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PASS SQLSATURDAY

How mature has SSAS Tabular mode become?

Who am I?

Developer and consultant for Microsoft BI at oh22data AG

Main Topics: SSAS, SSRS and MDS

>10 years of experience with database and BI development

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Agenda

Modus operandi:

- Identify criteria for classical analysis model approach
- Identify criteria for modern analysis model approach
- Evaluate based on criteria
- Compare to competitors from same vendor

Outlook

Conclusion

Modus operandi:

Identify criteria set

Modus operandi

- Identification of criteria
  - For classical analysis model approach
  - For modern analysis model approach

- Comparison to competitors from same vendor
  - SSAS Multidimensional → classical analysis model
  - PowerBI → modern analysis model

Selection of criteria for a classical analysis model (I)

- Measures
  - Different aggregation methods, Custom Calculations
- Dimensions
  - Balanced / Ragged / Parent-Child hierarchies
  - Many-to-many relationships
  - Custom rollup
  - Named sets, Default member

Selection of criteria for a classical analysis model(II)

- Security
  - Row Level / Object Level / Cell Security / Non-visual totals
- Usability Features
  - Display folder, Perspectives, Translations
- Performance Features
  - Partitioning, Aggregations
- Additional features
  - Custom assemblies, Actions, Writeback, Developer Tool Support (e.G. SSDT Configuration Manager)

Selection of criteria for a modern analysis model (I)

- Collaborative BI
  - Merge BI Platforms with collaboration tools
- Embedded Analytics
  - Integrate Analytics with business applications
- Predictive Analytics
  - Use patterns in historical data to predict future events
- Cloud BI
  - BI in the cloud
- Integrated solution
  - ETL, Data Modeling, Analysis, Visualization in one tool

Modus operandi:

Evaluate based on criteria set

How did SSAS Tabular develop regarding classical criteria for analysis models?

		Tabular 2012/2014	Tabular 2016	Tabular 2017/Azure AS
Measures	**Different aggregation methods**	x	x	x
	Custom Calculations	not for DirectQuery	not for DirectQuery	not for DirectQuery
Dimensionen	**Balanced Hierarchies**	x	x	x
	Ragged Hierarchies	using DAX	using DAX	x
	Parent-Child Hierarchies	-	-	-
	Many-to-many Relationships	-	bi-directional filters	bi-directional filters
	Named Sets	-	-	-
	Custom Rollup	-	-	-
	Default Member	-	-	-
KPIS and Datamining	**KPIs**	x	x	x
	Data Mining Algorithms	-	-	-
Security	**Row Level Security**	x	x	x
	Cell Security	x	x	x
	Object Level Security	-	-	x
	Non-visual totals	-	using Calculated Tables	using Calculated Tables
Usability Features	**Display Folder**	-	x	x
	Perspectives	x	x	x
	Translations	-	x	x
Performance Features	**Partitioning**	not for DirectQuery, only sequential processing	not for DirectQuery	not for DirectQuery
	Aggregations	-	-	-
Weitere Funktionalitäten	**Custom Assemblies**	-	-	-
	Actions	-	-	-
	Writeback	-	-	-
	SSDT Configuration Manager Support	-	x	x

Demo:
Object level security

How did SSAS Tabular develop regarding modern criteria for analysis models?

	Tabular 2012/2014	Tabular 2016	Tabular 2017/Azure AS
Collaborative BI	-	-	-
Embedded Analytics	-	-	-
Predictive Analytics	-	-	-
Cloud BI	-	-	x
Integrated solution	Modeling	Modeling	ETL + Modeling

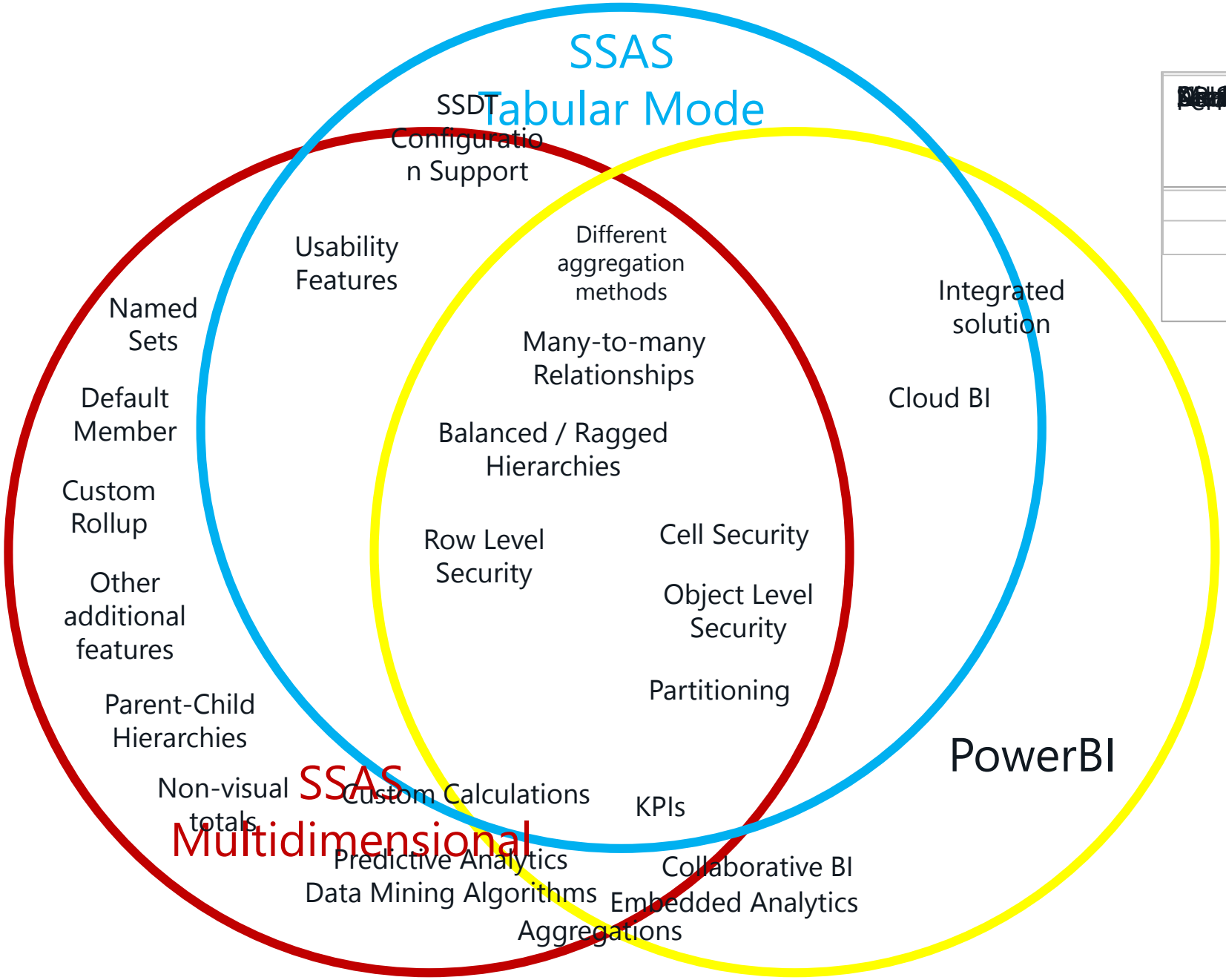
Demo:
ETL included

Modus operandi:

Compare to competitors from same vendor

Competitors from the same vendor

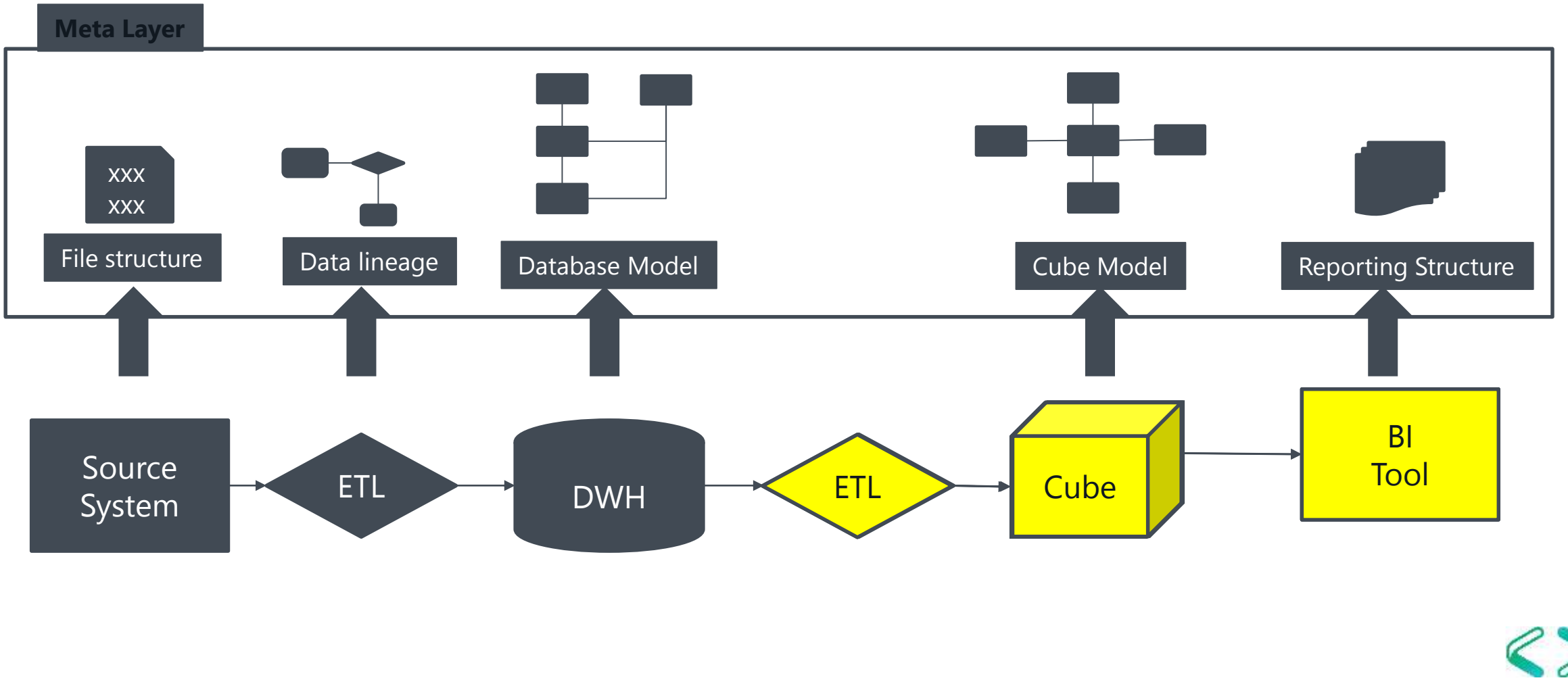
- SSAS Multidimensional
  - THE classical analysis model
  - Mighty but complex
  - Established but unchanging
- PowerBI
  - modern analysis model
  - Not yet completed but fast-developing
  - Easy to start with but hard to keep track of



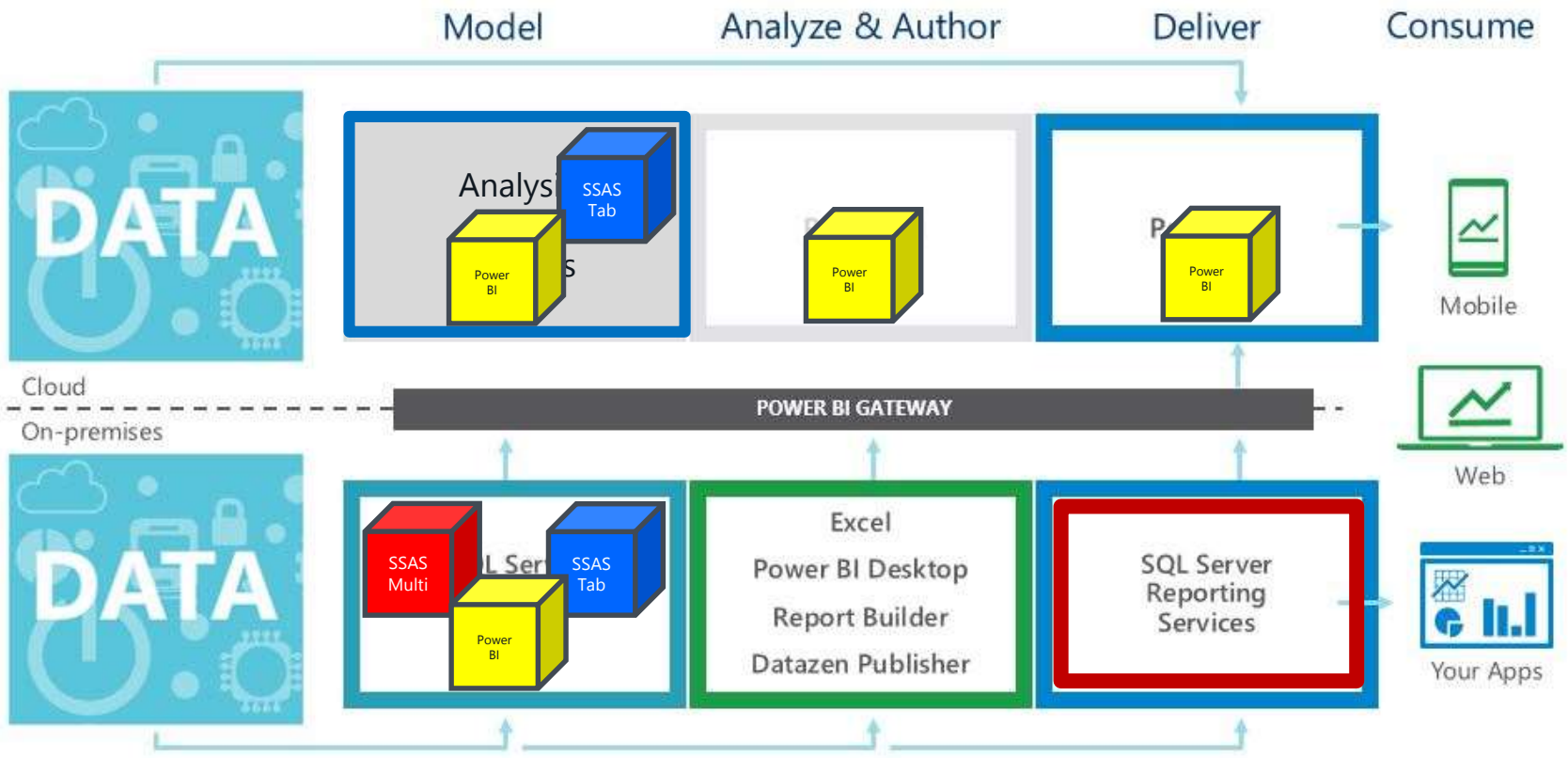
Custom Rollup
Default Member

How does the criteria distribution across Microsoft's tools look like?

Corporate BI: Information chain



Microsoft BI Landscape 2017



Outlook

What's on the roadmap for SSAS Tabular and PowerBI?

- SSAS on prem/Azure Analysis Services:
  - Resource governance properties (GA October)
  - MDX column controls (GA October)
- PowerBI:
  - Common Data Service for Apps and Power BI dataflows (GA)
  - Multiple geographies (Preview)
  - Incremental Data Refresh in PowerBI (GA October)
  - Query acceleration for large datasets in PowerBI (Preview)
  - XMLA endpoints visible in PowerBI (Preview)
  - Composite Models (Preview)

Conclusion

Did SSAS Tabular grow mature?

		Tabular 2012/2014	Tabular 2016	Tabular 2017/Azure AS	Tabular vNext
Measures	**Different aggregation methods**	x	x	x	
	Custom Calculations	not for DirectQuery	not for DirectQuery	not for DirectQuery	
Dimensionen	**Balanced Hierarchies**	x	x	x	
	Ragged Hierarchies	using DAX	using DAX	x	
	Parent-Child Hierarchies	-	-	-	
	Many-to-many Relationships	-	bi-directional filters	bi-directional filters	
	Named Sets	-	-	-	
	Custom Rollup	-	-	-	
	Default Member	-	-		
KPIS and Datamining	**KPIs**	x			
	Data Mining Algorithms	-			
Security	**Row Level Security**				
	Cell Security				
	Object Level Security				
	Non-visual totals				
Usability Features	**Display Folder**				
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	Translations				
Performance Features	**Partitioning**	not for DirectQuery, only sequential processing			
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Weitere Funktionalitäten	**Custom Assemblies**	-	-	-	
	Actions	-	-	-	
	Writeback	-	-	-	
	SSDT Configuration Manager Support	-	x	x	
Collaborative BI		-	-	-	
Embedded Analytics		-	-	-	
Predictive Analytics		-	-	-	
Cloud BI		-	-	x	
Integrated solution		Modeling	Modeling	ETL + Modeling	

Which picture can we draw?

SSAS Tabular Mode toda d range of requirements for classical **and** modern

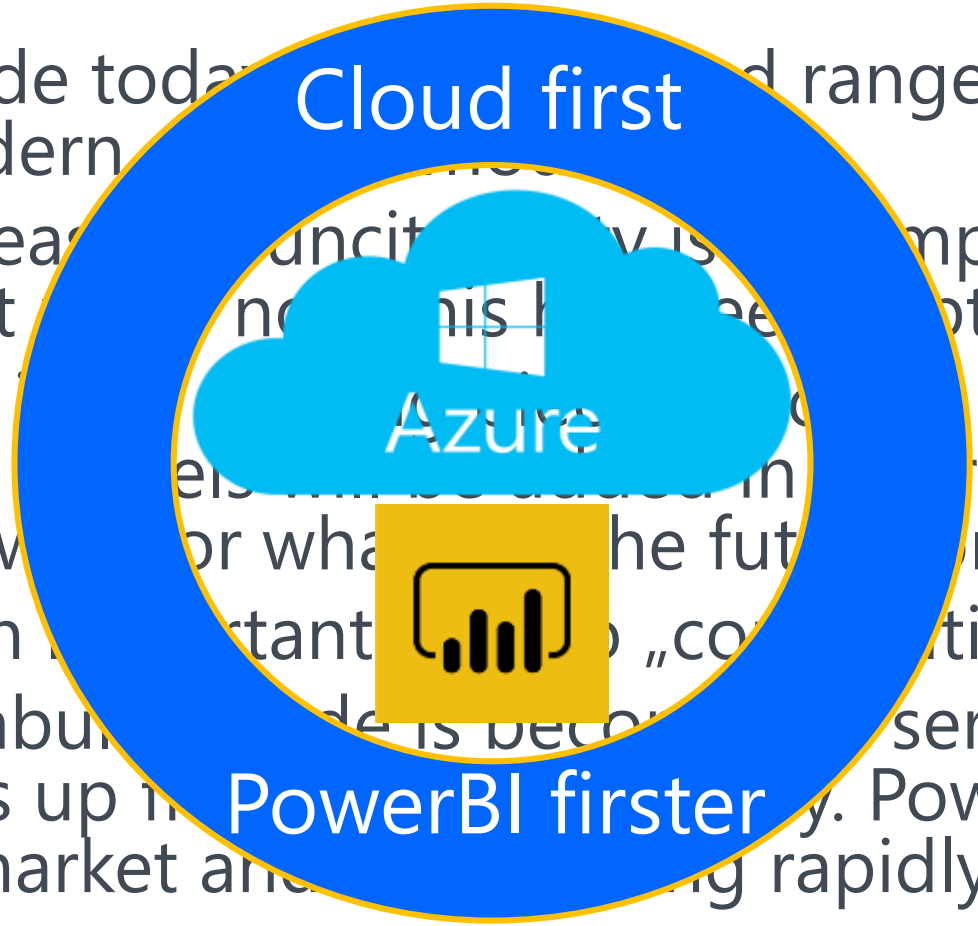
As always an increa mpanied by an increase of complexity. But ot at a moderate level.

It is questionable the full range of classical analytics e. But definitely it will be interesting to w or wha he fut rings.

SSAS 2017 was an tant „co tive maturity“.

But while SSAS Tabu serious product competition pops up f y. PowerBI covers a similar segment of the market a g rapidly.

This might lead to suspicions regarding priorities...



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- Ignite Vortrag von Christian Wade

Migrate PowerBI into AAS

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