Imagine you are (would be) in this situation

- Your main source is Microsoft Dynamics
- You need to integrate other datasources
 - Historical Microsoft Dynamics database
 - Legacy ERP system
 - Excel budgets & Weather report (sales team)
 - Google Analytics & Mailchimp (marketing team)
 - ...

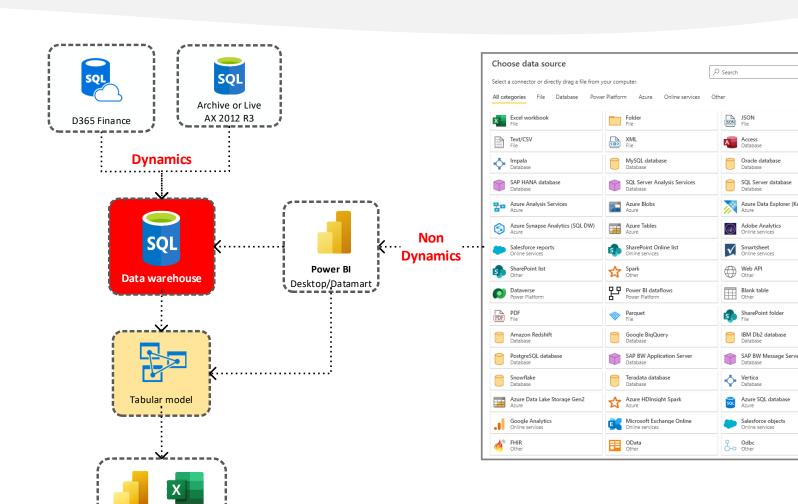
Question #1: Power BI or BI4Dynamics Data Warehouse?

Criteria	DATA WAREHOUSE (=SQL)	POWER BI
Out-of-the box content (for Dynamics)	Best on the market	
Implementation time	Few days	
Cost of license or services	License << Services	
Flexibility (customizations)	No Code	
Usage of internal resources	Yes (know Dynamics)	
Processing time	Very fast	
Scalability	No problem. Ever.	
Cost of infrastructure	Azure VM for 150 GB db =200\$/month	
User experience	No waiting	
Integrations of other sources		

Question 2: What & how needs to be done?

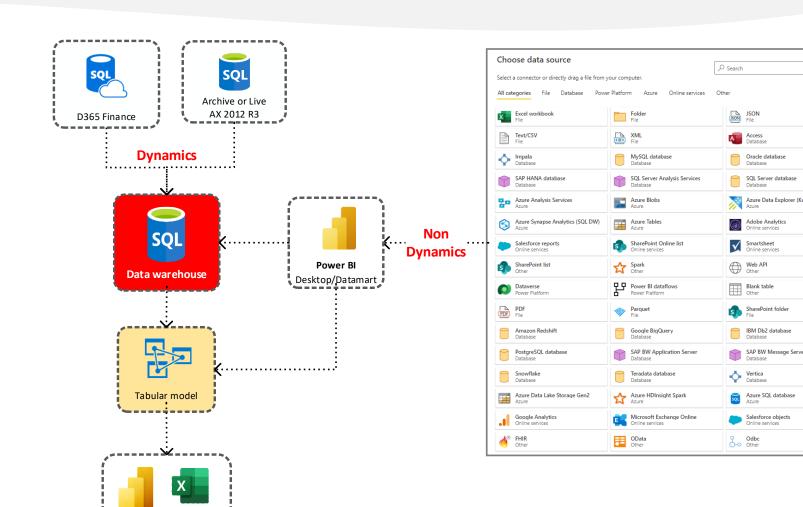
Dynamics

- Integrated into Data Warehouse
- Non-Dynamics
 - Prepared and integrated into Data Warehouse
 - Composed with Corporate Tabular Model



Question #3: Who does it?

- Software
- IT team
- Business user

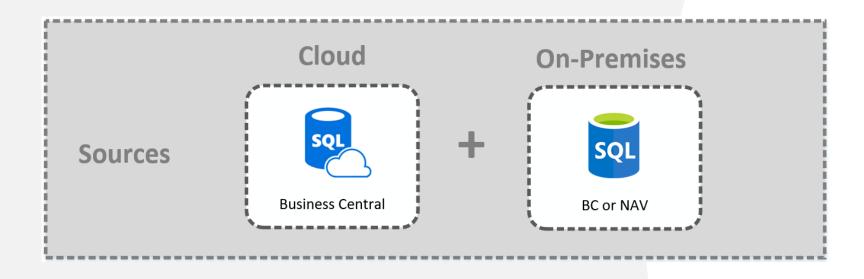




1A: Integrate different Dynamics sources

Cloud: D365 Business Central

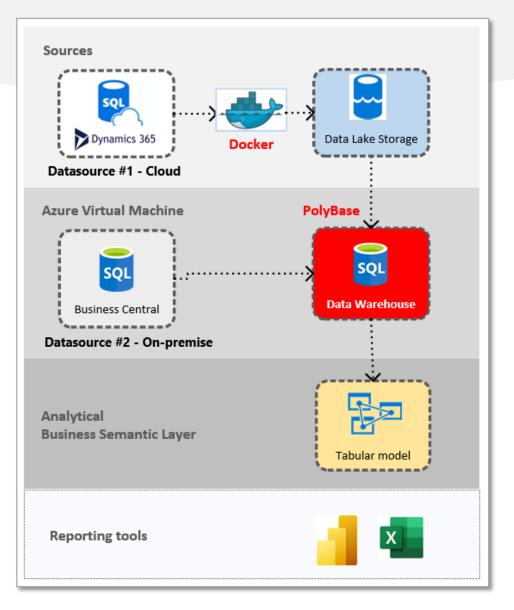
On-Premises: Microsoft Dynamics BC/NAV



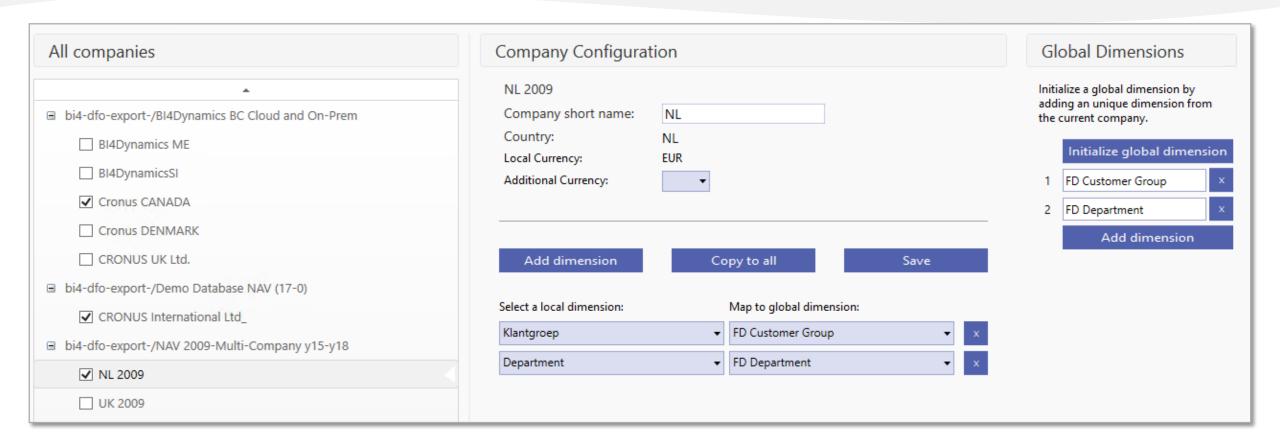
Full data integration

bi@dynamics

- Connector for NAV 2009+ / BC
- NAV / BC database can be live or archive
 - Timestamp per datasource
 - Incremental load (active datasource)
 - One-time load (passive datasource)
- All application area
 - Document level granularity
 - Financial dimensions (mapping available)
 - Account schedules (all available)



Specifics



Challenges

Table names, Extensions

	DataSourceTableID	DataSourceID	TableID	TableNameSql	TableNameStage	TableType	ExistsInDataSource
1	275	1	0	Acc. Schedule Line	Acc_Schedule Line	0	1
2	276	2	85	Acc_ Schedule Line\$437dbf0e-84ff-417a-965d-ed2bb	Acc_Schedule Line	0	1
3	277	3	85	Acc_ Schedule Line	Acc_Schedule Line	0	1

Global dimensions

```
LEFT OUTER JOIN dim. [Vendor] [Buy From Vendor] ON [Buy From Vendor]. [Vendor_No.] = [GLTransactionsView]. [GLEntr LEFT OUTER JOIN dim. [Customer] [Bill To Customer] ON [GLTransactionsView]. [GLEntry_SourceType] = 1 AND [Bill To LEFT OUTER JOIN dim. [ClosedPeriod] [Closed Period] ON [Closed Period]. [ClosedPeriodID] = [GLTransactionsView]. [GLEntr OUTER JOIN dim. [DocumentGL] [Document GL] ON [Document GL]. [GLEntry_EntryNo.] = [GLTransactionsView]. [GLEntr LEFT OUTER JOIN dim. [SourceGL] [Source GL] ON [Source GL]. [SourceType] = [GLTransactionsView]. [GLEntry_SourceTy -- NAV Global dimensions

LEFT OUTER JOIN help. [DimensionSetEntry] [DimensionSetEntry1] ON 1 = DimensionSetEntry1. [DimensionID] AND [GLTr LEFT OUTER JOIN help. [DimensionSetEntry] [DimensionSetEntry2] ON 2 = DimensionSetEntry2. [DimensionID] AND [GLTr LEFT OUTER JOIN help. [LedgerEntryDimension] [LedgerEntryDimension1] ON 1 = LedgerEntryDimension1. [DimensionID] LEFT OUTER JOIN help. [LedgerEntryDimension] [LedgerEntryDimension2] ON 2 = LedgerEntryDimension2. [DimensionID] -- NAV Global dimensions END
```

Results

1	А	A B		D
1	Data Source ID	Data Source Database Name	Company short name	Net Sales
2	□1	■ BI4Dynamics BC Cloud and On-Prem	Canada	3,347,078.60
3	■2	□ Demo Database NAV (17-0)	UK	90,842.92
4	∃3	■ NAV 2009-Multi-Company y15-y18	NL	30,297,069.18
5	Grand Total			33,734,990.70
_				

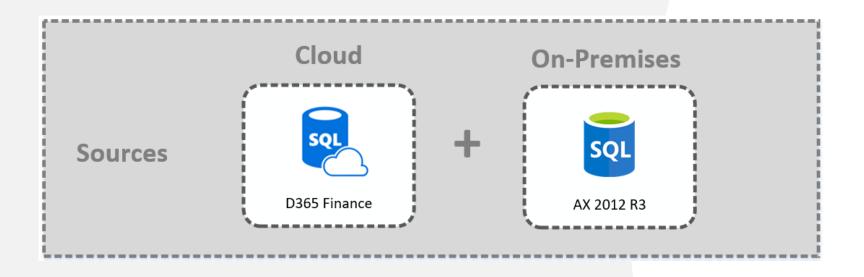
	Α	В	С	D	Е	F	G
1	Net Sales		FD Department 🔻				
2	Data Source ID	FD Customer Group Code	ADM	N/A	PROD	SALES	Grand Total
3	□1	LARGE	125.10		875.50		1,000.60
4		MEDIUM	2,392.30			1,698.00	4,090.30
5		N/A		3,335,254.10			3,335,254.10
6		SMALL			2,352.70	4,380.90	6,733.60
7	=2	LARGE				8,009.67	8,009.67
8		MEDIUM				34,078.08	34,078.08
9		N/A				4,331.40	4,331.40
10		SMALL				44,423.77	44,423.77
11	∃3	1-KLEIN BEDRIJF		704,809.55		14,145,952.34	14,850,761.89
12		2-MIDDEL BEDRIJF		331,924.75		5,214,395.92	5,546,320.67
13		3-GROOT BEDRIJF		1,011,557.80		4,318,304.90	5,329,862.70
14		4-STAAT		507,785.81		2,553,499.38	3,061,285.19
15		5-INTERCOMPANY		392,889.98		1,115,948.75	1,508,838.73
16	Grand Total		2,517.40	6,284,221.99	3,228.20	27,445,023.11	33,734,990.70



1B: Integrate different Dynamics sources

Cloud: D365 Finance & Operations

On-Premises: Microsoft Dynamics AX 2012 R3



Full data integration

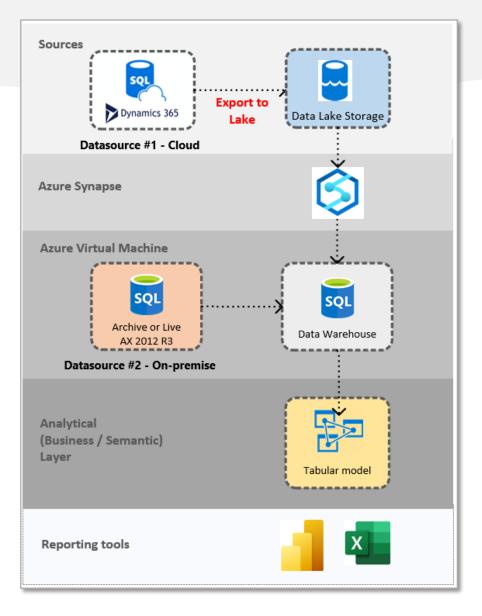
Connector for DFO Cloud & AX 2012 R3

- Multiple DFO / AX instances
- AX database can be live or archive
 - Incremental load (active datasource)
 - One-time load (passive datasource)

All application areas

- Document level granularity
- Financial dimensions (mapping available)

biadynamics



Results

Data Source ID	▼ Data Source Server Name	▼ Company Name	▼ Net Sales POS I	Receivables Overdue
1	mn-synapse-ondemand.sql.azuresynapse.net	Contoso Azure	2,783,585.31	465.86
2	bi4-dfo-export-	Contoso Consulting US	A	10,634,876.83
		Contoso Process Indust	try	13,183,954.65
		Contoso Retail USA	14,648,678.05	946.88
Grand Total			17,432,263.36	23,820,244.22

2022 - June 📭							
	Net Sales POS	Net Sales POS			Net Sales POS	Discount	
Net Sales POS	YOY	YOY Variance	YOY Variance %	YTD Variance %	per Store	Amount % POS	Sales Price POS
662,648.88	560,360.35	102,288.53	18.25%	-13.28%	30,120.40	35.03%	0.88
525,953.60	553,499.32	-27,545.72	-4.98%	-18.73%	23,906.98	29.20%	0.72
551,932.94	518,894.48	33,038.46	6.37%	-22.16%	25,087.86	26.73%	0.69
560,071.28	512,236.33	47,834.95	9.34%	-29.42%	25,457.79	29.96%	0.73
d 662,648.88	560,360.35	102,288.53	18.25%	-13.28%	30,120.40	35.03%	0.88
	Net Sales POS 662,648.88 525,953.60 551,932.94 560,071.28	Net Sales POS YOY 662,648.88 560,360.35 525,953.60 553,499.32 551,932.94 518,894.48 560,071.28 512,236.33	Net Sales POS YOY YOY Variance 662,648.88 560,360.35 102,288.53 525,953.60 553,499.32 -27,545.72 551,932.94 518,894.48 33,038.46 560,071.28 512,236.33 47,834.95	Net Sales POS YOY YOY Variance YOY Variance % 662,648.88 560,360.35 102,288.53 18.25% 525,953.60 553,499.32 -27,545.72 -4.98% 551,932.94 518,894.48 33,038.46 6.37% 560,071.28 512,236.33 47,834.95 9.34%	Net Sales POS YOY YOY Variance YOY Variance % TD Variance % 525,953.60 553,499.32 -27,545.72 -4.98% -18.73% 551,932.94 518,894.48 33,038.46 6.37% -22.16% 560,071.28 512,236.33 47,834.95 9.34% -29.42%	Net Sales POS Net Sales POS YOY Net Sales POS YOY Variance Net Sales POS	Net Sales POS Net Sales POS YOY Net Sales POS YOY YOY Variance Net Sales POS YOY YOY Variance Net Sales POS YOY YOY Variance Net Sales POS POS PER Store Net Sales POS PER Store Net Sales POS PER Store POS PER Store POS PER Store Net Sales POS PER Store POS PE

Net Sales POS	Data Source id 💌		
Row Labels	1	2	Grand Total
□ 2020		7,650,310.25	7,650,310.25
± 2020 - January		1,238,806.14	1,238,806.14
3020 - February ± 2020 - E		516,675.26	516,675.26
± 2020 - March		569,428.14	569,428.14
3020 - April ± 2020 - April		553,837.78	553,837.78
3 2020 - May		552,150.28	552,150.28
3020 - June ± 2020 - June		585,025.30	585,025.30
3020 - July ± 2020 - July		574,627.88	574,627.88
3020 - August ± 2020 - Eugust		591,859.12	591,859.12
3 2020 - September		546,742.04	546,742.04
± 2020 - October		549,223.38	549,223.38
3020 - November ± 2020 - November		563,395.94	563,395.94
∄ 2020 - December		808,538.99	808,538.99
□ 2021		6,998,367.80	6,998,367.80
3 2021 - January ± 2021 - January		577,564.62	577,564.62
3021 - February ± 2021 - E		576,354.15	576,354.15
3021 - March ± 2021 - March		546,995.09	546,995.09
3021 - April ± 2021 - April		518,894.48	518,894.48
3 2021 - May € 100 -		582,837.81	582,837.81
3021 - June ± 2021 - June		560,360.35	560,360.35
3021 - July ± 2021 - July		548,117.49	548,117.49
3 2021 - August ± 2021 - Eugust		542,826.82	542,826.82
3 2021 - September		553,841.65	553,841.65
⊕ 2021 - October		594,628.82	594,628.82
3021 - November ± 2021 - November		557,787.92	557,787.92
3021 - December ± 2021 - December		838,158.60	838,158.60
□ 2022	2,783,585.31		2,783,585.31
3022 - January ± 2022 - Banuary	53,508.51		53,508.51
3022 - February ± 2022 - E	562,425.80		562,425.80
3022 - March ± 2022 - March	560,071.28		560,071.28
3022 - April ± 2022 - April	551,932.94		551,932.94
3022 - May ± 2022 - May	525,953.60		525,953.60
3022 - June ± 2022 - June	529,693.19		529,693.19
Grand Total	2,783,585.31	14,648,678.05	17,432,263.36



There is more about integration...

Ongoing Business change
Checking data warehouse health
Monitoring processing times
Creating documentation
Monitoring Azure costs

Technical and business process

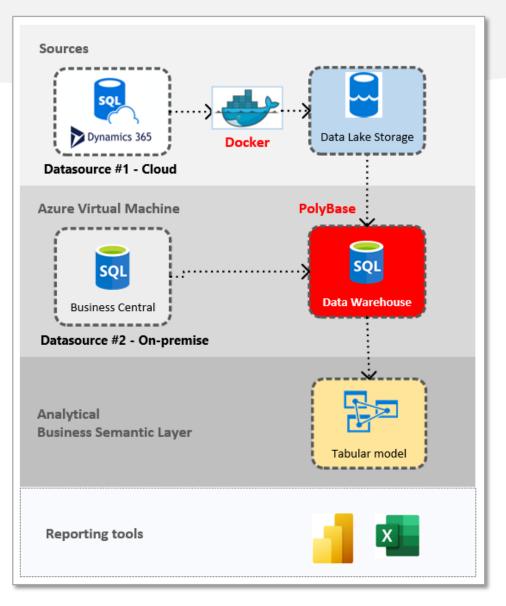
Integration Services

- Standard: filter AR/AP/INV balances
- Custom (project)
 - Mapping old and new dimension attributes
 - Fix erroneous transactions in BI

Impact on business

- BC: Faster processing and operational reporting
- Reporting is moving from ERP to BI





Checking data warehouse health

Data warehouse dimensions

	ID	Date	TableName	Scheme	Stage#	Dw#	Diff#	Diff
1	9	2022-06-26 19:32:42.537	Currency	dim	144	144	0	0
2	1	2022-06-26 19:32:42.537	Customer	dim	144	144	0	0
3	13	2022-06-26 19:32:42.537	Document GL	dim	216306	216306	0	0
4	14	2022-06-26 19:32:42.537	Document Sales	dim	110	110	0	0
5	15	2022-06-26 19:32:42.537	Document Sales Order	dim	44	44	0	0
6	3	2022-06-26 19:32:42.537	Fixed Asset	dim	18	18	0	0
7	4	2022-06-26 19:32:42.537	GL Account	dim	541	541	0	0
8	6	2022-06-26 19:32:42.537	Item	dim	314	314	0	0
9	10	2022-06-26 19:32:42.537	Item Variant	dim	4	4	0	0
10	11	2022-06-26 19:32:42.537	Job	dim	2	2	0	0
11	5	2022-06-26 19:32:42.537	Location	dim	16	16	0	0
12	7	2022-06-26 19:32:42.537	Resource	dim	24	24	0	0
13	8	2022-06-26 19:32:42.537	Sales Person	dim	24	24	0	0
14	12	2022-06-26 19:32:42.537	Unit Of Measure	dim	33	33	0	0
15	2	2022-06-26 19:32:42.537	Vendor	dim	142	142	0	0

Data warehouse facts

	ID	Date	TableName	Scheme	Stage#	Dw#	Diff#
1	1	2022-06-26 19:34:44.937	GL Budget Transactions	fact	2633	2633	0
2	2	2022-06-26 19:34:44.937	GL Cash Flow Transactions	fact	0	0	0
3	3	2022-06-26 19:34:44.937	GL Transactions	fact	216306	216306	0
4	4	2022-06-26 19:34:44.937	Sales Budget Values	fact	6963	6963	0
5	5	2022-06-26 19:34:44.937	Sales Delivery-Return Receipt	fact	62	62	0
6	6	2022-06-26 19:34:44.937	Sales Delivery-Shipment	fact	88	88	0
7	7	2022-06-26 19:34:44.937	Sales Orders	fact	96	96	0
8	8	2022-06-26 19:34:44.937	Sales Orders Archive	fact	6	6	0
9	9	2022-06-26 19:34:44.937	Sales Shipped Quantities	fact	32341	32341	0
10	10	2022-06-26 19:34:44.937	Sales Values-Item	fact	51165	51165	0
11	11	2022-06-26 19:34:44.937	Sales Values-NotItem-Sales Invoice	fact	6	6	0
12	12	2022-06-26 19:34:44.937	Sales Values-NotItem-Service Credit Memo	fact	0	0	0
13	13	2022-06-26 19:34:44.937	Sales Values-NotItem-Service Invoice	fact	0	0	0

						5	Stag	e - lo
Stage table	:	1	3	4	6	8	10	Total
RETAILTRANSACTIONSALESTRANS		21	21	23	22	19	23	23
SALESLINE		17	16	18	17	15	16	18
CUSTINVOICETRANS		13	11	12	14	12	12	14
NVENTTRANS		11	11	11	12	10	10	12
RETAILTRANSACTIONTABLE		8	7	8	9	8	9	9
RETAILTRANSACTIONPAYMENTTRAN	ıs	7	7	7	8	6	7	8
INVENTTRANSORIGIN	_	5	5	4	4	4	5	5
GENERALIOURNALACCOUNTENTRY	_	4	_				4	4
PURCHLINE		2	2	2	2	2	2	2
CUSTTRANS		2	2	2	2	2	2	2
Total			_	23	_	_	23	23
						S	tag	e - in
tage table							10	Total
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M. Nama			10	Tata		ı	D۱	N din
	1	3	10	Tota ▼	_		D۱	V din
oadDocumentInventoryInvoice	1	1	0	· 1			D۱	V din
oadDocumentInventoryInvoice oadDocumentInventory	1	1	0	1			D\	V din
oadDocumentInventoryInvoice oadDocumentInventory	1	1	0	1			D\	V din
.oadDocumentInventoryInvoice .oadDocumentInventory .oadDocumentSalesOrderLine .oadRetailTransaction	1	1 1 0	0	1 1 1			D\	W din
.oadDocumentInventoryInvoice .oadDocumentInventory .oadDocumentSalesOrderLine .oadRetailTransaction	1 1 1	1 1 0	0 1 0	1			D\	W din
.oadDocumentInventoryInvoice .oadDocumentInventory .oadDocumentSalesOrderLine .oadRetailTransaction .oadReceivablesStateTransactions	1 1 1	1 1 0	0 1 0	1			D\	W din
.oadDocumentInventoryInvoice .oadDocumentInventory .oadDocumentSalesOrderLine .oadRetailTransaction .oadReceivablesStateTransactions .oadSalesByReceipt .oadDocumentCustomer	1 1 1 1	1 1 0 0	0 1 0 0	1			D\	W din
oad Document Inventory Invoice oad Document Inventory oad Document Sales Order Line oad Retail Transaction oad Receivables State Transactions oad Sales By Receipt oad Document Customer	1 1 1 1 0 0	1 0 0 0	0 1 0 0 0	1 1 1 (((((((((((((((((D\	W din
oadDocumentInventoryInvoice oadDocumentInventory oadDocumentSalesOrderLine oadRetailTransaction oadReceivablesStateTransactions oadSalesByReceipt oadDocumentCustomer oadDocumentPurchaseOrderLine	1 1 1 1 0 0	1 0 0 0 0	0 1 0 0 0 0	1 1 1 (((((((((((((((((D\	W din
.oadDocumentInventoryInvoice .oadDocumentInventory .oadDocumentSalesOrderLine .oadRetailTransaction .oadReceivablesStateTransactions .oadSalesByReceipt .oadDocumentCustomer .oadDocumentPurchaseOrderLine	1 1 1 0 0 0	1 0 0 0 0 0	0 1 0 0 0 0	1 1 1 (((((((((((((((((
.oadDocumentInventoryInvoice .oadDocumentInventory .oadDocumentSalesOrderLine .oadRetailTransaction .oadReceivablesStateTransactions .oadSalesByReceipt .oadDocumentCustomer .oadDocumentPurchaseOrderLine total	1 1 1 0 0 0 0	1 1 0 0 0 0 0 0	0 1 0 0 0 0 0					W din
oad Document Inventory Invoice oad Document Inventory oad Document Sales Order Line oad Retail Transaction oad Receivables State Transactions oad Sales By Receipt oad Document Customer oad Document Purchase Order Line otal	1 1 1 0 0 0	1 0 0 0 0 0	0 1 0 0 0 0	1 1 1 (((((((((((((((((
oadDocumentInventoryInvoice oadDocumentInventory oadDocumentSalesOrderLine oadRetailTransaction oadReceivablesStateTransactions oadSalesByReceipt oadDocumentCustomer oadDocumentPurchaseOrderLine otal	1 1 1 0 0 0 0	1 1 0 0 0 0 0 0	0 1 0 0 0 0 0	1 1 1 1 ((((((((((((((((
oadDocumentInventoryInvoice oadDocumentInventory oadDocumentSalesOrderLine oadRetailTransaction oadReceivablesStateTransactions oadSalesByReceipt oadDocumentCustomer oadDocumentPurchaseOrderLine total DW Name oadSalesInvoice	1 1 1 0 0 0 0	1 0 0 0 0 0 0	0 1 0 0 0 0 0 0	1 1 1 1 ((((((((((((((((
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DW Name LoadDocumentInventoryInvoice LoadDocumentSalesOrderLine LoadRetailTransaction LoadSalesByReceipt LoadDocumentCustomer LoadDocumentPurchaseOrderLine Total DW Name LoadSalesInvoice LoadSalesInvoice LoadSalesOrders LoadSalesOrders LoadSalesOrders LoadSalesOrders LoadSalesOrders LoadSalesOrders	1 1 1 0 0 0 0 1	1 1 0 0 0 0 0 0 0 1	0 1 0 0 0 0 0 0 0 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
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Monitoring processing times

	DW Facts									
Log ID	Start Day	Start Time	DW Name	Process Type	Time (min)	Time (s)	Rows Inserted	Rows Deleted	Ins/min	
6193	06-25	12:16	LoadSalesInvoice	0	4.0	240	3,739,944		935,700	
4734	06-25	09:45	LoadSalesInvoice	0	3.9	235	3,487,388		891,400	
3297	06-24	14:19	LoadSalesInvoice	0	4.7	284	3,739,944		790,700	
1429	06-23	11:07	LoadSalesInvoice	0	4.1	248	3,487,388		842,600	
Total					16.8	1,007	14,454,664		861,500	

Analytical Table by Event Subclass										
TableName	CompressSegment	ExecuteSql	Process	ReadData	VertiPaq	Total ▼				
Retail Sales Transactions	0.7	8.4	7.4	6.8	3.0	26.4				
SalesOrders	0.3	5.2	3.3	3.2	0.7	12.6				
InventoryState	0.2	5.6	2.9	2.9	1.0	12.6				
SalesInvoice	0.3	5.6	2.6	2.6	0.1	11.2				
PayablesState	0.2	5.4	2.3	2.1	0.9	10.9				
Total	1.6	30.3	18.5	17.4	5.8	73.7				

BI4DYNAMICS

Project documentation





177 Dimensions 3104 Measures

Instance name	BI4Dynamics DFO Cloud and AX on-Premise
BI4Dynamics version	9.1.0
Physical cubes (12)	Common Measures, FA Analysis, GL Analysis, Inventory Analysis, Payables Analysis, Product Information Analysis, Production Analysis, Project Analysis, Purchase Analysis, Receivables Analysis, Retail Analysis, Sales Analysis,
Data warehouse	
Server	bi4-dfo-export-
Database	BI4Dynamics DFO Cloud and AX on-Premise
SQL edition	standard
SQL version	15
Analysis database	<u> </u>
Server	powerbi://api.powerbi.com/v1.0/myorg/BI4Dynamics%20Integration
Database	BI4Dynamics DFO Cloud and AX on-Premise
SQL edition	enterprise
SQL version	x

SETUP

Datasources

ID	Server name	Database name	Version
	mn-synapse- ondemand sol an iresunanse net	https://dfo.dfs.core.windows.net/dynamics3i financeandoperations/bi4dynamics- uat.operations.dynamics.com	7.0
2	bi4-dfo-export-	AX2012R3	6.3

Companies

Comp ID	Data source ID	Company code	Company	Country	Local curr	Add. curr
1	1	001	Contoso Azure	USA	USD	USD
2	2	uspi	Contoso Process Industry	USA	USD	USD
3	2	usrt	Contoso Retail USA	USA	USD	USD
4	2	ussi	Contoso Consulting USA	USA	USD	AED

Setup table

octup tubic	
Paramether	Value
Fiscal date type	0
Language	1033
Language code	EN-US
Process type	0
Payables period	6
Payables compression	2
Receivables period	6
Receivables compression	2
Inventory period	6
Inventory compression	2

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Sales Analysis

Overview of measures and dimensions

Object name	Count
Measure groups	9
- DW based measure groups	9
Measures	610
- DW base Measures	46
- DW custom Measures	64
- DAX extended DW based measures	406
- Calculated measures	94
Dimensions	49
From Field	8
From Enum	
From Table	
Custom	41

Measure group and dimension table

Dimensions	Sales Invoice (#Sales Invoice)	Sales Invoice - Charges Line (#Sales Invoice - Charges Line)	Sales Invoice - Misc Charges (#Sales Invoice - Misc Charges)	Sales Invoice - Charges Header (#Sales Invoice - Charges Header)	Sales Delivery (#Sales Delivery)	Sales Orders (#Sales Orders)	Sales Quote (#Sales Quotes)	Sales Opportunity (#Sales Opportunities)	Sales Forecast (#Sales Forecasts)
Account					x	X	X		
Manager									
Bill Of Lading					X				
Bill To Customer	X	X	X	X	X	X	X		
Charges	X	X		X					
Closed Date Commission								X	
Sales Group	X	X	X						
Contact Person						X	X		
Country						X	X		
Currency	X	X	X	x	x	X	X		x
Date	X	X	X	X	X	X		X	X
Delivery Mode		-	-		x	X	x		
Delivery Reason					-				
Code							×		
Delivery Term					X	X	X		
Document Sales	x	x	×	x					
Invoice	^	^	^	^					
Document Sales Opportunity							×	×	
Document Sales Order					x	×	×		
Document Sales Order Line					x	x			
Document Sales Ouotation							x		
Employee	x	X	x	x		X	X		
Expiry Date							X		
Follow Up Date							X		
Forecast End Date									x
Forecast Model									x
General Type	x	X	x	x					
Inventory Batch	X	X	X	X					
Inventory Dimensions	x	x	×	x					
Inventory Serial	Х	X	X	X					
Inventory Size	X	X	X	X					
Item	X	X	X	X	X	X	X		X
Location	X	X	X	X	X	X	X		X
Opened Date								X	
Packing Slip					X				
Payment Term					X				
Procurement Category	x	x	x	x	x	x	×		
Project						X	X		x
Project Category							X		

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							6/2	26/2022 9	:41:48 PM
Measures	Net Sales ACY Line, Net Sales Posted Line, Sales Posted Line, Sales Commission Amount, Sales Commission Amount ACY, Sales Cost Amount ACY Amount Posted, Sales Discount Amount Posted, Invoice Line, Sales Discount Amount Posted, Invoice Line, Sales Discount Amount Posted, Line, Sales Discount Amount Posted Line, Sales Discount Amount Posted Line, Sales Discount Line, Sales Discount Amount, Sales Discount Amount Amount Amount Amount Amount Sales Line	Sales Charges Value - Charges Line, Sales Charges Value ACY - Charges Line, Sales Charges Value Posted - Charges Line,	Sales Discount Amount - Misc Charges, Sales Discount Amount ACY Misc Charges, Sales Discount Amount End, Sales Discount Amount End ACY, Sales Discount Amount End Posted, Sales Discount Amount End Posted, Sales Misc Charges, Sales Misc Charges, Sales Misc Charges, Sales Misc Charges Charges End ACY, Sales Misc Charges Tax, Sales Tax ACY, Sales Tax Posted, Sales Tax, Sales Tax Posted, Sales Tax Posted, Sales Tax Posted,	Sales Charges Value - Charges Header, Sales Charges Value ACY - Charges Header, Sales Header, Sales Header,	Line Num - Sales Delivery, No of Sales Delivery Lines - Sales Delivery, Sales Amount Late - Sales Delivery, Sales Amount Late - Sales Amount Late ACV - Sales Delivery, Sales Lines Con Time - Sales Delivery, Sales Delivery, Sales Delivery, Sales Delivery, Sales Delivery, Sales Packingslip Quantity Ordered - Sales Delivery, Sales Packingslip Quantity Remaining - Sales Delivery,	Financial, Sales Order Open Amount Posted, Sales Order Open Amount		Opportunity Days To Close, Opportunity Estimated Revenue,	Sales Forecast Amount, Sales Forecast Amount ACY, Sales Forecast Amount Posted, Sales Forecast Cost Price, Sales Forecast Cost Price Posted, Sales Forecast Count, Sales Forecast Discount Amount, Sales Forecast Discount Amount Fosted, Sales Forecast Discount Forecast Discount Forecast Discount Forecast Discount Forecast Price Unice Unice Unit ACY, Sales Forecast Sales Forec

Measure group : Sales Invoice (#Sales Invoice)

Dimensions (20)

Name	Source type	Source
Bill To Customer	[Bill To Customer].[CUSTTABLE_ACCOUNTNUM] = [SalesInvoiceView]. [CUSTINVOICEJOUR_INVOICEACCOUNT]	Customer
	[Charges].[MARKUPTRANS_TRANSTABLEID] = 0[Charges].[MARKUPTRANS_TRANSRECID] = 0[Charges].[MARKUPTRANS_LINENUM] = 0	Charges

Commission Sales Group	[COmmission Sales Group]. [COMMISSIONSALESGROUP_GROUPID] = [SalesinvoiceView]. [CUSTINVOICETRANS_SALESGROUP]	Commission Sales Group
Currency	[Currency].[CURRENCY_CURRENCYCODE] = [SalesInvoiceView]. [CUSTINVOICETRANS_CURRENCYCODE]	Currency
Date	Field	
Document Sales Invoice	[Document Sales Invoice].[CUSTINVOICEJOUR_RECID] = [SalesInvoiceView].[CUSTINVOICEJOUR_RECID]	Document Sales Invoice
Employee	[Employee].[HcmWorker_Recld] = [SalesInvoiceView]. [CUSTINVOICEJOUR_WORKERSALESTAKER]	Employee
General Type	[General Type].[GeneralTypeID] = [SalesInvoiceView]. [GeneralType]	General Type
Inventory Batch	[Inventory Batch].[InventBatch_inventBatchId] = [SalesInvoiceView].[InVENTBATCH_INVENTBATCHID] [Inventory Batch].[InventBatch_itemId] = [SalesInvoiceView].[CUSTINVOICETRANS_ITEMID]	Inventory Batch
Inventory Dimensions	[Inventory Dimensions].[InventDim_inventDimId] = [SalesInvoiceView]. [CUSTINVOICETRANS_INVENTDIMID]	Inventory Dimensions
Inventory Serial	[Inventory Serial].[InventSerial_InventSerialId] = [SalesInvoiceView].[InVENTSERIAL_INVENTSERIALID] [Inventory Serial].[InventSerial_itemId] = [SalesInvoiceView].[CUSTINVOICETRANS_ITEMID]	Inventory Serial
Inventory Size	[Inventory Size], [InventDim_InventSizeId] = [SalesInvoiceView], [INVENTDIM_INVENTSIZEID] [Inventory Size], [InventDim_inventDimId] = [SalesInvoiceView], [CUSTINVOICETRANS_INVENTDIMID]	Inventory Size
Item	[Item].[INVENTTABLE_ITEMID] = [SalesInvoiceView]. [CUSTINVOICETRANS_ITEMID]	İtem
Location	[Loadion] [INVENTLOCATION_INVENTLOCATIONID] [SaleshvoiceView]. [INVENTDM_INVENTLOCATIONID] [Loadion]. [INVENTLOCATION_INVENTSITEID] = [Salestivoiceview] [INVENTDM_INVENTSITEID] [Loadion] [InventDim_wMSLoadionid] = [Salestivoiceview] [VMSLoadionid] =	Location
Procurement Category	[Procurement Category].[No] = [SalesInvoiceView]. [ProcurementCategory]	Procurement Category
Reason Code	[Reason Code].[ReasonTableRef_RecId] = [SalesInvoiceView]. [CUSTINVOICETRANS_REASONREFRECID]	Reason Code
Return Reason Code	[Return Reason Code]. [Return ReasonCode, ReasonCodeld] = [SalesInvoiceView]. [CUSTINVOICEDOUR, RETURNREASONCODEID]	Return Reason Code
Sell To Customer	[Sell To Customer].[CUSTTABLE_ACCOUNTNUM] = [SalesInvoiceView]. [CUSTINVOICEJOUR_ORDERACCOUNT]	Customer
Tax Group	[Tax Group].[TAXGROUPHEADING_TAXGROUP] = [SalesInvoiceView].[CUSTINVOICETRANS_TAXGROUP]	Tax Group
Unit Of Measure	[Unit Of Measure].[UnitOfMeasure_Symbol] = [SalesInvoiceView].[CUSTINVOICETRANS_SALESUNIT]	Unit Of Measure

Global dimensions

Measure group	Source of global dimensions
Sales Invoice(#Sales Invoice)	

DW base measures (7)

Name	Description
Sales Commission Amount Posted (Variable scrap)	CUSTINVOICETRANS.COMMISSAMOUNTCUR
Sales Commission Amount (Variable scrap)	CUSTINVOICETRANS.COMMISSAMOUNTMST
Sales Invoiced Quantity (Variable scrap)	CUSTINVOICETRANS.INVENTQTY
Net Sales Posted Line (Variable scrap)	CUSTINVOICETRANS.LINEAMOUNT
Net Sales Line (Variable scrap)	CUSTINVOICETRANS.LINEAMOUNTMST
Sales Invoiced Quantity UM (Variable scrap)	CUSTINVOICETRANS.QTY
Sales Tax Amount (The sales tax amount, in the accounting currency)	CUSTINVOICETRANS.TAXAMOUNTMST

DW measures (8)

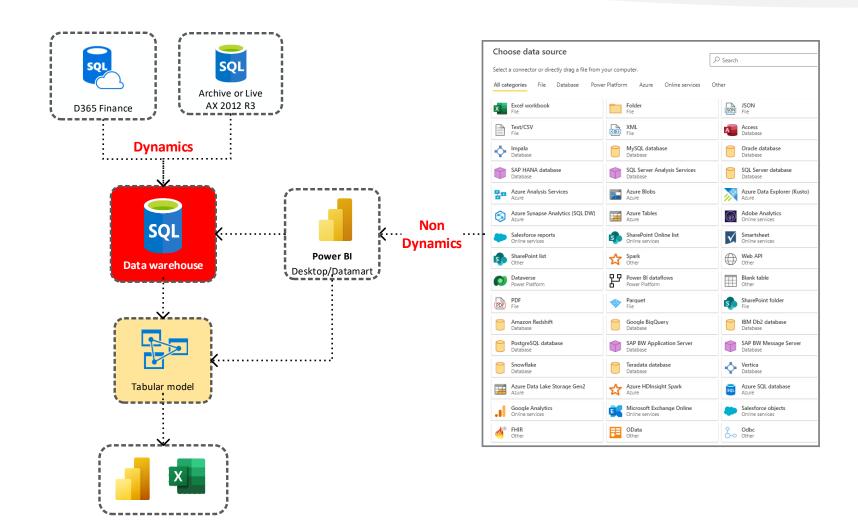
Name	ustom SQL expression		
Sales Discount Amount Posted - Invoice Line	CUSTINVOICETRANS.DISCAMOUNT * CUSTINVOICETRANS.QTY		
Sales Cost Amount Posted	IF([Costs_SQ].COSTAMOUNTPOSTED=0, NULL, -		
Sales Cost Amount Posted	[Costs_SQ].COSTAMOUNTPOSTED)		
Sales Shipped Quantity	- [Costs_SQ].QTY		



#2: Add Non-Dynamics sources to Data Warehouse

Power Query-based BI4Dynamics ETL Power BI Datamart (preview)

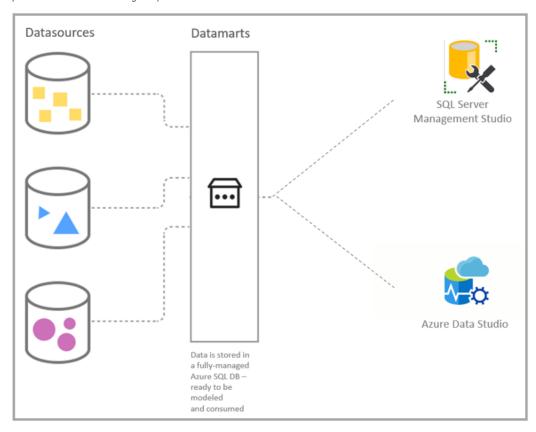
Add Non-Dynamics Sources

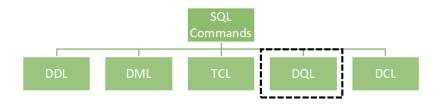


Power BI Datamart (preview)

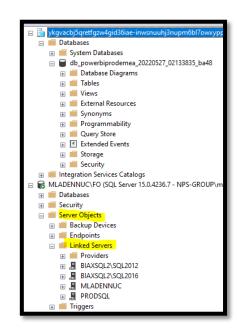
Analyze outside the editor

Datamarts provide a SQL DQL (query) experience through your own development environment – such as SSMS or Azure Data Studio. You must run the latest version of the tools and authenticate using Azure Active Directory or MFA. The login process is the same as the sign-in process for Power BI.





You can only write DQL (not DDL or DML)



Support for Linked Server connection



#3: Add Non-Dynamics sources to Tabular Model

Build a composite model using Power BI Premium (Per User) or Azure Analysis Service (Standard)



