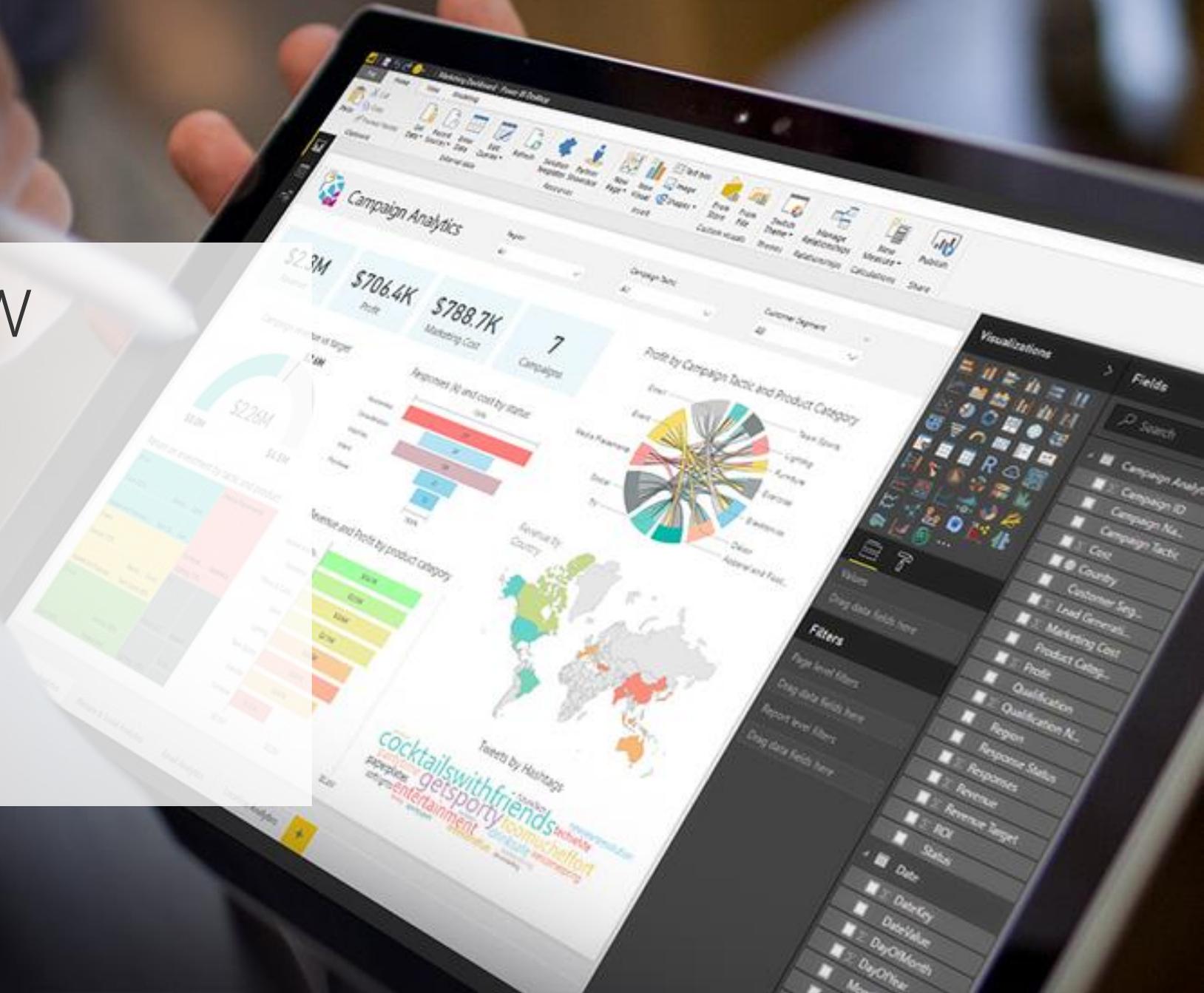


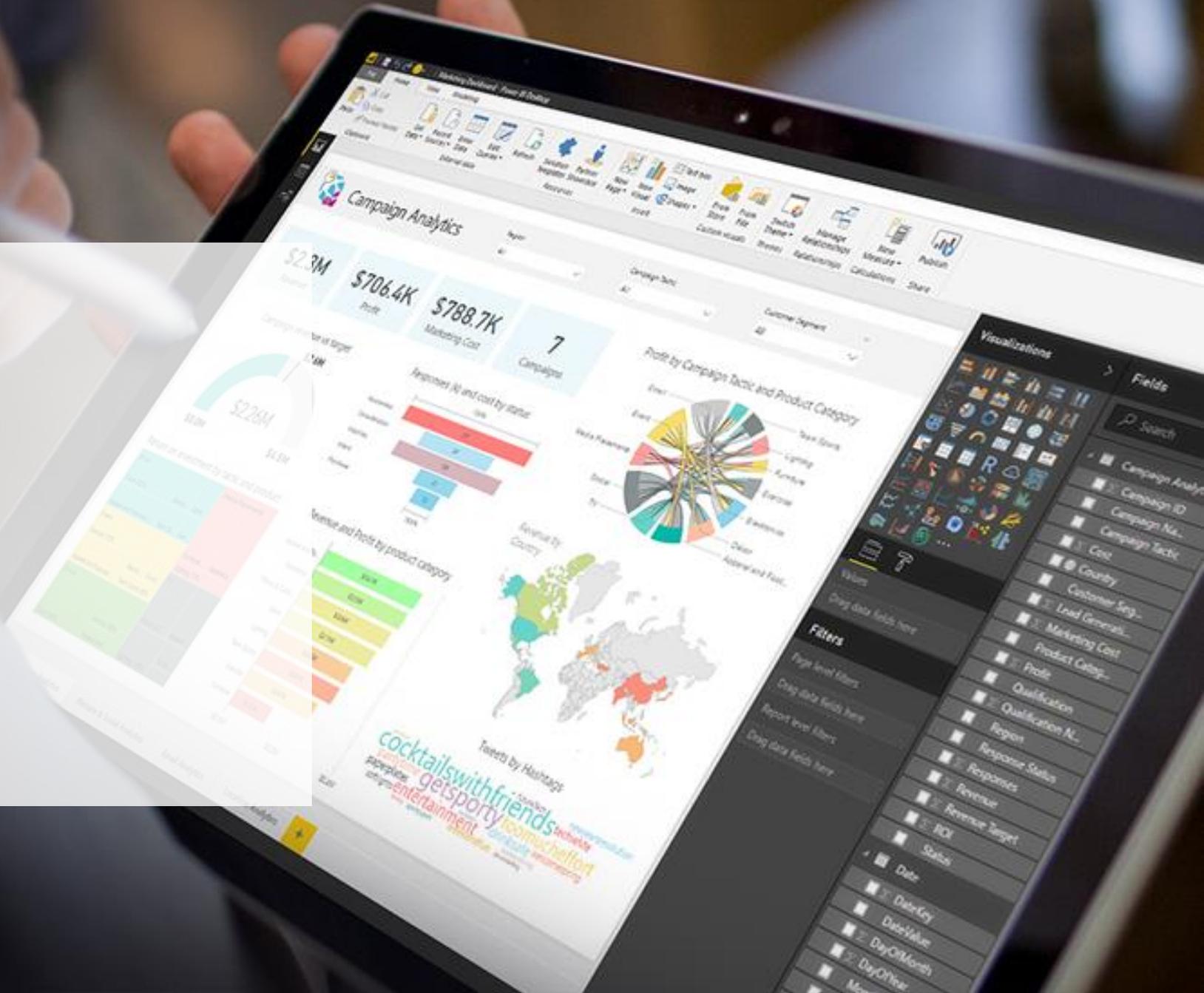
Power BI overview

Speaker name
Title



Modern analytics

Speaker name
Title



Companies want to do more with data

70%

of organizations believe
their data is not used
to its fullest extent

But it's hard to do

Amount of data
is growing

163ZB

worldwide data
creation by 2025

-IDC: Data Age 2025

Data sources
are growing

86%

challenged to analyze
unstructured data

-IDG: Big Data Survey

Lack of
specialized workers

#1

data science and
analytics are most
challenging to find

-IDG: State of CIO

How does Power BI help modernize analytics?



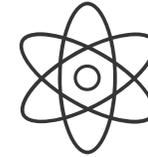
Unify self-service and enterprise BI

Remove the challenges of multiple solutions and conquer data both structured and unstructured



AI gets to insights faster

Reduce the amount of time spent wrangling data and spend more time getting answers



Anyone can access and analyze

Make sense of data and drive confident decisions without relying on specialized skills

Data culture



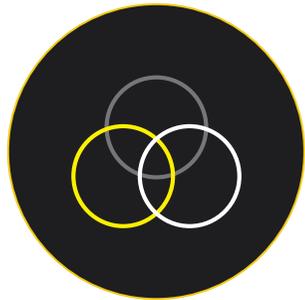


Unify self-service and enterprise BI

- Reduce cost, complexity, and challenges of multiple analytics systems
- Grow and evolve with a scalable, secure, and compliant platform
- Enterprise BI tools like SSRS and SSAS are inside Power BI
- Protect your data inside and outside of Power BI



Pair Power BI with Microsoft Information Protection and Microsoft Cloud App Security to better protect Power BI data



Apply sensitivity labels familiar in Office 365 apps like Word, Excel, PowerPoint, and Outlook to Power BI data.



Extend protection and governance policies to Power BI data—including exported data—with Microsoft Information Protection.



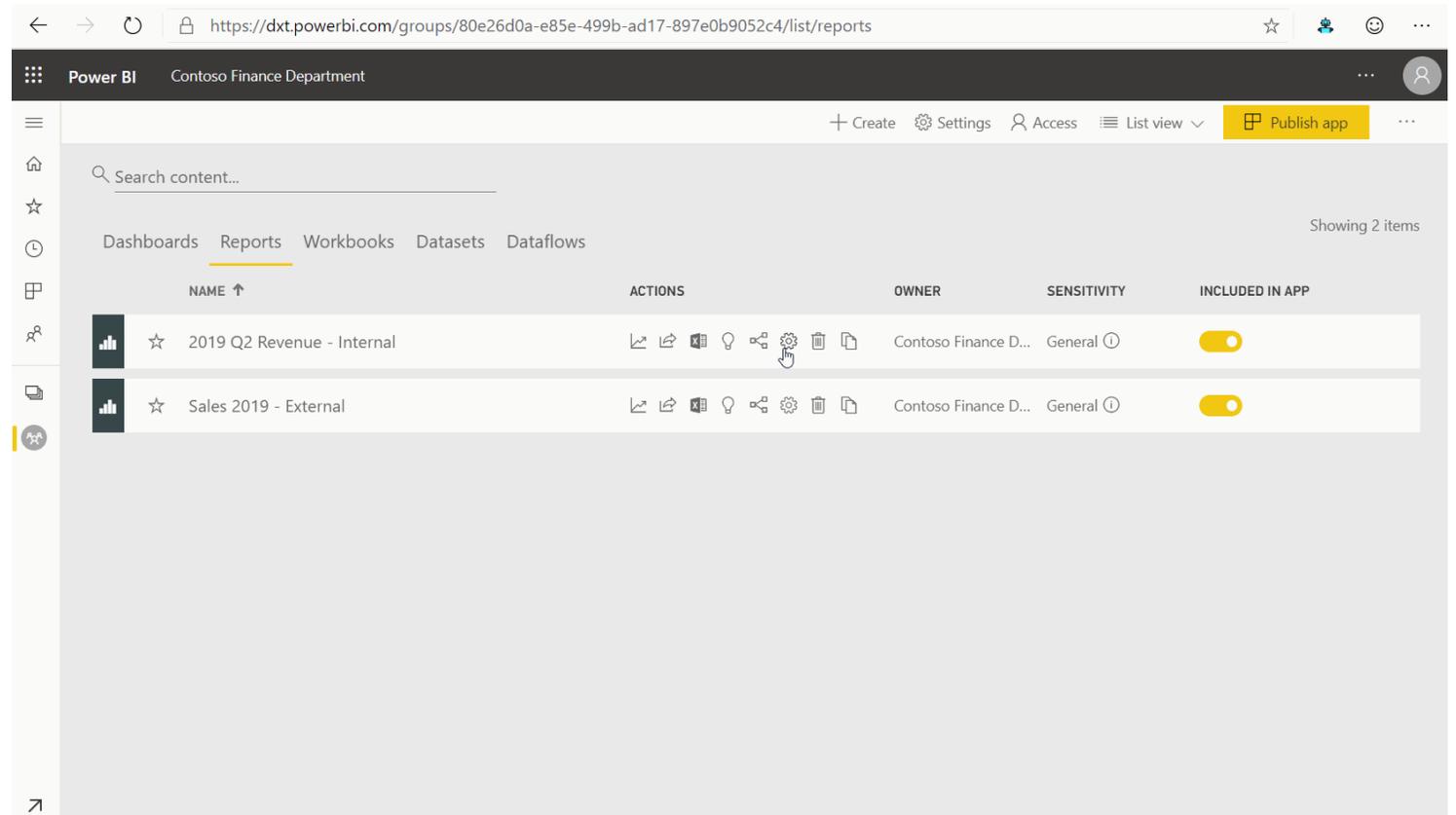
Better meet privacy and regulatory requirements with oversight of sensitive data through Microsoft Cloud App Security.



Help prevent exposure of sensitive data by blocking risky user activities, in real time, with Microsoft Cloud App Security.

Classify and label Power BI artifacts

- Data owners set **Microsoft information protection** sensitivity labels for datasets, reports, dashboards and dataflows.
- Same labels used to classify Office 365 files.

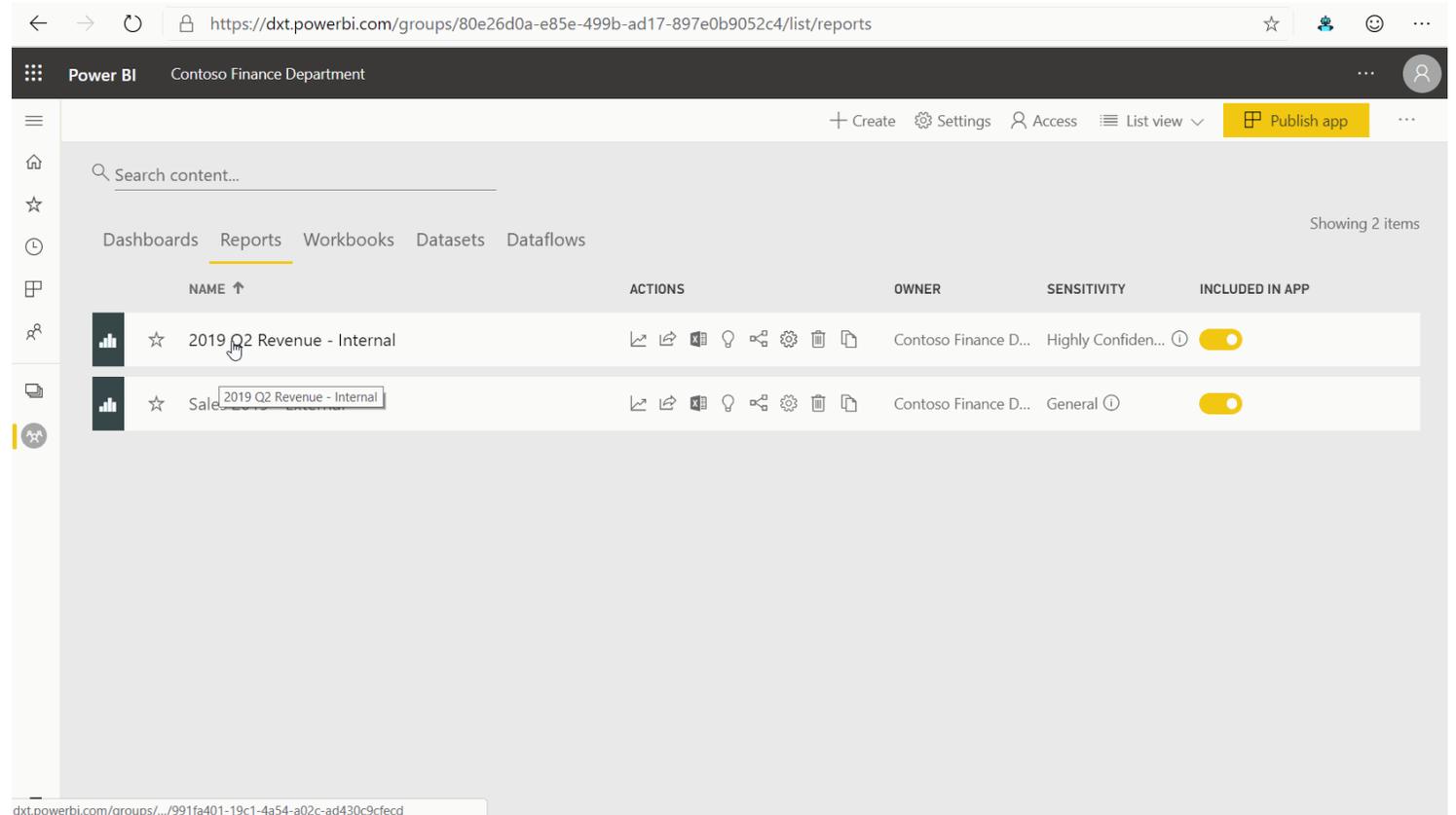


The screenshot displays the Microsoft Power BI web interface for a group named "Contoso Finance Department". The page shows a list of reports under the "Reports" tab. The interface includes a search bar, navigation tabs for Dashboards, Reports, Workbooks, Datasets, and Dataflows, and a "Publish app" button. The list of reports is as follows:

NAME ↑	ACTIONS	OWNER	SENSITIVITY	INCLUDED IN APP
☆ 2019 Q2 Revenue - Internal	[Icons: Refresh, Share, Print, Copy, Paste, Delete, Save, Refresh]	Contoso Finance D...	General ⓘ	<input checked="" type="checkbox"/>
☆ Sales 2019 - External	[Icons: Refresh, Share, Print, Copy, Paste, Delete, Save, Refresh]	Contoso Finance D...	General ⓘ	<input checked="" type="checkbox"/>

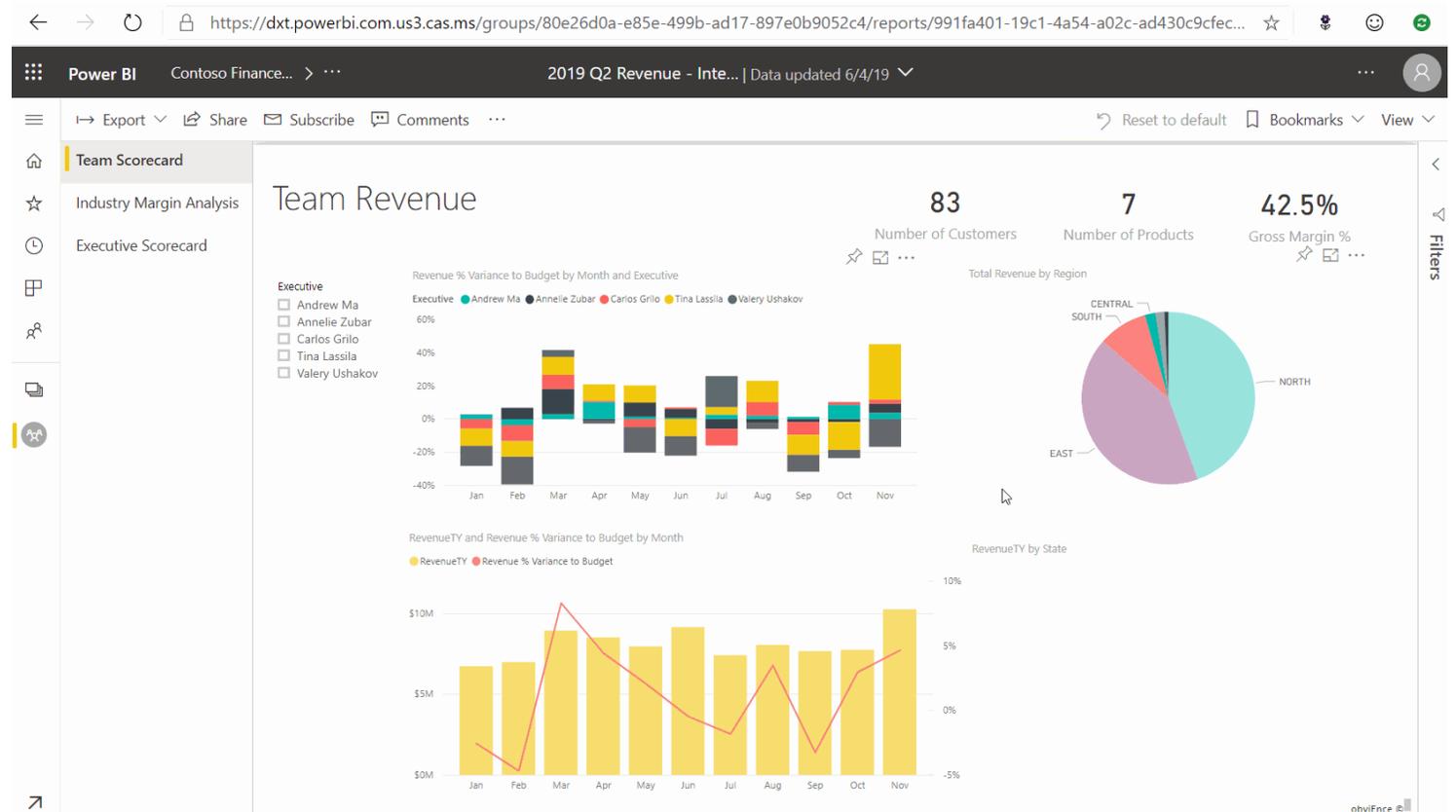
Protect data exported from Power BI

- Sensitivity labels of Power BI artifacts persist in files exported from Power BI to Excel, PowerPoint, PDF (at preview).
- Data protection policies defined by security and governance admins in Microsoft 365 portal are inherited when data is exported from Power BI service.
- Prevent unauthorized access to sensitive data.



Protect data with real-time risk analysis

- Admins can closely monitor risky sessions connecting to Power BI service in Microsoft Cloud App Security.
- Security admins can define real time remediation of risky activities using Microsoft Cloud App Security real time controls.



Enable admin oversight of sensitive data

- Power BI admins have full visibility to sensitive data in their Power BI tenant and who consumes it (launch Jan 2020).
- Security admins can use Microsoft Cloud App Security to gain better visibility for sensitive data usage in Power BI and investigate potential security risks.

The screenshot shows the Power BI Admin portal interface. The browser address bar displays <https://dxt.powerbi.com/admin-portal/dataProtection>. The page title is "Admin portal" and the sub-page is "Data Protection".

The main content area is titled "Your tenant is secured by Microsoft Cloud App Security" and "Investigate risky usage of Power BI data in the Cloud App Security portal". A yellow button labeled "Go to Cloud App Security portal" is visible.

Under "MCAS alerts last 7 days", there is a table with the following data:

Severity	User name	Alert	When
High	Adele Lewis	Download of Highly Confidential file to an unmanaged device	Less than 1 hours ago
Low	Able Neuman	Login from risky IP	7 hours ago
Medium	Tom Lauri	Unusual access to Confidential reports	2 days ago

Under "File download monitored by MCAS last 30 days", there is a bar chart showing downloads categorized by sensitivity label (General, Confidential, Highly Confidential) and action (Allow, Block). The chart shows a significant spike in General downloads in late January 2019.

There are four pie charts showing the distribution of sensitivity labels for different report types:

- Reports by sensitivity label:** General (4000), Confidential (700), Public (400), Non-Business (45).
- Dashboards by sensitivity label:** General (300), Confidential (50), Public (15), Non-Business (5).
- Datasets by sensitivity label:** General (200), Confidential (25), Public (25), Non-Business (25).
- Dataflows by sensitivity label:** General (12), Confidential (7), Public (3), Non-Business (1).

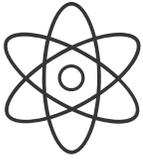
Under "Artifacts by Sensitivity label last 6 months", there is a stacked bar chart showing artifacts from Dec 2018 to May 2019. The chart shows a steady increase in artifacts over time, with a notable spike in May 2019.



Get to insights faster with AI

- Make immediate sense of unstructured data like images and text
- Ask questions using natural language or company jargon
- Discover hidden insights and understand what influences your KPIs
- Accelerate time to insight with sharable machine learning models





Anyone can access and analyze

- Tell your data story with hundreds of data connectors and visual options
- Expedite decisions backed by live dashboards and single source of truth
- Run your business in real time and complete ad-hoc analysis from any device
- Put insights where users spend time by embedding dashboards in applications



Worldwide reach



GOV.UK



FedRAMP



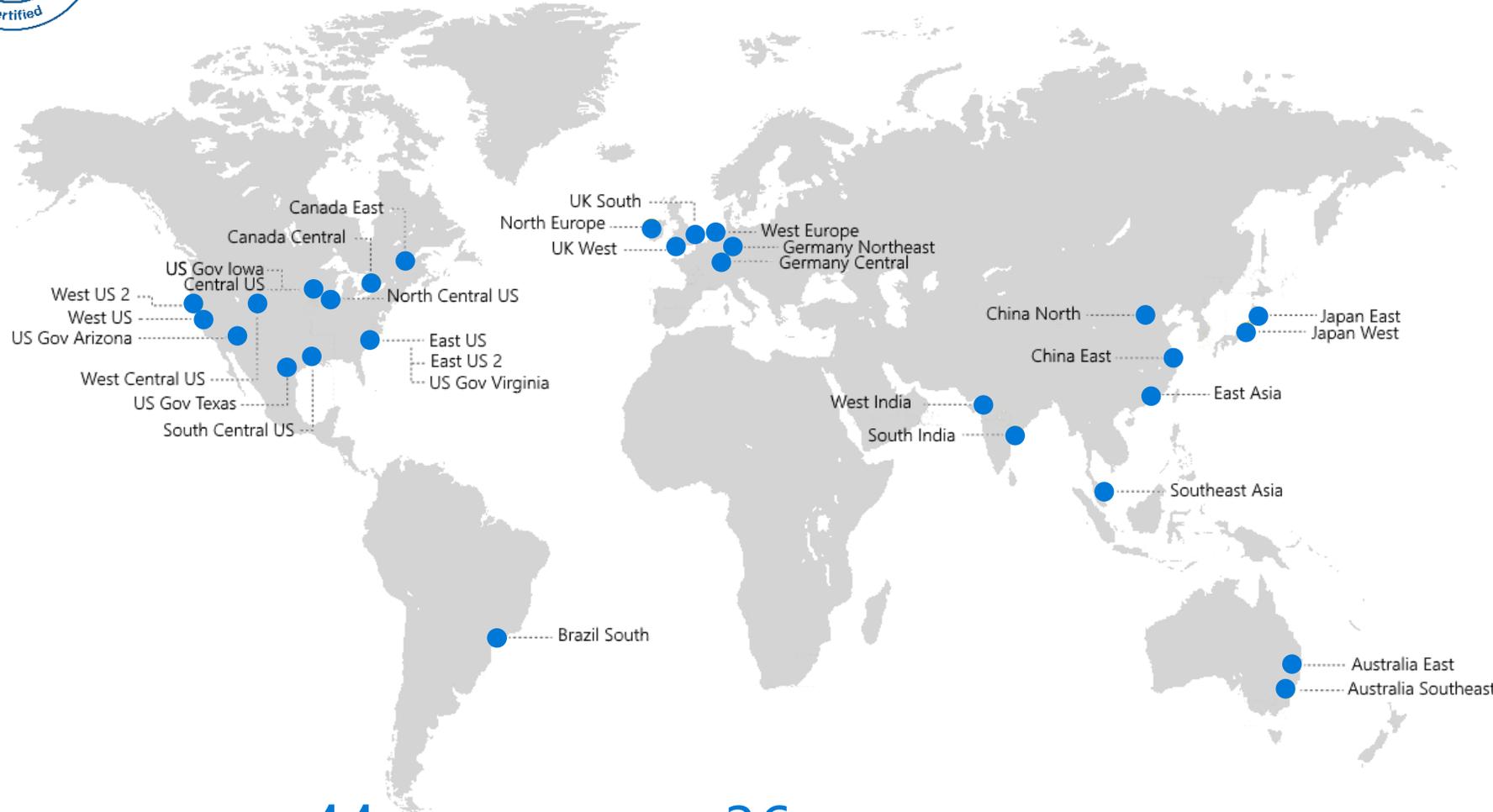
EU Model Clauses



Federal Office for Information Security



China GB 18030



44

Languages

36

Primary and backup datacenters worldwide

National Clouds

US Government
China
Germany



Power BI data sources

Always growing

File	Database	Database	Online Services	Online Services	Other
<ul style="list-style-type: none"> Excel Text/CSV XML JSON Folder PDF SharePoint folder 	<ul style="list-style-type: none"> IBM Netezza MySQL database PostgreSQL database Sybase database Teradata database SAP HANA database SAP Business Warehouse Application Server SAP Business Warehouse Message Server Amazon Redshift Impala Google BigQuery Vertica Snowflake Essbase AtScale cubes (Beta) BI Connector Dremio Exasol Indexima (Beta) 	<ul style="list-style-type: none"> Jethro (Beta) InterSystems IRIS (Beta) Kyligence MarkLogic <p>Azure</p> <ul style="list-style-type: none"> Azure SQL database Azure SQL Data Warehouse Azure Analysis Services database Azure Blob Storage Azure Table Storage Azure Cosmos DB Azure Data Lake Storage Gen2 (Beta) Azure Data Lake Storage Gen1 Azure HDInsight (HDFS) Azure HDInsight Spark HDInsight Interactive Query Azure Data Explorer (Kusto) Azure Cost Management (Beta) 	<ul style="list-style-type: none"> SharePoint Online List Microsoft Exchange Online Dynamics 365 (online) Dynamics NAV Dynamics 365 Business Central Dynamics 365 Business Central (on-premises) Microsoft Azure Consumption Insights (Beta) Azure DevOps (Beta) Azure DevOps Server (Beta) Salesforce Objects Salesforce Reports Google Analytics Adobe Analytics appFigures (Beta) Data.World - Get Dataset (Beta) Facebook GitHub (Beta) MailChimp (Beta) Marketo (Beta) Mixpanel (Beta) 	<ul style="list-style-type: none"> Planview Enterprise One - PRM (Beta) Planview Projectplace (Beta) QuickBooks Online (Beta) Smartsheet SparkPost (Beta) Stripe (Beta) SweetIQ (Beta) Planview Enterprise One - CTM (Beta) Twilio (Beta) tyGraph (Beta) Webtrends (Beta) Zendesk (Beta) Emigo Data Source (Beta) Intune Data Warehouse (Beta) Microsoft Graph Security (Beta) TeamDesk (Beta) Industrial App Store Quick Base Dynamics 365 Customer Insights (Beta) Entersoft Business Suite (Beta) 	<ul style="list-style-type: none"> Web SharePoint list OData Feed Active Directory Microsoft Exchange Hadoop File (HDFS) Spark R script Python script ODBC OLE DB BI360 – Budgeting & Financial Reporting Denodo Information Grid (Beta) Paxata QubolePresto (Beta) Roamlr (Beta) Workforce Dimensions (Beta) SurveyMonkey (Beta) Tenforce (Smart)List (Beta) Blank Query
<p>Power Platform</p> <ul style="list-style-type: none"> Power BI datasets Power BI dataflows Common Data Service 					
<p>Database</p> <ul style="list-style-type: none"> SQL Server database Access database SQL Server Analysis Services Oracle database IBM Db2 database IBM Informix database (Beta) 					

Power BI success
in driving data
culture





February 2019

A Leader in Analytics & BI Platforms*



Source: Gartner (February 2019)

*Gartner "Magic Quadrant for Analytics and Business Intelligence Platforms," by Cindi Howson, James Richardson, Rita Sallam, Austin Kronz, 11 February 2019

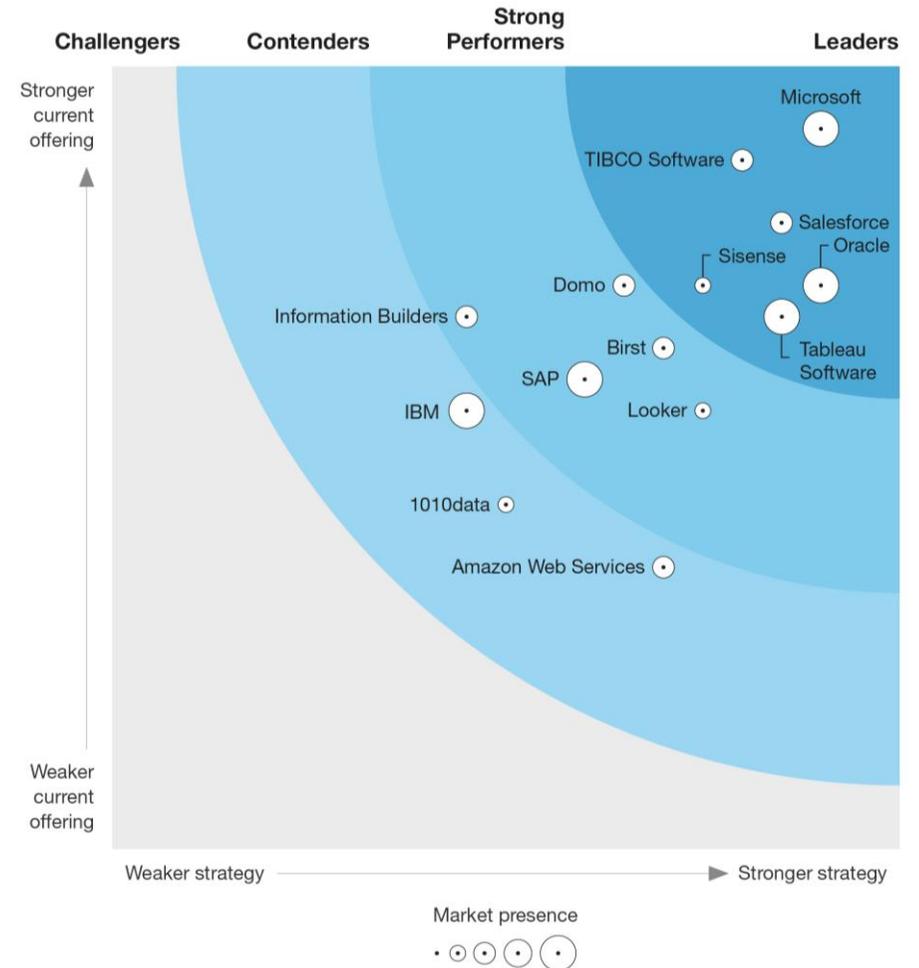
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FORRESTER®

Microsoft Positioned as a Leader in The Forrester Wave™: Enterprise BI Platforms (Vendor-Managed), Q3 2019*

“You no longer need to be shy about using Microsoft Power BI; it's a killer BI platform.”

—According to the Forrester report



*The Forrester Wave™: Enterprise BI Platforms (Vendor-Managed), Q3 2019 by Boris Evelson with Srividya Sridharan, Robert Perdoni, Aldila Yunus. The Forrester Wave™ is copyrighted by Forrester Research, Inc. Forrester and Forrester Wave are trademarks of Forrester Research, Inc. The Forrester Wave is a graphical representation of Forrester's call on a market and is plotted using a detailed spreadsheet with exposed scores, weightings, and comments. Forrester does not endorse any vendor, product, or service depicted in the Forrester Wave. Information is based on best available resources. Opinions reflect judgment at the time and are subject to change.

Partner solutions

990+

Partners in 100+ countries

420+

Showcase solutions



Customer momentum: Power BI



Retail and consumer goods



Discrete manufacturing



Government and education



Healthcare



Banking and financial services



Professional services



Technology systems and services



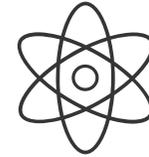
Power BI modernizes analytics



**Self-service
and enterprise BI**



**Powered
by AI**



**Provides insights
to all**

It's easy to
get started...

PowerBI.com



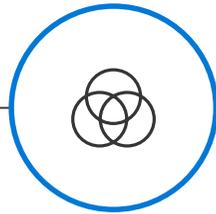
Demo

Executive dashboard

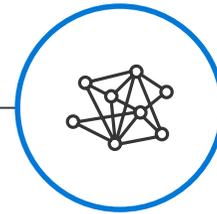
Power BI innovation areas



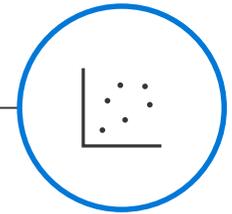
Self-service
BI/collaboration



Unified self-service
and enterprise BI



Pervasive AI
for BI

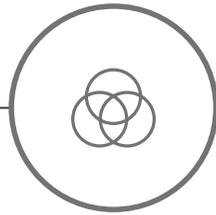


Big data analytics
with Azure Data
Services

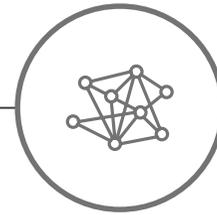
Power BI innovation areas



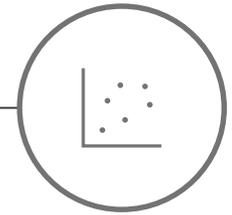
Self-service
BI/collaboration



Unified self-service
and enterprise BI



Pervasive AI
for BI



Big data analytics
with Azure Data
Services

Transform data to insights



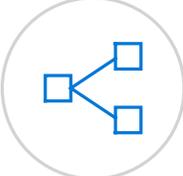
Get your data



Analyze



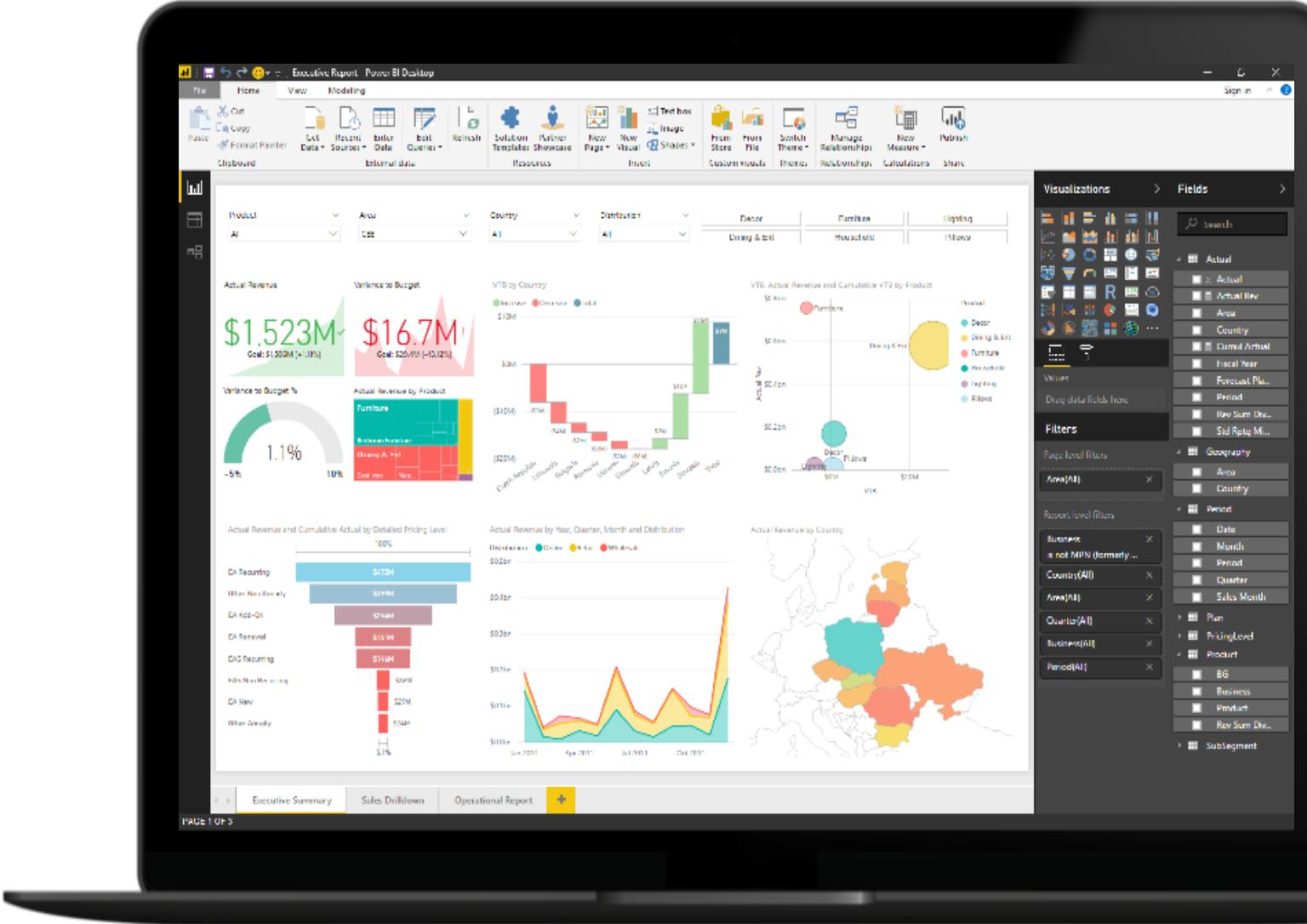
Visualize



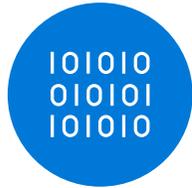
Publish



Collaborate



Easily connect, clean, and mashup data



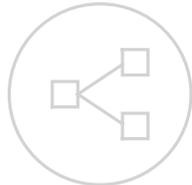
Get your data



Connect to any data sources on-premises and cloud



Shape, transform, and clean data



Connect live to any data source



Prep your data using familiar Power Query experience

Extend self-service prep to Azure Data Lake Storage



Power BI data sources

File	Database	Database	Online Services	Online Services	Other
Excel	IBM Netezza	Jethro (Beta)	SharePoint Online List	Planview Enterprise One - PRM (Beta)	Web
Text/CSV	MySQL database	InterSystems IRIS (Beta)	Microsoft Exchange Online	Planview Projectplace (Beta)	SharePoint list
XML	PostgreSQL database	Kyligence	Dynamics 365 (online)	QuickBooks Online (Beta)	OData Feed
JSON	Sybase database	MarkLogic	Dynamics NAV	Smartsheet	Active Directory
Folder	Teradata database		Dynamics 365 Business Central	SparkPost (Beta)	Microsoft Exchange
PDF	SAP HANA database	Azure	Dynamics 365 Business Central (on-premises)	Stripe (Beta)	Hadoop File (HDFS)
SharePoint folder	SAP Business Warehouse Application Server	Azure SQL database	Microsoft Azure Consumption Insights (Beta)	SweetIQ (Beta)	Spark
	SAP Business Warehouse Message Server	Azure SQL Data Warehouse	Azure DevOps (Beta)	Planview Enterprise One - CTM (Beta)	R script
Power Platform	SAP Business Warehouse Message Server	Azure Analysis Services database	Azure DevOps Server (Beta)	Twilio (Beta)	Python script
Power BI datasets	Amazon Redshift	Azure Blob Storage	Salesforce Objects	Webtrends (Beta)	ODBC
Power BI dataflows	Impala	Azure Table Storage	Salesforce Reports	Zendesk (Beta)	OLE DB
Common Data Service	Google BigQuery	Azure Cosmos DB	Google Analytics	Emigo Data Source (Beta)	BI360 - Budgeting & Financial Reporting
	Vertica	Azure Data Lake Storage Gen2 (Beta)	Adobe Analytics	Intune Data Warehouse (Beta)	Denodo
Database	Snowflake	Azure Data Lake Storage Gen1	appFigures (Beta)	Microsoft Graph Security (Beta)	Information Grid (Beta)
SQL Server database	Essbase	Azure HDInsight (HDFS)	Data.World - Get Dataset (Beta)	TeamDesk (Beta)	Paxata
Access database	AtScale cubes (Beta)	Azure HDInsight Spark	Facebook	Industrial App Store	QubolePresto (Beta)
SQL Server Analysis Services	BI Connector	HDInsight Interactive Query	GitHub (Beta)	Quick Base	Roamlar (Beta)
Oracle database	Dremio	Azure Data Explorer (Kusto)	MailChimp (Beta)	Dynamics 365 Customer Insights (Beta)	Workforce Dimensions (Beta)
IBM Db2 database	Exasol	Azure Cost Management (Beta)	Marketo (Beta)	Entersoft Business Suite (Beta)	SurveyMonkey (Beta)
IBM Informix database (Beta)	Indexima (Beta)		Mixpanel (Beta)		Tenforce (Smart)List (Beta)
					Blank Query

Build powerful models and flexible measures



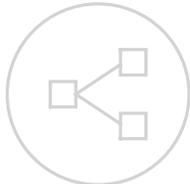
Analyze



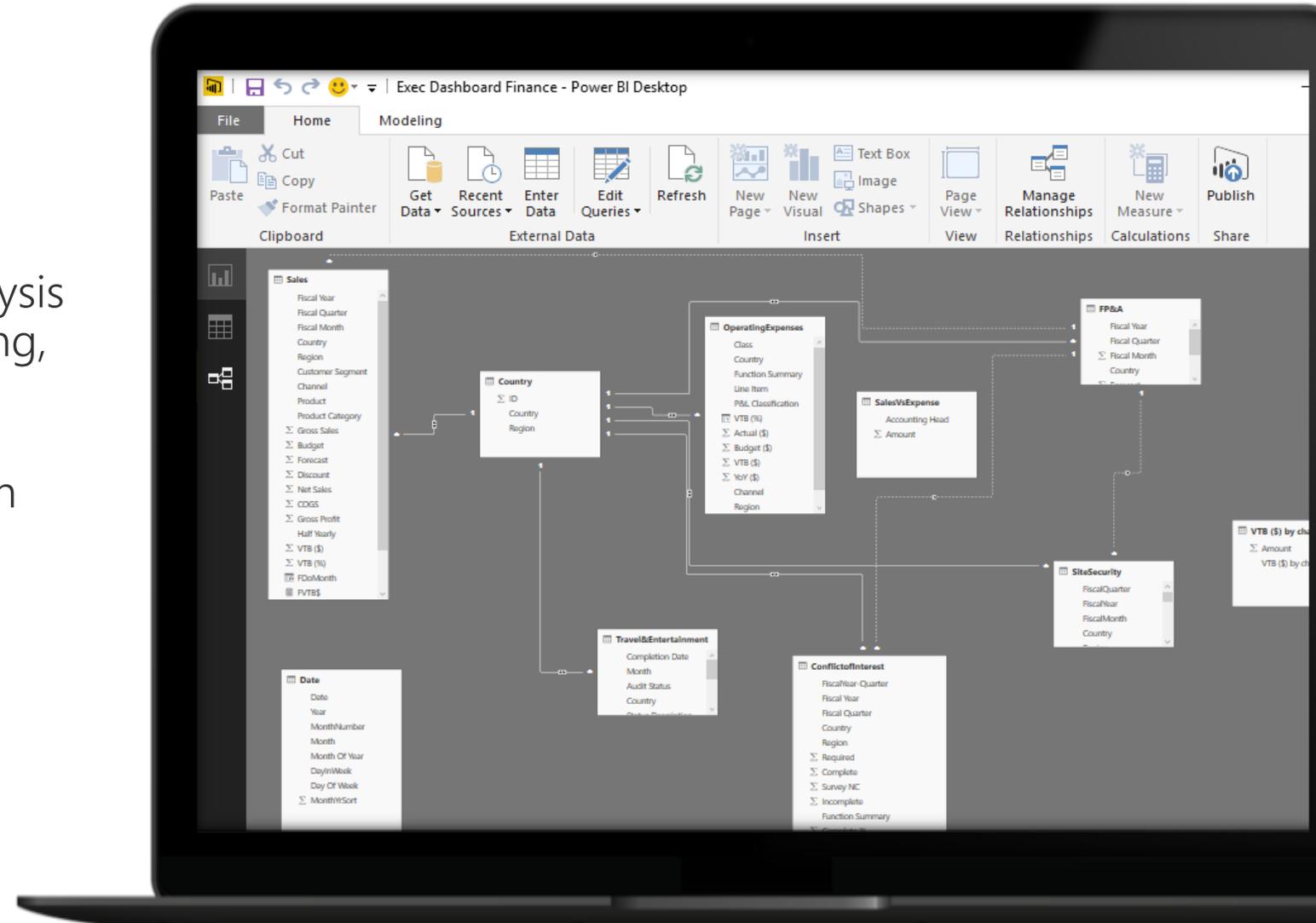
Create model automatically



Simplified point and click analysis with Quick Measures, Clustering, and Binning



Create powerful measures with familiar DAX formulas



Create stunning interactive reports



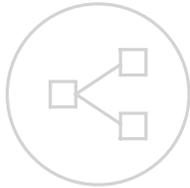
Visualize



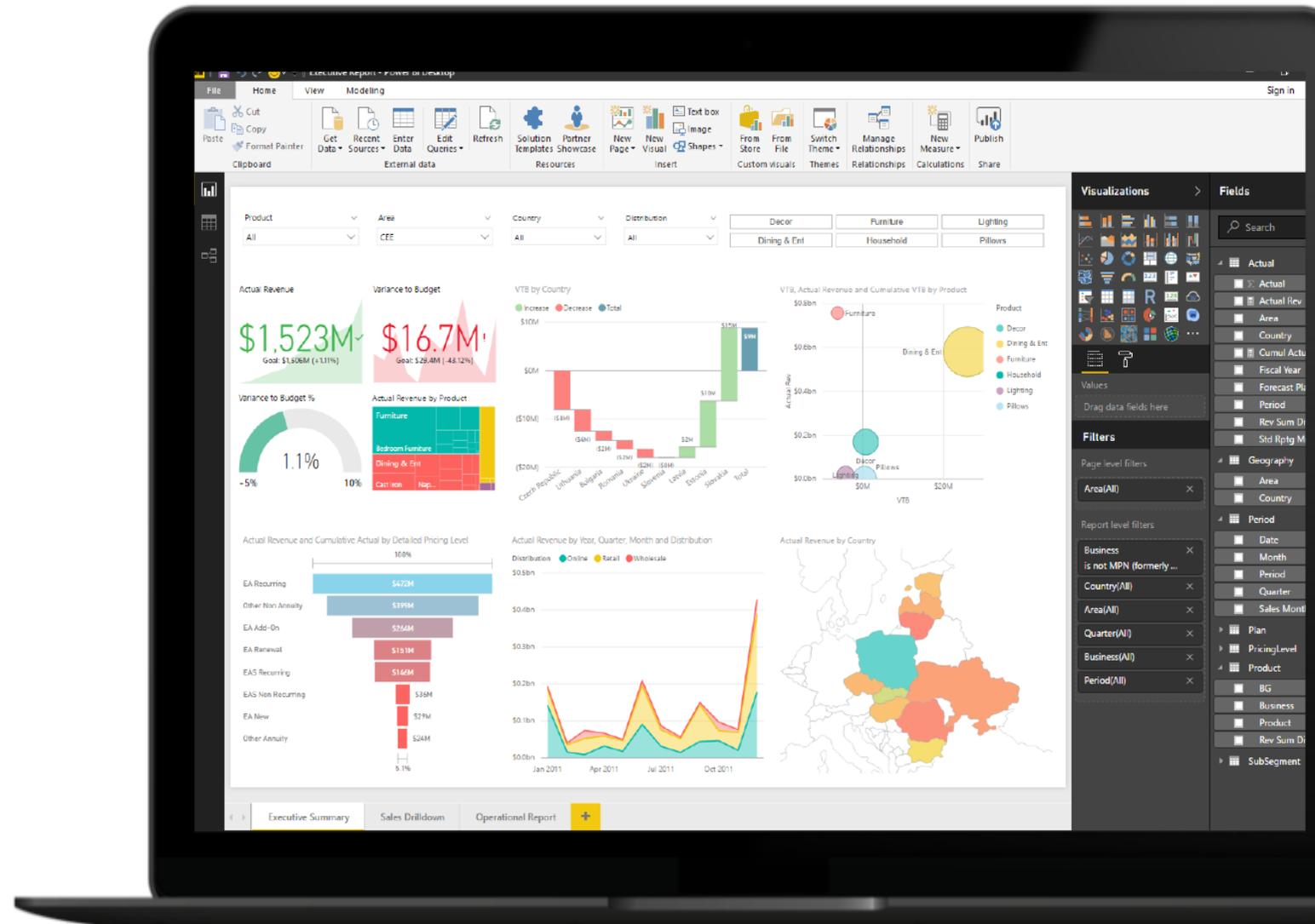
Choose from limitless visualization options



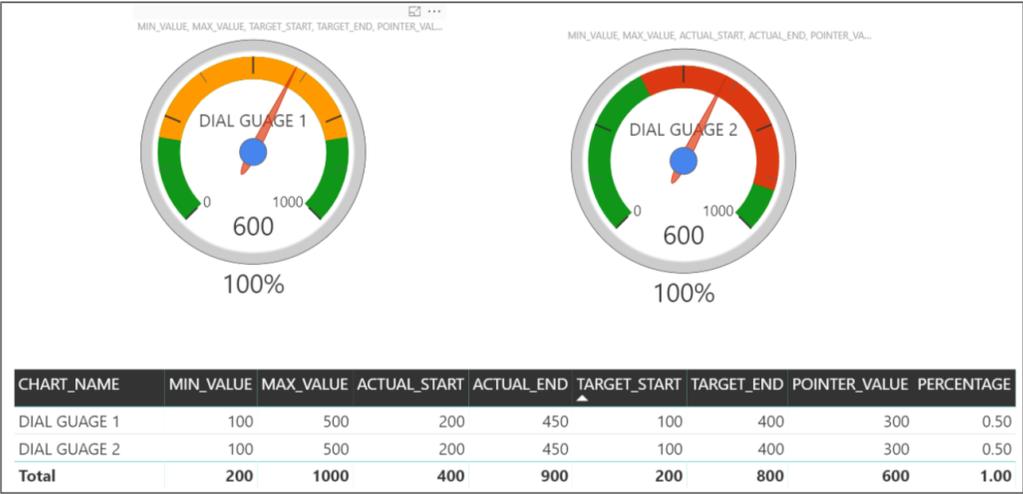
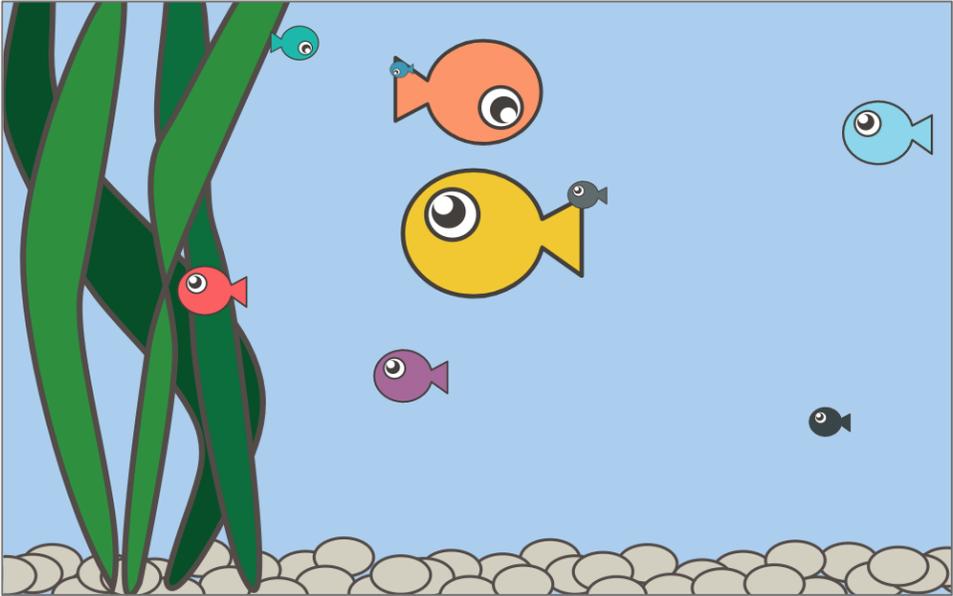
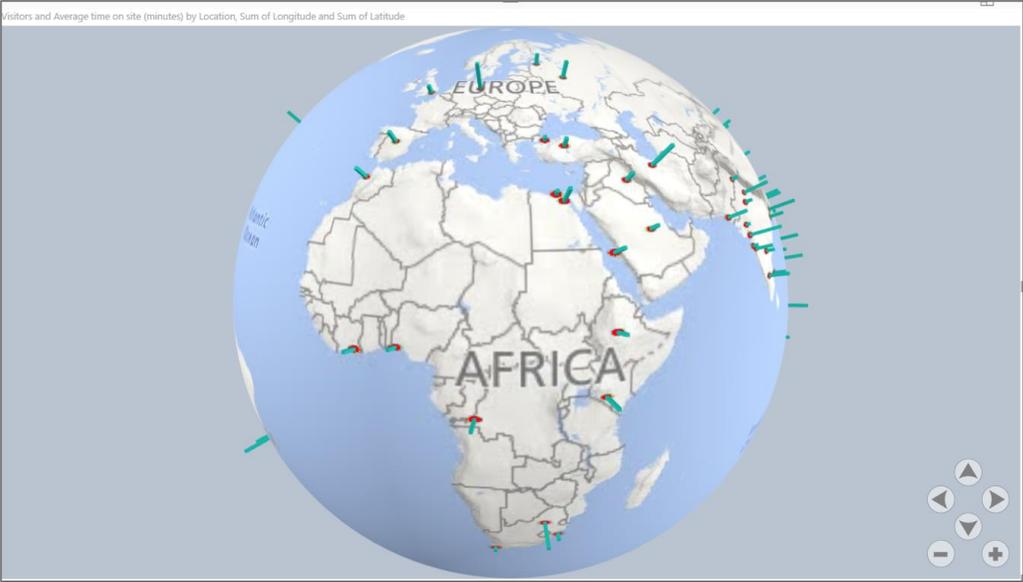
Visualizations are interactive and link together



Use bookmarks and custom navigation to bring your data story to life



Visualize in the context of your business



Share insights with others



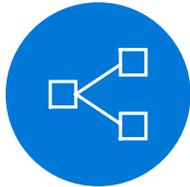
Publish



Publish interactive or paginated reports to the cloud or on-premises



Automatic data refresh, so your reports are always up to date



Package your reports in apps for easy consumption and control



Manage your analytics content with admin and governance tools



Pixel perfect
paginated reports

Power BI RS_WS > adventureworks

Export 1 of ? Parameters

Home (Preview) Favorites Recent Apps Shared with me Workspaces RS_WS

Sales Order 4739 Last day of Sales 6/13/2018 11:03:49 PM View Report

Sales Order SO47398

	PRODUCT	QTY	EXTENDED	DISC	SALES	TAX	FREIGHT
36	Half-Finger Gloves, M	6	84.77	0.00	84.77	6.78	2.12
37	LL Road Frame - Red, 60	5	1,011.66	0.00	1,011.66	80.93	25.29
38	HL Road Rear Wheel	1	214.24	0.00	214.24	17.14	5.36
39	Women's Tights, S	1	44.99	0.00	44.99	3.60	1.12
40	ML Road Front Wheel	2	298.06	0.00	298.06	23.85	7.45
41	AWC Logo Cap	6	31.12	0.00	31.12	2.49	0.78
42	ML Road Frame-W - Yellow, 38	1	324.45	0.00	324.45	25.96	8.11
43	Road-250 Black, 52	3	3,926.81	0.00	3,926.81	314.15	98.17
44	Road-250 Red, 44	6	8,796.06	0.00	8,796.06	703.68	219.90
45	Road-250 Black, 44	4	5,235.75	0.00	5,235.75	418.86	130.89
46	Road-250 Red, 52	1	1,466.01	0.00	1,466.01	117.28	36.65
47	Road-650 Black, 58	1	469.79	0.00	469.79	37.58	11.74
48	Road-550-W Yellow, 48	5	3,001.31	0.00	3,001.31	240.11	75.03
49	Road-250 Red, 58	2	2,617.88	0.00	2,617.88	209.43	65.45
50	LL Road Handlebars	1	24.29	0.00	24.29	1.94	0.61
51	Road-550-W Yellow, 42	2	1,200.53	0.00	1,200.53	96.04	30.01
52	Sport-100 Helmet, Black	3	60.56	0.00	60.56	4.84	1.51
53	Road-650 Black, 62	3	1,409.38	0.00	1,409.38	112.75	35.23
	TOTAL	152	60,281.31	0.00	60,281.31	4,822.50	1,507.03

Get Data Sales Order SO47398 Page 2 of 2

Empower your organization



Collaborate



Provide insights on any device



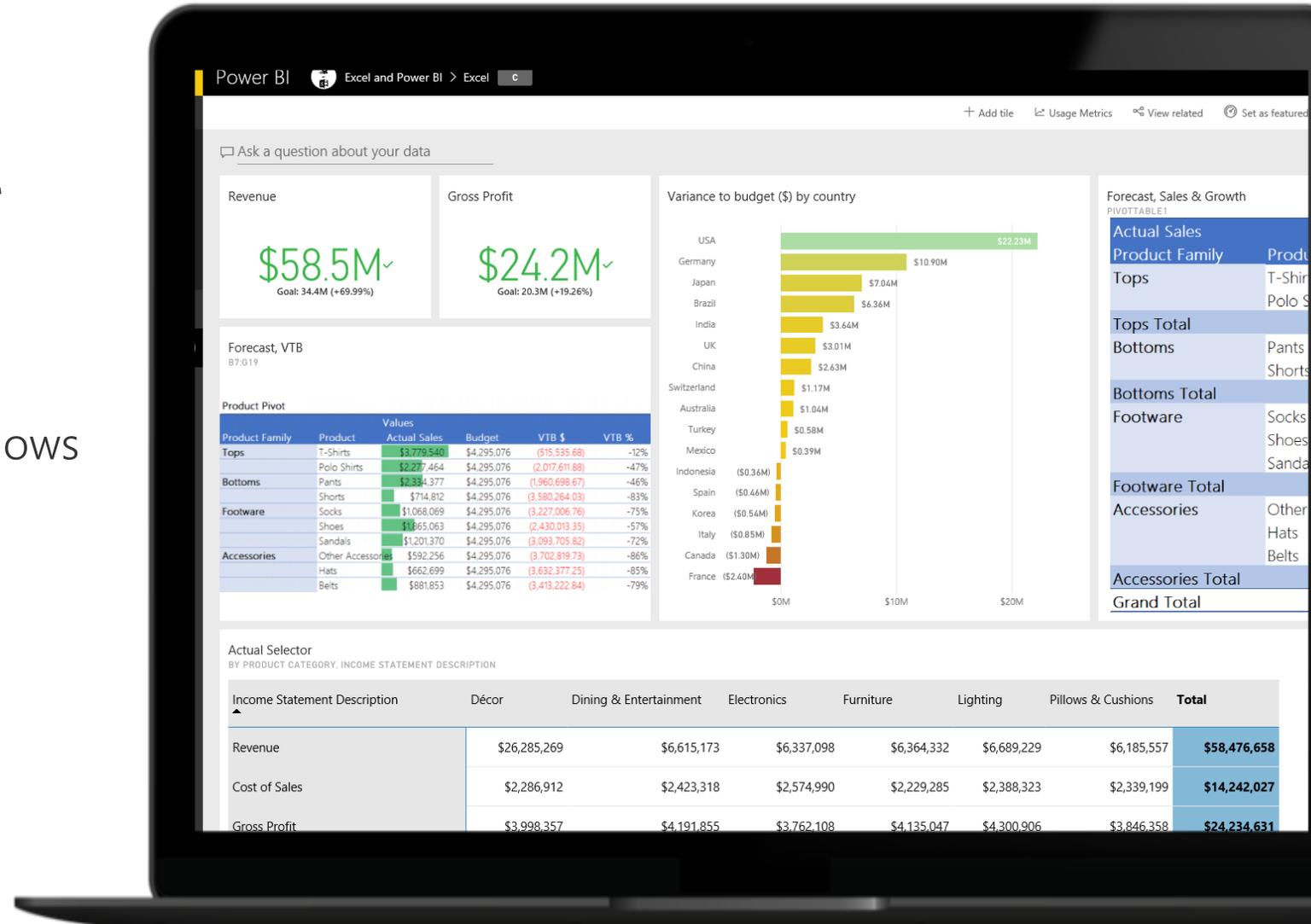
Use Q&A to automatically discover insights



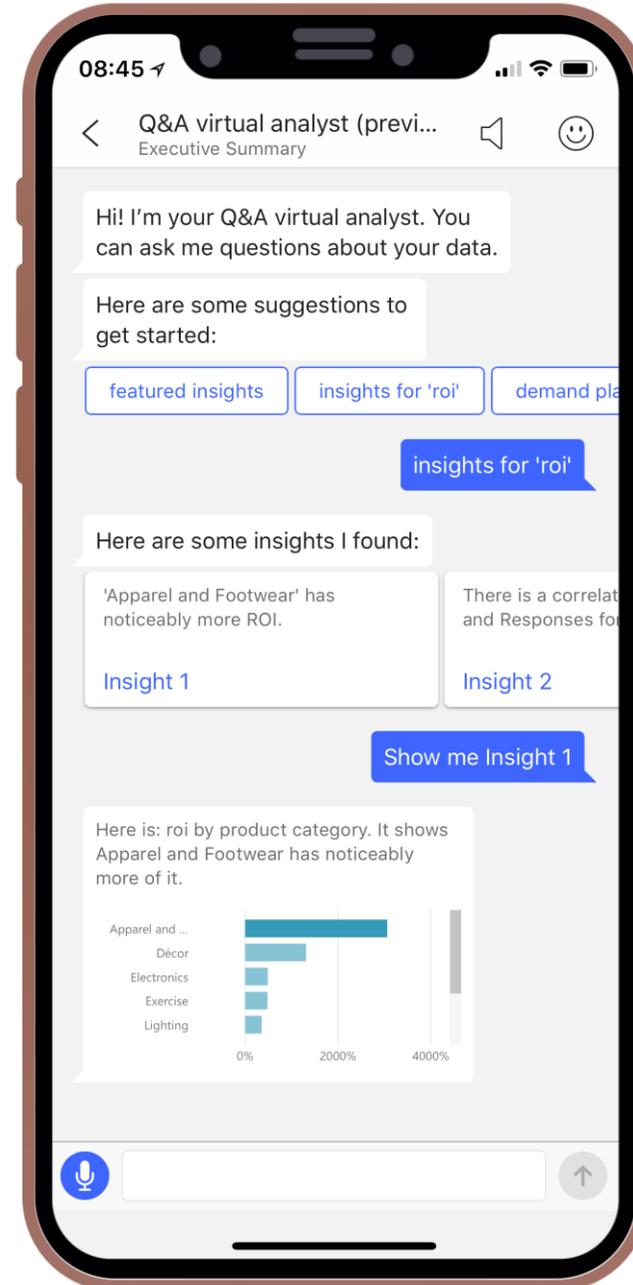
Deliver insights in other user flows like Teams and SharePoint



Connect live to your models in Excel and Power BI Desktop

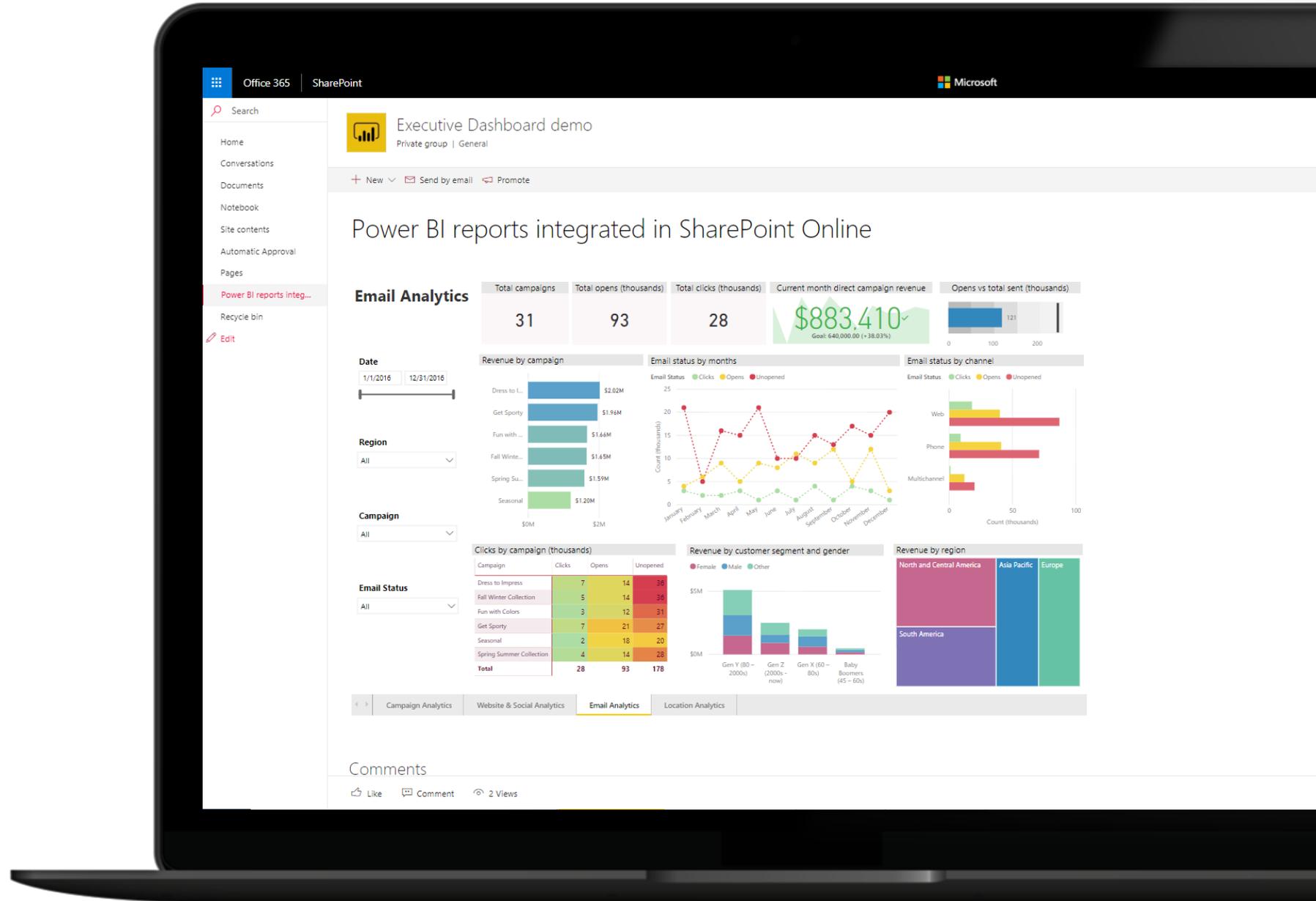


Stay connected to
your data on the go



Deliver insights through

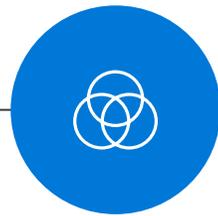
- Excel
- Visio
- SharePoint
- Teams
- PowerApps
- Dynamics 365
- SaaS apps



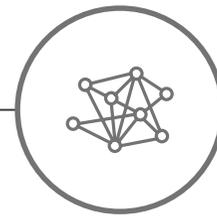
Power BI innovation areas



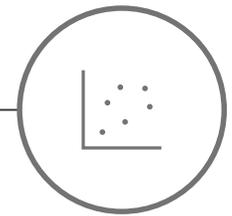
Self-service
BI/collaboration



Unified self-service
and enterprise BI



Pervasive AI
for BI



Big data analytics
with Azure Data
Services

Unify self-service and enterprise BI



Enterprise BI tools
inside of Power BI



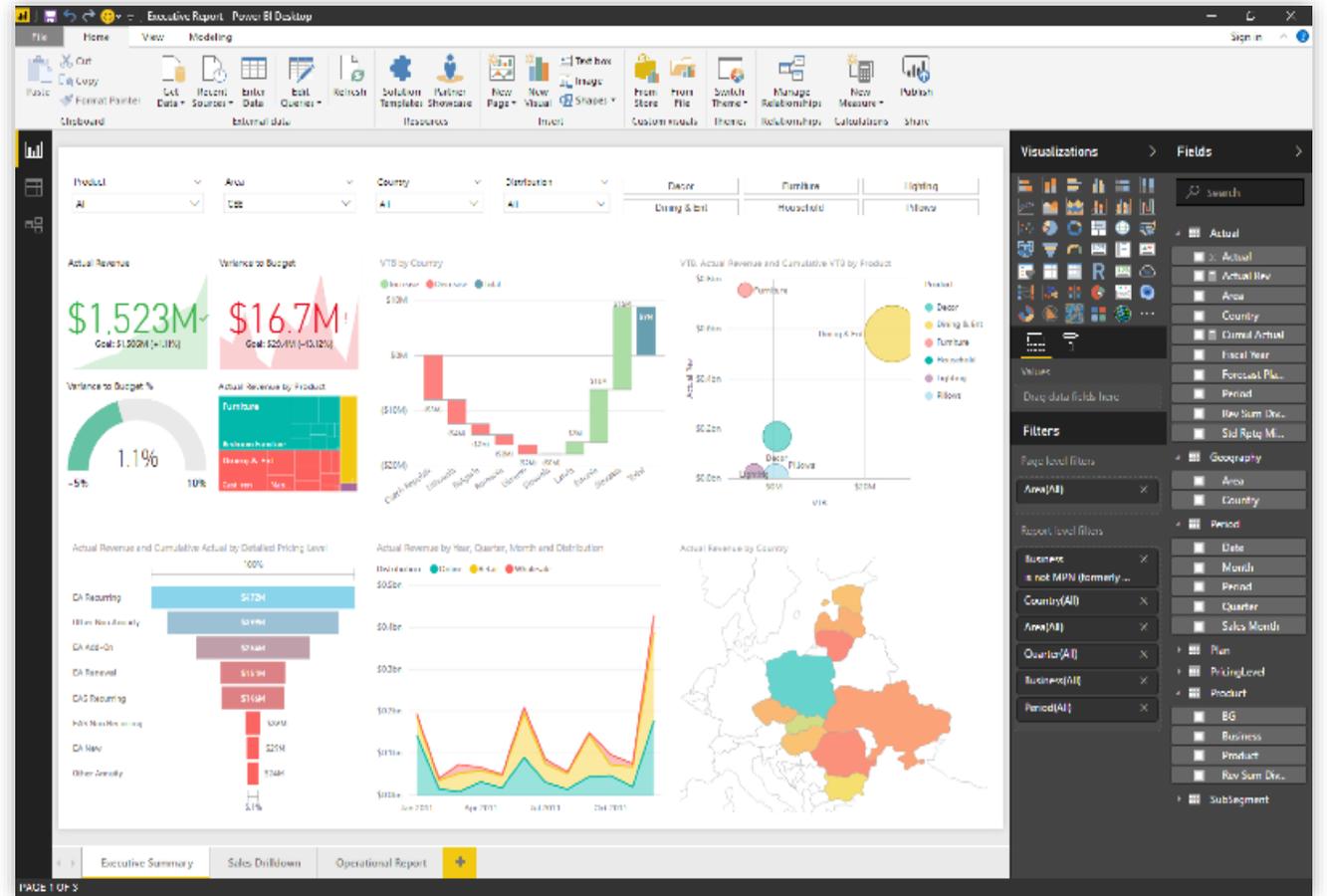
Security



Compliance



Privacy



Enterprise BI tools inside of Power BI



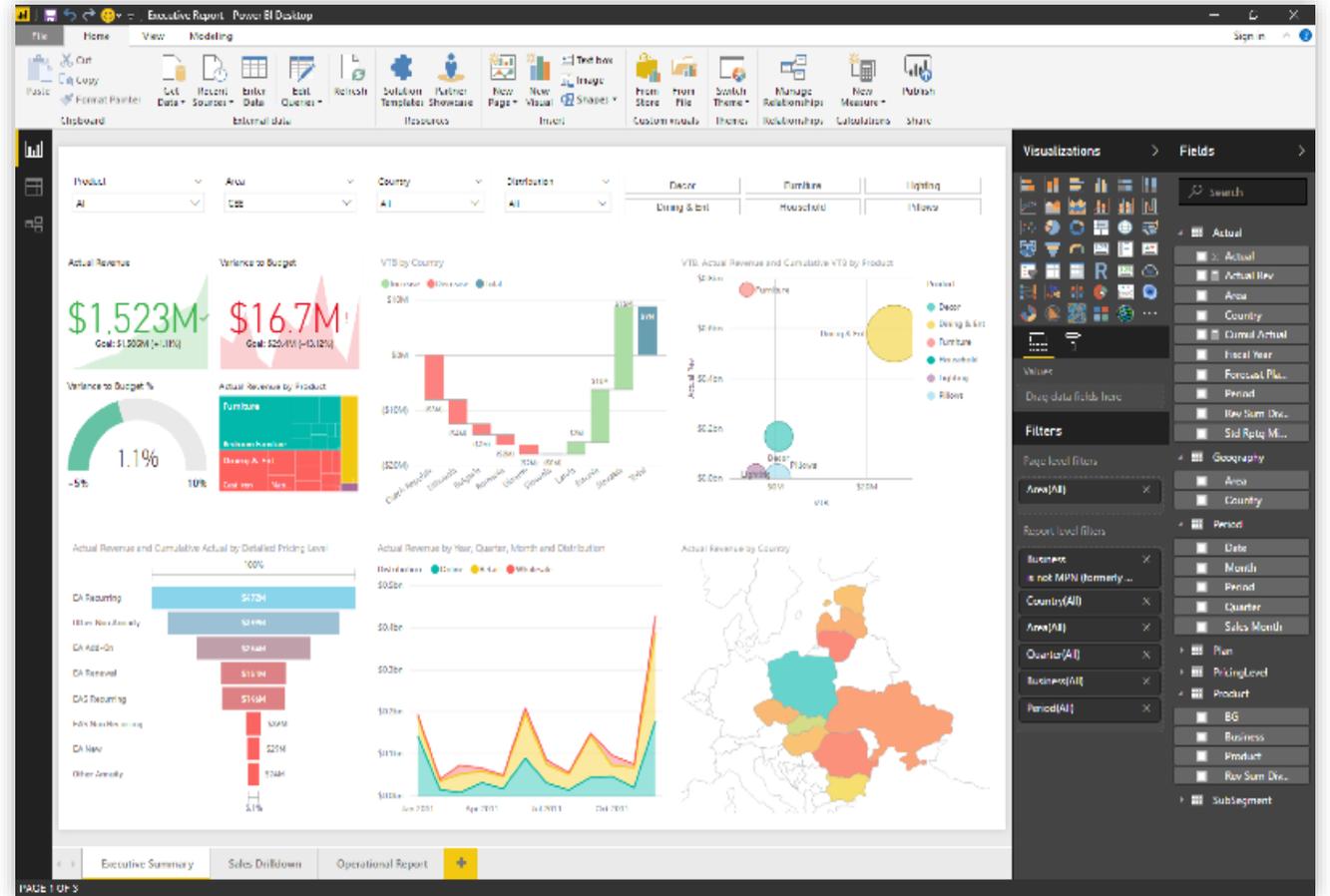
Enterprise BI tools inside of Power BI



SQL Server Analysis Services integrated into Power BI



SQL Server Reporting Services technology now part of Power BI



Securely protect your data



Security



Protect data with Microsoft information protection classifications both inside and outside of Power BI



Keep data secure with identity and access management using Azure Active Directory



Encrypt to safeguard data, both at rest and in transit

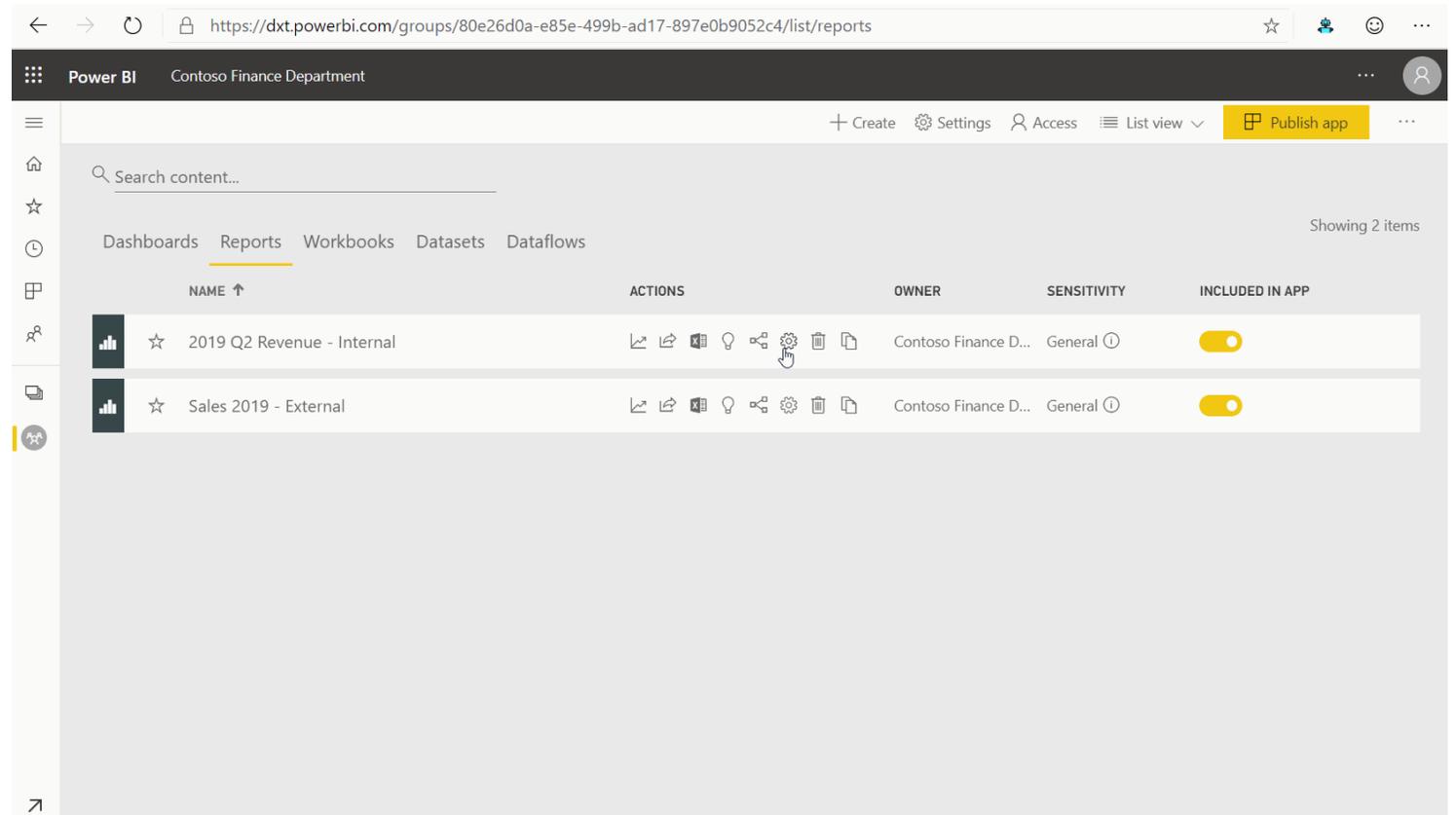
Secure access for Power BI data, based on user's identity

BYOK

Find out more about [Security](#) in the Microsoft Trust Center

Classify and label Power BI artifacts

- Data owners set **Microsoft information protection (MIP)** sensitivity labels for datasets, reports, dashboards and dataflows.
- Same labels used to classify Office 365 files.

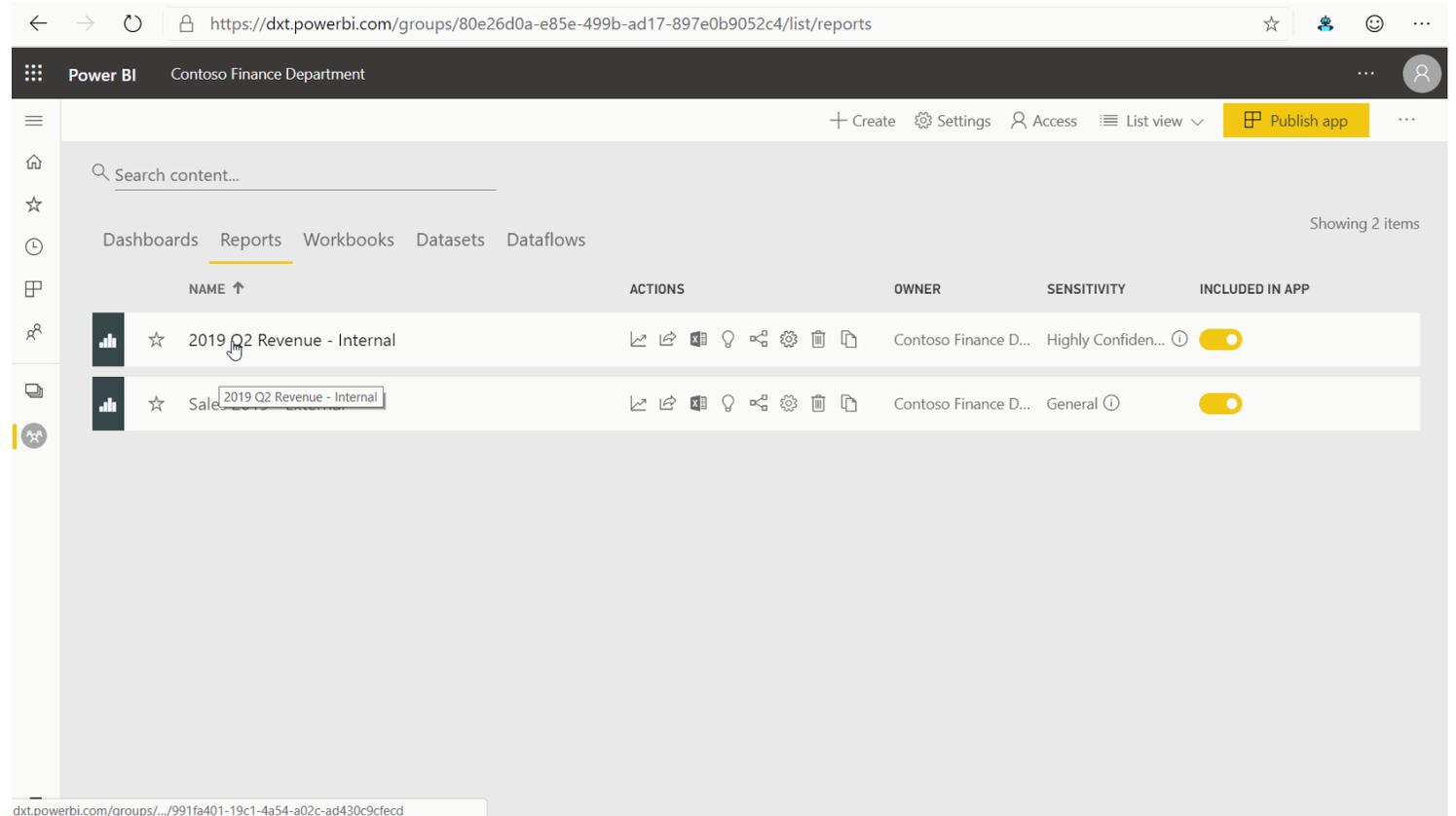


The screenshot shows the Power BI web interface for a group named 'Contoso Finance Department'. The 'Reports' tab is selected, displaying a list of two reports. The interface includes a search bar, navigation tabs for Dashboards, Reports, Workbooks, Datasets, and Dataflows, and a 'Publish app' button. The reports list has columns for Name, Actions, Owner, Sensitivity, and Included in App.

NAME ↑	ACTIONS	OWNER	SENSITIVITY	INCLUDED IN APP
☆ 2019 Q2 Revenue - Internal	       	Contoso Finance D...	General ⓘ	<input checked="" type="checkbox"/>
☆ Sales 2019 - External	       	Contoso Finance D...	General ⓘ	<input checked="" type="checkbox"/>

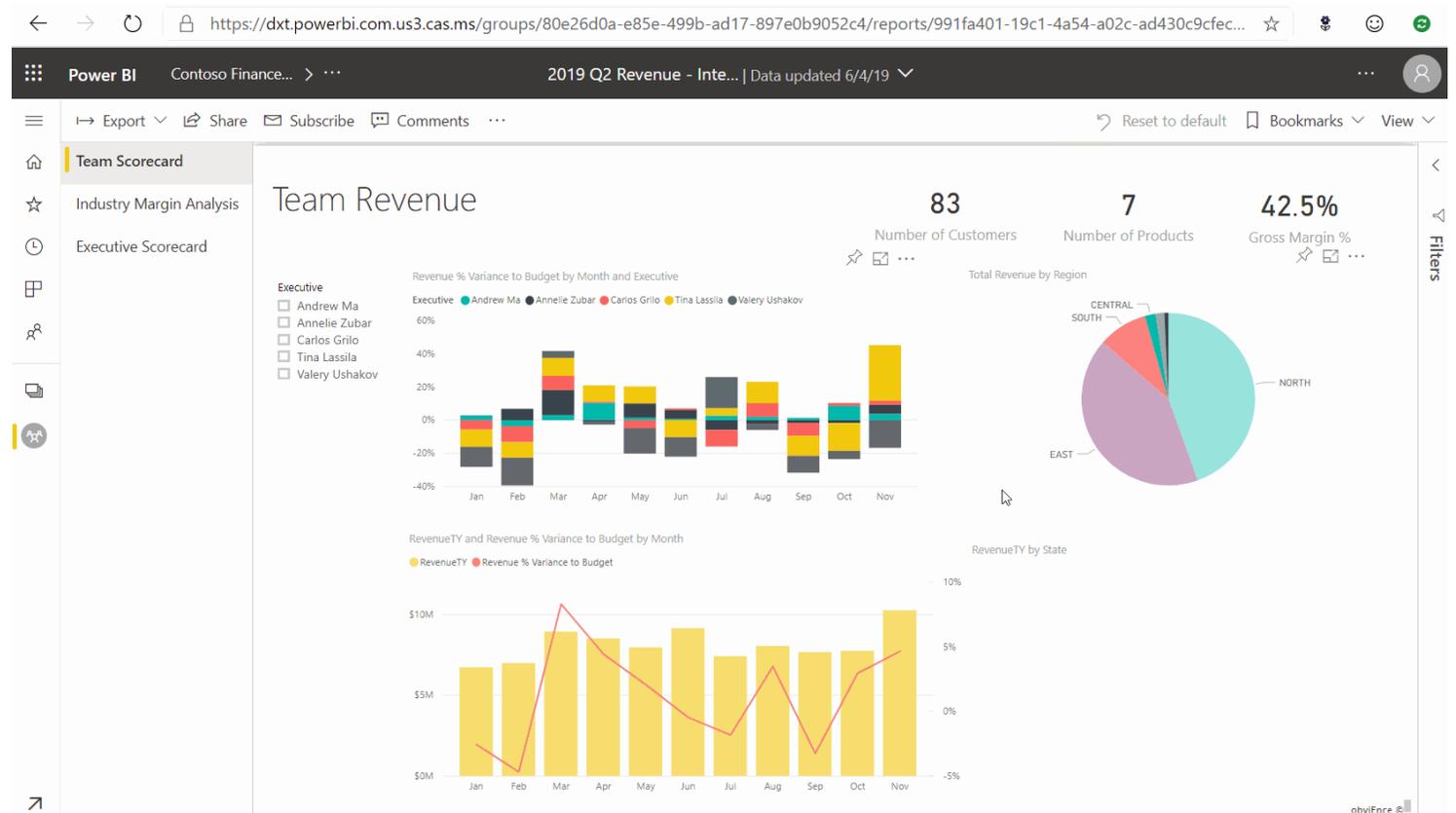
Protect data exported from Power BI

- Sensitivity labels of Power BI artifacts persist in files exported from Power BI to Excel, PowerPoint, PDF.
- Data protection policies defined by Security and Governance admins in Microsoft 365 portal are inherited when data is exported from Power BI service
- Prevent unauthorized access to sensitive data.



Protect data export with real-time risk analysis

- Admins can use **Microsoft Cloud App Security (MCAS)** to closely monitor risky sessions connecting to Power BI service.
- Security admins can define real time remediation of risky activities using MCAS real time controls.



Admin oversight of sensitive data

- Power BI admins have full visibility to sensitive data in their Power BI tenant and who consumes it
- Security admins can use MCAS to gain better visibility for sensitive data usage in Power BI and investigate potential security risks

https://dxt.powerbi.com/admin-portal/dataProtection

Power BI Admin portal

Admin portal

- Usage metrics
- Users
- Audit logs
- Tenant settings
- Capacity settings
- Embed Codes
- Organization visuals
- Dataflow settings
- Workspaces
- Custom branding
- Data Protection**

Your tenant is secured by Microsoft Cloud App Security
Investigate risky usage of Power BI data in the Cloud App Security portal

[Go to Cloud App Security portal](#)

MCAS alerts last 7 days

Severity	User name	Alert	When
High	Adele Lewis	Download of Highly Confidential file to an unmanaged device	Less than 1 hours ago
Low	Able Neuman	Login from risky IP	7 hours ago
Medium	Tom Lauri	Unusual access to Confidential reports	2 days ago

File download monitored by MCAS last 30 days

Legend: General (Yellow), Confidential (Red), Highly Confidential (Pink)

Allow: 4.3K (General), 1.3K (Confidential), 0.2K (Highly Confidential)
Block: 0.8K (General), 0.5K (Confidential), 0.1K (Highly Confidential)

Reports by sensitivity label

Sensitivity L.	Count
General	4000
Confidential	45
Public	40

Dashboards by sensitivity label

Sensitivity L.	Count
General	300
Confidential	15
Non-Business	5

Datasets by sensitivity label

Sensitivity L.	Count
General	200
Confidential	28
Public	7

Dataflows by sensitivity label

Sensitivity L.	Count
General	12
Confidential	7
Highly Confidential	3

Artifacts by Sensitivity label last 6 months

Month	General	Confidential	Highly Confidential
Dec 2018	5.0K	0.9K	0.1K
Jan 2019	5.1K	0.9K	0.1K
Feb 2019	5.2K	0.9K	0.1K
Mar 2019	5.3K	1.0K	0.1K
Apr 2019	5.4K	1.0K	0.1K
May 2019	5.4K	1.1K	0.1K

Compliant solution



Compliance

Flexibility to deploy Power BI in specific global regions with multi-geo compliance



Find out more about [Compliance](#) in the Microsoft Trust Center

Global	Government	Industry	Regional
CIS Benchmark	CJIS	23 NYCRR Part 500	CCSL/IRAP (Australia)
CSA-STAR-Attestation	DoD DISA L2, L4, L5	FERPA	EU-Model-Clauses
CSA-Star-Certification	FedRAMP	FFIEC (US)	EU-U.S. Privacy Shield
ISO 27001	FIPS 140-2	FISC (Japan)	GB 18030 (China)
ISO 27018	UK G-Cloud	GLBA	GDPR (EU)
		HDS (France)	MeitY (India)
		HIPAA/HITECH	NZ CC Framework (New Zealand)
		HITRUST	
		PCI DSS	
		SOX	
		TISAX (Germany)	

As of May 2019

Protect your data privacy



Privacy

Protect your data from unauthorized persons or inappropriate access



Prohibit your data from being mined for marketing and advertising



Restrict access by personnel and subcontractors



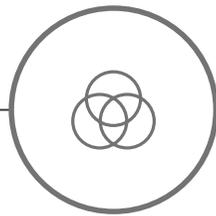
Carefully defined requirements for responding to government requests for customer data

Find out more about [Privacy](#) in the Microsoft Trust Center

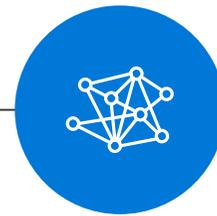
Power BI innovation areas



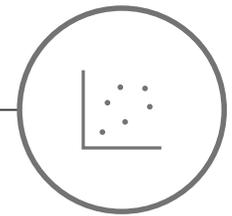
Self-service
BI/collaboration



Unified self-service
and enterprise BI



Pervasive AI
for BI

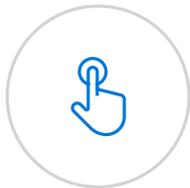


Big data analytics
with Azure Data
Services

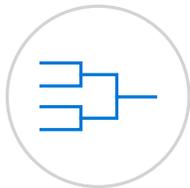
Pervasive AI in BI



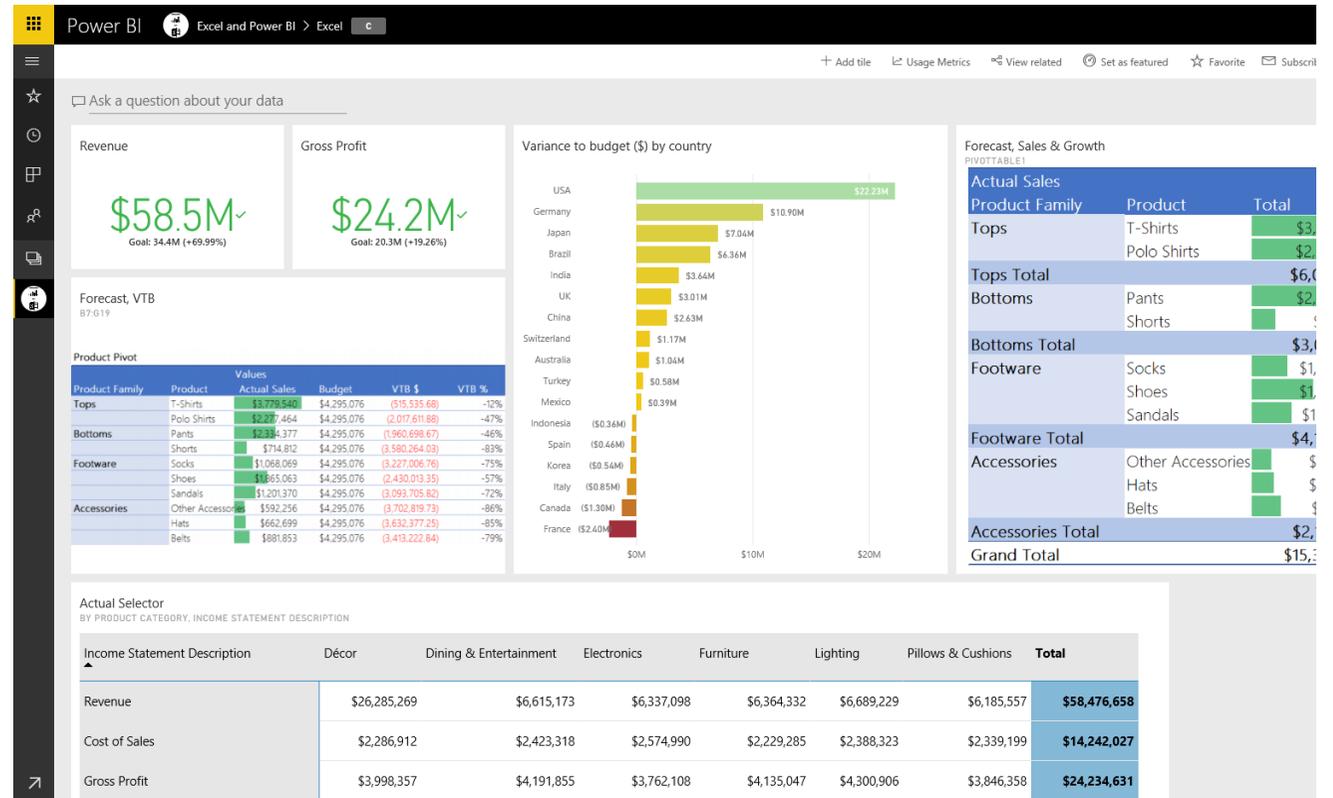
Help business users understand data



Help business analysts prepare data



Simplify collaboration for data scientists and business analysts





Help business users understand data

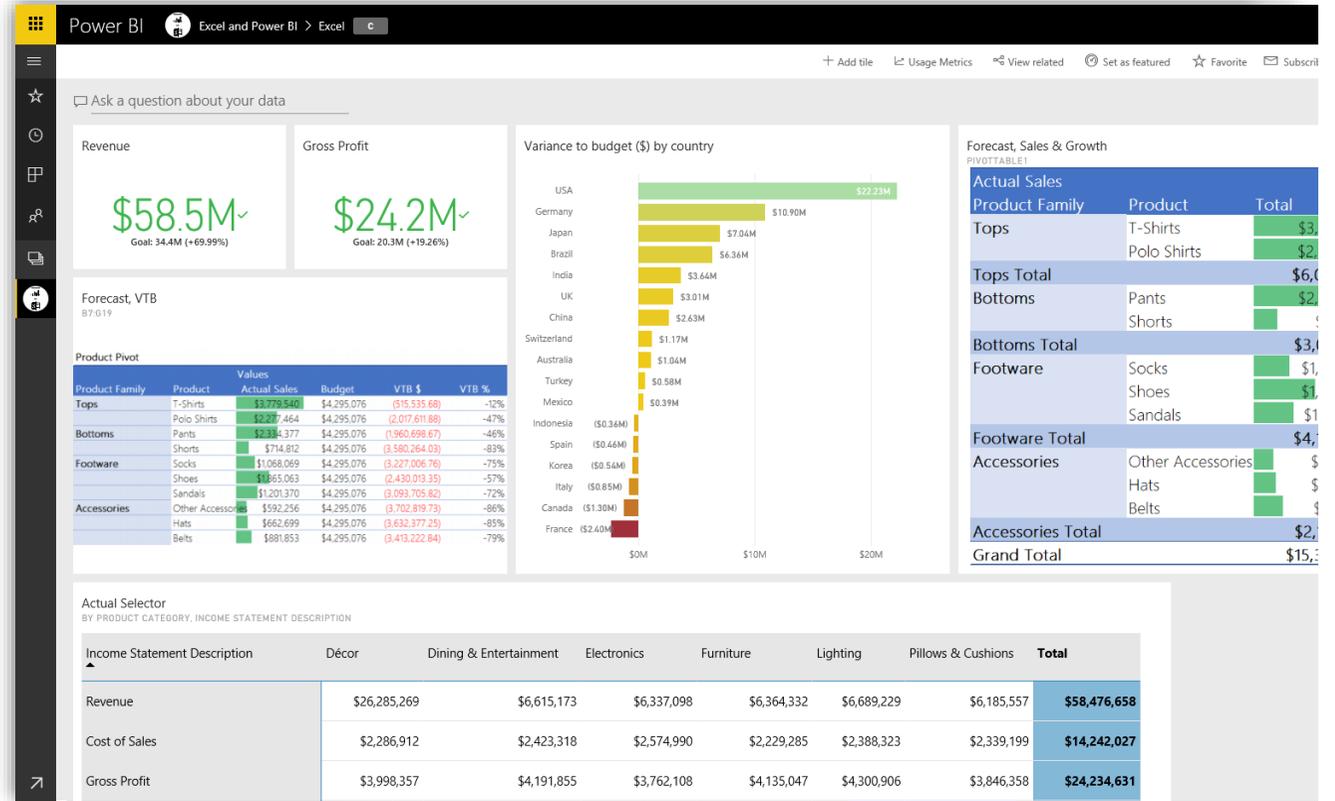


Q&A

Quick insights



Key drivers

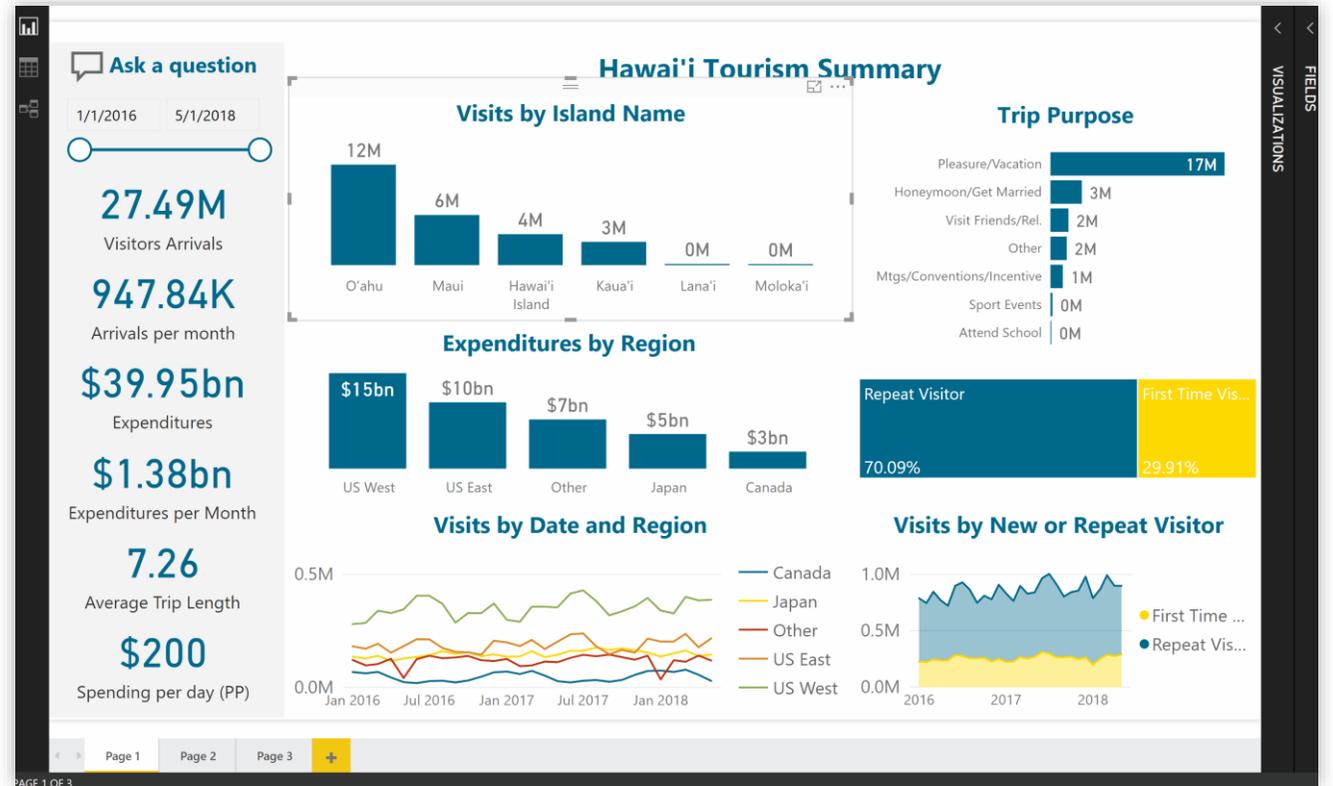


Help business users understand data



Q&A

Get answers by simply asking



Help business users understand data

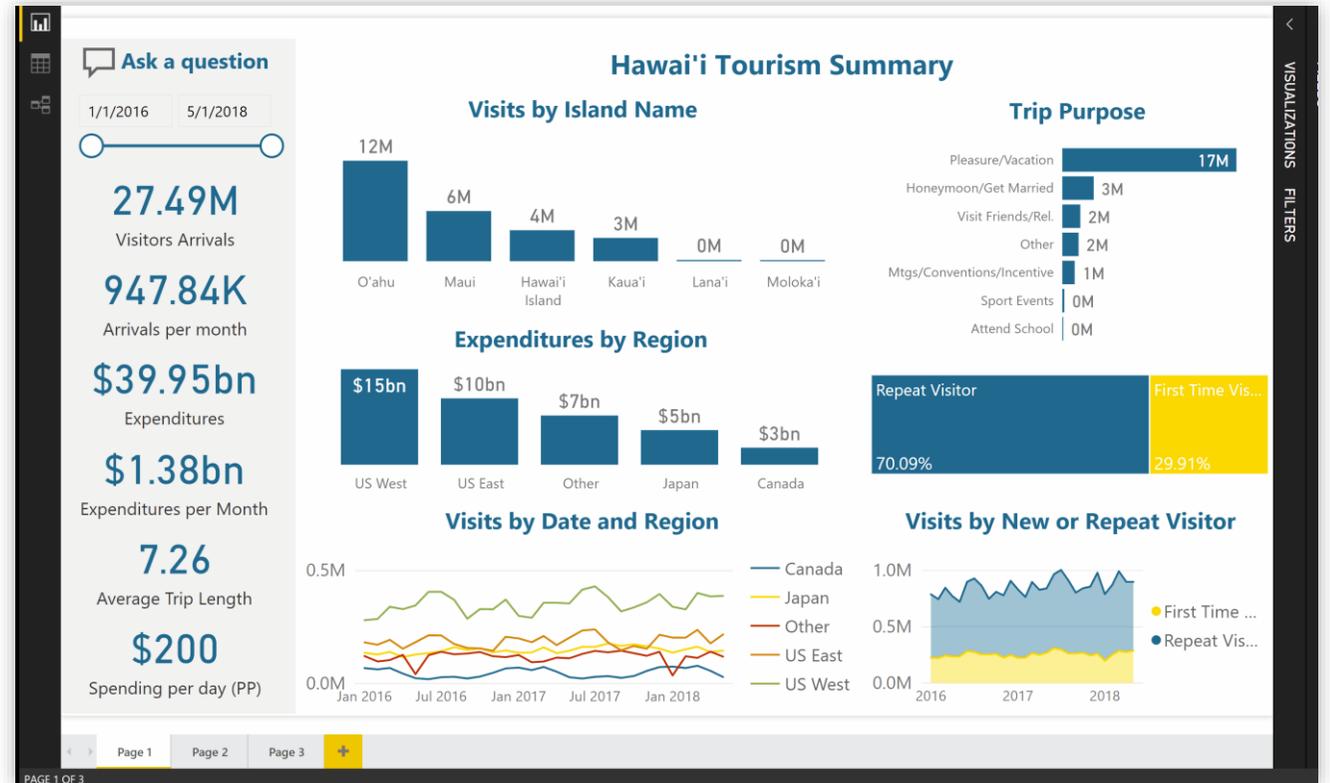


Quick insights

Find where the distribution is different



In this example, first time visitors visits to islands is different than those who visit several times

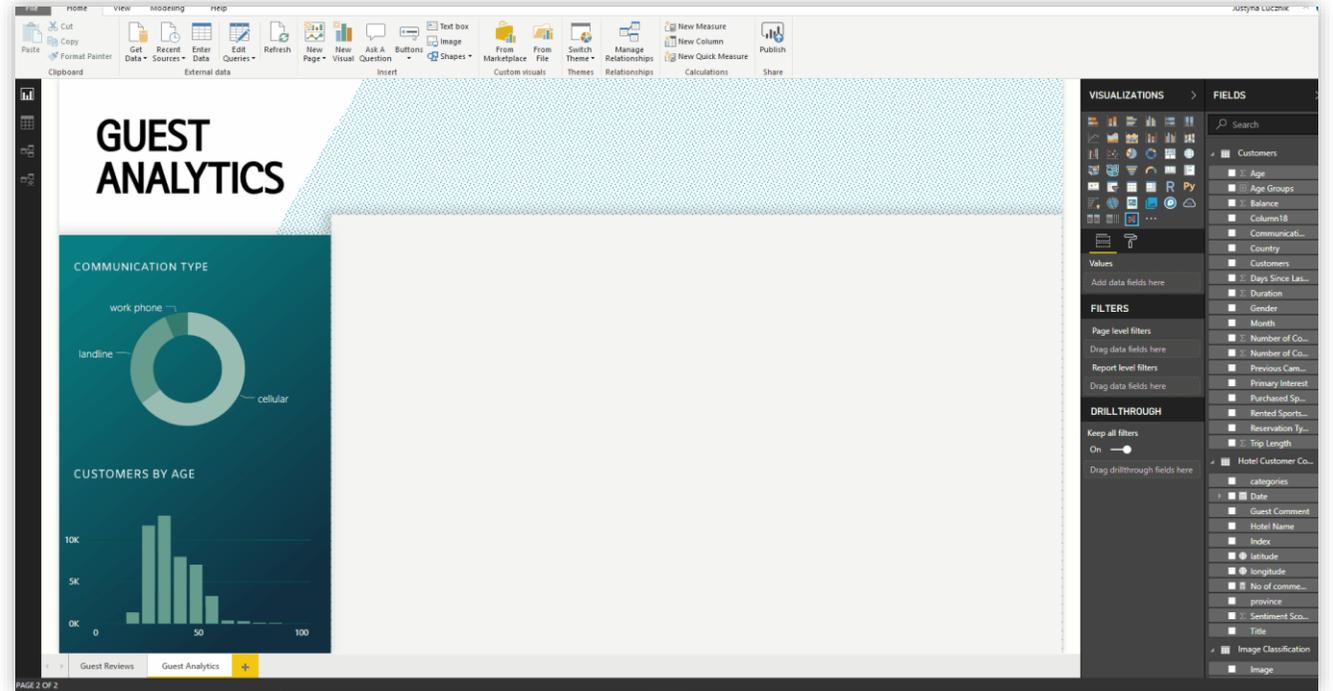


Help business users understand data



Key influencers

Find out what drives your KPIs—key influencers uncovers what matters





Help analysts prepare data



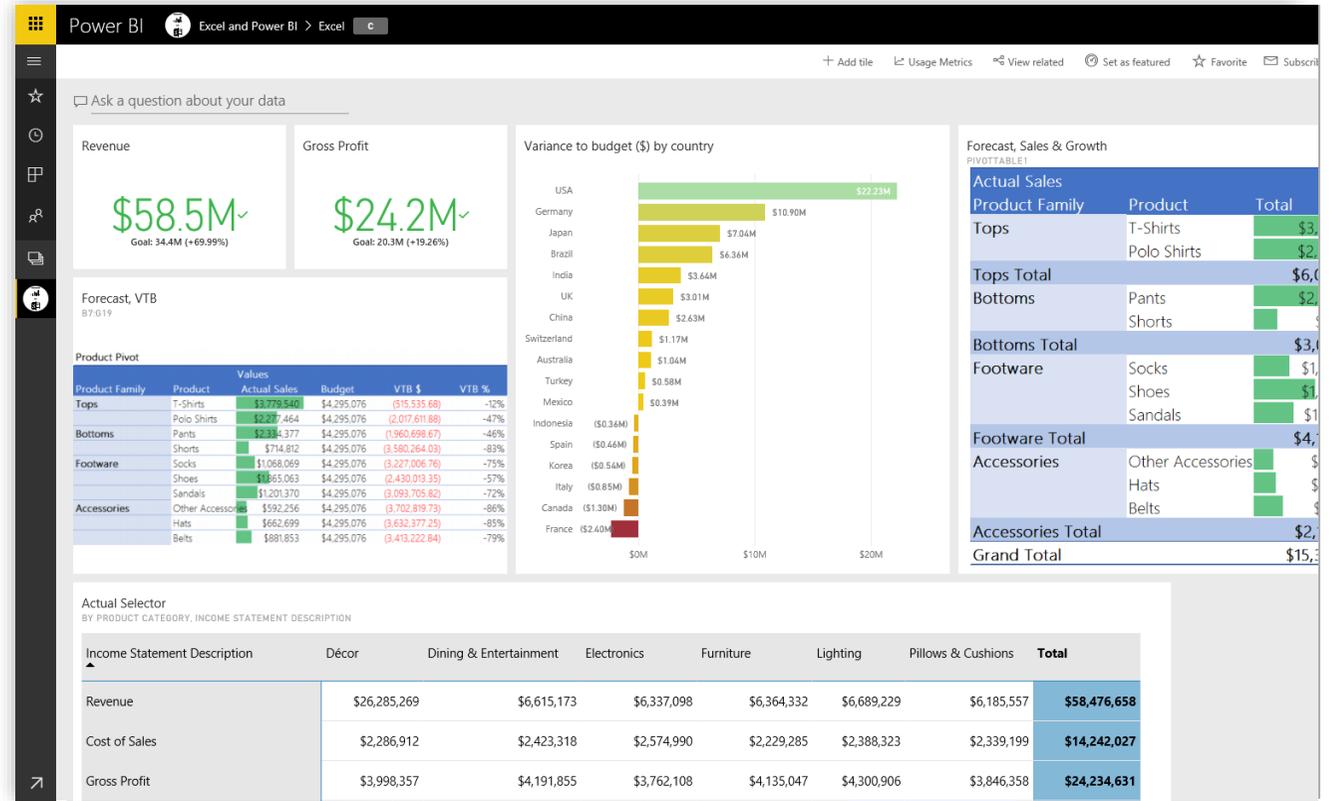
Clustering

Forecasting



Cognitive services

Automated ML

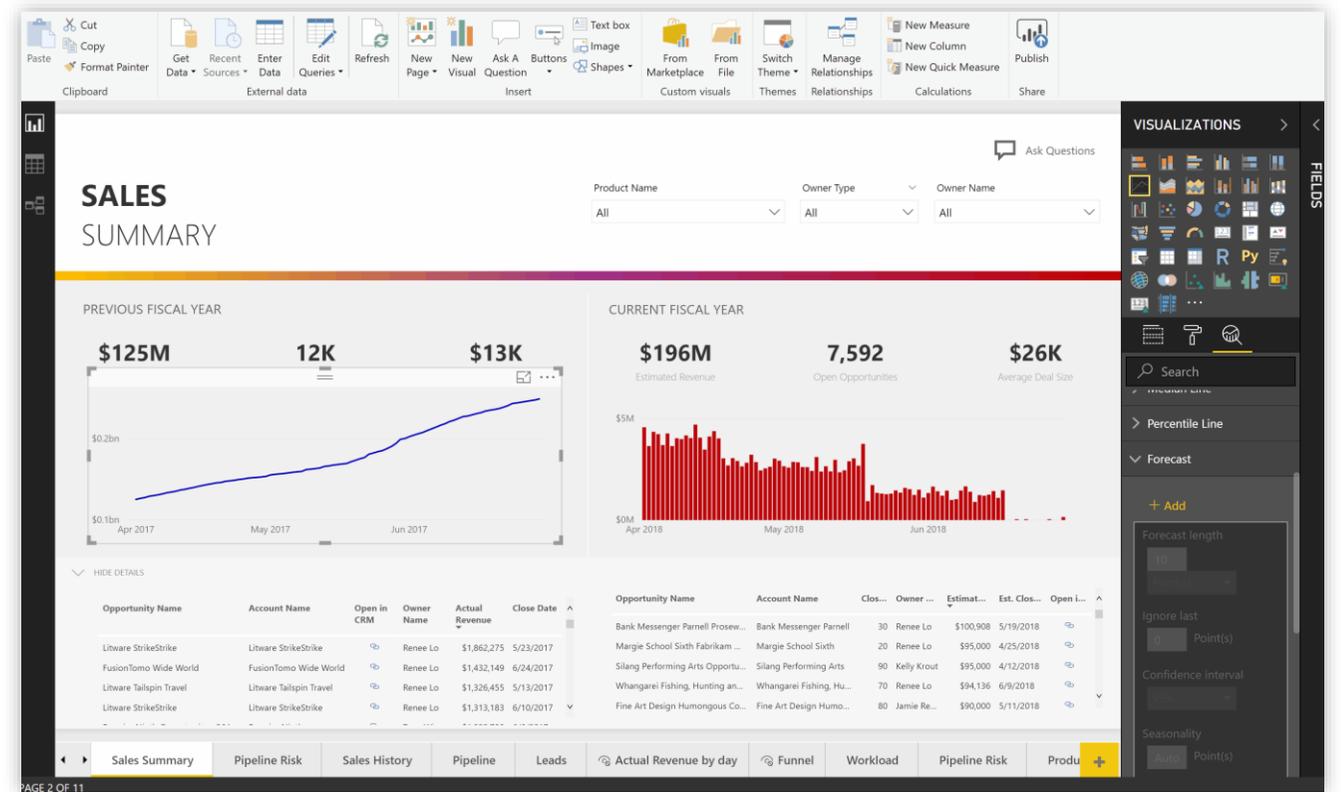


Help analysts prepare their data



Forecast

Add a forecast line and see future max and min values

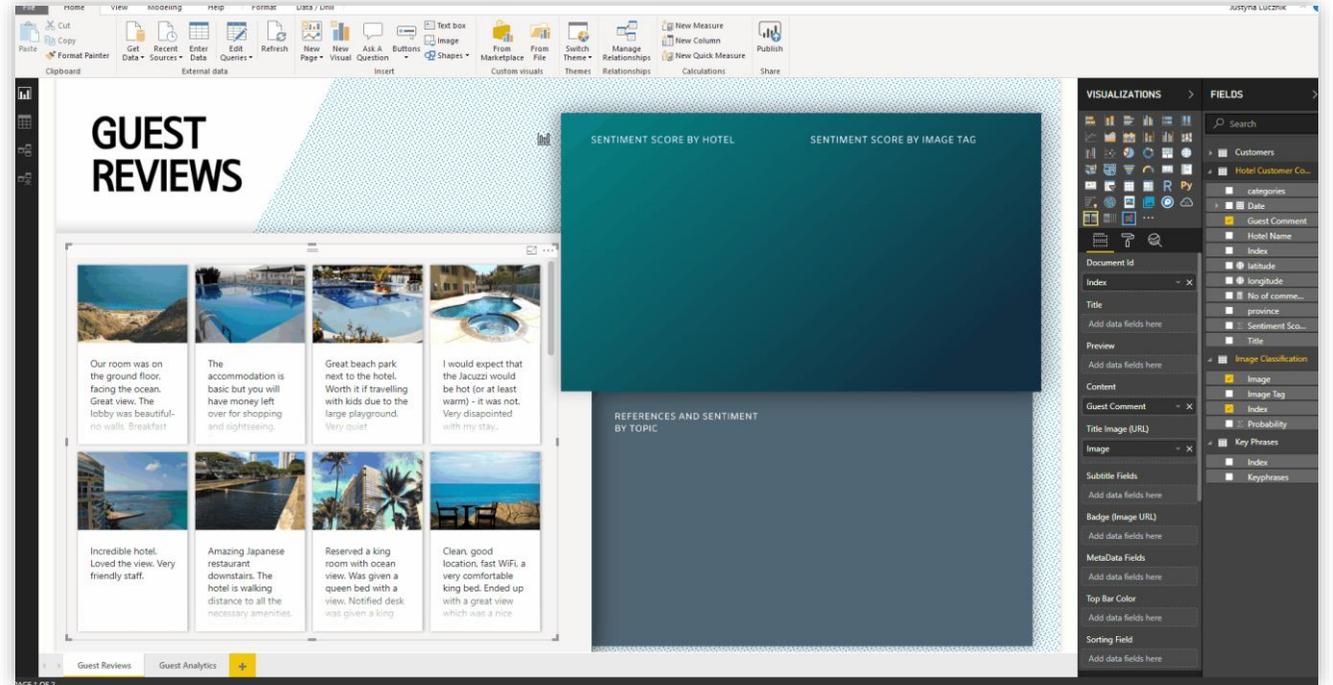


Help analysts prepare their data



Cognitive services

Use the results of sentiment analysis and key phrase extraction on unstructured data to create powerful analytics



Help analysts prepare their data



Automated ML

Author machine learning models with just a few clicks



Power BI AI test > SalesOpportunities

Entities Machine learning models

Edit entities Add entities Save Close

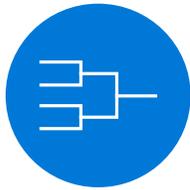
ENTITY NAME	ENTITY TYPE	ACTIONS
Account	Custom	[Icons]
Contact	Custom	[Icons]
Lead	Custom	[Icons]
Opportunity	Custom	[Icons]
OpportunityProduct	Custom	[Icons]
Product	Custom	[Icons]
SystemUser	Custom	[Icons]



Simplify collaboration for data scientists and business analysts



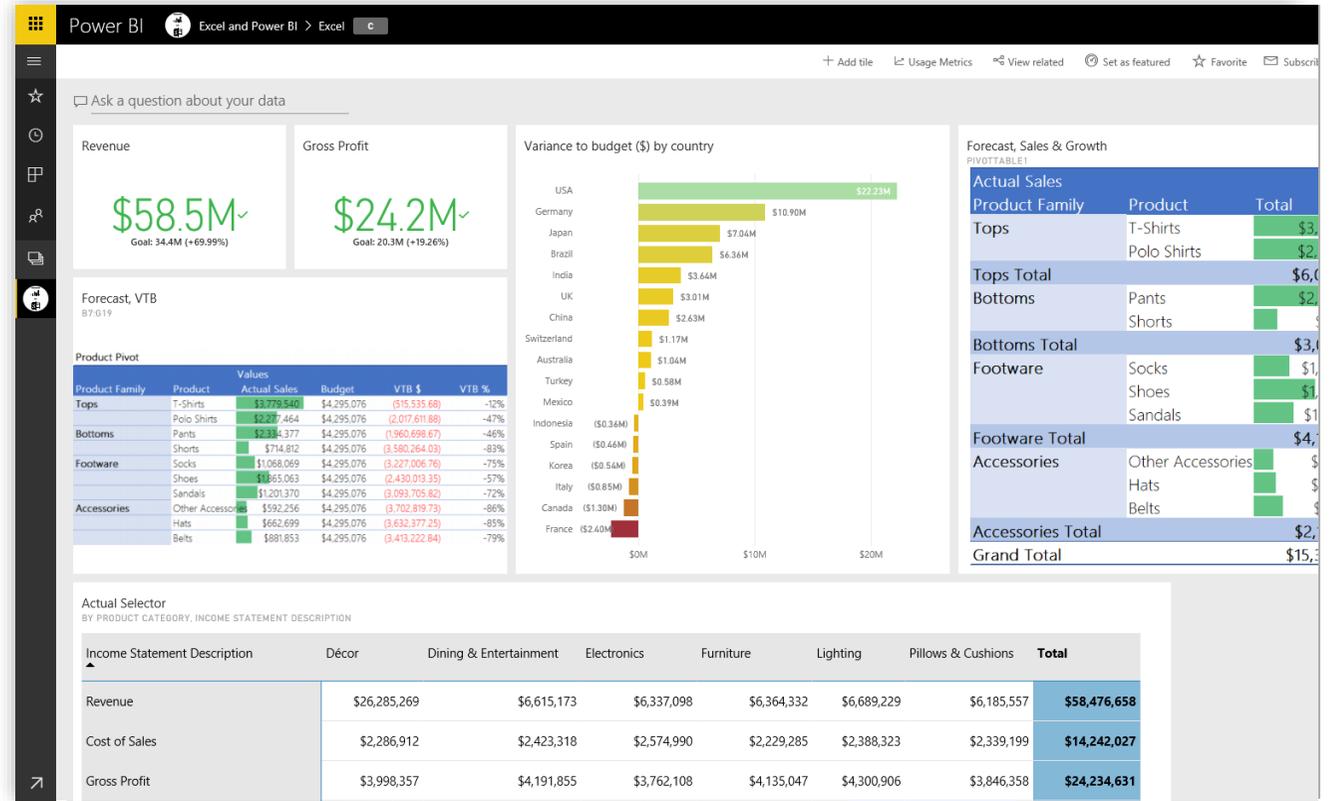
R Integration



Python Integration



Azure ML Integration



Easy for data scientists and analysts to collaborate



Azure ML Integration

Any Azure Machine Learning model is automatically available to Power BI users simply by giving them the permission to use it



id	categories	city	country	1.2 latitude	1.2 longitude	name	province	reviews_date	reviews_dateAdded	reviews_text
1	Hotels	Princeville	US	22.226	-159.481	Hotel 2	HI	5/5/2016, 5:00:00 PM	3/31/2017, 11:32:19 AM	We had A/C issues at 3:30 -
2	Hotels	Princeville	US	22.226	-159.481	Hotel 2	HI	6/1/2016, 5:00:00 PM	3/31/2017, 11:32:19 AM	A/C was broken. Hotel was
3	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	10/7/2015, 5:00:00 PM	2/25/2017, 12:32:57 PM	We had a one night stay at
4	Hotels	Princeville	US	22.226	-159.481	Hotel 2	HI	6/23/2016, 5:00:00 PM	3/31/2017, 11:32:19 AM	Breakfast was broken.
5	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	9/16/2015, 5:00:00 PM	2/25/2017, 12:32:57 PM	Unprepared for the unmerc
6	Hotels	Kaapa	US	22.043	-159.338	Hotel 5	HI	5/31/2016, 5:00:00 PM	3/31/2017, 11:32:19 AM	I expected that the unmerc
7	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	9/26/2015, 5:00:00 PM	2/25/2017, 12:32:57 PM	For the price that I paid fo
8	Hotels	Princeville	US	22.226	-159.481	Hotel 2	HI	6/12/2016, 5:00:00 PM	3/31/2017, 11:32:19 AM	At Night A/C very loud, as
9	Hotels	Princeville	US	22.226	-159.481	Hotel 2	HI	6/13/2016, 5:00:00 PM	3/31/2017, 11:32:19 AM	The A/C in my room broke.
10	Hotels	Princeville	US	22.226	-159.481	Hotel 2	HI	7/29/2016, 5:00:00 PM	3/31/2017, 11:32:19 AM	Great beach park off the la
11	Hotels	Princeville	US	22.226	-159.481	Hotel 2	HI	6/4/2016, 5:00:00 PM	3/31/2017, 11:32:19 AM	Our room was on the bott.
12	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	2/15/2016, 4:00:00 PM	2/25/2017, 12:32:57 PM	We spent 2 weeks in this h.
13	Hotels	Princeville	US	22.226	-159.481	Hotel 2	HI	7/1/2016, 5:00:00 PM	3/31/2017, 11:32:19 AM	Terrible view from my \$300
14	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	9/2/2015, 5:00:00 PM	2/25/2017, 12:32:57 PM	Older property but it is sup
15	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	8/18/2015, 5:00:00 PM	2/25/2017, 12:32:57 PM	We stayed here for over a...
16	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	12/10/2015, 4:00:00 PM	2/25/2017, 12:32:57 PM	When we had booked this
17	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	7/29/2016, 5:00:00 PM	2/25/2017, 12:32:57 PM	Loved the beach and servic
18	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	2/15/2016, 4:00:00 PM	2/25/2017, 12:32:57 PM	I wanted to share negative
19	Hotels	Princeville	US	22.226	-159.481	Hotel 2	HI	7/29/2016, 5:00:00 PM	3/31/2017, 11:32:19 AM	Beautiful renovation. The h.
20	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	3/26/2016, 5:00:00 PM	2/25/2017, 12:32:57 PM	Positive Location! It is on
21	Hotels	Kaapa	US	22.043	-159.338	Hotel 5	HI	7/30/2016, 5:00:00 PM	3/31/2017, 11:32:19 AM	This hotel is on the beach
22	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	10/4/2015, 5:00:00 PM	2/25/2017, 12:32:57 PM	Clean room, old style, 196...
23	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	12/12/2015, 4:00:00 PM	2/25/2017, 12:32:57 PM	The accommodation is bas.
24	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	3/1/2016, 4:00:00 PM	2/25/2017, 12:32:57 PM	The entrance to the hotel i.
25	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	8/16/2015, 5:00:00 PM	2/25/2017, 12:32:57 PM	Rooms were nice, basic bu.
26	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	10/25/2015, 5:00:00 PM	2/25/2017, 12:32:57 PM	I booked this hotel for mid.
27	Hotels	Princeville	US	22.226	-159.481	Hotel 2	HI	5/5/2016, 5:00:00 PM	3/31/2017, 11:32:19 AM	Loved the view from my ro.
28	Hotels	Princeville	US	22.226	-159.481	Hotel 2	HI	4/19/2016, 5:00:00 PM	3/31/2017, 11:32:19 AM	A/C unit was disgusting an.
29	Vacation Rentals,Resorts &	Honolulu	US	21.282	-157.831	Hotel 4	HI	2/28/2016, 4:00:00 PM	2/25/2017, 12:32:57 PM	The staff were really friendl.

Easy for data scientists and analysts to collaborate

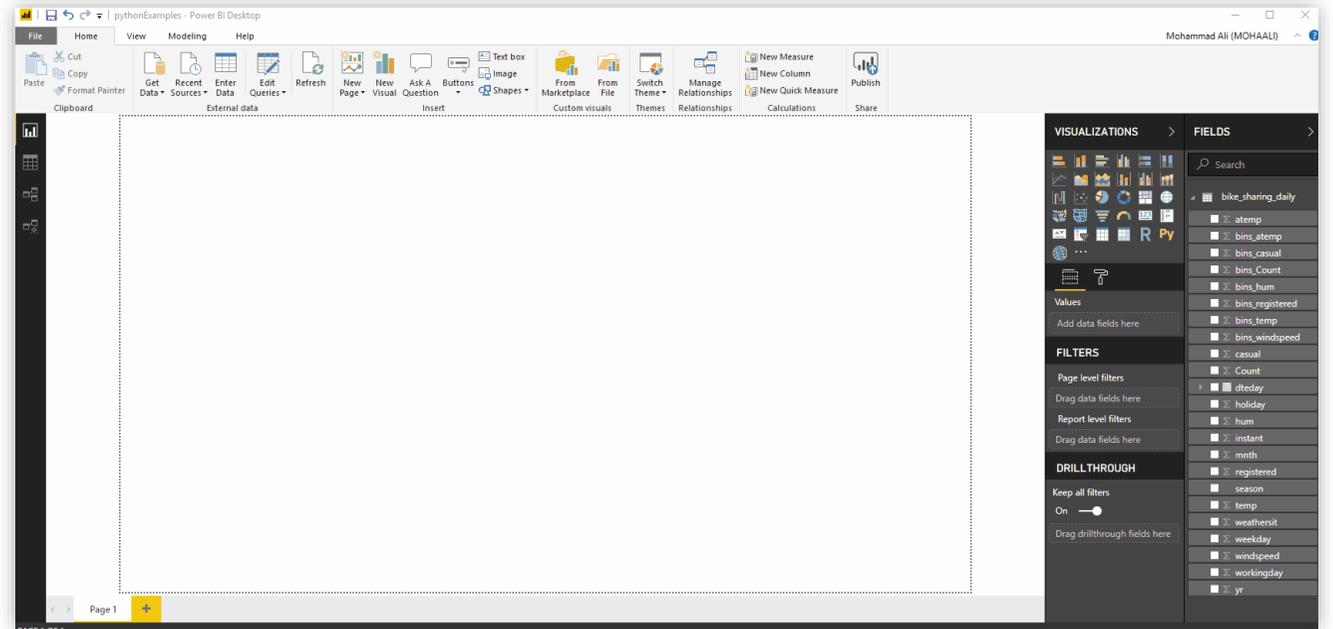
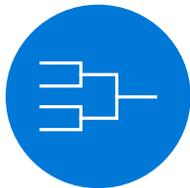


Python visualization

Use your python scripts in Power BI



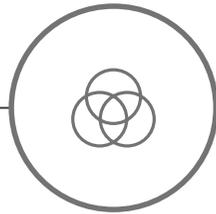
Python visualization behaves like any other visualization such than slicing on data triggers the script to rerun and the visual is refreshed



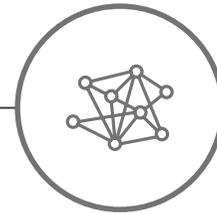
Power BI innovation areas



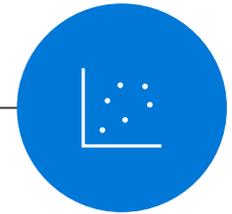
Self-service
BI/collaboration



Unified self-service
and enterprise BI



Pervasive AI
for BI

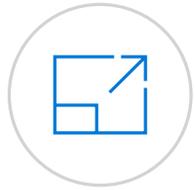


Big data analytics
with Azure Data
Services

Big data analytics with Azure Data Services



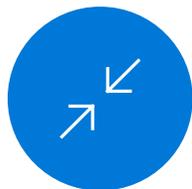
Unify data across your organization



Deliver petabyte-scale analytics



Get deep insights and advanced analytics and AI



Unify data across your organization



Create reusable ETL logic to ingest any data source while automatically storing data in Azure Data Lake Storage



Run SSIS packages natively in Azure Data Factory, so you don't have to recreate years of on-premises ETL logic

Collaborate without moving the data around with one lake for all data

Unified data and unlocked insights with Power BI and Azure

Impact

Unified internal and third-party data stores with Azure Data Factory and Azure Data Lake Storage

Accessed insights on both desktop and mobile with Azure SQL Data Warehouse and Power BI

Cost savings on licensing and maintenance paid for the new platform in the first year

Empowering 40,000 employees to work smarter



Deliver petabyte-scale analytics



Power BI + Azure SQL Data Warehouse



Enable instant response times on massive datasets when querying at the aggregated level with Power BI Aggregations

Queries at the granular level are sent to Azure SQL Data Warehouse with DirectQuery

Skip configuration by connecting to Power BI with the 'Open in Power BI' button within Azure SQL Data Warehouse

Petabyte-scale analytics across the organization with Power BI and Azure

Impact

More powerful but cost-efficient analytics on Azure SQL Data Warehouse to support a growing BI user base across the enterprise

Replaced thousands of fixed PDF reports with a fully interactive BI experience using Power BI

Shifted focus from software maintenance to extracting insights

A data estate for any future



Get deep insights, advanced analytics, and AI

Power BI + Azure Machine Learning



Use automated machine learning within Power BI to solve for common use cases with zero coding



Enable business analysts to consume the work of data scientists for more advanced problems with seamless connection to Azure Machine Learning

Leverage data in Azure Data Lake Storage to train models in Azure Machine Learning giving your business a competitive edge

Automate time-consuming tasks such as model tuning and deployment, reducing time-to-insight from weeks to hours

Equipping sellers with machine learning insights with Power BI and Azure

Impact

Improved product pricing by delivering insights from Azure Machine Learning to sellers in real time through Power BI

Reduced costs by moving to the cloud with an advanced analytics solution using Power BI, Azure SQL Data Warehouse and Azure Machine Learning

Implemented 90% of the solution with no IT help

Improved sales negotiations to increase profits

What is Power BI

Power BI: analytics for every organization

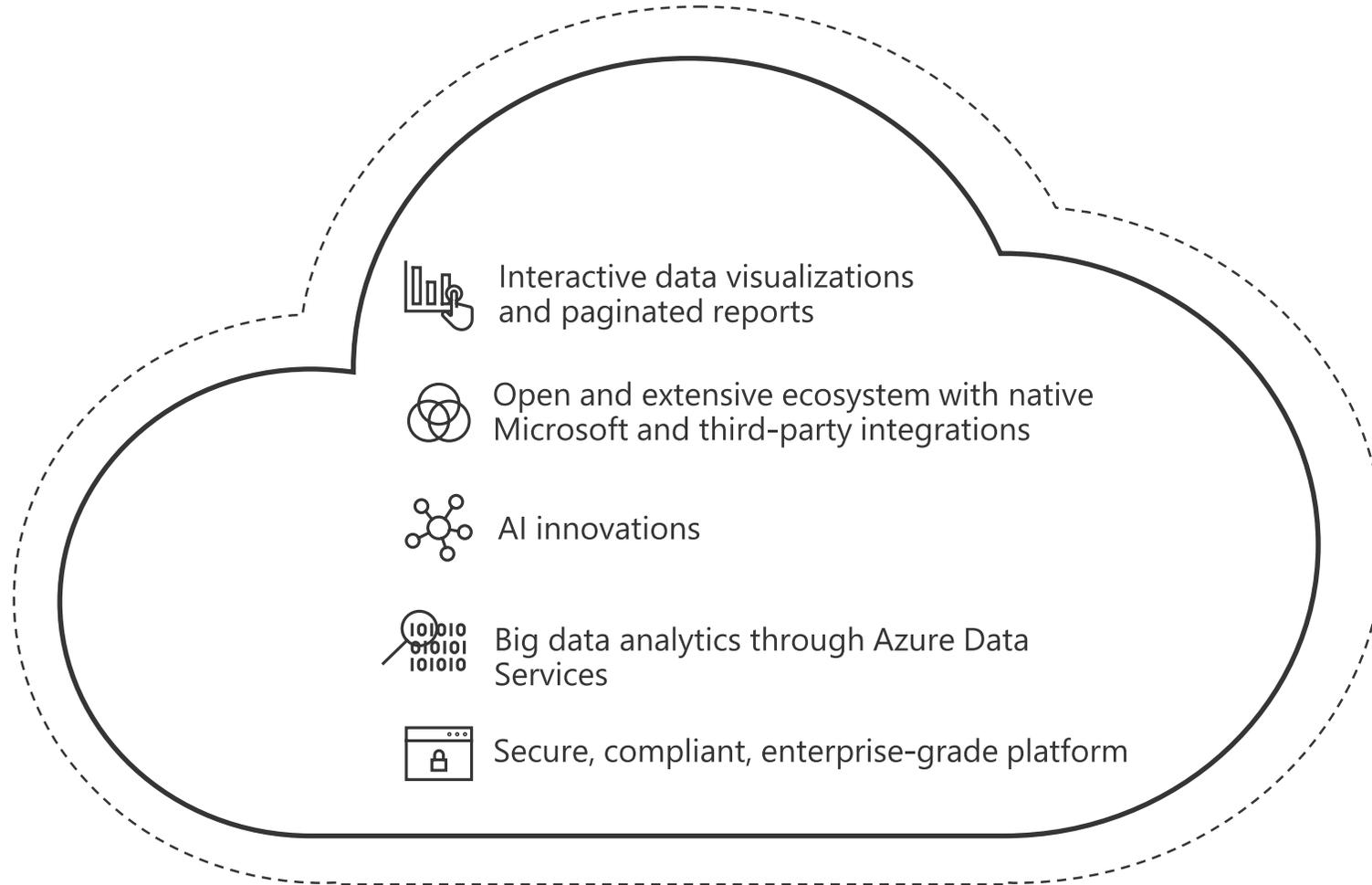
Unified self-service & enterprise BI platform



Cloud data



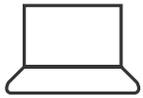
On-premises data



-  Web
-  On-premises
-  Mobile
-  Embedded
-  "..."

Power BI family

Author



Power BI Desktop

Free data analysis
and report authoring tool

Share and collaborate



Power BI Pro

Cloud-based modern
business analytics solution

Large scale deployments

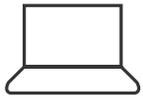


Power BI Premium

Dedicated capacity for
increased performance

Power BI family

Author



Power BI Desktop

Free data analysis
and report authoring tool

Share and collaborate



Power BI Pro

Cloud-based modern
business analytics solution

Large scale deployments



Power BI Premium

Dedicated capacity for
increased performance

Deployment option 1

Deployment option 2

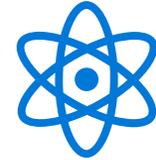
Power BI



self-service & enterprise BI



powered by AI



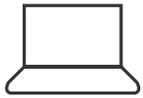
provides insights to all

Appendix

Power BI Premium

Power BI family

Author



Power BI Desktop

Free data analysis
and report authoring tool

Share and collaborate



Power BI Pro

Cloud-based modern
business analytics solution

Large scale deployments



Power BI Premium

Dedicated capacity for
increased performance

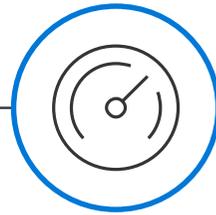


Power BI Premium
deployment

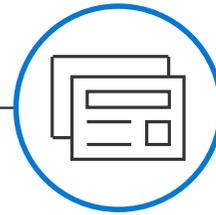
Power BI Premium



Flexibility to license
by capacity



Greater scale
and performance



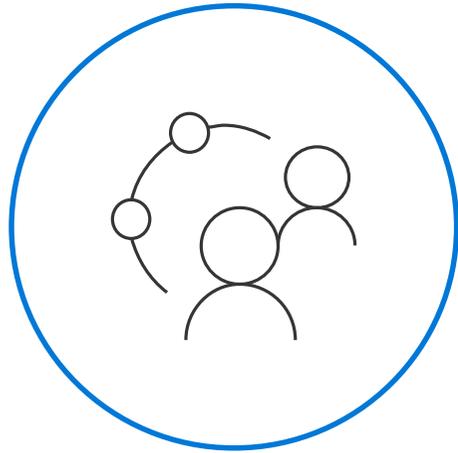
Unifying self-service and
enterprise BI



Extending on-premises
capabilities

Dedicated resources in the cloud

Flexibility to license by capacity



Extend read access to a broader set of people without requiring per user license

Tailor performance to the unique needs of your organization, department, or team

Scale as your requirements change

Greater scale and performance

Dedicated resources for exclusive use by the tenant
fully managed by Power BI

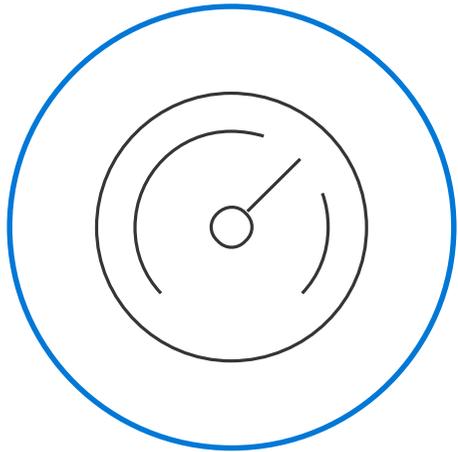
Easily scale up as your usage grows

Large user quota up to 100 TB of storage and large
dataset support up to 12 GB in size

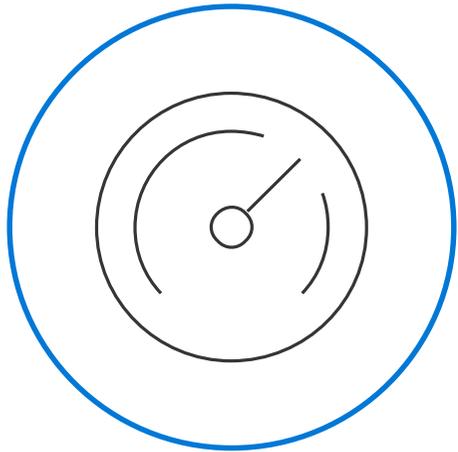
Greater scale with dynamic memory management

More frequent data refresh up to 48 times a day

Faster refresh with incremental data refresh support



Greater scale and performance

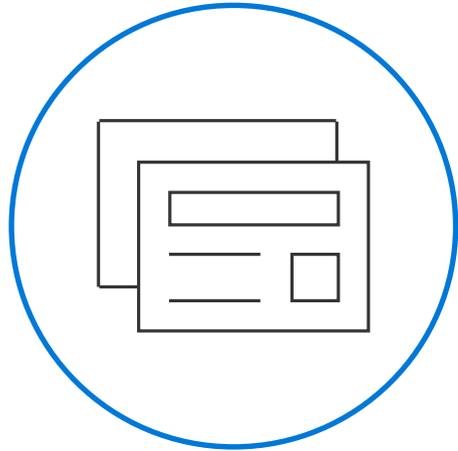


Greater scale with dynamic memory management

More frequent data refresh up to 48 times a day

Faster refresh with incremental data refresh support

Unifying self-service and enterprise BI

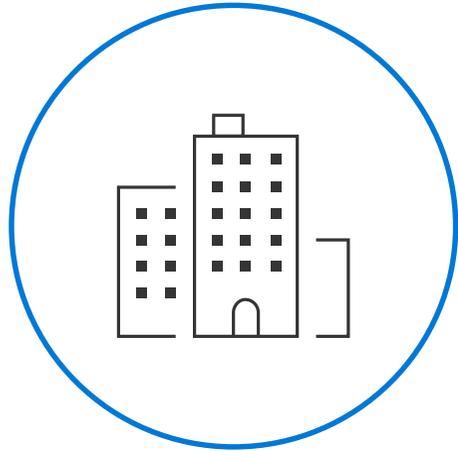


SQL Server Analysis Services integrated into Power BI

SQL Server Reporting Services technology now part of Power BI

Flexibility to deploy Power BI in specific global regions with multi-geo compliance

Extending on-premises capabilities



Flexibility to keep reports on-premises

Compatibility with SSRS reports

Concurrently deploy an equivalent number of cores on-premises

Power BI Report Server

Power BI: analytics for every organization

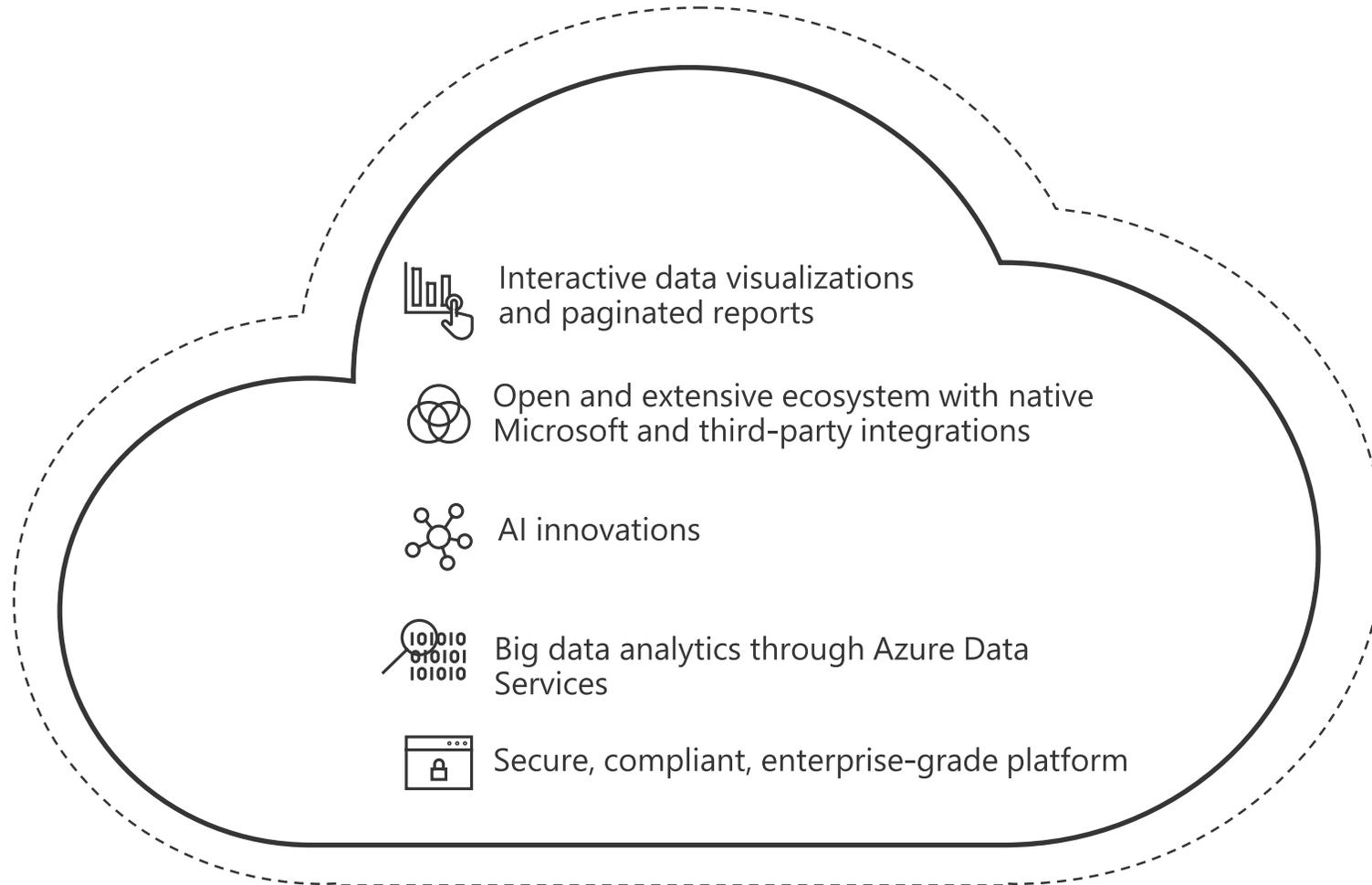
Unified self-service & enterprise BI platform



Cloud data

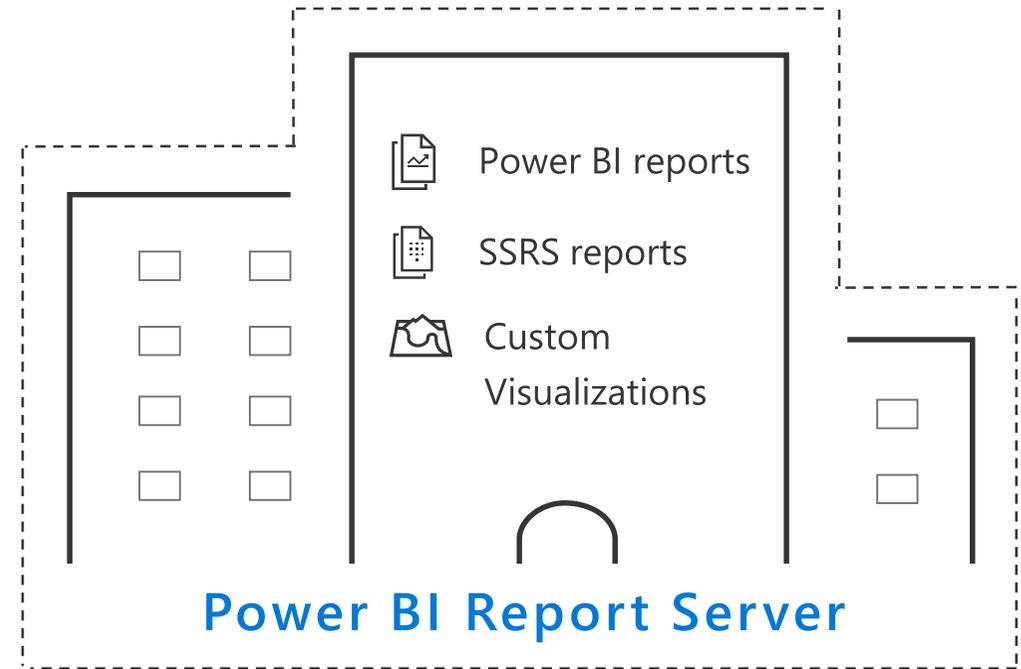
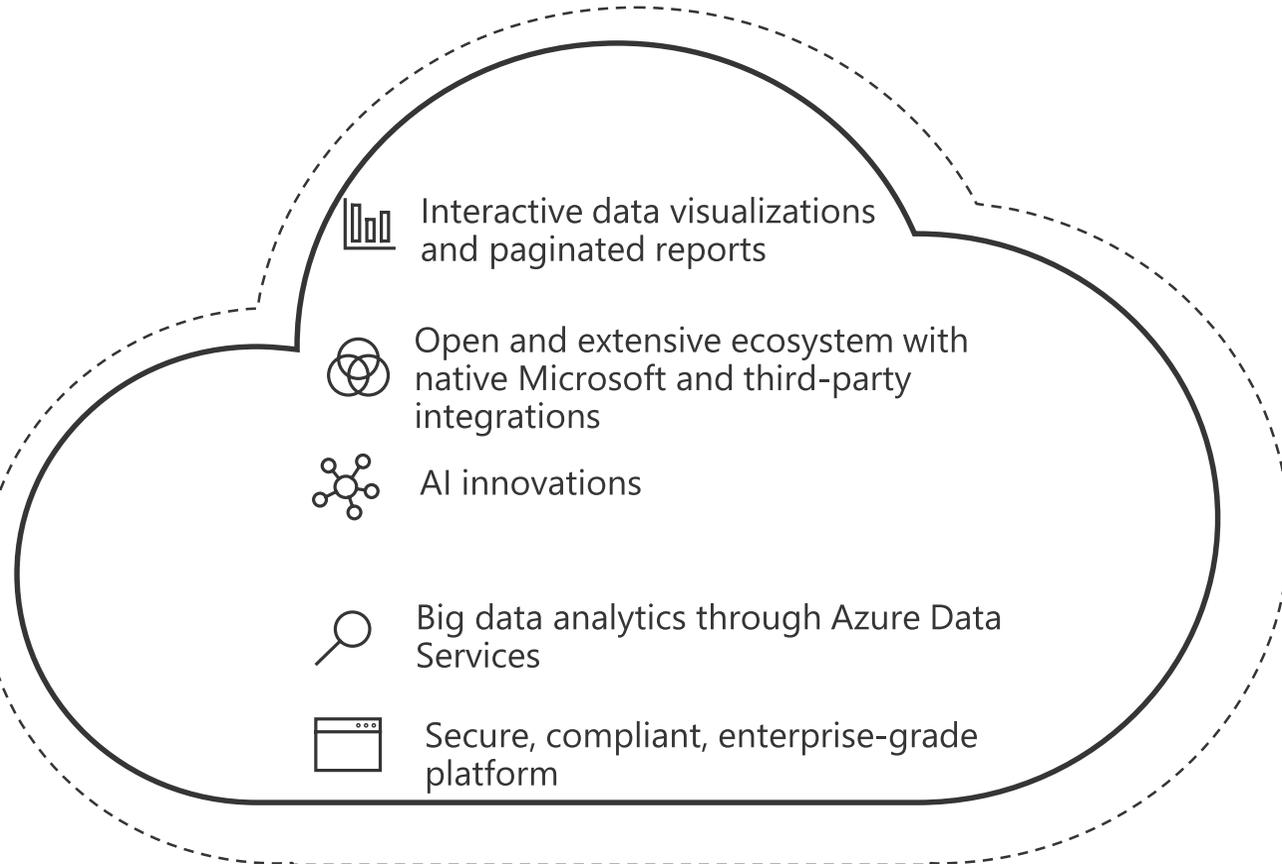


On-premises data

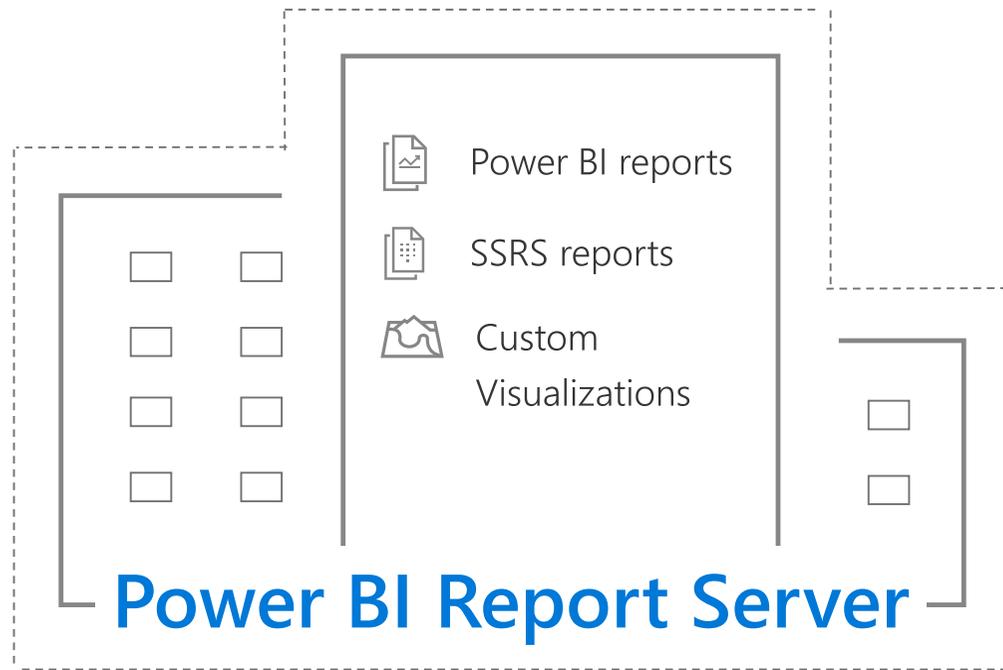


- Web
- On-premises
- Mobile
- Embedded
- "..."

Power BI: extending on-premises capabilities



Power BI Report Server



Keep Power BI reports on-premises



Compatible with SSRS



Move to the cloud on your terms

Keep Power BI reports on-premises

Fully interactive reports to visualize your data and gain insights



Explore data across multiple visualizations

Drill through to underlying reports

Apply filters at a visual, page, or report level

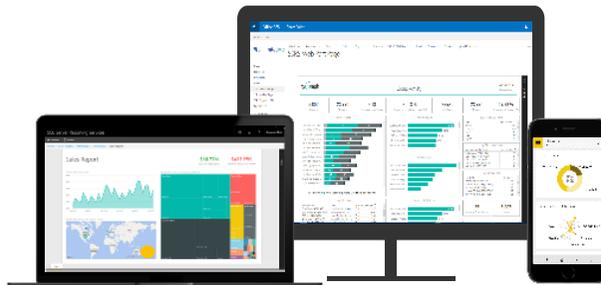
Compatible with SSRS

Built on proven SQL Server Reporting Services technology



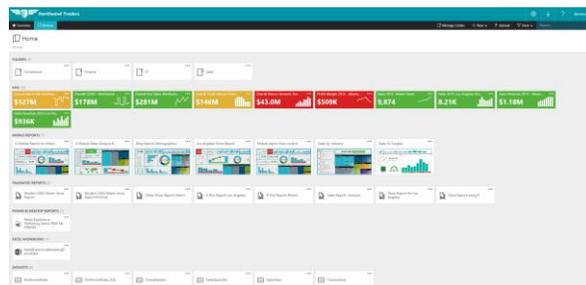
Publish SSRS reports

Create and publish precisely-formatted, paginated, modern reports



Consume in multiple ways

Modern browsers, mobile app or embed into apps



Benefit from an enterprise-ready solution

Manage permissions, enable security, and access reports in one modern web portal

How to acquire Power BI Report Server

Power BI Premium



Power BI Premium includes rights to concurrently deploy **Power BI Report Server** on-premises and Power BI in the cloud

SQL Server



Customers with SQL EE SA also have access to **Power BI Report Server** as a SA benefit

* **Power BI Pro** license required to publish Power BI Reports to Power BI Report Server