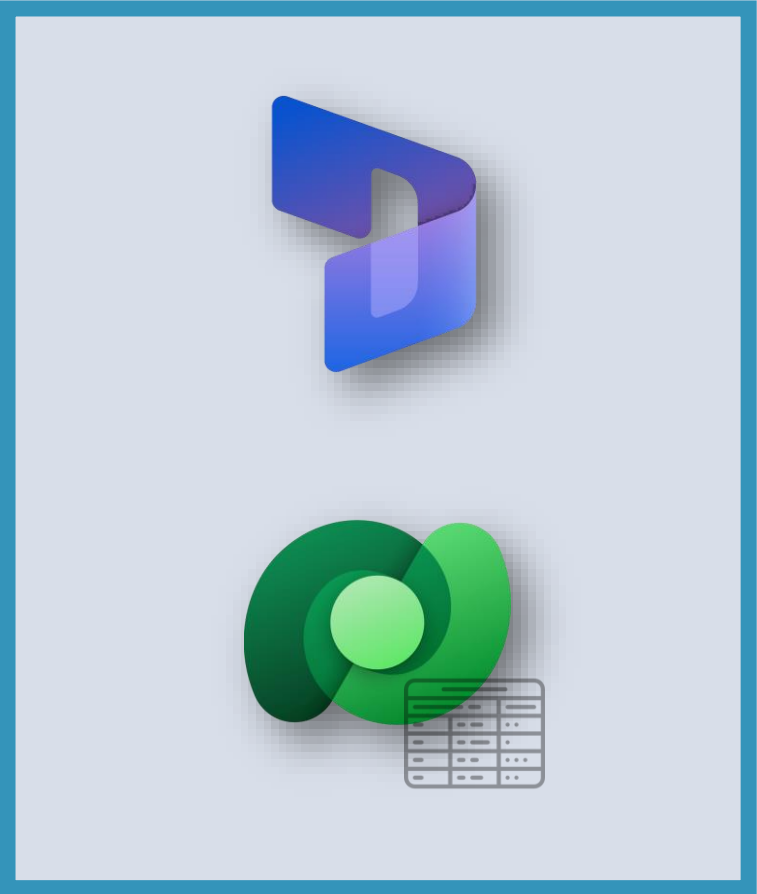
# Introduction

## Outbound integrations



# Introduction

Surfacing data



No Copying!

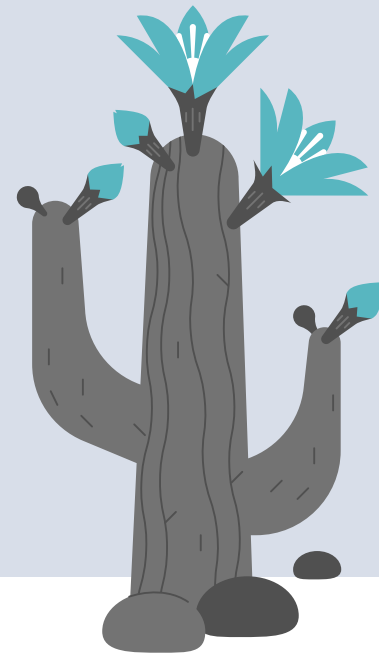


Aggregating / Measures



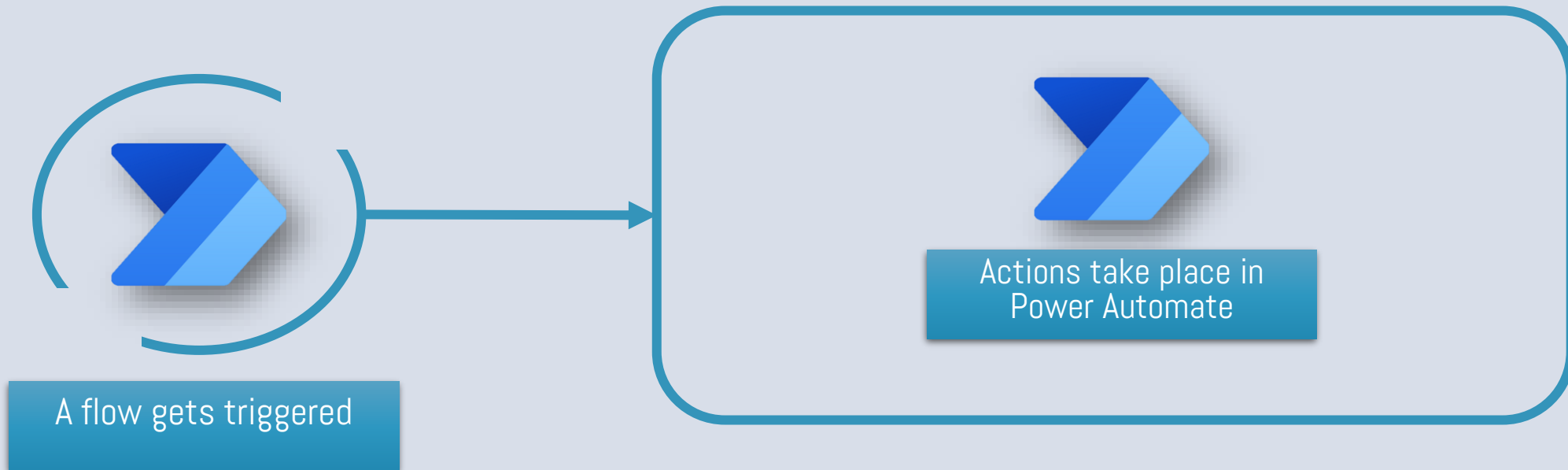
# Antipattern(s)

Definitely not the way



# Power Automate Flow

It's Power Automate not Power Integrate!



# Power Automate Flow

## Advantages and disadvantages



- No code needed
- Integrated within the Power Platform
- Many actions available



- Hard to maintain when it has too many steps
- It's slow
- Error handling is not the best
- Licensing is getting stricter



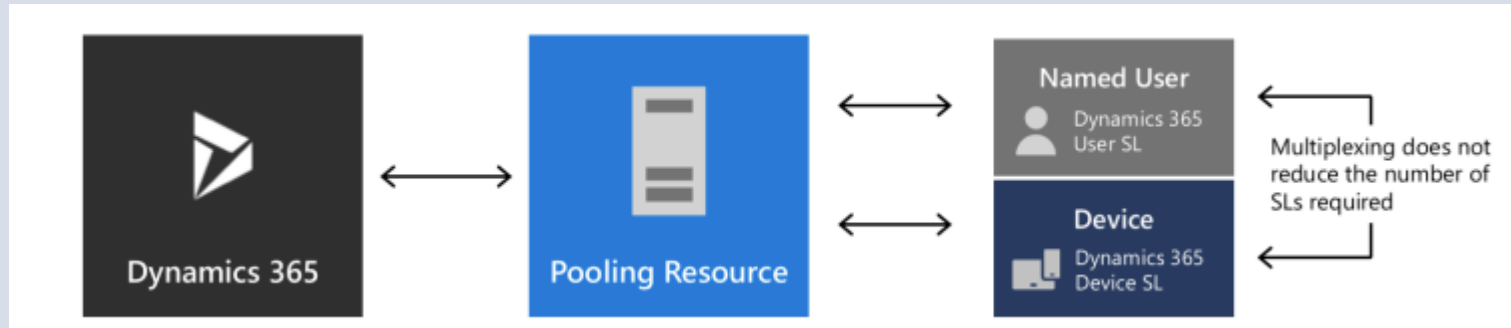
# Power Automate Flow

## Be aware of licensing

- Flows running integrations need to be licensed, either as a Flow or as a user
- If user license is used be aware of Multiplexing!
- **Warning:** It's hard to get concrete answers to licensing questions
- **Warning:** Licensing might change frequently for Power Automate!

# Multiplexing

Just because there is a technical way to avoid a license does not mean you don't need one



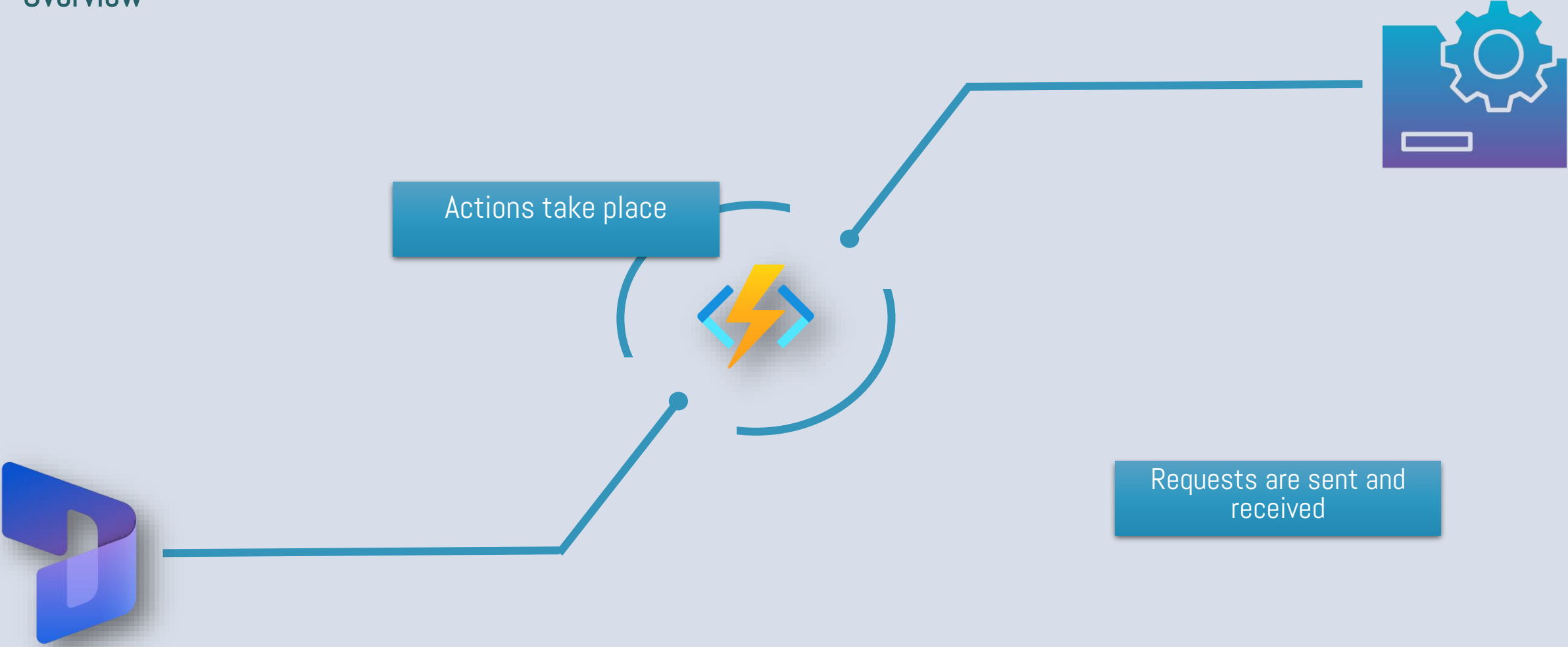
# Best practices

Try to use any of those



# Performing actions with Azure Functions

## Overview



# Performing actions with Azure Functions

## Advantages and disadvantages



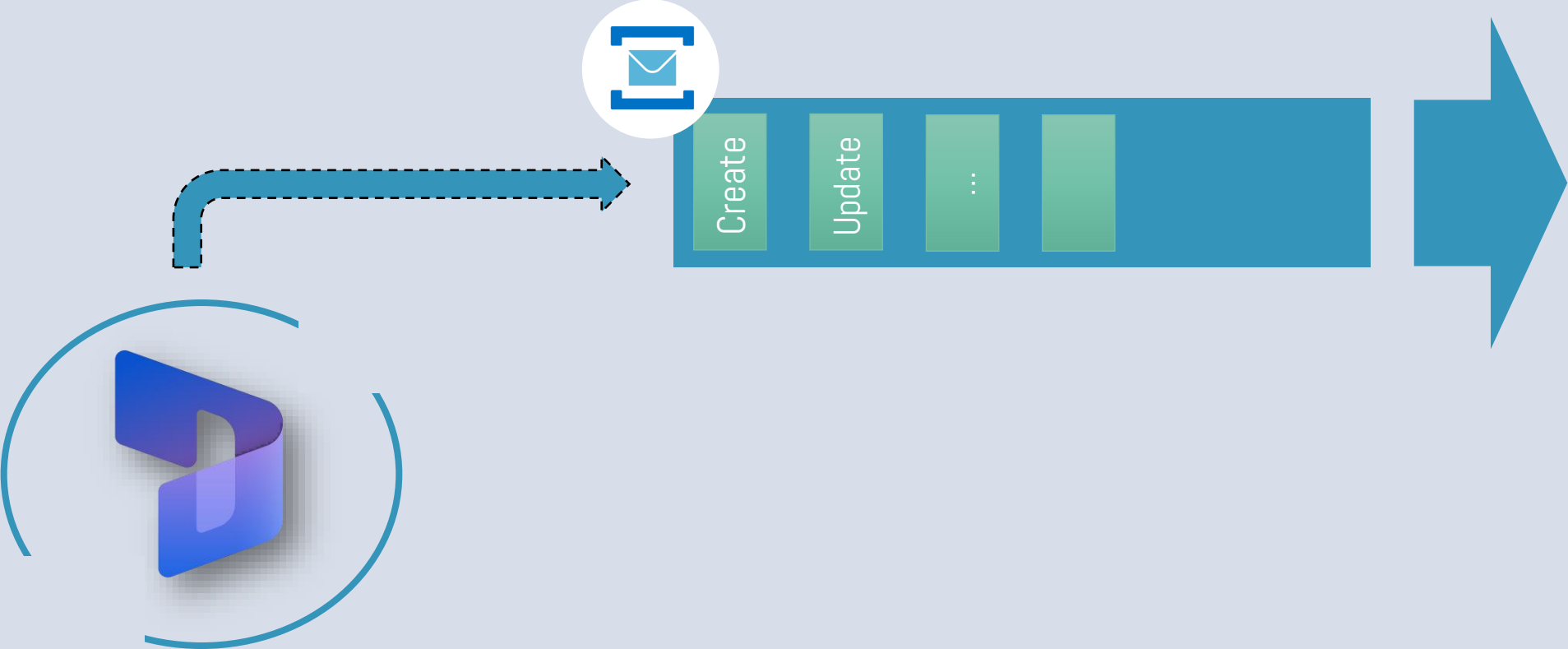
- High performance / Scales well
- Very flexible
- Monitoring and logging
- Security and authorization



- Requires code
- Debugging challenges
- It may incur in additional cost, out of the PP license

# Use Queues as a middleware

## Overview



# Use Queues as a middleware

## Advantages and disadvantages



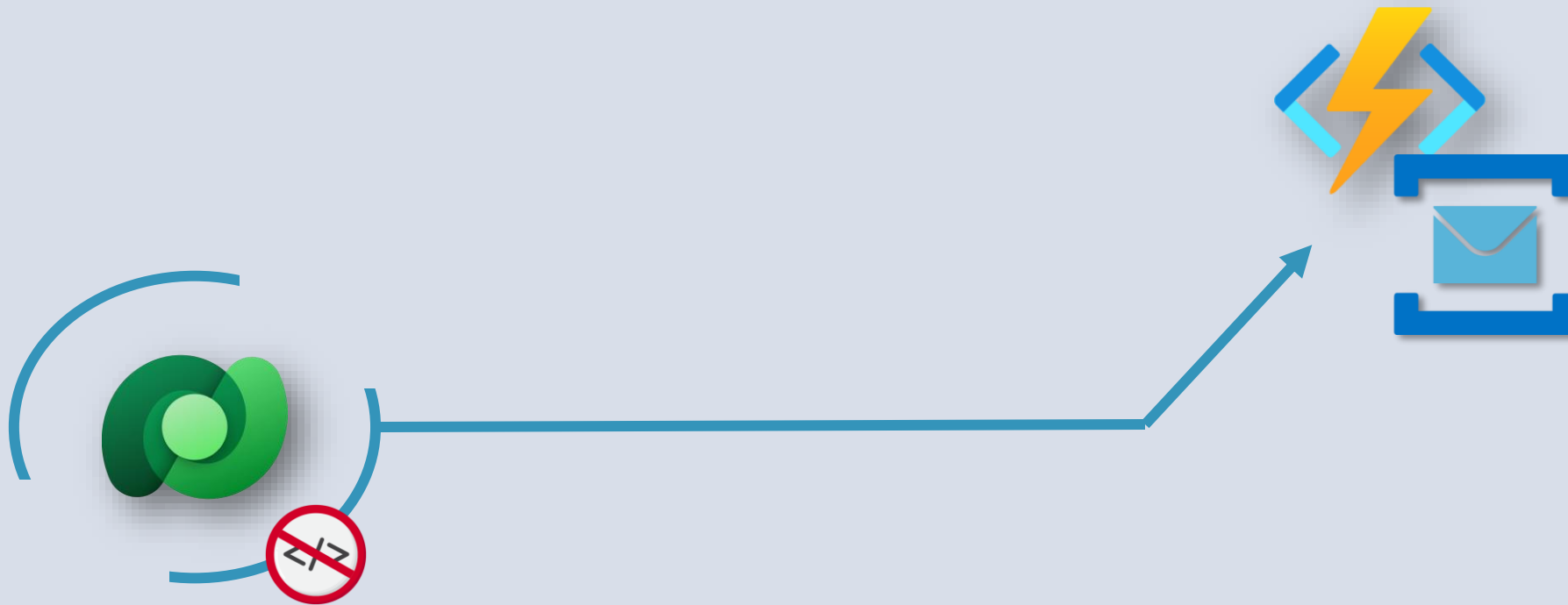
- Reliable Message Delivery
- Topics and Subscriptions
- Dead-Lettering and Error Handling
- Protection against volume peaks
- Increases availability of the integration



- Monitoring and visibility
- More complexity and cost

# Reach your Azure Functions / Queues without code (PRT)

Overview of the Plugin Registration Tool





# Reach your Azure Functions / Queues without code (PRT)

Advantages and disadvantages of using the Plugin Registration Tool



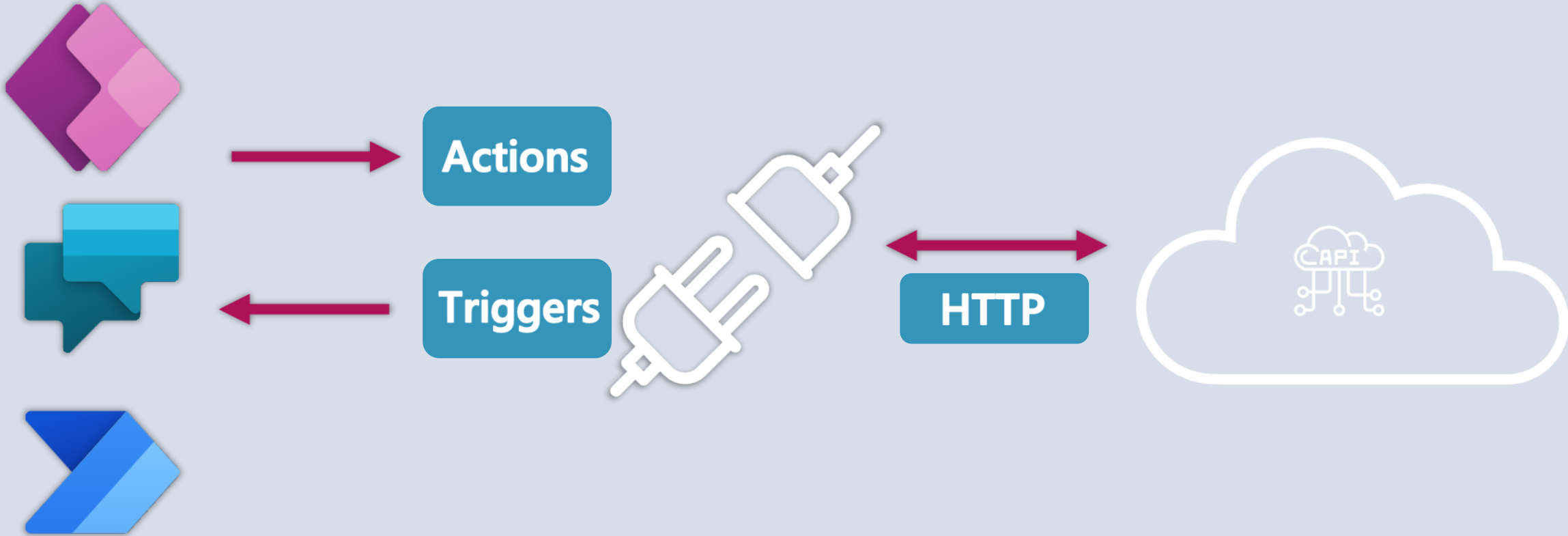
- Easy to set
- No code needed
- Can set pre/post images
- Scalability and efficiency



- Monitoring and visibility
- Doesn't support all the authentication methods (Managed Identity)
- Manual work between environments

# Use of Custom Connectors instead of HTTP Requests

## Overview



# Use of Custom Connectors instead of HTTP Requests

## Advantages and disadvantages



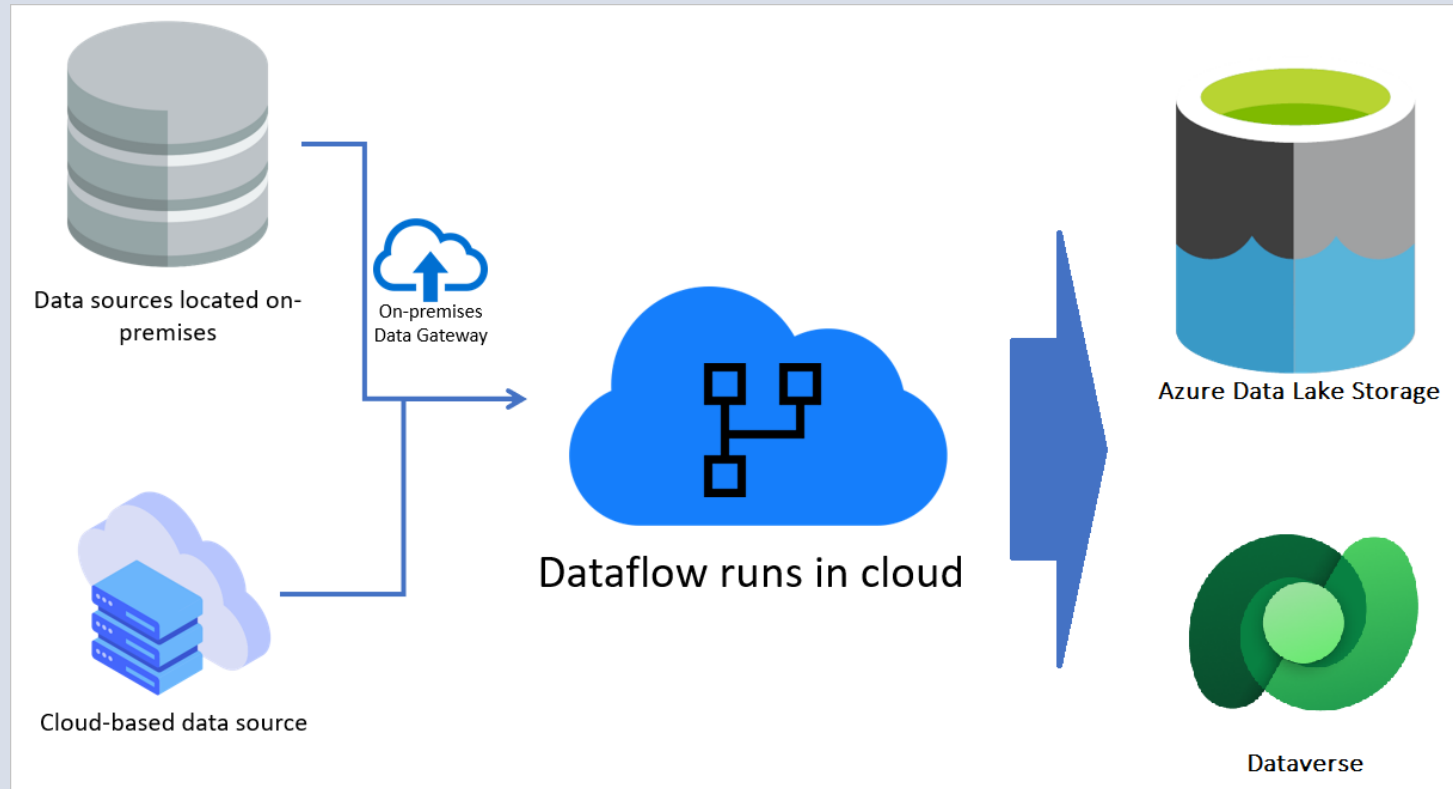
- More Low-Code friendly
- Using secure connections
- Better Governance / Data Loss Prevention Policies
- Support On-Premises Gateway



- Premium feature, require premium license
- Still Power Automate, same disadvantages

# Use Dataflows

## Overview



# Use Dataflows

## Advantages and disadvantages



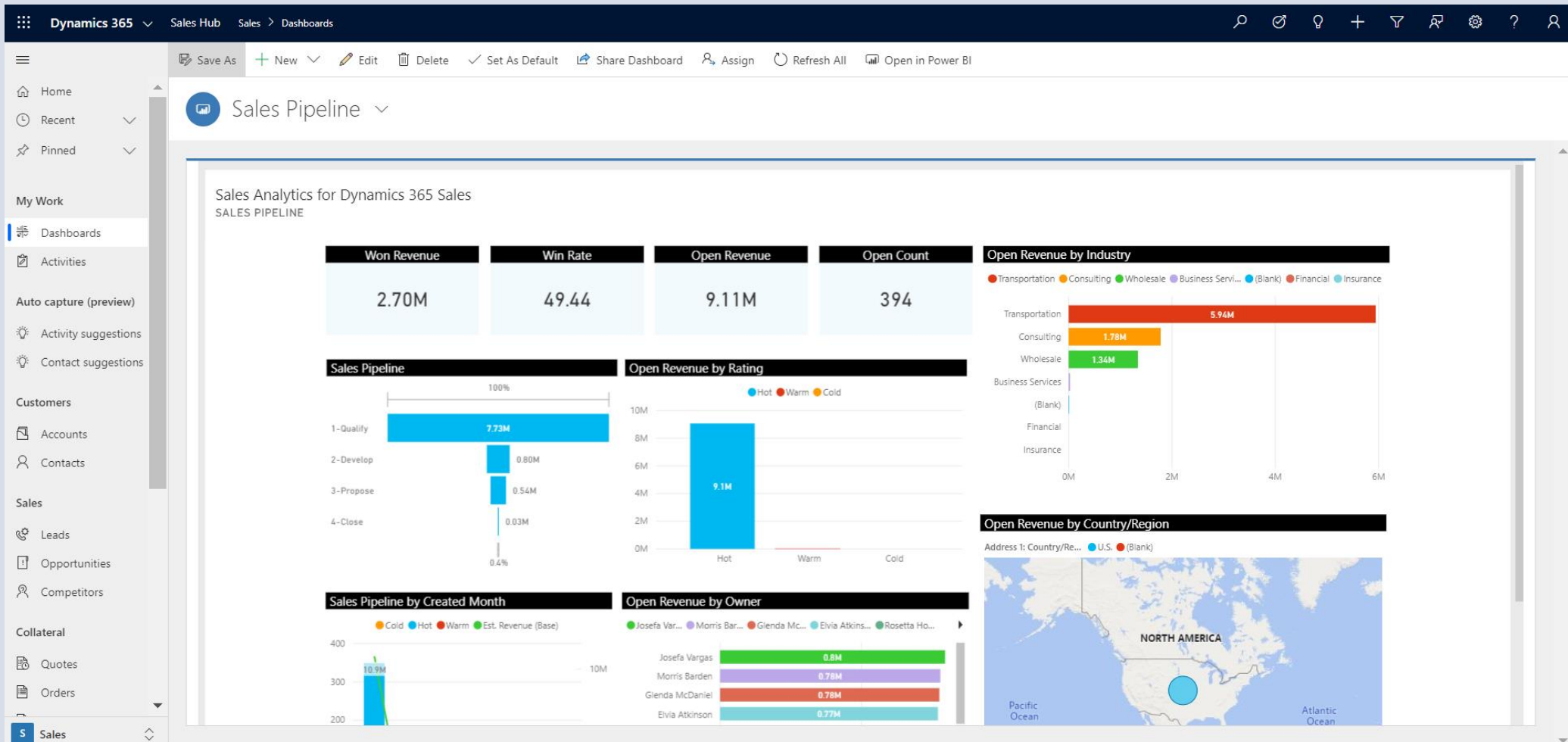
- Easy UI for integrations and datatransformations
- Lots of different sources
- Lots of options (Delta import, Schedules, ..)
- Included in license



- Not super performant
- Problems with Lookup fields
- Doesn't scale infinitely

# Using Power BI to surface external data

Not every integration need to transfer / copy data!



# Using Power BI to bring external data

## Advantages and disadvantages



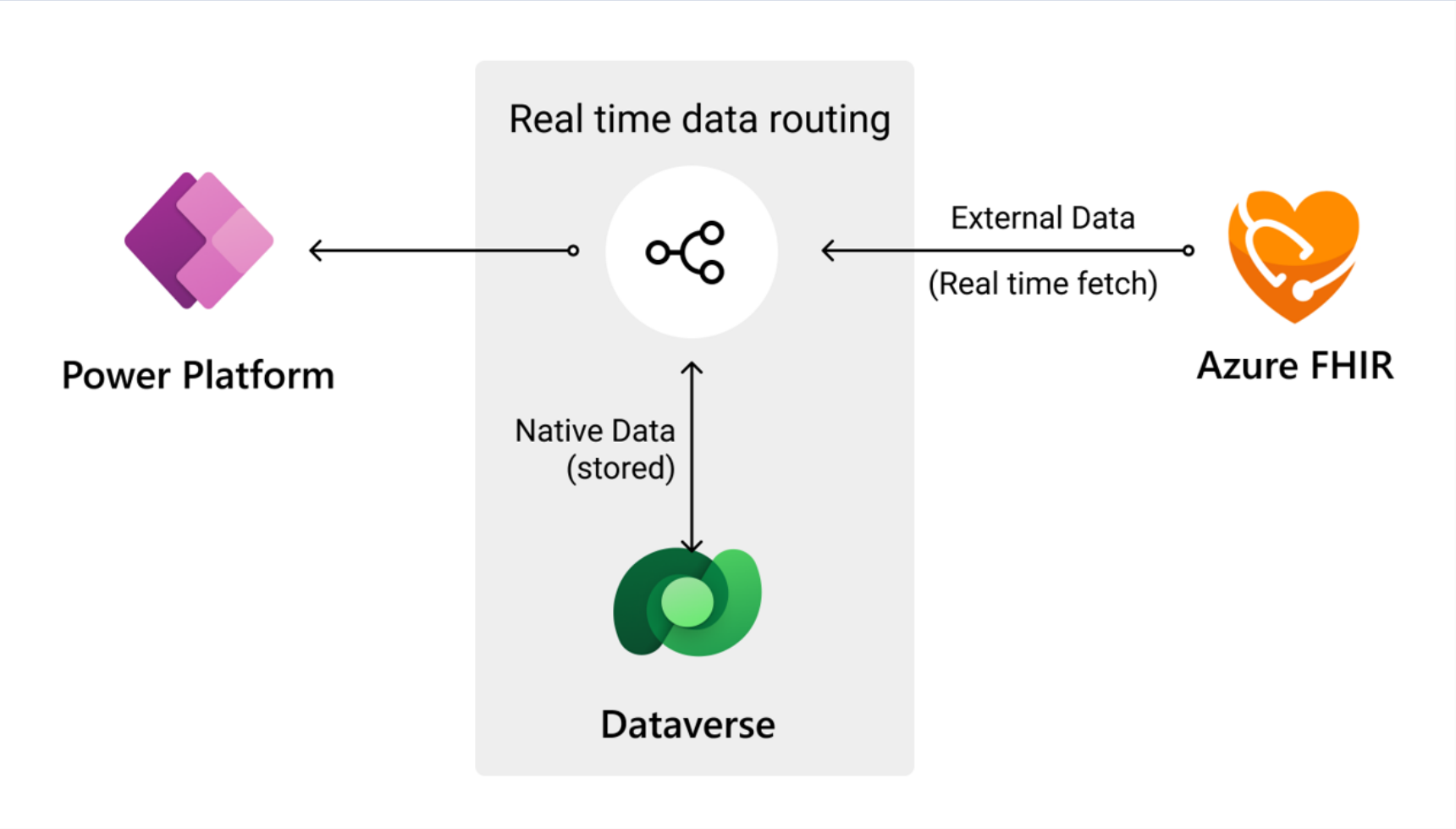
- Ability to bring in any data available in Power BI
- OOB integrations in dashboards, easy integrations in entity forms
- No extra storage need, no interface needed



- Data from Dataverse has to be copied and synced to Power BI if relations are important
- Extra license cost (a cheap one!)

# Use of Virtual Tables

## Overview





# Use of Virtual Tables

## Advantages and disadvantages



- Very easy to set up
- Mapping from more than one table
- Extensible / Custom Code possible (Pro-Dev!)



- Just a few OOTB Connectors available (Excel, SQL Server, SharePoint)
- Custom ones harder to maintain / develop

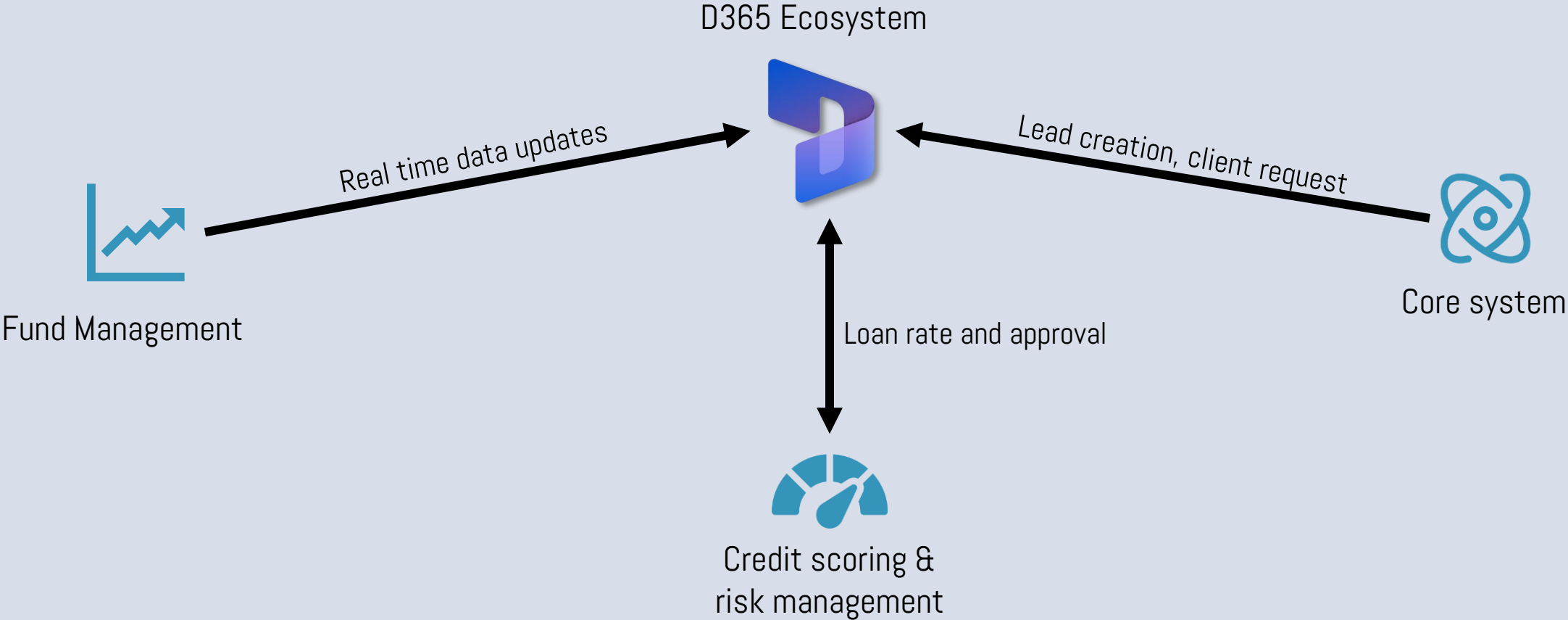
# Real Life Scenarios

What we used in projects



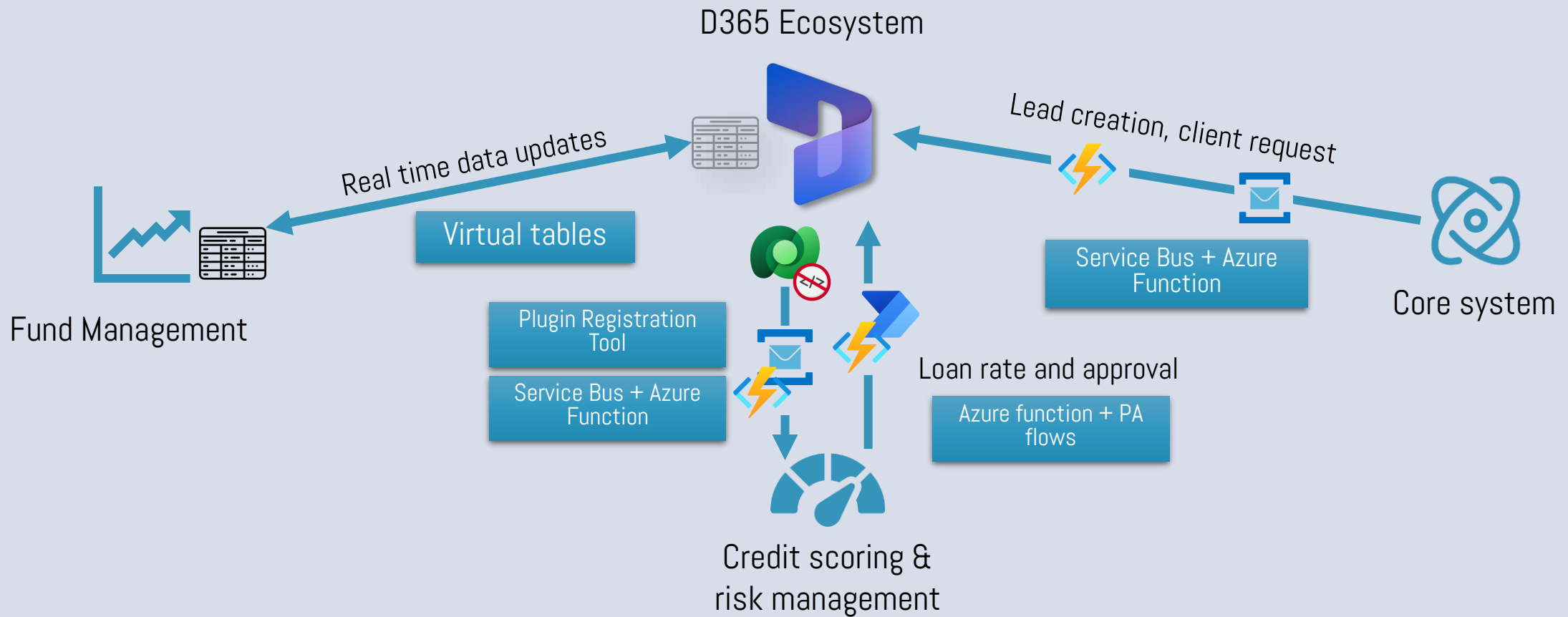
# Scenario #1

## Banking Company – Business Processes



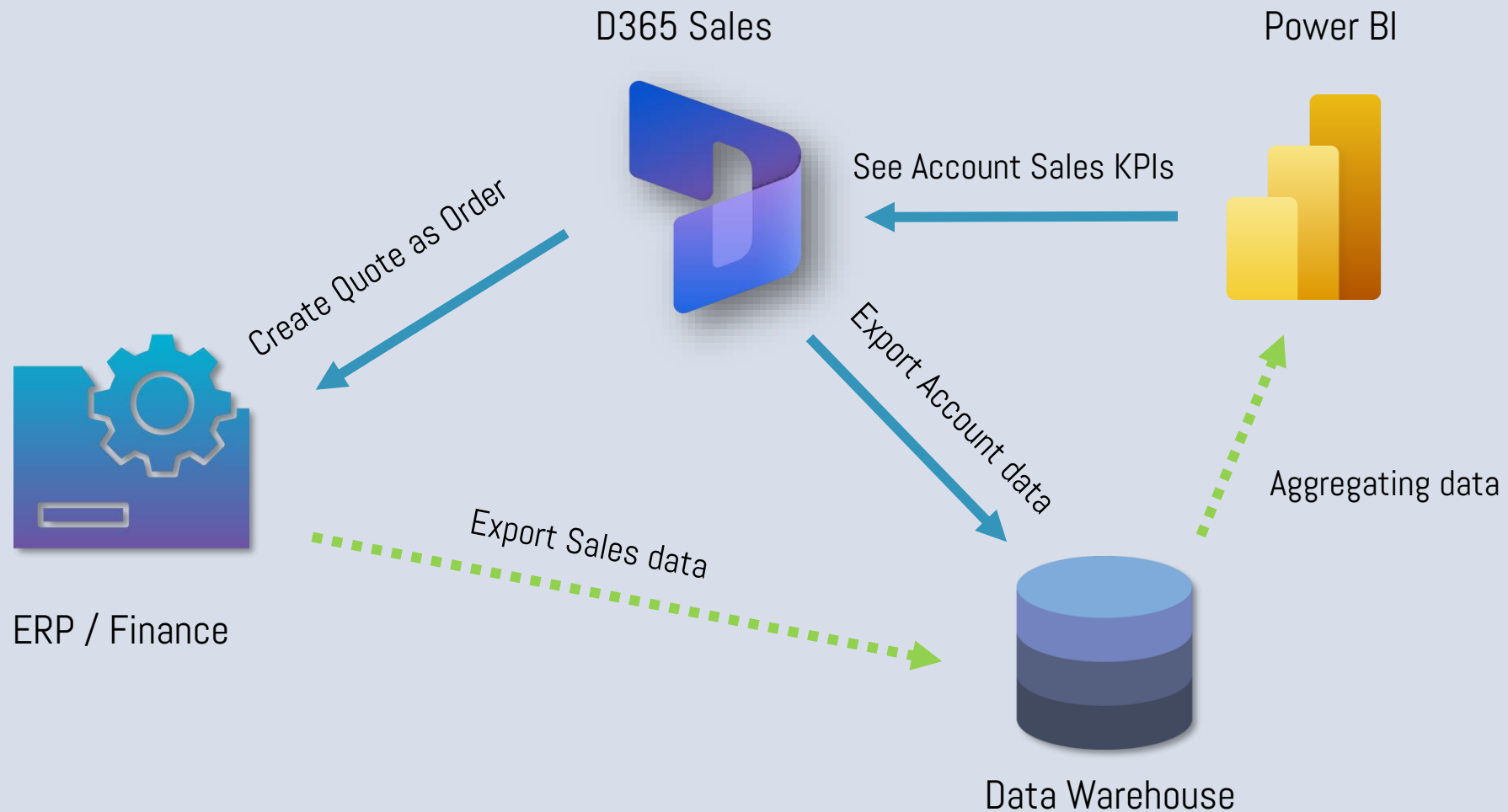
# Scenario #1

## Banking Company – Integration Landscape



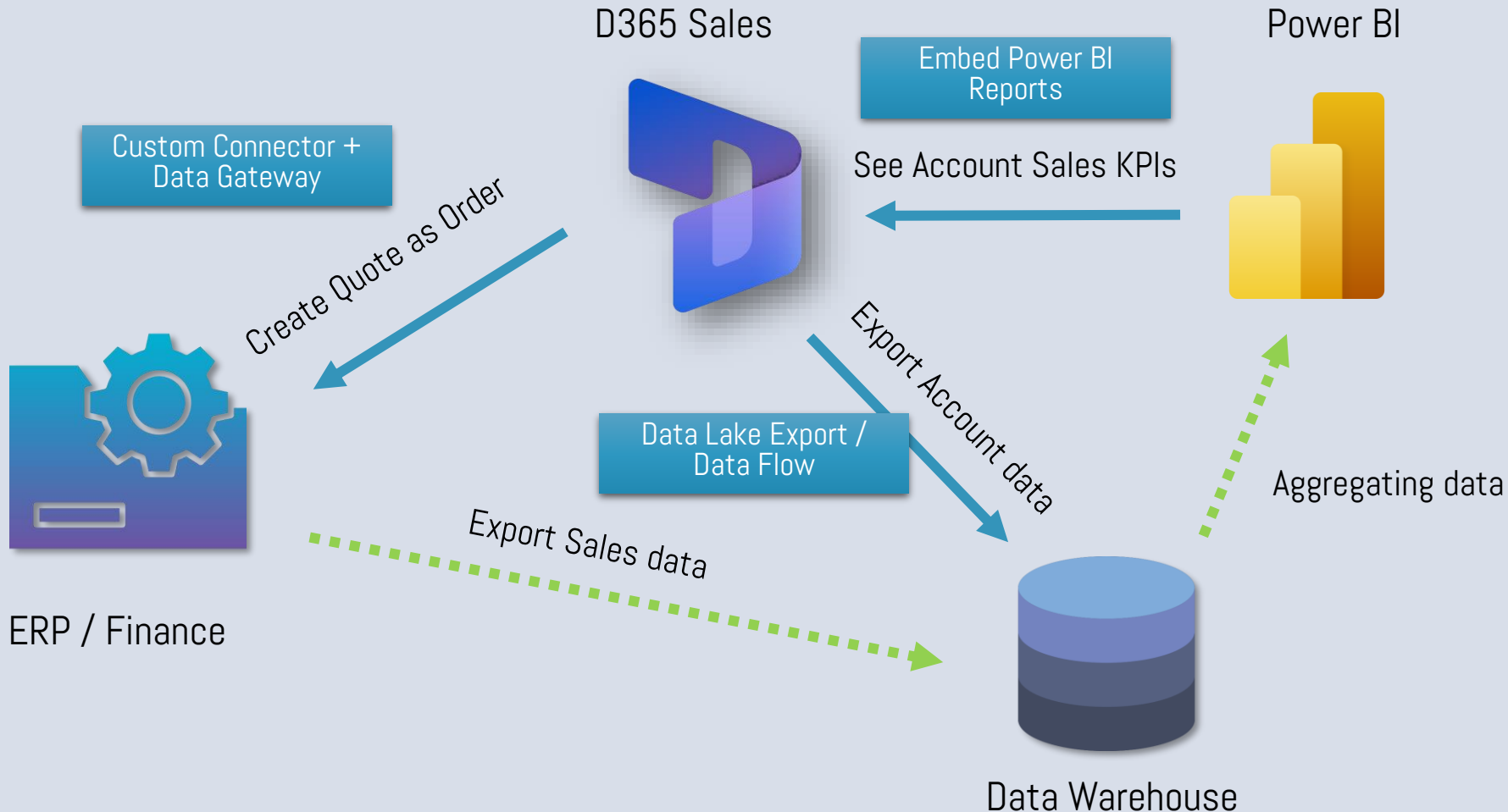
# Scenario #2 – Sales CRM fully integrated

## Overview – Business Processes



# Scenario #2 – Sales CRM fully integrated

## Overview - Technical





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Q&A



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THANK YOU!