Get Smart: Power BI
Any Data * Any Way * Any Where

NJAMHAA IT Conference, May 29, 2019
Jerome Scriptunas, LSW and Amanda Thompson, LSW
Get PBI: What is Power BI?

➢ Get PBI
➢ Get Set
➢ Get Smart

What is Power BI? – self-service business intelligence platform; cloud-analytics service

Power BI - business analytics service that delivers insights to enable fast, informed decisions
- Transform data into stunning visuals and share them with colleagues on any device.
- Visually explore and analyze data—on-premises and in the cloud—all in one view.
- Collaborate on and share customized dashboards and interactive reports.
- Scale across your organization with built-in governance and security.

Power BI is a business analytics solution that lets you visualize your data and share insights across your organization or embed them in your app or website. Connect to hundreds of data sources & bring your data to life with live dashboards & reports.

https://powerbi.microsoft.com/en-us/what-is-power-bi/


https://docs.microsoft.com/en-us/learn/browse/?products=power-bi ➙ Try this if new to PBI
Why
- Organizational shift
- Data mindfulness, data quality
- Meaningful use of data

Uses
- Sample data via Obvience.com
- Demographics, Operations, Agency site
- Billing Snapshot, Provider Management
- Provider Management
- Practice Evaluation
- Statewide benchmarking
- Assessment data

https://www.state.nj.us/health/populationhealth/opioid/opioid_njsams.shtml
http://www.communitydataroundtable.org/reports/

Get PBI: More to See with Data Visualization

- 8 sets of sample data. Analysis Samples for:
  - Customer, HR,
  - IT, Opportunity,
  - Procurement, Retail,
  - Sales, Supplier.
- Each set includes (left nav panel):
  - Dashboard, Report, Dataset

Practice Data Sets [Dashboard, Report, Dataset]
https://docs.microsoft.com/en-us/power-bi/sample-datasets
https://docs.microsoft.com/en-us/power-bi/sample-financial-download

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Get Power BI

Get PBI Account from [www.powerbi.com](http://www.powerbi.com)
- Power BI Free
- Power BI Pro
- Power BI Premium
- Add PBI to Office 365

Get PBI Desktop and PBI Mobile from the Microsoft Store

[Power BI Desktop](https://microsoft.com)
[Power BI Mobile](https://microsoft.com)
Get PBI: Data to Insights
Power BI/Power BI Pro & Power BI Desktop work as standalone tools. Their capabilities are enhanced when used with Office 365.
Get Set: *Examples*

**Get Data**
- Local, Office 365, Cloud …
- CSV, SharePoint List, web page …
- Data Source Setting
- Query Editor
- Clean, Model

**Make**
- Relationships
- Visualizations
- Pages
- Slicers, Filters
- M, DAX

**Share**
- Workspaces
- Publish to Service
- Publish to Web
- Embed in SharePoint Online
- Dashboard
- Kiosk

➢ Get PBI
➢ Get Set
➢ Get Smart
Some PBI Tools used in Examples

Data source settings
Manage settings for data sources that you have connected to using Power BI Desktop.

- Data sources in current file
- Global permissions

Select data source settings

- https://wraparound.sharepoint.com/
- https://wraparound.sharepoint.../NJ1169_LSPCycleTime_AdHoc.csv
- https://wraparound.sharepoint.../NJ1209_CMO_Census.csv
- https://wraparound.sharepoint.../NJ001_CMO_D8_CommsOOh_CIAAC.csv
- https://wraparound.sharepoint.../NJ3002_demographics.csv
- https://wraparound.sharepoint.../NJ3002_demographics-CIAAC.csv

New measure
- New column
- New quick measure
- Refresh data
- Edit query
- Rename
- Delete
- Hide
- Mark as date table
- View hidden
- Unhide all
- Collapse all
- Expand all
- Properties

File Home Transform Add Column View Help

Column From Custom Invoke Custom Function
- Conditional Column
- Index Column
- Duplicate Column

Transform
- Merge Columns
- Extract
- Format
- Statistics
- Standard
- Scientific
- Rounding
- Information

Date Time Duration
PBI Example Walkthrough: Create Report

2019: Out of Home
- (Blank): 51 (6%) (3%)
- BH: 24
- DD: 2
- SU: 803 (91%)

2019: Developmental Disability Eligibility
- N/A: 217 (25%)
- Eligibility Pending: 26 (3%)
- Eligible: 637 (72%)

2019: Youth Enrolled with CMO & DCPP
- DCPP: 104 (12%)
- Not DCPP: 776 (88%)

2018: Out of Home
- (Blank): 43 (6%) (3%)
- BH: 23
- DD: 2
- SU: 685 (91%)

2018: Developmental Disability Eligibility
- N/A: 221 (29%)
- Eligibility Pending: 14 (2%)
- Eligible: 520 (69%)

2018: Youth Enrolled with CMO & DCPP
- DCPP: 115 (15%)
- Not DCPP: 640 (85%)
Get Set: from Data to Report to Sharing

<table>
<thead>
<tr>
<th>Get Data</th>
<th>Make Visuals for Report</th>
<th>Share Report, Dashboard, Embed</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Connect to data</td>
<td>• Visualizations, maps …</td>
<td>• PBI Administration</td>
</tr>
<tr>
<td>SharePoint Online</td>
<td>• Query Editor, M Expressions</td>
<td>• PBI Mobile</td>
</tr>
<tr>
<td>CSV, spreadsheet</td>
<td>• Advanced Editor</td>
<td>• PBI Home</td>
</tr>
<tr>
<td>many other sources</td>
<td>• Add Columns</td>
<td>• Annotate, comment</td>
</tr>
<tr>
<td>• Establish relationships</td>
<td>• Transform Data</td>
<td>• Ask a Question</td>
</tr>
<tr>
<td>• Merge data</td>
<td>• Change Data Type</td>
<td>• Row Level Security</td>
</tr>
<tr>
<td>• Append data</td>
<td>• Pages and Page layout</td>
<td>• Workspaces</td>
</tr>
<tr>
<td>• Data view</td>
<td>• Add Index</td>
<td>• Schedule refresh</td>
</tr>
<tr>
<td>• Quick Insights (PBI.com)</td>
<td>• Combine columns</td>
<td>• Change settings</td>
</tr>
<tr>
<td>• Desktop Options, Preview Features</td>
<td>• Split, format columns</td>
<td>• Print report page</td>
</tr>
<tr>
<td></td>
<td>• Hide columns</td>
<td>• Export to PDF</td>
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<tr>
<td></td>
<td>• Conditional formatting</td>
<td>• Export to PPT</td>
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<td>• Sync slicers</td>
<td>• Embed to site</td>
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<td></td>
<td>• Disable drilldown</td>
<td>• Featured &amp; Favorite reports, dashboards</td>
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<tr>
<td></td>
<td>• Bookmarks</td>
<td>• Export PBIT (template)</td>
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<td></td>
<td>• Themes</td>
<td>• Save a Copy</td>
</tr>
<tr>
<td></td>
<td>• Measures, Columns, DAX</td>
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</table>
Power BI: Get Smart

- Get PBI
- Get Set
- Get Smart - Use PBI
  - Suggestions
  - Resources
<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
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<th>Comm. Involve</th>
<th>Optimism</th>
<th>Rel. Stability</th>
<th>Resiliency</th>
<th>Spiritual</th>
<th>Youth Involve w/Care</th>
<th>CG Optimism</th>
<th>CG Resourcefulness</th>
<th>CG Knowl. Youth Strengths</th>
<th>CG Involve w/Care</th>
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<th>Logs</th>
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Service: Create Power BI account
Desktop: Install Power BI Desktop
Desktop: GET Data - Query, Clean, Load
Desktop: Model Data, Relationships
Desktop: MAKE Visuals, Pages, Report
Desktop to Service: Publish Report-Pages

Service: Create Dashboard & Tiles
Service: SHARE Report-Dashboard
Service & Mobile: View Power BI
Desktop, Service or Gateway: Refresh Data
Service: Publish to web, Pin, Print, embed

Create PBI account: use work or edu e-mail
Install PBI Desktop (Windows)
GET Data: query, …, clean, load
Model data, relations
MAKE visuals, pages, report
Publish Report to PBI Svc
Create Dashboard And Tiles
SHARE Report, Dashboard
View on Devices – Make better decisions

PBI walkthrough: step by step
PBI Reminders

Things you can do with PBI

- Heat Maps
- Quick Insights
- Quick Measures
- KPI
- Custom Visuals
- Random Function
- Cardinality
- Alerts
- Publish (embed) to Web & SharePoint Online
- Export or print to PDF
- Row Level Security
- Date Hierarchy, Drill down
- Templates

- Query Editor (M) vs DAX
  - https://docs.microsoft.com/en-us/power-bi/refresh-data
  - https://docs.microsoft.com/en-us/power-bi/guided-learning/modeling

- Power BI in Your Organization

- Row Level Security,

- Power BI Administration,
  - https://docs.microsoft.com/en-us/power-bi/service-admin-administering-power-bi-in-your-organization
Microsoft Links


Microsoft Learning & Documentation

- https://docs.microsoft.com/en-us/power-bi/
- https://docs.microsoft.com/en-us/power-bi/guided-learning/gettingstarted
- https://docs.microsoft.com/en-us/power-bi/service-basic-concepts

Power BI Support & Community

- https://community.powerbi.com/
- https://www.pbiusergroup.com/home
- https://www.facebook.com/groups/powerbi/

Power BI User Group for Central New Jersey
https://www.pbiusergroup.com/centralnj

May 29, 2019
**M Expressions**, which are defined in **Query Editor**

M function, = LastYearStartDate()

let

  CurrentDate = DateTime.LocalNow(),
  LastYear = Number.ToText(Date.Year(CurrentDate) - 1),
  CurrentMonth = Number.ToText(Date.Month(CurrentDate)),
  LastYearStart = Date.FromText(CurrentMonth & "/01" & "/" & LastYear)

in

  LastYearStart

---

**DAX Expressions**, which are defined in **PBI Desktop**

#This expression returns the last day of the previous month.

EndOfLastMonth =

  Var lastmonth = EDATE(NOW(), -1)
  Var lastmonth_eomonth = EOMONTH(lastmonth, 0)
  Return
  DATE(YEAR(lastmonth), MONTH(lastmonth), DAY(lastmonth_eomonth))

#This expression returns TRUE if the date is < beginning of previous month 1 year ago.

EnrollCMODateFlag_LastYear =

  Var LastYearDate = EDATE(NOW(), -12)
  Var LastYearBeginMonthDate = DATE(YEAR(LastYearDate), MONTH(LastYearDate), "1")
  Return
  IF (DemOpen[Enroll-CMO] < LastYearBeginMonthDate && NOT(ISBLANK(DemOpen[Enroll-CMO])), "true", "false")

---

**DAX Intro, Basics & Reference**

- https://docs.microsoft.com/en-us/power-bi/guided-learning/introductiontodax


  https://www.dropbox.com/s/k83aa0sgezk02vs/DAX%20Query.pdf?dl=0

**M is for (Data) Monkey**, download MDataMonkeyebook.pdf
  https://www.dropbox.com/s/re3nf0l9lpgiud2/MDataMonkeyeBook.pdf?dl=0
Thank You!