

# BIBuilder4Dynamics D365FO Presentation

SCALES



# Summary

## Situation:

- With a Dynamics 365FO cloud instance, direct access to data is no longer possible
- Standard solutions for exporting data is a viable solution for many scenarios, but not for exporting data to be used in a data warehouse outside of D365

## Solution:

- BIBuilder4Dynamics is a component that allows exporting all data from D365 to a SQL Server database on-premise or in the cloud
- BIBuilder4Dynamics can build a full best-practice BI solution
- BIBuilder4Dynamics will guide the user to simplify the complex data structures of Dynamics



# Bring Your Own Database (BYOD)

The BYOD enables exporting data entities to an Azure SQL database. There is several standard entities available, and all of them are fairly easy to export. However; Not all data is exposed in standard entities, and extending them requires a D365 developer and a D365 deployment.

Entities exported with BIBuilder4Dynamics can be easily extended by adding data from tables or views. There is no need to involve a D365 developer. Entities can also be created from scratch with BIBuilder4Dynamics by selecting the tables and views needed in the entity.



# Entity Store

Entity store is NOT a store that holds data entities. It holds aggregate measurements which are a star-schemed model of data. It comes standard with any installation of D365FO. It is the foundation for the array of embedded Power BI reports available in D365. Even though the model covers many areas, there's still a lot of data that is not available in the Entity Store. The store can be extended, but it is quite complex, and requires a D365 developer and a deployment.

The Entity Store is used for the Embedded Power BI reports, but as for now, the entity store is not available from outside D365.



# Common Data Service (CDS) / Common Data Model (CDM)

CDS/CDM is a tool to synchronize or standardize the underlying data model for various systems. This includes for example the Dynamics apps, other 3<sup>rd</sup> party apps or homebuilt Power Apps. These apps can either use the CDM as the actual data store or use CDS to synchronize their data to and from CDM.

Various systems include standard entity mappings and export/import to CDS, but neither D365FO, CE nor Talent delivers a full data structure in CDM. It is possible to extend and develop these mappings, but it is a lot of work, if the only goal is to get data out and use it in a BI solution. CDS is more integration than extraction.

To get data out of CDS, there is an API that can be used to both read and write data. The API delivers data in an ODATA format. This might be fine for smaller entities such as customers or products, but the performance will be too big an issue when exporting millions of transaction lines.



# BIBuilder4Dynamics

BIBuilder4Dynamics is D365FO extension and a Windows client application.

- Can build a full best-practice BI solution with staging database, data warehouse and cubes based on standard Microsoft SQL Server components
  - Data warehouse and cubes are optional – BILBuilder4Dynamics can be used as a data extraction tool for D365FO and D365CE
- Access all data from D365FO database with out the need for D365 developers or deployments
- Assists the user in simplifying the complex data structure of D365
- Can be used by BI developers with minimum D365 knowledge
- Agile development; Data model can be extended in minutes
- Configuration is done via a Windows client application, but the end result is purely Microsoft SQL Server components
- Can be deployed either on-premise or in the cloud



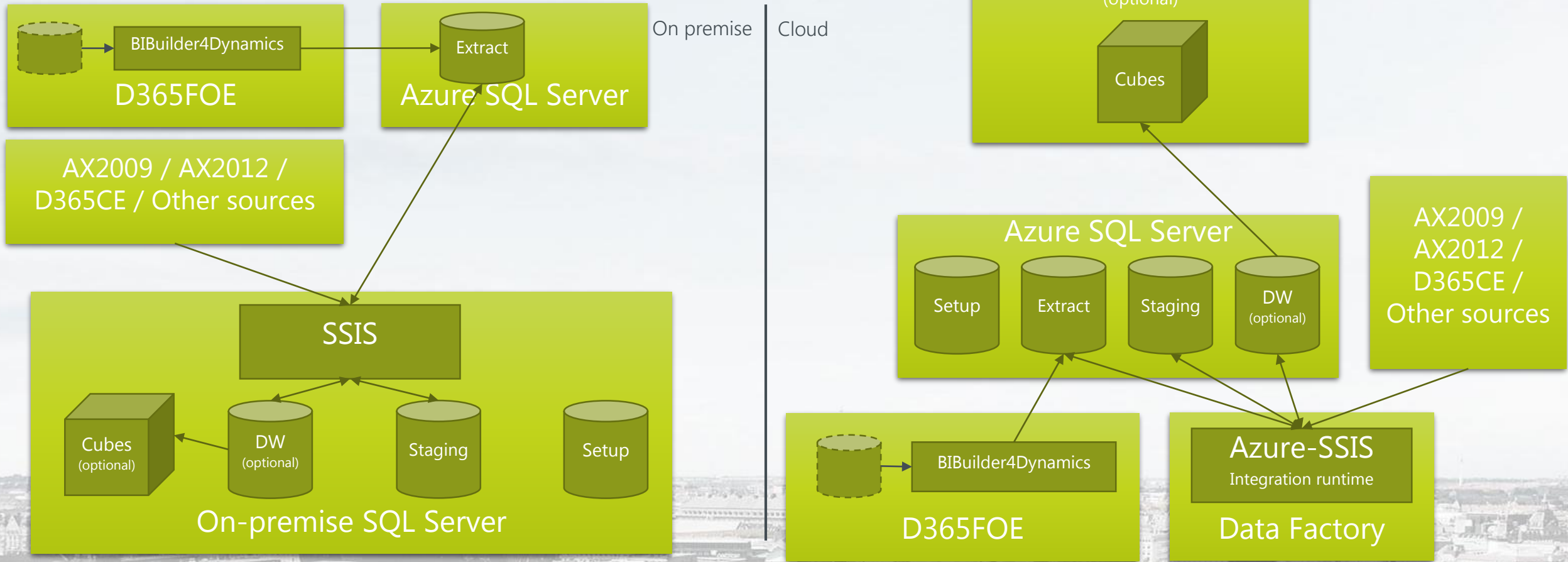
# Comparison

	Entity Store	BYOD	BIBuilder4Dynamics
Access data from outside D365	No	Yes	Yes
Extend and add data without a D365 developer	No	No	Yes
Extend and add data without a D365 deployment	No	No	Yes
Schedule can be setup to load data from all companies at once	No	Yes (flighting feature)	Yes
Transactional level data	No	Yes	Yes



# Deployment

BIBuilder4Dynamics can be deployed either on-premise or in the cloud





# Highlighted secondary features

BIBuilder4Dynamics  
CustInvoiceJour

Filter columns:

JCRPaymAmount	modifiedDateTime	numberSequenceGroup	OnAccountAmount	OneTimeCustomer	OrderAccount	ParmId	Partition	PaymDayId	Payment	Pay
X00000	2017-10-09T13:33:04		0.000000	0 - No	DKAX0000181	DKAX-006565	5637144576		IC	
X00000	2017-10-25T12:25:02		0.000000	0 - No	DKAX0000096	DKAX-006512	5637144576		IC	
X00000	2017-10-26T14:06:32		0.000000	0 - No	DKAX0000096	DKAX-006558	5637144576		IC	
X00000	2017-11-27T12:13:45		0.000000	0 - No	DKAX0000096	DKAX-007301	5637144576		IC	
X00000	2018-01-02T13:32:37		0.000000	0 - No	DKAX0000096	DKAX-008523	5637144576		IC	
X00000	2018-01-24T14:55:03		0.000000	0 - No	DKAX0000096	DKAX-009086	5637144576		IC	
X00000	2018-02-05T13:51:29		0.000000	0 - No	DKAX0000096	DKAX-009614	5637144576		IC	
X00000	2018-02-26T10:33:42		0.000000	0 - No	DKAX0000096	DKAX-009870	5637144576		IC	
X00000	2018-02-27T11:59:36		0.000000	0 - No	DKAX0000096	DKAX-010033	5637144576		IC	
X00000	2018-02-27T13:12:07		0.000000	0 - No	DKAX0000096	DKAX-010050	5637144576		IC	
X00000	2017-01-25T13:23:12		0.000000	0 - No	DKAX0000092		5637144576		N15	
X00000	2017-01-25T13:23:10		0.000000	0 - No	DKAX0000056		5637144576		N90	
X00000	2017-01-25T13:23:07		0.000000	0 - No	DKAX0000144		5637144576		N30	
X00000	2017-01-25T13:23:10		0.000000	0 - No	DKAX0000056		5637144576		N90	
X00000	2017-01-25T13:23:10		0.000000	0 - No	DKAX0000056		5637144576		N90	
X00000	2017-01-25T13:23:13		0.000000	0 - No	DKAX0000128		5637144576		N45	
X00000	2017-01-25T13:23:09		0.000000	0 - No	DKAX0000004		5637144576		N30	

BIBuilder4Dynamics  
Custom Mappings

Map entities within or across source systems

Mappings

- ProjTransPostingCube -> ProjTransPosting
- ProjPostTransView -> Currency
- CustTableCube <-> CustTable

Column Mappings

- CurrencyId -> CurrencyCode

Save and continue >

BIBuilder4Dynamics

**Table:** GeneralJournalAccountEntry

**Source:** Dynamics 365 for Finance and Operations

**Label:** General journal account entry

**Documentation (from D365):**  
The GeneralJournalAccountEntry table contains the required general detail information.

Preview data

## Data preview

- Preview data before loading it
- Supports D365FO and D365CE

## Custom mappings

- Setup mappings between tables if they are not defined in the source
- Mappings can be setup between tables from different source systems, i.e. D365FO and D365CE

## Table and relation information

- Extensive information about tables and relations are extracted from the source and available directly in BIBuilder4Dynamics



# Roadmap

Current Version

## Version 3.0

Support for CE

Minimized load  
by only loading  
selected columns

## Version 3.1

Data preview for  
FO and CE

Add custom  
relations  
between  
tables/sources

Extended  
information  
about relations

## Version 3.2

Parallel data load  
and new D365FO  
extract logic =>  
D365FO extract  
performance  
improved 5-10x

Developer  
information  
available in front  
end

## Version 3.3

Fast loading of  
views

Fast load data  
from extract  
database to  
staging with  
change tracking

## Version 4.0

Support for  
generic SQL  
database sources

New setup  
experience

