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Unlock the potential of your Business Central data: create your first Power BI report



Chris Lindsay, Shannon Lindsay



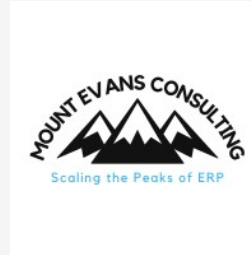
Meet your presenters

Chris Lindsay

[LinkedIn](#)

D365 BC Consultant

Mount Evans Consulting



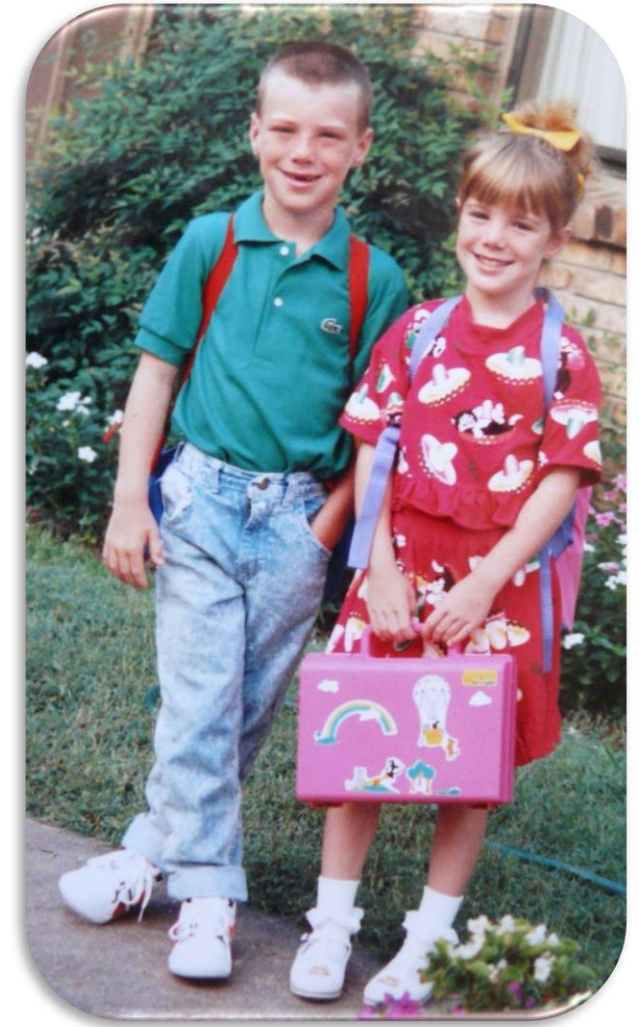
Shannon Lindsay



aka.ms/Shannon

Senior Program Manager

Power BI | Microsoft





Agenda

- Why Power BI?
- Bring Business Central data into Power BI
- Build visuals
- Share and automate
- Tips and tricks
- Resources



This session is not...

- ✗ End-to-end Power BI training
- ✗ Deep dive into data modeling
- ✗ Custom API development
- ✗ New ways to embed PBI directly into BC pages

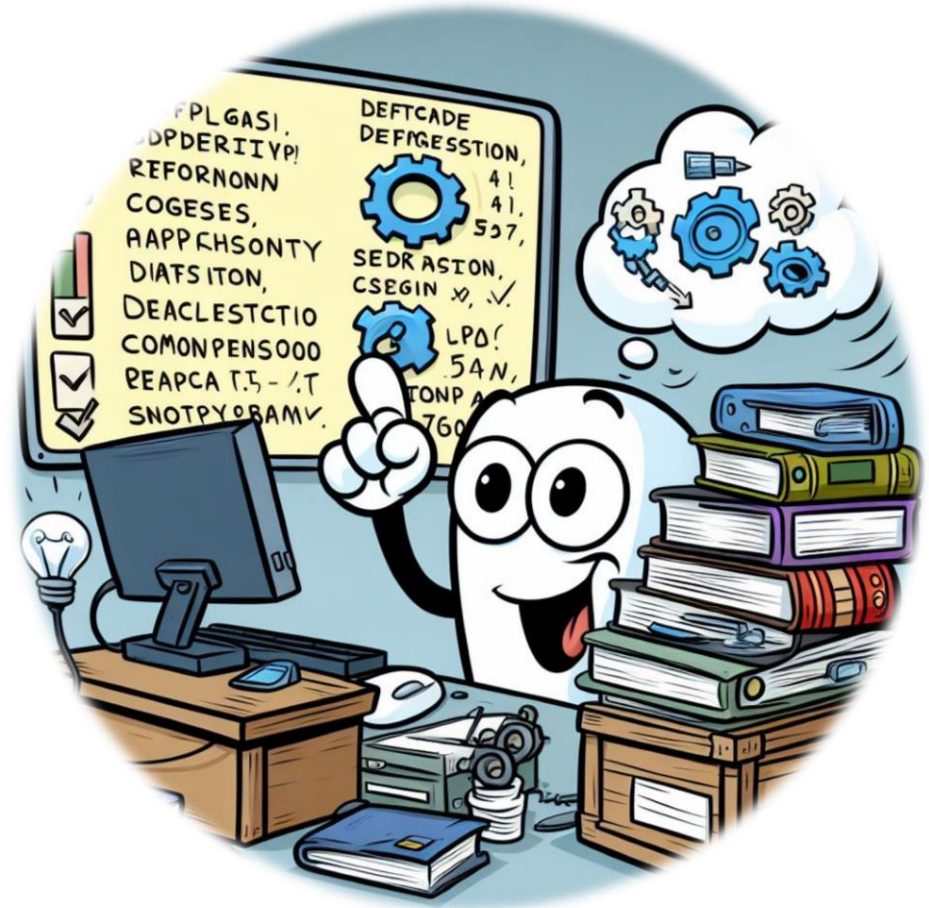


Why Power BI?

The background features a stylized landscape with a blue sky, mountains, and trees. The sky is filled with a radial pattern of lines emanating from the top center, creating a sense of depth and focus. The mountains are rendered in shades of blue and purple, and the trees are dark silhouettes. The overall aesthetic is clean and modern.

BC Reporting

- 🧡 Challenging
- 🧙 Requires Excel wizardry
- 💔 Ends up with disconnected data
- 💰 ISV Reporting Solutions – Jet or Cosmos



With Power BI you can:



Connect directly to BC (and bring in other data)



Effectively **visualize** your data



Share insights in BC or Power BI



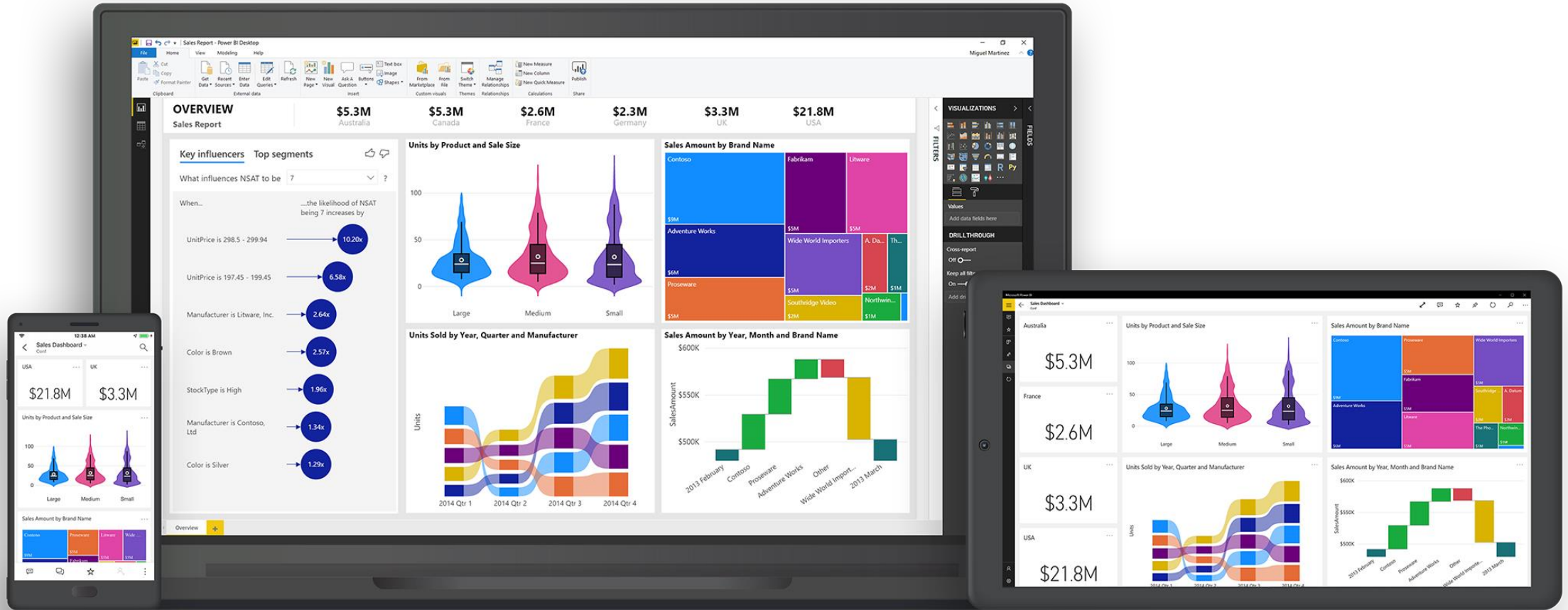
Keep **data up-to-date** (avoid disconnected data)



Enhance insights with Copilot

Power BI Ecosystem

Desktop



Mobile

Web

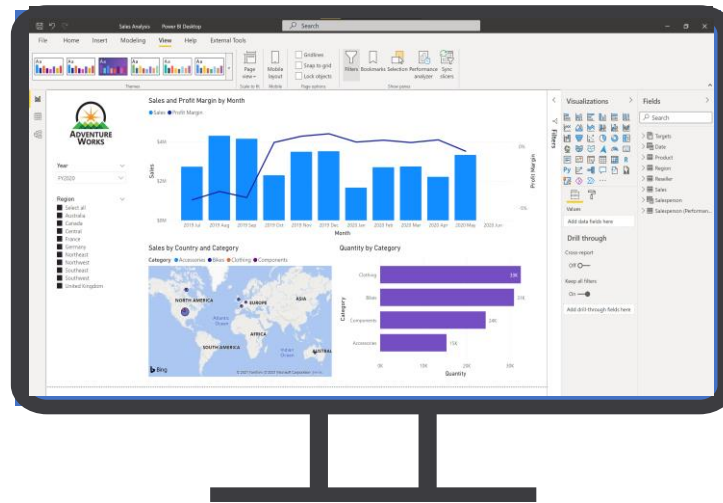


Process

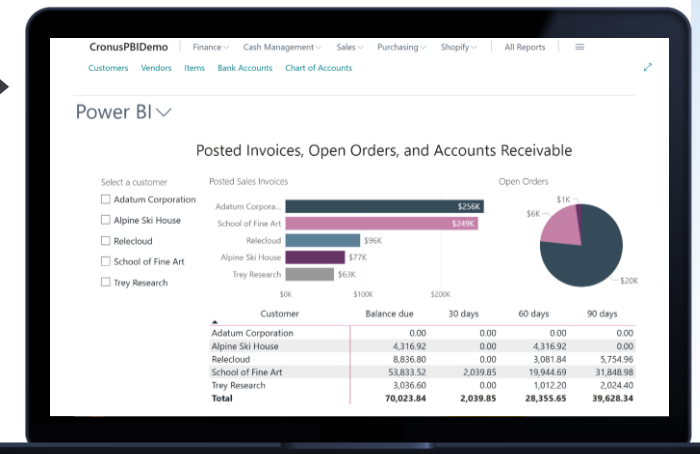
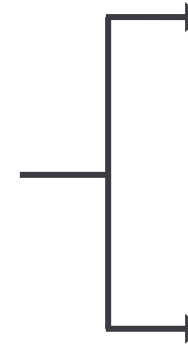
Source data



Build in Power BI




Distribute in PBI Service/
Mobile, or embed in BC



Get started

- **Download** Power BI desktop and ingest some data!
- Get data - **connect to BC**
- **Prepare data**
 - Shape, transform, and clean data for analysis
 - Join and model data from multiple data sources/types



The background features a stylized landscape illustration. The sky is a gradient of blue, with numerous thin, light blue lines radiating from the top center towards the bottom. Below the sky is a layer of light blue, rounded clouds. The middle ground consists of several layers of dark blue mountain ranges, creating a sense of depth. The foreground shows rolling hills with silhouettes of evergreen trees. The overall color palette is monochromatic, using various shades of blue.

Bring BC Data into Power BI

How to get data out of BC

- APIs (standard or custom)
- OData v4 URL
- If data isn't available in Web Services out of the box, you need to configure this in BC



Find tables in BC

CTRL + ALT + F1

The screenshot shows the Dynamics 365 Business Central interface for an Item Card. The item is 'SPK-100 · Spike for LS-100'. The 'Page Inspection' tool is open on the right, showing a list of tables used on the page. The tool highlights the 'Item (27)' table and provides a 'View table' link. Below the table list, there are sections for 'Table Fields', 'Extensions', and 'Page Filters'. The main card displays various fields for the item, including No., Description, Type, Base Unit of Measure, Last Date Modified, Inventory details (Shelf No., Quantity on Hand, Qty. on Purch. Order, Qty. on Sales Order), and Costs & Posting details (Costing Method, Posting Details).

Item

No. SPK-100
Description Spike for LS-100
Blocked
Type Inventory
Base Unit of Measure PCS
Last Date Modified 2/27/2024

Inventory

Shelf No.
Quantity on Hand 0
Qty. on Purch. Order 0
Qty. on Sales Order 0

Costs & Posting

Costing Method FIFO
Posting Details Gen. Prod. Posting Group RETAIL

Page Inspection

Page
Item Card (30, Card)
Explore page in Visual Studio Code

Table
Item (27)
View table

Table Fields | Extensions | Page Filters

No. (1, Code[20], PK)
SPK-100
Base Application

No. 2 (2, Code[20])
(Blank)
Base Application

Description (3, Text[100])
Spike for LS-100
Base Application

Search Description (4, Code[100])
SPIKE FOR LS-100
Base Application

Description 2 (5, Text[50])
(Blank)
Base Application

Assembly BOM (6, Boolean)
No
Base Application

Base Unit of Measure (8, Code[10])



Expose your BC Tables

Dynamics 365 Business Central

Environment: Sandbox24

Web Services

If you want to set up an OData connection, for performance and stability reasons consider using an API page instead. Don't show again | API documentation

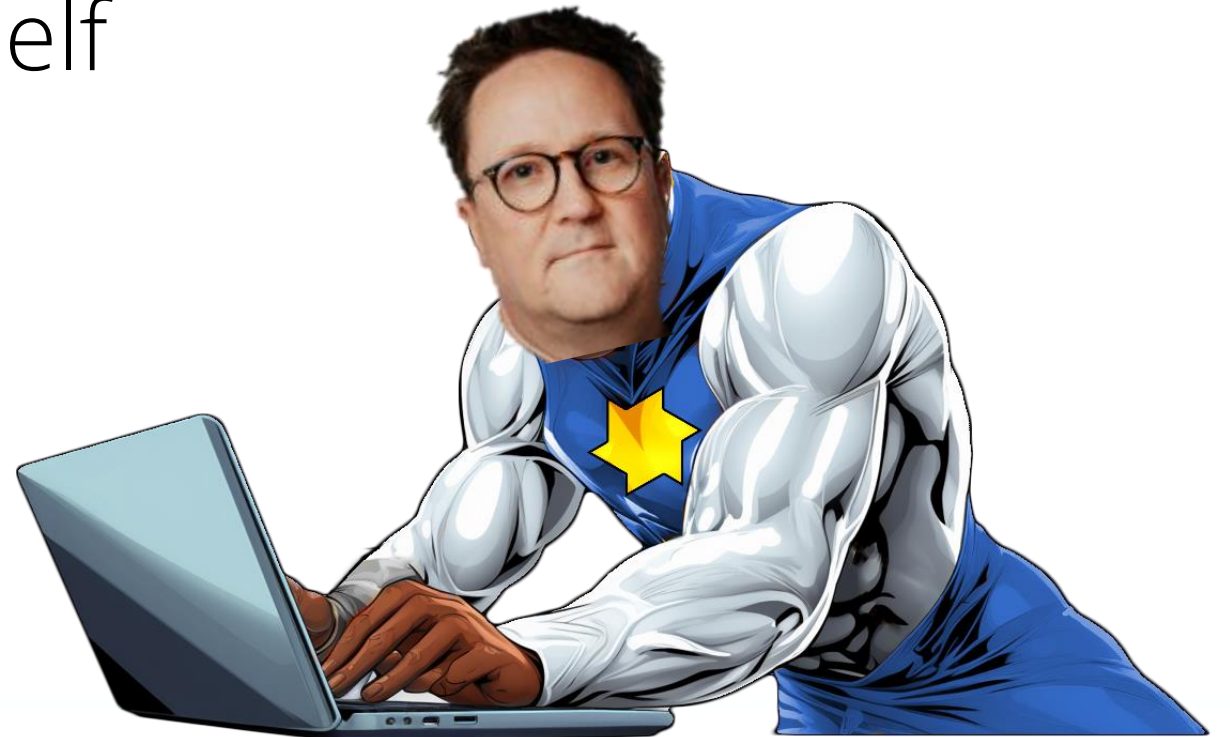
+ New Edit List Delete Reload Download Metadata Document Actions Fewer options

Object Type ↑	Object ID	Object Name	Service Name ↑	All Tenants	Published	OData V4 URL	SOAP URL
Query	62	Power BI Cust. Ledger Entries	Power BI Cust. Ledger Entries	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	50	Power BI Customer List	Power BI Customer List	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	53	Power BI GL Amount List	Power BI GL Amount List	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	58	Power BI GL Budgeted Amount	Power BI GL BudgetedAmount	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	52	Power BI Item Purchase List	Power BI Item Purchase List	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	57	Power BI Item Sales List	Power BI Item Sales List	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	54	Power BI Projects List	Power BI Jobs List	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	64	Power BI Purchase Hdr. Vendor	Power BI Purchase Hdr. Vendor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	56	Power BI Purchase List	Power BI Purchase List	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	60	Power BI Sales Hdr. Cust.	Power BI Sales Hdr. Cust.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	55	Power BI Sales List	Power BI Sales List	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	59	Power BI Top Cust. Overview	Power BI Top Cust. Overview	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	65	Vendor Item Ledger Entries	Power BI Vend. Item Ledg. Ent.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	63	Power BI Vendor Ledger Entries	Power BI Vendor Ledger Entries	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	51	Power BI Vendor List	Power BI Vendor List	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	269	Res. Ledger Entries	Res.LedgerEntries	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	101	Sales Dashboard	SalesDashboard	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	105	Sales Opportunities	SalesOpportunities	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	104	Sales Orders by Sales Person	SalesOrdersBySalesPerson	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	106	Segment Lines	SegmentLines	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	100	Top Customer Overview	TopCustomerOverview	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
Query	266	Value Entries	ValueEntries	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable
→ Query	263	Vendor Ledger Entries	VendorLedgerEntries	<input type="checkbox"/>	<input checked="" type="checkbox"/>	https://api.businesscentral.dynamics.com/v2...	Not applicable



Custom API Creation

- [Simple Object Designer](#)
- Have a dev do it
- Learn how to do it yourself





Demo

File Home Insert Modeling View Optimize Help Share

Paste Cut Copy Format painter
Clipboard

Get data Excel workbook OneLake data hub SQL Server Data Enter data Dataverse Recent sources
Data

Transform data Refresh Queries

New visual Text box More visuals Insert


New measure Quick measure Calculations

Sensitivity Sensitivity


Publish Share


Copilot Copilot

Add data to your report
Once loaded, your data will appear in the Data pane.


Import data from Excel


Import data from SQL Server


Paste data into a blank table


Use sample data

Get data from another source →

Visualizations

Build visual

Filters

Values
Add data fields here

Drill through
Cross-report Off
Keep all filters On

Add drill-through fields here

Data

Get data **AND** transform

- Transforming data is important!
- Makes data more manageable to build visuals
- Improves report performance



File Home Insert Modeling View Optimize Help External tools Share

Clipboard: Paste, Copy, Format painter

Data: Get data, Excel workbook, OneLake data hub, SQL Server, Enter data, Dataverse, Recent sources

Queries: Transform data, Refresh data

New visual

Insert: [Visual icons]


Text box, More visuals

Calculations: New calculation, New measure, Quick measure

Sensitivity, Share, Copilot

Build visuals with your data

Select or drag fields from the Data pane onto the report canvas.



Filters

Search

Filters on this page: Add data fields here

Filters on all pages: Add data fields here

Build

Suggestions: [Visual icons]

Data

Search

- agedAccountsReceivables
- customers
- salesInvoices
- salesOrders

Data: +Add data

Get your data...

The screenshot shows the Microsoft Power BI Desktop interface. The ribbon at the top includes 'File', 'Home', 'Insert', 'Modeling', 'View', 'Optimize', and 'Help'. The 'Insert' tab is active, and the 'Get data' button is highlighted with a red box. Below the ribbon, a visualization area shows a pie chart and a bar chart. A 'Get Data' dialog box is open, displaying a list of data sources. The 'Online Services' category is selected, and the following sources are listed:

- SharePoint Online List
- Microsoft Exchange Online
- Dynamics 365 Online (legacy)
- Dynamics 365 (Dataverse)
- Dynamics NAV
- Dynamics 365 Business Central**
- Dynamics 365 Business Central (on-premises)**
- Azure DevOps (Boards only)
- Azure DevOps Server (Boards only)
- Salesforce Objects
- Salesforce Reports
- Google Analytics
- Adobe Analytics
- appFigures (Beta)
- Data.World - Get Dataset (Beta)
- GitHub (Beta)

At the bottom of the dialog, there are buttons for 'Certified Connectors', 'Template Apps', 'Connect', and 'Cancel'.



Select tables

Navigator

Display Options ▾

- ▾ Dynamics 365 Business Central [3]
- ▾ PRODUCTION [2]
- ▾ CRONUS USA, Inc. [3]
 - Advanced APIs [9]
 - Standard APIs v2.0
 - ▾ Web Services (legacy) [81]
 - AccountantPortalActivityCues
 - AccountantPortalFinanceCues
 - AccountantPortalUserTasks
 - BankAccountLedgerEntries
 - C2Graph
 - Chart_of_Accounts
 - Cust_LedgerEntries
 - DimensionSetEntries
 - ExcelTemplateAgedAccountsPayable
 - ExcelTemplateAgedAccountsReceivable
 - ExcelTemplateBalanceSheet
 - ExcelTemplateCashFlowStatement
 - ExcelTemplateIncomeStatement
 - ExcelTemplateRetainedEarnings

Chart_of_Accounts

No	Name	GlFI_Code	Net
	Resale (Interim)		
10000	BALANCE SHEET		
10001	ASSETS		
10100	Checking account		
10200	Saving account		
10300	Petty Cash		
10400	Accounts Receivable		
10500	Prepaid Rent		
10600	Prepaid Insurance		
10700	Inventory		
10750	WIP Account, Finished goods		
10800	Equipment		
10900	Accumulated Depreciation		

i The data in the preview has been truncated due to size limits.

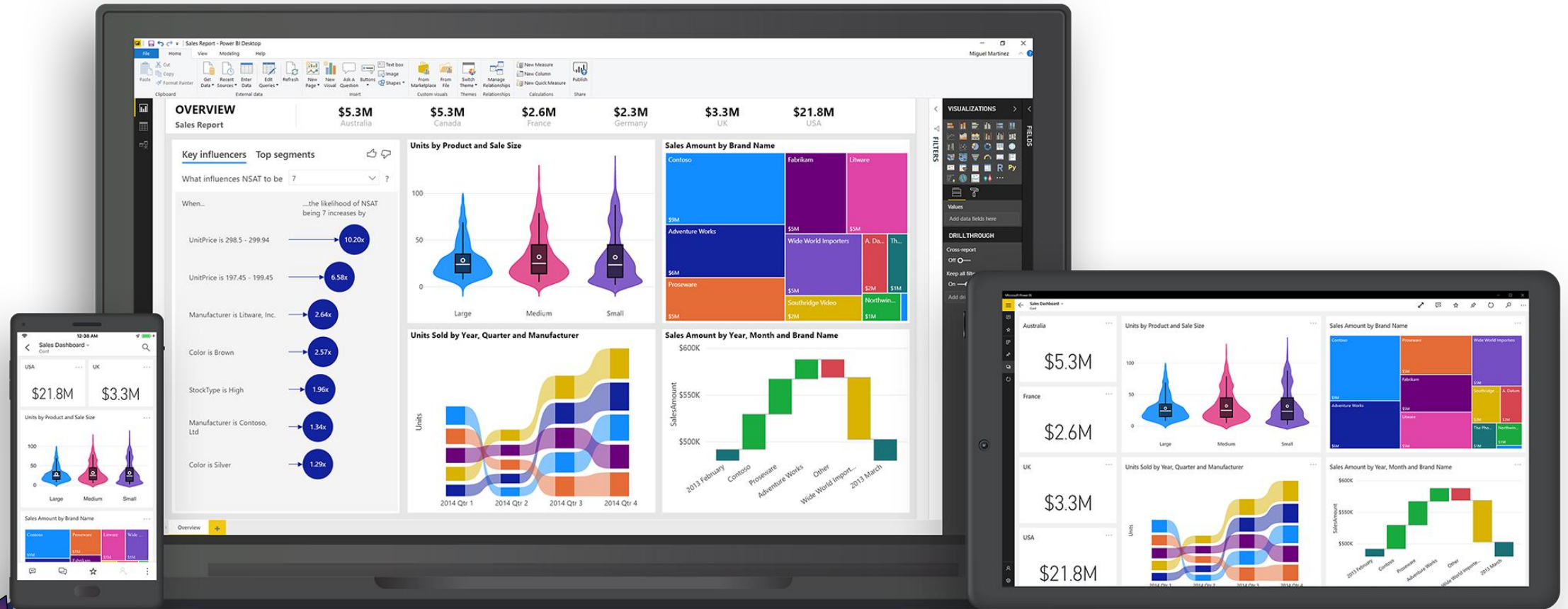
Load Transform Data Cancel



The background features a stylized landscape. The sky is a gradient of blue, with numerous thin, light blue lines radiating from the top center towards the bottom. Below the sky is a layer of light blue, rounded clouds. The mountains are depicted in various shades of blue, with darker tones for the foreground and lighter tones for the background, creating a sense of depth. In the foreground, there are silhouettes of evergreen trees on rolling hills.

Let's Get Visual

Visualize your data



agedAsOfDate Tuesday, May 14, 2024

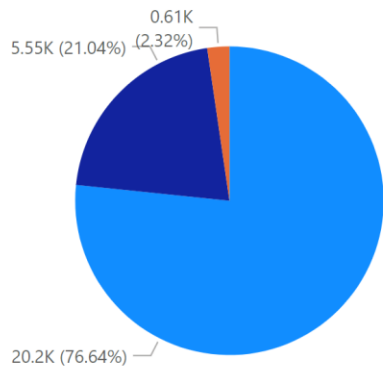
displayName Sum of balanceDue Sum of period1Amount Sum of period2Amount Sum of period3Amount

displayName	Sum of balanceDue	Sum of period1Amount	Sum of period2Amount	Sum of period3Amount
	70,023.84	5,121.69	25,273.81	39,628.34
Adatum Corporation	0.00	0.00	0.00	0.00
Alpine Ski House	4,316.92	0.00	4,316.92	0.00
Relecloud	8,836.80	3,081.84	0.00	5,754.96
School of Fine Art	53,833.52	2,039.85	19,944.69	31,848.98
Trey Research	3,036.60	0.00	1,012.20	2,024.40
Total	140,047.68	10,243.38	50,547.62	79,256.68

TOTAL A/R

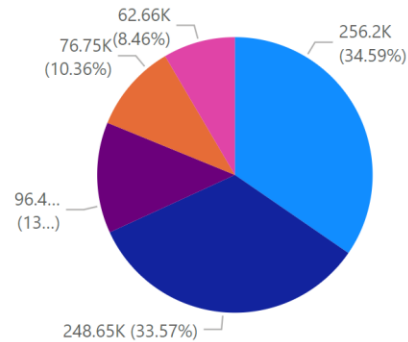
140.05K

SALES ORDERS BY CUSTOMER by displayName



displayName
● Adatum Corporation
● School of Fine Art
● Alpine Ski House

SALES INVOICES BY CUSTOMER by displayName



displayName
● Adatum Corpor...
● School of Fine Art
● Relecloud
● Alpine Ski House
● Trey Research

displayName

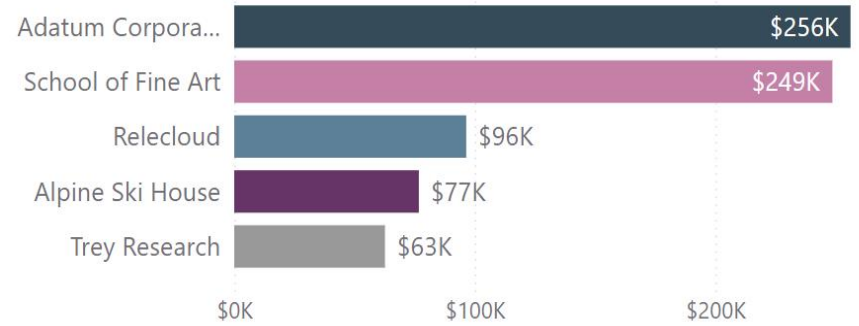
- (Blank)
- Adatum Corporation
- Alpine Ski House
- Relecloud
- School of Fine Art
- Trey Research

Cronus Inc - Posted Invoices, Open Orders, and A/R

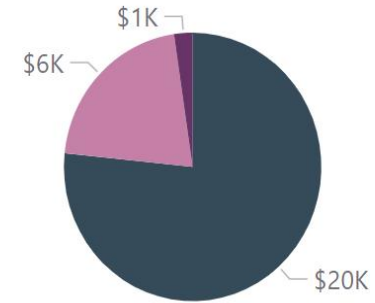
Select a customer

- Adatum Corporation
- Alpine Ski House
- Relecloud
- School of Fine Art
- Trey Research

Posted Sales Invoices



Open Orders



Customer	Balance due	30 days	60 days	90 days
Adatum Corporation	0.00	0.00	0.00	0.00
Alpine Ski House	4,316.92	0.00	4,316.92	0.00
Relecloud	8,836.80	3,081.84	0.00	5,754.96
School of Fine Art	53,833.52	2,039.85	19,944.69	31,848.98
Trey Research	3,036.60	0.00	1,012.20	2,024.40
Total	70,023.84	5,121.69	25,273.81	39,628.34





Demo

The background features a stylized landscape. The top half is a sky with a radial pattern of blue lines emanating from the center. Below the sky is a layer of white, rounded clouds. The middle section consists of several layers of blue mountains, with the foreground mountains being a darker shade of blue. The bottom section shows a silhouette of a forest of evergreen trees on a dark blue hillside.

Automate Refresh and Share Your Work

Sharing Your Masterpiece

- Publish your report!
- To keep data updated, set up automated refreshes in Power BI
- Reports are consumed in the service (powerbi.com) or in BC



Select how users will access



Business Central



Power BI

Licensing

- Get started for free today!
 - Office 365 is the base
- Power BI Pro
- Power BI Premium / Fabric
- Power BI Embedded





Demo

File Home Insert Modeling View Optimize Help External tools Share

Paste Cut Copy Format painter Clipboard

Get data Excel workbook OneLake data hub SQL Server Enter data Dataverse Recent sources Queries Transform Refresh data New visual

Insert Text box More visuals

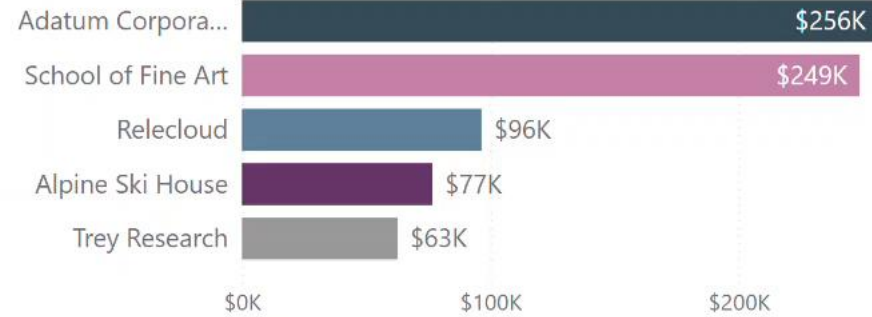
Calculations New calculation New measure Quick measure Sensitivity Publish Copilot

Cronus Inc - Sales Info by Customer

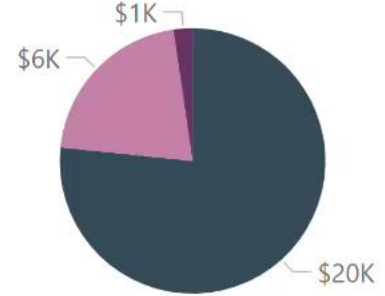
Select a customer

- Adatum Corporation
- Alpine Ski House
- Relecloud
- School of Fine Art
- Trey Research

Sales Invoices



Orders



Customer	Balance due	Period1 Amt	Period2 Amt	Period3 Amt
Relecloud	8,836.80	3,081.84	0.00	5,754.96
School of Fine Art	53,833.52	2,039.85	19,944.69	31,848.98
Adatum Corporation	0.00	0.00	0.00	0.00
Alpine Ski House	4,316.92	0.00	4,316.92	0.00
Trey Research	3,036.60	0.00	1,012.20	2,024.40
Total	70,023.84	5,121.69	25,273.81	39,628.34

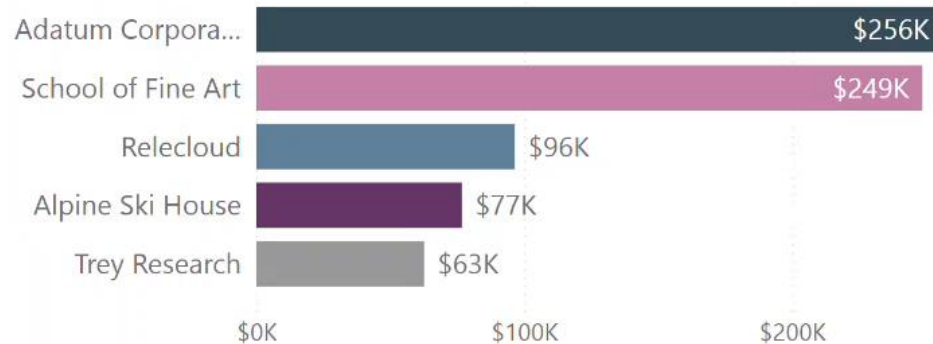


Cronus Inc - Sales Info by Customer

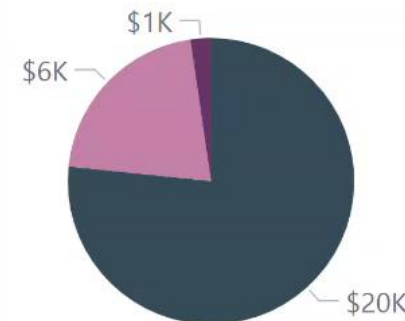
Select a customer

- Adatum Corporation
- Alpine Ski House
- Relecloud
- School of Fine Art
- Trey Research

Sales Invoices



Orders



Customer	Balance due	Period1 Amt	Period2 Amt	Period3 Amt
Relecloud	8,836.80	3,081.84	0.00	5,754.96
School of Fine Art	53,833.52	2,039.85	19,944.69	31,848.98
Adatum Corporation	0.00	0.00	0.00	0.00
Alpine Ski House	4,316.92	0.00	4,316.92	0.00
Trey Research	3,036.60	0.00	1,012.20	2,024.40
Total	70,023.84	5,121.69	25,273.81	39,628.34



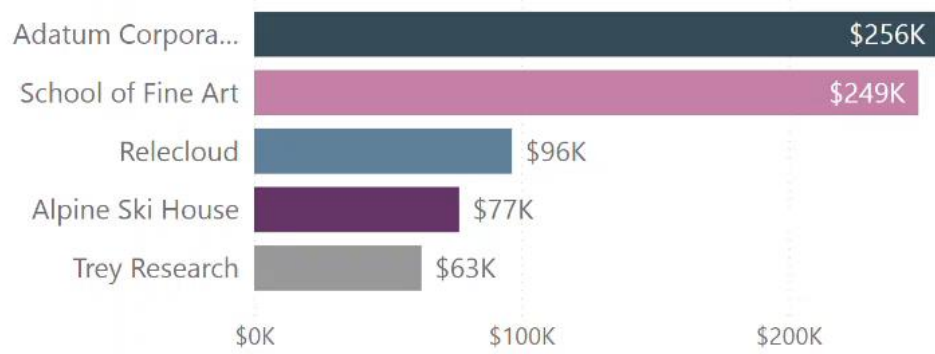
- Home
- Create
- Browse
- OneLake data hub
- Apps
- Metrics
- Monitoring hub
- Learn
- Workspaces
- DynamicsCon 2024
- DynamicsCon Denver
- Power BI

Filters

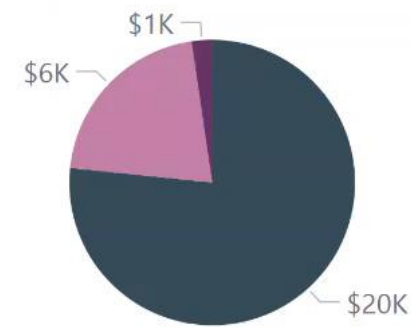
Posted Invoices, Open Orders, and Accounts Receivable

- Select a customer
- Adatum Corporation
 - Alpine Ski House
 - Relecloud
 - School of Fine Art
 - Trey Research

Posted Sales Invoices



Open Orders



Customer	Balance due	30 days	60 days	90 days
Adatum Corporation	0.00	0.00	0.00	0.00
Alpine Ski House	4,316.92	0.00	4,316.92	0.00
Relecloud	8,836.80	0.00	3,081.84	5,754.96
School of Fine Art	53,833.52	2,039.85	19,944.69	31,848.98
Trey Research	3,036.60	0.00	1,012.20	2,024.40
Total	70,023.84	2,039.85	28,355.65	39,628.34



Tips and Tricks

The background features a stylized landscape. The sky is a gradient of blue, with numerous thin, light blue lines radiating from the top center towards the bottom. Below the sky is a layer of light blue, rounded clouds. The mountains are depicted in various shades of blue and purple, with some peaks appearing more prominent than others. In the foreground, there are dark blue silhouettes of evergreen trees on rolling hills.



Keys to success

- Understand the business need first; and map out what you want to create before opening anything!
- Understand the basics
- Understand the tables
- CTRL + ALT + F1 in BC is your friend
- The best way to LEARN is to BUILD



Tips and tricks

- Process:
 - Start with business process and end-user requirements
 - Ensure your devs have support (not everyone is a Power BI dev!)
 - Use the rest of the Power Platform
 - Power Apps for quick data collection, Power Automate for process automation
 - Train your end users! Power BI is not intuitive

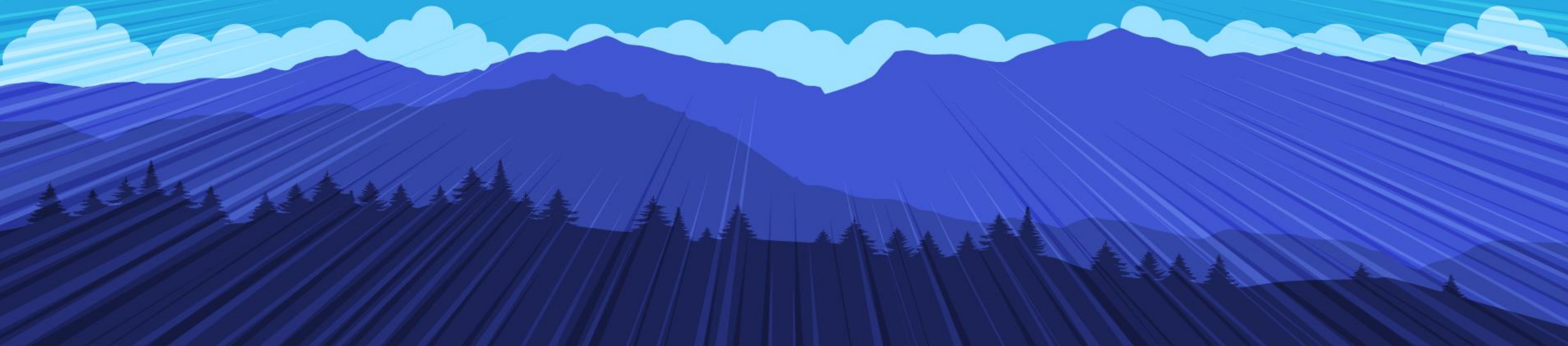


Tips and tricks

- When you're building:
 - Keep it simple!
 - # visuals on the page
 - custom visuals
 - clean data model
 - reuse measures
 - Incorporate data viz best practices
 - Turn gridlines on



Resources



Resources

- [Sample Power BI Report](#)
- [Microsoft Learn](#) for Power BI
- Steven Renders [video](#) and [templates](#)
- [Power BI training](#) – fundamentals of data modeling and DAX



Download our presentation at: aka.ms/BCandPBI



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DYNAMICS CON LIVE

MAY 2024

