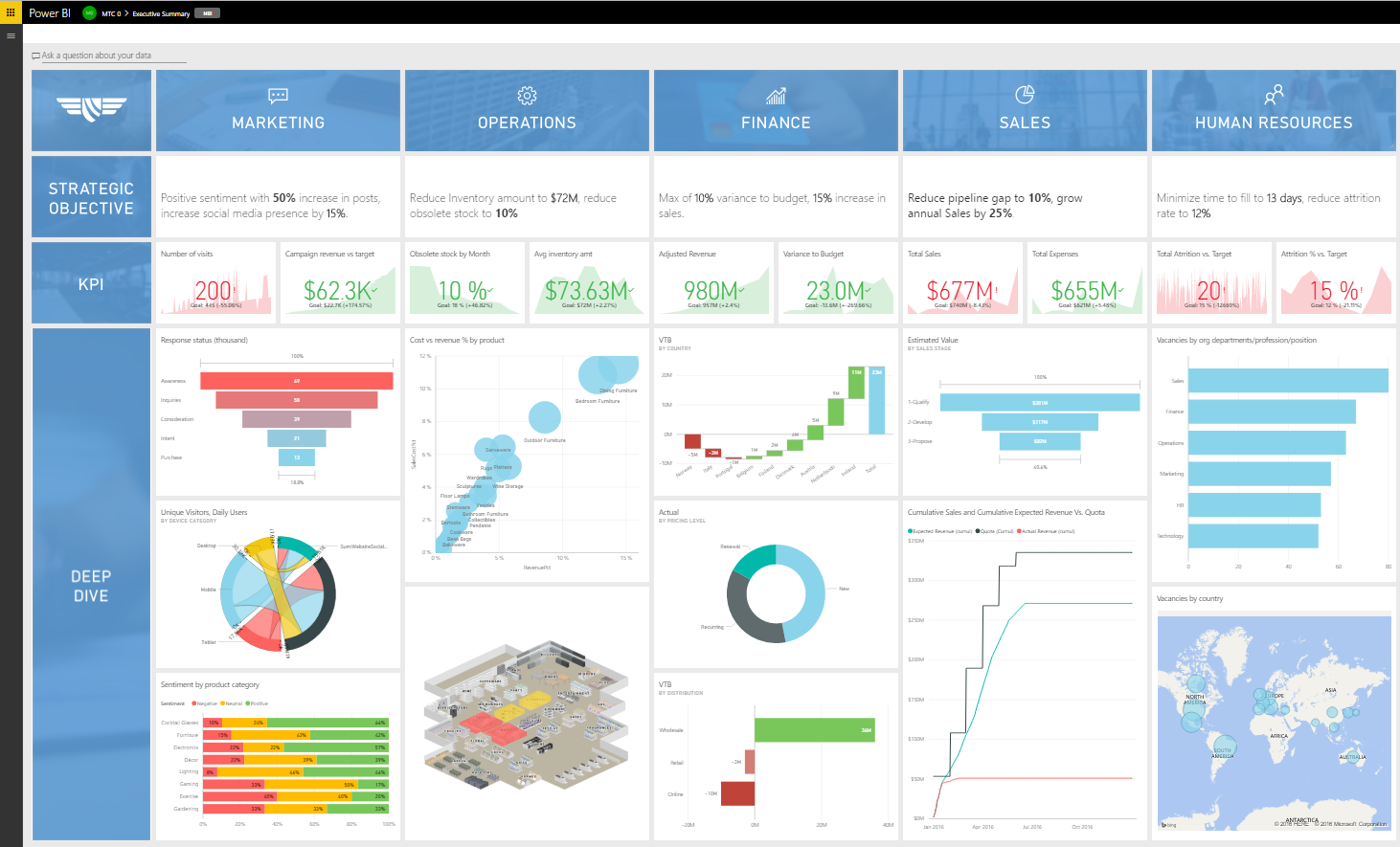


**Power BI MTC 0 Demo**

Demo Script



November 2016

Contents

[About this demo 3](#_Toc467185997)

[PREREQUISITES 3](#_Toc467185998)

[PART 1: INTRODUCING POWER BI 7](#_Toc467185999)

[Overview 7](#_Toc467186000)

[PART 2: POWER BI DEMO 12](#_Toc467186001)

[EASY TO GET STARTED: BUSINESS USER 12](#_Toc467186002)

[Dashboards and reports 12](#_Toc467186003)

[Q&A 16](#_Toc467186004)

[Mobile 19](#_Toc467186005)

[EASY TO USE: BUSINESS ANALYST 23](#_Toc467186006)

[Power BI Desktop 23](#_Toc467186007)

[POWER BI IN ACTION: Airline Scenario 34](#_Toc467186008)

[Dashboard 34](#_Toc467186009)

[PowerApps 40](#_Toc467186010)

[PARTNER SOLUTIONS AND SOLUTION TEMPLATES 46](#_Toc467186011)

[Partner Solutions 46](#_Toc467186012)

[Solution Templates 48](#_Toc467186013)

# About this demo

This demo is designed to introduce Power BI, showcasing the service in action and demonstrating how easy it is to get started – whether the user is a business user, an analyst or an IT admin. Power BI helps everyone unlock value from their data, regardless of the type of data or where it lives - even in real-time. Users can extract insights from intelligence that fuel action and enable them to be more productive by focusing on what matters most to them.

# PREREQUISITES

| Prerequisite | Screenshot |
| --- | --- |
| 1. **Prerequisite**: You will need a Power BI account for this demo. If you do not have an account, you can sign up for free at <http://powerbi.com> |  |
| 1. **Prerequisite**: You will need Power BI Desktop installed on your machine.   Visit <http://powerbi.microsoft.com/desktop> to install the latest version of Power BI Desktop. |  |
| 1. **Prerequisite**: Save the Power BI Desktop file **MTCFinance.pbix** that is delivered with this demo to a folder on your machine, e.g. to Documents\Power BI Demos. |  |
| 1. **Prerequisite**: You have created the **Executive Dashboard** in your Power BI subscription, either via a content pack that is available in your subscription, or by following the steps in the **Executive Dashboard Setup** document to create the dashboard manually**.** |  |
| 1. **Prerequisite**: You will need to download and install the Microsoft Power BI app on your mobile device e.g. iPhone, iPad, Windows Phone, Android phone etc.   e.g. to install the app on your iPhone:   * + Go to the **App Store** on your iPhone   + Search for **Microsoft Power BI**   + Download and install the **Microsoft Power BI** app.   + Sign in with your Power BI account. |  |
| 1. **Prerequisite:** You will need to install the **Analyze in Excel updates** for Power BI as described below.    1. Sign in with your Power BI account at powerbi.com.    2. In the navigation pane, select **Analyze in Excel** from the menu (...) next to one of your existing reports or datasets.    3. When you first use **Analyze in Excel**, you need to install updates to the Excel libraries. You’ll be prompted to download and run the installation for the Excel updates (Windows installer package **SQL\_AS\_OLEDDB.msi**).    4. Run the installer file **SQL\_AS\_OLEDDB.msi** once it is downloaded.    5. Follow the setup wizard to complete the installation.    6. Back in Power BI, select **Analyze in Excel** again.    7. Power BI will create an .ODC file and download it to your computer. |  |
| 1. **Prerequisite:** Install the **Power BI publisher for Excel**.    1. Download Power BI publisher for Excel at <https://powerbi.microsoft.com/en-us/excel-dashboard-publisher>    2. Run the installer file **PowerBIpublisher\_[..][..].msi** once it is downloaded.    3. Follow the setup wizard to complete the installation. |  |

# PART 1: INTRODUCING POWER BI

| Overview | | |
| --- | --- | --- |
| Narrative | Steps | Screenshot |
| It’s nice to be here with you today…I’m <name, title>.  We all know how data is growing by leaps and bounds. Data is coming from applications, data is coming from IOT devices; there’s structured data, there’s unstructured data. However, human attention is still scarce.  It’s really important for customers to have a transformative experience with their data, for three things to be true:  One, – Power BI helps customers to take the data and convert it into insights.  Second – it helps them take these insights and translate it into action, through a family of products called PowerApps and Microsoft Flow.  Third – It helps customers to put this into hands of every single employee. |  |  |
| To illustrate this we’re going to see two examples.  I’m going to show you a quick preview of two demos you will see today. The first is a dashboard that provides a view across the whole company through a single pane of glass. Across all the departments - marketing, operations, finance department, sales and human resources.  This has never been possible before – to drive a single consistent view all the way from the executive to front-line individuals and managers. |  |  |
| The second demo we’re going to look at is a demo of a jet engine manufacturer, based on real work we’ve done. This company was going through a significant transformation that was enabled by data. You will see how Power BI works with Azure Machine Learning and real time insights to help the company transform. |  |  |
| Power BI is a SaaS service that helps non-technical business users and business analysts to get value from their data and transform the data into insight. With Power BI, business users can sign up in 5 seconds, and within 5 minutes can get real business value from their data. |  |  |
| Let’s see what makes it possible. First it connects to whole host of data sources. For example, it can pretty much connect to any data source whether it is Microsoft cloud, non-Microsoft cloud or even on-premise data. Here is a small set of examples of the connectors that ship with Power BI out of the box. Power BI ships with hundreds of connectors that make getting access to all this data very simple. |  |  |
| Power BI ships with Power BI Desktop which is the power tool for business analysts. Power BI Desktop is completely free and helps customers to connect to wide variety of data sources. You can use Power BI Desktop to bring data in, mash the data up with other data sources and transform the data as well. You can also build sophisticated data models as well.  Power BI is 100% compatible with Microsoft Excel, because a lot of our customers have so much data and so much information sitting in excel, Power BI can not only bring in the data from Excel, but also import Excel workbooks, Excel data models, and Excel visualizations directly into Power BI. Power BI can even fully render Excel reports as-is if that’s what the customer requires. Power BI can also do the reverse. It can connect from Excel to the data models published in Power BI so that business analyst can work with those data models and pivot data the way they want. No other system can do that.  Now that you have these visualizations built by Power BI Desktop, those can be made available to any device on any location.  Customers can many different ways of accessing them. They can access them on mobile devices as we have native application for iOS and Android. They can access them on their PC or even access them on HoloLens in mixed reality environments.  Power BI can also be embedded completely into any business application, and that is Power BI Embedded.  You can work with any data, you can transform the data and you can allow customers to consume the stunning visualizations anyway they want to. |  |  |
| Power BI has invested in a set of capabilities that are highly differentiated in the market.  Let’s take a look at some of the capabilities that set Power BI apart:   * Real-time dashboards: It is not only important for customers to understand what happened yesterday, last week, or last month but also to understand things as they are happening in real time. As a SaaS service built in Azure, Power BI has native capability to support real-time dashboards. * Customers value the ability to ask questions in natural language. We have invested in our natural language capabilities for several years now and we have industry leading capability on this front. * We already talked about deep Excel integration capability. * Custom visuals: Power BI has taken the step to open source all visualizations we ship on GitHub. They are all built in Node GS and D3. The purpose of doing that is that we want Power BI in the hands of a billion users; we recognize that even though we ship a wide variety of visuals out of the box, there are always situations unique to industry or unique to a customer where there is a need for a visual that we do not ship out of the box. By open sourcing our visuals and encouraging our third party community building visuals, we make it super simple for customers. * Customers require solutions in order to get systems into production. Power BI has hundreds of solutions available from Microsoft and from our partner community. * Lastly we talked about the importance of insights but it is equally important to be able to convert those insights into action with PowerApps and Microsoft Flow.   These are the capabilities that are unique to Power BI and nobody in the Industry does.  As you go through the demos, hopefully you will be able to see these capabilities in action. Because of these differentiators, Gartner and Forrester have put us ahead of our competitors. |  |  |

# PART 2: POWER BI DEMO

## EASY TO GET STARTED: BUSINESS USER

| Dashboards and reports | | |
| --- | --- | --- |
| Narrative | Steps | Screenshot |
| One of the most painful processes for business users is the ability to consume numerous dashboards that we get. Those could come in various formats from paper reports, having to go to SharePoint sites, to login to web sites or custom apps. It is difficult to see one single view of our reports and dashboards and as a business user, you consume what somebody else sends you and it is a passive experience.  Power BI helps business users to self-serve themselves from a very secure place. We have a lot of agility but we don’t compromise any of the security.  To get this dashboard, it is a very simple experience. | 1. Navigate to the **Executive Summary Dashboard**. |  |
| The first thing you do is click on **Get data.** Here, we have different options. We can get traditional data from database tables or we can get things that are prepackaged. | 1. Click on **Get Data.** |  |
| When we click on Services we can see a number of prebuilt dashboards that are based on third party apps. These are from different business services from Dynamics, Marketo, Google Analytics and many more. When you click on one of them you can login using your credentials and you get directly from that source that dashboard.  e.g. let us click on Microsoft Dynamics NAV, you can login with your credentials and you get this dashboard out of the box.  This is for external data. | 1. Clickon **Get** in the **Services** section. 2. Select Microsoft Dynamics NAV content pack and show the capability.   Please note: You will NOT be logging into Nav for this demo. |  |
| You can go and get the same experience looking at your organizational data as well. Most of the dashboards include data from internal organizations. These are all the dashboards shared with me across the company. If I belong to a certain group, or if someone wants to share any of the reports with me, they will appear here. Single place for all dashboards. I can look for a specific report by clicking on search to find the Executive Summary dashboard and once I click here, I get the Power BI dashboard. | 1. Switch to the **My organization** tab**.** 2. Type ‘Executive summary’ in the search button to see the Executive Summary dashboard. |  |
| When we select the Executive Summary, here we have a single pane of many different functions that have data from many different data sources. For example, Marketing data that could come from a Twitter connector; Operations could come from SQL Analysis Services (SSAS) models. Finance could come from SAP or Dynamics and Sales could also come from Dynamics. This is just the tip of the iceberg where we can see an overview of the data. |  |  |
| The tiles on my dashboard are live and interactive and touch or click enabled. All you have to do to learn more about a place is click. | 1. **Click** on the **Estimated Value** tile in the **Sales** section of the dashboard. |  |
| Power BI has taken me to a report with a lot more detail. Here we have a report that was based on a Dynamics Solution template where we have more information about the health of the pipeline by the different sales folks that we have. Here we have David Simpson, Isabella, Nancy. We can see they have whole pipeline coverage but I can also click on any one of them, and this data is interactive and dynamic, and I’m going to see the information just for David Simpson or just for Isabella.  This enables you to drill and really see the detail. | 1. Select the bar for sales team **David Simpson** in the **Pipeline Coverage by Owner** bar chart. 2. Select the bar for sales team **Isabelle Scernia**. 3. Highlight the **Cumulative Sales and Cumulative Expected Revenue vs. Quota** line chart. |  |
| Now if I wanted to go back to my dashboard, I’d just click on the top left on Power BI.  And here I have a very interesting view of a map that’s going to give me an idea of how well I’m doing across a commercial area where we have many stores.  So here we’re going to have a few stores and a few areas in the stores.  And you can see the sales per square feet by product in the map  You can show which area you may be struggling.  So if you want to see where dryer is doing, this is just interactive and dynamic.  I can go to the right, I can click on stemware, and I can see where stemware is located on the map. | 1. Navigate back to the dashboard. 2. Highlight the **Operations** section of the dashboard. 3. Click on the store map custom visual showing **Sales per sq. ft.** |  |

| Q&A | | |
| --- | --- | --- |
| Narrative | Steps | Screenshot |
| One of the most common areas, you have a specific question on something you have heard in a meeting. That process can also be very painful because you have to send an email, an instant message. There is an area in the top left of the dashboard that says ask a question about your data.  You can simply click in that area ask a question using natural language.  If I want to know more about sales or revenue, I can do ‘sum of actual revenue’, and I can see that I have $2.5B in revenue, but I want to see by country. | 1. At the top of the dashboard, in the field **Ask a question about your data** (Q&A) type the question:   **Sum of actual rev**   1. Select the detected field **Actual > Actual Rev** from the data model. |  |
| I’d like to sort by country, I can see stack rank, but if I’m not very good at geography maybe I can do it as a map.    Here I’m going to have the cut by map and I can see the size of the bubble how each country is doing. So maybe I’m going to look at the top two countries which are Poland and Denmark. So I’m going to do sum of actual revenue. | 1. Amend the question:   **Sum of actual rev by country**   1. Amend the question:   **Sum of actual rev by country as map** |  |
| And here I'm going to change my question. I’d like to do two specific countries – Poland and Denmark, and I’m going to see instantly those two countries and time by quarter, but maybe I want a better view so I choose line chart. as a better view as a line chart.  Now I’ll be able to see the trend of Poland vs. Denmark over time simply asking my question.  I can easily pin this visual to my dashboard to keep an eye on these two countries. | 1. Amend the question:   **Sum of actual rev for Poland vs. Denmark by quarter as line chart**   1. **Optional: Pin** the visual to the dashboard. |  |

|  | | |
| --- | --- | --- |
| Narrative | Steps | Screenshot |
| Power BI makes it easy for me to share insights with others in my organization. I simply click on Share and enter the email addresses of the people that I want to share this dashboard and reports.  I never compromise security. When I connect my data to SQL Server Analysis Services on Prem, role based security carries on to the cloud. When I connect, and get a dashboard, it will always check my credentials and only show me what I am entitled to see. When I share this with colleague in Denmark, he can only see data for Denmark. We have lot of agility without compromising security. It’s essential that that role-based security carries on to the cloud. | 1. Click on **Share** in the toolbar on top right side of your dashboard. |  |

| Mobile | | |
| --- | --- | --- |
| Narrative | Steps | Screenshot |
| One of the most important elements of dashboard and reporting is the ability to be able to consume these on any device.  With Power BI, I have access to the same dashboard and the same insights on any hardware; iPhone, Android phone, Windows Phone.  Here’s my dashboard on my iPhone and I get the same responsive experience that I am used to on my desktop. Here we are using an iPhone. | Note: You can use your Windows phone, iPhone or Android phone for most of this demo.  Included below are the steps for an iPhone.   1. Launch the **Power BI** app on your iPhone/another mobile phone. 2. **Sign in** with your Microsoft Power BI account. 3. In the app, select **MTC0 workspace (or the one that you created in the setup steps for this demo)**, then the **Dashboards** tab. 4. Tap on **Exec Dashboard**. |  |
| I can scroll through the tiles of my dashboard on my phone. I can see all the information I showed you earlier. Here are the Marketing indicators, and here are my Sales indicators from the dashboard you saw earlier.  If I am interested in a tile, I can just tap on it to open the tile in focus mode. | 1. The tiles from the dashboard will be shown in the app. 2. Scroll down to **Sales** section of the dashboard and tap on **Total Revenue**. |  |
| In focus mode, I can see details and see that there are spikes in the total revenue over time.  I can create alerts to monitor changes in revenue on my device. | 1. Tap on the alert icon at the bottom of the app. |  |
| To add an alert, I just tap on add alert rule. | 1. Tap on **Add alert rule**. |  |
| Then, I can specify the conditions for when I want to receive an alert.  I can set the value for total revenue to a threshold amount e.g. $700M. | 1. Show alert but you will not actually create alert. |  |
|  |  |  |
| If I would like my team to investigate the spikes in revenue. I can share the insight, with a comment, right here on my phone. | 1. Go back to focus mode of the visualization. 2. Tap on the **Share** button below the visual. |  |
| I can add annotations to the visual before sharing it, using markers, text or icons. Not only can you annotate, you can share this on your OneNote (it has full Office 365 integration) and you can also share it through your email. If you click on Outlook there’s a picture with detail and link.  So we have full interactivity from the Power BI App to any device which also allows you to collaborate, annotate and share with others. | 1. Use a red pencil to annotate the visual as shown in the example on the right. 2. Tap the **Share** button to send the annotated image as an email. |  |
|  |  |  |

## EASY TO USE: BUSINESS ANALYST

| Power BI Desktop | | |
| --- | --- | --- |
| Narrative | Steps | Screenshot |
| We have a beautiful dashboard here. If we spend 6 to 12 months in development and custom coding, and spend half a million to a million dollars, it kind of defeats the purpose. The amazing part of Power BI is anybody can build this in hours. This is more of a design challenge than a technical challenge. We are going to use an authoring tool which is quite similar to Excel. | 1. Show Executive summary dashboard. |  |
| The amazing part of Power BI is anybody can build this. We are going to use the authoring tool that we introduced earlier called Power BI desktop. | 1. Show the powerbi.com and the location to download the Power BI Desktop file. |  |
| Here, we have data that is connected and we have a lot of visuals. But that is not all because Power BI enables you to basically build your own visuals if you want, using D3, JavaScript custom visuals and you can even benefit from what the community has built for everybody. | 1. Launch Power BI Desktop and open the Power BI Desktop file **MTC Finance.pbix** that is provided with this demo. |  |
| If you go to Power BI and search for Power BI custom visuals you have all these visuals that are available to you for download to add to ones that come out of the box. The process of adding a visual is super simple, you click on any of these to download. Once you download the visual we can go back to Power BI desktop and simply click on import a custom visual and you can get it from where you have downloaded.  Here we are going to download the Mekko chart. Once you do that, the visual is available right here. If you want to change your visual, all you have to do is click on it. | 1. Navigate to [www.powerbi.com/visuals](http://www.powerbi.com/visuals) and highlight the custom visuals available. 2. Download the mekko chart 3. Import the mekko chart in to Power BI desktop and highlight the feature. |  |
| May be in this case I want to choose a different visual here. We can choose a water fall chart and all I have to do is click on the visual that I want. | 1. Highlight the column chart VTB By Country. 2. Change the VTB by country to a waterfall chart by selecting water fall in the visuals. |  |
| Once I’m done with my design, I can publish this to the service. All I have to do is click on the button on top called publish. Once I publish, I save my work and now I am going to be able to pick the appropriate Office 365 group. | 1. Click on publish on the ribbon |  |
| This shows how well Power BI is integrated with Office 365. I can scroll down to the group that I am using. When you create a group, only the folks that are part of that group can see what you are publishing and you can use the OneDrive that you get with the groups. Full integration with office 365 enables you to really collaborate around groups that you can create for your division. | 1. Choose the relevant workspace from the list. |  |
| It is published and it gives me an option here you can get quick insights. When I click on Quick Insights, I am going to have Azure Machine Learning advanced algorithms that are going to be running against the data that I am loading looking for an anomaly. | 1. Click on quick insights linked shown after the pbix file is published to the service. |  |
| I have all the learning that we have acquired in Azure Machine Learning - especially around an anomaly detection and finding outliers. This is running out of the box and it returns to me a set of nuggets against my data. | 1. Go to Power BI service. 2. Navigate the nuggets generated from quick insights and scroll up and down the screen. |  |
| For example, I can go against one of them and see that bedroom furniture is the category that generates more revenue. | 1. Highlight the bar chart Actual revenue by Product. |  |
| I can see that dining and entertainment is the group that has the most products and furniture is right after that one. I can see which of my products is doing well with certain licensing in terms of variance to budget and percentage. This is totally out of the box. | 1. Highlight count of product bar chart. |  |
| I can see over time if I have more products that are the coming to the market or not. In this case its fairly flat so this is again totally out of the box. | 1. High light the area charts available at the bottom of quick insights screen. |  |
| I am going to go to the report I just published which is MTC finance. If I want to include any of those elements into my dashboard all I have to do is just pin the visual against the Executive summary dashboard.  When I pin on it I can go back to the executive summary and I am going to see that tile appearing at the bottom. When I go to the bottom it is right here I can resize the tile I can make it smaller and I can fit it where ever I want on my dashboard. | 1. Go to MTC finance report on Power BI service and pin VTB % card tile. 2. Pin the tile to Executive summary dashboard. 3. Go to the Executive summary dashboard. 4. Highlight the vtb % card tile at the bottom of the dashboard. |  |
| You saw earlier that I am designing for the web. | 1. Change the layout the dashboard by clicking on the ellipse as shown on the screenshot. |  |
| I can design a specific dashboard for my phone by going to the top right and editing the view for the phone. I did no coding nothing to be able to see this on the phone all I have to is click on any of the tile that I want to pin against my dashboard and I can bring up and instantly I am going to have this available on my phone. | 1. Select the phone layout and scroll down to show tiles available. |  |
| So the mobile design comes out of the box and it is simply picking the tiles that you want to be shown on the phone and again no coding this is totally out of the box | 1. Select the vtb % card tile and pin the tile to the Phone layout. |  |

|  |  |  |
| --- | --- | --- |
| I am going to go back to my web view and I am going to show one of the most powerful features. Analysts use Excel and we worked hard on integrating Power BI with Excel.  In this case I have a report called the MTC finance report that I just loaded and I want to do further analysis in Excel. I just have to click on the report and go to the three dots and then click on analyze in Excel.  This is going to export the data model into excel and it is not only going to export the data model but it is also going to keep the connection to the model that I have in Power BI desktop and it will benefit from further changes. | 1. In Power BI, go to the **Datasets** section. 2. Find the **MTCFinance** dataset and expand the menu next to it. 3. Select **Analyze in Excel**. |  |
|  | 1. When prompted, click on **Enable** to continue.   Note: To use this feature, you will need to download and install an OLEDB provider that will connect the local Excel application to the Power BI service (see Prerequisites section). |  |
| Here I am going to get all the fields that are available. If I want to see actual revenue and I want to scroll down and maybe I want to see breakdown by country and let us add fiscal year as a column. Here, I can see that data very easily. I can further analyze our data. | 1. Select **Actual Revenue** from the dataset. 2. Scroll down to select **Country** from the dataset. |  |
|  | 1. Select **Actual Rev** as **values** in the PivotTable. 2. Select **Country** as **rows** in the PivotTable. |  |
| If you want to review a table that is critical to your executive, I can highlight this area and pin it back to the Power BI dashboard. There is interaction not only from Power BI to Excel but also from Excel to Power BI. | 1. Select the PivotTable that you just created. |  |
|  | 1. In the Power BI ribbon in Excel, click on **Profile** to add a Power BI connection from Excel. 2. If prompted, enter your Power BI credentials to sign into your account. |  |
| All I have to do is to go to the Power BI tab and click Pin. It is going to ask me which of the Office 365 groups do you want to pin this. I am going to pick the right group and the dashboard. It gives me a preview and I click ok. | 1. Pin the PivotTable to the Power BI dashboard. 2. Select the desired workspace and dashboard. |  |
| If I go back to my Power BI Executive Summary Dashboard, I can see a new tile that was added here and I can add this tile to a new section or another section on my dashboard, modify title etc. This is something I can do very easily out of the box. | 1. Go back to the Power BI dashboard. 2. Scroll to the bottom of the dashboard to find the pinned Excel PivotTable. 3. Rearrange or resize the tile as desired. |  |
| In conclusion we’ve talked about the business users and the very difficult part that comes from consuming many dashboards from many sources. That has been solved now because you can self-serve yourself using Power BI in one place. You can consume it in a secure way on your mobile phone. For an analyst, one of the most important things is it requires no coding. Everything I showed you today is out of the box. When I connect to SQL Server Analysis Services on premise, I get the security from the source that carries to the cloud. Not only do I have lot of agility but I do not pay any price in terms of security. It is more of a design challenge instead of a technical challenge. The key for me is to find what matters and show it in an effective way. |  |  |

## POWER BI IN ACTION: Airline Scenario

| Dashboard | | |
| --- | --- | --- |
| Narrative | Steps | Screenshot |
| I will now show you a second demo. This is based on some real work Microsoft did with one of the world’s largest jet engine manufacturers.  The company was in an interesting position. Their business needed to transform. They were moving from selling jet engines to leasing jet then. Along with leasing jet engines they are also offering maintenance and repair of jet engines to their customers.  So this manufacturer moved from a business model where they used to get paid upfront for a jet engine, to a model where they get paid for time that a jet engine is in the air.  So, the decision about when to take an engine out for maintenance is a critical one for the business.  Previously, this work was done manually, with tons and tons of data, and lots of people pouring over the data to decide when the engine needed to be taken out for maintenance.  The decision to take an engine out for maintenance is not a trivial one, because it is based on analyzing an enormous amount of data. A single jet engine has hundreds of sensors and a single flight produces between 1 – 2 TB of data.  In the new model, the manufacturer is utilizing data that is analyzed in Azure through several Azure Machine Learning models, which make a determination of when a plane needs to be taken out for maintenance. The models were trained by leveraging 3 years of historical data provided by the manufacturer from hundreds of flights. | 1. Go to [www.powerbi.com](http://www.powerbi.com) 2. Sign in to the Power BI service with your account. 3. Navigate to **Airline** dashboard. |  |
| So, this is the view that the fleet operator sees when they look at the status of the overall fleet.  They can see the fleet summary over here, they can see some engine diagnostics, they can also see some real-time data coming in as the plane is in the air.  What happens is most of the data, the 1-2 TB of data that is collected during a single flight, are collected when the plane docks at the gate. However, when the plane is in the air, a smaller amount of data is transmitted via satellite. This data is coming in through Azure Event Hub, and brought directly into Power BI, so that the operators can get a clear and up-to-date status of their fleet. | 1. Highlight the **Fleet Summary** pane. 2. Highlight the **Engine Diagnostics** pane. 3. Highlight the **Live Streaming** pane. |  |
| When I look at the fleet summary, I can see five planes that are marked in red.  I can click on the indicator to understand exactly what is going on. | 1. Highlight the red/yellow/green indicators on the dashboard. 2. Click on the red indicator with the number **5**. |  |
| As the fleet operator, it is really important for me to understand the status of the different planes in my fleet. I can do that in this report.  I can see that 5 planes have been flagged as red in critical status, 7 have been flagged with warnings, and 14 have been flagged with recommendations.  Now let me look at some of the planes that have been flagged as critical.  I can see the five planes listed here that have been flagged that way, and I can see the symbol of the plane, with their tail numbers.  Let me take a closer look at this particular plane, with the tail number 1ABCK.  When I click on this plane, I notice that a set of issues has been flagged for this plane by the Azure Machine Learning models.  I also notice that the map has zoomed into the UK and this plane is currently in London.  When I look at the flight schedule to the right, I can see that 1ABCK is scheduled to fly to Germany (OHR) next, then from there to Dubai (DXB), and then to Sydney (SYD). This helps me to quickly get a sense of where the plane is expected to be so I can decide where I want to take the plane out for maintenance. | 1. Click on the **Critical** status selector at the top. 2. Click on the **Warning** status selector at the top. 3. Click on the **Recommendation** status selector at the top. 4. Click again on the **Critical** status selector at the top. 5. Highlight the five tail numbers which are shown. 6. Click on the **1ABCK** tail number. 7. Highlight the issue details and severity color codes filtered data. 8. Highlight the location of **1ABCK** in London, UK. 9. Highlight the schedule for tail number **1ABCK**. | image004 |
| When I look at the set of issues that have been flagged, there is one issue flagged as red which is a significant engine second stage pressure anomaly.  Right here in this list, I see a details icon. When I click on it, I will be taken to a page in which Power BI provides me with all the information about why this particular engine was flagged for requiring maintenance. | 1. In the **Issue Details** list highlight the first row with the red indicator and the message summary 2. Click on the **Details** icon, to the left of the red severity indicator. |  |
| In this report, I see that Power BI has flagged this engine as having an 81% chance of requiring maintenance right away.  This recommendation was driven by four sensors, sensor 17, 19, and the two sensors you see at the bottom, reaching significant thresholds that, in combination, in the past have resulted in the engine requiring maintenance. | 1. The **Anomaly Detection** report will be shown. 2. Highlight the gauge chart for **Confidence of prediction**. 3. Highlight the area charts for the four engine sensors. |  |
| The very first sensor, which is Sensor 17, was the biggest contributor to this overall prediction. | 1. Highlight the **Sensor 17** column in the **Determination by feature & rank** chart. |  |
| Now when I go back to my dashboard, I can also get a better sense of my engine diagnostics.  Let me click on it and see some of the details that are offered. | 1. Navigate back to the **Airline** dashboard. 2. Click on the **Faults by Engine Parts** visual. |  |
| In the engine diagnostics report, you see the engine from two different perspectives. You see a frontal, three-fourth view as well as a lateral view of the same engine.  You notice that the parts of the engine have been color coded.  On the right-hand side, you see the faults, identified by engine part, that occurred over the last 12 months, in the same color coding.  For example, if I click on this part of the engine here, which is the cone, you notice on the right-hand side that the cone has been the part with the most defects over the last 12 months, with 65 faults. | 1. Highlight the two different views of the engine. 2. Highlight the data in the bar chart, representing the engine parts. 3. In the **3/4** view of the engine, click on the blue cone. 4. Highlight the top bar for **Cone** in the **Engine Part by Faults** bar chart. |  |
| If I click on the second biggest contributor, the bleed air channel, you see the bleed air channel highlighted in both perspectives of the engine.  This is really interesting because this is an example of how custom visuals bring analytics to life for our customers.  In this case, what made sense to the manufacturer, is to be able to see the faults overlaid on the schematic of the engine so they can understand how the faults map to the different engine parts. | 1. Click on the bar for the **Bleed** **air channel** part in the bar chart. 2. In the engine visuals, highlight the location of the part and its color coding. |  |

| PowerApps |  |  |
| --- | --- | --- |
| Narrative | Steps | Screenshot |
| [The demo starts with the Engine Maintenance page below]. | 1. Launch **PowerApps** on your mobile phone. 2. **Sign in** to **PowerApps** with your work account. 3. Tap on the **Airline Engine Inspection** app to launch it. |  |
| We saw from the Power BI dashboard, that the plane with the tail number 1ABCK needed maintenance. Now let’s pretend that I am the maintenance engineer. I bring up this application on my iPhone that has been built using PowerApps.  PowerApps is a rapid application development platform, that helps business users and business analysts build applications without any coding whatsoever.  In this case, I am using this app on my iPhone, and you can see, as a maintenance engineer it has my schedule for the day. These are the planes with the engines that I need to inspect today.  You can see that the second item on my list is the plane with the tail number 1ABCK. | 1. Navigate to the **Engine Maintenance** schedule. 2. Highlight information provided – scheduled time, location, plane model and tail number, engine ID. 3. Tap on **Bay-C26** which has the plane with the tail number **1ABCK**. |  |
| If I click into it, you will see that PowerApps has put in the data here from Power BI, about the sensor that reached a certain threshold value.  I can also see the components that I am supposed to inspect, the high pressure compressor, the bleed air channel, and so on.  If I click into the high pressure compressor, you can see that PowerApps produced additional information, that helps me determine exactly which components I need to inspect. | 1. On the **Engine Details** page, highlight the sensor area chart which looks the same as in Power BI. 2. Highlight the engine components to be inspected by scrolling down the page. 3. Tap on **High Pressure Compressor** to go to the detailed inspection page. |  |
| Once I perform my inspection, I can recommend the action, let’s say in this case I’m going to recommend a repair.  I can also specify a date for when I want the repair to be performed, let’s say the 30th of the month, and click OK. | 1. Click the **Repair** button. 2. Click on the calendar icon to pick a date. 3. Click on **Photo Attachment**. |  |
| I can even take a picture and attach the photo for my inspection. | 1. Tap on **Capture** to take a picture of the engine parts. 2. Tap on the check mark when done. |  |
| Then I submit this inspection. | 1. Tap on the check mark to complete the inspection details for the **High Pressure Compressor** part**.** |  |
| You can see that the app acknowledges that this particular plane has a repair needed on a specific date. | 1. Navigate back to the **Engine Maintenance** page. 2. Highlight the check mark and **Repair Needed** status for tail number **1ABCK**. |  |

## PARTNER SOLUTIONS AND SOLUTION TEMPLATES

| Partner Solutions | | |
| --- | --- | --- |
| Narrative | Steps | Screenshot |
| We saw two demos. First, you saw how Power BI  Provided and end to end view of business through a single pane of glass. Secondly, you saw how a jet engine manufacturer used Power BI to transform the way the business works.  Lastly I wanted to show you the hundreds of solutions available through Microsoft and partners. | 1. Go to [www.powerbi.com](http://www.powerbi.com) 2. Navigate to **Partners**, then select on **Partner showcase**. |  |
| Here you see the Power BI partner solution showcase. The solutions can be searched by country, by industries, or by departments. If I scroll down, I can see hundreds of solutions from top partners around the world. | 1. Highlight solutions organized by Countries, Industries and Departments on the web site. 2. Scroll through the list to show solutions created by the partners on the site. |  |
|  |  |  |
| As an example, I am going to select one of our top partners like Hitachi. | 1. Click on **Hitachi Solutions**. |  |
| On this page you will see all the information about Hitachi solution. Not only can you read about it, but you can also take the solution for a quick test drive.  Hit view report and here you see Power BI with embedded data and reports that are produced by Hitachi so customers can get a real sense of what Hitachi can do for them. | 1. Highlight the information and the screenshots on the page. 2. Click on **View Report for Manufactoring IOT solution.** |  |
| Now I am looking at an actual Power BI report which is fully interactive and allows me to take the solution for a test drive. This gives a sense of what a customer can get if they implement the solution built by Hitachi. | 1. Highlight the embedded Power BI report and switch to the report page for **Monitoring HVAC** units. |  |

| Solution Templates | | |
| --- | --- | --- |
| Narrative | Steps | Screenshot |
| In addition to partner solutions, Microsoft provides a set of solution templates for common scenarios for BI and Data Warehousing. You will see these solutions available directly on Powerbi.com. | 1. Go to [www.powerbi.com](http://www.powerbi.com) 2. Select **Soutions**, then **Solution Templates**. |  |
| Here we have various solution template that have been shipped already. | 1. Scroll down the page and highlight available solution templates. |  |
| Let me go the **Sales Management solution template for Dynamic CRM** as an example to see what kind of insights it provides. You will see a page similar to what you saw with Hitachi. | 1. Scroll to the **Sales Management for Dynamics CRM** solution template and click on **Learn more.** |  |
| I can now see a description and screenshots for the solution. I can also view an actual Power BI report for this solution template.  I can click on View Report. | 1. Highlight the details and description for solution template. 2. Click on **View Report**. |  |
| Here you see a Power BI report as an example of the output of the template. I can slice and dice it and see how this solution provides me with fantastic analytics on the state of my pipeline and sales force. | 1. Show the **Pipeline** report page. |  |
| If I am interested in this solution template, I can install it from here. | 1. Close the report by clicking outside the report window. 2. Select **Install now**. |  |
| This will launch an Azure application that allows me to configure parameters that need to be configured and I can hit Deploy. That is all that is needed to get this solution in production. Once deployed what Power BI has done is that it connected to Dynamics CRM, built a data mart in Azure, created a set of KPIs, measures and built a security model as well. It then provides a set of Power BI reports that look just like the reports I showed a few minutes ago. | 1. Highlight the configuration steps and configuration options:   **Dynamics CRM instance**  ***Online*** *or* ***On Premise***. |  |
| I just wanted to come back to the differentiator slide I showed you earlier.   * First one we talked about was the Real-time dashboards which you saw come alive with the airline industry example where real time demo data from the airplanes streamed into the dashboard. * Next we talked about great natural language capabilities. * We also showed Excel Integration. * You also saw great examples of custom visual with the jet engine that represents faults associated by plane. * You saw the hundreds of solutions available from Microsoft and partners. * You also saw what happens when we combine Power BI with PowerApps and flow so that people can translate amazing insights into action. |  |  |

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