Virtual entities

Dynamics 365 FastTrack
Architecture Insights

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Agenda

- Quick overview of Virtual Entities
- Solution design: choose the right technology
- Demo
- Resources
- Q&A

Quick overview of Virtual Entities
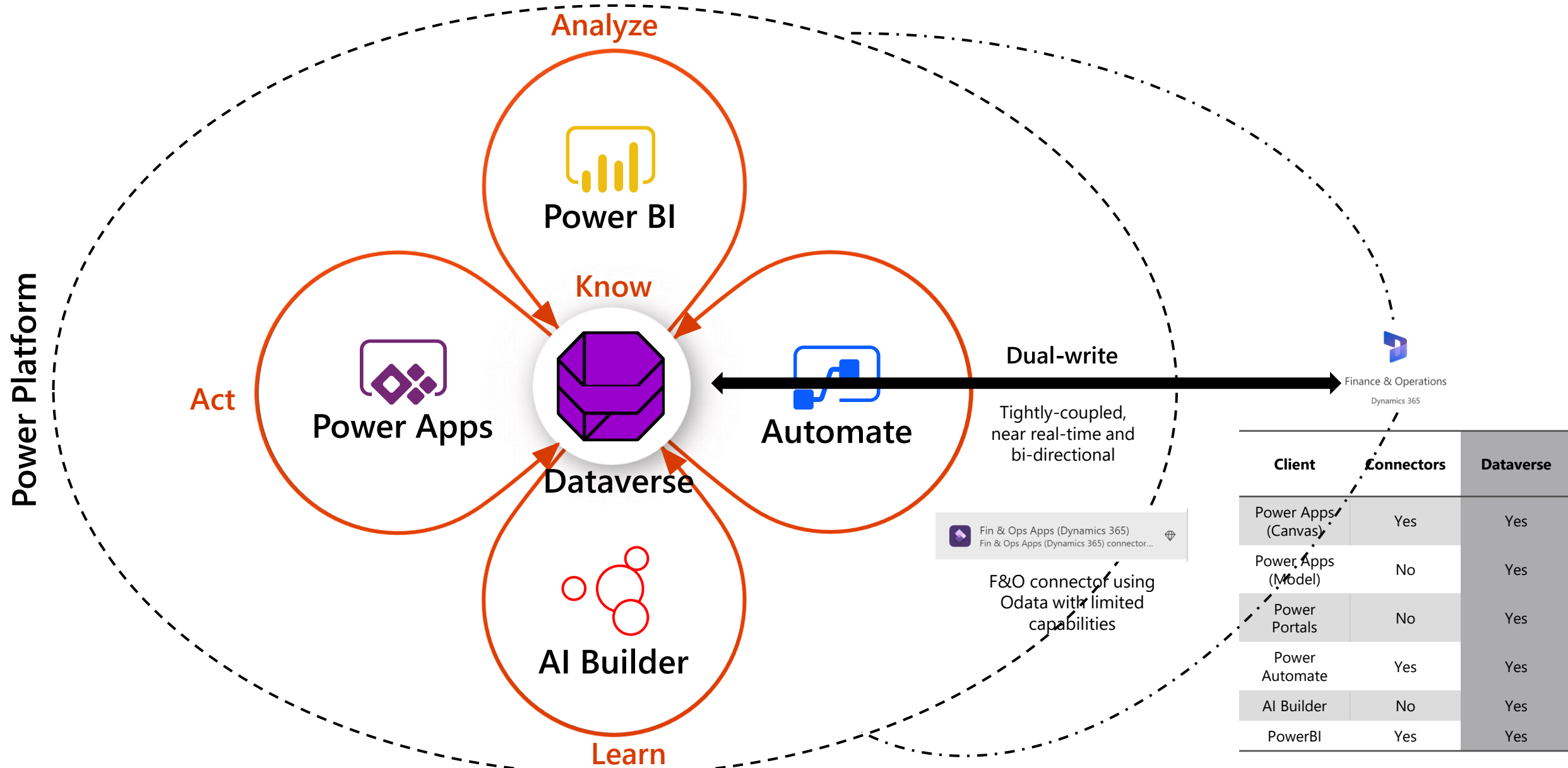
What is Virtual table (entity) in Dataverse ?

➢It enables the integration of data residing in external systems by seamlessly representing that data as tables in Microsoft Dataverse

❑ without replication of data

❑ often without custom coding

➢It's used to connect directly with an external data source at runtime
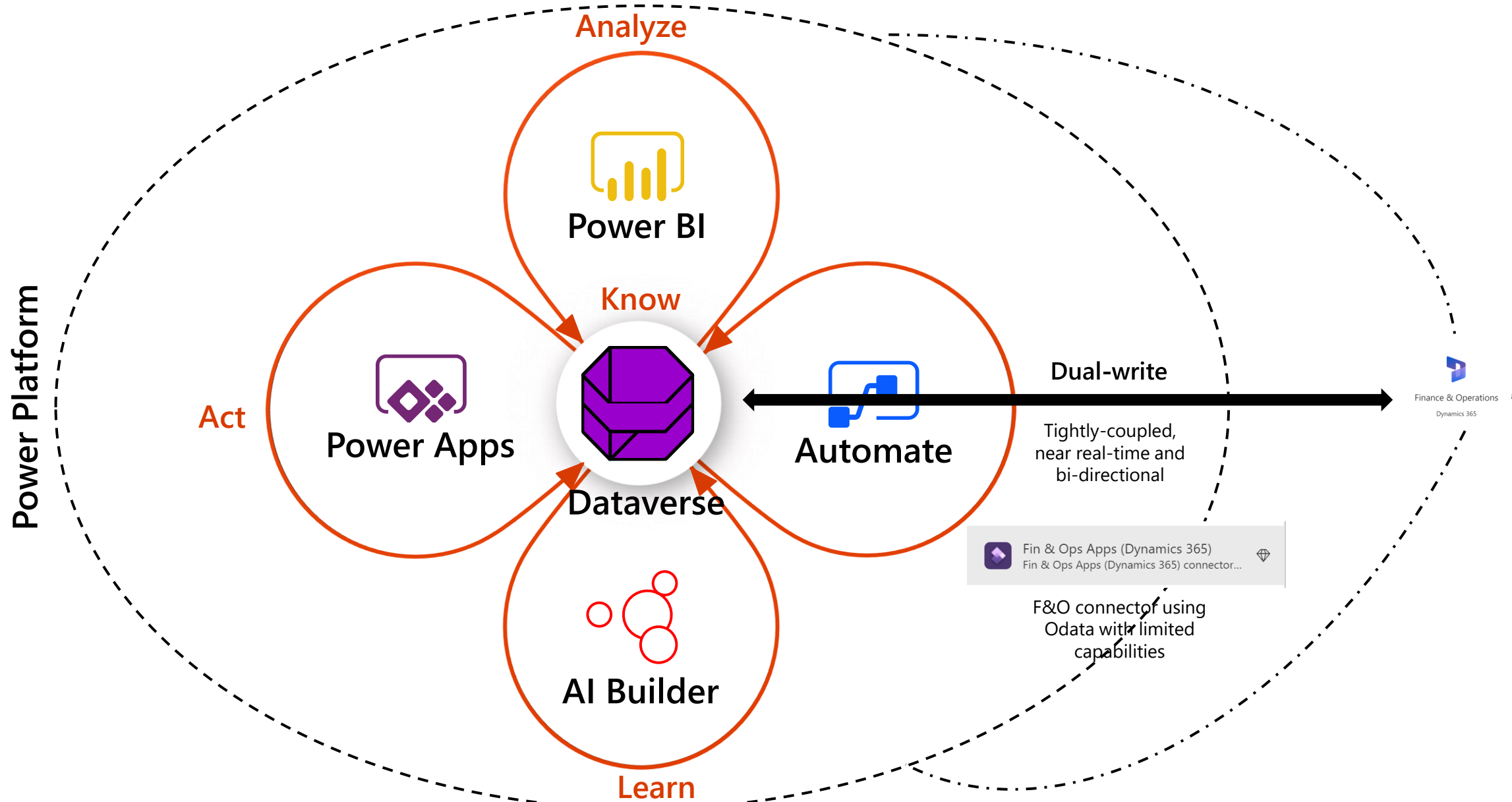
➢Only READ operation was allowed

? What if this external data source is Dynamics 365 Finance and Operations?

What if full CRUD operations are allowed for such Virtual table (entity)?

Microsoft Power Platform – without F&O Virtual Entity

Power Platform

Analyze

Power BI

Know

Act

Power Apps

Dataverse

Automate

Dual-write

Tightly-coupled, near real-time and bi-directional

Finance & Operations
Dynamics 365

Learn

AI Builder

Fin & Ops Apps (Dynamics 365)
Fin & Ops Apps (Dynamics 365) connector...

F&O connector using Odata with limited capabilities

Client	Connectors	Dataverse
Power Apps (Canvas)	Yes	Yes
Power Apps (Model)	No	Yes
Power Portals	No	Yes
Power Automate	Yes	Yes
AI Builder	No	Yes
PowerBI	Yes	Yes

Microsoft Power Platform – with F&O Virtual Entity

Why Virtual entity?

Customer uses **multiple Dynamics apps** for business processes

but applications have **different experience and capabilities**.....

Results in a broken experience.

Dynamics 365

Sales   F&O

Sales Process

Virtual entities for D365 Finance and Supply Chain Management apps

➢ Finance and Operations is now available as virtual data source in Dataverse

➢ Supports full CRUD operations from Dataverse and Microsoft Power Platform

➢ All Finance and Operations 'public' entities are natively available in Dataverse as virtual entities

➢ Allowing synchronous execution of Finance and Operations business logic

➢ Consistent behavior across Microsoft Power Platform & Finance and Operations

➢ Doesn't copy or store data into Dataverse

➢ Dual-write continues to address specific scenarios where data needs to be physically copied between apps.

Set the stage for Microsoft Power Platform

➢ Finance and Operations Entities available in Dataverse

➢ No code/low code approach

➢ Leverage full potential of Power Platform

➢ Bring feature parity for Finance and Operations apps

Canvas Apps

Model Driven Apps

Power Portals

Power Automate

AI Builder

Power BI

Solution design: choose the right technology

The comparison – choose the right technology

Attribute	Dual write	Finance and Operations Virtual entity
Scenario	Near real-time CRUD	Real-time CRUD
Method	Synchronous (Live sync)	Run-time
Direction	Bi-directional	Not applicable
Data	Data is duplicated	Data remains in source i.e., Finance and Operations
Logic	Auto business logic execution	Auto business logic execution, you can call Odata actions
Offline scenario	Catch-up capability	Not supported
Development	Finance and Operations data entity + Dual write entity map + Dataverse table	Finance and Operations data entity + Dataverse configuration
Bootstrapping	May be needed for existing Dataverse data	Not applicable
ALM	Finance and Operations package + Dataverse solution (including entity map solution)	Finance and Operations package + Dataverse solution
User	Runs as S2S call, user doesn't need to exist in both apps	Runs against the user context, user does need to exist in both apps

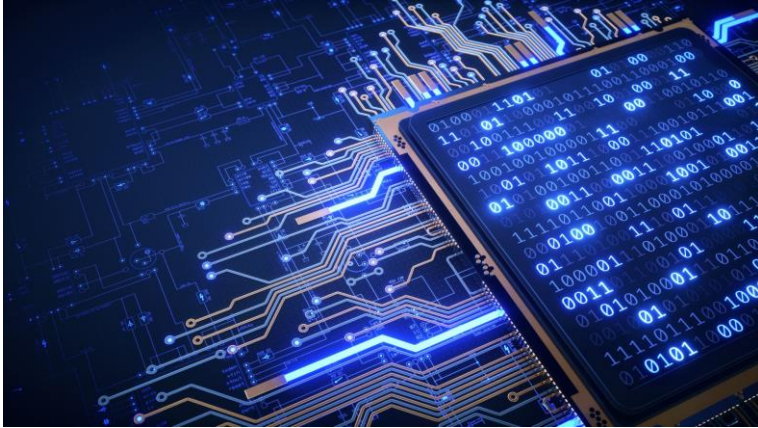# DO's and DON'Ts to choose Virtual Entities (VE)

DO's

- ✓ Use Virtual entity to enable Power Platform capabilities and experience for Finance and Operations apps
- ✓ Use Virtual entity where your business data and logic resides in Finance and Operations apps
- ✓ Use Virtual entity when you plan to extend or add business logic in a Power App or Power Automate etc.

DON'Ts

- ✕ Use Virtual entity as data copy mechanism
- ✕ Use Virtual entity for offline scenarios
- ✕ Use Virtual entity when additional data points are needed

Virtual Entities (Use Case)

Benefits

➢ No copying of data

➢ No code/low-code extensions

➢ Leverage Power Platform capabilities for Finance and Operations
  ❑ Create Power Apps
  ❑ Create Power Automate Flows
  ❑ Create Power Virtual Agents etc.

Examples for Dataverse Users

➢ Access and act on Finance and Operations data within Dataverse; no different app user experience

➢ View credit information such as credit limits, collection letters, and so on

➢ View asset maintenance information or fixed asset details

Examples for F&O Users

➢ Create a Power App to make data entry more simplified

➢ Create app experiences with bar code scanning and picture taking on a device

➢ Trigger Power Automate flows for emails or automation

➢ Create various Power Portal experience

Demo

Resources

Resources

Introduction

[Virtual entities overview - Finance & Operations | Dynamics 365 | Microsoft Docs](#)

[Entity modeling - Finance & Operations | Dynamics 365 | Microsoft Docs](#)

Setup

[Virtual entity installation and setup for Finance and Operations](#)

[Finance and Operations virtual entities FAQ - Finance & Operations | Dynamics 365 | Microsoft Docs](#)

[Power Apps portals with Finance and Operations - Finance & Operations | Dynamics 365 | Microsoft Docs](#)

AppSource

[Finance and Operations Virtual Entity (microsoft.com)](#)

Q&A

Thank you

Microsoft Dynamics 365