

Azure Analysis Services – The next step to BI in the cloud?



Our Partners

Quest

DBPLUS
better performance

IDERA

SolidQ
Think Big. Move Fast.

trivadis
makes IT easier.

SOLISYON

PASS

IBM

Microsoft



About me

Developer and consultant for Microsoft BI at oh22data AG

Main Topics: SSAS, SSRS and MDS

> 10 years of experience with database and BI development

Speaker at chapter meetings, national and international conferences, German Pass local chapter lead, Data Platform MVP



Agenda

What is Azure Analysis Services?

What is BI?

Which chances and risks do exist for BI in the cloud?

Which BI features are already available in the cloud?

How can Azure Analysis Services improve „BI in the cloud“?



What is Azure Analysis Services?

Enterprise grade OLAP engine and BI modeling platform

Fully managed platform-as-a-service (PaaS)

General availability announced on Data Amp event on 2017-04-19

Only Tabular Model mode so far, but multidimensional mode in consideration

Newest supported level always available

currently level 1400 = SQL vNext



How to interact with Azure AS? (I)

You can use your standard on-prem toolset to interact with Azure AS

- SSMS

- SSDT

- Team Foundation Services or Visual Studio Team Services

But you can also use new tools with new features:

- Azure Analysis Web Designer



How to interact with Azure AS? (II)

Management and Automization:

- PowerShell

- Rest services

- Azure functions



Why choose Azure AS?

Easy to get started

- No waiting time for hardware or infrastructure

- Azure AD makes start and collaboration easy

- No additional tools or drivers need to be installed

Easy to move from current Tabular solutions on-prem into cloud

- Deploy out of your existing environment

- Backup/Restore

Easy to handle

- Guided interaction with portal or „flexible“ interaction with PowerShell

- Accessible from almost anywhere



Features and Editions

FEATURE	DEVELOPER	BASIC	STANDARD
Perspectives	✓		✓
Multiple Partitions	✓		✓
DirectQuery Storage mode	✓		✓
Translations	✓	✓	✓
Dax Calculations	✓	✓	✓
Row-level Security	✓	✓	✓
In-mem storage	✓	✓	✓
Back up and restore	✓	✓	✓



Demo

Show Azure portal with Azure AS

Connect to Azure AS with SSMS and SSDT

Deploy project from SSDT



What is BI?

"Business intelligence (BI) is an umbrella term that includes the applications, infrastructure and tools, and best practices that enable access to and analysis of information to improve and optimize decisions and performance." (Gartner IT Glossary)

"What is BI? There are two prevailing definitions out there – broad and narrow. The broad definition ... is that BI is a set of methodologies, processes, architectures, and technologies that transform raw data into meaningful and useful information used to enable more effective strategic, tactical, and operational insight and decision-making. ...the narrow definition is used when referring to just the top layers of the BI architectural stack such as reporting, analytics and dashboards." (Forrester Research)



What is BI?

Broad definition:

Load/ Enrich/Clean data => ETL

Transform data into readable model => ETL/DWH

Secure data => DWH/Mart

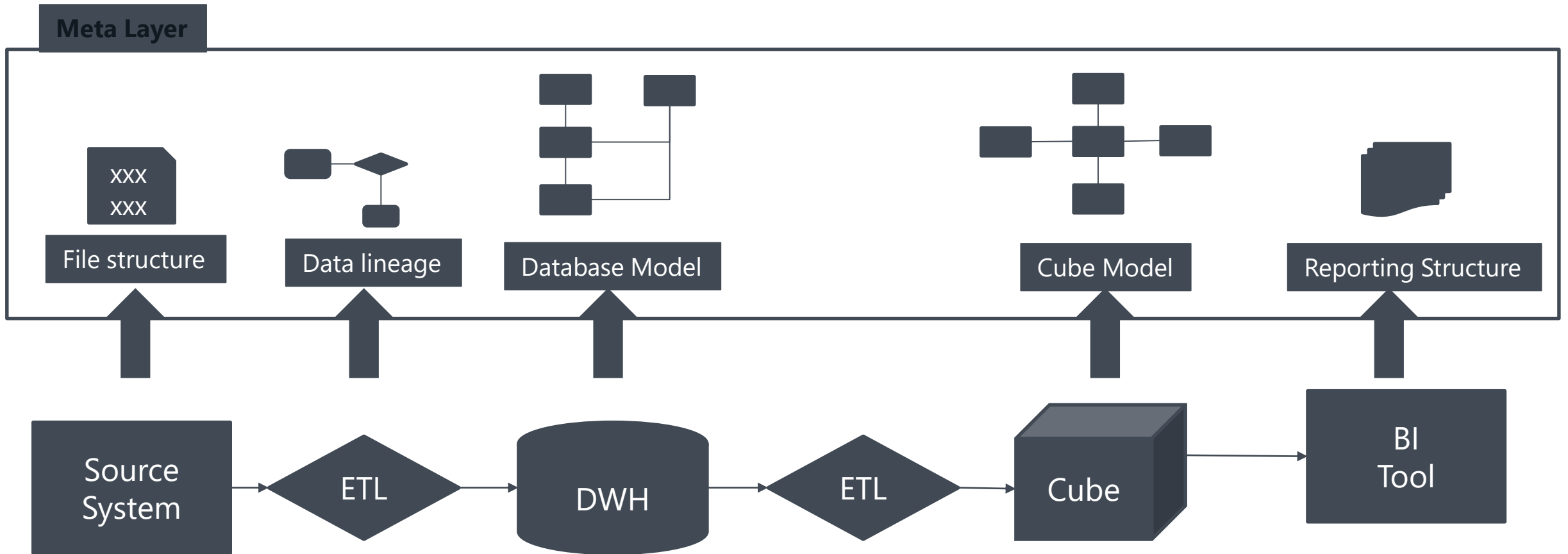
Analyze data => Mart/Datamining

Create szenarios, predictions,... => Datamining

Expose data => Presentation Layer



Corporate BI: Information chain



What is BI?

Special requirements

Combine data from different sources

Combine historical and current data

Read over write performance

- Denormalization

- Column Store Indexes

Bulk Load enabling

React to concurrency peaks



Which chances and risks do exist for BI in the cloud?

No „Microsoft only“ topic:

BI CLOUD BENEFITS

ACCELERATED DEPLOYMENT

Can be up and running within minutes, not weeks.

EASY BUDGET APPROVAL

Can be treated as an Operational Expense instead of a Capital Expense.

LOW RISK

No hardware or software to install and you can cancel your subscription at anytime.

EASE OF USE

Easier for end-users to access, operate and set-up reducing IT involvement and costs.

SCALABILITY

Can easily scale to accommodate growth and server power.

ACCESSIBILITY

Provides enterprise-class BI delivered anywhere, anytime.



CLOUD OVERVIEW

BI in the cloud is no longer a second tier task, it's a core tenant, and not just in IT. Key departments such as sales, marketing and finance need access to business analytics quickly without getting bogged down in the technical details. Cloud Computing makes it possible. And Decision First Technologies makes it Easy!

We provide companies with immediate access to SAP's BusinessObjects BI Suite, including operational reporting, ad hoc query and analysis, dashboards and visualizations, data exploration and more.

Whether you need a subscription-based solution for SAP BusinessObjects or HANA or a custom built BI and HANA Cloud environment, we can provide you with the right solution to meet your business needs.

Agile Business Intelligence in the Cloud for Everyone

A proven platform for creating powerful business intelligence applications, enabling users from the workgroup to the enterprise.

[Watch Video](#)

[View eBook](#)



Fast Time to Value

Quickly combine data from any source and rapidly create BI applications for agile analysis.

Intuitive and Powerful

Dozens of visualizations and advanced calculations available in a fast, friendly UI.

For Everyone, Everywhere

From executives to analysts to everyday dashboard users. In a browser or on-the-go with Mobile BI.

Enterprise Class, Business Driven

The security, reliability, and performance you require, with the flexibility the business demands.



Which chances and risks do exist for BI in the cloud?

Chances

- Accessibility

- Scalability

- Improved cost management (PaaS, pay only when you need something)

- Geo replication

- Self-service

Risks

- Security

- Online only (For BI a general risk, because on-prem BI very often requires online access from customers)

- Self-service



Which BI features are already available in the cloud?

E(T)L

- Azure Data Factory

- Logic Apps

- PowerBI Model (using M)

- Common Data Services

DWH

- Azure SQL Datawarehouse

- Azure SQL Database

- Azure Data Lake



Which BI features are already available in the cloud?

Mart

- PowerBI Model (not accessible from other applications)

- Common Data Services

Datamining / Analysis

- Azure Machine Learning

- Cognitive Services

- Azure Data Lake Analytics

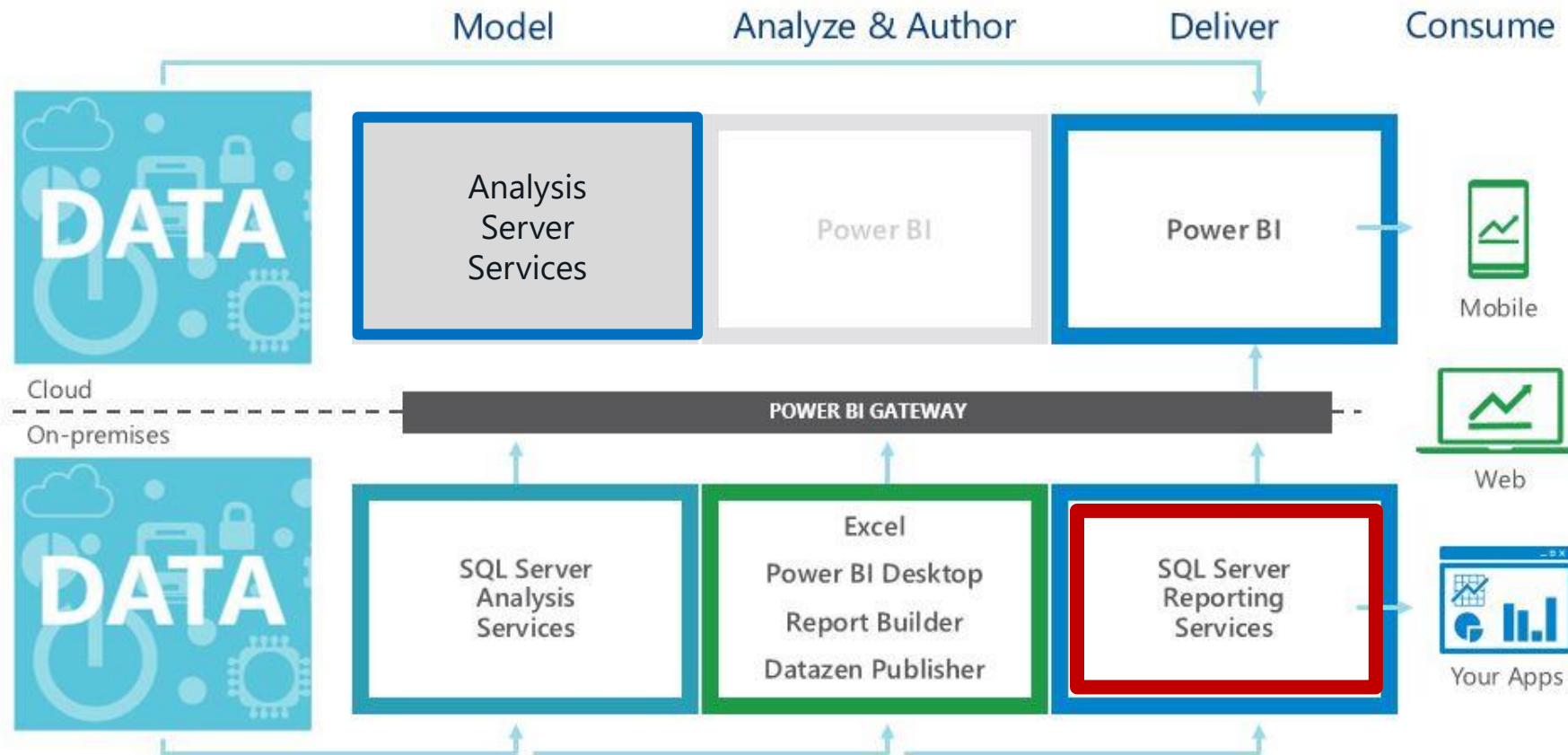
...

Presentation Layer

- PowerBI



Microsoft BI Landscape 2017



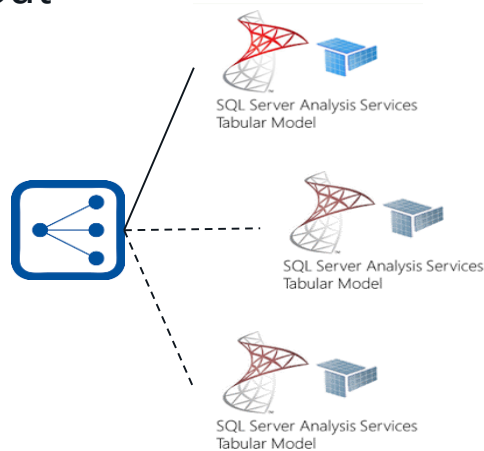
How can Azure AS improve „BI in the cloud“? (I)

Geo replication

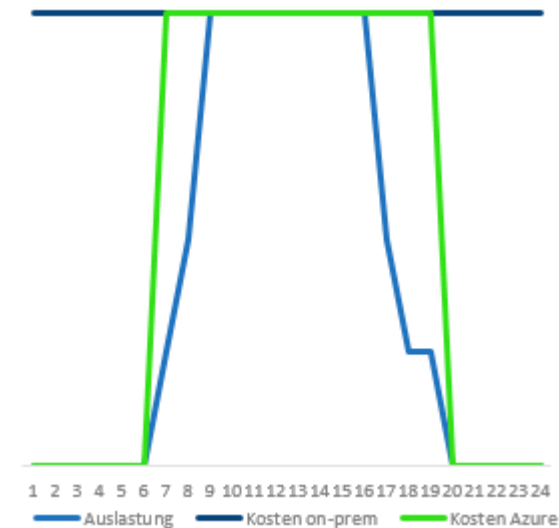
Scale up/down



Scale out



Usage based payment



How can Azure AS improve „BI in the cloud“? (II)

Azure Analysis Services offers the possibility to implement a semantic layer in the cloud.

Even more, you have the chance to create a data virtualization layer!

From the feature perspective it covers the same elements that PowerBI does. So why would you need Azure AS on top?

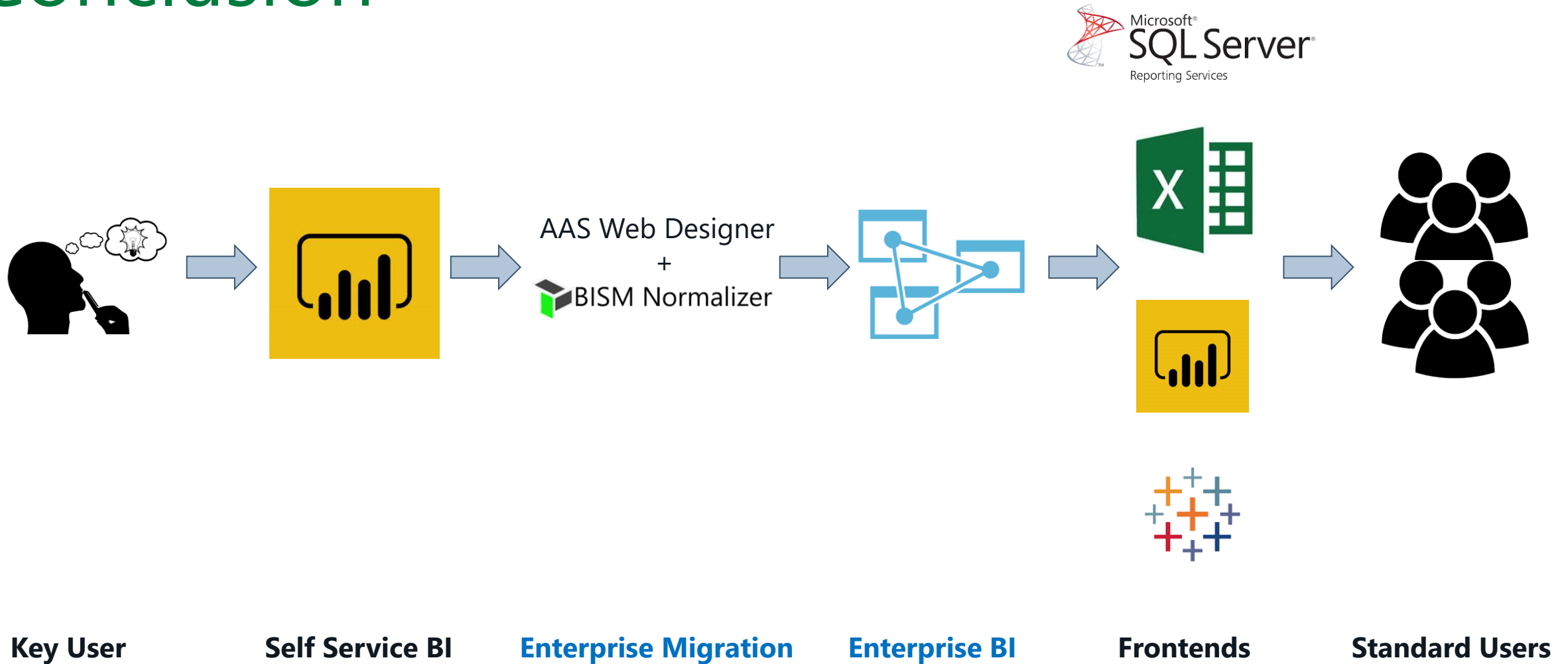


How can Azure AS improve „BI in the cloud“?(III)

	PowerBI Pro	PowerBI Premium	Azure Analysis Services
Model/Data Set Size	1 GB	not restricted	based on pricing tier (current max: 400 GB)
Refresh times per day	8	not restricted	not restricted
Partitioning	No	No	Yes (not Basic)
Scalability	No	Yes	Yes
Cost management by pausing service	No (user licenses)	No	Yes
Usage of development toolset	PowerBI Desktop	PowerBI Desktop	Yes
Integrate into development strategies like continuous integration	No	No	Yes
Extend modelling to functionality of multidimensional	No	No	in evaluation: vote here



Conclusion



References

Azure Analysis Services

<https://docs.microsoft.com/en-us/azure/analysis-services/analysis-services-overview#>
<https://www.kasperonbi.com/analysis-services-in-azure-when-and-why/>
<https://www.kasperonbi.com/getting-your-on-premise-ssas-tabular-model-to-azure/>
<https://azure.microsoft.com/de-de/blog/1400-models-in-azure-as/>

What is BI?

<http://www.gartner.com/it-glossary/business-intelligence-bi/>
http://blogs.forrester.com/boris_evelson/10-04-29-want-know-what-forrester-lead-data-analysts-are-thinking-about-bi-and-data-domain

BI in the cloud

3:30 pm, SolidQ: [Build your next BI solution in azure \[DE/EN\] Alexander Klein](#)

<http://biinthecloud.com/>
https://cloud.oracle.com/business_intelligence
<https://www.microsoft.com/en-us/sql-server/business-intelligence>

