Sharing methods in Power BI: how to fulfill your audience

Andrea Martorana Tusa
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Jaarbeurs, Utrecht
Speaker Info: Andrea Martorana Tusa

- Microsoft MVP Data Platform
- **Team Leader** for **Business Intelligence** in Würth-Phoenix (Bozen, Italien)
- Previously worked by Widex a danish company which manufactures hearing aids, as **BI Specialist**
- Previously worked as **BI Developer** in an italian bank
- Speaker at SQL Saturdays, and other community-driven events in Europe, (MS Cloud Summit, SQL Konferenz, SQL Nexus, SQL Days, Dataminds Connect ...). Speaker in webinars for PASS Italian VC, DW/BI VC
- Author for sqlservercentral.com, sqlshack.com, UGISS (User Group Italiano SQL Server)
Agenda

• Introduction
• Sharing
• Workspace and App
• Sharepoint
• Subscriptions
• Interaction with MS Office
Why this session?

How many times have you been asked:
“Can you share this report/dashboard, with me?”;
“Can we distribute our work to other users?”; “Shall we pay for it? How can we get licenses?”.
“How can we deal with Security and Compliance rules inside our organization”?

To make things worse, the licensing and delivering model has changed evolving, bringing more confusion to end-users.

So I want to give you a clear and complete overview of all the sharing methods in Power BI, helping you to choose the solution that best fits your needs.
Power BI licensing model

Power BI Free
- Personal use
- Licensed by user
- Self-service analysis, report authoring, etc.

Power BI Pro
- Collaborative use
- Licensed by user
- The same as Free plus collaboration and sharing

Power BI Premium
- Corporate use
- Licensed by capacity
- Great scale distribution and performance, delivery contents without per user licensing
Sharing
Sharing is the faster and easier collaborative method. You can share dashboards and reports with colleagues inside and outside of your company.

Sharing is a Pro feature.

When you share:
- Everyone you share with can see your dashboard and interact with your reports, but can’t edit
- Changes you make are visible to everyone (after you save those changes)
- Dashboards and reports are read-only. No-one can save its own local copy
- No-one can see or download the dataset
To share a dashboard in Power BI Service simply click on the Share icon. Fill in the address of the recipient and he will receive an e-mail with an invitation.

Andrea Martorana Tusa has shared Power BI Dashboard ‘SQLNexus’ with you.

Hi,
I’d like to share this dashboard to you.

Open SQLNexus
All the shared contents are accessible through the “Shared with me” menu.
Sharing with colleagues

- Colleagues who have the same email domain as you, and colleagues whose domain is different but registered within the same tenant in Office 365, can reshare the dashboard.

- If you use Office 365 for email, you can share at once with members of a distribution group by entering the email address associated with the distribution group. The group limit for sharing is 500 members.

- You can even send a direct link to a dashboard, just by copying the URL. For example: https://powerbi.com/dashboards/g12466b5-a452-4e55-8634-xxxxxxxxxxxxx
Filters and data rows limitations on shared objects

• User see same data as developer, unless Row Level Security is applied to the dataset underlying a dashboard or report, then the credentials of every person are used to determine which data they can access.

• Sharing a filtered version of a report, is doable by creating a custom URL

Report page URL + ?filter=tablename/fieldname eq value

Eg: app.powerbi.com/groups/me/reports/010ae9ad-a9ab-4904-a7a1-xxxxxxxxxxxxx/ReportSection2?filter=Store%252FTerritory%20eq%20%27NC%27
Sharing with people outside your organization

• When you share with people outside your organization, they even get an email with a link to the shared dashboard.

• When they try to access the link, they see the shared dashboard in its own browser window without the left navigation pane, not in their usual Power BI portal.

• They can't edit any content in this dashboard or report. They can interact with the tiles in the dashboard or report but cannot modify.

• Only your direct recipients can see the shared dashboard. No-one else can see that dashboard, even if they have the link.

• People outside your organization can see data according to the role or row-level security you implemented.
Resharing

• Resharing allows your colleagues to forward the email invitation to others in your organization.
• They can also reshare through the Power BI service and mobile apps.
• As the owner of the dashboard, you can turn off resharing and you can also revoke resharing on an individual basis.
• People outside your organization can't reshare.
Sharing from the mobile app

- You can share a dashboard, or a single tile from the Power BI mobile apps.
- Sharing a dashboard from the app works in the same way as from Power BI Service.
- When you share a tile, actually you're sending a snapshot of the tile.
- You can send snapshots of tiles to anyone by e-mail. You're not limited to recipients in your domain.
Power BI admin portal

In the admin portal you can enable / disable some features for your tenant, like sharing for example.

- **Export and sharing settings**
  - Share content with external users
    - Enabled for the entire organization
  - Publish to web
    - Enabled for the entire organization
  - Export data
    - Enabled for the entire organization
  - Export reports as PowerPoint presentations
    - Enabled for the entire organization
  - Print dashboards and reports
    - Enabled for the entire organization

- **Content pack and app settings**
  - Publish content packs and apps to the entire organization
    - Enabled for the entire organization
  - Create template organizational content packs and apps
    - Disabled for the entire organization
Demo

• Share a dashboard inside your organization
  • elena.carboni@amtproweb.info > My Workspace > Retail Analysis Sample > lucia.tabacci@amtproweb.info

• Share a dashboard outside your organization
  • elena.carboni@amtproweb.info > My Workspace > Retail Analysis Sample > andrea.martorana@wuerth-phoenix.com

• Remove/Edit access and manage permissions
• Enable/disable resharing for a single dashboard/report
• Enable/disble external sharing for the tenant
Workspaces
App Workspace

Create and share dashboards or reports in a workspace

A workspace is the staging area designed for collaboration in Power BI. Inside a workspace you can collaborate with other colleagues and work together on dashboards, reports and datasets. Everyone in the workspace can view, interact with, and edit the dashboard and its reports. You can set user in the group as viewer, member, contributor or admin.

App Workspace is a Pro feature ...

… unless your app resides in a PBI Premium capacity plan. In this case, users are free to connect to the app.
Workspaces are the evolution of groups in Power BI, traditionally they are based on Office 365 groups and offer group services such as OneDrive for business, conversations, calendars, tasks, …
… but, starting from August 2018, important changes have been introduced for workspaces:

- Manage access to workspace for security groups, distribution lists, multiple Office 365 groups
- When creating a workspace in Power BI, an Office 365 group is no longer created
- New section in the admin portal to manage workspaces
- Organizational and service contents packs are being retired
Now, when creating a workspace you can choose the new improved version. As it reaches GA the feature will be the default choice.
In the improved workspace experience, new roles have been made available.

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<tr>
<th>Role</th>
<th>Definition</th>
<th>Notes</th>
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<tr>
<td>Admin</td>
<td>• Can change and delete workspaces</td>
<td></td>
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<tr>
<td></td>
<td>• Add Admins</td>
<td></td>
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<tr>
<td></td>
<td>• Everything a Member can do</td>
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<tr>
<td>Member</td>
<td>• “Reshare” – add new users to be Members or lower permissions</td>
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</tr>
<tr>
<td></td>
<td>• Publish and update Apps</td>
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<tr>
<td></td>
<td>• Everything a Contributor can do</td>
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<tr>
<td>Contributor*</td>
<td>• Add/edit/delete content within the workspace</td>
<td></td>
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<tr>
<td>* Available at Public Preview</td>
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<tr>
<td></td>
<td>• Everything a Viewer can do</td>
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<tr>
<td>Viewer*</td>
<td>• View content within the workspace</td>
<td>Replaces read-only workspaces.</td>
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<tr>
<td>* Available at GA</td>
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Once the new workspace experience reaches General Availability (GA):

- All workspaces will be created using the new workspaces infrastructure
- No more workspaces that create an Office 365 Group
- New workspaces will have a setting where you can associate a workspace in Power BI with an Office 365 Group

New workspaces experience features for replacing content packs:

- Ability to personalize content by saving a copy of a report or dashboard to your own workspaces
- New dataset discovery experiences that enable searching for datasets in other workspaces, and the ability to build reports and dashboards from datasets in a different workspace
- Ability to copy reports and dashboard between workspaces

App Workspace

• Once your workspace is ready you can publish it as an App. An App is the way to distribute content to end-users in production.
• It is possible not to publish all the reports and dashboards into a workspace, but only the ones that are ready.
• Business users can therefore connect to the published App and consume the contents you prepared for them.
Power BI Workflow
Workspaces settings

- **Private:** Only group members can see the group’s contents.

- **Public:** People in your organization can make themselves members of the group, without needing permission from an admin.

- **Edit rights:** all members of the group can modify the group's content.

- **View only permissions:** only admin of the group can modify content. Members can only read it.
App Workspaces

Consume the app

There are different ways to expose an app for business users:

• Unattended installation in the user’s Power BI account
• Sending a direct link to the app
• Searching in the AppSource repository
App Workspaces

External Sharing
• Apps can furthermore be distributed to guest users outside of your organization’s tenant
• Recipients are able to securely sign into the service using their own organization’s security credentials or personal email address
• This is a feature made possible through the integration of Power BI integration with Azure Active Directory (AD) business-to-business (B2B) collaboration
DEMO
Demo

App Workspaces

• Create a workspace “Power BI Gebruikerdag 2019” as elena.carboni@amtproweb.info
  • Add members: lucia.tabacci@amtproweb.info; andrea.martoranatusa@amtproweb.info;

• Edit workspace’s properties, change member rights

• Publish a report to a workspace from PBI Desktop

• Publish/Update app. Change settings, permissions, etc.
  • Add user elena.napoli@amtproweb.info

• Consume app as a user (publish to sara.minotti@amtproweb.info)
  • Get app > My Organization

• Set workspace features (image, featured dashboard, …)
Sharepoint integration
Power BI reports can be embedded in SharePoint Online. No coding is required.

Embedding is easy and secure; the reports inherit all the security features from the hosting portal.

This method applies only to reports, not to dashboards.
The Power BI web part for SharePoint Online requires Modern Pages

- From the report in PBI Service, select **Embed in SharePoint Online**.
- Copy the URL from dialog box
SharePoint Integration

Security
• User’s authentication is managed by the portal through single sign-on. Users are not prompted to sign-in again in Power BI. All filters and features applied to reports (e.g., RLS) are kept, when they browse contents.
• Nevertheless to access reports, users must be granted in Power BI service, too. Permissions are managed in two ways:
  o Through Office 365 Groups. In this case the user must be added as a member to the app workspace behind the group.
  o Creating a dashboard based on the embedded report and then sharing the dashboard with user(s).
SharePoint Integration

As you are sharing/collaborating in Power BI Service, this feature requires a Pro license. And users need a PBI account.
Edit a page in SharePoint Online

Select Power BI

Add report

Paste the URL and then click Publish
Subscriptions
Subscription

Subscription is the feature for receiving reports/dashboards directly into your mailbox. Subscription is personal, but you can even subscribe for someone else into your domain.

By subscribing you can only receive a snapshot of report pages you are interested in. You can subscribe to one report page at time.

Subscriptions is a Pro feature
Subscription

As of 02-02-2019 you can also set a time-based subscription schedule for your reports and dashboards.
Subscription

There are two third-party products suited for automated scheduling & distribution of reports and dashboards.

The first one is called **Power BI Reports Scheduler**

You can:

- Distribute reports and dashboards at scheduled time
- Trigger distribution based on events
- Set up a data driven distribution
- ...  

https://go.christiansteven.com/power-bi-reports-scheduler-power-bi-reports-distribution-pbrs
Subscription

The other product is called **Power BI Robots**. You can schedule and send reports and dashboards by e-mail.

https://blog.devscope.net/2018/05/30/how-to-schedule-and-send-power-bi-reports-and-dashboards-by-email/
DEMO
Demo

Subscriptions

• Open a report > Subscribe personally and for another user, then go to the e-mail to get the message
Interactions with MS Office
Interaction with MS Office

There are several ways for Power BI users to interact to MS Office suite. Starting from simply download data and analyze it in Excel, to more complex interactions.

Few add-ins and tools are available. Some are developed directly from Microsoft, others are third-party tools.
Export data
Data can be exported from visuals on a dashboard and in reports. In any visual in edit mode select ... > Export data

The data is exported to a .xlsx or .csv file that you can open and analyze.
Interaction with MS Office

With **Analyze in Excel**, you can view and interact with a dataset you have access to in Power BI.

When you select **Analyze in Excel** from the ellipses menu (the ...) associated with a dataset or report in **Power BI**, Power BI creates an **.ODC file** and downloads it from the browser to your computer.

When you open the file in Excel, an empty **PivotTable** and **Fields** list appears with the tables, fields, and measures from the Power BI dataset. This is a live connection. Data is updated every time you refresh the Excel file.
Interaction with MS Office

Another top requested feature is currently in preview: **Export Power BI report to PowerPoint**.

Export features:
- Each report page is converted into a PowerPoint slide
- Each Power BI visualization in the report is converted in an image in PowerPoint
- Textboxes are exported as (editable) textboxes
- There is a link to the live report in Power BI
Export to PowerPoint
Excel Publish to Power BI
From Excel 2016 you can publish your workbook directly to Power BI Service.

Two options:
• Upload your workbook to Power BI
• Export workbook data to Power BI

The workbook appears as in Excel Online. You can pin elements to dashboards and edit it (in Excel Online).

Data is exported as new dataset to Power BI and the original workbook is synchronized with dataset.
Power BI Publisher for Excel. It is an add-in to catch snapshots of Excel and pin to dashboards in Power BI, or to connect to data.

Pin range of cells, PivotTables, charts, etc. from Excel ...

... to Power BI

Connect data from Power BI ...

... to Excel
Other plug-ins are available from *DevScope*, an independent vendor:

- **Power BI for SharePoint**. Export dashboard tiles to SharePoint.
- **Send to Power BI**. Excel add-in to send and sync Excel data to Power BI.
- **Power BI Tiles Pro**. Client app to embed up-to-date Power BI visuals into your Power Point documents. Grants full interaction. *The most powerful.* Licensed.

www.devscope.net/Products.aspx
DEMO
Demo

- Export data
- Analyze with Excel
- Export to Power Point
- Power BI Excel Publisher
Thank you!

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