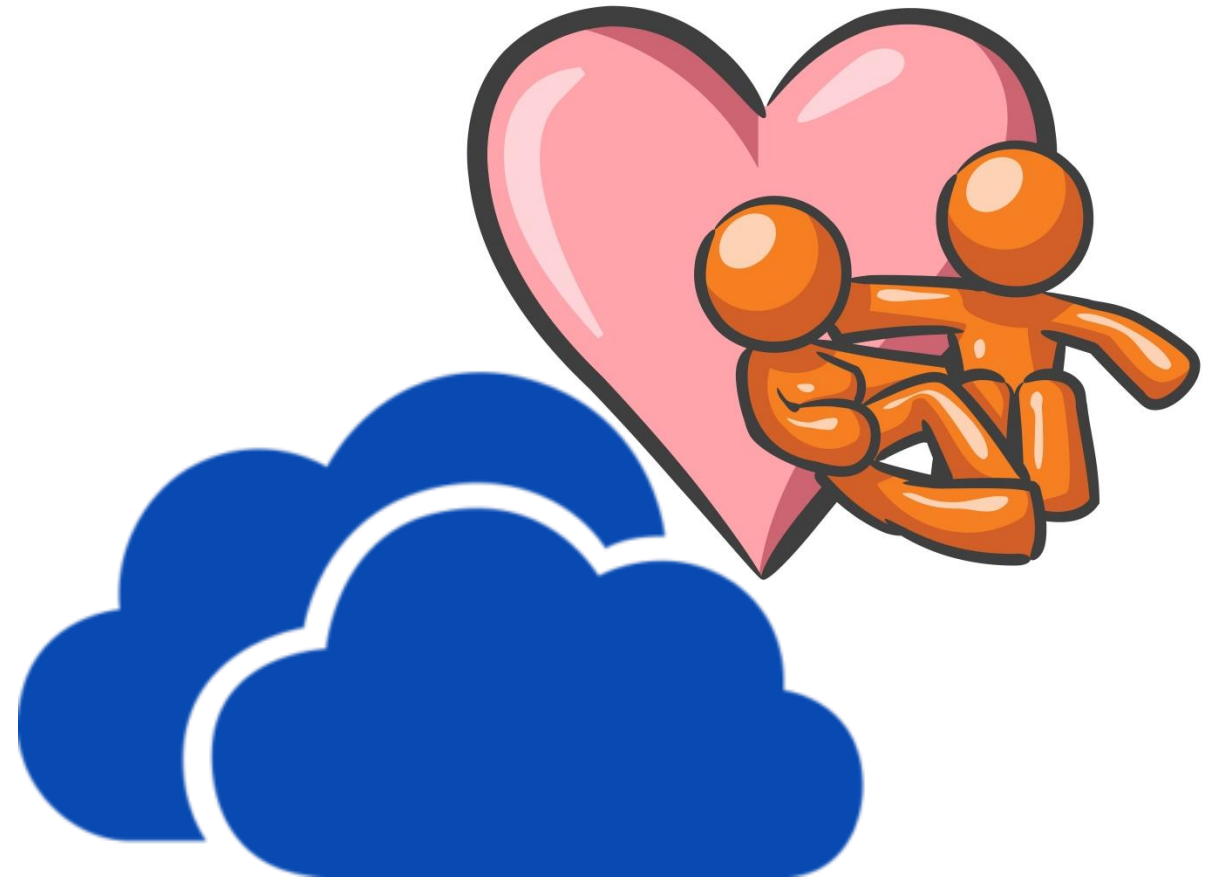


# Paginated Reports in Power BI

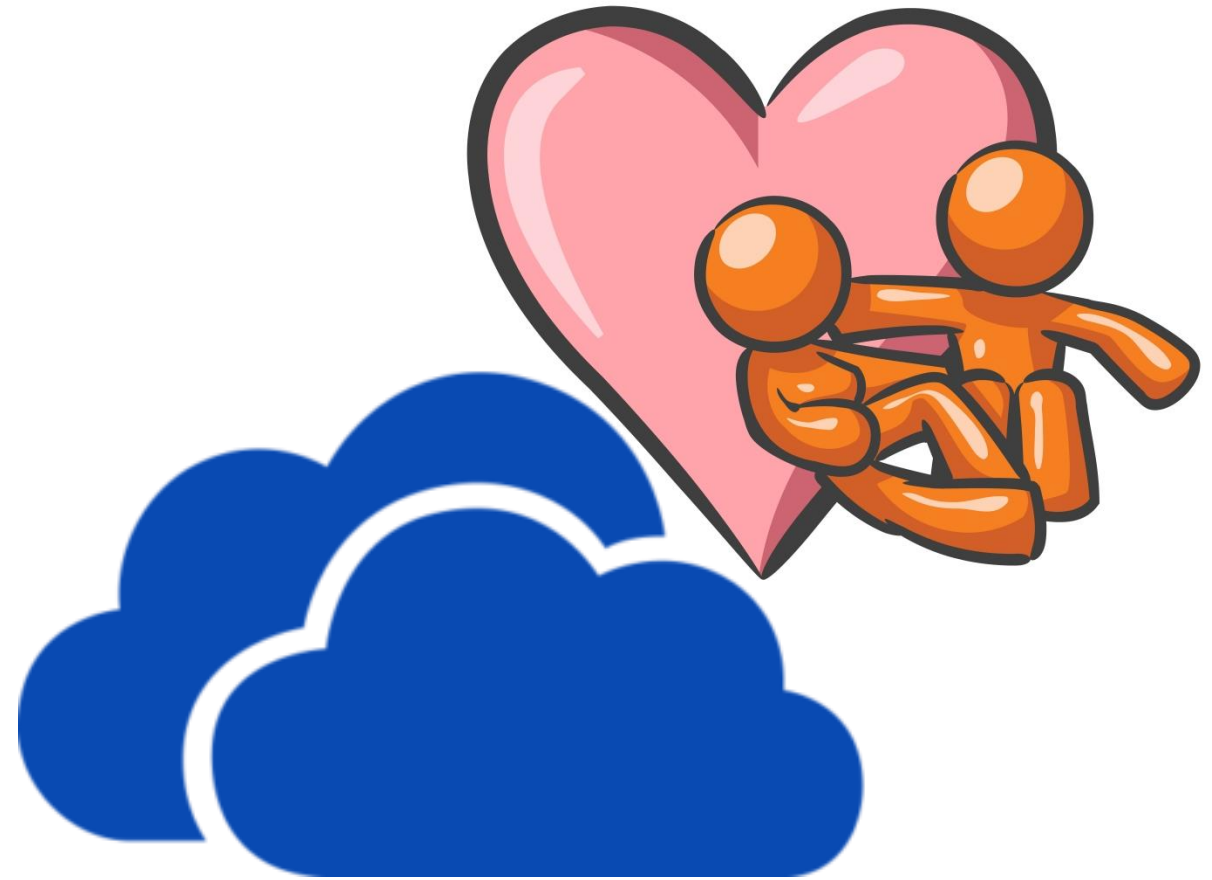
Just Thorning Blindbæk



**ORANGEMAN**

# Agenda - Love is in the air

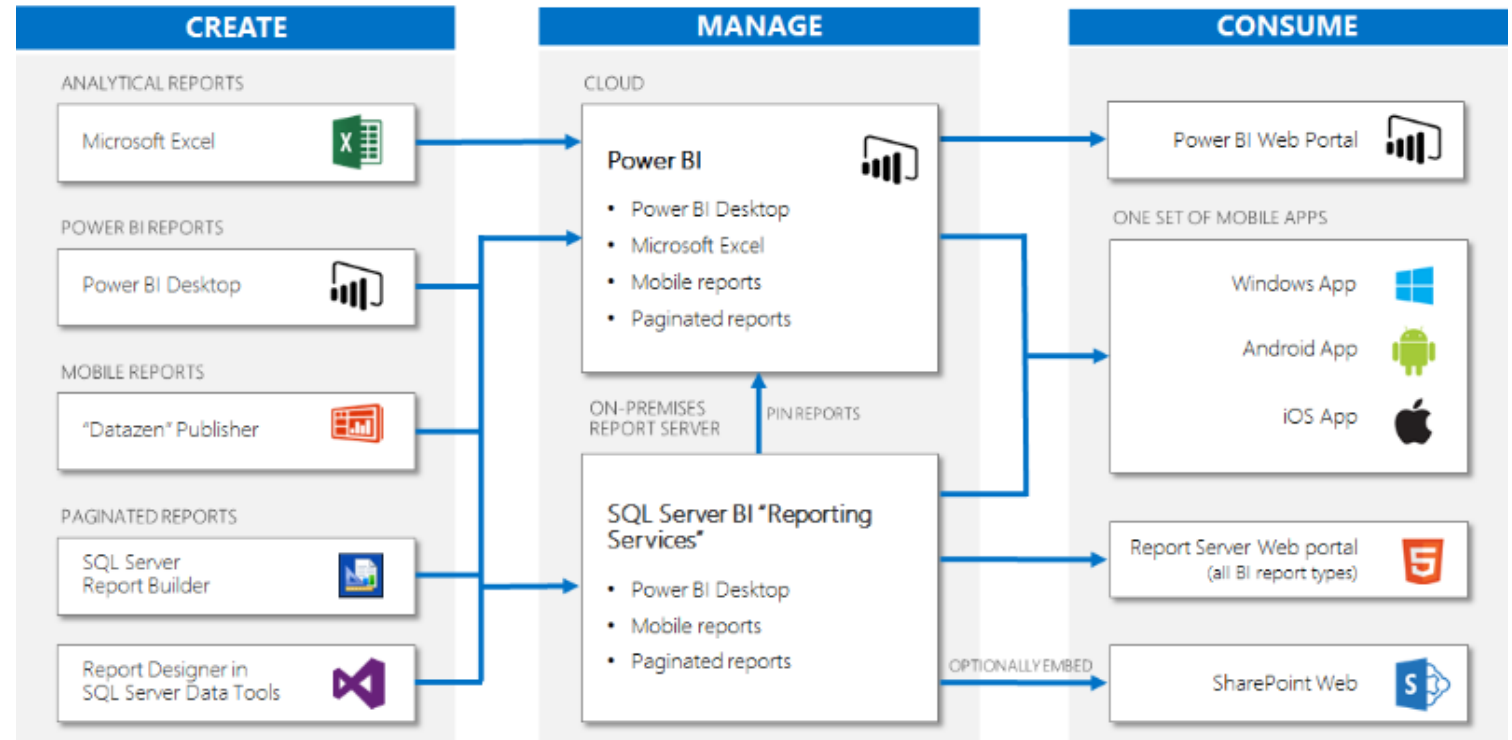
- ▶ The background
- ▶ Use cases
- ▶ How to create a report
- ▶ How to publish and distribute
- ▶ The future



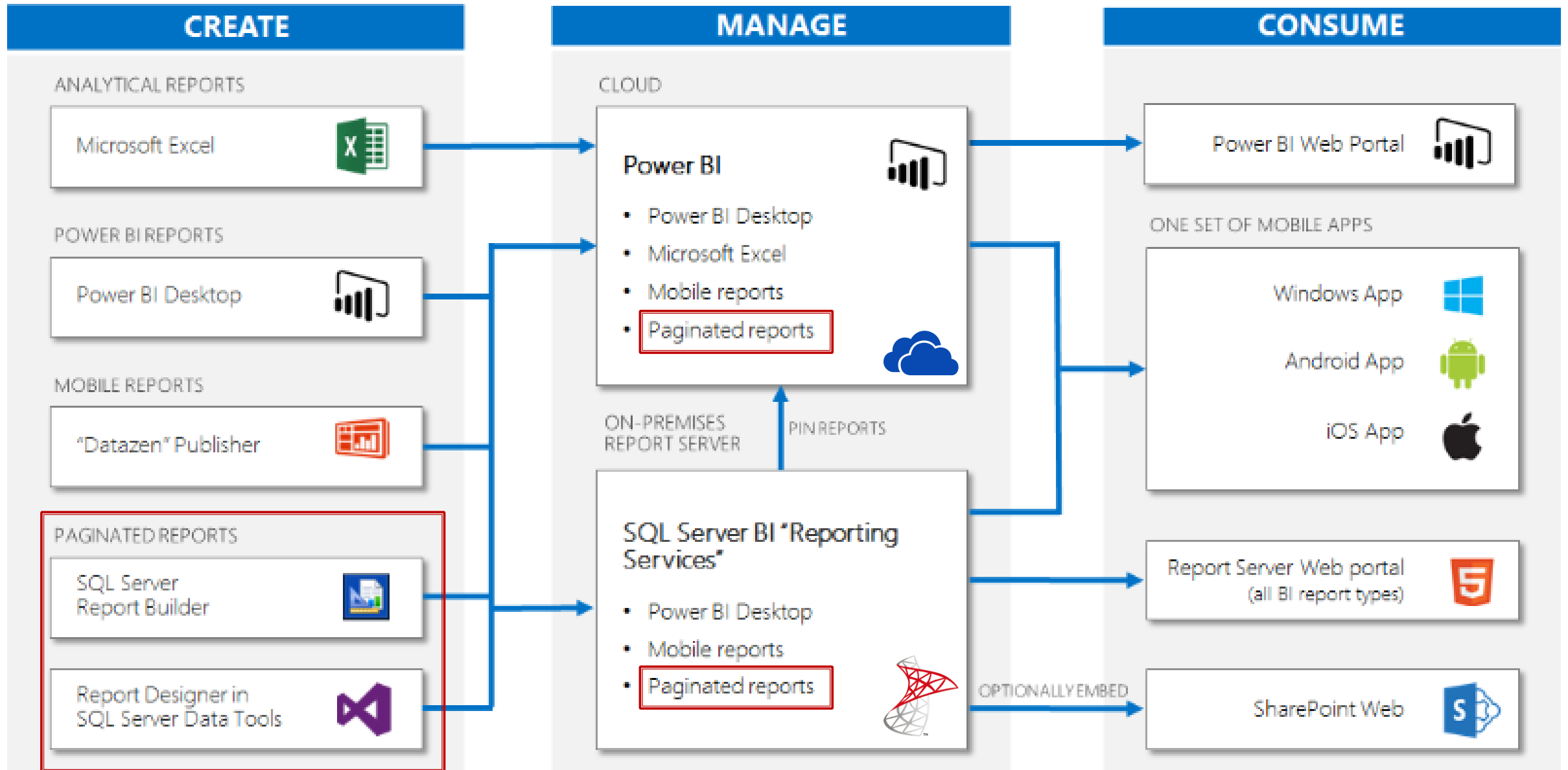
The background

# Pixel perfect print friendly paginated reports

- ▶ Been around for years...
  - Reporting Services (SSRS)
  - SQL Server 2000
  - Now GA in Power BI
- ▶ The Swiss Army Knife



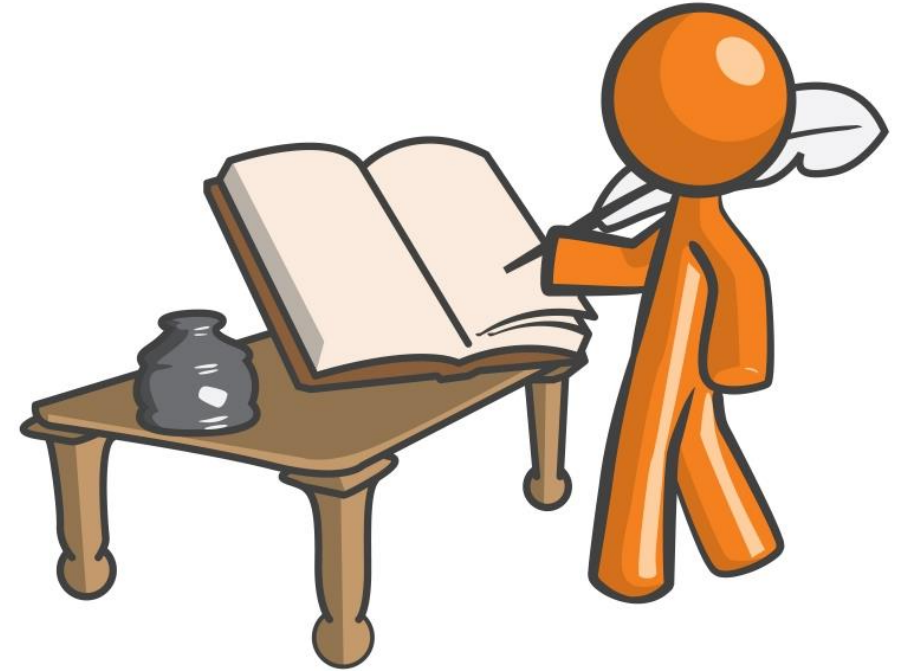
Microsoft Reporting Roadmap, October 2015



Use cases

# Use cases

1. Migration scenarios
  - All ready a large investment in Paginated reports
  - Gather them with your Power BI analytical reports
2. Complement to Power BI reports
  - Print, print, print
  - Push reports and/or data
  - Export without row limits
  - Multiple live connections in the same report



# Strengths

- ▶ Paginated
  - ▶ Print friendly
  - ▶ Pixel perfect
  - ▶ Multiple export formats
  - ▶ Parametrized subscriptions
- 
- ▶ Require premium

# Weaknesses

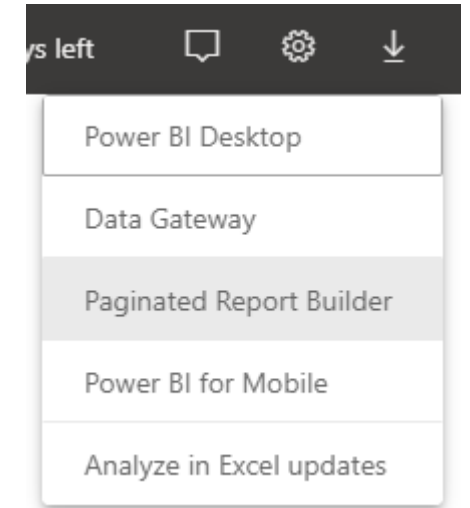
- ▶ Additional development tool



# How to create a report

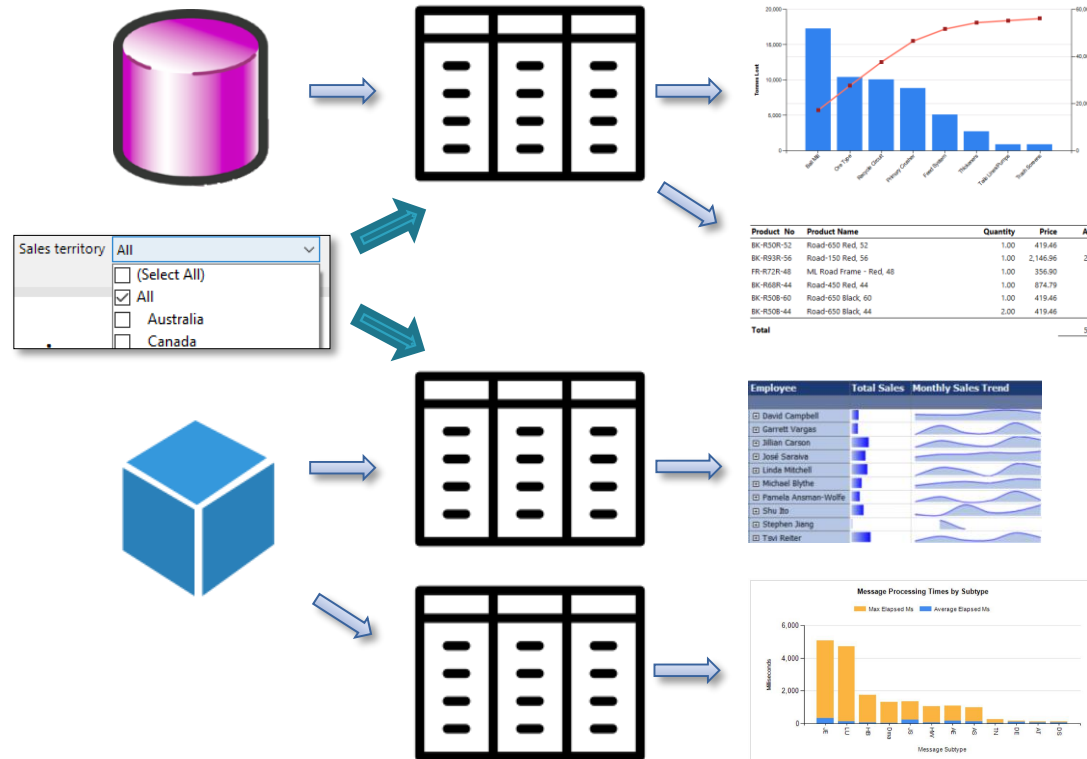
# Power BI (Paginated) Report Builder

- ▶ Another development tool
  - SQL Server Report Builder + additional features
  - Not as user friendly as Power BI Desktop
- ▶ Download and install
  - Updated frequently
- ▶ Free – don't require Premium
  - Try it out!



# Report objects

- ▶ Data source
  - Connection string
- ▶ Dataset
  - Just a flat table
- ▶ Parameter
  - Input filter
- ▶ Data region
  - Tablix, chart



- Parameters
  - FromDateFullDateAlternateKey
  - ToDateFullDateAlternateKey
  - SalesTerritorySalesTerritoryCountry
  - SalesSalesOrderNumber
- Images
  - AWLogo
- Data Sources
  - My Workspace\DS Sales
- Datasets
  - SalesTerritorySalesTerritoryCountry
    - SalesTerritoryCountry
    - ParameterCaption
    - ParameterValue
    - ParameterLevel
    - ParameterCaptionIndented
  - dsOrders

# Data sources for the Power BI Developer

Reuse what you have already build!

- ▶ Power BI Datasets
  - Premium
  - Non-premium
- ▶ Analysis Services
  - On-prem (Tabular and MOLAP)
  - Azure
- ▶ Other sources
  - SQL Server On-prem
  - Azure SQL DB
  - Azure SQL DW
  - Oracle
  - Teradata

# Datasets

- ▶ Not a Model
- ▶ No import mode
- ▶ Just a query
  - Live/direct connection
  - Returns a flat table
- ▶ Query designer
  - Generates DAX or SQL

Query Designer

Model

Metadata

Search Model

Measure Group:

<All>

Model

- Measures
- KPIs
- Currency
- Date
- Employee
- Product
- Promotion
- Reseller
- Sales
- SalesTerritory

Dimension	Hierarchy	Operator	Filter Expression	Param...
Date	FullDateAlternateKey	Range (Inclusive)	1/1/2005 : 12/31/2014	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
SalesTerritory	SalesTerritoryCountry	Equal	{ All }	<input checked="" type="checkbox"/> <input type="checkbox"/>
Sales	SalesOrderNumber	Equal	{ All }	<input checked="" type="checkbox"/> <input type="checkbox"/>

Status	CustomerPONumber	SalesOrderNumber	OrderQuantity	CarrierTrackingNumber	ProductAlternateKey	Product
Current	PO18009186470	SO43663	1	1E90-4FBF-B6	BK-R50R-60	Road-6
Current	PO16008173883	SO43666	1	D46A-40CA-8D	BK-R50R-52	Road-6
Current	PO16762199940	SO43859	1	2C16-4AA6-B4	LJ-0192-L	Long-S
Current	PO12557127067	SO43872	1	52FF-45CD-9B	BK-R50R-48	Road-6
Current	PO7656175368	SO43912	1	69B6-46F8-A4	BK-R68R-44	Road-4
Current	PO18009181739	SO44281	1	13EE-4DFE-93	BK-R50B-52	Road-6
Current	PO16008112311	SO44286	1	27D8-4398-9C	BK-R68R-44	Road-4
Current	PO16762152605	SO44500	1	E9A4-477A-83	BK-R50R-48	Road-6
Current	PO16037162003	SO44505	1	5D07-4BE7-A6	FR-M945-52	HL Mo
Current	PO12557171689	SO44521	1	E46D-4692-AC	BK-R50R-58	Road-6
Current	PO4698173942	SO44548	1	3A3B-4572-8F	BK-R50B-58	Road-6
Current	PO16095186445	SO44753	1	3015-48E8-85	FR-R72R-48	ML Roa
Current	PO4002147144	SO44781	1	32AD-4737-BB	CA-1098	AWC Lc
Current	PO18009115235	SO45040	1	8354-423A-A8	BK-R50B-52	Road-6
Current	PO16008114038	SO45044	1	DC47-40A2-8F	BK-R50R-52	Road-6
Current	PO6728123661	SO45073	1	7EBC-48E3-90	BK-R50R-48	Road-6
Current	PO16762133534	SO45286	1	AE6F-4379-99	BK-R68R-58	Road-4
Current	PO12499190711	SO45301	1	0BA8-4928-A7	FR-R38R-62	LL Roac
Current	PO4553175399	SO45325	1	5C87-4ACC-B0	BK-R50R-60	Road-6
Current	PO7656113434	SO45339	1	1F94-40D0-86	BK-R50R-62	Road-6

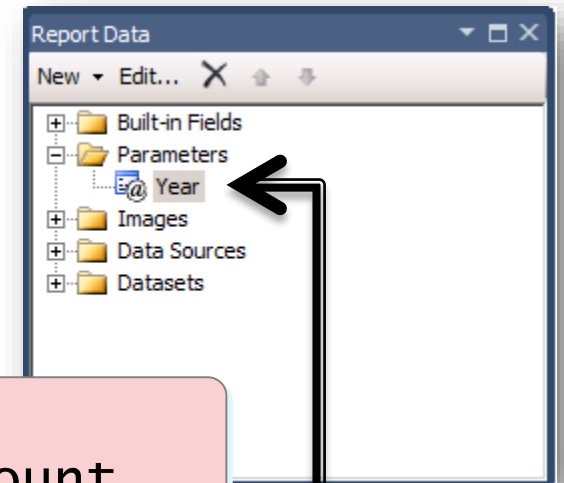
Help

OK

Cancel

# Parameters

- ▶ Report Parameters
  - Values specified when rendering a report
  - By a user viewing a report interactively
  - In a report subscription
- ▶ Dataset/query Parameters
  - Used to restrict query results
  - Mapped to a report parameter



```
-- Dataset query
SELECT SalesOrderNumber, SalesAmount
FROM FactInternetSales
WHERE YEAR(OrderDate) = @Year
```

# Data regions

Like Visuals in Power BI

- ▶ Tablix
  - Tables
  - Matrixes
  - Lists
- ▶ Charts
- ▶ Gauge
- ▶ Maps

Sales Territory	Full Name	ID2003	ID2004
Northwest	Pamela O. Anderson-Wolfe	\$900368.58	\$1656492.86
	David R. Campbell	\$1377431.33	\$1930885.56
	Tate A. Morris-Annex		
Total			

Table Report

Sales by Area and Year		North America		2003	2004	Total
		US	CA			
Clothing	Caps	\$9798.76	\$2801.06	\$9909.44	\$13006.39	\$22915.83
	Tights	\$51391.51	\$8233.90	\$59625.41	\$10000.00	\$69625.41
Components	Chains	\$4972.00	\$793.83	\$354		
	Cranksets	\$105118.64	\$18515.99	\$728		
	Touring Frames	\$767130.33	\$196141.85	\$60345		

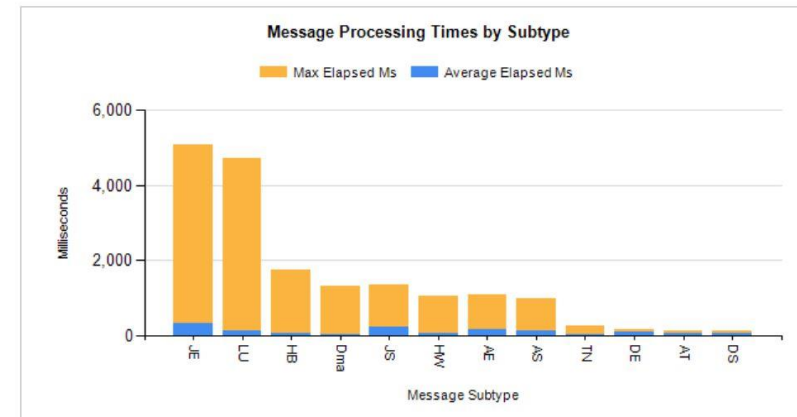
Matrix Report

**Congratulations!**

Michael G Blythe 275

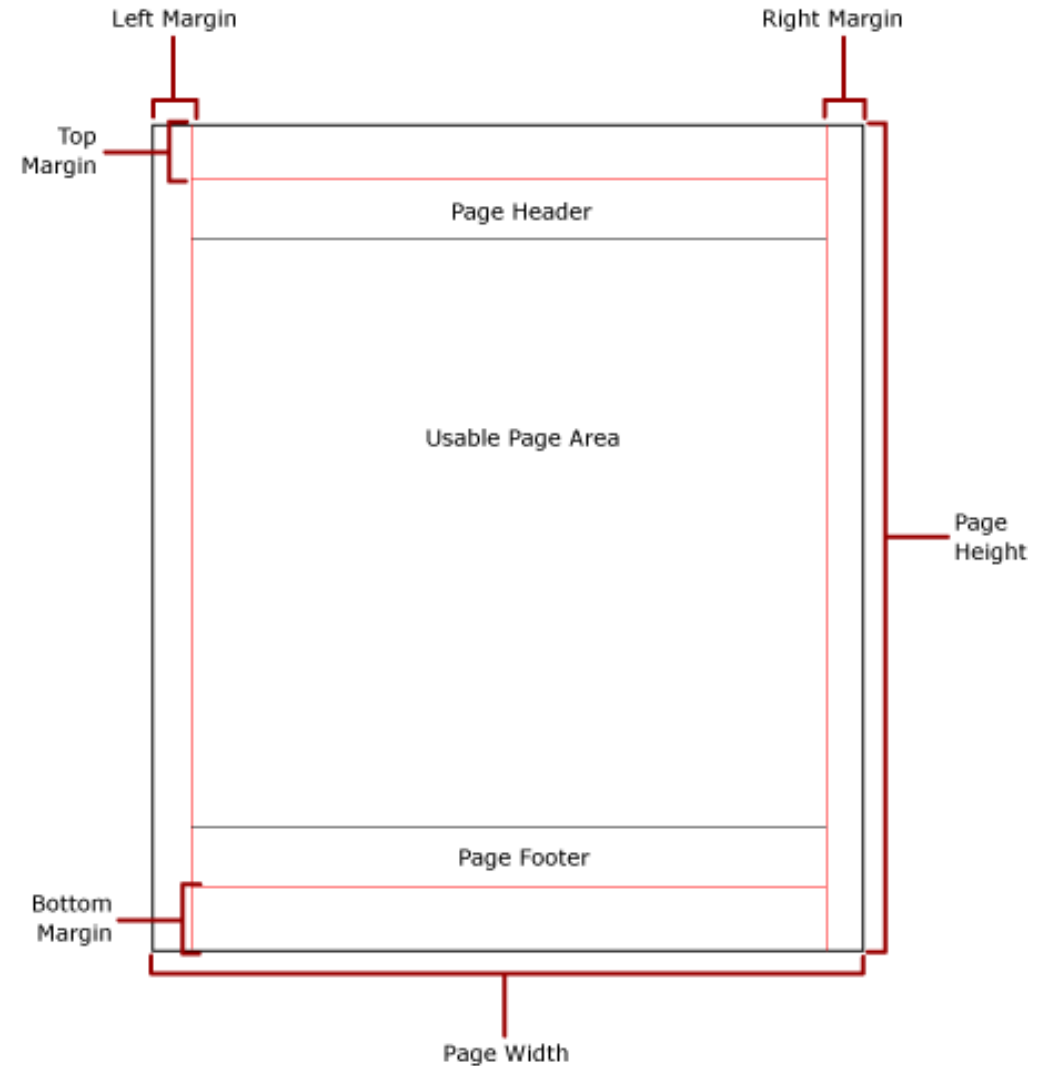
Hello Michael,  
Congratulations on an outstanding year!  
Your sales of \$1951085.83 makes you the TOP Adventure Works sales person in 2008.  
Bob & Craig

List Report



# Report-Level Properties

- ▶ Report Layout
  - Interactive size
  - Page size
  - Margins
  - Language
- ▶ Body size
- ▶ Header and footer



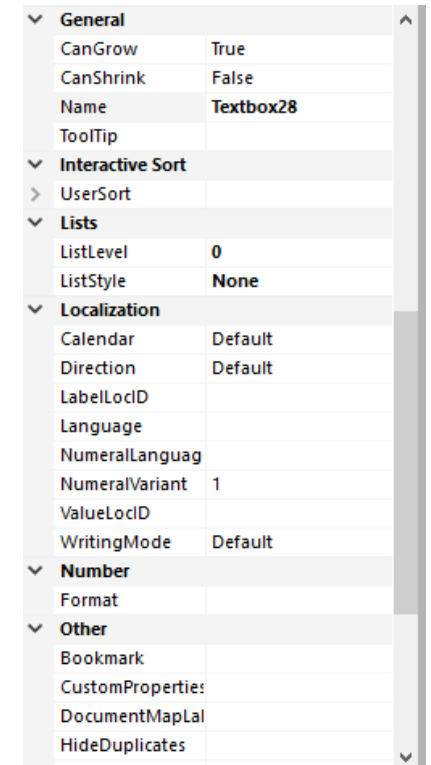
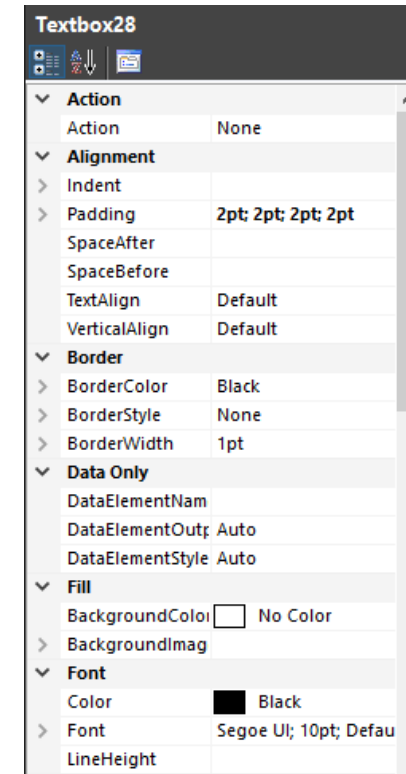


# Item Properties

Complete control over every element in the report

- ▶ Fonts and colors
- ▶ Date and number formatting
- ▶ Naming of report objects
- ▶ Expressions!

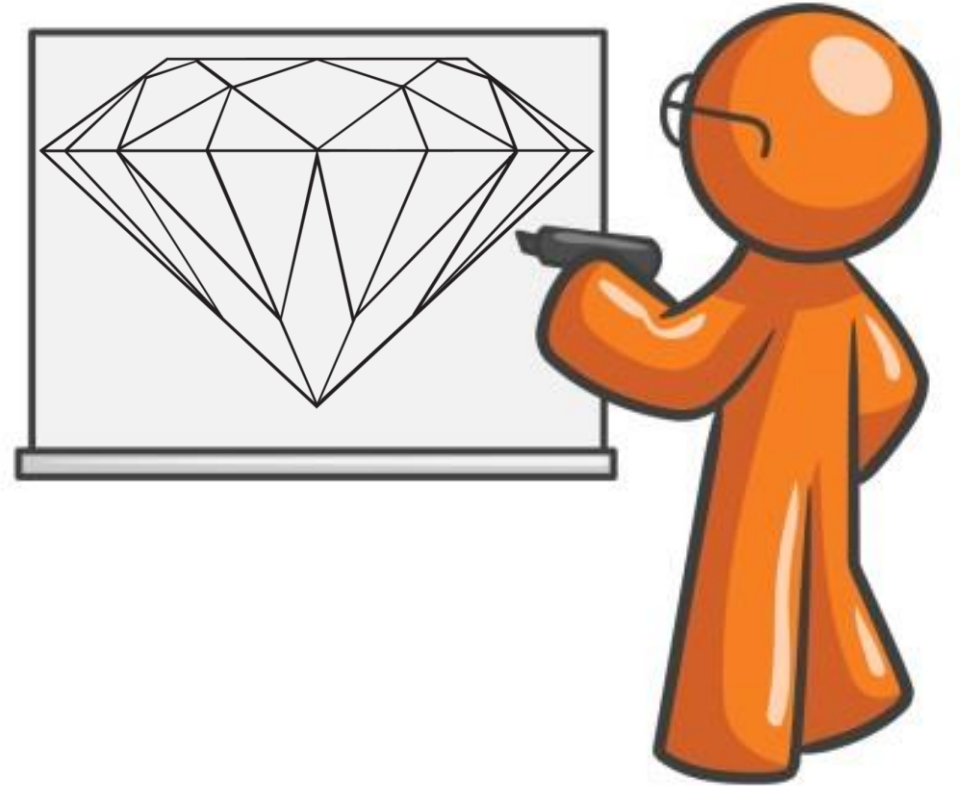
You can make it pixel perfect 😊



How to publish and distribute

# Premium ☹️

- ▶ Require P1, P2, P3 or A4, A5, A6
  - Support for A3 is coming
- ▶ How to test with out Premium?
  - Azure Portal
  - Create Power BI Embedded
  - Scale to A4 - \$8 per hour
  - Assign capacity to workspace



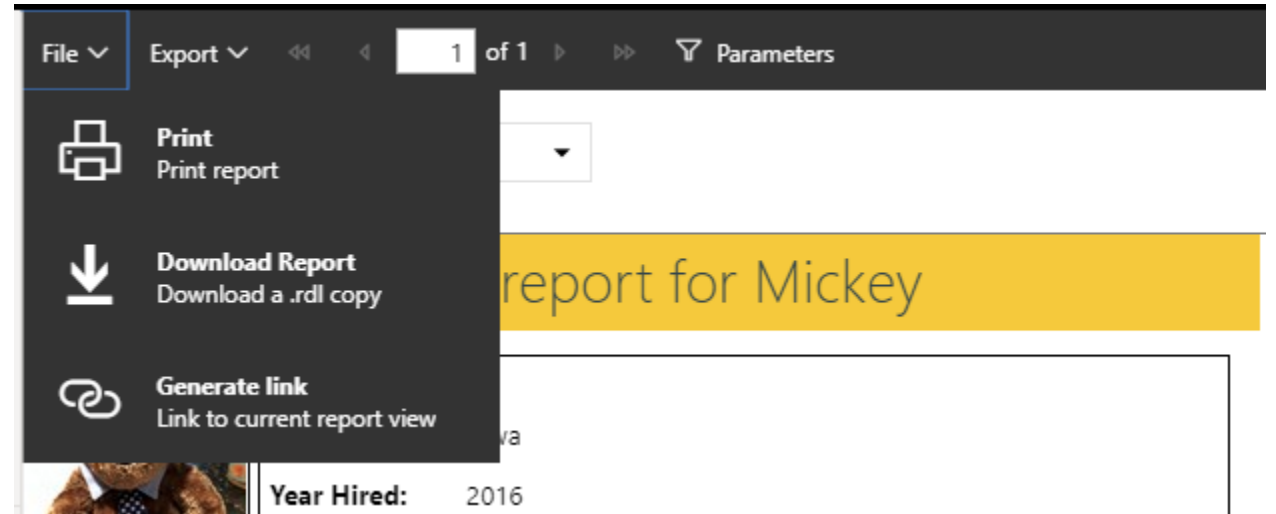
# Print, Export and Subscriptions

- ▶ Print, print, print
- ▶ Export
  - PDF, Word, Excel, PowerPoint, Web
- ▶ Subscriptions
  - Hourly, Daily, Weekly



# Bonus: Integration between reports

- ▶ Drill through scenarios
  - Paginated -> Paginated
  - Power BI -> Paginated
- ▶ URL parameters
  - Link to report
  - `rp:parameter=value`
  - `rdl:format=PDF`



The future

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# Additional features we can expect to come

- ▶ Data driven subscriptions
- ▶ Shared data sources and datasets
- ▶ Power Query as data source
- ▶ More admin options in portal
- ▶ Migration tool
- ▶ Support for Pro users?
  - Ideas: <https://ideas.powerbi.com/forums/265200-power-bi-ideas/suggestions/35959420>



# Questions



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# Just Thorning Blindbæk

- ▶ Self-employed Consultant in justB
- ▶ Trainer at Orange Man
- ▶ Founder
  - Danish Microsoft BI Community ([MicrosoftBI.dk](https://MicrosoftBI.dk))
  - Power BI UG Denmark ([PowerBI.dk](https://PowerBI.dk))
- ▶ Strong focus on the front-end tools
  - Analysis Services
  - Reporting Services
  - PerformancePoint Services
  - Excel and Power Pivot
  - Power BI
- ▶ [just@blindbaek.dk](mailto:just@blindbaek.dk) / [blog.justB.dk](https://blog.justB.dk) / [@justblindbaek](https://twitter.com/justblindbaek)



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