

15 edycja konferencji SQLDay

8-10 maja 2023, WROCŁAW + ONLINE



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Future Processing

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Optimize KPI reporting using Power BI Metrics

Lars Andersen

&

Bartlomiej Graczyk



Intro – who are we



Bartłomiej Graczyk

- Lead Cloud Solution Architect,
 Data & Analytics
- Working with Central and Southeast Europe, Middle East and Africa (CEMA) Customers

Lars Andersen

- Program Manager on PBI CAT
- Working with Nordic, Eastern European, Italian and Spanish customer
- Started at Microsoft in January 2014



AGENDA



- Power BI Metrics what and how?
- Creating Scorecards
- Creating Metrics
- Organize, View and Consume Metrics
- Metrics and Integrations
- Metrics and licensing requirements











What is Power BI Metrics?



Metrics is a data-driven, collaborative, and adaptable way to measure key business metrics and goals



Driven by data



Built for teams



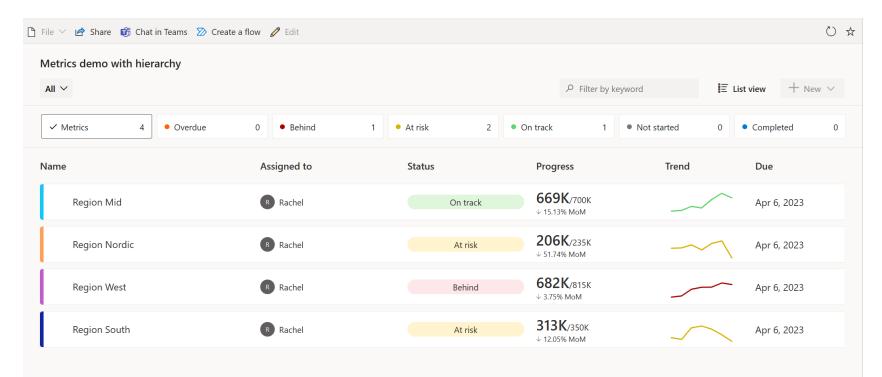
Automated action



What is Power BI Metrics?



- Easy to create scorecards for KPIs
- Utilize data that already exist in Power BI reports
- Track progress for KPIs and optionally add check-in comments





How to use Power BI Metrics?







Define Metrics

Create Scorecard

Draft

Review

Publish

Check-in

Collect notes

Review

Improve, adjust

Automate

ROB (Rhythm of Business)
MBR (Monthly Business Review)
WSR (Weekly Service Review)



Methodologies



Measurable Achievable Deadline

A methodology defines an approach to goal setting, tracking, initiatives, review and improvements

- MBO: Management by Objectives
- MAD: Measurable, Attainable, and have a Deadline
- SMART: Specific, Measurable, Achievable, Relevant, Time bound
- FAST: Frequently discussed, Ambitious, Specific, and Transparent
- OKR: Objectives and Key Results

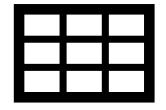




Demo







Creating Scorecards



Create Scorecard



- Always created in Power BI Service (or using Metrics Visual)
- Settings: Details, Permissions & Statuses



Sharing Scorecard



Similar to sharing other content in Power BI

- Admin, Member and Contributors on Workspace can edit Scorecards
- Viewers on Workspace will see all Scorecards in Workspace
- Scorecards can also be shared using *Share* function





Demo







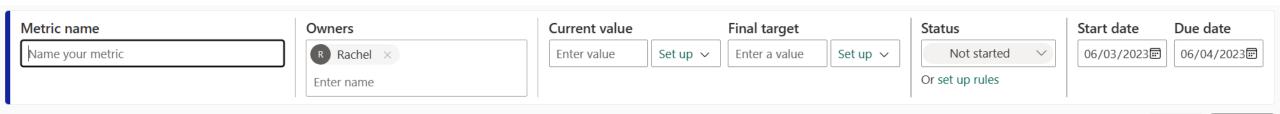
Creating Metrics



Creating Metrics



- Each metric has
 - A name
 - One or more owners (optional, but recommended)
 - Value
 - Target (optional)
 - Status
 - Start date
 - End date



Cancel



Creating Metrics



- Different types of metrics
 - Manual metrics
 - Connected metrics
 - Submetrics
 - Linked metrics
- Statuses
 - Easy way to see status on individual metrics
 - Each scorecard can have different statuses
 - Can be set manually or updated using rules



Permissions on Metrics



Scorecard setting, you can configure roles with permission on metric level

Permission ^ Update Search Set for all ① Current Status Notes Select all Sales Region North **Region South** NPS Cost **Employee satisfactory**



Permissions on Metrics



- Scorecard setting, you can configure roles with permission on metric level
- View permission: user can view metric
- Update permission: allow users to update & check-in, control on
 - Note: permission to add notes
 - Status: permission to update status
 - Current: permission to update current value
- Set for all permission: all submetrics will inherit configured permissions
- **Default** permission: applicable if no other roles are assigned





Demo





Organize, View and Consume Metrics

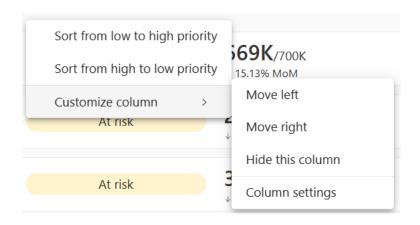


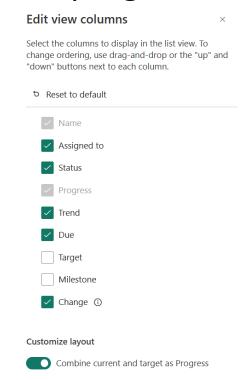


Organizing content in scorecard



- You can reorder metrics, including creating/removing submetrics
- Rearrange order of columns
- Hide/unhide columns, name and progress/current cannot be hidden







Organizing content in scorecard



- You can reorder metrics, including creating/removing submetrics
- Rearrange order of columns
- Hide/unhide columns, name and progress/current cannot be hidden
- Move scorecard to another workspace
- Copy scorecard this can be used to create scorecard templates



Consume metrics



- In scorecard
- Metrics visual (preview)
- Hierarchy

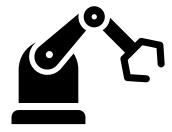




Demo





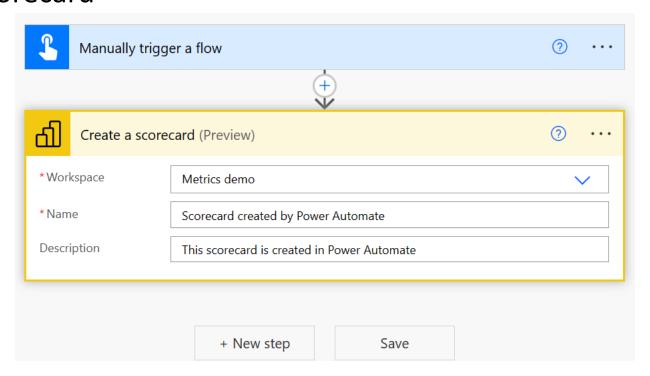


Metrics and Integrations





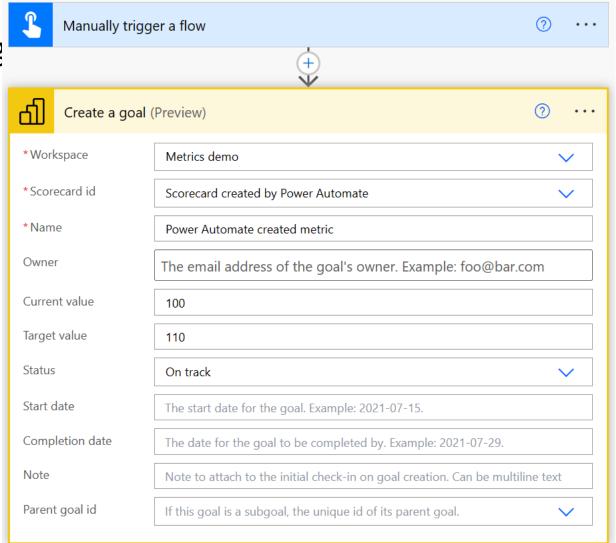
- Automate monitoring and creation of scorecard/metrics
- Actions:
 - Create a scorecard







- Automate monitoring
- Actions:
 - Create a scorecard
 - Create a metric



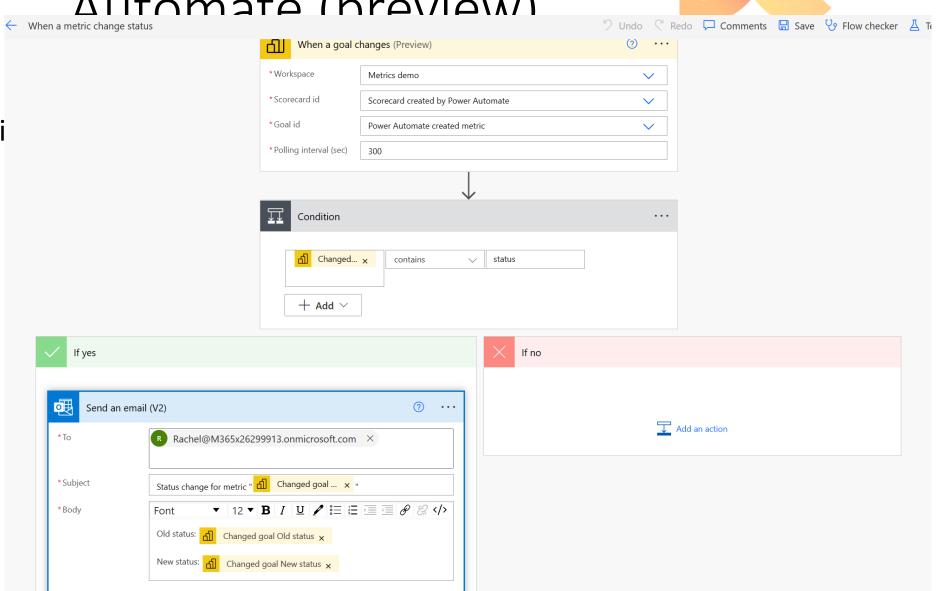




- Automate monitoring and creation of scorecard/metrics
- Actions:
 - Create a scorecard
 - Create a metric
 - Create a check-in
 - Add a note to a check-in
 - Update a check-in
 - Update a metric
 - Get metric(s)
 - Get metric check-in(s)



- Triggers:
 - When a metri







• Triggers:

- When a metric changes, for example, status, owner, and so on
- When someone adds or edits a check-in
- When an owner is assigned to a metric
- When a data refresh for a metric fails

- <u>Use Power Automate to update metrics automatically</u>
- Power BI metrics Connectors



Metrics REST APIs (preview)



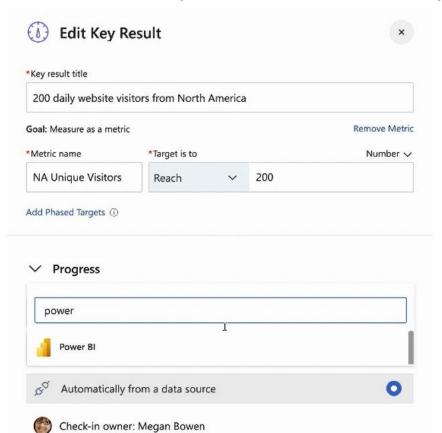
- Add/update/delete notes
 - GoalNotes (Preview) REST API (Power BI Power BI REST APIs)
- Add/update/delete/get values
 - GoalValues (Preview) REST API (Power BI Power BI REST APIs)
- Scorecard actions, like add/get/update/delete metric
 - Goals (Preview) REST API (Power BI Power BI REST APIs)
- Create/update/get/remove status rules
 - GoalsStatusRules (Preview) REST API (Power BI Power BI REST APIs)



Power BI and Viva Goals



- In Viva Goals you can point a Key Result (KR) to a data in Power BI
- Similar experience to how you connect data to metrics in Power BI

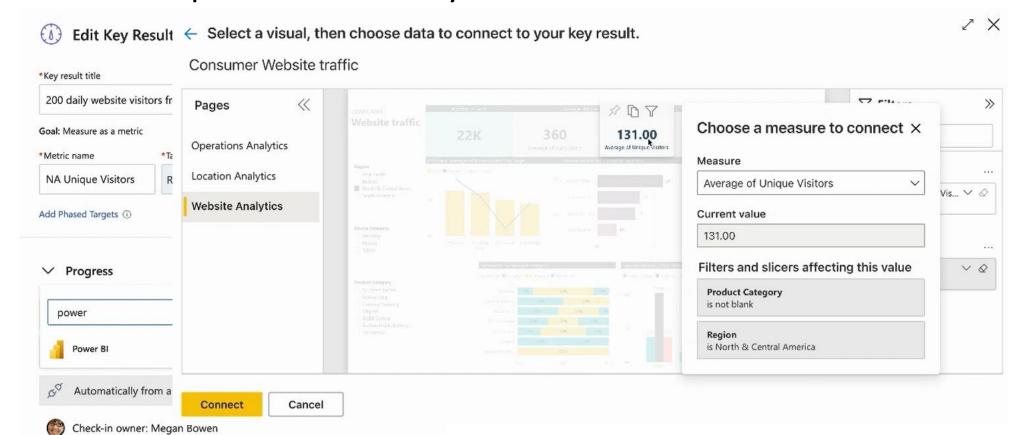




Power BI and Viva Goals



- In Viva Goals you can point a Key Result (KR) to a data in Power BI
- Similar experience to how you connect data to metrics in Power BI







Metrics and licensing requirements



Metrics and licensing requirements



- Metrics is a Pro feature*
- Pro or Premium Per User is required to
 - Author/share scorecards/metrics
 - Perform check-ins, including updating manual metrics
- Free users can view scorecards/metrics when hosted on Premium Per Capacity

Get started with metrics in Power BI – licensing requirements







Thank you



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Appendix



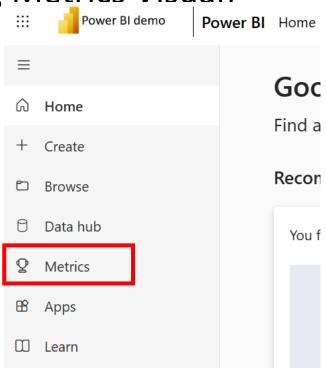






Always created in Power BI Service (or using Metrics Visual)

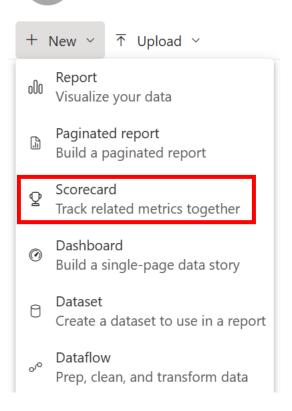
• Use the left navigation menu (saves the scorecard in My Workspace and it can be moved)







- Always created in Power BI Service (or using
- Use the left navigation menu (saves the scorecard in My Workspace and it can be moved)
- "New" in a Workspace (saves the scorecard in the Workspace)

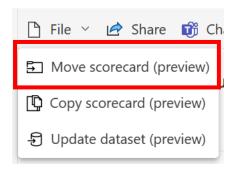


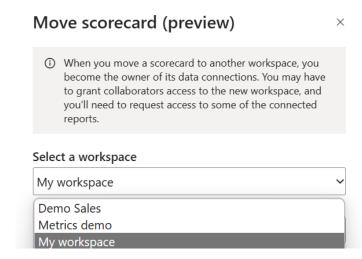
Metrics demo





- Always created in Power BI Service (or using Metrics Visual)
- Use the left navigation menu (saves the scorecard in My Workspace and it can be moved)
- "New" in a Workspace (saves the scorecard in the Workspace)
- Scorecard can be moved to another Workspace in File menu









- Always created in Power BI Service (or using Metrics Visual)
- Use the left navigation menu (saves the scorecard in My Workspace and it can be moved)
- "New" in a Workspace (saves the scorecard in the Wor Copy scorecard (preview)
- Scorecard can be move
- Scorecard can be copie

When you move a scorecard to another workspace, you become the owner of its data connections. You may have to grant collaborators access to the new workspace, and you'll need to request access to some of the connected reports.					
Select a workspace					
Metrics demo					
Include check-in history					
	Continue				

e in File menu Workspace





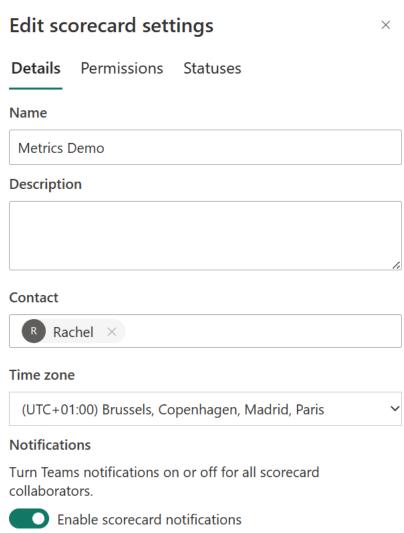
- Always created in Power BI Service (or using Metrics Visual)
- Use the left navigation menu (saves the scorecard in My Workspace and it can be moved)
- "New" in a Workspace (saves the scorecard in the Workspace)
- Scorecard can be moved to another Workspace in File menu
- Scorecard can be copied to existing or another Workspace
- Each Scorecard has a dataset with details about the scorecard
 The dataset includes details about KPIs including values, targets,
 check-in notes and more



Settings for scorecard



• Details, e.g., name, description, contact and time zone





Settings for scorecard



- Details, e.g., name, description, contact and time zone
- Permissions, configure access to metrics
 - more about this later

Edit scorecard settings

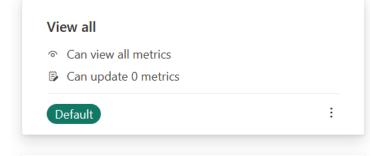
Details **Permissions** Statuses

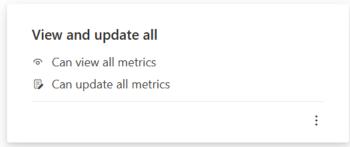
Give people access to this scorecard, or just specific metrics.

Permission roles

Add members to an existing role, or create a new role with custom permission settings.

+ Add role



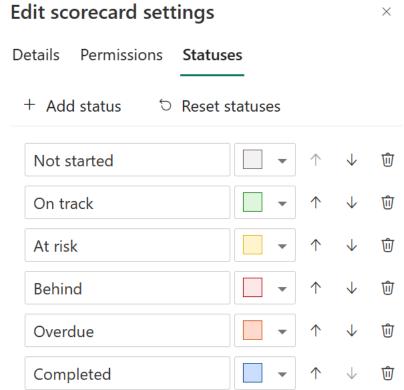




Settings for scorecard



- Details, e.g., name, description, contact and time zone
- Permissions, configure access to metrics
 - more about this later
- Statuses
 - more about this later







Create Metrics



Manual metrics



- Current value and Target are manually entered
- History is automatically created based on entered values



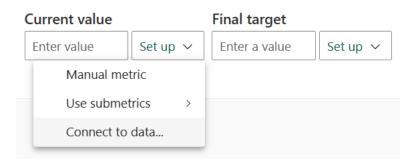
• Create scorecards and manual metrics - Power BI



Connected metrics



- Values are connected to data in a report
- Not all values must be connected you can connect to Current value and manually enter Target or vice versa
- Values are automatically updated when datasets are refreshed
- If applicable, history is automatically created



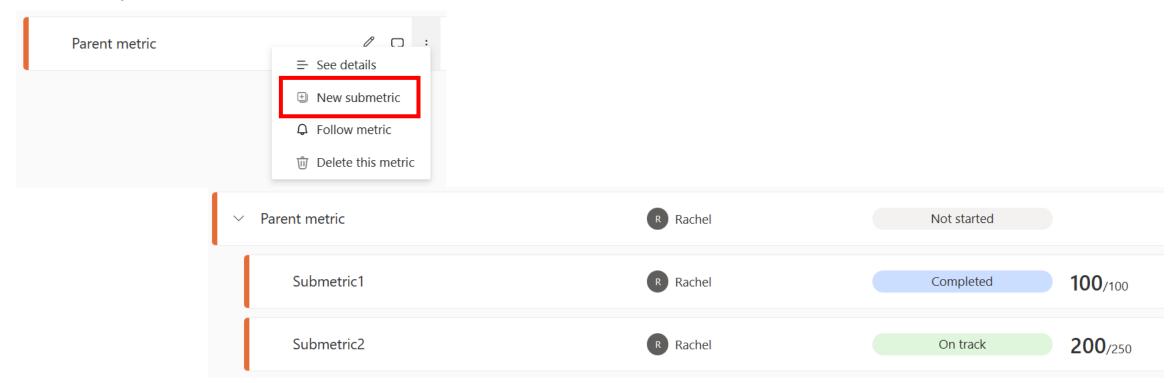
Create connected metrics in Power BI



Submetrics



- Require a parent metric
- Each parent metric can have none or more submetrics





Submetrics



- Require a parent metric
- Each parent metric can have none or more submetrics
- A submetric can be either connected or manual
- Submetrics can rollup to parent metric, based on SUM, AVG, MAX or MIN





Submetrics



- Require a parent metric
- Each parent metric can have none or more submetrics
- A submetric can be either connected or manual
- Submetrics can rollup to parent metric, based on SUM, AVG, MAX or MIN
- Rollups always show the same aggregation value of all submetrics, regardless of metric level permissions
- Support up to 5 levels

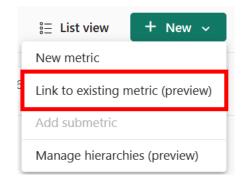
Create submetrics in the Power BI service

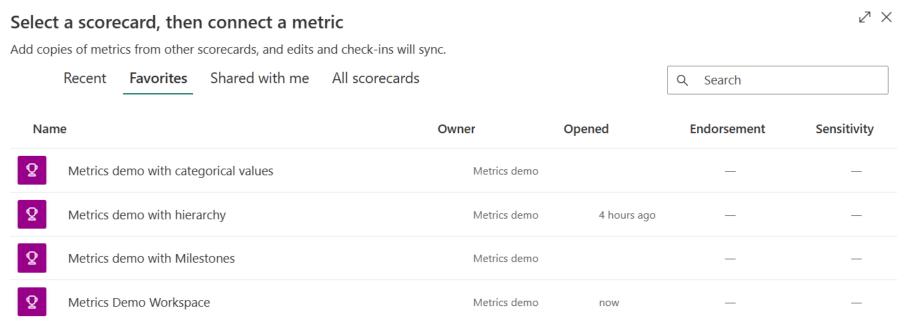


Linked metrics (preview)



Use same metric on multiple scorecards







Linked metrics (preview)



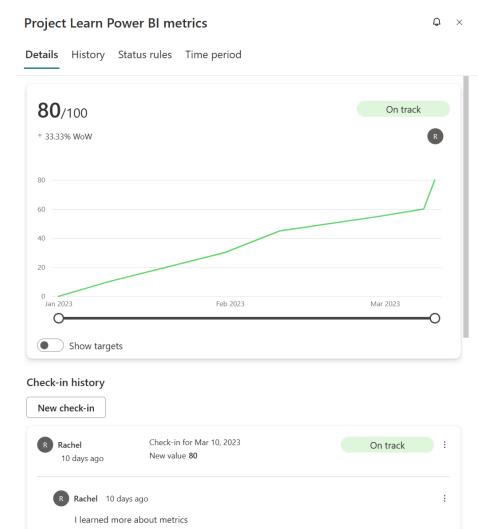
- Use same metric on multiple scorecards
- Check-ins are reflected in all scorecards
- Only users who have view access to the source metric can see the linked metric
- Metric can only be edited in source scorecard
- Check-in can happen in all scorecards, if user has permission
- Linked metrics are not filtered by hierarchies
- Rollups are based on source scorecard

Create linked metrics in the Power BI service





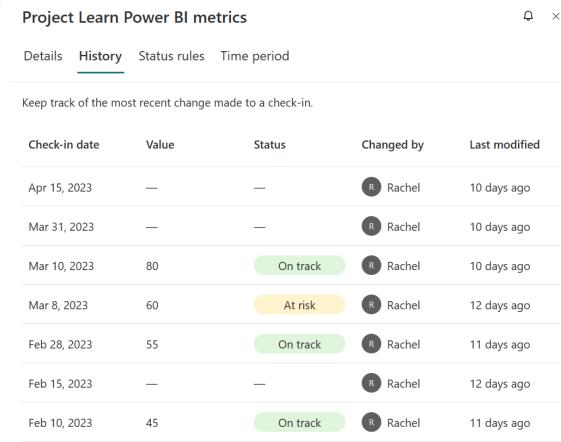
• Details: including check-in option and history







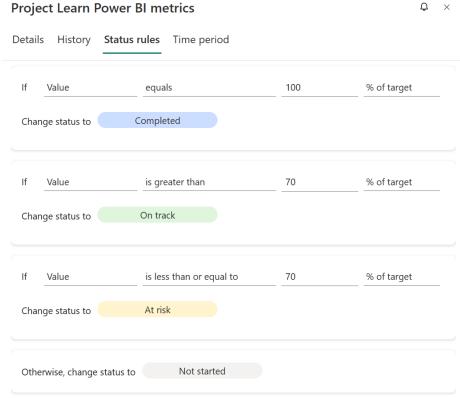
- Details: including check-in option and history
- History: check-in date, value, status etc.







- Details: including check-in option and history
- History: check-in date, value, status etc.
- Status rules: configure automated status rules Project Learn Power BI metrics

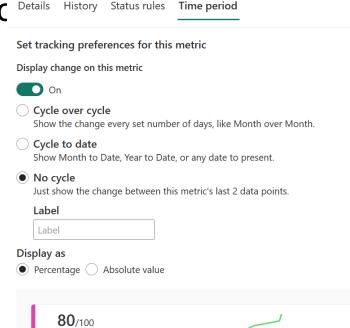






 Ω \times

- Details: including check-in option and history
- History: check-in date, value, status etc.
- Status rules: configure automated status rules
- Time period: configure change in percentage c

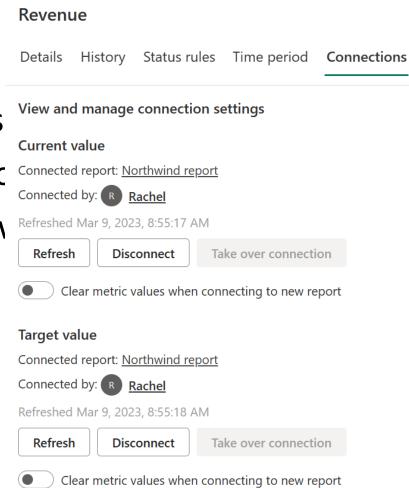


↑ 33.33% WoW





- Details: including check-in option and history
- History: check-in date, value, status etc.
- Status rules: configure automated status rules
- Time period: configure change in percentage c
- Connections: exist for connected metrics, show







- Details: including check-in option and history
- History: check-in date, value, status etc.
- Status rules: configure automated status rules
- Time period: configure change in percentage or value
- Connections: exist for connected metrics, show report and user
- Follow metric: get Teams notifications on activity





Milestone on metrics



- Relevant for metrics where targets change over time
- Setup target and due date manually

Add or edit multiple milestones (preview)

Add (or copy and paste) the metrics and due dates you'd like to set as milestones.



	Target	Due date
0	10	3/15/23
1	40	4/30/23
2	80	6/30/23
3	100	7/31/23
+		



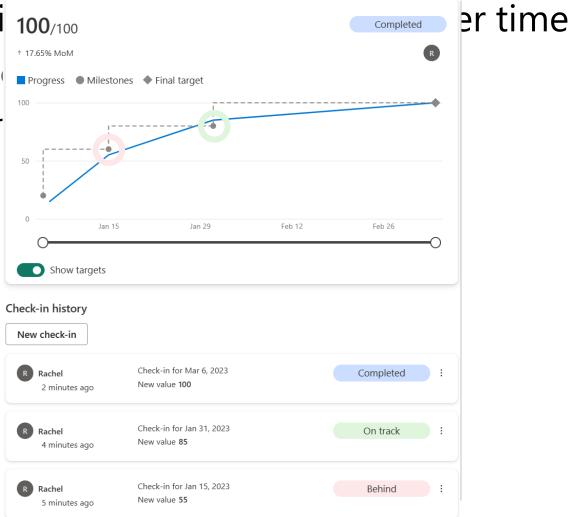
Milestone on metrics



• Relevant for metri 100/100

Setup target and

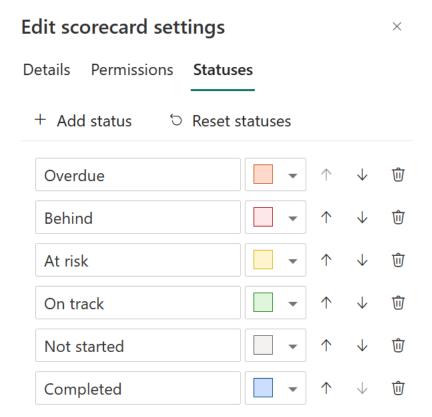
Track developmer







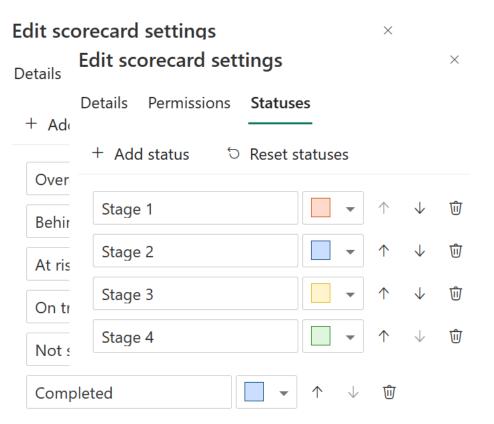
- Easy way to see status on individual metrics
- Each scorecard can have different statuses
 - Configured under Settings for scorecard







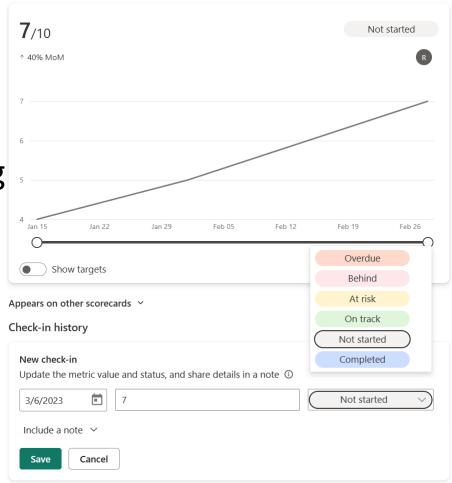
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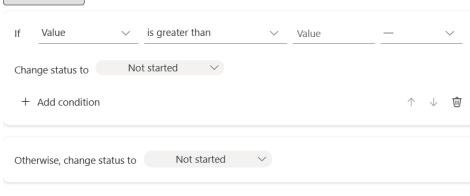
- Easy way to see status on individual metrics
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 - Configured under Settings for scorecard
- Status can be adjusted manually when creating metrics and performing check-in







- Easy way to see status on individual metrics
- Each scorecard can have different statuses
 - Configured under Settings for scorecard
- Status can be adjusted manually when creating time period metrics and performing check-in
- Status can be automated by configuring rules

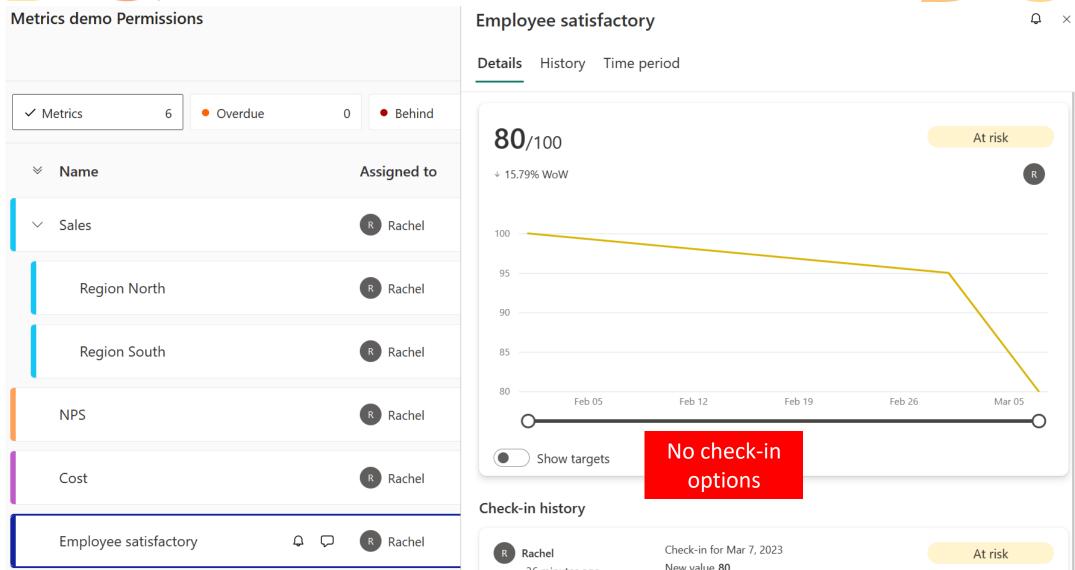


- Customize statuses on your scorecard
- Create automated status rules for metrics in the Power BI service



Permission: View

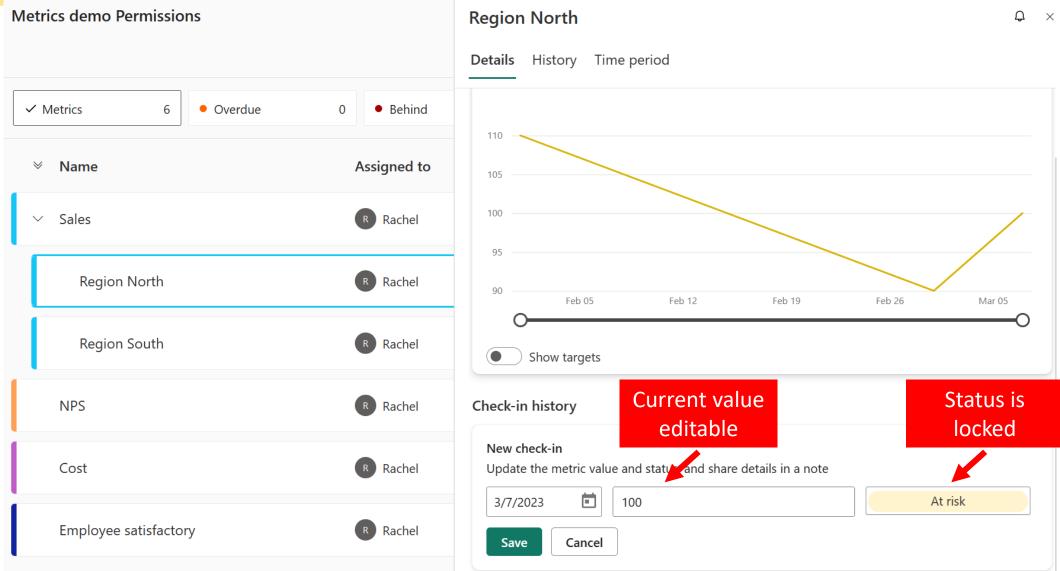






Permission: Update, Current

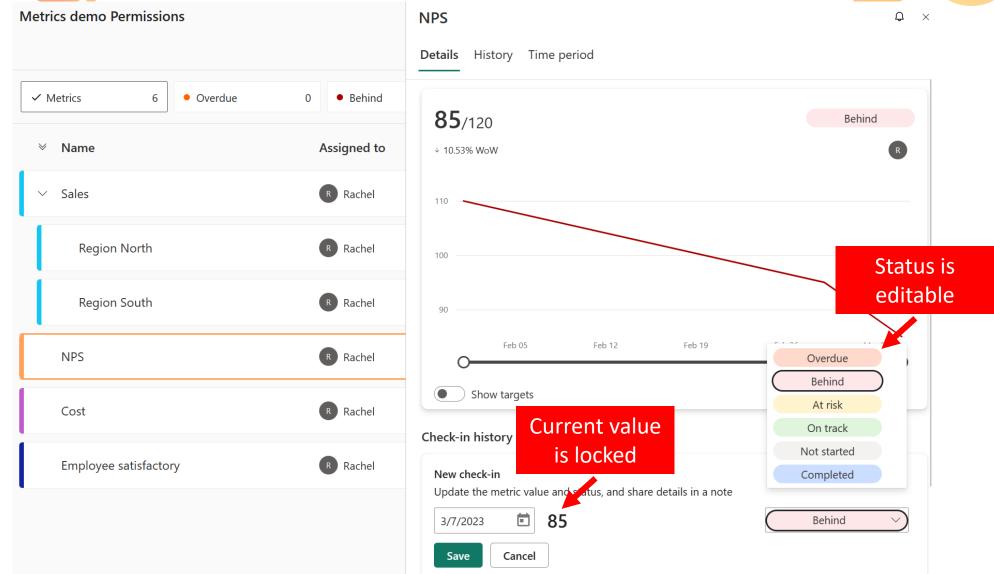






Permission: Update, Status

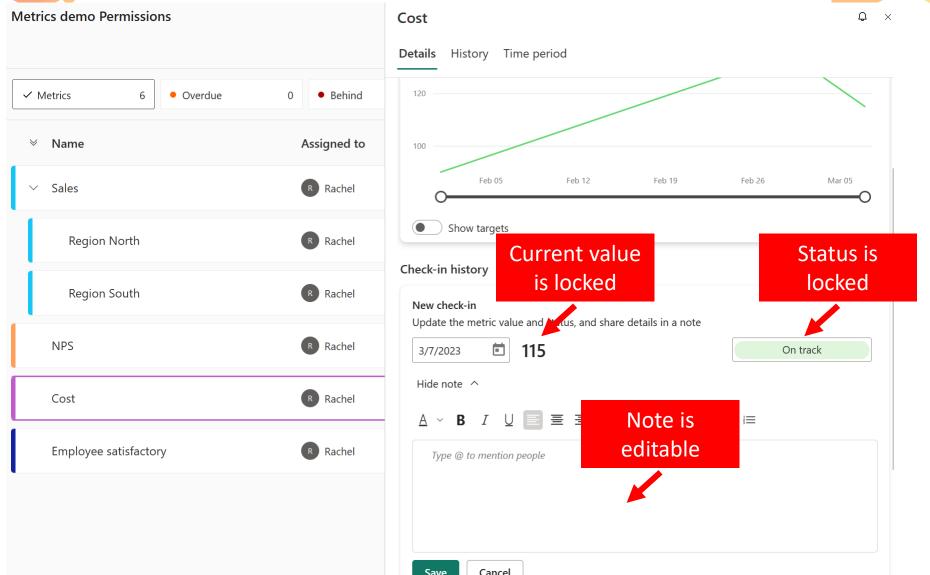






Permission: Update, Notes







Permission on Metrics



- Permissions apply to underlying dataset for scorecard, except default role
- Admin, Member or Contributor will always see all metrics in scorecards

Protect your scorecards with metric-level permissions





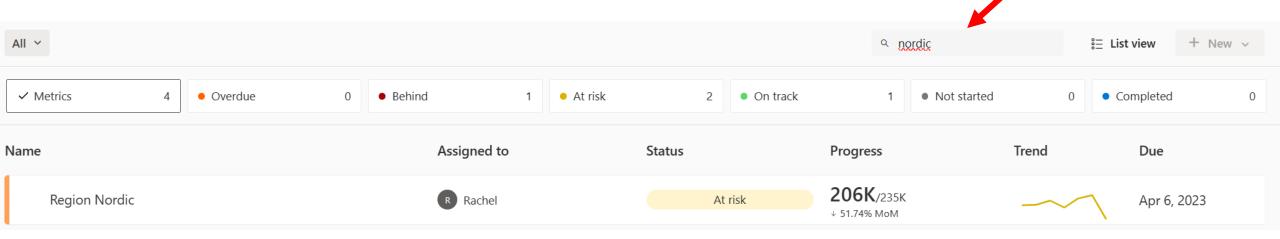
Organize, View and Consume on Metrics



Viewing Metrics



- On a scorecard, you can see all metrics
- You can filter on
 - Name of metric

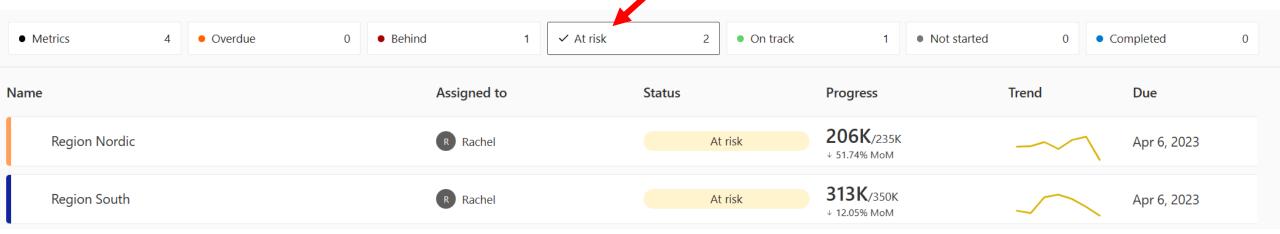




Viewing Metrics



- On a scorecard, you can see all metrics
- You can filter on
 - Name of metric
 - Status

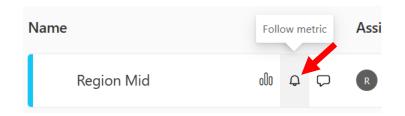


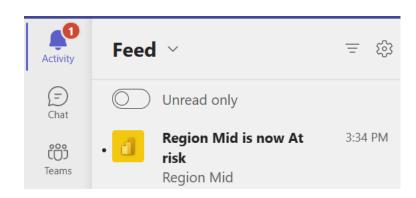


Viewing Metrics



- On a scorecard, you can see all metrics
- You can filter on
 - Name of metric
 - Status
- It is possible to *follow* individual metrics and be notified in Teams when a metric is updated







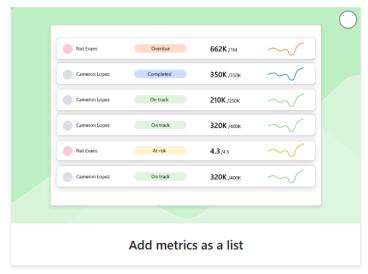


Add scorecards or individual metrics directly in your report

Add a metric to this report

Choose from (or add to) existing scorecards, or create a brand new metric and scorecard. What's a scorecard?



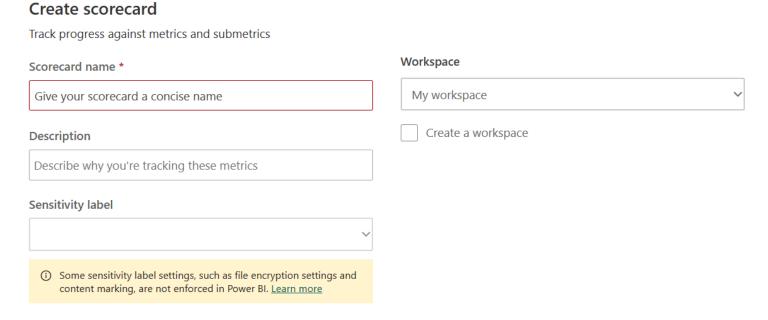


Browse metrics Create new Cancel





- Add scorecards or individual metrics directly in your report
- Create scorecards

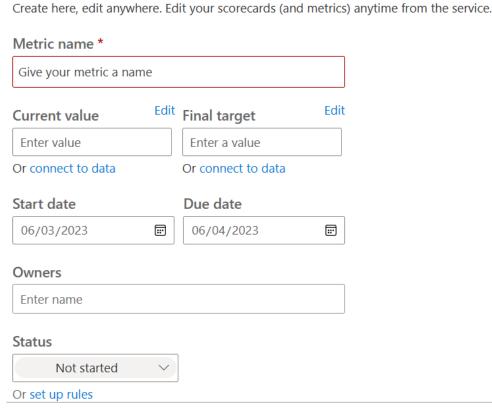




Create a new metric to add as a visual in this report



- Add scorecards or individual metrics directly in your report
- Create scorecards
- Create metrics

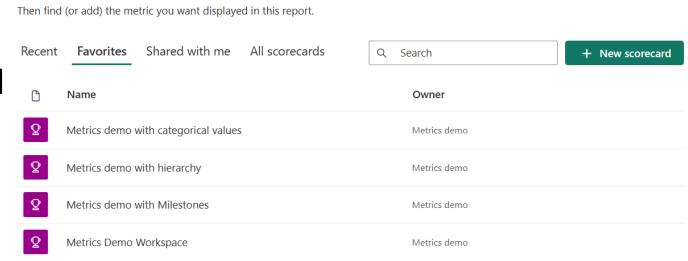




Choose from one of your existing scorecards



- Add scorecards or individual metrics directly in your report
- Create scorecards
- Create metrics
- Connect to existing scorecard



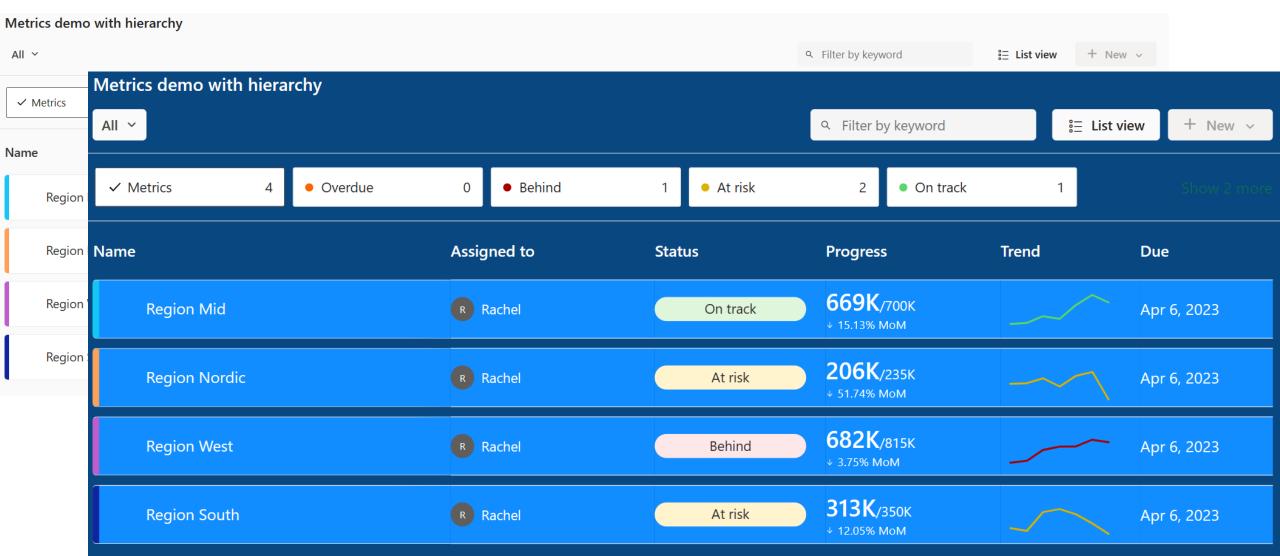




- Add scorecards or individual metrics directly in your report
- Create scorecards
- Create metrics
- Connect to existing scorecard
- Format scorecards and metrics, e.g., font, colors, and backgrounds











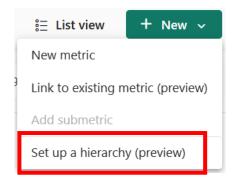
- Add scorecards or individual metrics directly in your report
- Create scorecards
- Create metrics
- Connect to existing scorecard
- Format scorecards and metrics, e.g., font, colors, and backgrounds
- Cross-filtering or highlighting are not supported

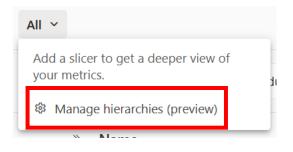
Create a metrics visual in a Power BI report





- Feature to automatically roll up metrics
- Require Premium Per User or Capacity
- Created at scorecard level based on datasets using in connected metric(s)



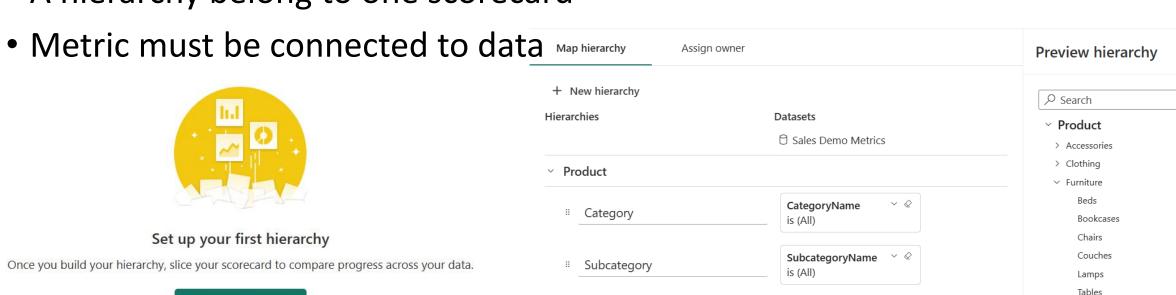






- Feature to automatically roll up metrics
- Require Premium Per User or Capacity
- Created at scorecard level based on datasets using in connected metric(s)
- A hierarchy belong to one scorecard

New hierarchy



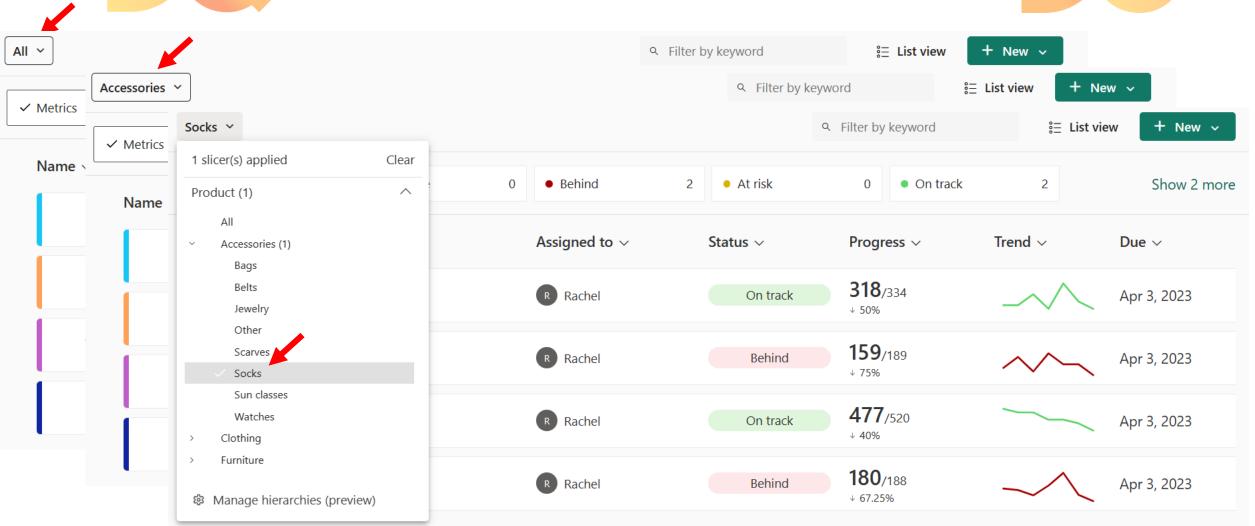




- Feature to automatically roll up metrics
- Require Premium Per User or Capacity
- Created at scorecard level based on datasets using in connected metric(s)
- A hierarchy belong to one scorecard
- Metric must be connected to data
- Scorecard list view: slice metrics by one or more hierarchy level







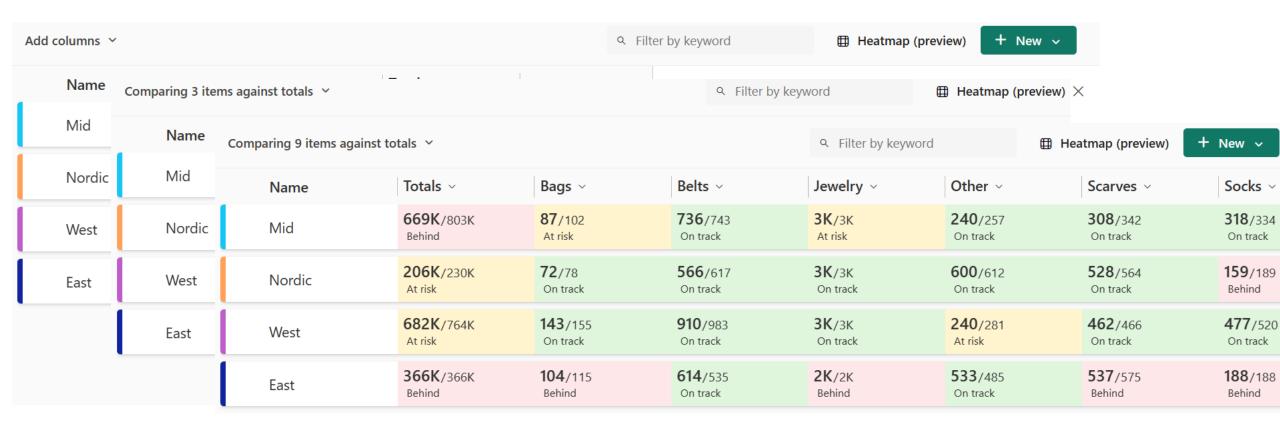




- Feature to automatically roll up metrics
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- Created at scorecard level based on datasets using in connected metric(s)
- A hierarchy belong to one scorecard
- Metric must be connected to data
- Scorecard list view: slice metrics by one or more hierarchy level
- Heatmap view: side by side comparison of different hierarchy levels











- Feature to automatically roll up metrics
- Require Premium Per User or Capacity
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- Scorecard list view: slice metrics by one or more hierarchy level
- Heatmap view: side by side comparison of different hierarchy levels

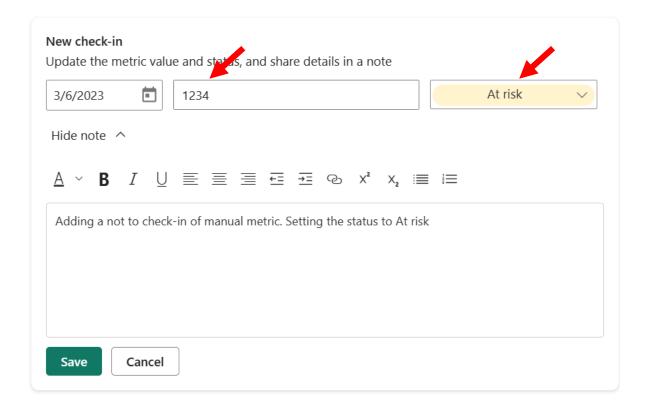
Get started with hierarchies in Power BI metrics



Follow up on Metrics



Manual metrics must always be updated manually with new values

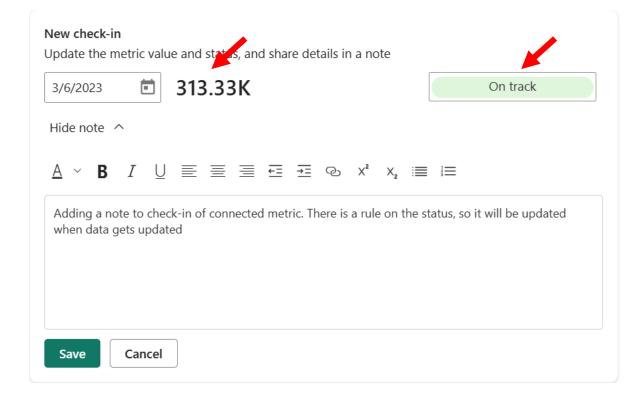




Follow up on Metrics



- Manual metrics must always be updated manually with new values
- Connected metrics will automatically get values updated





Follow up on Metrics



- Manual metrics must always be updated manually with new values
- Connected metrics will automatically get values updated
- In summary with Check-in you can
 - Add a note
 - Update value (for manual metrics)
 - Set status, if status rules have not been configured