PL-900
Microsoft Power Platform Fundamentals
Trainer Preparation Guide

August 2022

Purpose

This document is for Microsoft Certified Trainers preparing to teach PL-900. This course is designed for students who are planning to take the corresponding certification exam, or students who want to learn how to create Power Platform apps in their daily job.

Audience Profile

This course addresses business users, functional consultants, or students.

Audience Prerequisites

None

Certification Exam

The study areas for the certification exam related to this course are based on the Job Task Analysis (JTA) that was conducted in November 2021.

Each study area has a percentage indicating the relative weight of the area on the exam. The higher the percentage, the more questions a candidate is likely to see in that area.

Study Area	Percentage
Describe the business value of Microsoft Power Platform	20-25%

Identify the core components of Microsoft Power Platform	10-15%
Demonstrate the capabilities of Power BI	20-25%
Demonstrate the capabilities of Power Apps	25-30%
Demonstrate the capabilities of Power Automate	10-15%
Demonstrate the capabilities of Power Virtual Agents	1-5%

Note: There are sample questions available that learners can use to prepare for the certification. You can find them here.

Prerequisite Knowledge to teach this course

To successfully teach these courses, instructors must have experience leveraging the following:

- Microsoft Power Platform (including Dataverse, Power Apps, Power BI and Power Automate)
- Basic development processes, methodologies, and best practices

Note: These guidelines are not inclusive of the requirements to become a Microsoft Certified Trainer (MCT).

Required Materials to prepare for and teach this course

You need the following materials to prepare for and teach this course:

Resource	Description
Microsoft PowerPoint files	Download the PL-900T00A-ENU-PowerPoint.zip from the MCT Download Center.
Change Log	Download the PL-900T00A-ENU-CourseDatasheet.pdf from the MCT Download Center.
Lab environment provided by your lab hosting provider	Contact your lab hosting provider for instructions on using their lab environment.
Lab instructions	The lab instructions are provided in the lab environment and in the PL-900 Microsoft Learning GitHub repository. Students can access the lab manuals using the more user-friendly GitHub Pages feature.
Student training content	See the following section for a detailed breakdown of each Learning Path covered in the course.

Microsoft Learn for Educators program	For educational institutions that deliver this course, additional assets are available through the Learning Download Center (LDC) for Educators.

Student training content

The student training content for this course is located in Microsoft Learn. The following table provides a breakdown of the Learning Path, the modules covered, and the link to the LP in Microsoft Learn.

The student training content includes links to additional reading material to help you prepare for

Learning Path	Module	Online training in Microsoft Learn
Learning Path 1: **PL-900: Microsoft Power Platform Fundamentals**	**Module 1:** Introduction to Microsoft Power Platform **Module 2:** Introduction to Dataverse **Module 3:** Introduction to Power Apps **Module 4:** How to build a canvas app **Module 5:** How to build a model-driven app **Module 6:** Introduction to Power Automate **Module 7:** How to build an automated solution **Module 8:** Introduction to Power BI **Module 9:** How to build a dashboard **Module 10:** Introduction to Power Virtual Agents	PL-900: Microsoft Power Platform Fundamentals - Training | Microsoft Learn

Preparation Tasks

Instructors should complete the following tasks to prepare for teaching this course:

- If you have previously taught this class, refer to the course's Change Log. It provides detailed information on how the course has changed over time. The Change Log is updated for each course release.
- Review all topics in the student training material in Microsoft Learn (see the link in the Required Materials section above). You should be well-versed in every topic. If you have previously taught the

course and are comfortable with your knowledge of each topic, focus primarily on the new or updated topics as outlined in the Change Log.

- Review the PowerPoint slides.
    - Be able to speak to each of the talking points on the slides. Some slides include a graphic from the associated Learn content for the topic. These graphics are provided on the slide so that you can speak to them to help explain the key talking points in the topic.
    - **The bulleted items on each slide should NOT be read verbatim to the students.** The students can read the slides themselves. Rather, the bullet points reflect the key information that you should focus on when discussing each topic. You should use your experience as a subject matter expert to explain the What, the Why, and the How of each topic. **This is your opportunity to provide a real value-add above and beyond the bulleted talking points.**
- Review the Additional Reading links and other linked resources provided in the student training material. **It's recommended that you present key points from this material to supplement the value-add you provide as an instructor.**
- As you prepare for the class, you should review each unit and determine which ones you want to perform demonstrations of the corresponding product functionality. It's up to you to decide which product features you want to demonstrate to the class. You should use your experience to identify key points during the demonstration process. **This is an area where you should rely on your experience as a subject matter expert to provide additional value-add to the students.**
- You should review each Knowledge Check (KC) question so that you know why the correct answer is correct for each question. Students may challenge some of the questions, so you must be able to address any of those concerns.
- You should perform the labs yourself prior to class so that you become familiar with them and with any of the difficult points in the lab exercises. This will prepare you for helping students in case they get stuck.

Course Timing

Daily Agenda

The following agenda provides estimated times to complete each classroom activity. However, the estimated times may vary depending on the background of your students, which may affect whether you can move faster or slower through the course material.

Estimated times for each module include the time to complete:

- The module's PowerPoint slide deck presentation.
- Any pre-defined product demonstrations.
- Time to review Knowledge Check questions (see the section on Additional Timing Notes below).
- Time to complete a classroom discussion activity if a Discussion slide is included in the module slide deck.

You should adjust the agenda accordingly based on any classroom activities that you personally created or plan to deliver that are not included in the slides for this course. For example, if you plan to present:

- ad-hoc demonstrations
- review activities
- classroom games

- and so on…

Note: Each Module activity in the following agenda is the slide deck presentation for that module.

Day	Estimated Time	Classroom Activity
1	15 minutes	**Introduction**
	45 minutes	**Introduction to Power Platform**
	15 minutes + 15-minute break	Lab 0: Validate lab environment + break
	30 minutes	**Introduction to Dataverse**
	30 minutes	Lab 1: Data modeling
	1 hour	**Get Started with Power Apps** - Introduction to Power Apps - How to build a canvas app - How to build a model-driven app
	30 minutes	Lunch Break
	1 hour	Labs 2: Build a canvas app and Lab 3: Build a model-driven app
	30 minutes	**Get Started with Power Automate**
	30 minutes + 15-minute break	Lab 4: How to build an automated solution
	45 minutes	**Get Started with Power BI**
	30 minutes	Lab 5: How to build a simple dashboard
	15 minutes	**Get Started with Power Virtual Agents**
	15 minutes	Summary

Additional Timing Notes - Knowledge Check questions

Knowledge check (KC) questions are provided throughout the course to check the student's knowledge of the material that was covered. Instructors can use these KC questions in several ways:

- Conduct a formal classroom exercise in which you go through the questions in a module before moving on to the next module.
- Sprinkle the questions into the content as you cover the related material for a module
- Let the students review the questions after class as a daily homework assignment. You can set aside time at the start of each day to answer any questions they have regarding the prior day's questions. This may be the most feasible option given the tight time constraints that most classes work under.

It will be left up to each instructor to determine how they want to incorporate the KC questions into their class.

If you provide students with time to review the KC questions at the end of specific topics and at the end of each module, you should provide a couple of minutes per question, along with a few extra minutes per question to respond to student questions or challenges concerning certain questions they may not understand or whose answers they disagree with. This may add an extra 15 to 30 minutes to complete each module.

Labs

The labs must be completed within the lab environment provided by your lab hosting provider. Detailed, step-by-step instructions are provided for each lab and presented as part of the UI experience within your lab environment.

At the time the courses were released, the lab instruction had been thoroughly tested and the lab steps were 100% accurate. However, given the nature of Microsoft's cloud products and the fact that Microsoft releases UI updates on a regular basis, it's possible that at some point in time, the UI for a given feature may change so that it no longer matches the lab instruction.

If students encounter lab steps that don't accurately reflect the UI, they'll have to work through the UI to determine what needs to be done. Typically, UI changes are quite subtle, so hopefully you don't find yourself in a situation where a feature was completely overhauled.

However, if you do run into major UI changes, challenge your students to work through it, and only offer help if they need it. Product UI changes will be part of their daily life in today's cloud-centric world. As IT/Pros, they must learn how to work through such situations.

One thing Microsoft does ask of you is that if you run into situations such as this where lab instructions no longer match the corresponding UI, please document the issue in the course's GitHub repository. This will help Microsoft's World-Wide Learning team update the lab instructions to keep them as up to date as possible. For information on how to submit an issue, please see GitHub User Guide for MCTs.

Configure the real estate demonstration

Included with the instructor content, is an example real estate solution that you can leverage to showcase to students how the different components of the Power Platform can be leveraged together to build an end-to-end solution that supports different business cases. You can find the relevant files on Github here.

The real estate solution is a simple solution that includes several components that you can leverage as a starting point. Feel free tailor or expand on the solution as you feel necessary to help when delivering the class.

The real estate solution includes the following:

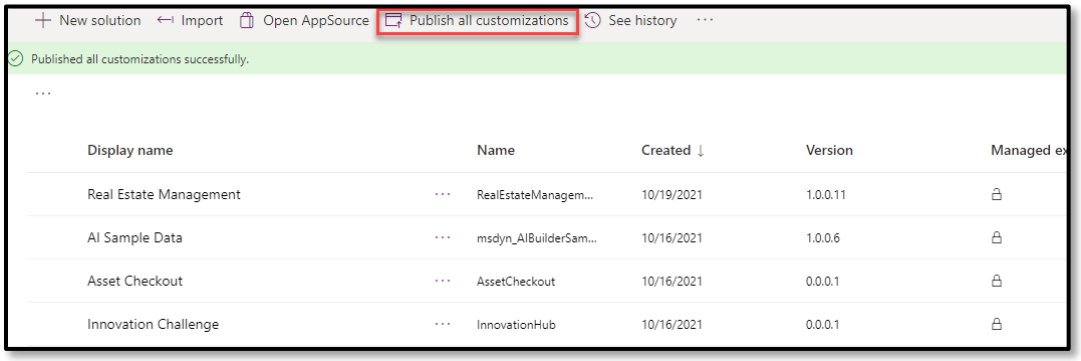
- Apps
  - Property Intake App (Canvas App)
  - Real Estate Internal (Model Driven App)
- Chat Bot
  - Real Estate Helper Bot
- Choices
  - Bedrooms
  - Bathrooms
  - Level of Interest
  - Property Type
- Processes
  - Showing to Closing BPF
- Tables
  - Closing
  - Counteroffer
  - Offer
  - Open House
  - Property Images
  - Real Estate Property
  - Showing to Closing
  - Similar Property

NOTE: *All the tables and other related information in the solution leverage U.S, address formats. If you are delivering this course in another country, you might want to consider making changes to address formats to ensure that the examples will resonate better with your specific audience.*

Task 1: Import the Real-Estate Solution

1. In new browser tab in the same instance, navigate to https://make.powerapps.com
2. Ensure that you are in the environment that you want to import the solution into.
3. Using the navigation on the left, select **Solutions**
4. On the command bar, select **Import**.
5. Select the **Browse** button
6. Locate the **RealEstateManagement_1_0_0_13.zip** unmanaged solution that is included in your instructor files.

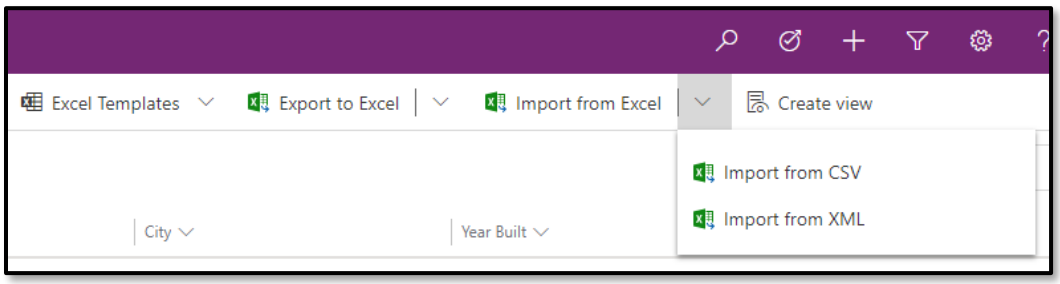
7. Select the **Next** button.
8. Select the **Import** button.
9. **IMPORTANT:** After the Import is complete, be sure to select the **Publish All Customizations** button. *If you do not Publish Customizations, you will not be able to launch The Real Estate Internal Model Driven Application.*



Task 2: Import Sample Data

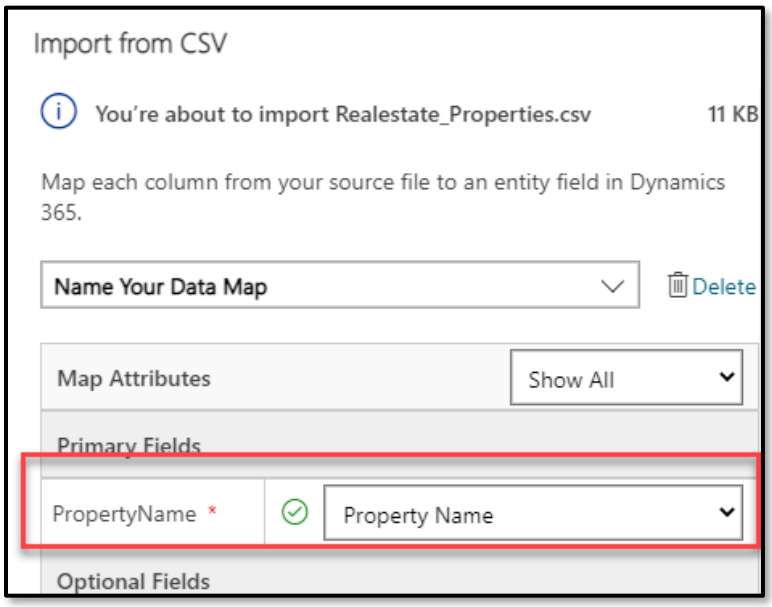
To ensure that you have some property data that you can leverage, we have included an Excel file that includes multiple property listings that you can leverage so you have some data to work with. If you would rather add your own properties to the application, you can add those manually.

1. Once you are in the Power Apps maker portal, use the Navigation on the left to select **Apps**.
2. Select the **Real Estate Internal** Model-driven application to open it.
3. Using the navigation on the left, select **Real Estate Properties**.
4. On the **Command Bar** at the top, select **Import from Excel**.
5. In the **Menu** that appears, select **Import from CSV**.

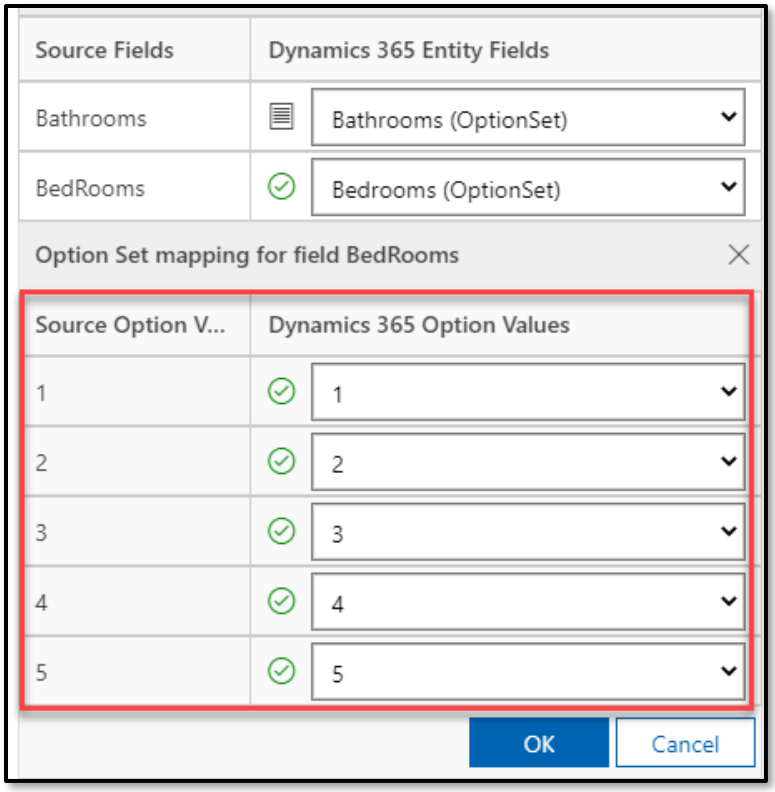


6. On the **Import from CSV** screen, select the **Choose File** button. (*Make sure you select CSV and not XML*)
7. Locate the **RealEstate_Properties CSV** file that was located in your instructor files.

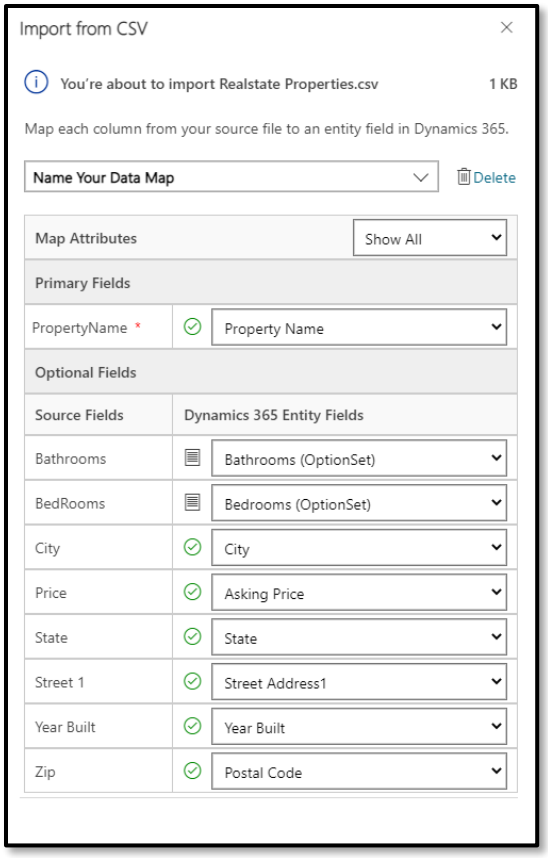
8. Select the **Next** button
9. Leave everything as is and select the **Review Mapping** button.
10. On the **Mapping** screen map the **PropertyName** field to **Property Name**.



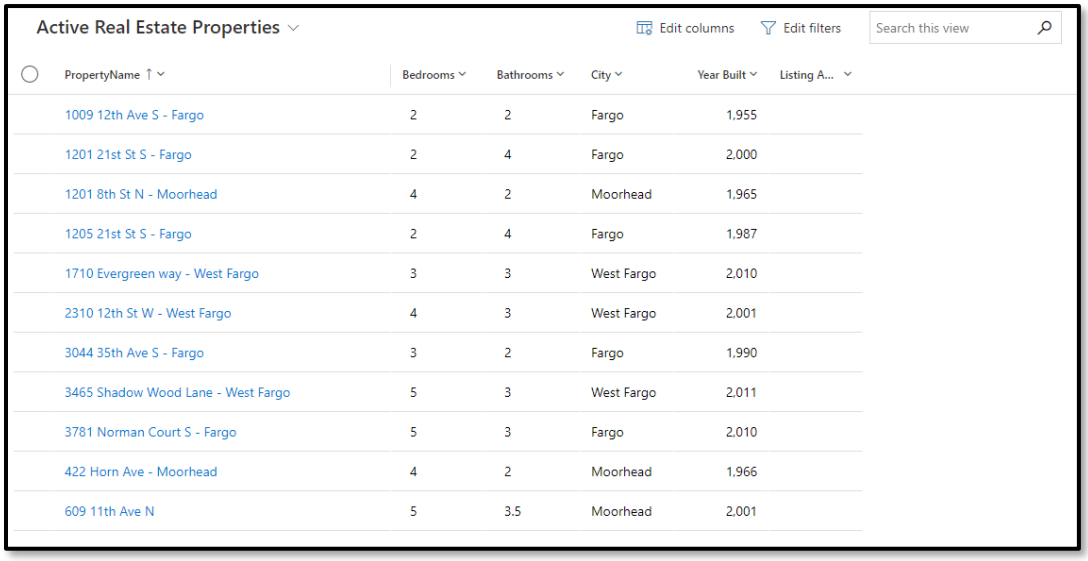
11. Map the **BedRooms** field to the **bedroom** option set field.
12. Verify the values are mapped correctly and select the **OK** button.



13. Map the remaining fields as follows:
    - **City** = City
    - **Price** = Asking Price
    - **State =** State
    - **Street 1** = Street Address 1.
    - **Year Built =**
    - **Zip** = Postal Code
    - **City =**
14. Your completed mapping should resemble the image below:



15. Select the **Finish Import** button
16. It can take several minutes for your data to import into the application. After your data has finished importing, when you select **Real Estate Properties**, you should see something similar to the following.

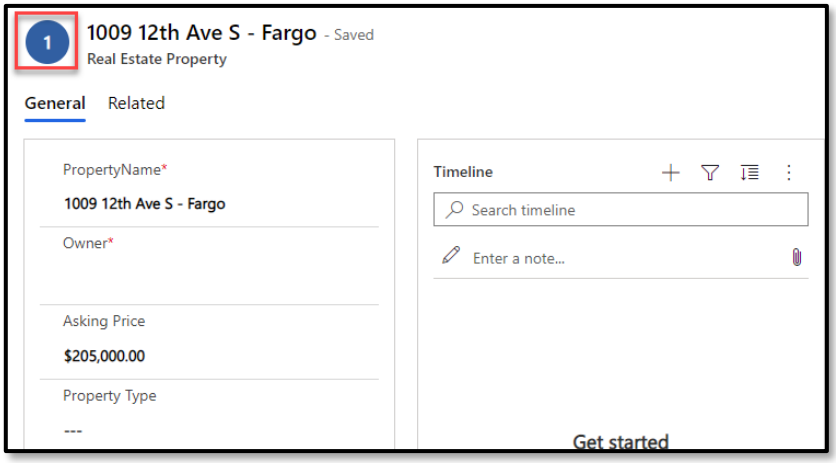


PropertyName	Bedrooms	Bathrooms	City	Year Built	Listing A...
1009 12th Ave S - Fargo	2	2	Fargo	1,955	
1201 21st St S - Fargo	2	4	Fargo	2,000	
1201 8th St N - Moorhead	4	2	Moorhead	1,965	
1205 21st St S - Fargo	2	4	Fargo	1,987	
1710 Evergreen way - West Fargo	3	3	West Fargo	2,010	
2310 12th St W - West Fargo	4	3	West Fargo	2,001	
3044 35th Ave S - Fargo	3	2	Fargo	1,990	
3465 Shadow Wood Lane - West Fargo	5	3	West Fargo	2,011	
3781 Norman Court S - Fargo	5	3	Fargo	2,010	
422 Horn Ave - Moorhead	4	2	Moorhead	1,966	
609 11th Ave N	5	3.5	Moorhead	2,001	

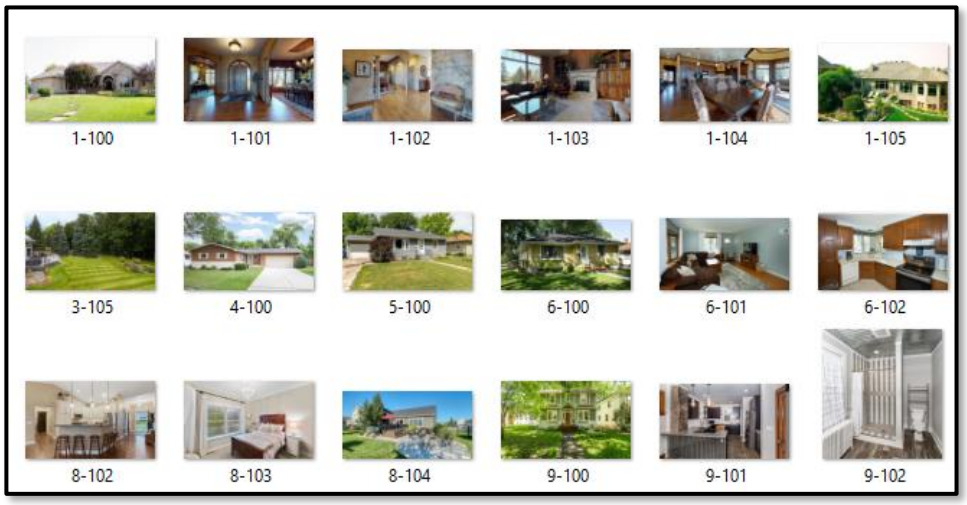
Task 3: Add Property Images (Optional)

In addition to the real estate properties table, there is a Property Images table that can be used to display different property images for several of the listings that you will be showing in your demo. If you would like to have images, be displayed for a property, you can use the steps below to ensure that images are displayed.

1. If necessary, open the **Real Estate Internal** application model driven application.
2. Using the navigation on the left, select **Real Estate Properties**.
3. Select the one of the **Real Estate Properties** that you want to add images to and open the record.
4. On the record, select the circle next to the Property name.

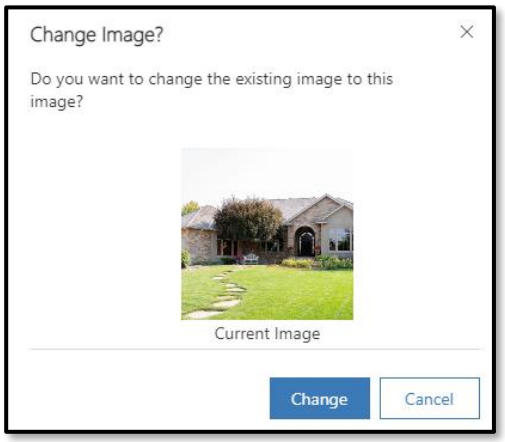


5. On the **Choose Image** screen that appears, select the **Upload** Image button.
6. Navigate to the Property Images folder that was included in your Instructor Files.

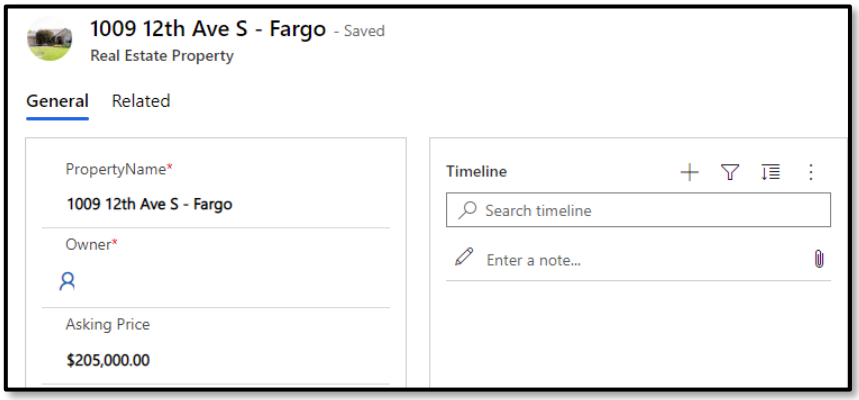


7. Select one of the Exterior images to leverage for the property, then select **Open**.

8. Select the **Change** button.



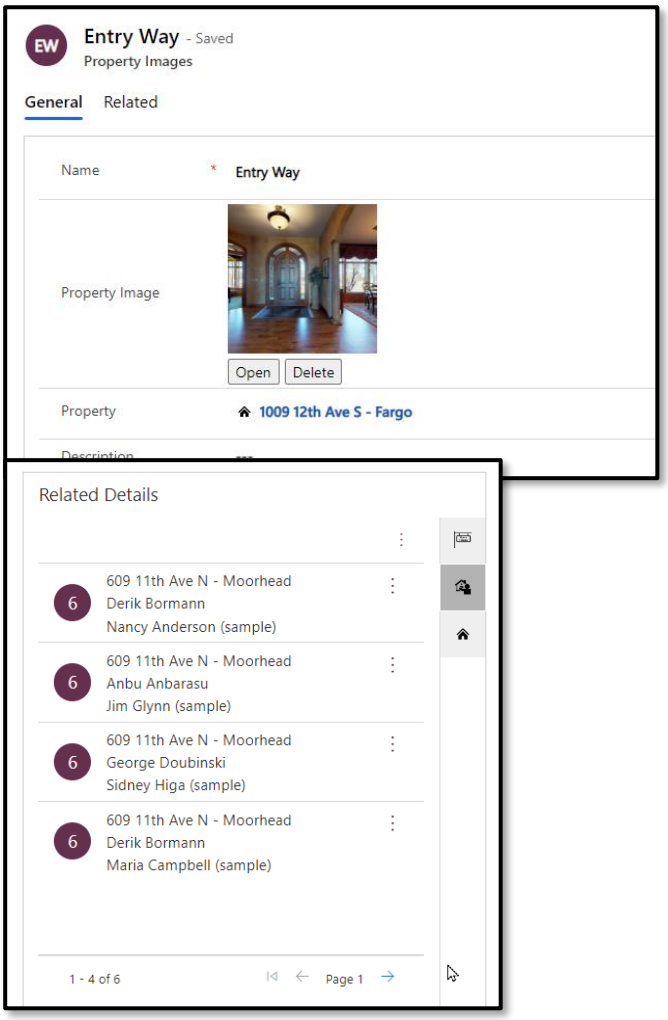
9. Your property Image will now have a primary image associated with it.



Next you can add some individual images to different properties.

10. On the record, select the **Related** tab.
11. From the menu that appears select **Property Images.**
12. Select **New Property Images**
13. In the **Name** field, enter a name for the image such as *kitchen*, or *entry way*.
14. Select the **Save** button to save the button and leave it open.
15. On the **Property Image** field, select the **Choose File** button.
16. Select an image from the **Property Images** folder, and select **Open,**

17. **Your completed record will resemble the image below.**



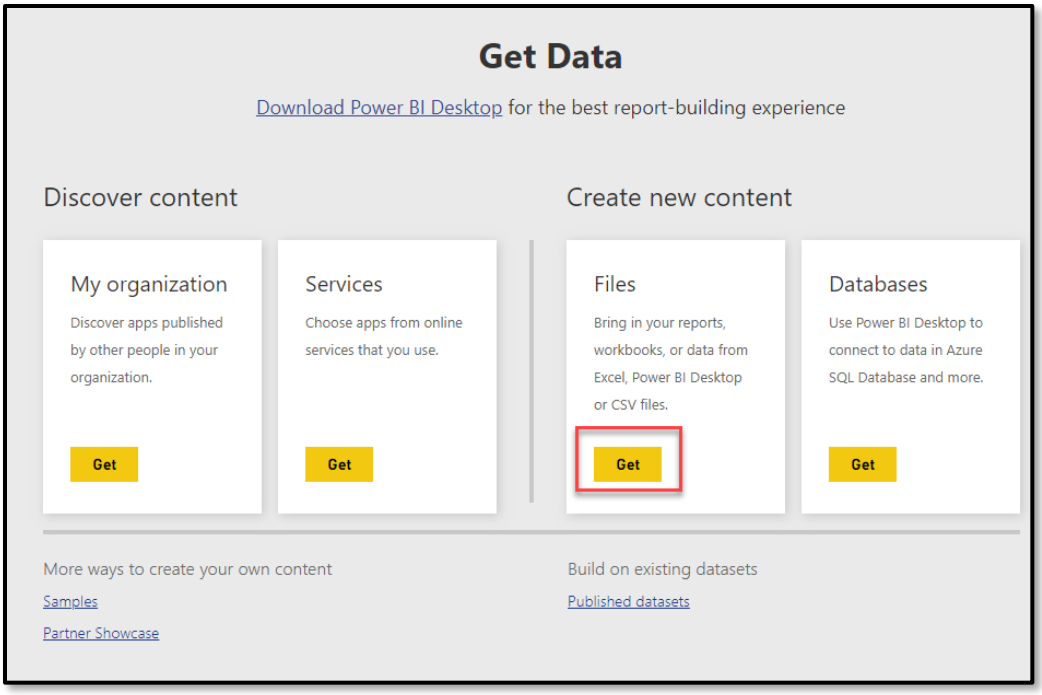
18. Select **Save and Close**

You can repeat the above steps to add multiple images to the property listing. Once you have added the images you want, move to another property, and repeat the process until you have added enough data to demo the application to your liking.

Optional Steps Items

Another option is to add some related records to your application. There are tables for Showings, Open Houses, and Offers. Adding some records to a few of the Property Listings will allow you wot be able to showcase those items as you demonstrate the application.

You can repeat the above steps to add multiple images to the property listing. Once you have added the images you want, move to another property, and repeat the process until you have added enough data to demo the application to your liking.



Task 4: Import the Real Estate PBIX file into Power BI (Optional)

Another way that you can showcase all the different Power Platform components working together is by demonstrating how to leverage Power BI. We have included a PBIX file that you can import into your environment, and then either demonstrate leveraging the report in Teams, stand alone in Power BI, or by embedding in a Model driven application. To import the Power BI Report, follow the steps below:

1. Open a new browser tab in the existing browser session.
2. Navigate to www.PowerBI.com
3. If prompted, login with the same credentials as your demo tenant.
4. In the lower left portion of the screen, select **Get Data**.
5. In the **Create New Content** section, under **Files,** select the **Get** button.

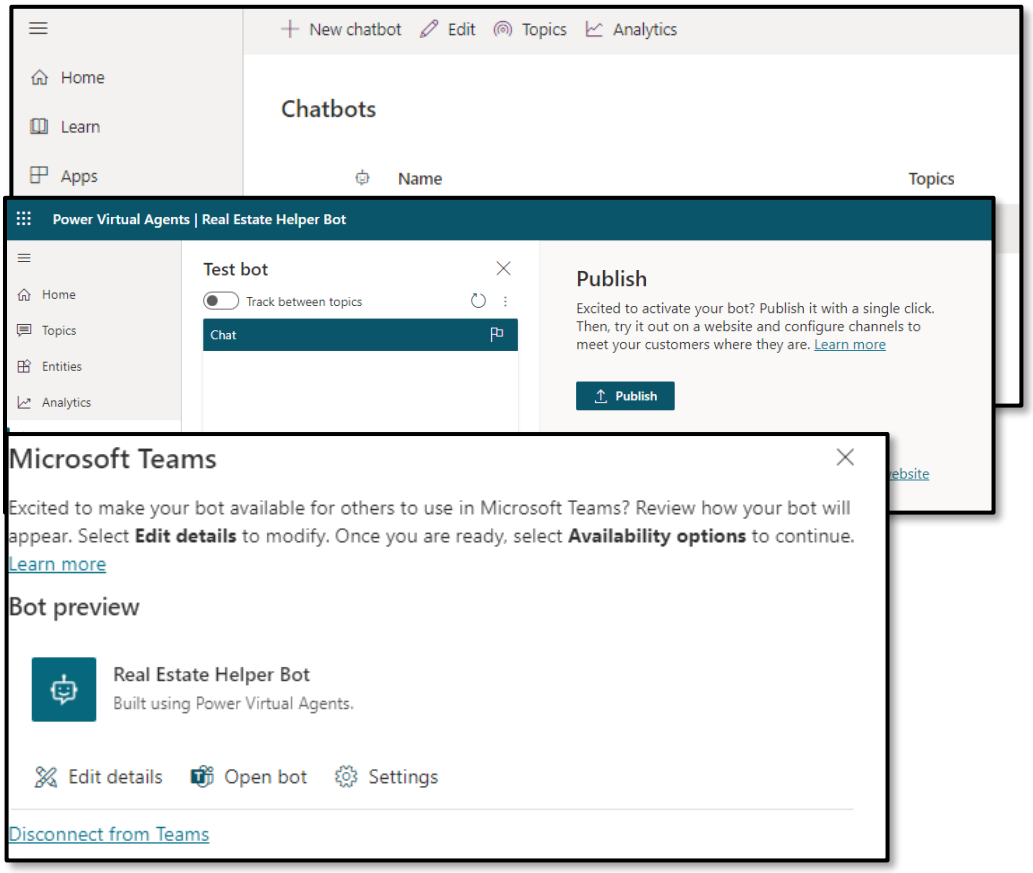
6. Select Local File.
7. Locate and select the **Realestate Sample.pbix** file from the Power BI folder and click **OK**.
8. Complete the Import.

Task 5: Make the Real-estate helper bot available in Teams (Optional)

One way that you can demonstrate flexibility is to show how PVA bots can be leveraged in different scenarios. You can do this by making the bot available in the Microsoft Teams environment that is associated with your training environment.

IMPORTANT: If *you are delivering this course remotely, you will need to make sure that you are not leveraging the same Teams instance you are using for the class. Import the bot into a different Teams Instance and then open the Teams instance in web browser.*

1. If necessary, open a new browser tab and navigate to https://make.Powerapps.com.
2. Using the navigation on the left, expand **Chatbots**.
3. Select **List**, and then open the **Real Estate Helper Bot**.



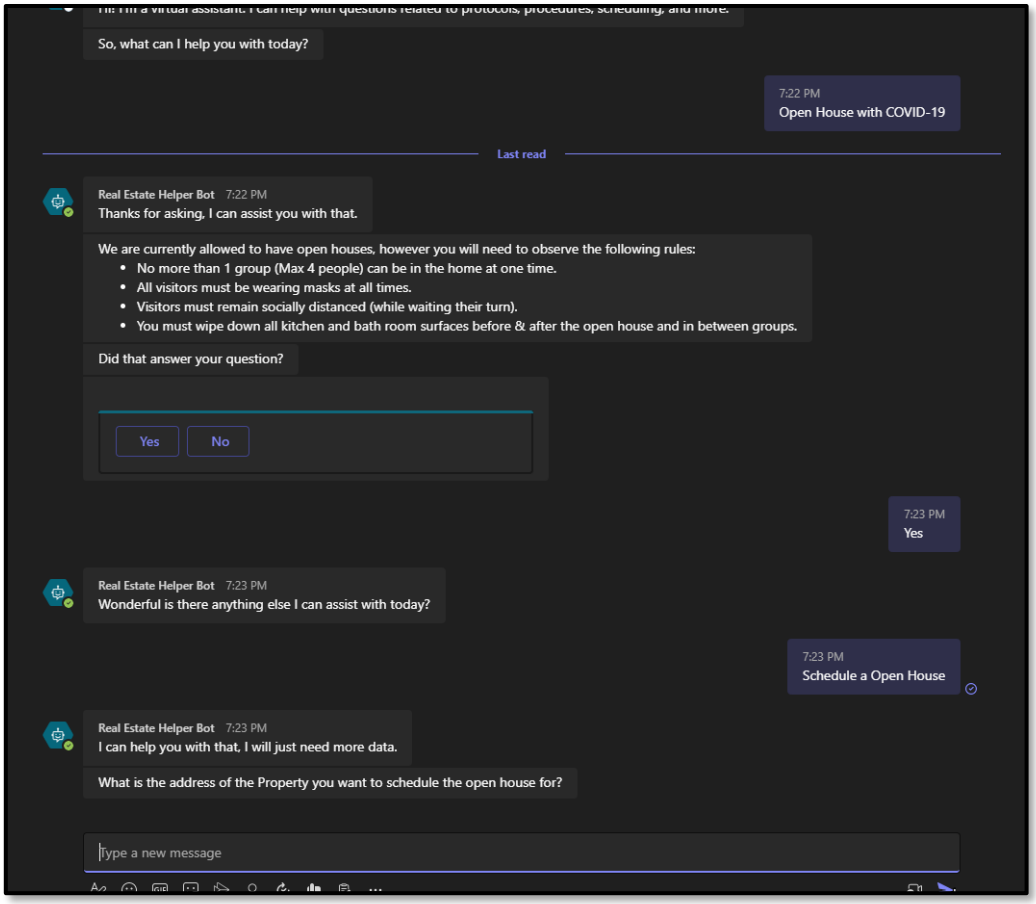
4. Using the navigation on the left, select **Publish**.
5. Select the **Publish** button.
6. Once your Bot is published, use the navigation on the left to expand **Manage**.
7. Select **Channels**.
8. Select **Microsoft Teams**.
9. Choose **Turn on Teams**.
10. Once your bot appears in the menu, choose Open Bot.

11. After Teams opens, select the **Add** button.
12. Your bot will now be available in Teams.

Demonstrating the Power Platform

Now that you have everything configured you can demonstrate the Power Platform. Setup the scenario by introducing a real-estate company. Explain what the real-estate agents need when working in the field, as well as what the managers need.

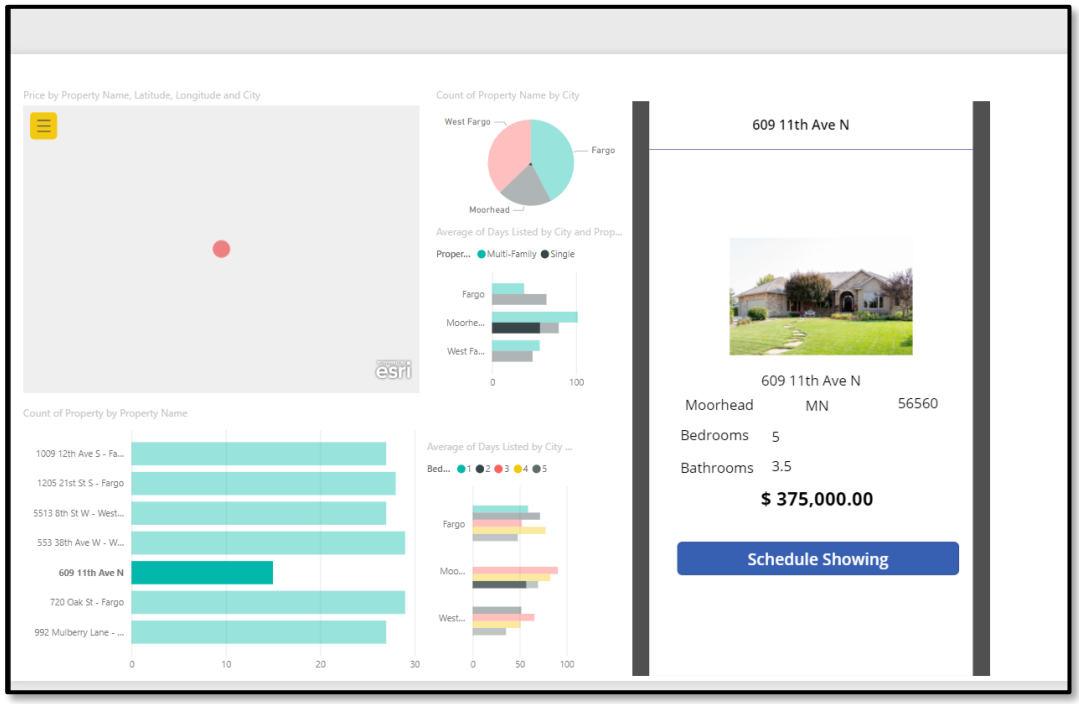
IMPORTANT: You are not showing students how to build the items at this point. Focus on how the different elements can be leveraged from an end user perspective. Focus on telling a story of the day in the life of a real estate company. What are the agents doing? How does management leverage the Power Platform? This helps students understand the business value that is being provided by the power platform.



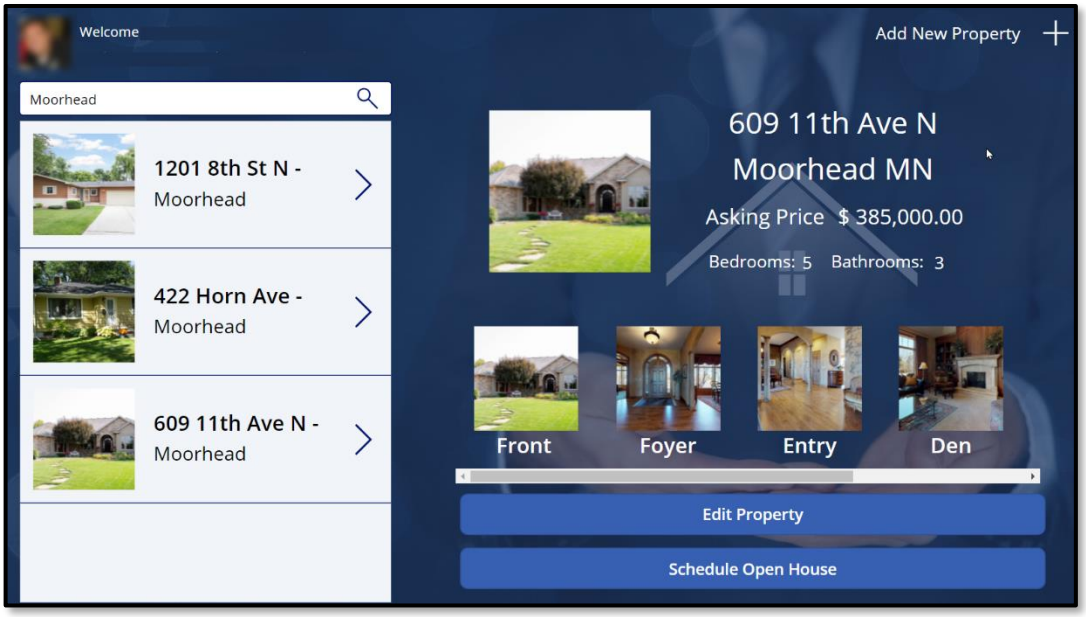
You can demonstrate the following:

1. **PVA:** Show how real-estate agents can leverage the Real-estate Helper bot in Teams to ask questions about open house procedures as they get ready to schedule an open house.
    a. You can also walk through using the bot to demonstrate how it can help the agents in scheduling an open house. (The item will not be posted anywhere, but students can see what that might look like.
    b. Enter Open House with COVID-19 as you trigger. This will walk you through the bot.
    c. Enter Schedule an Open House. The bot will walk you through a simulated open house scheduling.

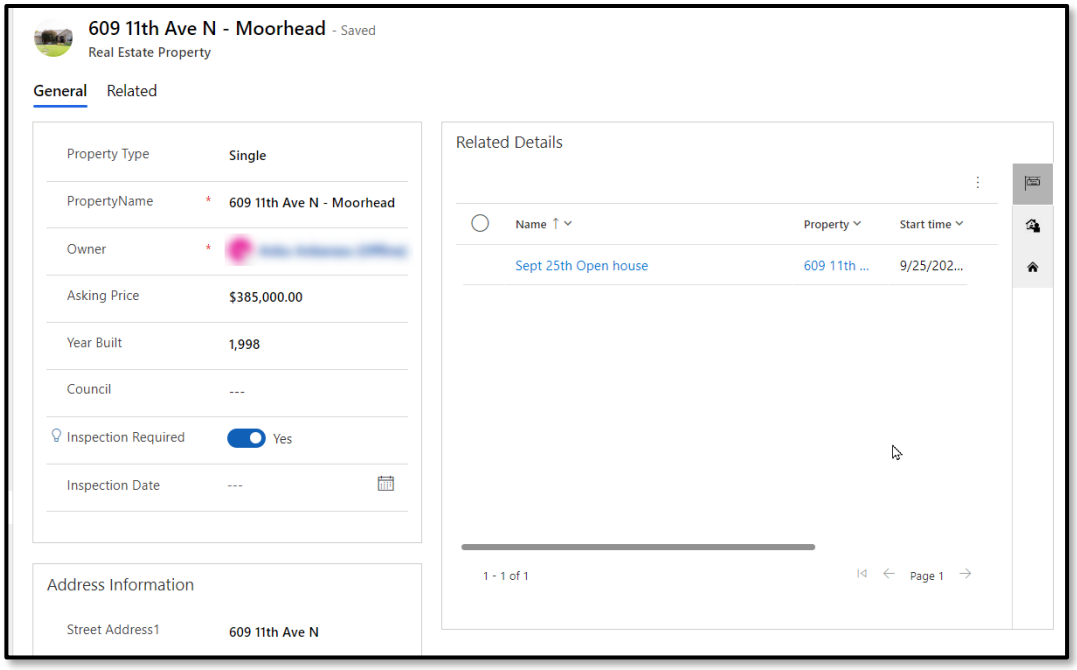
2. **Power BI:** In Microsoft Teams, create a team ahead of time called Real Estate. You can add the Real Estate Power BI Report as a Tab for the Team. Here you can show how Power BI Analytics can be leveraged from right within Teams.



3. **Canvas Application:** Open the Property Intake Canvas application to showcase how canvas application can be leveraged to fill specific needs. In this instance you can showcase the following:
    a. Leverage the searching functionality to search for properties by city (the sample data includes Fargo, Moorhead, and West Fargo)
    b. Select a property to show how details related to the property will be displayed in the application.
    c. Demonstrate how agents could add new properties
        i. Selecting use GPS for current location will remove the address fields from the form.
        ii. Selecting add photos allows you to demonstrate how to interact with devices.
    d. The schedule Open house button is not configured, but you could configure that if you want.



4. **Model-Driven Application:** Open the Real Estate Internal Application to showcase how managers might leverage it to see property listings
    a. Select Real Estate Properties to show how to view Property Data.
    b. If you set the year Built field to a number less than 2000, a business rule will run that provides a recommendation for an inspection.
    c. Demonstrate how to use the Related Details to view items like Open Houses, showings, etc.
    d. From a showing record, select the Flow button from the command bar. There is a Create Offer flow. This flow will prompt you for the offer amount and offer date. This is a great way to demonstrate what Power Automate flows can do.
    e. Once the offer is created, there is a business process you can use to demonstrate how you might make an offer on a property.



Tips and Tricks for teaching PL-900

There is a Train the Trainer video available for your review prior to delivering the course. It provides general guidance as well as specific recommendations on how to deliver the course.

Feedback

In this course, we have provided a framework for you to work with. Take time to prepare and think about the value that only an instructor can bring to training. We hope to partner with you to provide an exceptional student experience, and we welcome your feedback.