



# Power BI

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# 3rd Wave of Analytics: Everyone

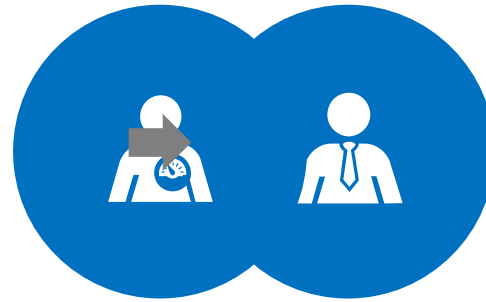


1<sup>st</sup> Wave  
**Technical**



IT End User

2<sup>nd</sup> Wave  
**Self Service**



Analyst End User

3<sup>rd</sup> Wave  
**End User**



Everyone

# 3rd Wave of Analytics: Everyone



Technical



Self Service



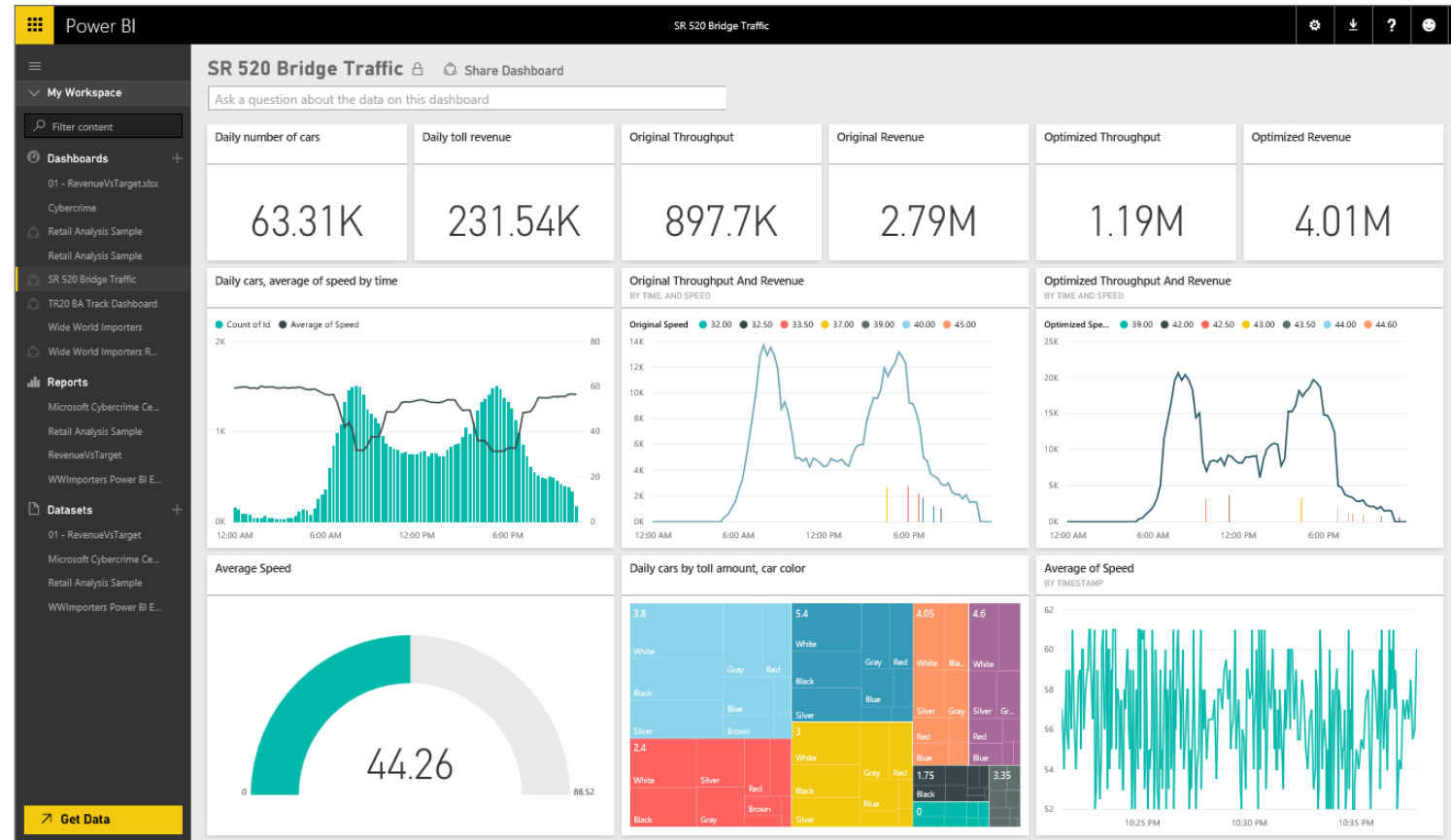
End User



# Power BI

## Visualisations in the cloud

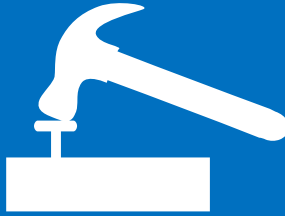
- Interactive
- Use on any device
- Live Updates



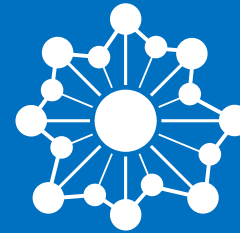
# Key Challenges for BI Professionals



Securing  
and Managing  
Data



Choosing the  
Right Tools for  
the Right Users



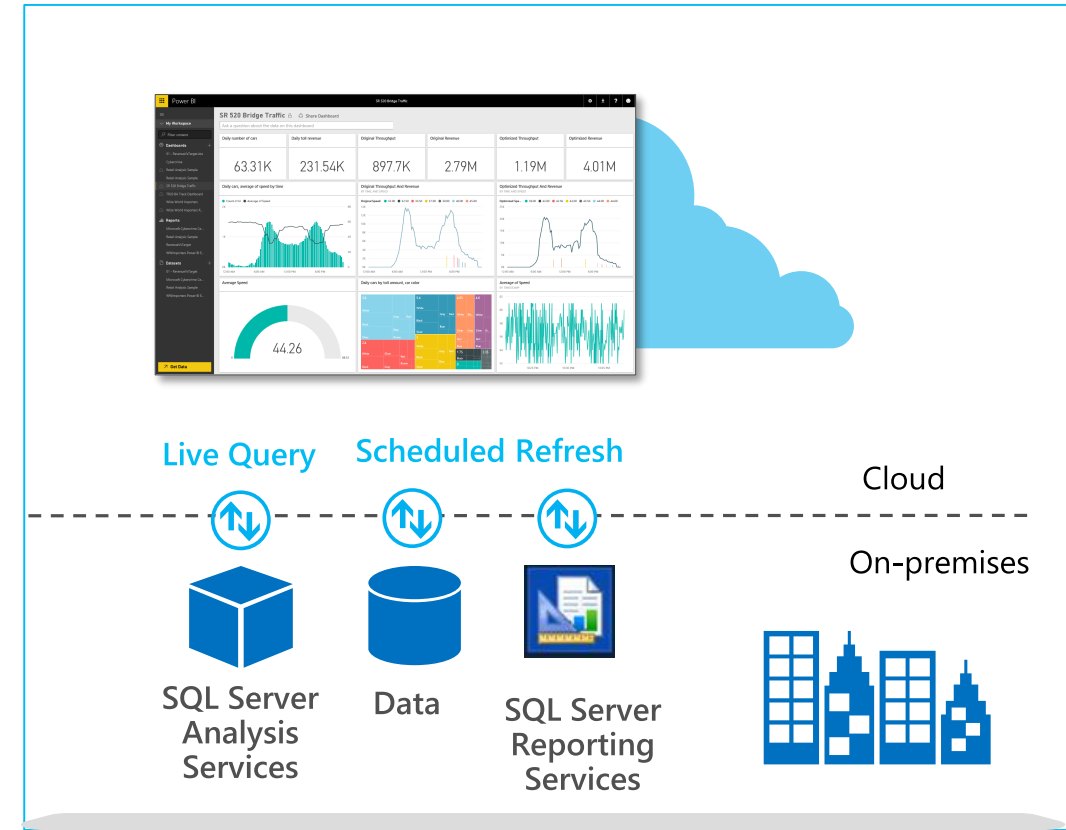
Connecting to a  
Variety of Data  
Sources



# Securing and managing data

## BI on your terms – keep your data where it lives today

- Hybrid BI
  - on-premises data +
  - cloud data e.g. from social media and gov.uk
- Keep your data current:
  - Live Query to SQL Server Analysis Services
  - Scheduled refresh
  - Real-time dashboards using Azure Stream Analytics

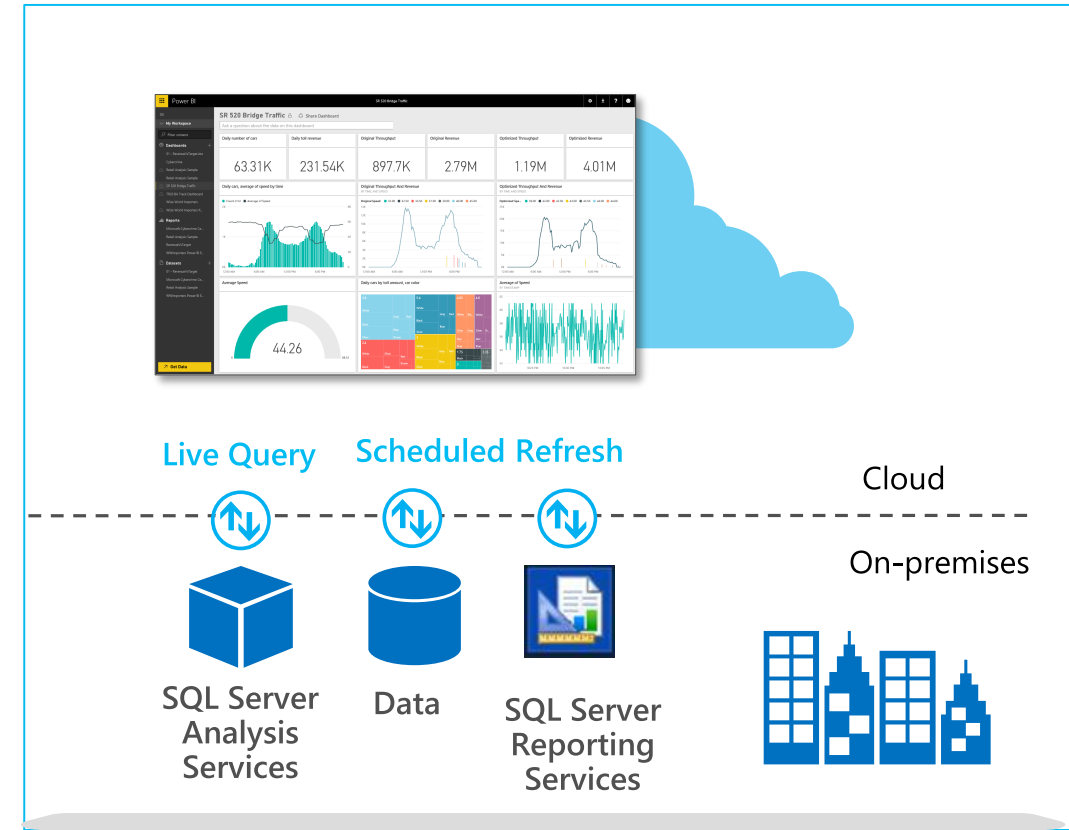




# Securing and managing data

## Demystifying data load

- "Import" = Cached
- "Live Query" and "Direct Query"
- "Real-Time" data







# Securing and managing data

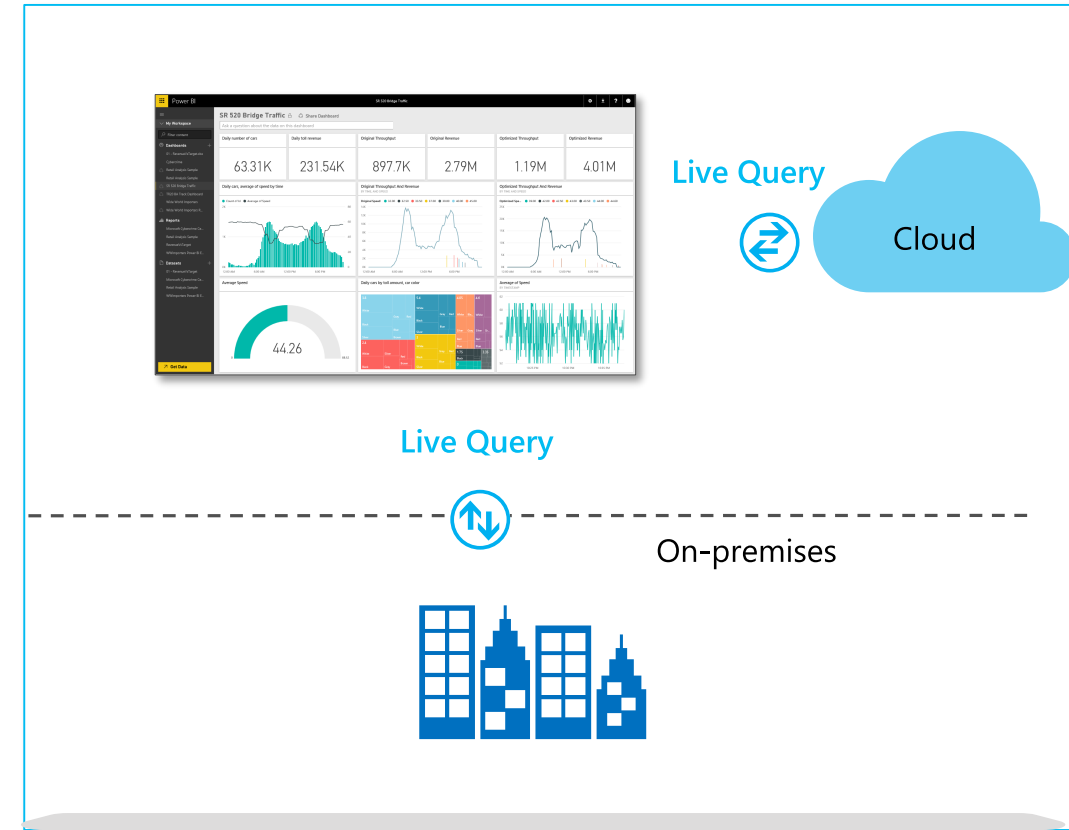
## Enabling Live Query (Direct Query)

Live sources built-in to Power BI.com

- Azure SQL
- Azure SQL Data Warehouse
- Spark on HD Insight

Enterprise Gateway enables more Live Query sources

- Analysis Services Tabular
- Analysis Services Multidimensional
- SQL Server
- SAP HANA
- Oracle
- Teradata

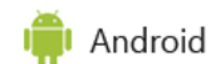




# Choosing the right tool

## Power BI cloud service for the business user

- A 360° view of your business
  - Monitor live real-time dashboards
  - Single view on historical, current and predictive
  - Collect and personalize insights
- Out-of-box content
- Interactive reports
- Native apps for iOS, Android, and Windows
  - Receive alerts on the go
- Share and collaborate

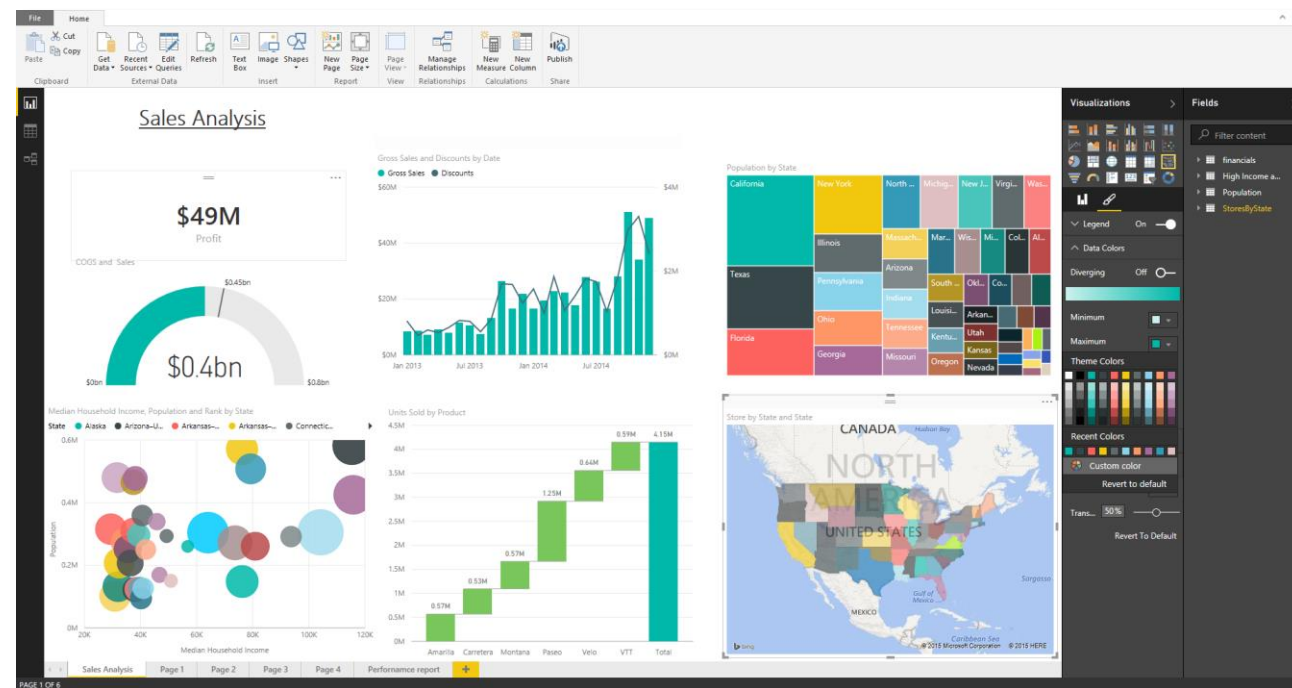


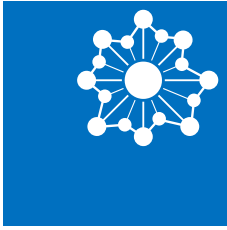


# Choosing the right tool

## For the BI analyst – Power BI Desktop

- Scalable personal ETL solution
- Data modeling
- Free
- Publish to the cloud to share

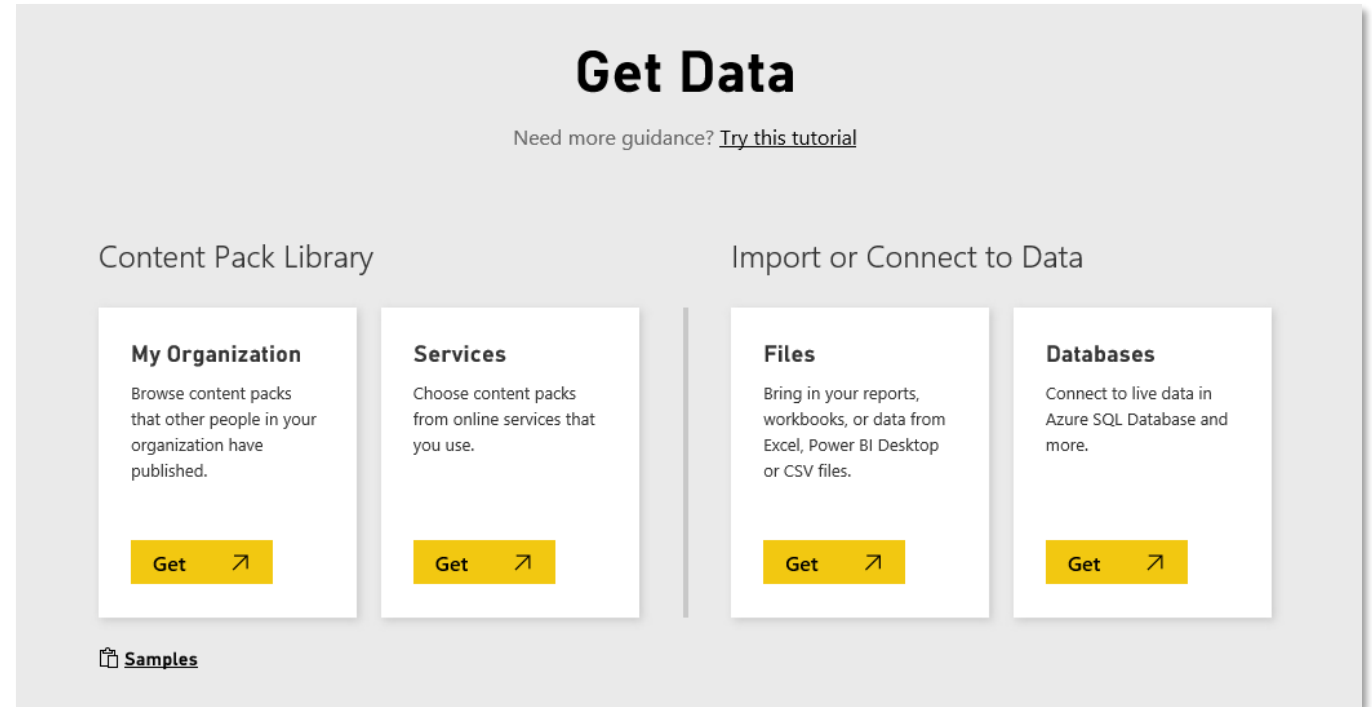


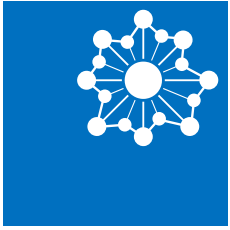


# Connecting to a variety of data sources

## Built-in connectivity for all your apps

- Data from popular SaaS services
- Big data and more
  - Azure data services, e.g. HDI, ASA, AML etc.
- On-premise data sources
  - Analysis Services via Direct Query
  - Scheduled refresh via Gateway
- Data from files
  - Import data from Excel or Power BI Desktop
- Data from your organization
  - Content published by others in your org (organizational content packs)





# Connecting to a variety of data sources

## Pre-built solutions for your SaaS apps

- Growing ecosystem of partner solutions
- Power BI provides “out of the box” value for popular SaaS solutions



Microsoft  
Dynamics CRM

appfigures



Dynamics  
Marketing



Google Analytics

SweetIQ



Visual Studio  
Online

GitHub



comSCORE.



Adobe® Analytics



MailChimp



Acumatica



Office 365



Marketo

tyGraph



intuit  
QuickBooks®



twilio



IRCUIT ID™



SendGrid

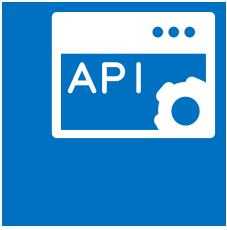
uservoice

webtrends

SQLSENTRY

zendesk

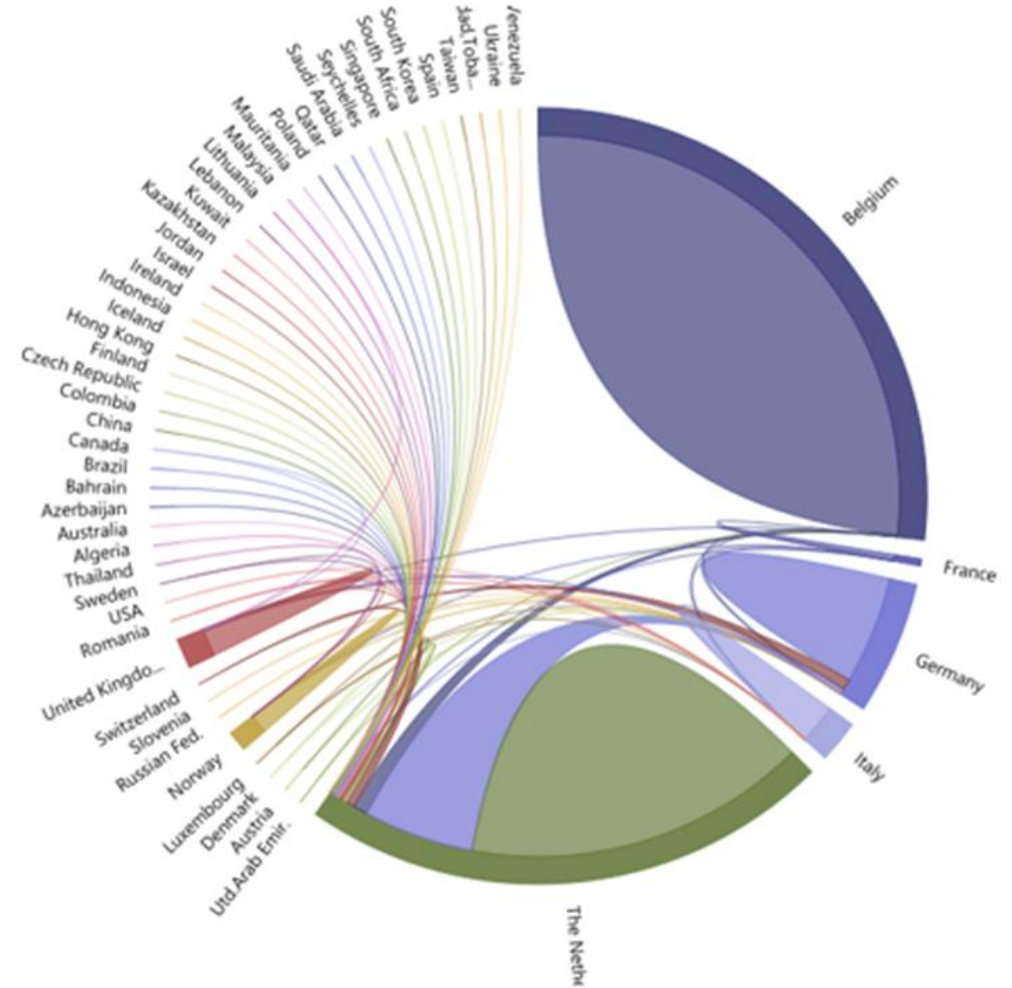
Find a list of the latest supported SaaS apps on [powerbi.com](https://powerbi.com)



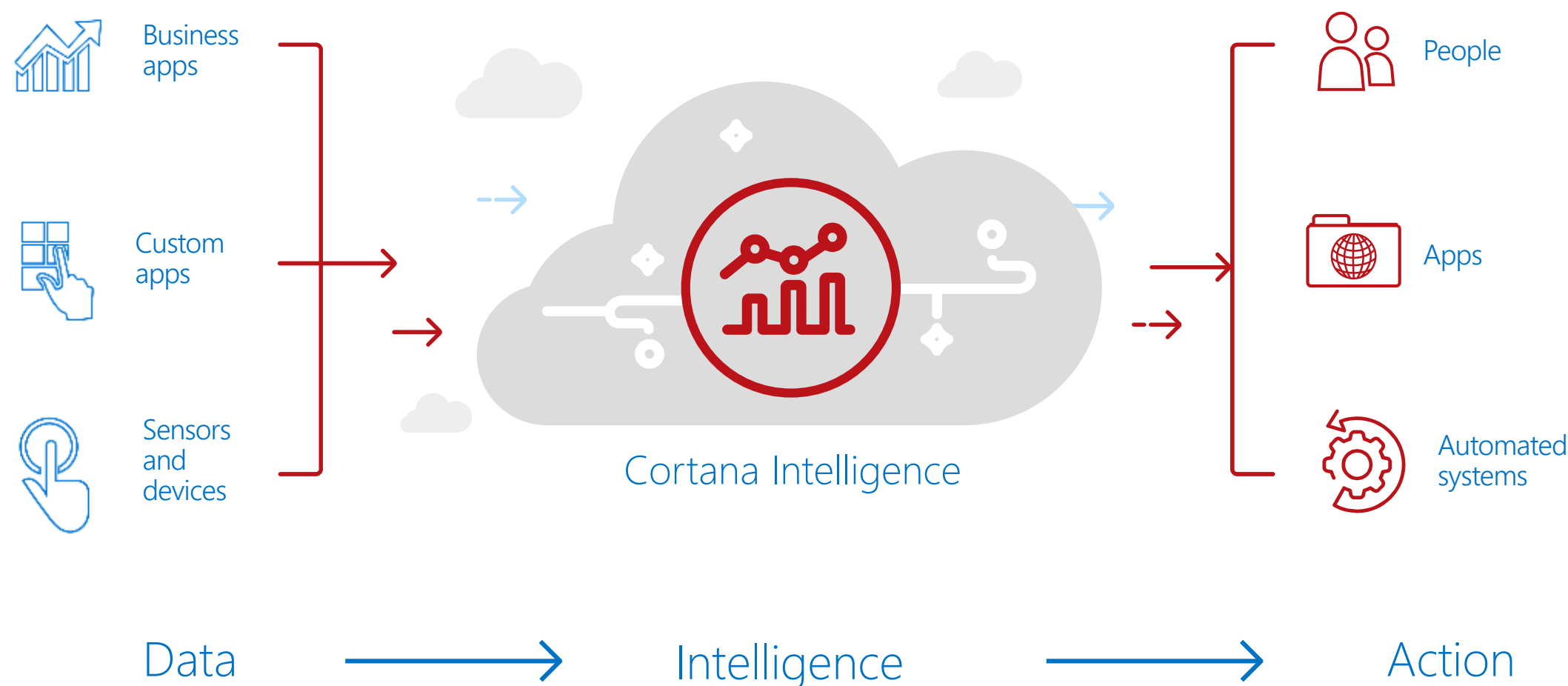
# Open APIs for new scenarios

## Create real-time dashboards or custom visuals

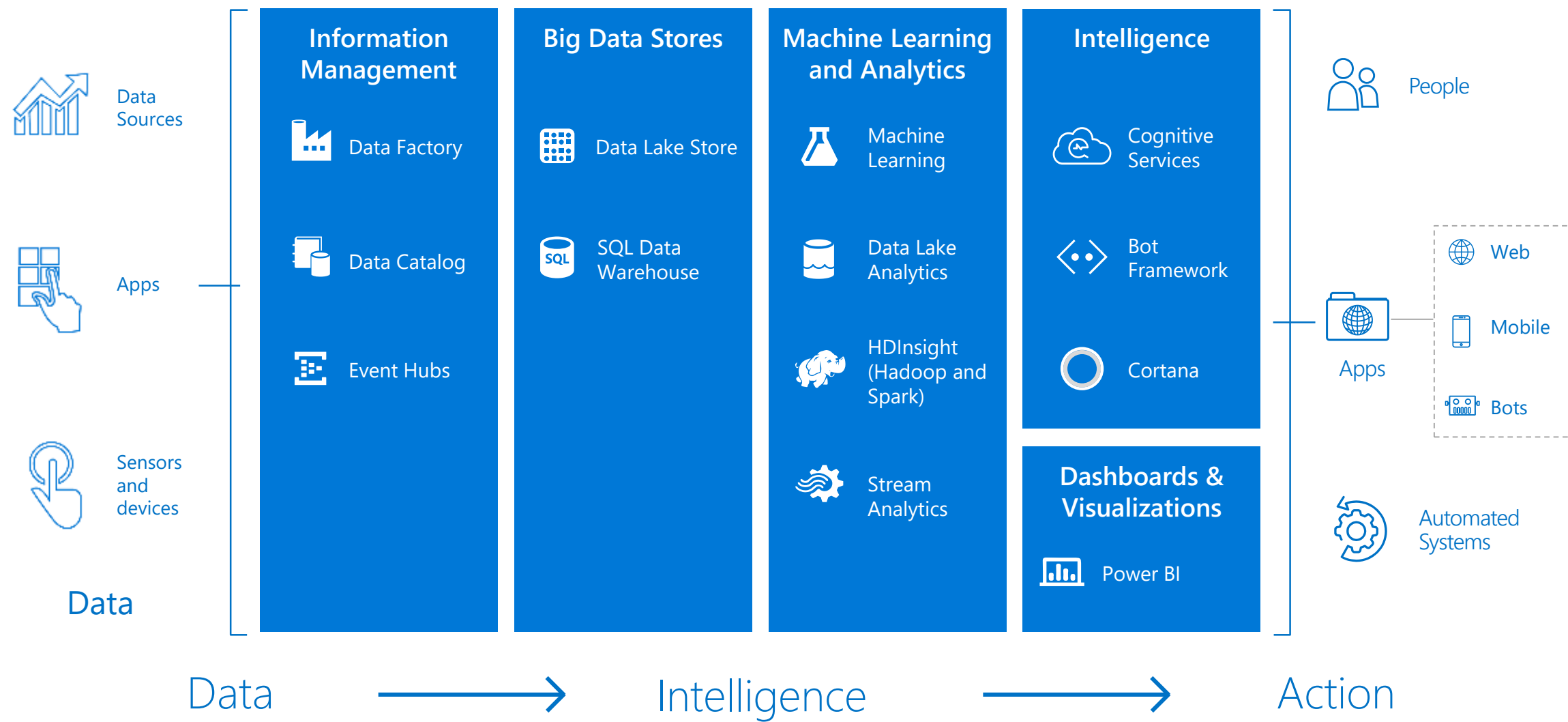
- Custom visuals to show the data the way you want to
- Embed Power BI tiles and reports
- Integrate content into Power BI
- Real-time analytics – Use the REST API or Azure Stream Analytics to push data into a Power BI dashboard
- <https://visuals.powerbi.com>
- <https://dev.powerbi.com>



# Intelligence as a Service

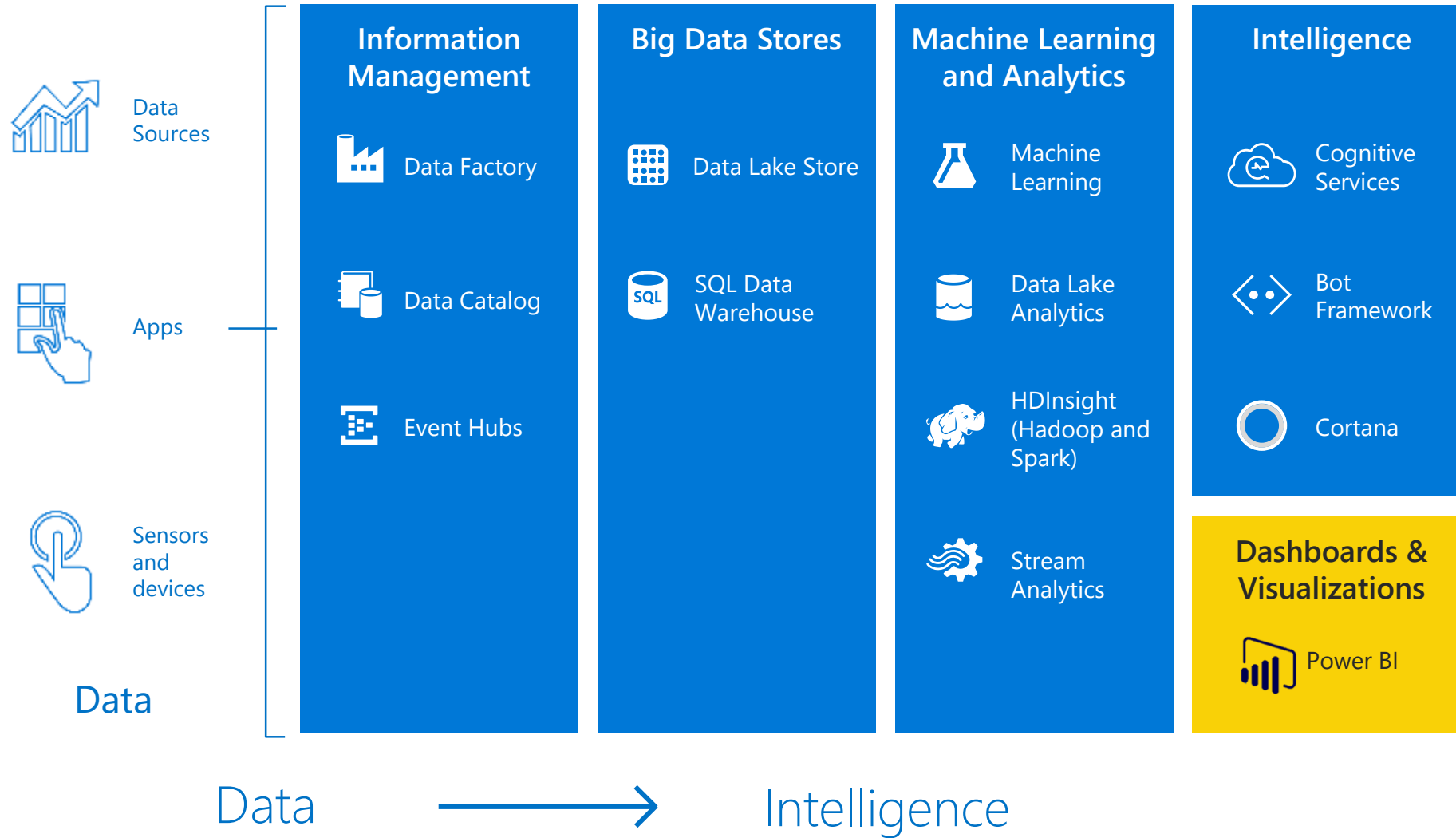


# Cortana Intelligence Suite

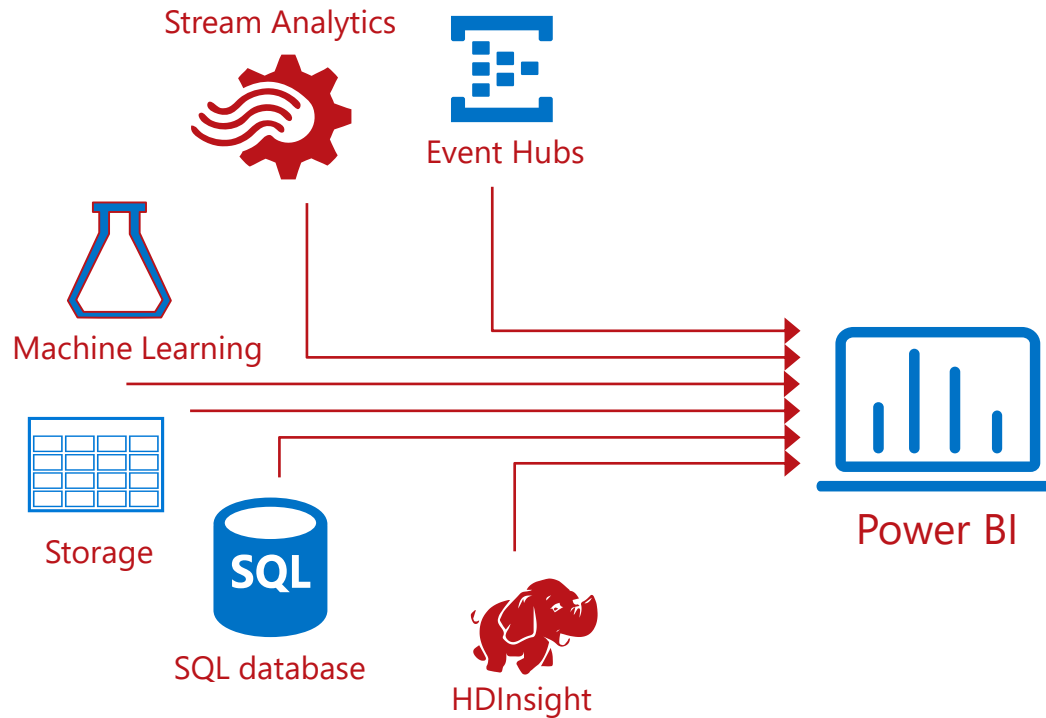




# Dashboards & Visualizations



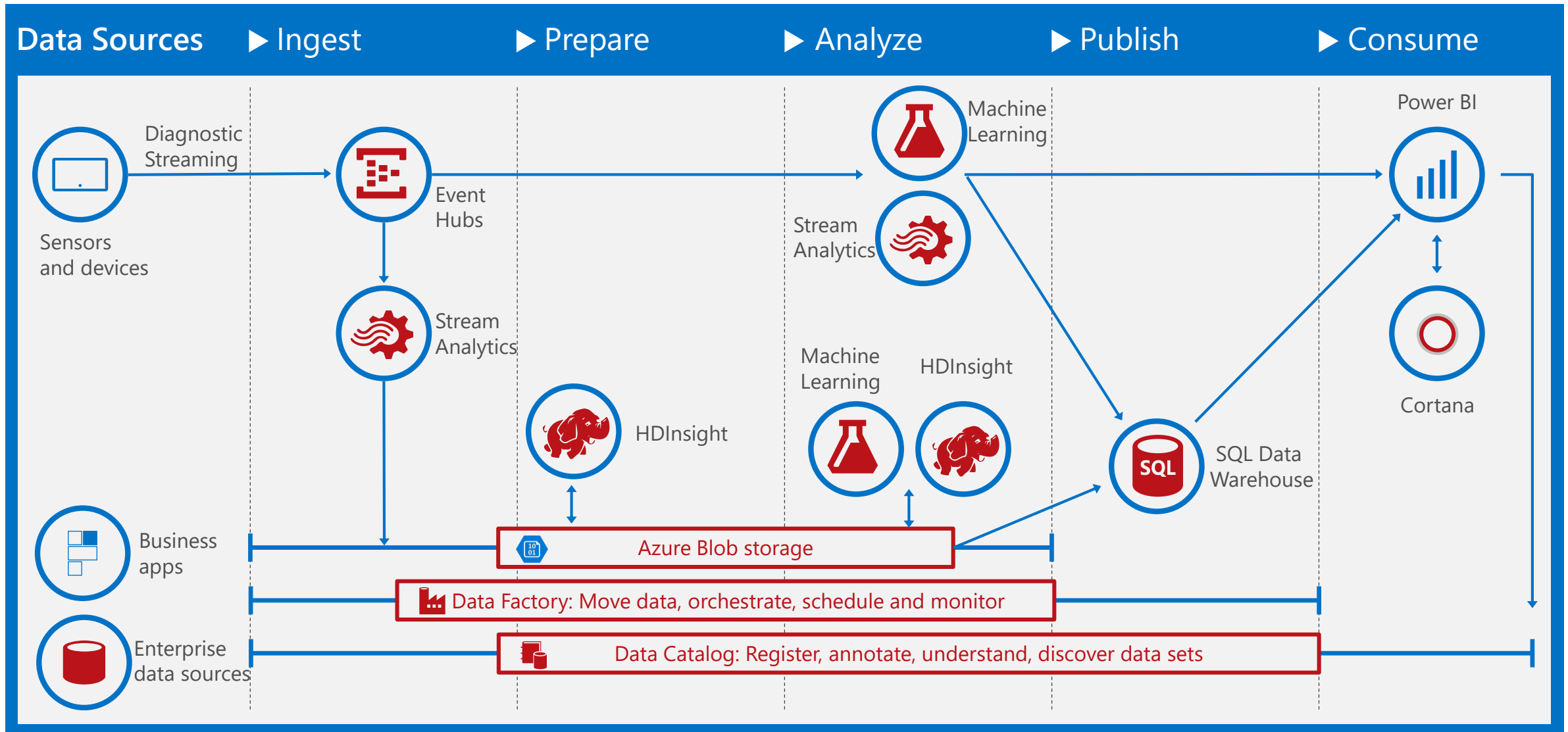
# Keep a pulse on your business with live, interactive dashboards



- Analytics for everyone, even non-data experts
- Your whole business on one dashboard
- Create stunning, interactive reports

- Drive consistent analysis across your organization
- Embed visuals in your applications
- Get real-time alerts when things change

# Example of Cortana Intelligence Suite in action



# Welcome to Power BI custom visuals

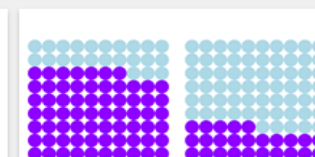
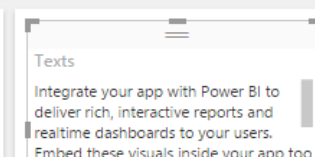
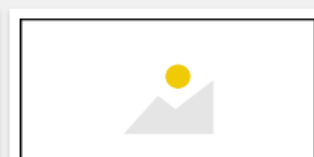
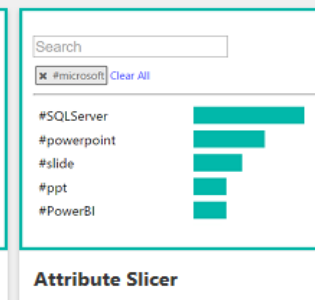
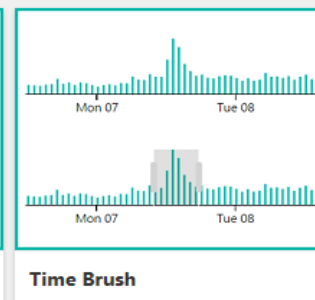
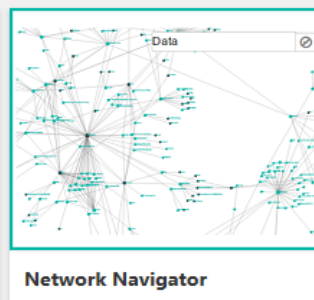
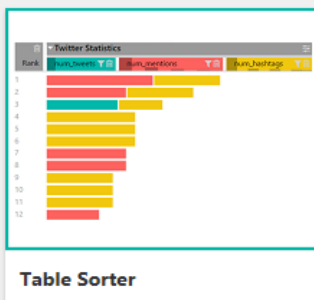
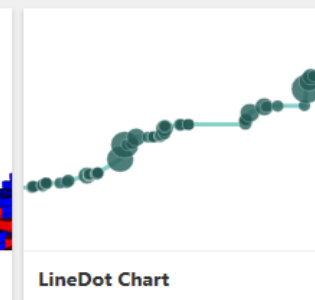
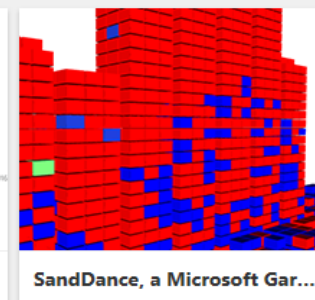
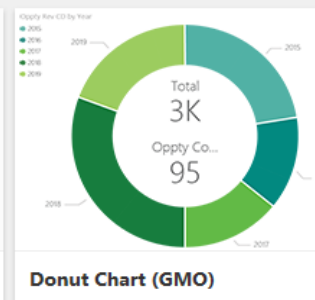
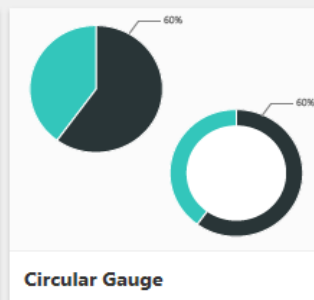
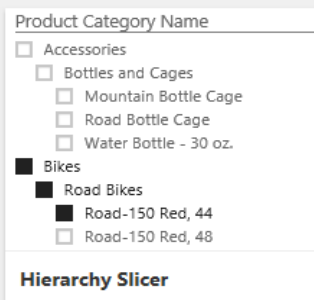
A gallery of visuals created by the Power BI community.  
Browse through the visuals or submit one of your own  
for others to use.

[Learn how to use custom visuals](#)

## Visuals

Sort by

Most Recent ▾



# Welcome to Power BI custom visuals

A gallery of visuals created by the Power BI community.  
Browse through the visuals or submit one of your own  
for others to use.

[Browse Gallery](#)

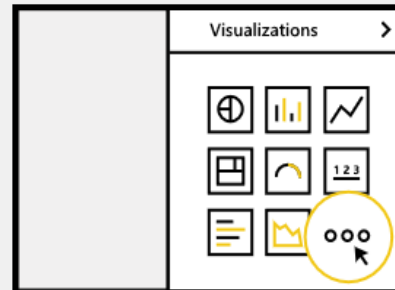
## How to use a visual



Step 1

### Download a visual

Browse our gallery for any number of community created visuals. Simply click on the visual, download, and read through the terms of use.



Step 2

### Upload to Power BI

In the report view, look for the upload icon in the visualization pane. Click the icon, follow the instructional popups, and upload your visual file.



Step 3

### Access visual in panel

Upon importing, the visual will be made available in the visualization panel. This visual will work and operate identically to other Power BI visuals.

[Browse the gallery](#)
[Learn more about using visuals](#)

# R visualisations in Power BI

The screenshot displays the Power BI Desktop interface with the title bar "sql bits products - Power BI Desktop". The ribbon includes "Visual Tools" and "Format". The main area shows a heatmap visualization of product data. The R script editor at the bottom contains the following code:

```
# Duplicate rows were removed from the data.
# Create dataframe
# dataset <- data.frame(SafetyStockLevel, ReorderPoint, StandardCost, ListPrice, DaysToManufacture, ProductID, ProductModelID)

# Remove duplicated rows
# dataset <- unique(dataset)
require("corrplot")
library(corrplot)
M <- cor(dataset)
corrplot(M, method = "color", tl.cex=0.6, tl.srt = 45, tl.col = "black")
```

Two yellow callout boxes provide additional context:

- Selected fields form an R data frame**: Points to the "Fields" pane on the right, where the selected fields are listed.
- Use an R library for the visualisation you need**: Points to the "require('corrplot')" line in the R script editor.

The "Fields" pane on the right shows the following fields:

- Class
- Color
- ☒ DaysToManufa...
- DiscontinuedD...
- ☒ ListPrice
- ModifiedDate
- ☒ ProductID
- ProductLine
- ☒ ProductModelID
- ProductNumber
- ProductSubcat...
- ☒ ReorderPoint
- rowguid
- ☒ SafetyStockLev...
- SellEndDate
- SellStartDate
- Size
- SizeUnitMeasu...
- ☒ StandardCost
- Style
- Weight
- WeightUnitMe...

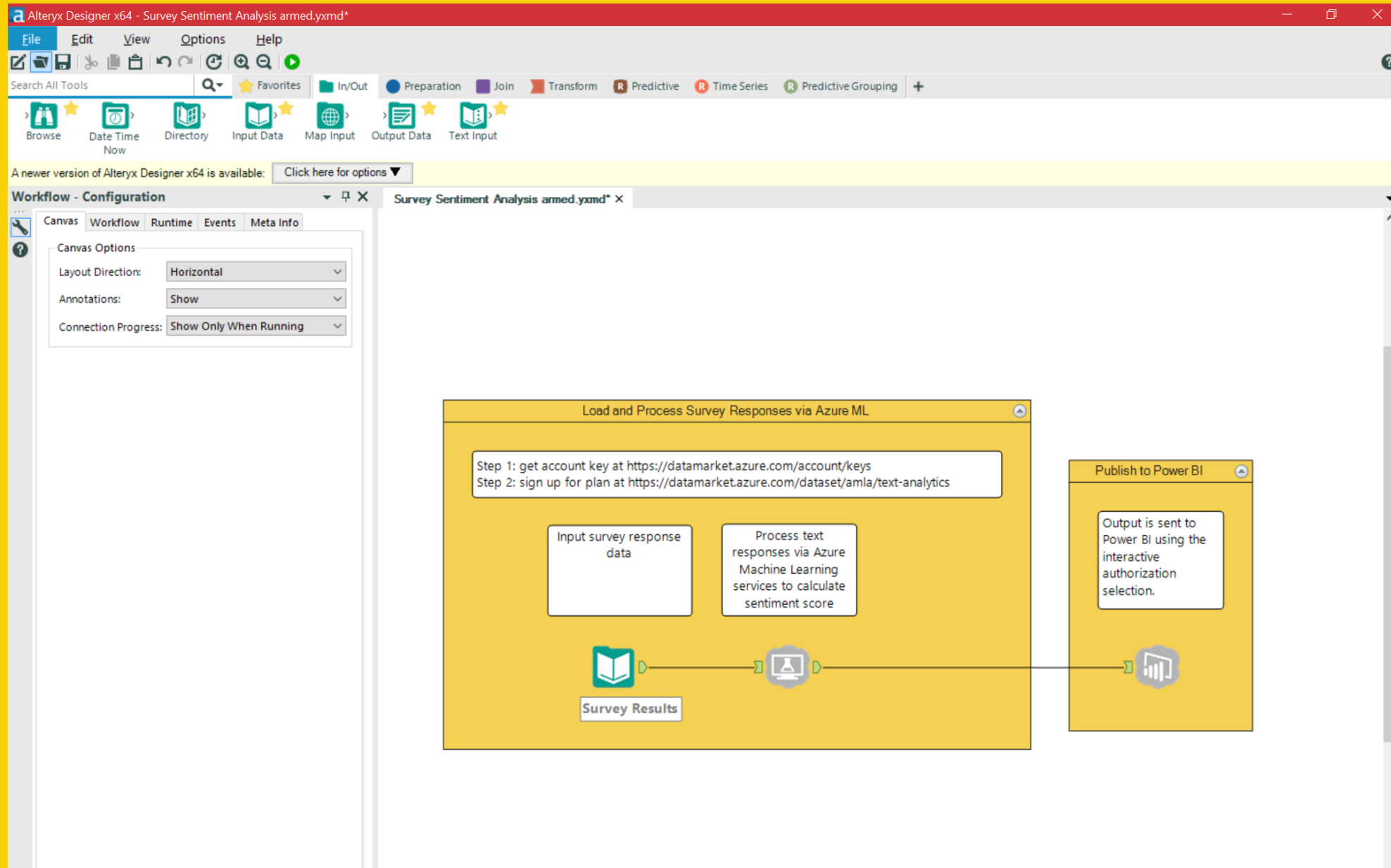
The "Visualizations" pane on the left shows the "Values" section with the following fields:

- SafetyStockLevel
- ReorderPoint
- StandardCost
- ListPrice
- DaysToManufacture
- ProductID
- ProductModelID

The "Filters" section shows the following fields:

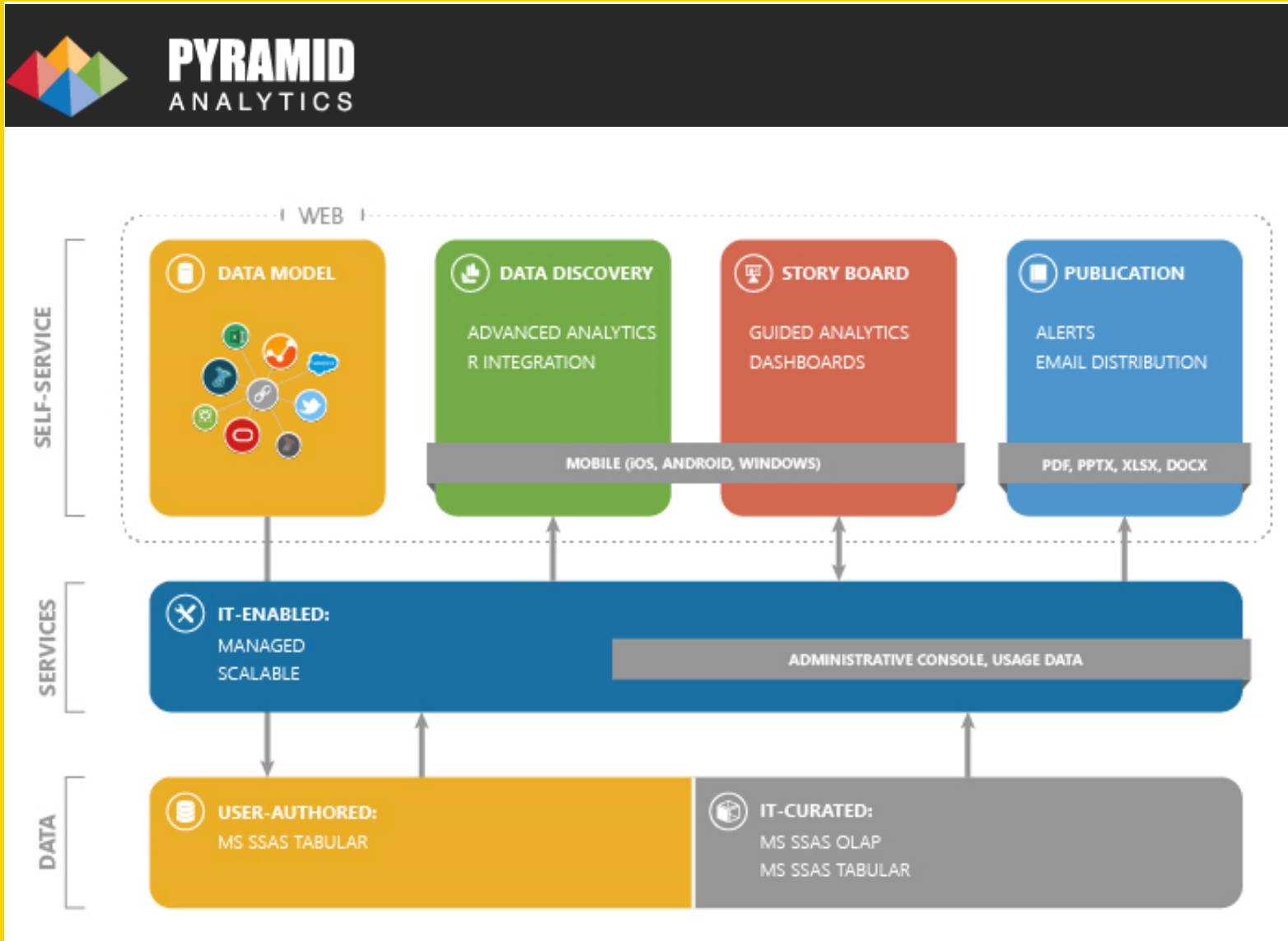
- DaysToManufacture(All)
- ListPrice(All)
- ProductID(All)
- ProductModelID(All)
- ReorderPoint(All)

# Alteryx & Power BI



# Pyramid & Power BI

<http://www.pyramidanalytics.com/powerbiandpyramid/>

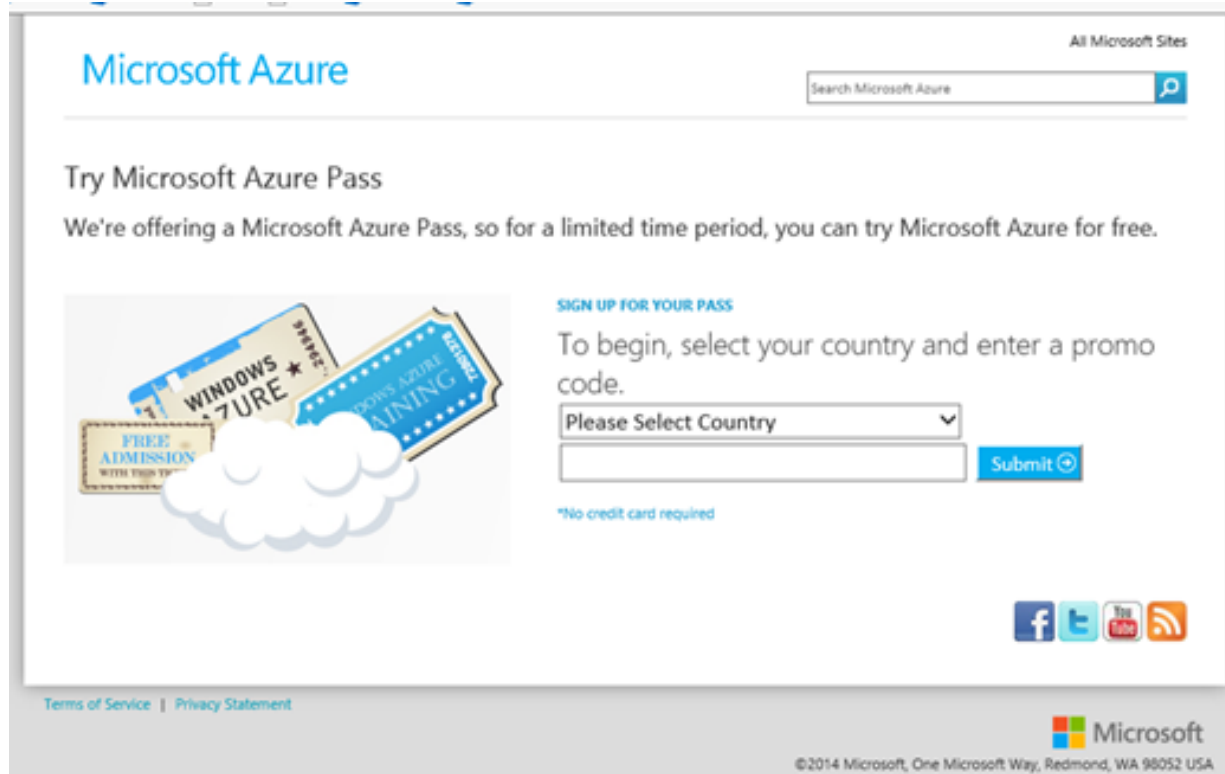




# Redeeming your Azure Pass

## www.microsoftazurepass.com

1. Select your country, type in the provided promo code and click "Submit."



The screenshot shows the Microsoft Azure Pass redemption page. At the top, there's a search bar labeled "Search Microsoft Azure" and a link to "All Microsoft Sites". Below this, the heading "Microsoft Azure" is displayed. The main section is titled "Try Microsoft Azure Pass" and includes a sub-header "SIGN UP FOR YOUR PASS". The text states: "We're offering a Microsoft Azure Pass, so for a limited time period, you can try Microsoft Azure for free." To the left of the sign-up form is an illustration of three tickets: one for "WINDOWS AZURE", one for "WINDOWS AZURE TRAINING", and one for "FREE ADMISSION WITH YOUR PASS". The sign-up form consists of a dropdown menu labeled "Please Select Country", a text input field for a promo code, and a "Submit" button. Below the form, a note states "\*No credit card required". At the bottom of the page, there are social media icons for Facebook, Twitter, YouTube, and RSS, along with links to "Terms of Service" and "Privacy Statement". The Microsoft logo and copyright information "©2014 Microsoft, One Microsoft Way, Redmond, WA 98052 USA" are at the very bottom.

All Microsoft Sites

Microsoft Azure

Search Microsoft Azure

### Try Microsoft Azure Pass

We're offering a Microsoft Azure Pass, so for a limited time period, you can try Microsoft Azure for free.

**SIGN UP FOR YOUR PASS**

To begin, select your country and enter a promo code.

Please Select Country

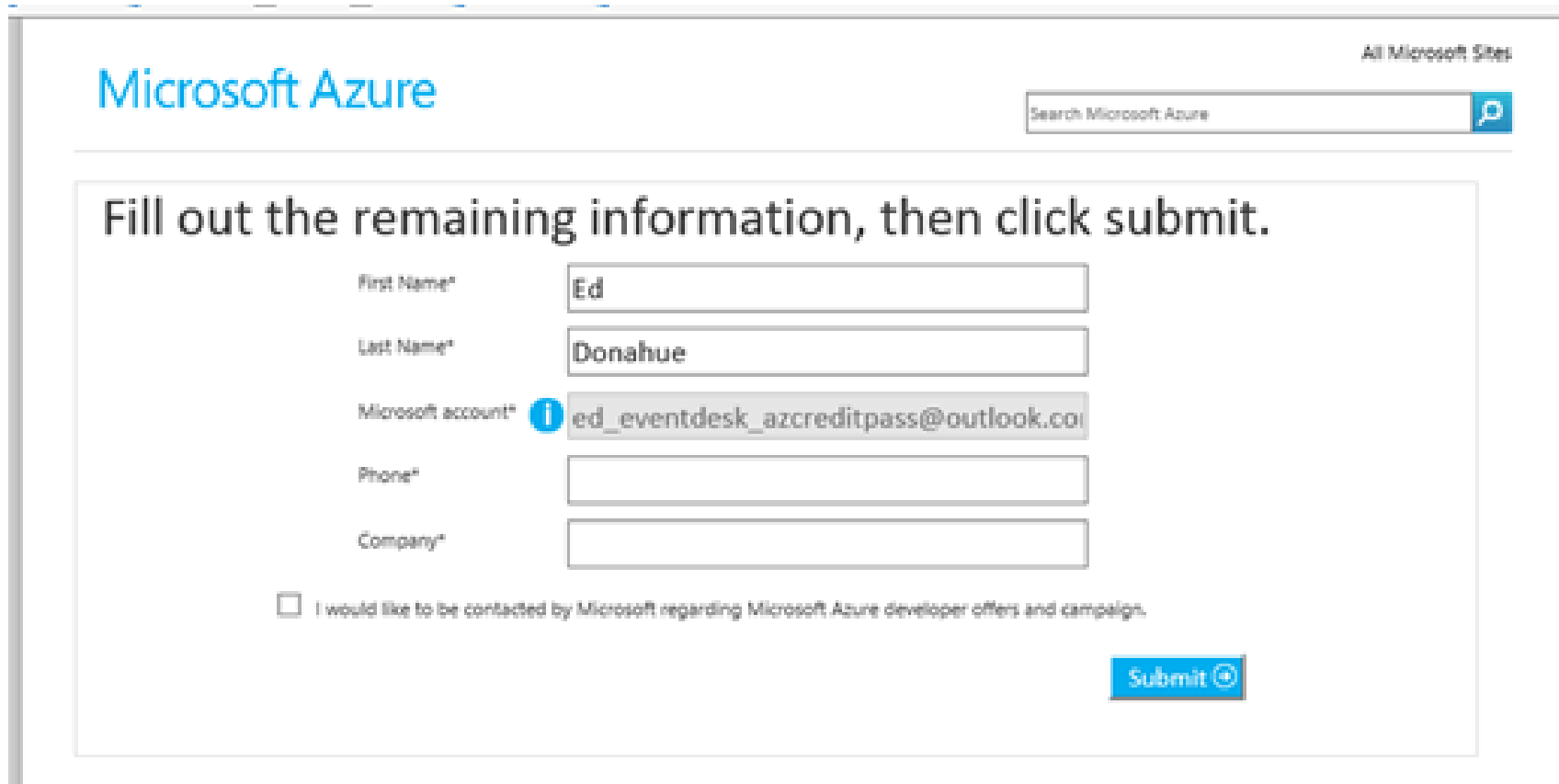
\*No credit card required

Terms of Service | Privacy Statement

Microsoft

©2014 Microsoft, One Microsoft Way, Redmond, WA 98052 USA

2. Sign into a Microsoft account to please use InCognito/ InPrivate browsing.
3. Fill out the remaining information and click "Submit."

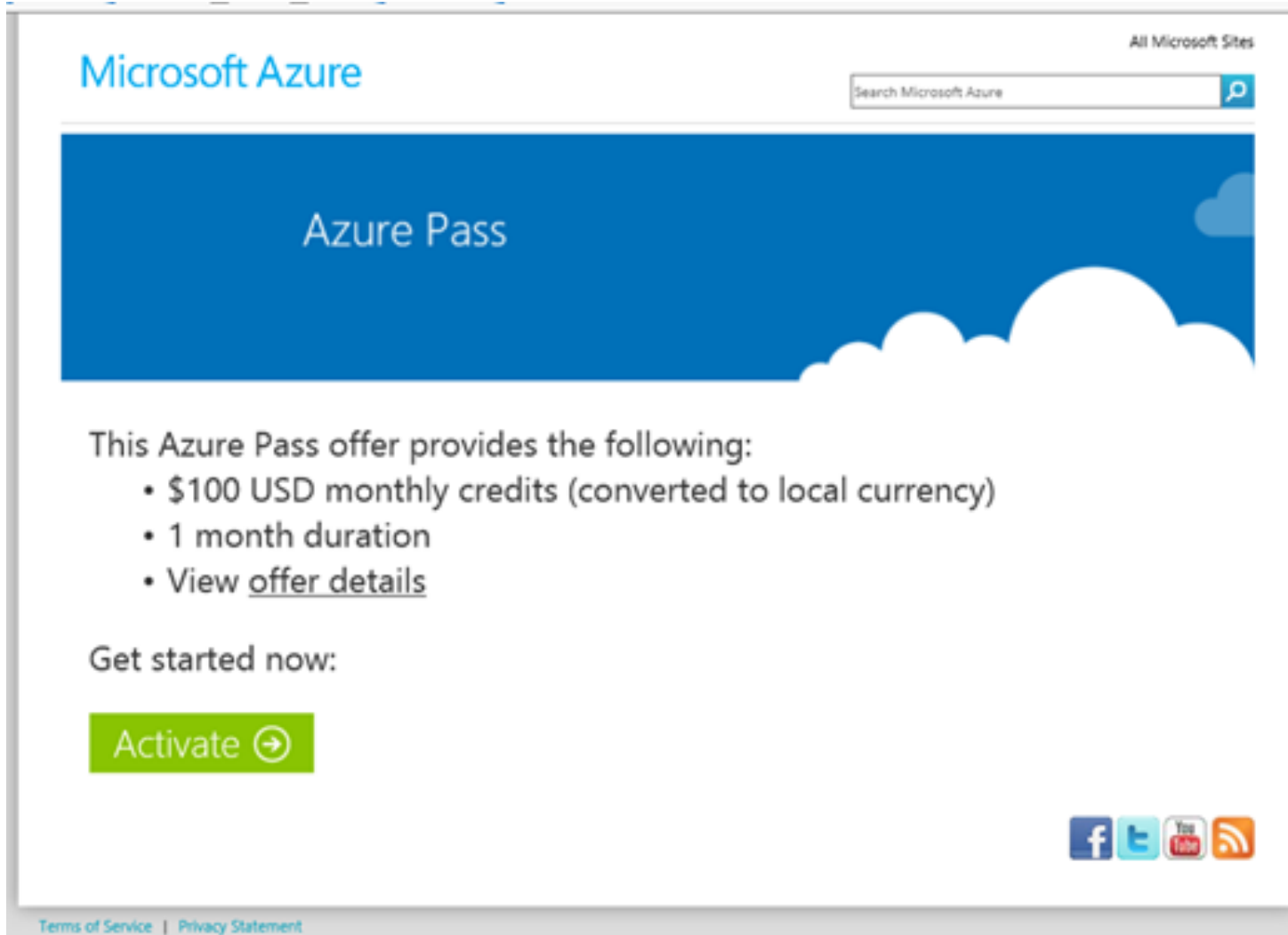


The screenshot shows the Microsoft Azure registration page. At the top left is the "Microsoft Azure" logo. At the top right is a search bar labeled "Search Microsoft Azure" with a magnifying glass icon. Below the header, a large box contains the instruction "Fill out the remaining information, then click submit." followed by a form with the following fields:

- First Name\*: Ed
- Last Name\*: Donahue
- Microsoft account\*: ed\_eventdesk\_azcreditpass@outlook.co (with an information icon)
- Phone\*: (empty)
- Company\*: (empty)

Below the form fields is a checkbox labeled "I would like to be contacted by Microsoft regarding Microsoft Azure developer offers and campaign." which is currently unchecked. At the bottom right of the form is a blue "Submit" button with a right-pointing arrow icon.

## 4. Review the Azure Pass offer and click "Activate."



The screenshot shows the Microsoft Azure website with a prominent blue banner for the "Azure Pass" offer. Below the banner, a list of benefits is provided, followed by a green "Activate" button with a right-pointing arrow. The page includes a search bar, social media icons, and links to the Terms of Service and Privacy Statement.

Microsoft Azure

All Microsoft Sites

Search Microsoft Azure

### Azure Pass

This Azure Pass offer provides the following:

- \$100 USD monthly credits (converted to local currency)
- 1 month duration
- View [offer details](#)

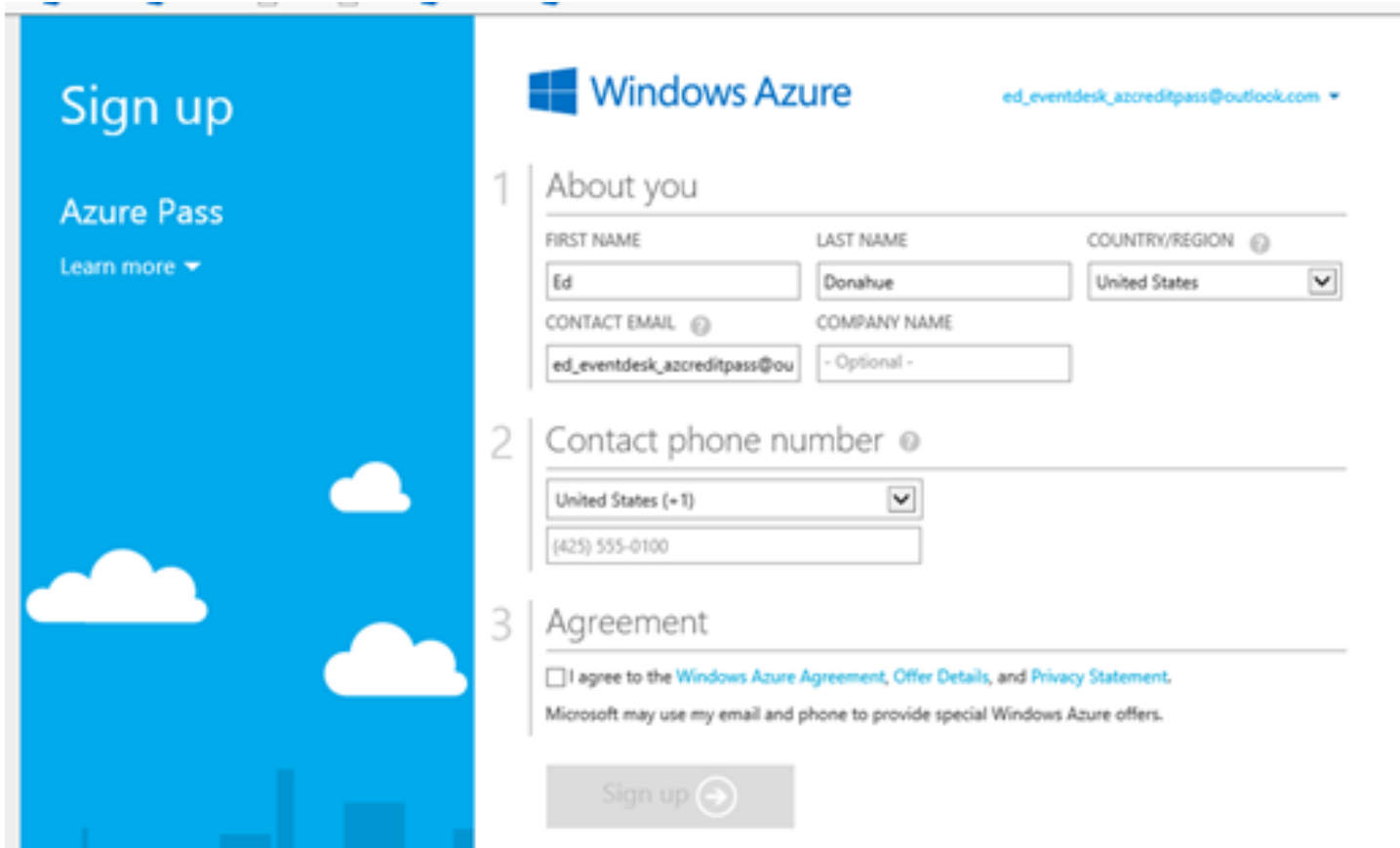
Get started now:

[Activate](#) ➔

[f](#) [t](#) [YouTube](#) [RSS](#)

[Terms of Service](#) | [Privacy Statement](#)

5. Fill out the rest of the required information and click "Sign up."



The screenshot shows the Windows Azure sign-up interface. On the left, a blue sidebar contains the text "Sign up", "Azure Pass", and a "Learn more" link with a dropdown arrow. The main content area is white and features the Windows Azure logo and the user's email address "ed\_eventdesk\_azcreditpass@outlook.com". The form is divided into three numbered sections: 1. "About you" with fields for First Name (Ed), Last Name (Donahue), Country/Region (United States), Contact Email (ed\_eventdesk\_azcreditpass@ou), and Company Name (- Optional -). 2. "Contact phone number" with a dropdown for country (United States (+1)) and a text field for the number ((425) 555-0100). 3. "Agreement" with a checkbox for terms and conditions, a link to the full agreement, and a statement about Microsoft's use of contact information. A "Sign up" button with a right arrow is at the bottom.

**Sign up**

Azure Pass  
Learn more ▼

**Windows Azure** ed\_eventdesk\_azcreditpass@outlook.com ▼

1 About you

FIRST NAME LAST NAME COUNTRY/REGION ⓘ

Ed Donahue United States ▼

CONTACT EMAIL ⓘ COMPANY NAME

ed\_eventdesk\_azcreditpass@ou - Optional -

2 Contact phone number ⓘ

United States (+1) ▼

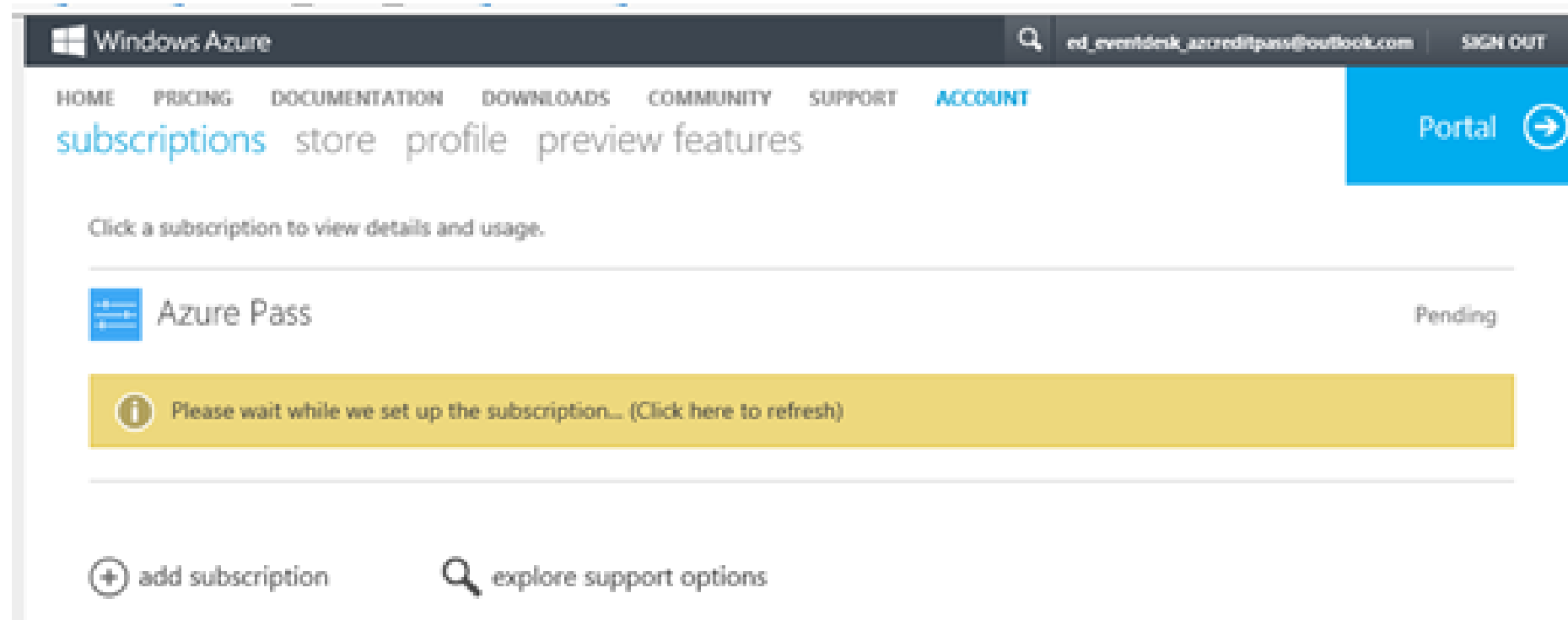
(425) 555-0100

3 Agreement

☐ I agree to the [Windows Azure Agreement](#), [Offer Details](#), and [Privacy Statement](#).  
Microsoft may use my email and phone to provide special Windows Azure offers.

Sign up →

6. The subscription will take 3-10 minutes to activate.



7. Once activated, you will be redirected to the summary page

The screenshot displays the Windows Azure account management interface. At the top, the navigation bar includes links for HOME, PRICING, DOCUMENTATION, DOWNLOADS, COMMUNITY, SUPPORT, and ACCOUNT. The ACCOUNT section is expanded, showing links for subscriptions, store, profile, and preview features. A blue 'Portal' button with a right arrow is located in the top right corner. The main heading is 'Summary for Azure Pass'. Below this, there are two tabs: 'OVERVIEW' (selected) and 'BILLING HISTORY'. The 'OVERVIEW' tab shows a green progress bar representing the \$100.00 credit, with a 'Pricing calculator' link below it. A note states 'Your monthly credit expires on 11/12/2014.' and a message says 'You have not used any services recently with this subscription.' To the right, the 'SUBSCRIPTION STATUS' section shows '30 days left' and '\$100 credits remaining\*'. Below this is a green button labeled 'Remove spending limit' with a right arrow. The 'NEXT BILL (ESTIMATED):' section shows '\$0.00', and the 'DATE PURCHASED' is listed as '10/13/2014'.

Windows Azure

ed\_eventdesk\_azcreditpass@outlook.com SIGN OUT

HOME PRICING DOCUMENTATION DOWNLOADS COMMUNITY SUPPORT ACCOUNT

subscriptions store profile preview features

Portal →

## Summary for Azure Pass

OVERVIEW BILLING HISTORY

\$100.00

\$0.00 \$100.00

Your monthly credit expires on 11/12/2014.

Pricing calculator

You have not used any services recently with this subscription.

SUBSCRIPTION STATUS

30 days left

\$100 credits remaining\*

Remove spending limit →

NEXT BILL (ESTIMATED):

\$0.00

DATE PURCHASED

10/13/2014

# Power BI Resources

## Custom Visuals in Power BI

<https://app.powerbi.com/visuals/info#use>

## On Line Learning

<https://powerbi.microsoft.com/en-us/documentation/powerbi-sample-datasets/>

<https://www.edx.org/course/analyzing-visualizing-data-power-bi-microsoft-dat207x-1>

## London Power BI User Group

<http://www.meetup.com/London-PUG/>

## Chris Webb on Power BI

<https://blog.crossjoin.co.uk/>





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