

Blackbaud CRM™ DEVELOPERS' CONFERENCE



Power BI for Blackbaud CRM

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Nine years

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HI!



WHY POWER BI?

Why Power BI?

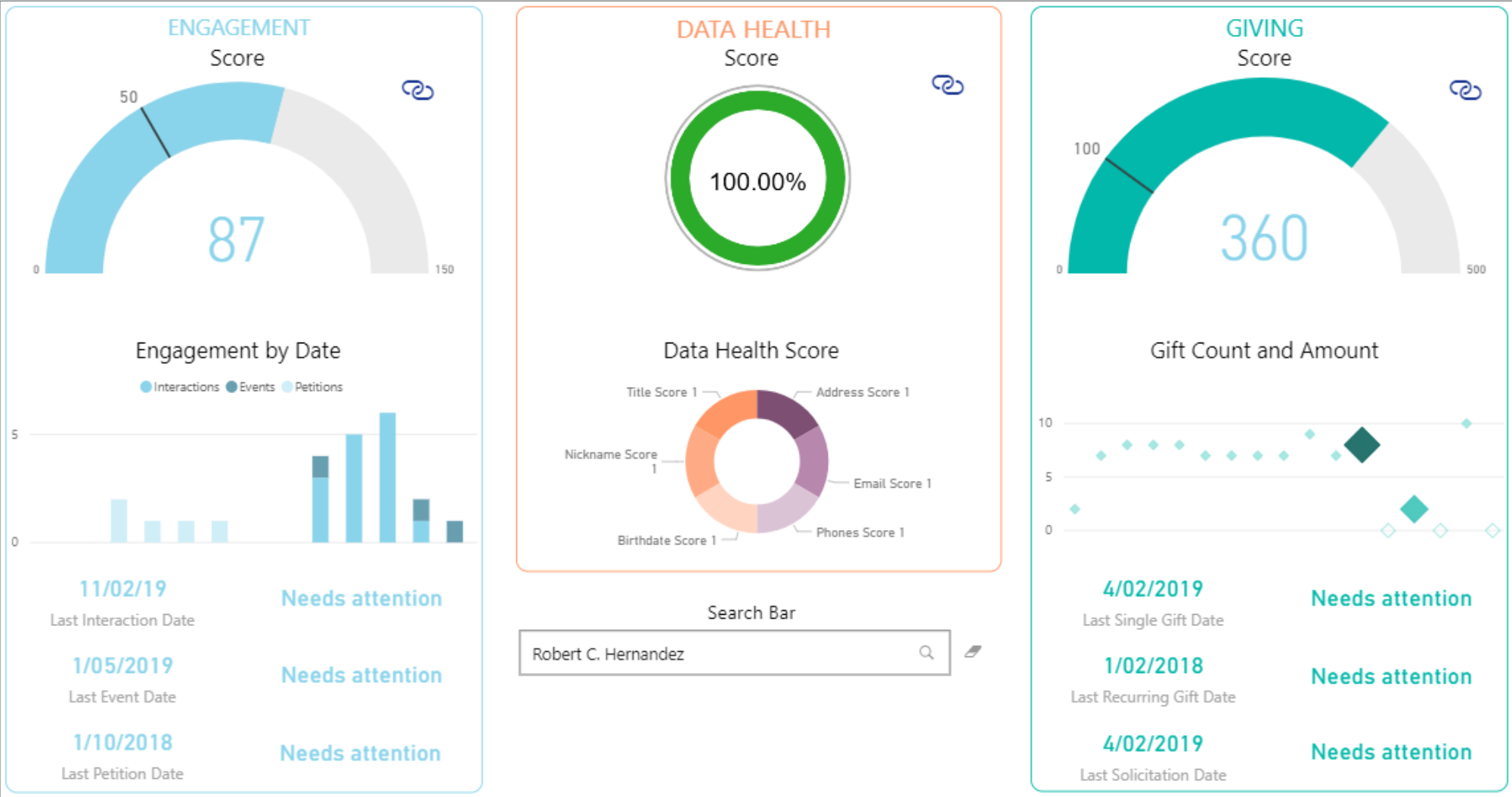
Monitor, Analyze,
Drill Through

Reference multiple source
systems for an enterprise
view

Ad hoc/Explorative
Analysis

Automated Insights

Demonstration





CONNECTION OPTIONS

Ad Hoc Query via OData

Data List via SOAP



Ad Hoc Query

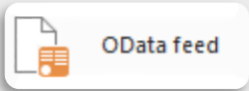
Use OData link to copy query results into Power BI.


OData

Build Ad-hoc Query

Get OData Link

Paste OData Link into
PBI's OData Source



Information library

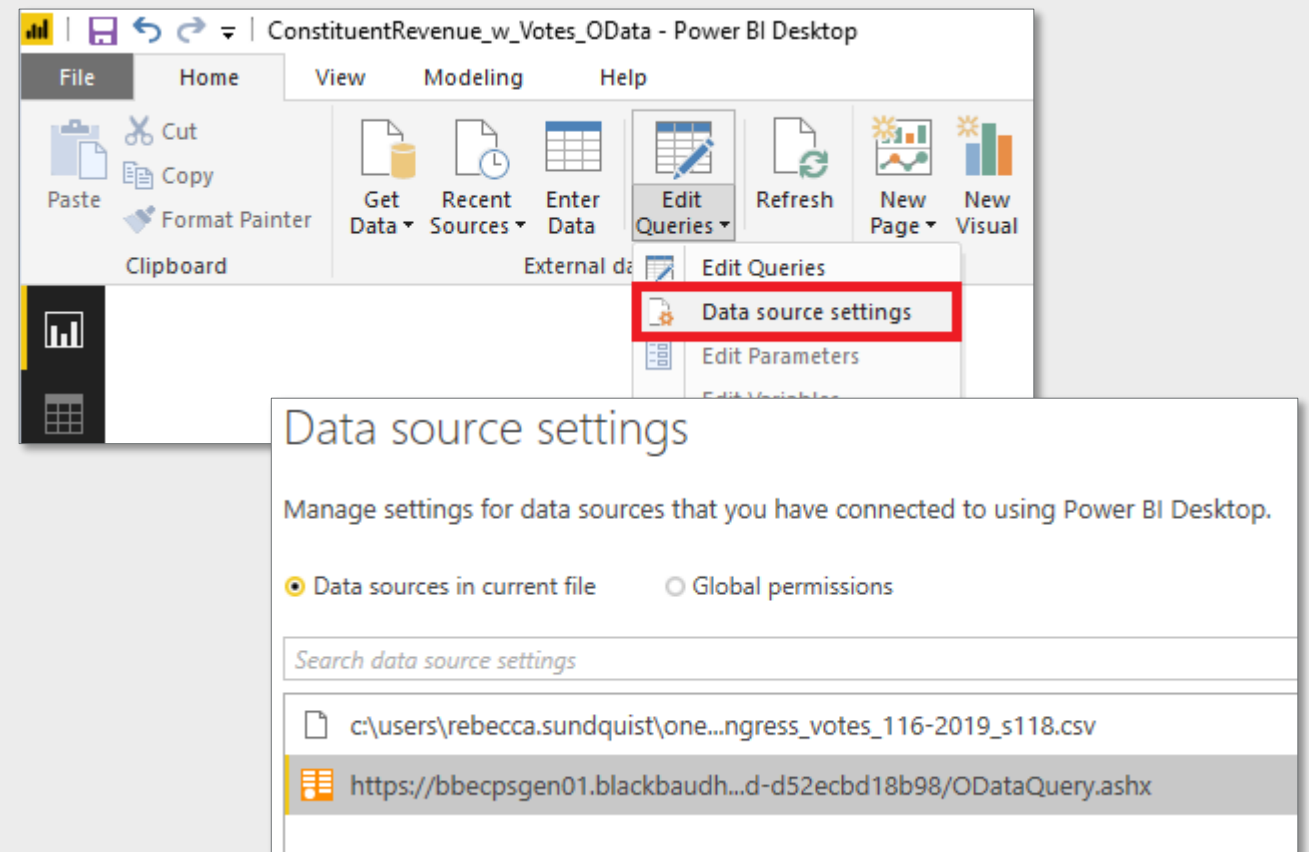
Ad-hoc Query: Revenue Basic

Name:	Revenue Basic	Owner:	rebeccasu5740PSSand	OData:	Get OData link
Type:	Revenue	Source view:	Revenue		
Category:		Description:	From BBCRM for PBI		
Site:	All sites	Others can modify:	Yes		

Challenge: Swap one OData reference for another

Under **Edit Queries**, select **Data Source Settings**.

From here you can edit any of the data sources. However, you must stay within the source system (i.e. exchange one OData URL for another)



Challenge: Filter the data flowing into Power BI

1. Add filter to ad hoc Query - Do this if you don't need multiple filter scenarios on the same data source.
2. OR use a Data List and pass a filter over the URL – Do this if you need to leave your ad hoc query alone, but you don't want to pull all the query's records into Power BI.





Data List API

Use the “Data Set” URL from the Data List API options.

Allows Power BI developer to filter data list as it flows into Power BI Query.

Data List encodes data types, whereas OData requires PBI user to set up the data types in PBI

DataSet Format

Create Data List from Ad-hoc Query

Copy DataSet Format URL for use in Power BI

Paste URL into PBI's Web data source



Data List: Revenue Basic

System record ID:

c51ed248-c46e-486c-b501-206b7d8a9244

Description:

Power BI Test connection

Author:

CDEV\rebeccasu5740PSSand

Date added:

6/1/2019 9:41:08 PM

Date changed:

6/1/2019 9:50:44 PM

User defined:

Yes

Context record type:

Implementation:

SP (USP_DATA LIST_ADHOC QUERY_C51ED248_C46E_486C_B501_206B7D8A9244)

Security folder:

Query\User-defined Data Lists

Installed products:

Installed:

Yes

Output Fields

Page References

Dashboard References

API

BizOp API

BizOp SOAP Url:

cdevloginps.blackbaudhosting.com/Links.aspx?siteinfoID=47776f78-6acc-447a-99dd-d52ecbd18b98&databaseID=6878149e-56f8-4aef-95b8-d9c266ff7f57&target=vpp/bizops/db[5740PSSand]/dataLists/c51ed248-c46e-486c-b501-206b7d8a9244/soap.asmx

Data list service

CSV format:

cdevloginps.blackbaudhosting.com/Links.aspx?siteinfoID=47776f78-6acc-447a-99dd-d52ecbd18b98&databaseID=6878149e-56f8-4aef-95b8-d9c266ff7f57&target=util/DataList.ashx?DatabaseName=5740PSSand&dataListID=c51ed248-c46e-486c-b501-206b7d8a9244&format=csv

DataSet format:

cdevloginps.blackbaudhosting.com/Links.aspx?siteinfoID=47776f78-6acc-447a-99dd-d52ecbd18b98&databaseID=6878149e-56f8-4aef-95b8-d9c266ff7f57&target=util/DataList.ashx?DatabaseName=5740PSSand&dataListID=c51ed248-c46e-486c-b501-206b7d8a9244&format=dataset

XML format:

cdevloginps.blackbaudhosting.com/Links.aspx?siteinfoID=47776f78-6acc-447a-99dd-d52ecbd18b98&databaseID=6878149e-56f8-4aef-95b8-d9c266ff7f57&target=util/DataList.ashx?DatabaseName=5740PSSand&dataListID=c51ed248-c46e-486c-b501-206b7d8a9244&format=xml

Reply format:

cdevloginps.blackbaudhosting.com/Links.aspx?siteinfoID=47776f78-6acc-447a-99dd-d52ecbd18b98&databaseID=6878149e-56f8-4aef-95b8-d9c266ff7f57&target=util/DataList.ashx?DatabaseName=5740PSSand&dataListID=c51ed248-c46e-486c-b501-206b7d8a9244&format=reply

Filter Data List



PBI **Web** data source allows users to set up **Advanced XML** options in order to pass **URL parts** to the BBCRM Data List

&FieldName=FieldValue

Data source settings

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

☒ Data sources in current file ☐ Global permissions

https://bbecpsgen01.blackbaudh...52ecbd18b98/util/DataList.ashx

From Web

☐ Basic ☒ Advanced

URL parts ⓘ

https://bbecpsgen01.blackbaudhosting.com

&TransactionType=Payment

Add part

URL preview

https://bbecpsgen01.blackbaudhosting.com/5740PSSand_47776f78-6acc-44

Command timeout in minutes (optional)

HTTP request header parameters (optional) ⓘ

Enter or select a value

Add header

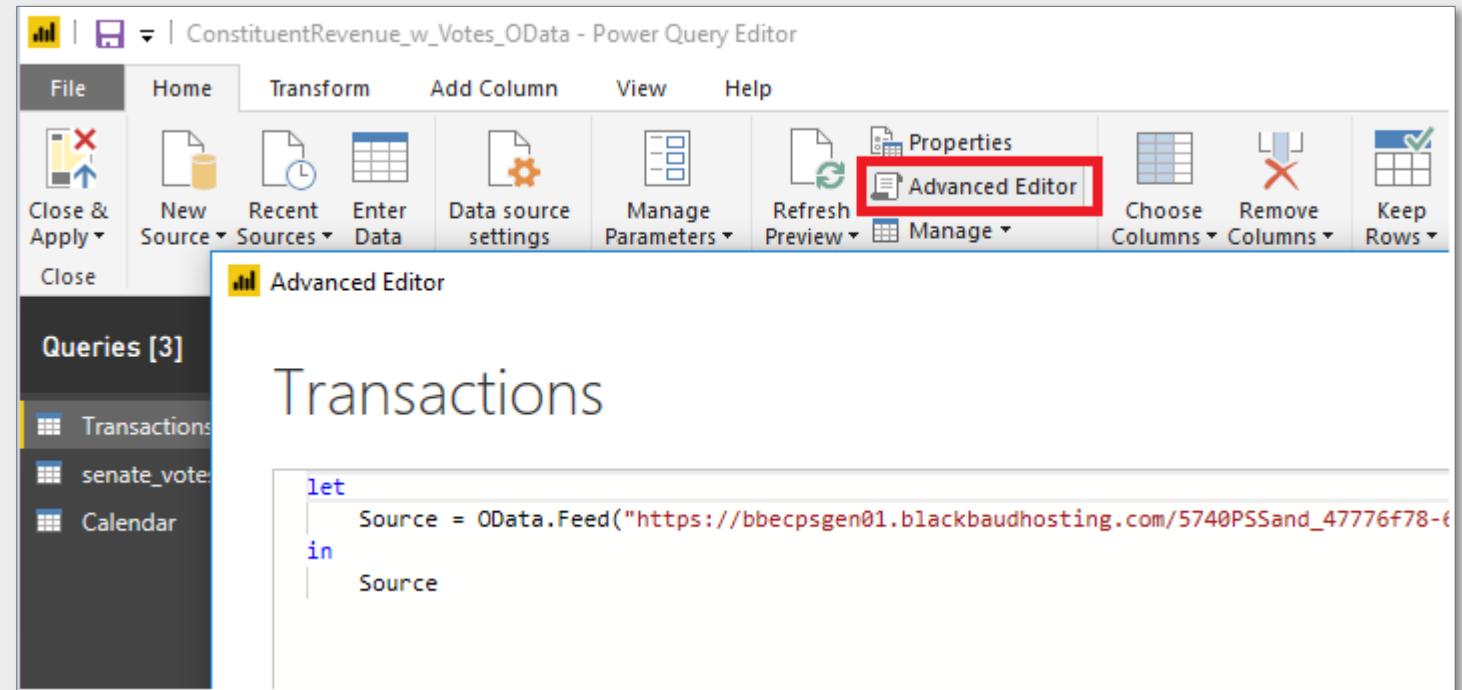
Change

OK

Cancel

Challenge: Switch from one type of data source to another

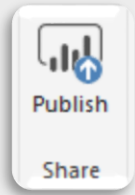
In **Power Query Editor**, use the **Advanced Editor** to swap the data source syntax





PUBLISH TO POWER BI SERVICE

Power BI Tenant



Publish the report to Power BI Service

Microsoft licenses are required to view Power BI Content:

Content consumers have Power BI Pro licenses

OR report is assigned capacity through Power BI Premium license, allowing access to large scale user bases

Refresh Settings



BBCRM Credentials



Schedule refresh for the published dataset

GeneralDashboards**Datasets**WorkbooksAlertsSubscriptions

AppendQuery_NewCommitmentsNewCash
Customer Catalog Requests table
GDP Americas
JIRA
Opportunities_DataList_Connection

Settings for Opportunities_DataList_Connection

Last refresh succeeded: Tue May 28 2019 00:16:22 GMT-0500 (Central Daylight Time)
Next refresh: Wed May 29 2019 00:00:00 GMT-0500 (Central Daylight Time)
[Refresh history](#)

► Gateway connection

◀ Data source credentials

Web **Edit credentials**

► Parameters

◀ Scheduled refresh

Keep your data up to date
☒ On

Refresh frequency
Daily ▼

Time zone
(UTC-06:00) Central Time (US and Canada) ▼

Time
[Add another time](#)

☒ Send refresh failure notifications to the dataset owner

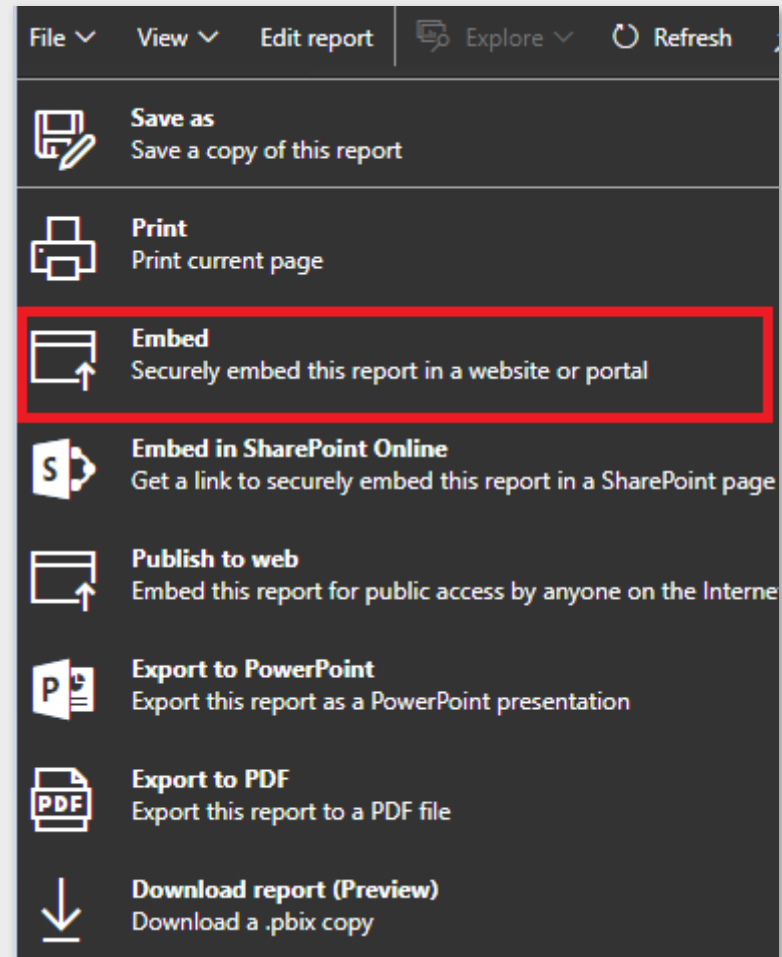
Apply Discard



EMBEDDING POWER BI

Embed

In Power BI Service, grab the Embed code from the report's File Menu



Create Section

Create a Section to contain
a “Custom Component”

CustomComponent =

Blackbaud.AppFx.Platform.UrlSectionClient.dll,Blackbaud.AppFx.Platform.UrlSectionClient.UrlSection

The screenshot shows the 'Edit section' dialog box with the following settings:

Section	Property	Value
Appearance	Caption	Power BI Example w Context
	CaptionResourceKey	
	HideCaption	False
	Visible	True
	HelpKey	
	SectionType	CustomComponent
	SectionDisplayStyle	Block
	Collapsible	False
	Collapsed	False
	HideRefresh	False
Custom component	CustomComponent	Blackbaud.AppFx.Platform.UrlSectionCil
	ContextType	PageContext
	Parameters	(Empty)
	ShowBorder	False

CustomComponent
Identifies the custom user component to call. Use assemblyname,classname.

OK Cancel

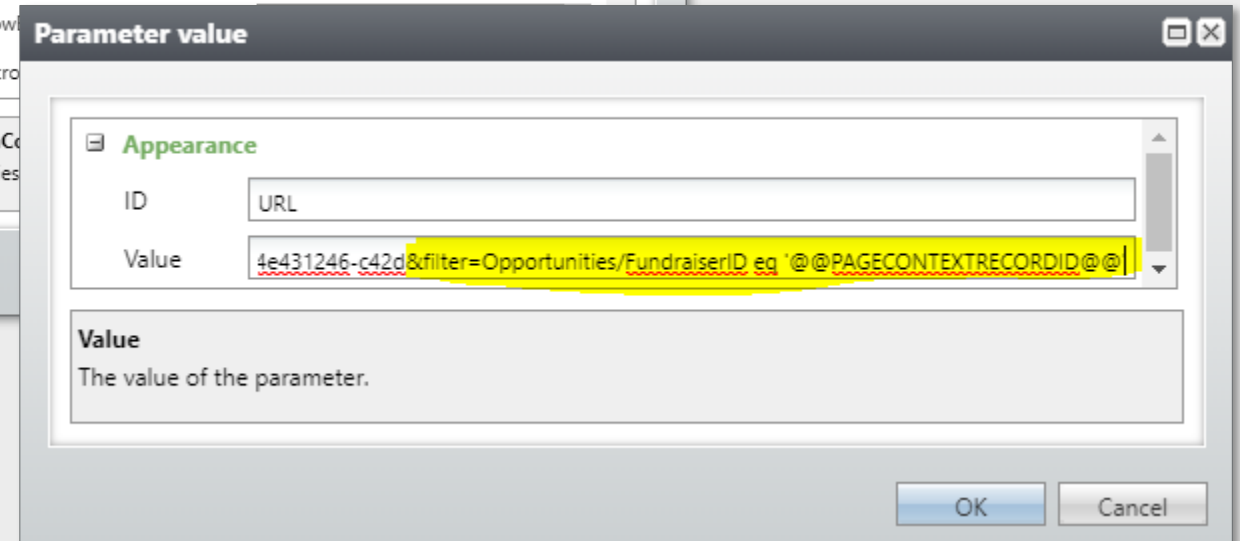
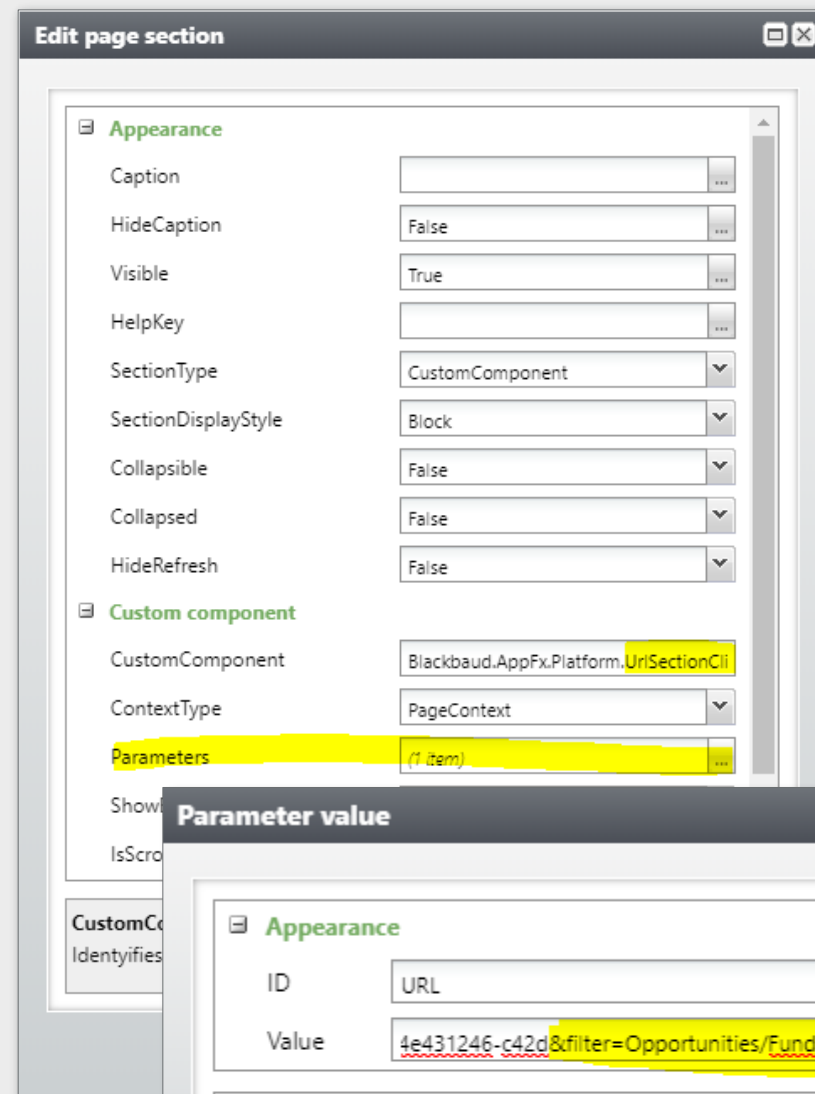
Challenge: Pass context from the BBCRM page to the Power BI report

Use the Parameters within the CustomComponent to reference the PBI embed code

Append filters to the embed code to pass context

&filter=TableName/FieldName eq '@@PAGECONTEXTRECORDID@@'

TableName/FieldName is the Power BI Query table and field



LEARN MORE



To learn more about what was included in this agenda, visit:

[Configure the Application Root URL for OData](#)

[BBCRM Get OData Link](#)

[BBCRM Data List SOAP Web Service](#)

[Microsoft Learn: Power BI](#)

[Microsoft Power BI Pricing](#)

LET'S CONNECT



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THANK YOU!

Blackbaud CRM™
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