

# Power BI Report Server Zero to Hero

Vishal Pawar



#GlobalPowerPlatformBootcamp

# GLOBAL POWER PLATFORM BOOTCAMP

Organized Globally, Held Locally

Power BI Report Server  
Zero to Hero

Vishal Pawar



POWER PLATFORM  
**BOOTCAMP**



**KingswaySoft**

# First, Thank you !

- Organizing community !
- Speakers and Volunteers !
- Of course you Too, To join us today !
- Power BI community !



#GlobalPowerPlatformBootcamp

# Vishal Pawar

- Principal BI Architect, 2x Microsoft MVP
- Microsoft rMVP, Microsoft Certified Trainer
- Founder of Global Power BI User Group
- Blogger, Speaker and #PowerAddict



# Join a Global Power BI User Group today !

- Facebook Group (15K+ member)- <http://bit.do/pbifb>
- **Udemy Free Course (50K+ Student)** – <http://bit.do/pbiu>
- LinkedIn (2K+ member) – <http://bit.do/pbiln>
- Twitter (@GlobePUG) – <http://bit.do/pbitw>
- YouTube (2K+ Subscriber)- <http://bit.do/ytgpbi>
- Official Microsoft Community – <http://bit.do/pbiug>
- Official website (2K+ Member) – <http://bit.do/gpbiweb>
- Power BI news (2K+ Readers) – <http://bit.do/pbinews>
- Session pins on Pinterest- <http://bit.do/gpbisession>
- Google Plus – <http://bit.do/pbigp>
- About user group – <http://bit.do/aboutgpbi>



#GlobalPowerPlatformBootcamp

# Free Power BI Template- Download & Use now !!

SQL Server Dashboard



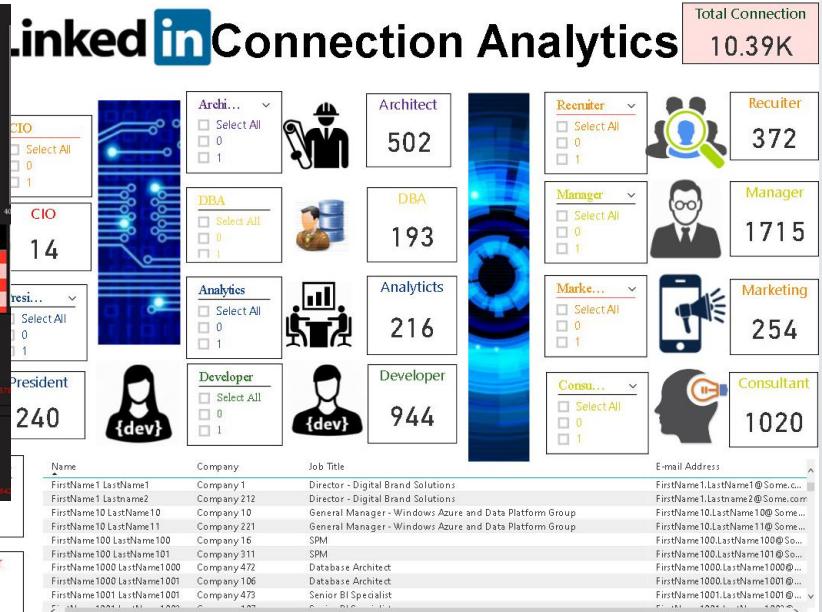
<http://bit.do/sqldash>

NetFlix Dashboard



<http://bit.do/pbinetflix>

LinkedIn Dashboard



#GlobalPowerPlatformBootcamp



# Session Objectives & Agenda

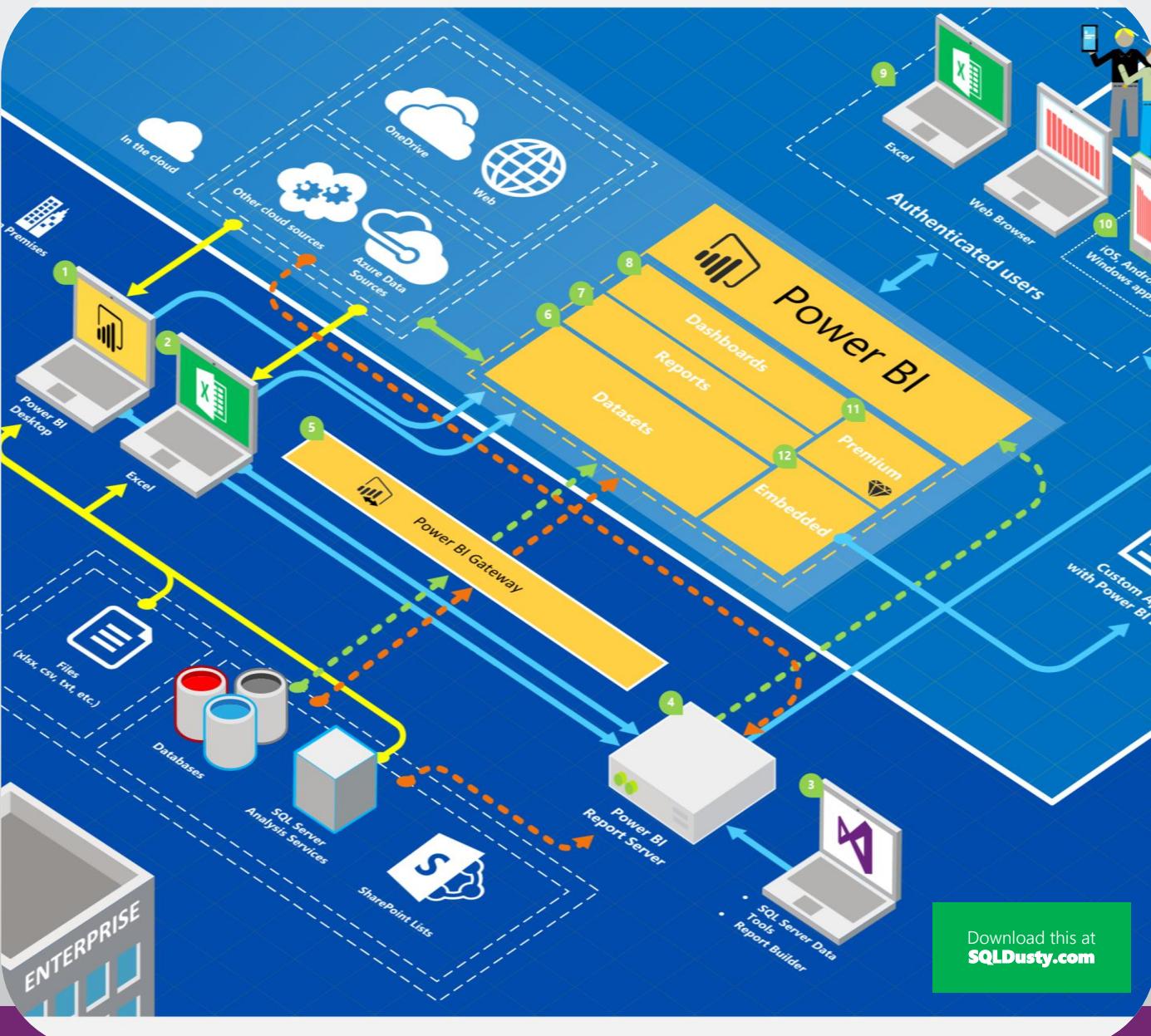
- 01 Power BI Usage across vertical (5 Min)
- 02 Power BI Ecosystem with industry usage example (3 Min)
- 03 Understand Power BI Components in Short? (3 Min)
- 04 Power BI Report Server – Introduction (3 Min)
- 05 Power BI Report Server for Enterprise (5 Min)
- 06 Power BI Report Server – History and Release cycle (2 Min)
- 07 Power BI Report Server – Utilization and Consumption (5 Min)
- 08 Power BI Report Server – Architecture (10 Min)
- 09 Power BI Report Server - DEMO (20-25 Min)



#GlobalPowerPlatformBootcamp

# What is Power BI?

- ✓ Transform data into stunning visuals and share them with colleagues on any device.
- ✓ Visually explore and analyze data—on-premises and in the cloud—all in one view.
- ✓ Collaborate on and share customized dashboards and interactive reports.
- ✓ Scale across your organization with built-in governance and security.



#GlobalPowerPlatformBootcamp



POWER PLATFORM  
BOOTCAMP

# How World Uses Power BI and its Components



## Non-Profit Client

(120 + School, As Consulting)



## Manufacturing Client

(Fortune 100 in US, As Services )



## Healthcare Client

(Power BI as Product)



#GlobalPowerPlatformBootcamp

# Power BI Usage Across Verticals



## Non-Profit Client

(120 + School, As Consulting)



## Manufacturing Client

(Fortune 100 in US, As Services )



## Healthcare Client

(Power BI as Product)



PEOPLE



PROCESS



TECHNOLOGY

As Consulting

80% - 20%

No, Satisfy Need

As Services

20% - 80%

Streamlined

As Product

100%

Mixed

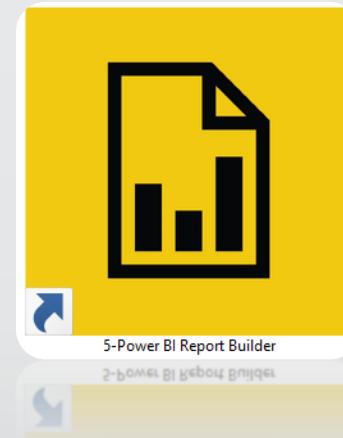
(Will be covered in Power BI components slide)



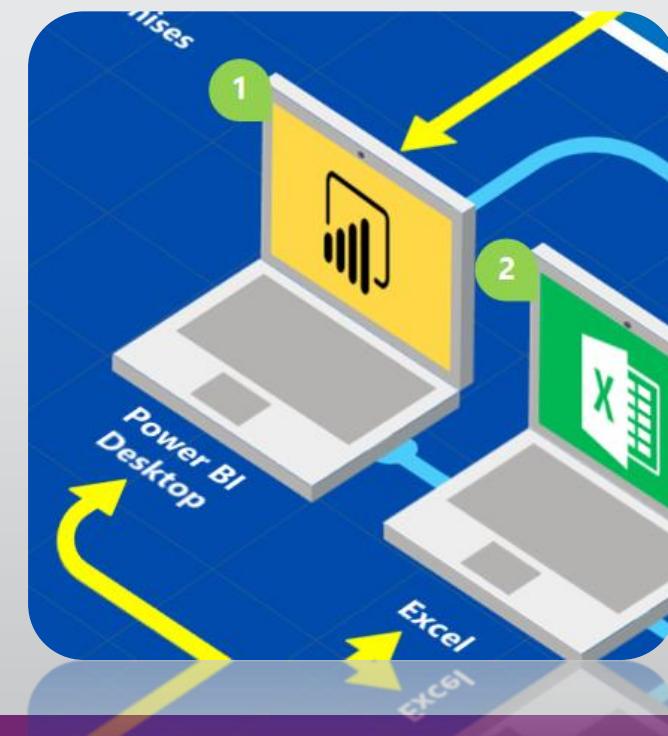
#GlobalPowerPlatformBootcamp

# Power BI Desktop

- Author for everyone, anywhere
- Publishing tool for Power BI
- Connect to your data, wherever it is
- Prep and model your data with ease
- Provide advanced analytics with the familiarity of Excel
- Create interactive reports customized for your business
- Installed on a developer workstation
- Costs \$0 AKA Free!
- Development ?



No	Power BI Components	Non Profit Client	Manufacturing Operation Client	Healthcare Power BI as Product component Client
1	Power BI Desktop	YES	YES	YES
2	Power BI Desktop Windows App	NO	YES(No Update)	NO
3	Power BI Desktop Optimized For Report Server	YES	YES	NO(PBI RS Not



#GlobalPowerPlatformBootcamp

# Excel Integration

- Develop data models using Power Pivot
- Browse Power BI data models
- Used by developers and power users
- Installed on local workstation
- Free



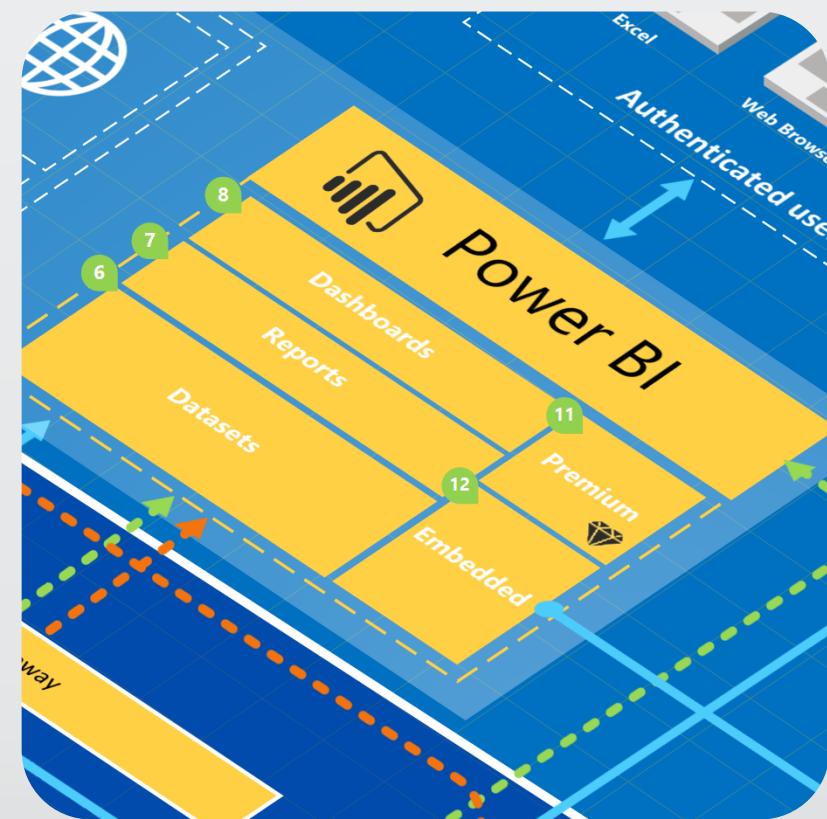
No	Power BI Components	Non Profit Client	Manufacturing Operation Client	Healthcare Power BI as Product component Client
4	Excel	No	YES	Yes(QA)



#GlobalPowerPlatformBootcamp

# Power BI Service or Power BI Pro

- Online Software as a Service (SaaS) where Power BI data models, reports, dashboards are hosted
- Create a data culture
- Admin, sharing, collaboration happen here
- Publish and consume content anywhere
- Most everyone uses it: developers, consumers, power users, admins
- Govern securely
- Pro license: \$10/users/month
- Premium: More \$

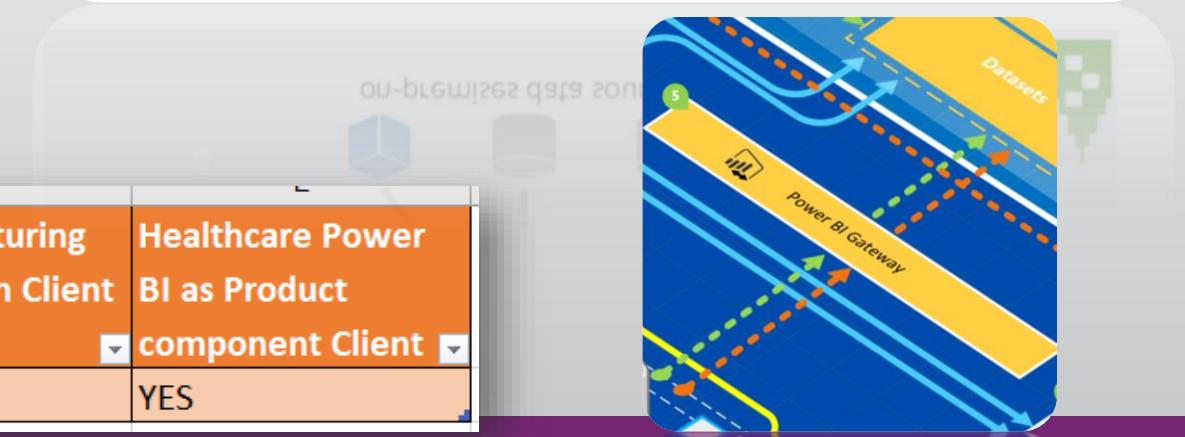
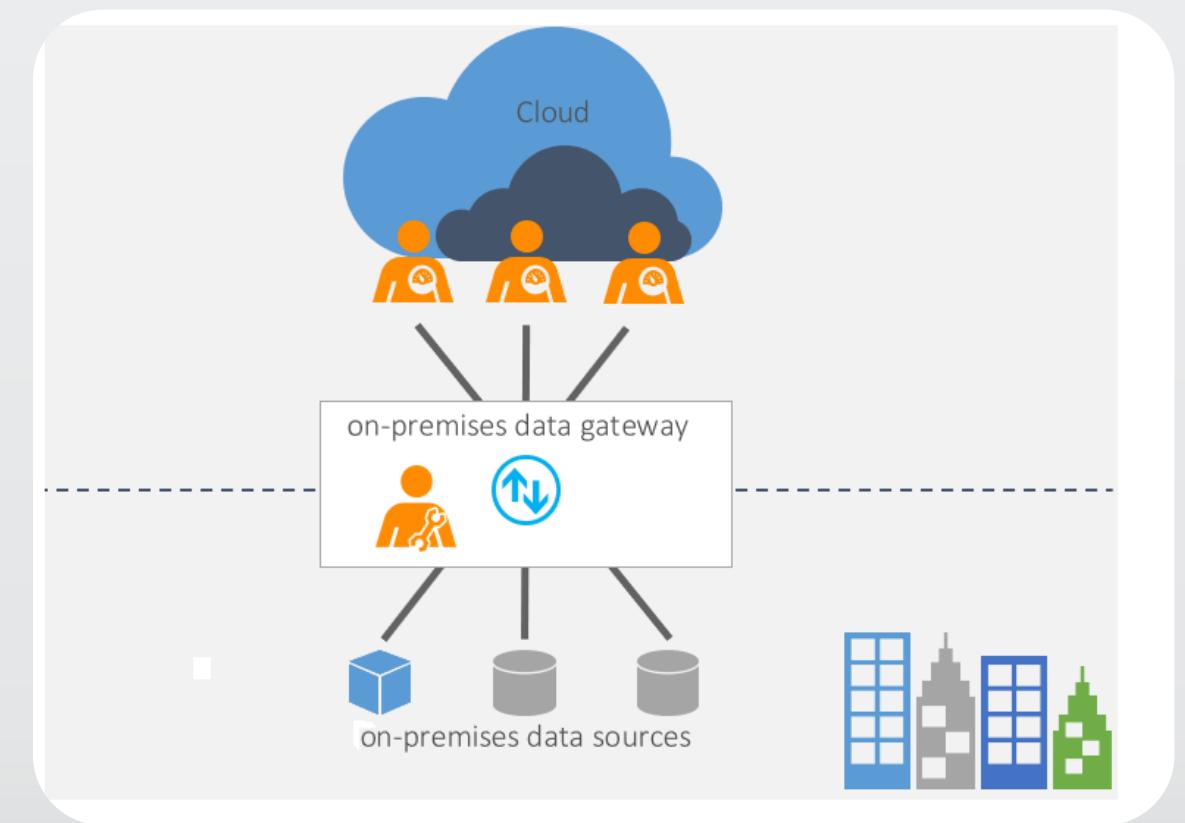


No	Power BI Components	Non Profit Client	Manufacturing Operation Client	Healthcare Power BI as Product component Client
5	Power BI Service (PowerBI.com)	NO(Only 5 Pro)	YES	YES



# Power BI Data Gateway

- Bridge between the Power BI Service and your on-premise data sources
- Supports DirectQuery, Import, Live Query
- Installed/managed by IT/Power BI Admin (Enterprise)
- Installed/managed by power user (Personal)
- Users can access reports that use the gateway
- Free



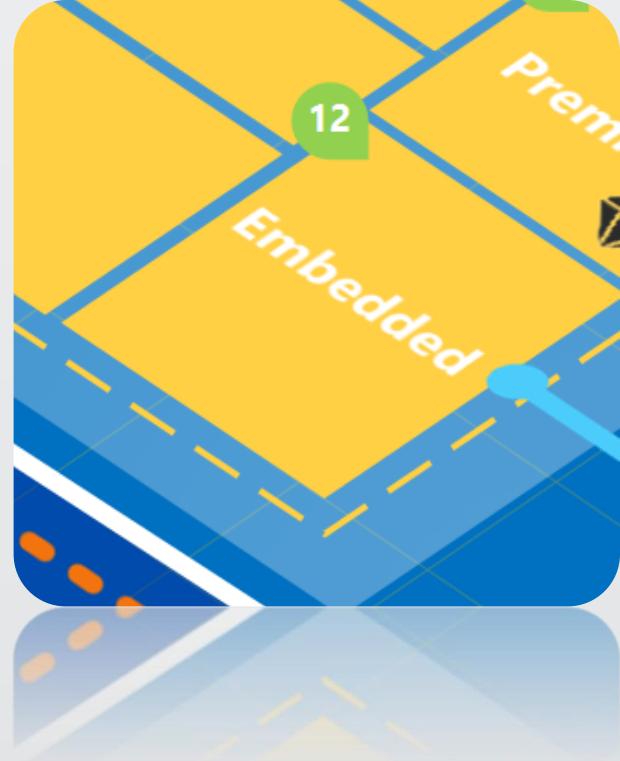
No	Power BI Components	Non Profit Client	Manufacturing Operation Client	Healthcare Power BI as Product component Client
6	Power BI Data Gateway	YES	YES	YES



#GlobalPowerPlatformBootcamp

# Power BI Embedded

- Allows developers to embed analytics into any app using the Power BI APIs
- Scale up, scale down, pause services
- Different than Power BI Premium
- Used by developers
- Consumed by users of the app
- Managed in Azure portal
- Starts at about \$1/hour



No	Power BI Components	Non Profit Client	Manufacturing Operation Client	Healthcare Power BI as Product component Client
8	Power BI Embedded	NO	NO	YES



# Power BI Mobile Apps

- Mobile apps on iOS, Android, Windows
- Can be managed using Microsoft Intune
- Can be used to view reports and dashboards on the Power BI Service as well as reports in Power BI Report Server
- Reports/dashboards are automatically available on mobile devices

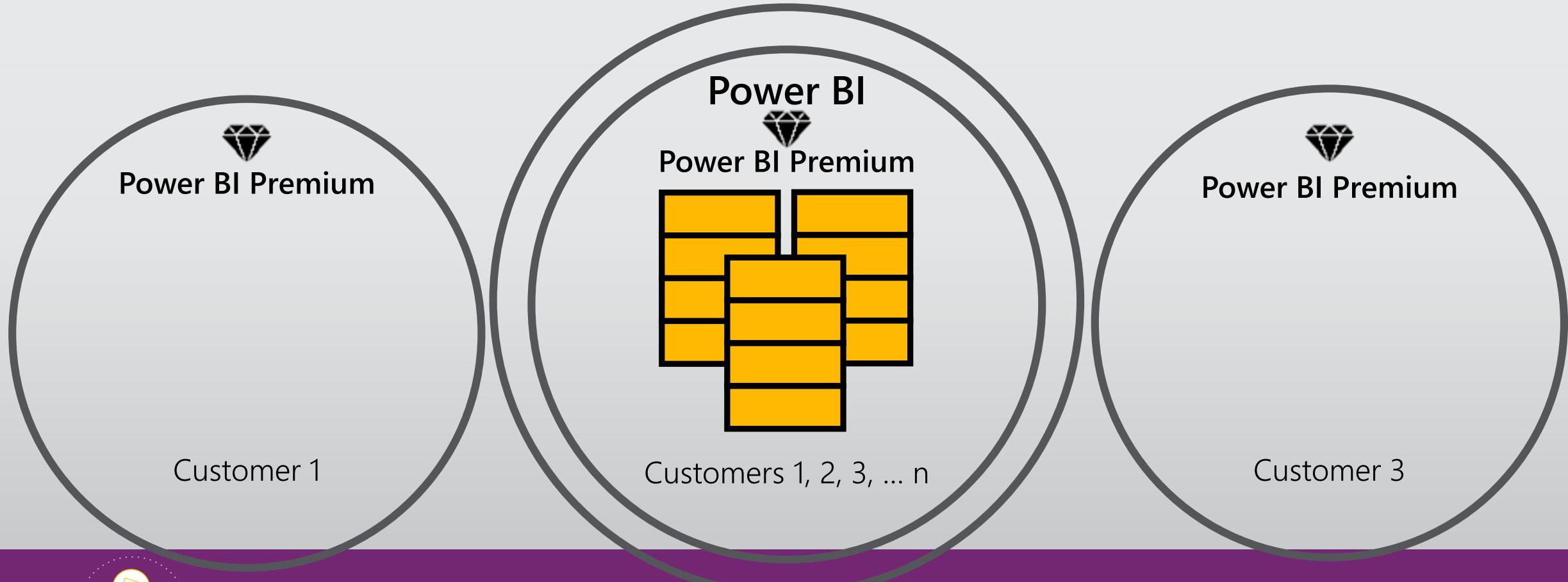


No	Power BI Components	Non Profit Client	Manufacturing Operation Client	Healthcare Power BI as Product component Client
10	Power BI Mobile Apps for Windows OS	YES	YES	NO
11	Power BI Mobile Apps for IOS	YES	YES	YES
12	Power BI Mobile Apps for Android	YES	YES	YES



# What is Power BI Premium ?

## A Dedicated Instance of the Power BI Service

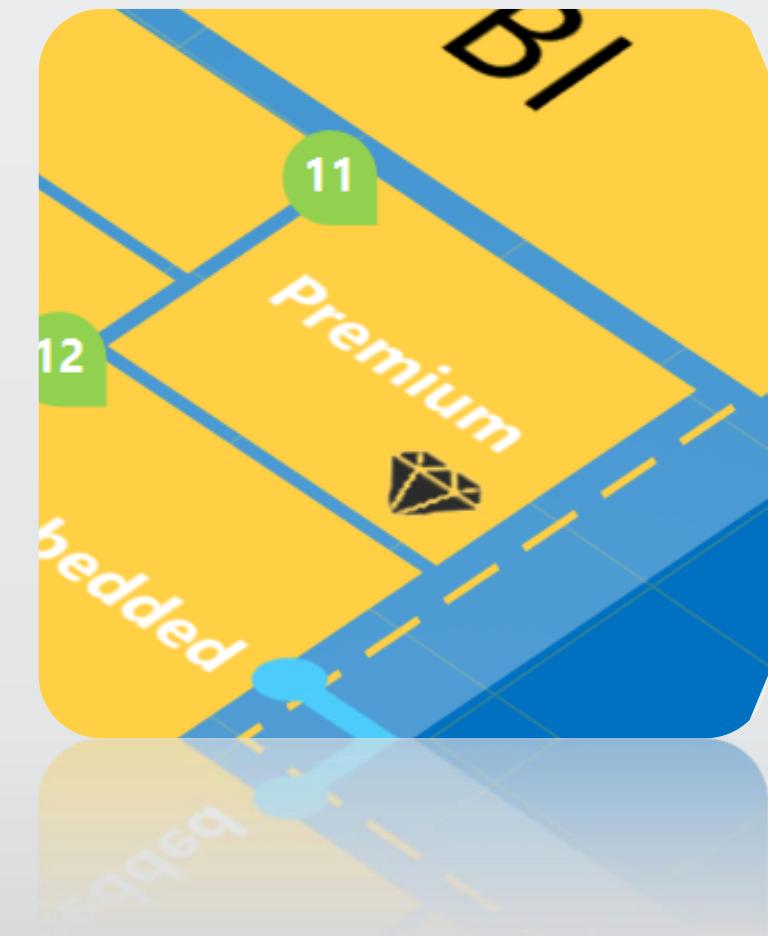


POWER PLATFORM  
BOOTCAMP

#GlobalPowerPlatformBootcamp

# Power BI Premium

- Dedicated capacity for running the Power BI organization for your team only
- Unify self-service and enterprise BI
- Supports embedding in custom applications
- Licensed at a capacity level instead of by user
- Accelerate decision making when everyone has access to insights
- Unlock big data with self-service data prep
- Simplify data management and access



No	Power BI Components	Non Profit Client	Manufacturing Operation Client	Healthcare Power BI as Product component Client
7	Power BI Premium	NO	YES	YES



# Power BI Report Server

- Superset of the features included with SSRS
- Can host paginated reports, KPIs, mobile reports, & Power BI Desktop reports
- Updates released every 4 months
- Installed/managed by IT
- Power users can modify Power BI reports
- Other reports developed by dev team
- Consumed by users
- Included with Premium
- Can also purchase w/ SQL EE + SA

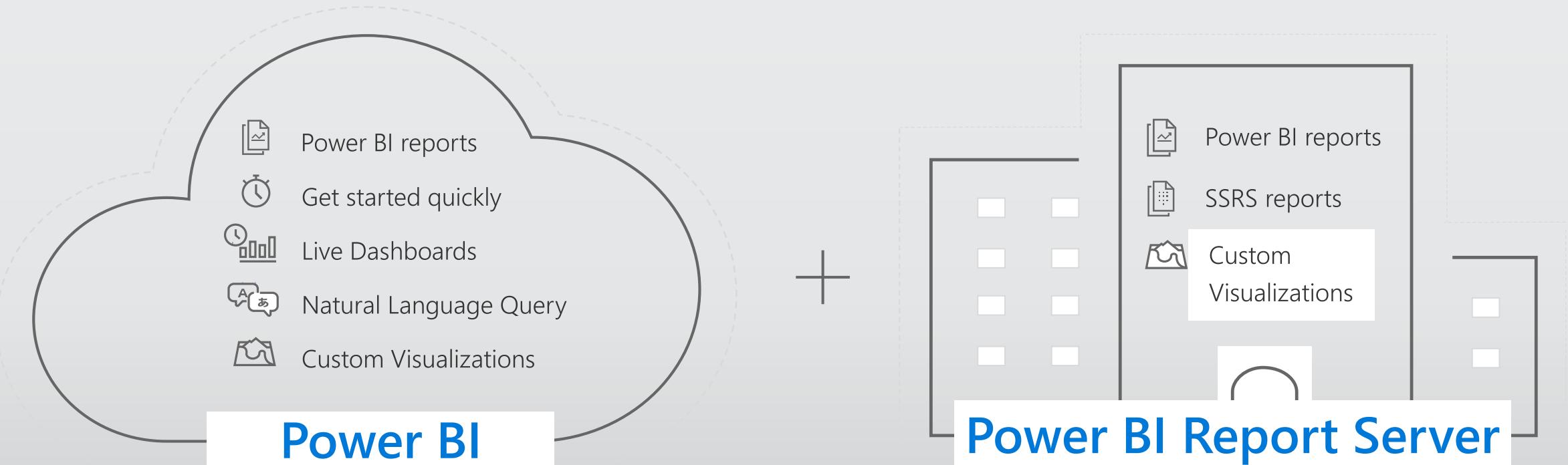


No	Power BI Components	Non Profit Client	Manufacturing Operation Client	Healthcare Power BI as Product component Client
9	Power BI Report Server	YES	YES(7 PBI Server)	NO



#GlobalPowerPlatformBootcamp

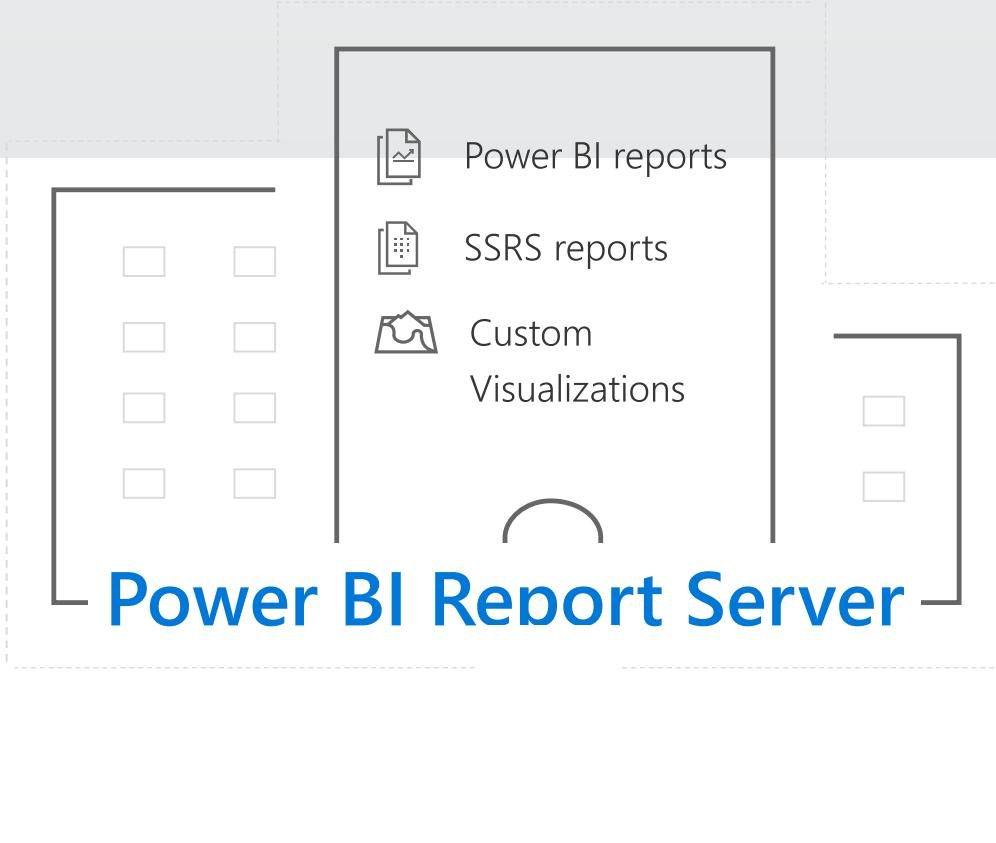
# Power BI: extending on-premises capabilities



#GlobalPowerPlatformBootcamp

# Power BI Report Server

Self-service BI and enterprise reporting in one solution



Keep Power BI reports on-premises



Compatible with SSRS

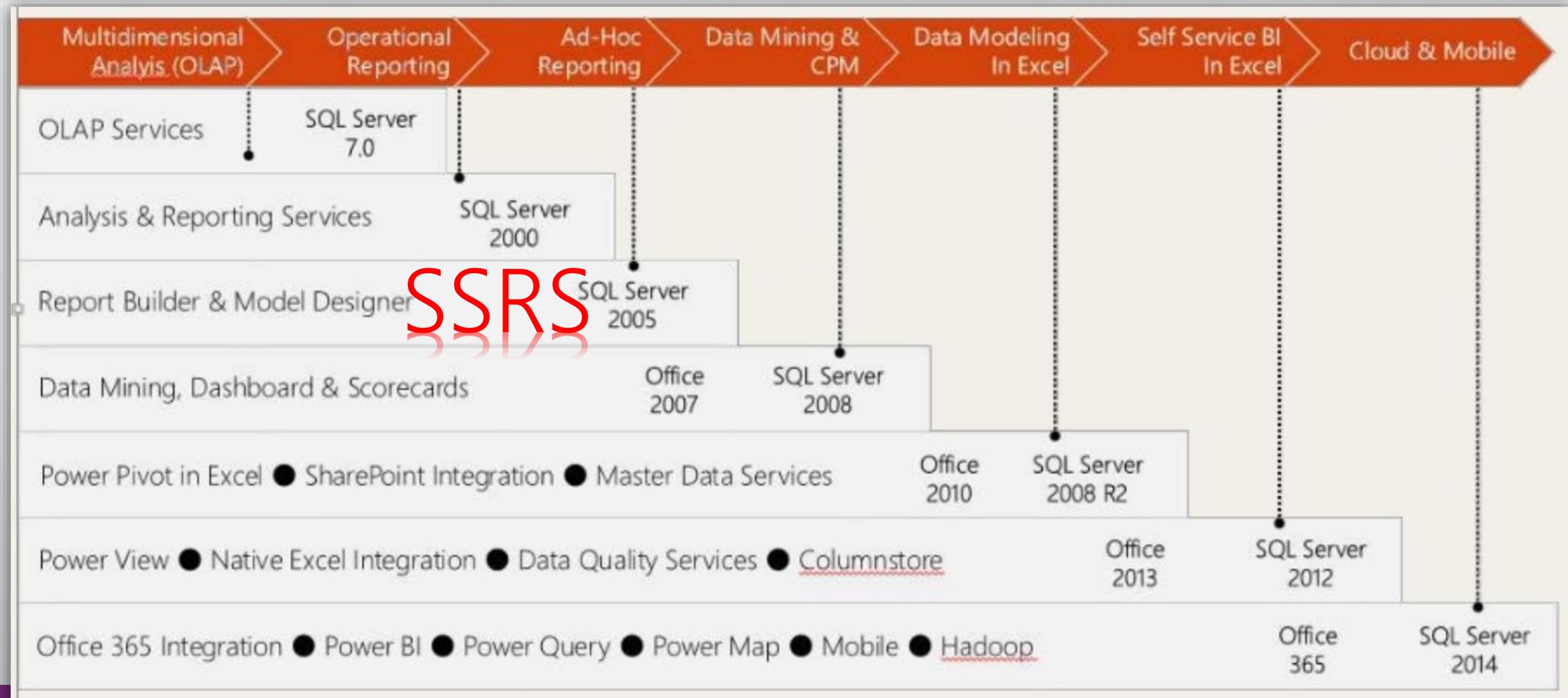


Move to the cloud on your terms



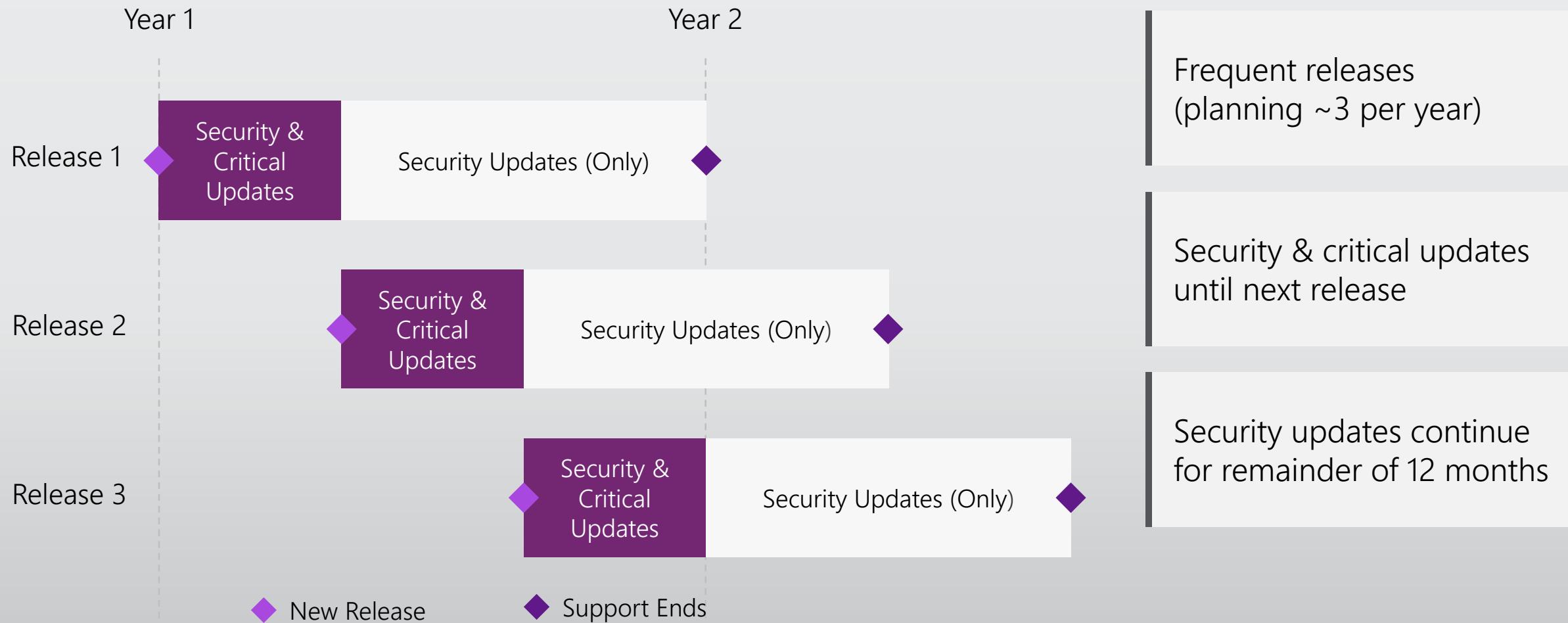
#GlobalPowerPlatformBootcamp

# Power BI Report Server History



#GlobalPowerPlatformBootcamp

# Modern Lifecycle Policy – Future Release



# Power BI Report Server

May 22, 2019 Power BI Desktop Opti

May 22, 2019 Power BI Rep

Jan Feb

2017

2

20

## Power BI Report Server January 2020 Feature Summary

Miguel Martinez  
Sr. Program Manager



Like always, we are happy to announce a new version Power BI Report Server for January 2020! This release brings in a bunch of exciting features such as buttons conditional formatting, data profiling enhancements, and many other new capabilities in this release.

Download Power BI Report Server

Report Server March 2018

Report Server August 2018

Report March 2018

Desktop Optimized for Power BI Report Server January 2019

Report BI Report Server January 2019

019

Dec

r

umber 2017

# Power BI Report Server for Enterprise

Installation



Lightweight download and installation

Migration



Migrate from SQL Server Reporting Services

Scalability



Scale up and out

Security



Integrate with ADFS

Lifecycle



Frequent releases



#GlobalPowerPlatformBootcamp

# How Organizations Use Power BI Report Server

## Create



Create interactive reports  
in Power BI Desktop



## Publish



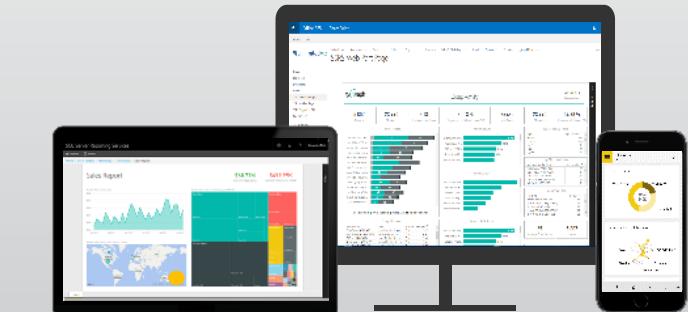
Publish to Power BI Report Server



## Consume



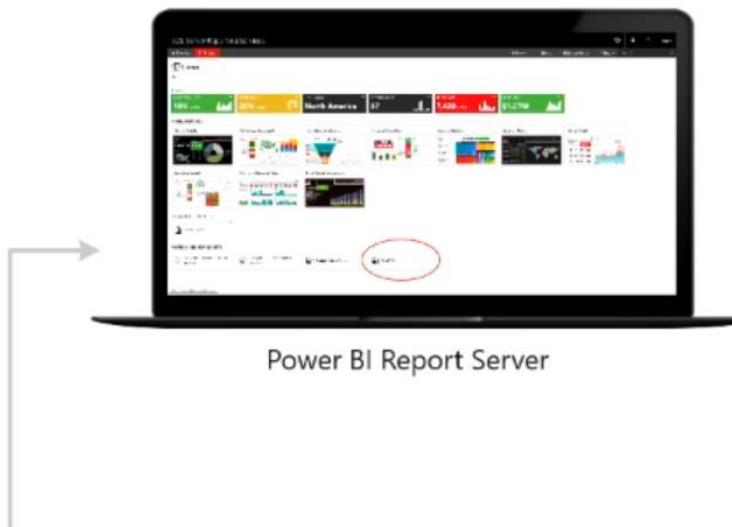
View and interact in  
Power BI Mobile or web browser



#GlobalPowerPlatformBootcamp

# Report Management

## Publish and manage reports



Power BI Report Server



Power BI Desktop

Publish to Power BI Report Server

Organize and manage access to reports

Re-open, edit, and save back



#GlobalPowerPlatformBootcamp

# How Organizations Consume PBRS

## Mobile apps

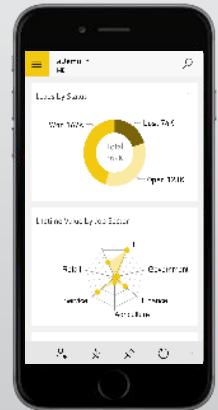
Windows



Android



iOS



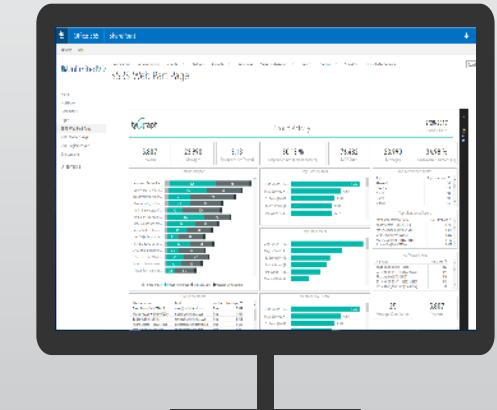
## Web portal

HTML5



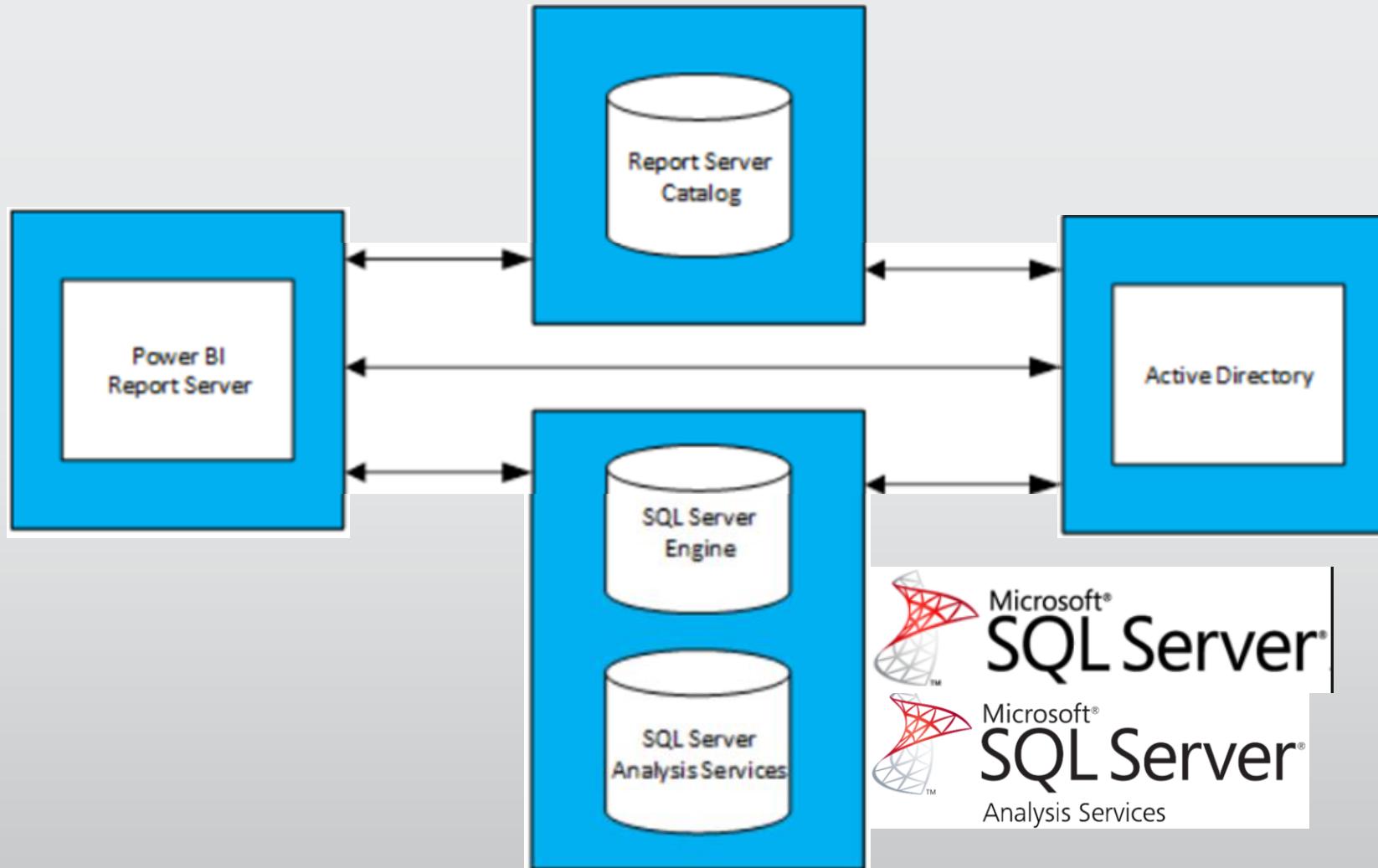
## Embedded In your apps

rs:Embed=true



#GlobalPowerPlatformBootcamp

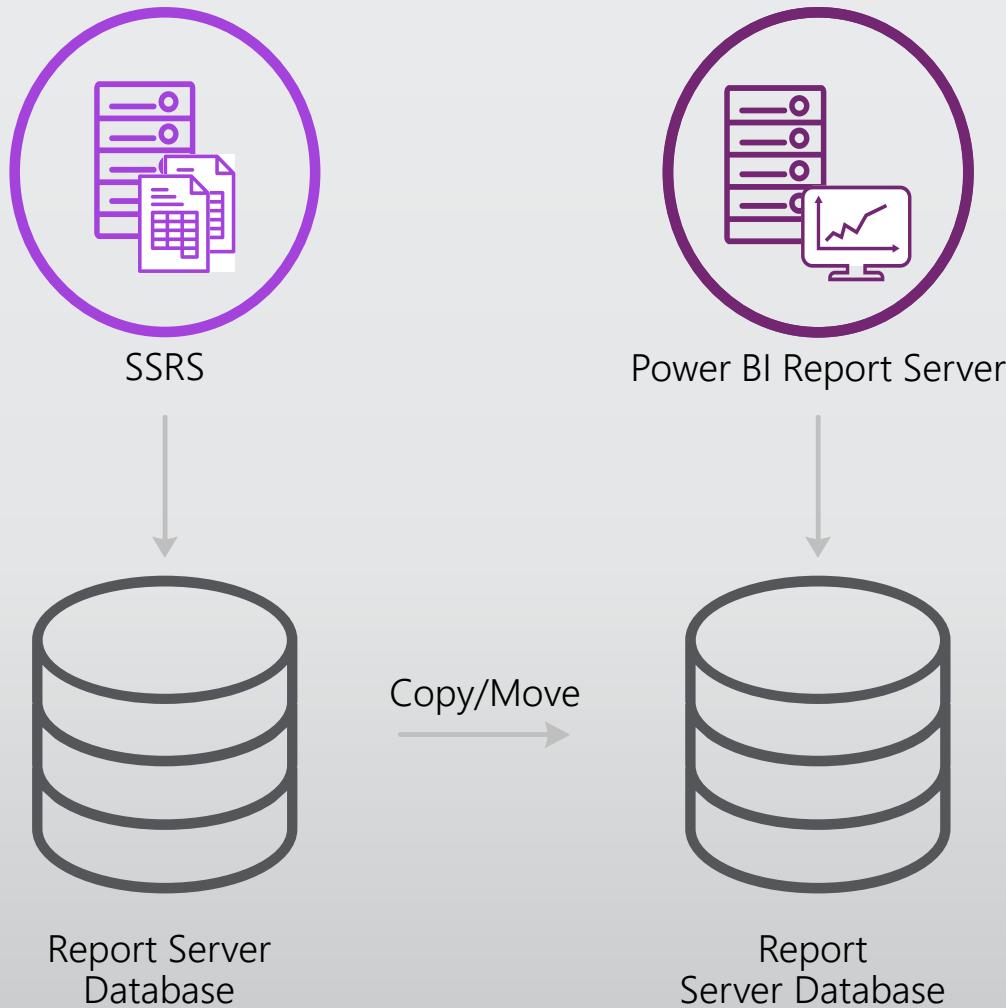
# Power BI Report Server topology



POWER PLATFORM  
BOOTCAMP

#GlobalPowerPlatformBootcamp

# Migrate from SSRS (Native mode)



1. Back up report server database
2. Install Power BI Report Server
3. Connect report server to database using Report Server Configuration Manager

# How to acquire Power BI Report Server

Power BI Premium



SQL Server Enterprise  
+ Software Assurance

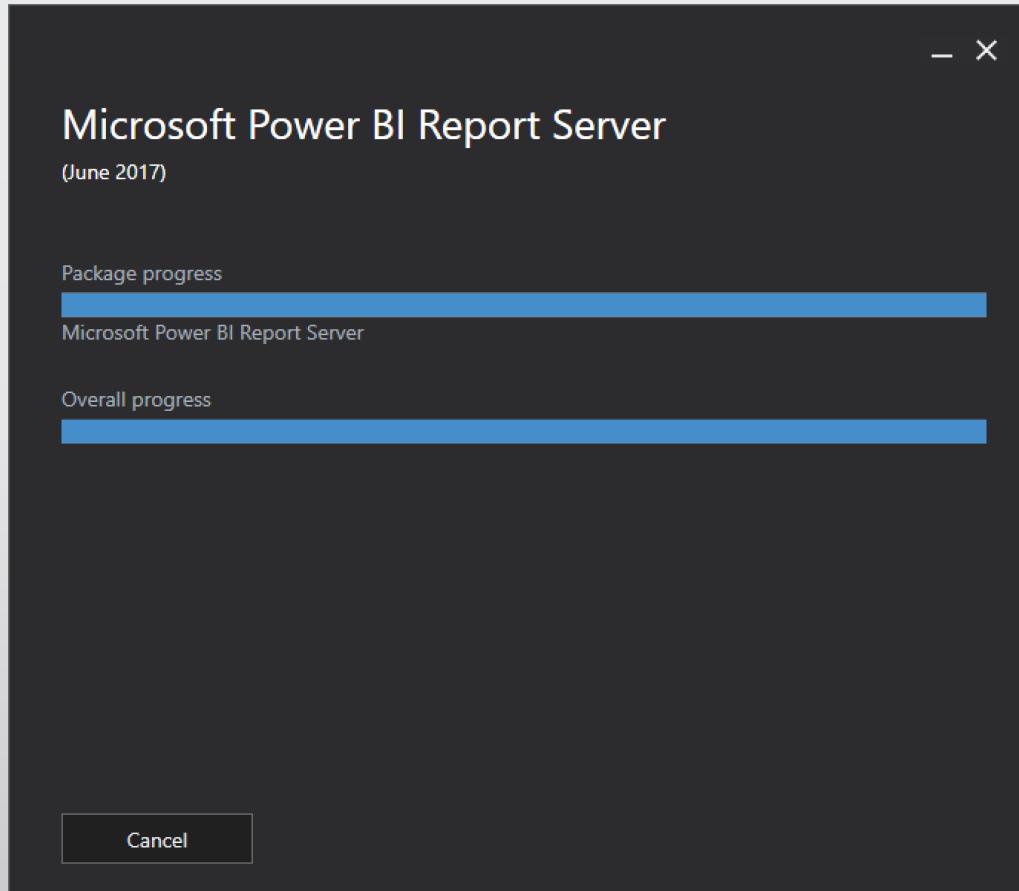


Power BI Pro license required to publish Power BI reports to Power BI Report Server



#GlobalPowerPlatformBootcamp

# PBI RS Installation



Lightweight download and installation

Zero impact on SQL Server

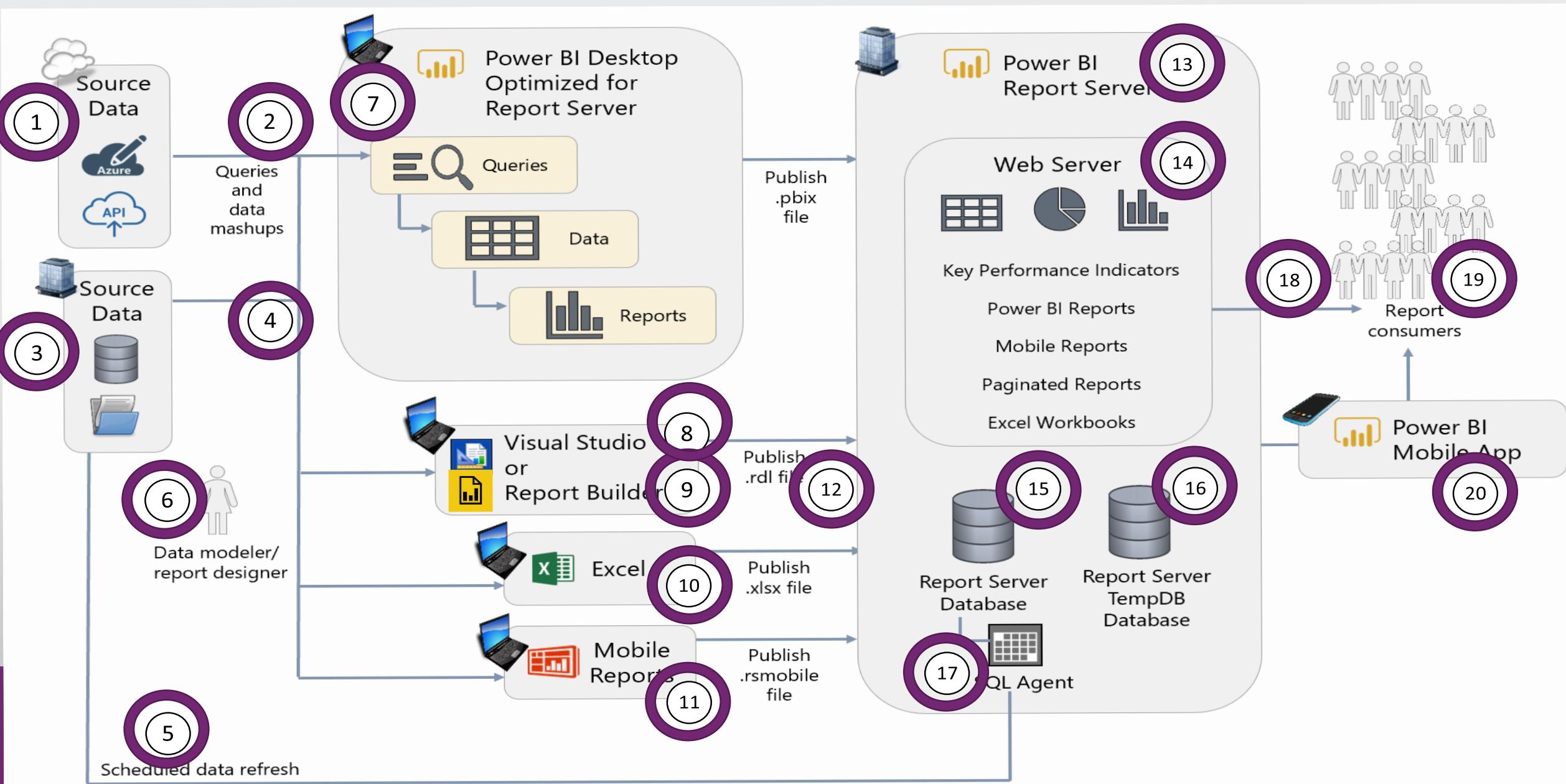
## Requirements

- Windows Server 2012+
- SQL Server Database Engine (2008+)
- SQL Server Analysis Services (2012+)



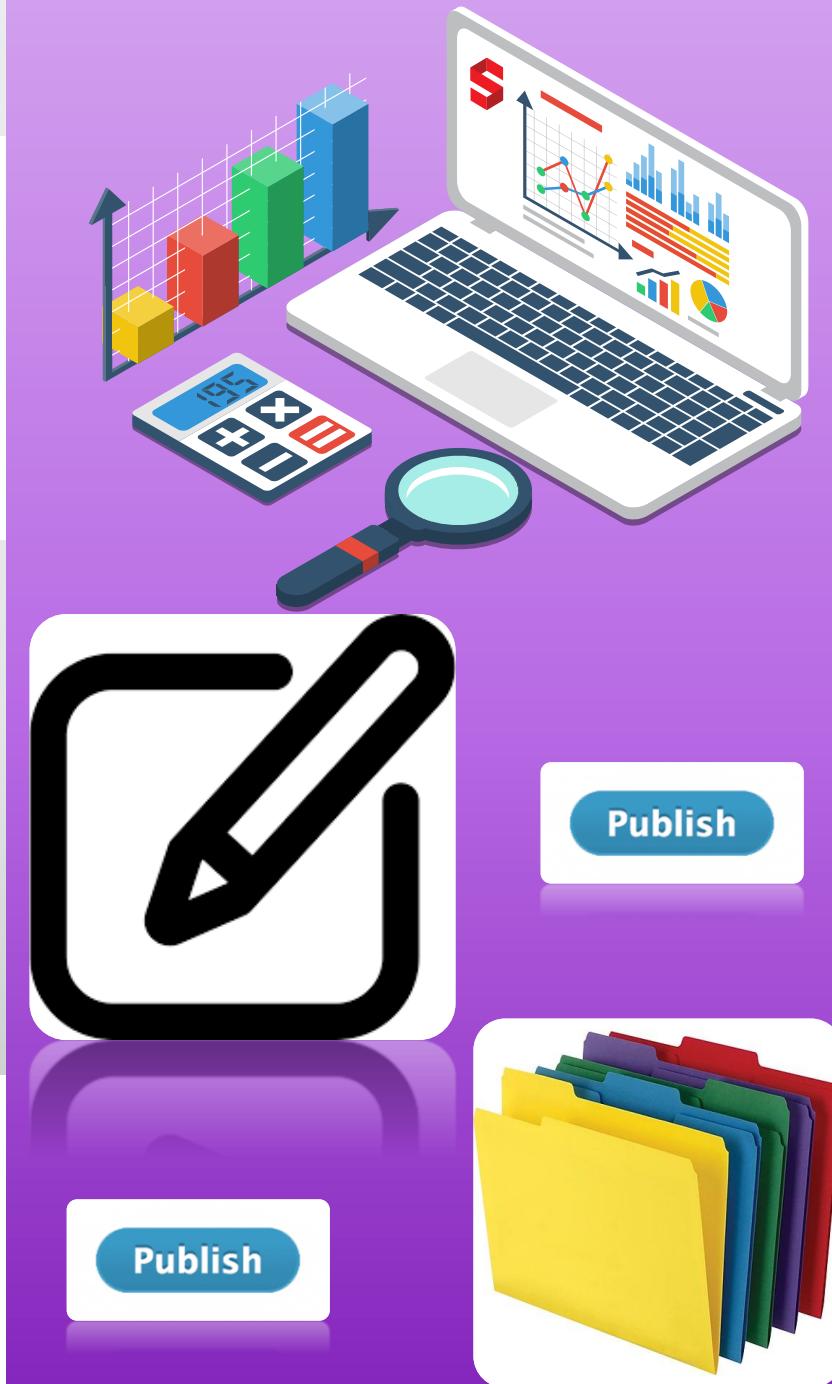
#GlobalPowerPlatformBootcamp

# On-Premises (Non-Cloud)-Architecture



# Power BI Report Server - Demo

- PBI RS – Site Setting ,Help overview
- PBI Desktop OPTIMIZED to PBI RS ( Where to find?)
- Tools to Publish Report to PBI RS
  - Power BI Optimized Desktop to PBI RS
  - Visual Studio SSDT SSRS publishing to PBI RS
  - Mobile Report publishing to PBI RS
  - Power BI Report Builder to PBI RS
- Report Server DB – Metadata, Special Query
- Branding - PBI Report Server
- Report Server execution log – Publish
- Full Screen **?rs:embed=true**
- Comment, Refresh Data and Scheduling
- Open and Edit directly from tool and Publish
- Access, Folder, and Many more things to do



# Difference - PBRS and PBIS

Features	Power BI Report Server	Power BI Service
Deployment	On-premises or hosted cloud	Cloud
Source data	Cloud and/or on-premises	Cloud and/or on-premises
License	Power BI Premium or SQL Server EE with SA	Power BI Pro and/or Power BI Premium
Lifecycle	Modern lifecycle policy	Fully managed service
Release cycle	Once every 4 months	Once a month
Power BI Desktop	Version optimized for Report Server, available for download with Report Server	Version optimized for Power BI Service, available from the Windows Store
Row-level security	Only through data source in DirectQuery mode	Available in both DirectQuery (data source) & Import mode
Create Power BI reports in Power BI Desktop	Yes	Yes
Email subscriptions for paginated reports	Yes	No
Custom visuals	Yes	Yes
Paginated reports	Yes	Yes
Power BI mobile apps	Yes	Yes
Connect to services like Salesforce	Yes	Yes
Create Power BI reports in the browser	No	Yes
Gateway required	No	Yes for on-premises data sources
Real-time streaming	No	Yes
Dashboards	No	Yes
Distribute group of reports using apps	No	Yes
Content packs	No	Yes
Q&A	No	Yes
Quick insights	No	Yes
Analyze in Excel	No	Yes
ARC GIS maps	No	Yes
Email subscriptions for Power BI reports	No	Yes
Data alerts	No	Yes
Full screen mode	No	Yes
Advanced Office 365 collaboration	No	Yes
R visuals	No	Yes
Preview features	No	Yes

# Best Practices for Power BI Report Server

- Development – Version, Upgrade & Migration
- Security - AD, SQL read account
- Administration – Report for Report 😊 !
- Upgradation – Decide your strategy, 6 Month Good\*\*
- Scheduling - Shared Data Scheduling
- Usage – Import VS Direct query
- Metadata - Report Server DB

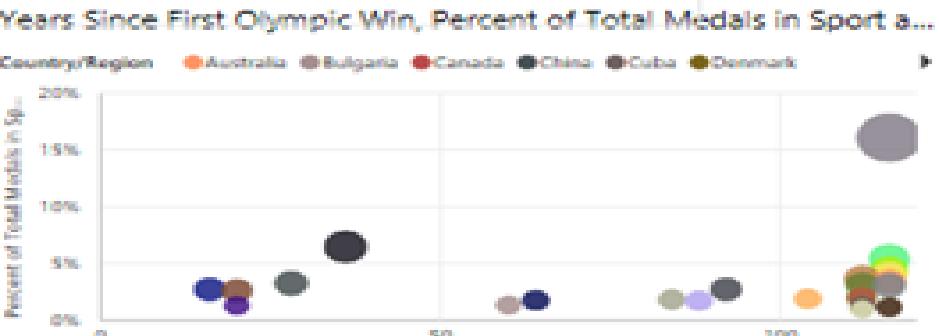


#GlobalPowerPlatformBootcamp

# Summer Olympic Games results

Summer games  
27

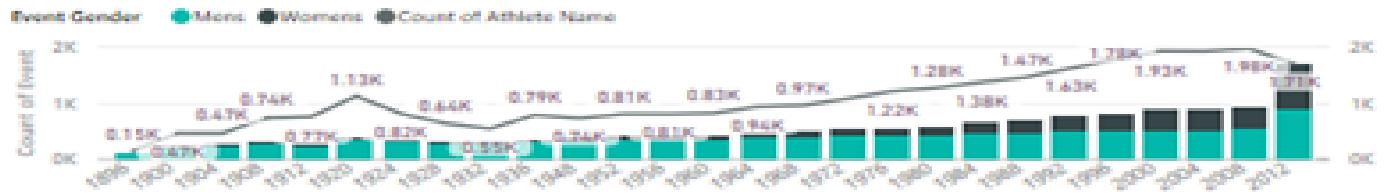
Number of Sports  
40



## Medal Count by Country/Region



## Count of Event and Count of Athlete Name by Olympic Year and Event Gender



## Count of Athlete Name by Year and Medal Class



## Medal Count by Sport and Class



Tell a story at a glance

#GlobalPowerPlatformBootcamp

# Power BI Best Practices – General

- Limit the number of visuals in dashboards and reports
- To improve Power BI report performance, remove unnecessary interactions between visuals
- Enable [Row-Level Security](#) (RLS) where applicable
- Use Microsoft AppSource [certified custom visuals](#) where applicable
- If you observe poor performance in Power BI, do not use hierarchical filters
- Provide data categorization for Power BI reports (HBI, MBI, LBI)
- Use the [On-premises data gateway](#) instead of Personal Gateway
- Use different Power BI gateways for “[Direct Query](#)” and “[Scheduled Refresh](#)”
- Test each custom visual on a report for performance to ensure fast report load time
- Limit complicated measures and aggregations in data models
- Use slicers sparingly
- Ensure that the Power BI report and the data source are in the same region
- Import only necessary fields and tables instead of entire datasets
- Ensure the cache update frequency aligns with the data source refresh frequency



#GlobalPowerPlatformBootcamp

# Reference & Call to action

- Download [Power BI Report Server](#)
- Read the [documentation](#)
- Subscribe to the [Power BI Blog](#)
- Follow [@MSPowerBI](#) on Twitter
- Join the [Power BI Community](#)
- <https://docs.microsoft.com>
- <https://www.blue-granite.com/blog/>
- <https://maqsoftware.com/expertise/powerbi/power-bi-best-practices>
- [Best design practices for reports and visuals](#) – Microsoft Corporation, published June 22, 2018
- [Tips for designing a great Power BI dashboard](#) – Microsoft Corporation, published June 22, 2018
- [Power BI Performance Best Practices](#) – Microsoft Corporation, published May 18, 2018



#GlobalPowerPlatformBootcamp



# PBRS - Zero to Hero

# Vishal Pawar

**Microsoft® CERTIFIED**  
Technology Specialist

**Microsoft® CERTIFIED**  
Professional



# Question ?



# Thank You !



**Please fill  
out the  
survey!  
& Win  
Swags!!**



<https://www.powerplatformbootcamp.com/survey>



#GlobalPowerPlatformBootcamp

# Thank You For Attending



#GlobalPowerPlatformBootcamp