

Cover

End User

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## About This Guide

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Hello and welcome to the Microsoft Surface Hub training guide. This guide includes detailed information for new Surface Hub end users as well as step-by-step walkthroughs for common tasks that attendees can perform in class. The guide can also be used as a reference after class to review the features and functionality of the Surface Hub.

## Who Should Attend?

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This course is intended for enterprise end users who attend or lead group meetings in person or remotely within the organization as well as those who ideate, using the large screen experience, to become more collaborative and engaged with their team.

## Objectives

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In this course, you will learn how to become more productive and collaborative within your work environment utilizing Microsoft Surface Hub. The training will not only teach you how to confidently utilize Microsoft Surface Hub in your day-to-day activities, it will also show you how to collaborate more effectively with your teammates, both internally and externally. The first 2 hours are spent learning new ways to work using Surface Hub every day. Then you'll learn how to apply those features to business and collaboration workflows in your industry.

You will also learn about the key features of Surface Hub including:

**Teamwork without boundaries** – Enable teamwork anywhere on an advanced platform for remote team meetings and fluid team collaboration

**Ink** – A responsive and natural inking experience that feels as fluid as pen on paper

**Touch** – Advanced touch capabilities and precision allows intuitive interaction

**Microsoft Teams** – A platform for true team collaboration, messaging, meetings, and files

**Microsoft Office** – This includes Word, Excel, PowerPoint, and OneDrive for storage

**Microsoft Whiteboard** – Shared infinite canvas brainstorming sessions available on any device

# 1. Teamwork without boundaries

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## Lesson Objectives

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After completing this lesson, you will be able to:

- Describe to co-workers what Microsoft Surface Hub is
- Identify the Surface Hub components and out-of-box features
- Navigate through apps and meetings using touch

## What is Surface Hub?

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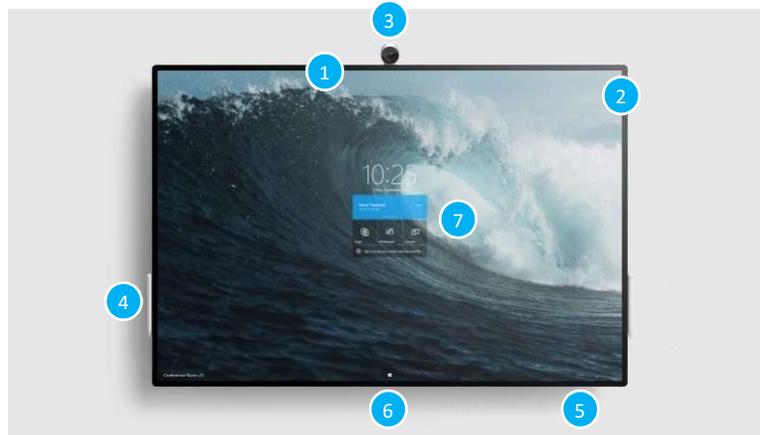
Microsoft Surface Hub 2S is the next generation team collaboration device designed to advance the way people work together naturally. Surface Hub 2S re-imagines the mobile meeting experience to unlock the power of the group by using an interactive, collaborative Whiteboard, Skype for Business, Microsoft Teams, Office apps, and Email to share content and meeting notes.



As a platform for amazing large screen apps, Surface Hub is the best way to create and brainstorm with others. In addition, since Surface Hub is a shared device, anyone can walk up and start a session from the Welcome screen. Surface Hub is advanced technology for the modern mobile workplace.

## Surface Hub Components

Surface Hub 2S includes highly refined technology with a thin bezel, light weight, and Ultra High Definition display.



Microphone (1) and Speakers (2)	Stereo speakers and a high-quality microphone array let you converse naturally with remote participants.
Camera (3)	Surface Hub includes a high definition camera for video calling and meetings.
Pen (4)	Use the tip of the active pen to write, draw, capture, or select. Use the flat end as an eraser.
Surface buttons (5)	The buttons for Power, Volume, and Source selection are located in the bottom right of the bezel.
Ports (6)	Located on the bottom of Surface Hub are the ports for USB-A, Mini DisplayPort output, HDMI input, USB-C with DisplayPort input, and RJ45 Ethernet.
Touchscreen (7)	Use the touchscreen to open app, write or draw on the whiteboard, join a meeting, invite participants, and more.
Integrated Computer	The Surface Hub has an onboard computer that supports Microsoft Teams meetings, Microsoft Edge and Office 365 apps like Word and PowerPoint.

## Out-of-Box Features

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Once Surface Hub is setup and configured in the meeting space, you will want to familiarize yourself with all the available features.

### Wake / Sleep

When someone enters the room, Surface Hub wakes up and displays the Welcome screen. When it stops detecting movement, it goes to sleep.

**Note:** If your Surface Hub seems to be asleep when you're in the room or does not respond as expected, try the following:

- On the keypad on the bottom of your Surface Hub, press the Source button to toggle through the possible video input sources.
- Swipe up from the bottom of the screen. If a menu appears, select Exit Full Screen.

### Interacting with Surface Hub

You can interact with your Surface Hub in several ways:

- Touch
- Pen

You can also use your Surface Hub as a display for your laptop, tablet, or smartphone.

#### Touch

Surface Hub is designed for touch. Start a meeting, invite more people to join you, open apps, write on the whiteboard, send the results of the meeting to yourself and others – you can do it all with touch. When you need to enter text, a touch keyboard appears.

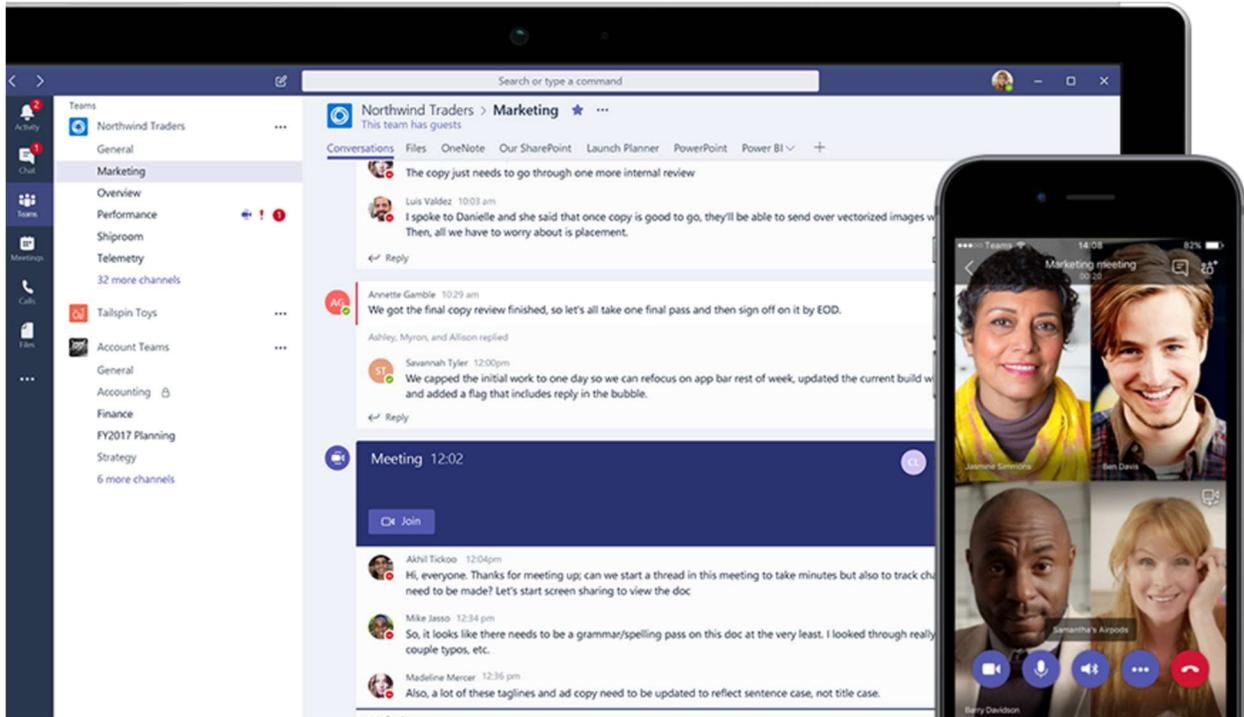
#### Pen

The pen is designed to be lightweight and easy to use for writing ideas and collaborating with teammates. If you make a mistake, just turn the pen around to erase.

## Introduction to Microsoft Teams

### Introduction

Microsoft Teams is a complete chat and online meetings solution that can be used to host audio, video, and web conferences, and chat with anyone inside or outside your organization.



The Teams app can be used through a web browser but for the best experience download the Microsoft Teams desktop application for Windows or Mac OS. The app is also available for iOS and Android mobile devices which means you can keep up with the latest project developments from anywhere.

### Make better, faster decisions

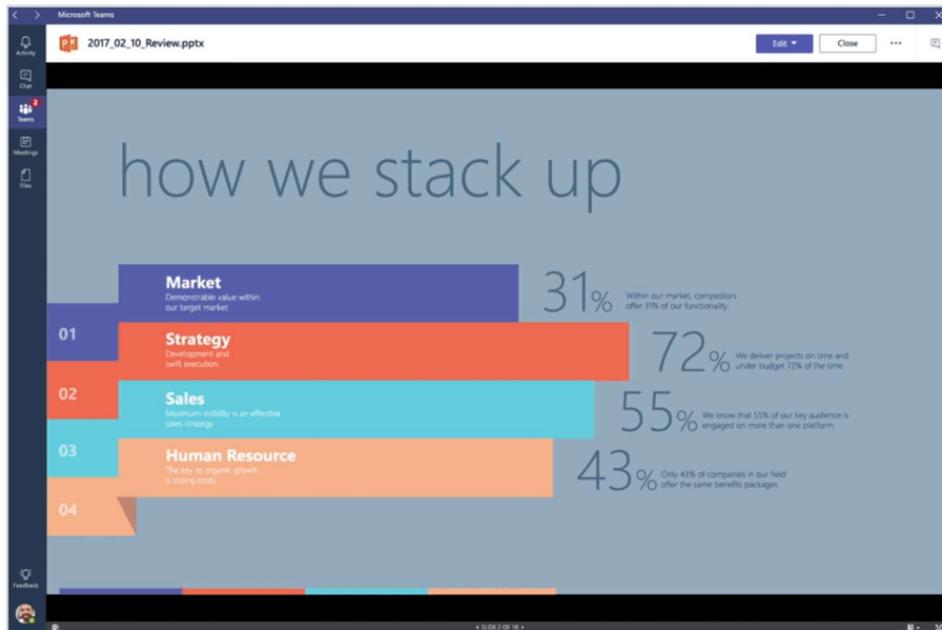
Today's workplace has seen a consistent and growing need to communicate in the moment and keep everyone in the know. Great ideas often start small, among a few people, then quickly grow to include a larger team that helps bring them to fruition. To keep that momentum going, fast communication is essential.



## Better integration

Your team needs flexible tools to work with. When tools are integrated with the business applications teams are already using, work happens faster, enabling easy communication and collaboration.

Microsoft Teams is designed so that employees can have access to conversations, files, people, and apps in one team workspace—ultimately spending less time searching and more time making decisions. They can directly link to files, documents, and emails for instant discussions and co-authoring within the app. It's also integrated with familiar tools like SharePoint, OneNote, Planner, and Power BI.

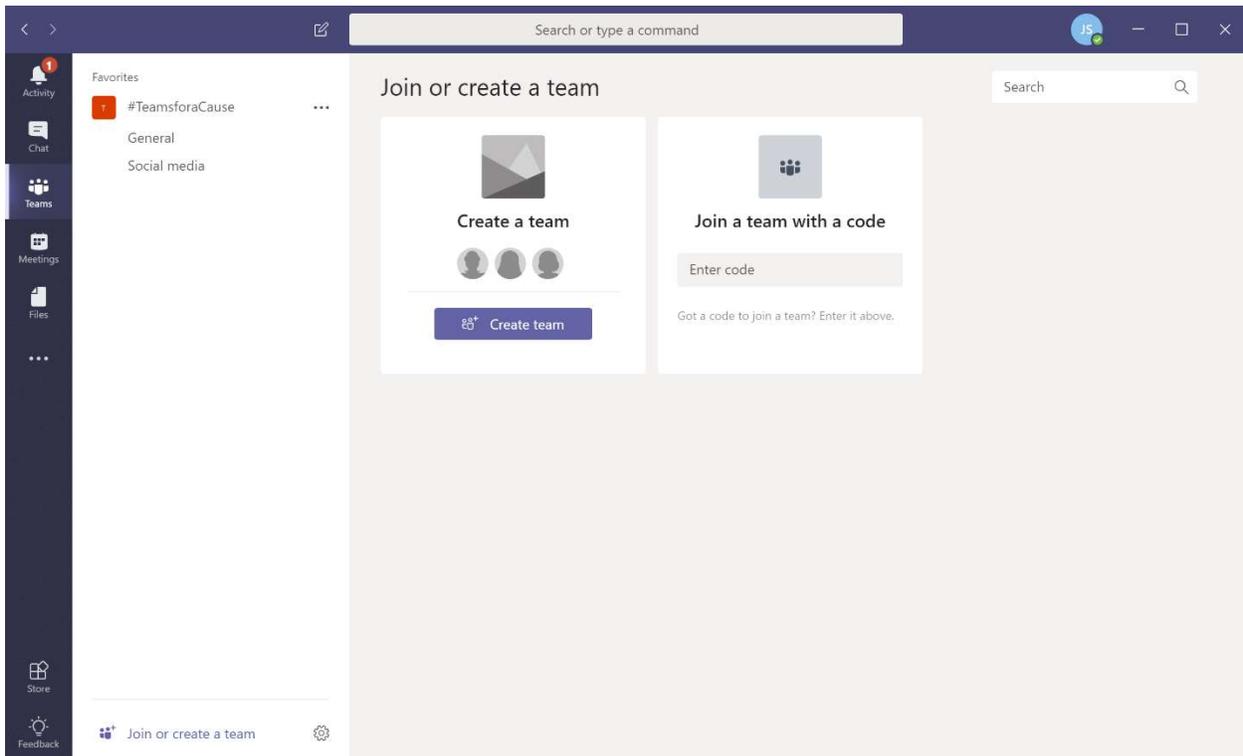


## Teams

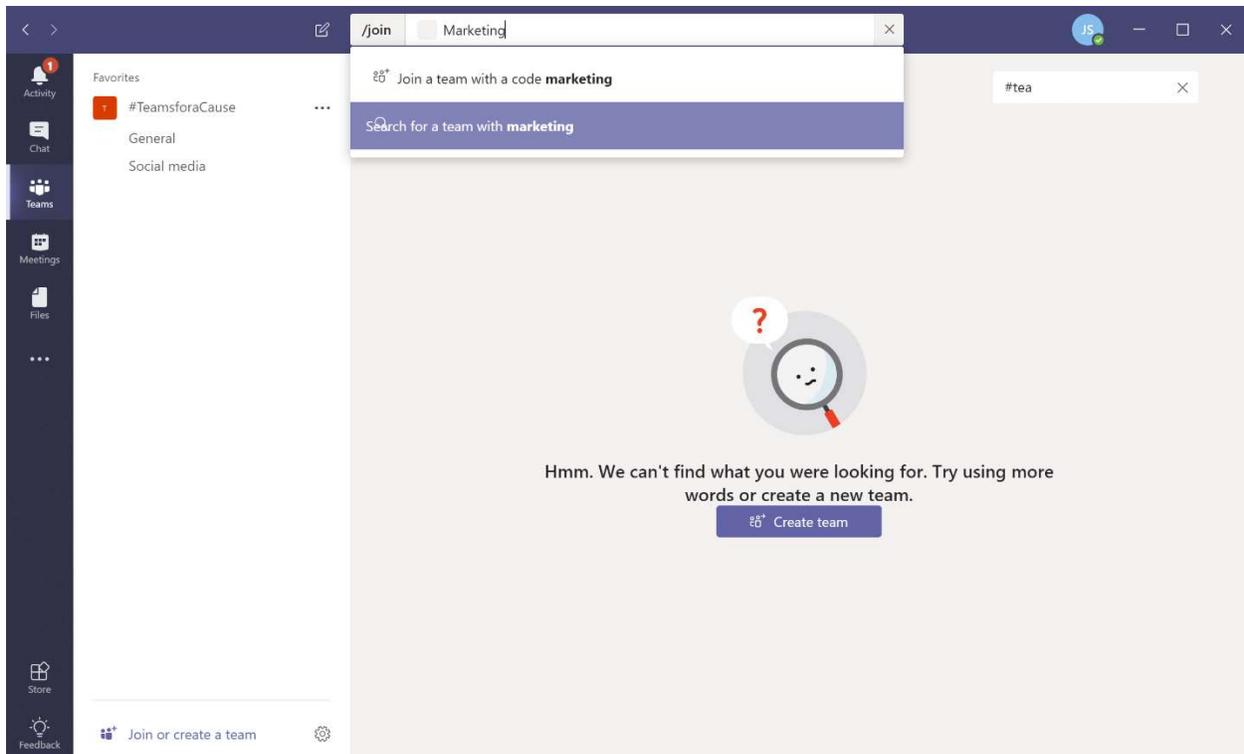
A team is a group of people gathered to get something big done in your organization. Sometimes it's your whole organization. Teams can contain all kinds of content and members can collaborate on many types of projects efficiently.

### Find a join a team

To join a specific team, click Teams > Join or create a team. Type the team name in the search box and press Enter. Find the team you're looking for and click Join team.



Another option is to go to the command box at the top of Teams, then type `/join` to see a list of all your suggested teams. Select a team to request permission to join.

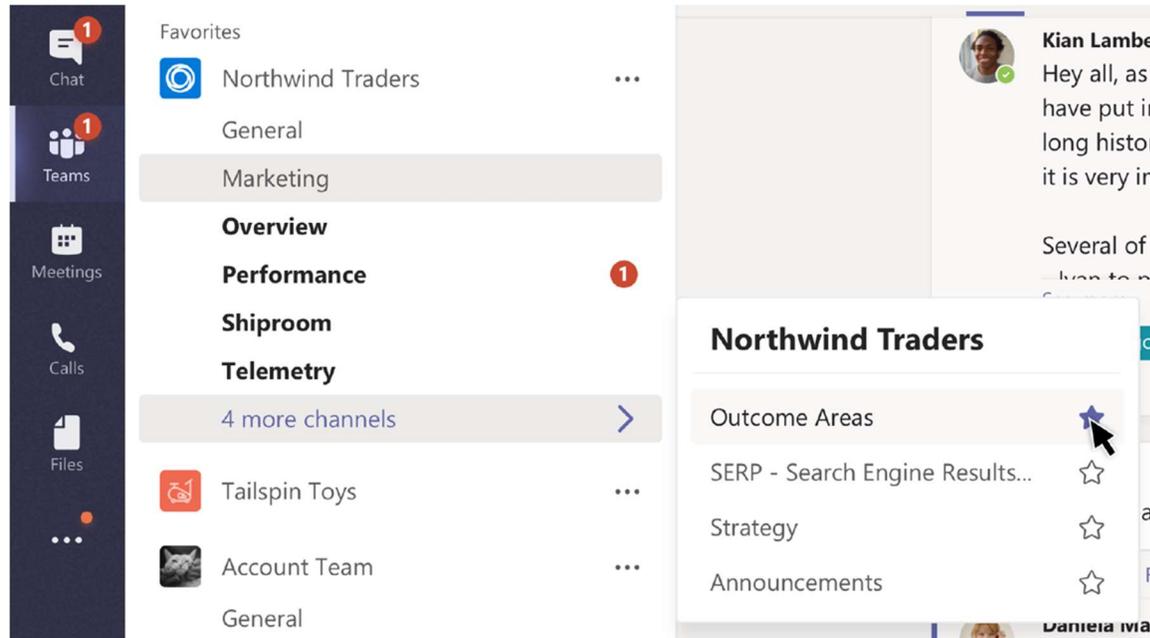


## Channels

Teams are made up of channels, which contain the conversations you have with your teammates. Each channel is usually dedicated to a specific topic, department, or project.

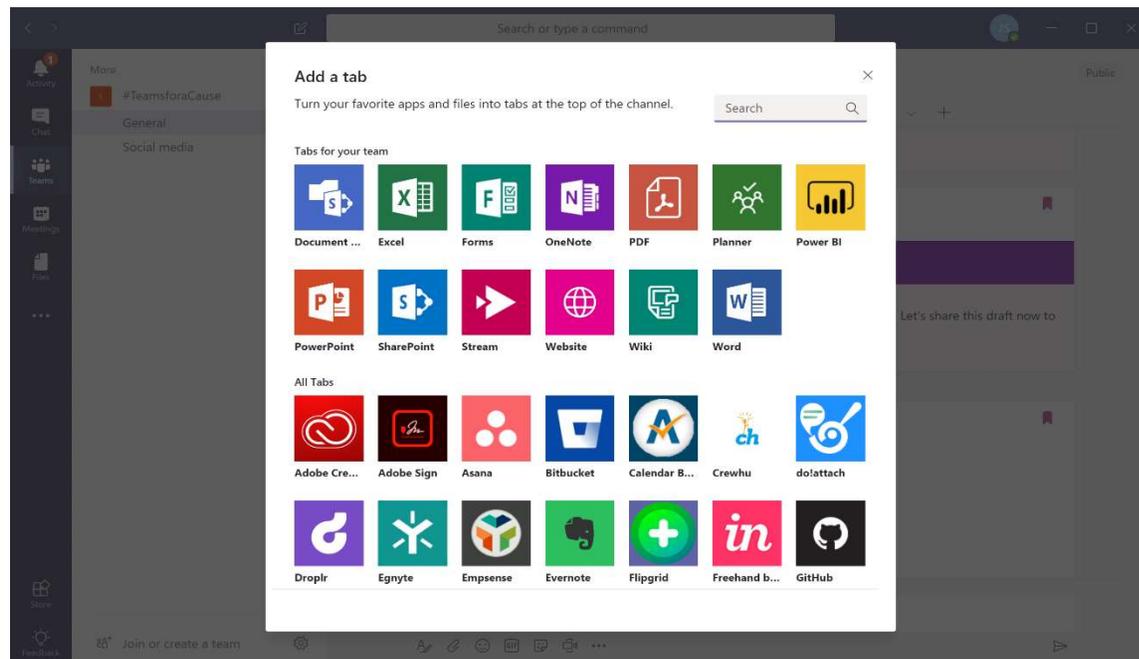
For example, the Northwind Traders team has General, Marketing, Overview, and 35 more channels. All the conversations, meetings, files, and apps in the Marketing channel have to do with marketing, and everything in this channel is visible to everyone on the Northwind Traders team.

Channels are where the work actually gets done—where text, audio, and video conversations open to the whole team happen, where files are shared, and where apps are added via a tab.



## Tabs

Tabs are application-based extensions that enable groups to work together on documents, share notes, or track a project. Each channel contains its own tabs that are relevant to the topic, department, or group for that channel.

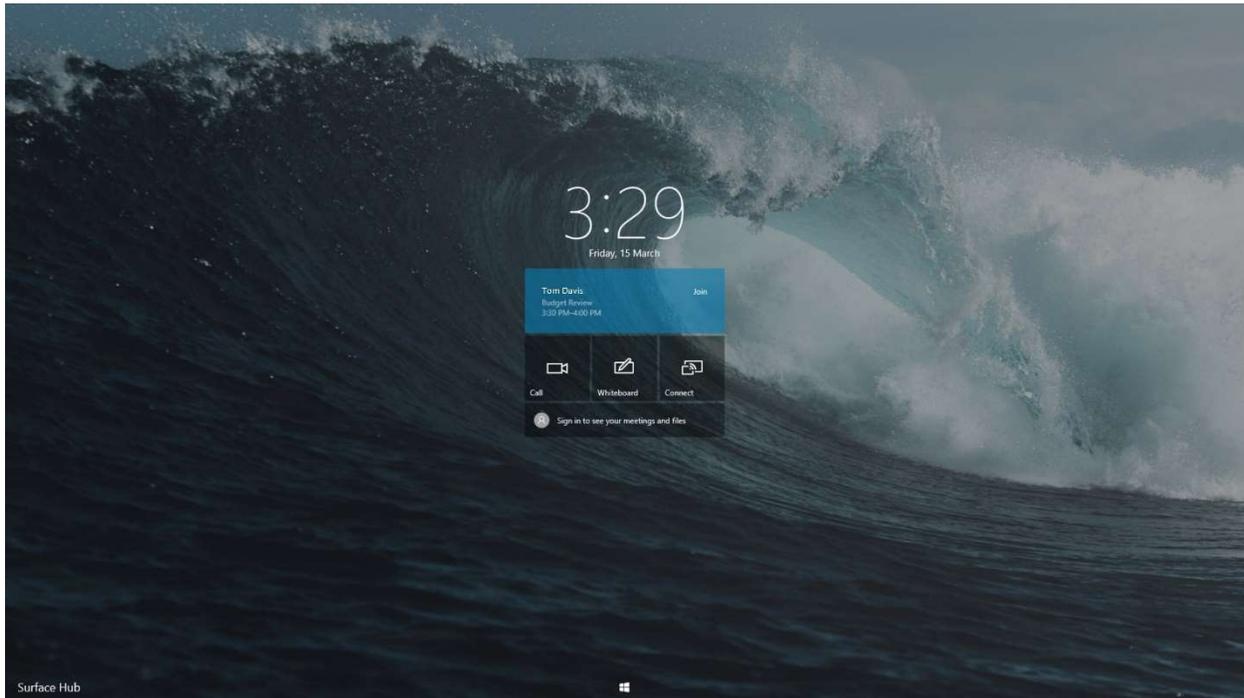


## Interact with Surface Hub

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### Welcome screen

The **Welcome** screen appears when your Surface Hub wakes up. When you end a session, your Surface Hub resets itself and the Welcome screen reappears.



From the Welcome screen, you can sign in to Office 365, start a scheduled or ad-hoc meeting, start the Whiteboard app, or connect your device. You can also open the Start menu to select an app, such as Microsoft Word or the Edge browser.

## Start menu

At any time, you can go to the **Start** menu  to access the whiteboard, start a Teams or Skype call, open apps, and more. The commonly used apps are displayed on the Start screen, but you can access all apps by selecting **All Apps** on the left.



## Switch or Close Apps

Select **Task View**  at the bottom of the screen to switch between open apps and to close any open app.



## Tips App

The **Tips** app  located on the Start screen is a great way to get up to speed on your Surface Hub fast. Consult it any time you need to know how to perform a task on your Surface Hub.



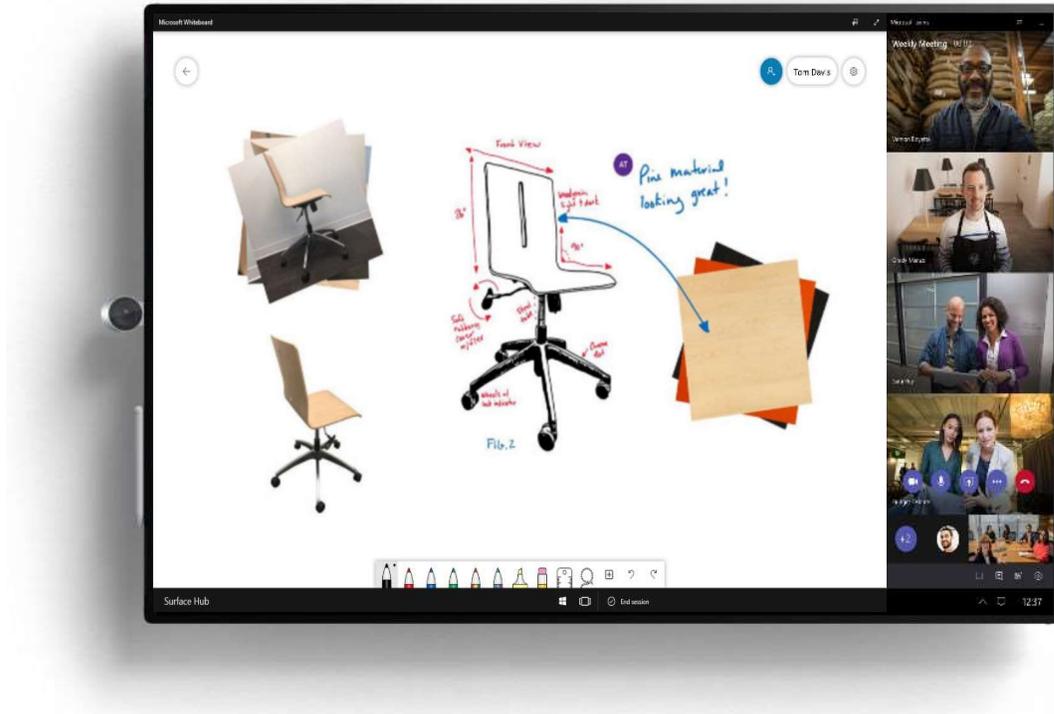
## Take a Tour

One helpful app for new users is the Take a Tour app. This app walks you through all the features and functions of Surface Hub in a fun and rewarding style. Sign in to Office 365 to save your progress and update your avatar with cool rewards for completing interactive challenges as you learn how to use Surface Hub.



## Whiteboard

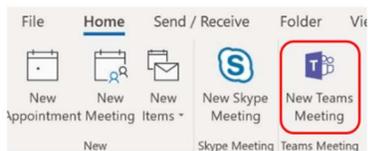
The **Whiteboard** app lets people collaborate in a traditional brainstorming session and take notes on the meeting. You can start the Whiteboard from the Welcome screen or Start menu.



## Get started with a Teams meeting

To schedule a Teams meeting and invite Surface Hub, follow these steps:

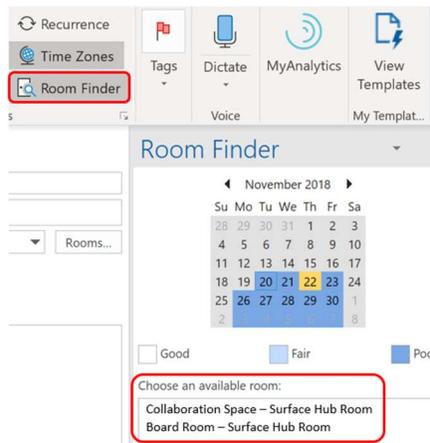
Open Outlook and go to your calendar.



On the **Home** tab, in the **Teams Meeting** section, click **New Teams Meeting**.

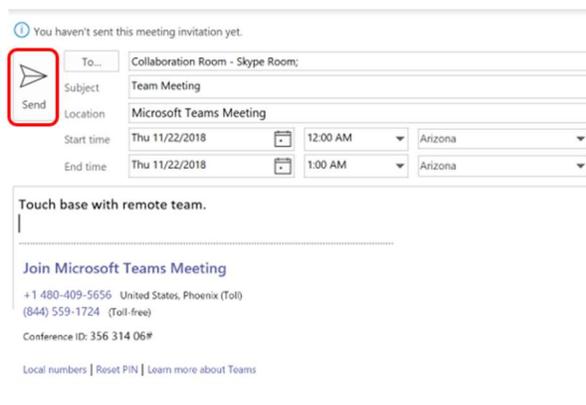
On the Meeting tab, select Room Finder.

In the **Room Finder** pane, select a building or list from the **Show a room list** menu.



From the list of available rooms, choose a room based on how your organization has designated rooms equipped with a Microsoft Surface Hub.

Complete the meeting invitation as you would for any other meeting before sending.

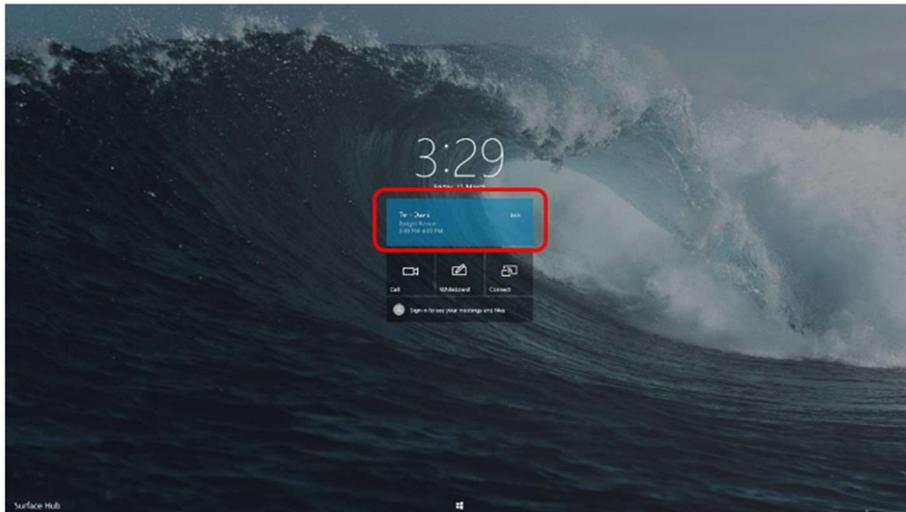


## Join a Teams meeting

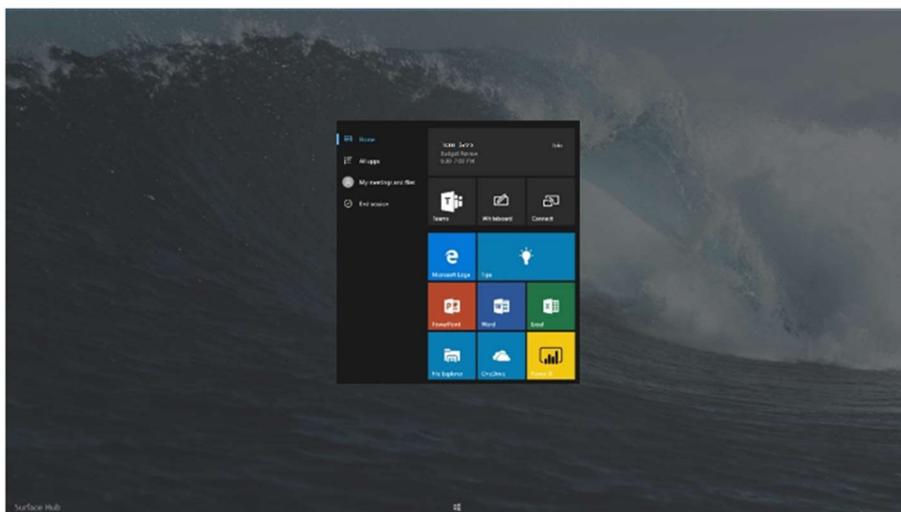
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To join your meeting, follow these steps:

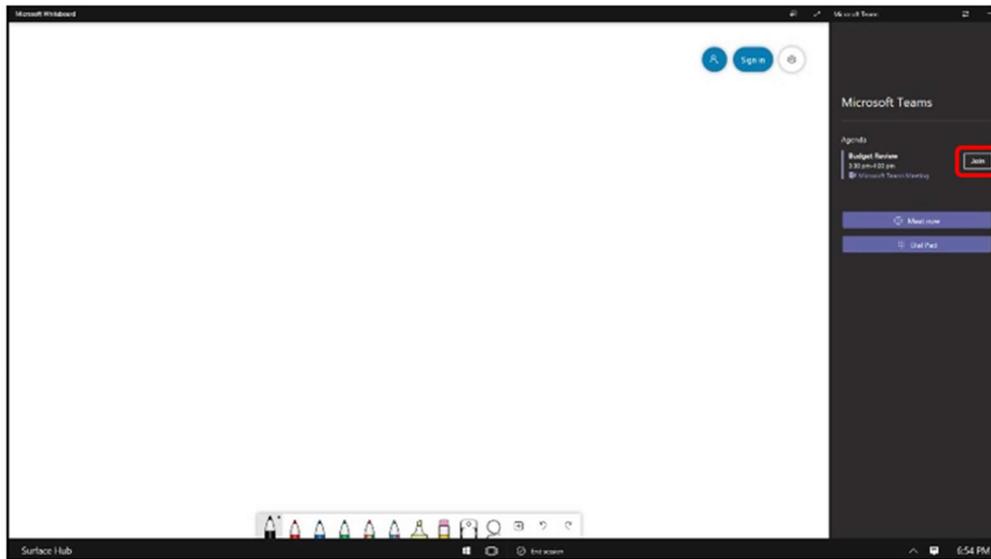
When it is time for your meeting, tap **Join** on the screen to join the meeting.



If a session is already in progress, join the meeting from the Start menu or launch Teams from the Start menu.



After launching Teams, join the meeting by touching the **Join** button.



## Connect

Use the **Connect** feature with Miracast to project the screen and audio from your laptop, tablet, or smartphone to your Surface Hub. Devices can connect with wires or wirelessly, and supported devices allow inkback and touchback to the connected device from the touchscreen.



## Touchback

Touchback lets you control your connected laptop from the touchscreen. If your device doesn't support wireless touchback, connect the USB cable to your device to allow input.

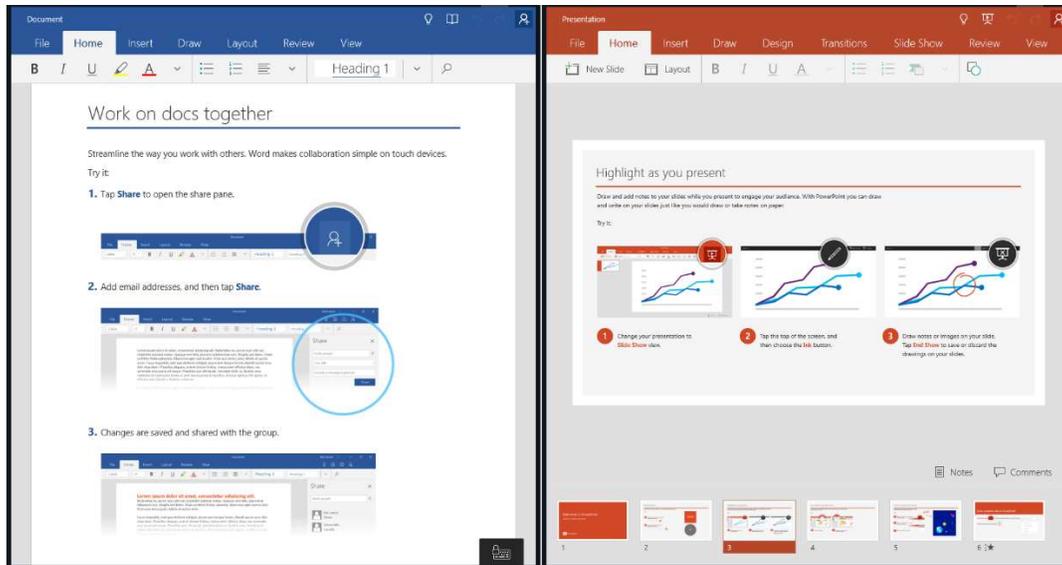
### Touchback with Inkback

Additionally, when you project an app that supports inking to the Surface Hub, any markups or annotations done on the Surface Hub screen appear in the file on the connected device. For example, if someone circles a paragraph in a Word document on the Surface Hub screen, that circle appears in the file on the connected device. If you save the file on the tablet, you also save the circle around the paragraph.

## Microsoft Office Apps

Included with Surface Hub are the Microsoft Office apps that allow users to open and edit documents, take notes using Ink, and make calls. Your Surface Hub includes the following apps:

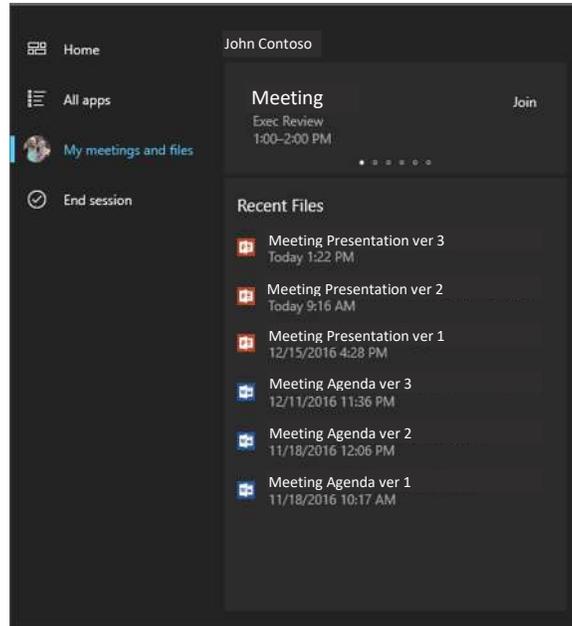
- Microsoft Word
- Microsoft Excel
- Microsoft PowerPoint
- Microsoft Whiteboard
- Microsoft Teams
- Skype for Business



In this training guide, we will look at these applications, starting with using Microsoft Whiteboard to take notes and capture brainstorming sessions and then using Microsoft Teams to collaborate productively.

## Sign in to view meeting and files

On the Welcome screen select **Sign In** or on the Start menu select **My meetings and files** and enter your Office 365 work or school credentials to access your meeting calendar and cloud-stored files.



## Let's Review

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In this lesson, you learned that:

- Surface Hub is a powerful team collaboration device designed to advance the way people work together naturally
- Surface Hub comes with a many features and apps that enable multiple users to interact simultaneously and collaborate easily
- You can connect your laptop, tablet, or smartphone and display content for presentation and markup

## 2. Fluid team collaboration with Surface Hub

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### Lesson Objectives

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After completing this lesson, you will be able to:

- Collaborate with Microsoft Whiteboard
- Create and share content with your team
- Connect your Windows 10 PC for an immersive experience

### Microsoft Whiteboard

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The Microsoft Whiteboard experience on Surface Hub provides fluid inking and versatile editing tools on an infinite canvas stored in the cloud for access from any device. In this lesson, we will look at the features and functionality of the Whiteboard and how it enhances the collaboration experience.



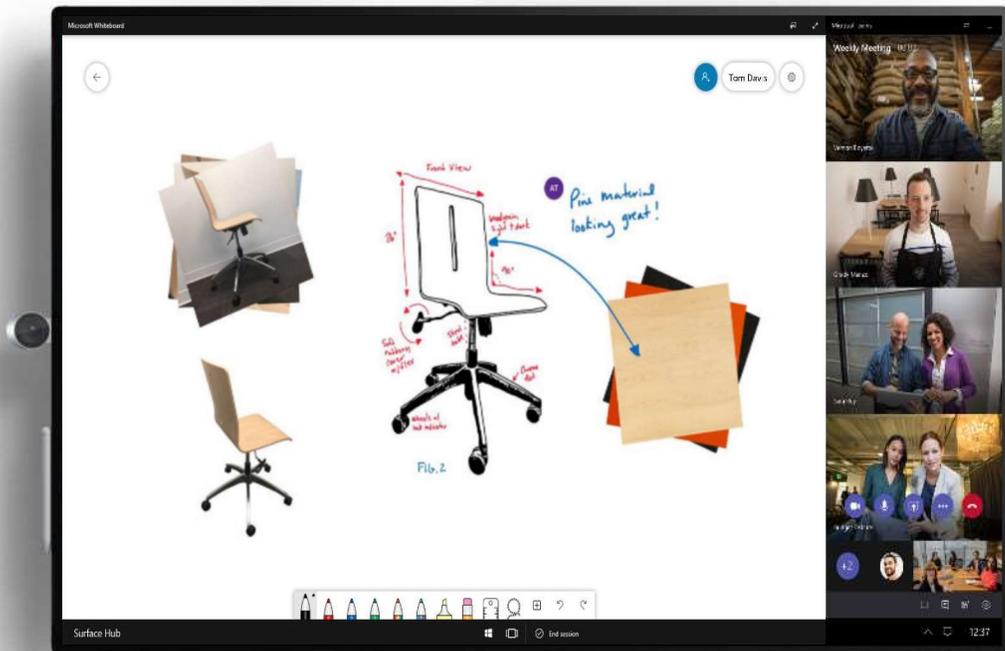
From the Welcome screen or the Start menu, tap the **Whiteboard** tile.

### Infinite Canvas

The Whiteboard canvas is infinite, which means you're not limited in your designs, only your imagination. When you need more space, drag the screen up or to the left and keep working. Rearrange objects and images on the screen to reflect your vision.

## Write Naturally

Writing on the Whiteboard is designed to feel natural, like writing on paper. Use the pen or switch to touch mode and write with your finger. Share the whiteboard with others so they can work with you on the same canvas and see all changes in real-time.



## Ink Pen / Touch

In the Whiteboard application, users can write, draw, and interact with objects using the Surface Hub pen. **Ink** is used to describe the feeling of writing as if it were a pen on paper. The pen tip is pressure sensitive, which enables a very fluid inking style and line definition.

The Surface Hub glass also distinguishes between the pen and a palm resting on the glass for detailed drawing.

## Eraser Button

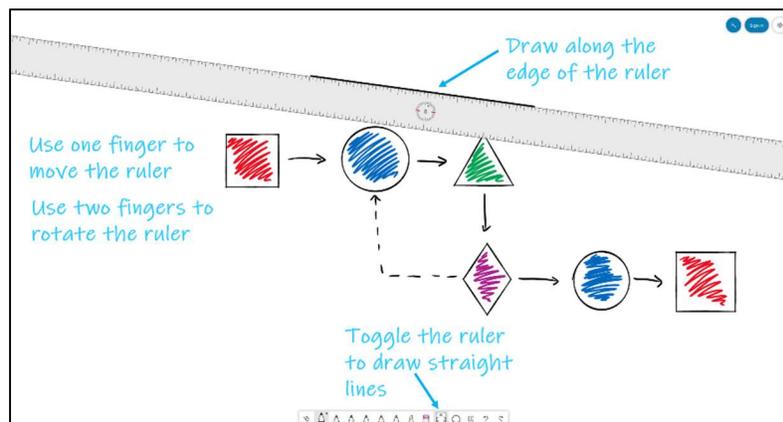
The flat end of the Surface Hub pen is used as an **eraser** in the Whiteboard application to erase drawings. This, along with the detailed drawing provided by the pressure sensitive pen, should feel very natural in the creative process. As you erase, the faster you move the eraser, the larger the area that is erased for greater control.



The **Eraser** button on the toolbar locks in the erasing function and allows for touch erasing as well.

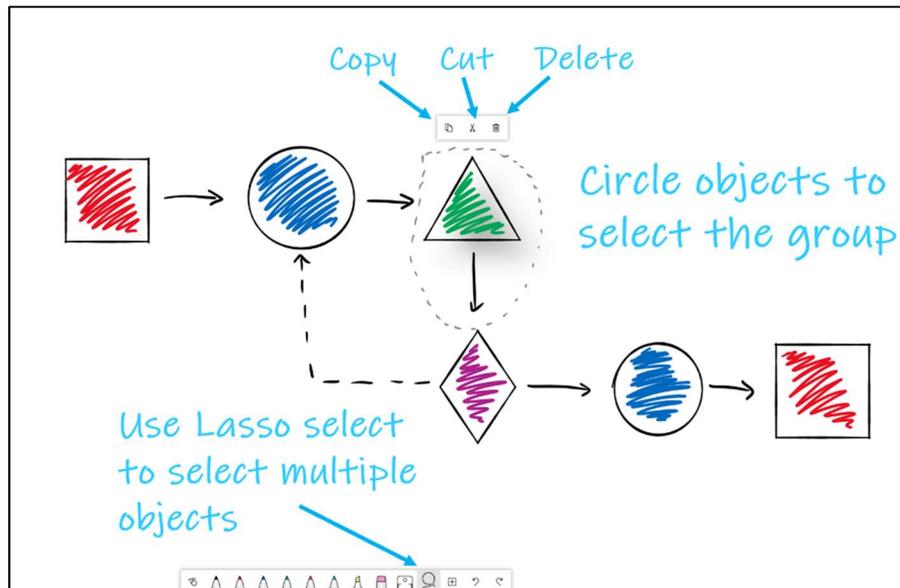
## Ruler

Toggle the onscreen ruler to draw straight lines. Press once to show the ruler then use one finger to move the ruler on the screen and two fingers to rotate the ruler. The angle of the line is shown in the middle of the ruler. Start drawing along the edge of the ruler to draw straight lines.



## Lasso to select, move and resize

The **Lasso** button is used to select objects in the Whiteboard. With the Lasso selected, circle an area on whiteboard to select all the images and ink within it. Only objects that are entirely inside the lassoed area are selected. Selected objects can be picked up and moved, cut, copied, and pasted anywhere else.



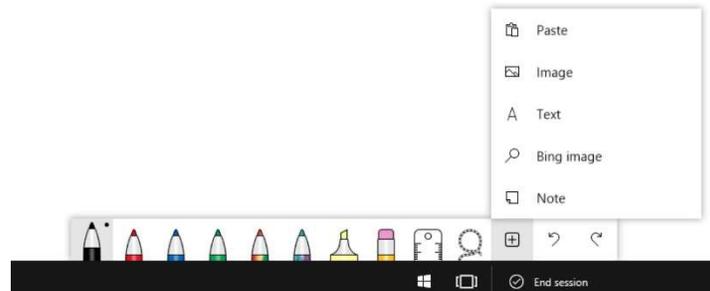
Select and drag any corner of the selected area to resize the objects.

Select the Move icon and drag it to relocate the lassoed selection.

You can also freely rotate selected objects by using two fingers to turn the object.

## Insert

Press the **Insert** button to see the list of items that can be inserted into the whiteboard. You can paste copied objects, insert an image from OneDrive or File Explorer, insert a text box with handwriting to text, search for an image using Bing, and insert a color sticky note with ink and text.



## Undo

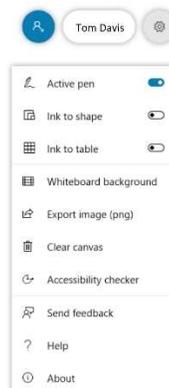
The **Undo** button will undo the last action that was performed on the whiteboard, even if the last action was to delete everything on the whiteboard.

## Redo

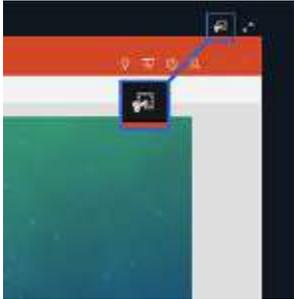
Similarly, the **Redo** button will redo the most recently undone action. You can step backward and forward through the history with Undo and Redo.

## Clear the canvas

To erase the whole canvas and start with a blank whiteboard, select the gear icon in the top right corner and then select **Clear canvas**.



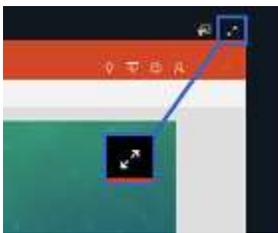
## Annotate (Clip)



The **Annotate** feature is available in all Surface Hub apps, including Edge and PowerPoint. From those apps, select Annotate to capture an image of the current page and place it on the whiteboard.

The whiteboard will display the entire page, but you can select an area of the page to clip into the whiteboard by drawing a box around only the desired area. If you want to take the entire page, select **Clip All** in the top right corner.

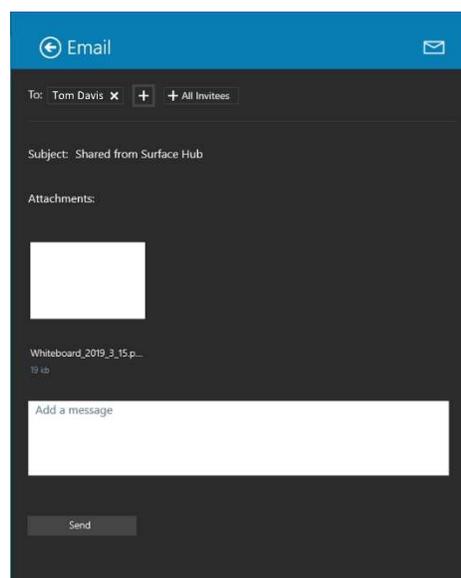
## Full Screen



The arrows in the top right corner of the whiteboard toggle **Full Screen** display mode. To exit Full Screen display mode, swipe in from the top or bottom of the screen and select **Exit Full Screen**.

## Email / Save

To send the whiteboard to yourself or someone else as an image, select the gear icon in the top right corner of the whiteboard, then select **Export image (png)**. In the Share panel, select the **Email**  button to create an email with the whiteboard image attached. Enter the email address of all recipients, using names to search the company directory. If you are in a meeting, you can add all invitees to the email with one button. Type a message to include in the email if necessary and then select **Send**.



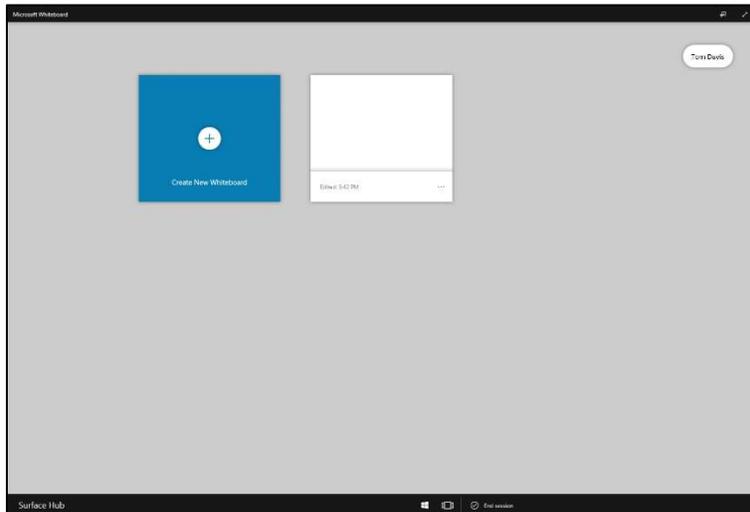
Some attachments may be too large to send via email. When this happens, you have the option to save the files to OneDrive.



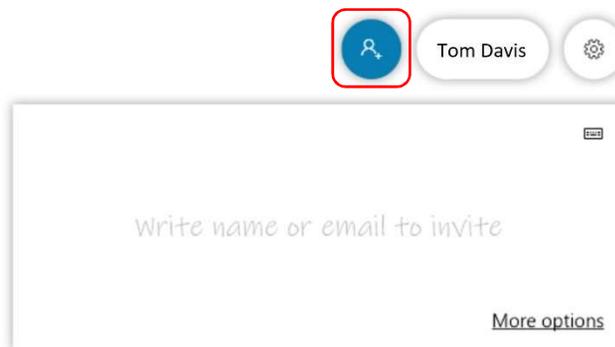
OneDrive provides cloud-based file storage with any Microsoft account. To save the whiteboard to OneDrive, select the Email icon, and then select OneDrive. This will require you to enter your OneDrive credentials, and navigate to the desired folder. Select the check mark to save the files.

## Share

With Office 365, you can now access all your whiteboards from Surface Hub, they are stored in the cloud for easy access. This means they are ready to be shared with other collaborators for access and real-time co-authoring.

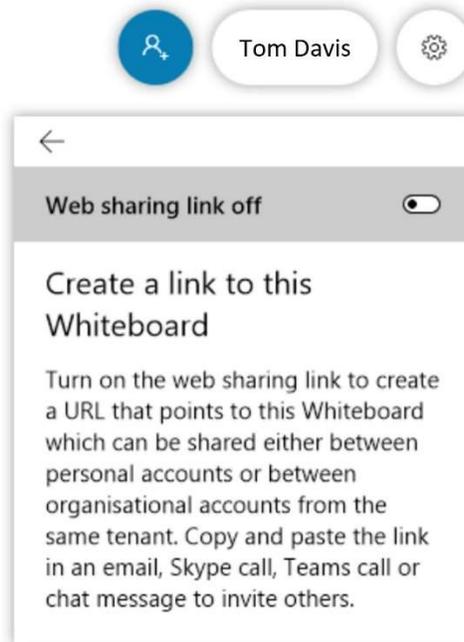


To share a whiteboard with a colleague, select the **Share** icon in the top right corner of the whiteboard.



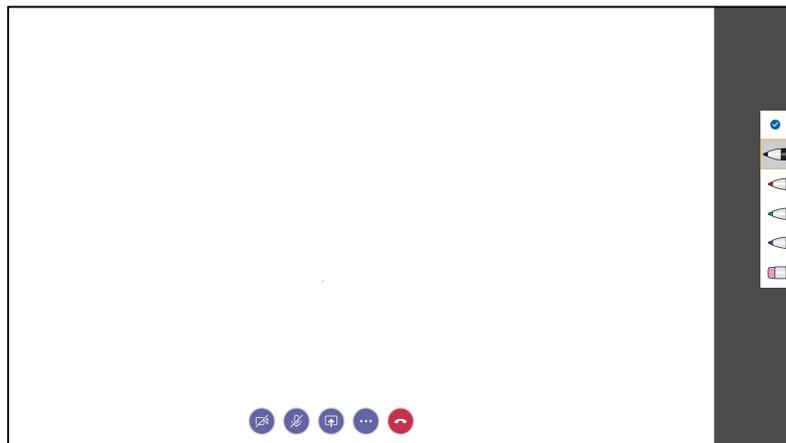
Then write a name or email address of the person you want to invite to the whiteboard in the box.

You can also get a link to share the whiteboard by selecting **More options**, and turning on the **Web sharing link** option. Once you have the link, you can copy and paste it to send it to anyone in your organization.



## Whiteboard in Teams

You can now use the Whiteboard as your presentation in a Teams meeting whether you are on Surface Hub or joined from a PC. You can also download the Microsoft Whiteboard app for iPhone from the Apple store.



## Office 365 Collaboration

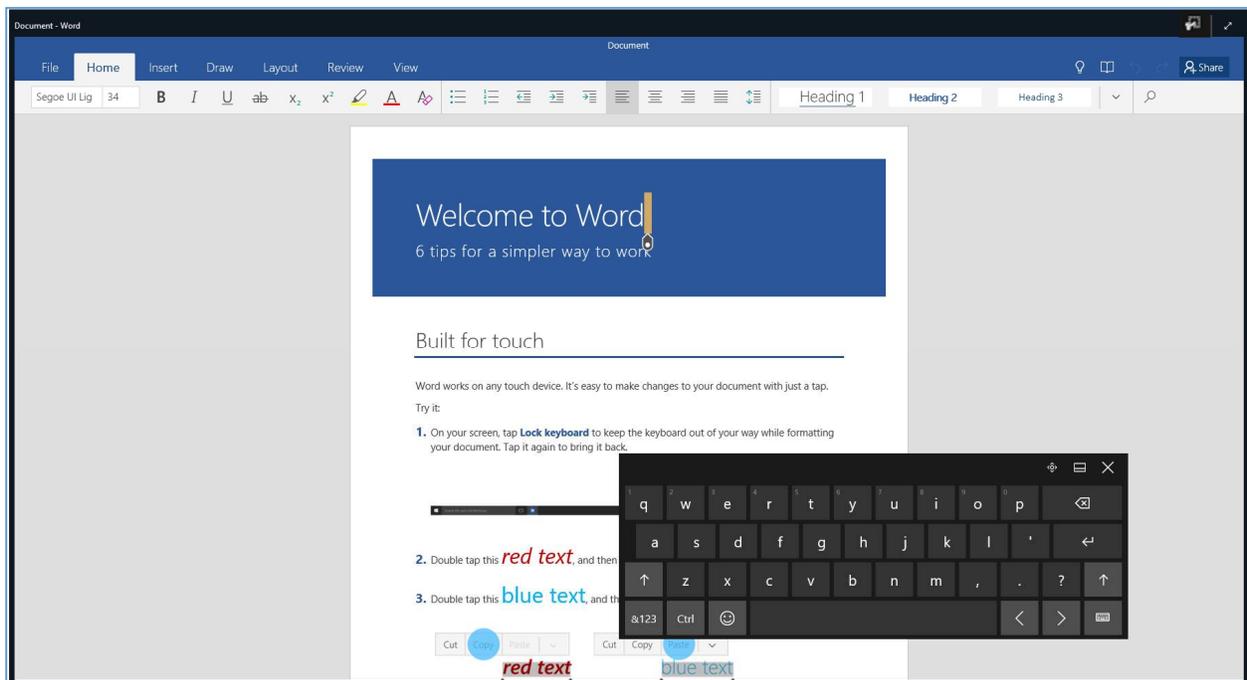
Microsoft Office 365 allows you to stay connected to your documents from anywhere in the world. Using web-based software applications you are able to edit and save documents without installing full versions of software on your machine.

Surface Hub includes **Office 365 apps** that have been optimized for touch, drawing, and the large screen. These are not the full versions of software that you may have installed on your laptop, but they offer a lot of the functionality for the collaboration and content creation that drives meetings.

### Word

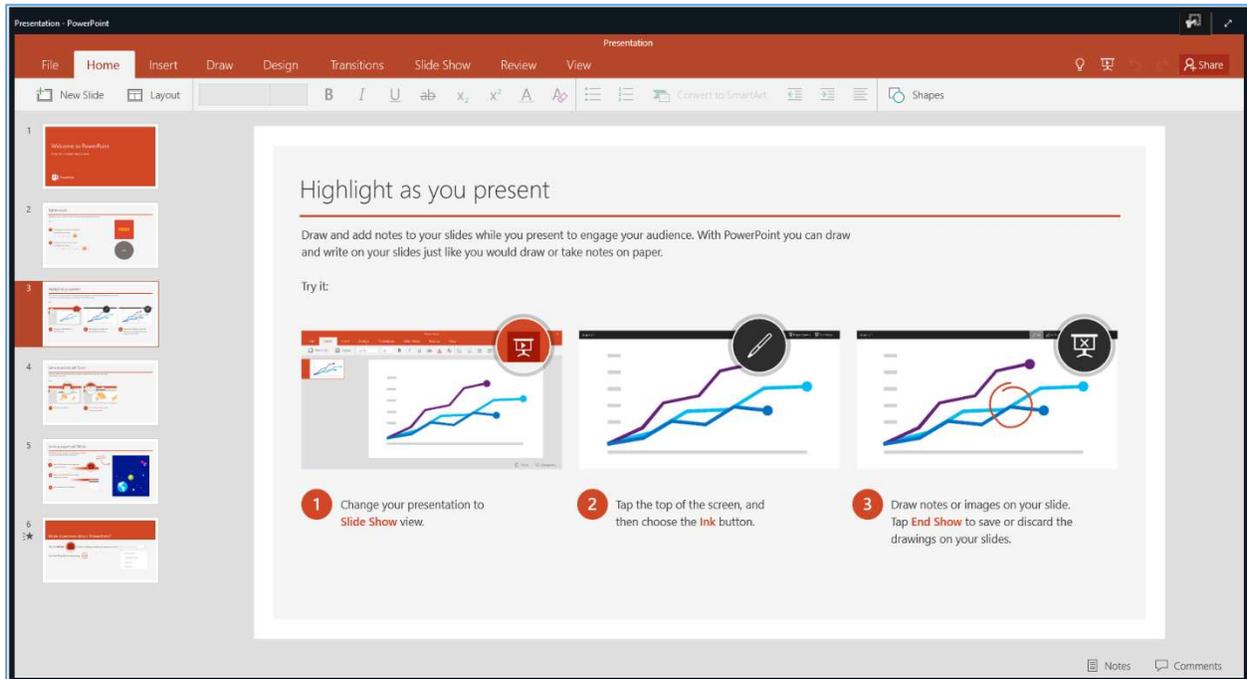
Streamline the way you work on documents with others. **Word** makes collaboration simple on Surface Hub. You can create and edit documents with Word, and then share them with others using the **Share** feature or email the document as an attachment.

Use Word to layout text and images, using touch to select and move objects on the page.



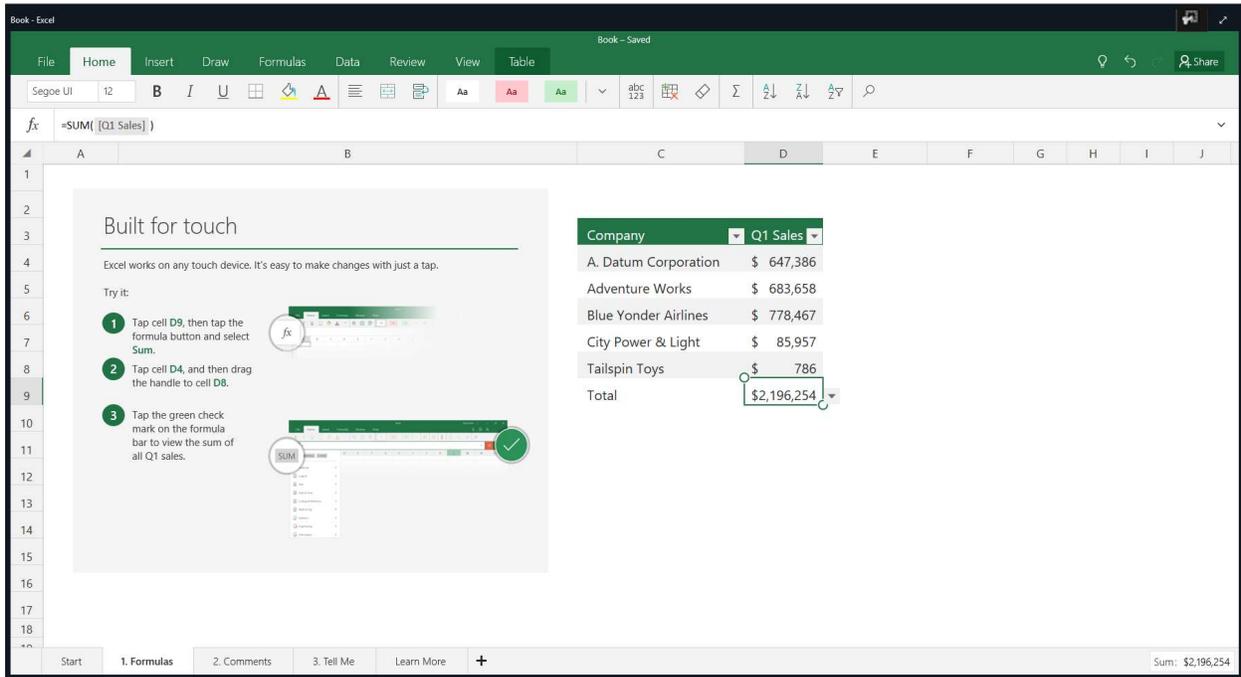
## PowerPoint

With **PowerPoint**, you can create and edit dynamic presentations. You can present them on the large screen and highlight as you present to engage your audience. With PowerPoint you can draw and write on your slides just like you would draw or take notes on paper.



## Excel

The interface in **Microsoft Excel** has been optimized for touch on Surface Hub. This means that you can create formulas and charts with just your fingers. Collaborate with your team by adding comments to your spreadsheets. One helpful feature for new users is the Tell Me option which provides tips and guides you through many features of Microsoft Office.

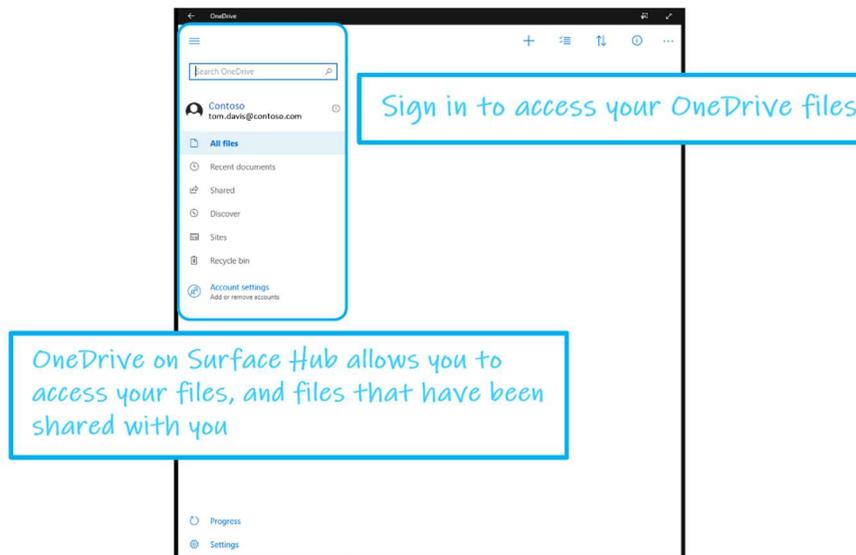


## OneDrive



**OneDrive** is an app that is installed on the Surface Hub and used to access files that have been saved to the cloud. To open OneDrive, select the Start button and then select OneDrive. You will be asked to enter your OneDrive credentials. Once you have accessed your OneDrive files, you can open them on Surface Hub as long as there is an app for that type of file. Some file types are protected by the security on Surface Hub to prevent malicious activity.

The easiest way to access all of your content is to Sign in to Office 365 at the start of your meeting. This will sign you into the Office apps, the Whiteboard, and OneDrive at the same time.



## Connect your PC to share business application content

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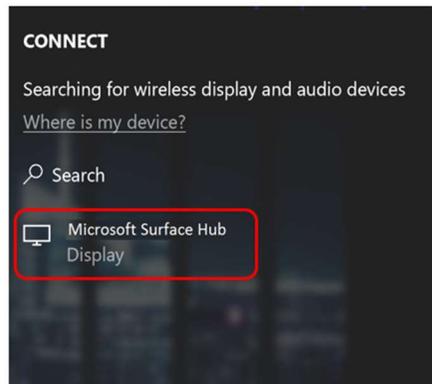
Surface Hub 2S allows you to bring in any content you have on your PC to the meeting by wirelessly projecting to the Surface Hub screen using Miracast technology.

To connect your Windows 10 laptop wirelessly:

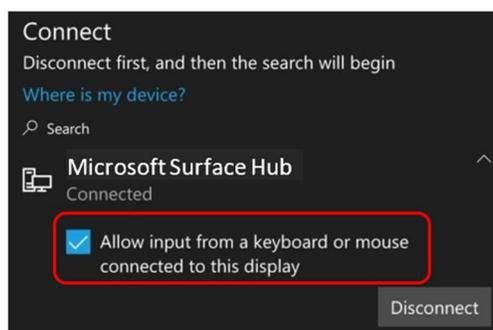
On your Windows 10 laptop keyboard, press **Windows key + K**.



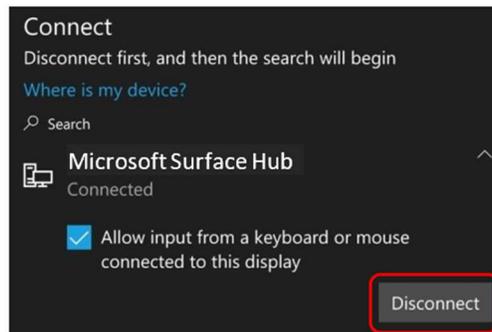
In the list of devices, select the one that matches the friendly name of the Surface Hub in the room. If it's the first time you have connected to the Surface Hub you may be asked to enter a PIN number on your laptop for verification, the PIN will be displayed on the Surface Hub screen.



To use the Surface Hub touch screen to control your PC, check the box to **Allow input**.



To disconnect from Surface Hub, on the laptop keyboard press **Windows key + K**, then select **Disconnect**.



Once you have connected your PC, you can now display content on the screen and if you have joined a meeting using Surface Hub, that content can be shared with remote participants as well. This allows meeting content to come from anyone.

With touchback and inkback you can drive the content using the Surface Hub touchscreen to control your connected PC.

Connect allows one device to connect at a time, so when its time to move on with the agenda, the next person simply connects, and their content is displayed automatically. No more musical chairs around the projector or trying to find the right video adapter.

## Let's Review

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In this lesson, you learned that:

- Microsoft Whiteboard provides an infinite canvas for taking notes and brainstorming ideas
- Every Surface Hub app includes the ability to be copied to the Whiteboard and annotated
- Sharing content from the Whiteboard can be done through Email or via OneDrive
- Microsoft Office provides powerful tools for editing and refining content during the meeting
- Content from a PC can be shared to the screen wirelessly with Miracast

## 3. Advanced platform for remote team meetings

### Lesson Objectives

After completing this lesson, you will be able to:

- Use Microsoft Teams for meetings
- Use Surface Hub to collaborate in scheduled and ad-hoc Teams meetings
- Manage a Teams meeting and present content, add participants, and change options
- Properly end meetings and sessions

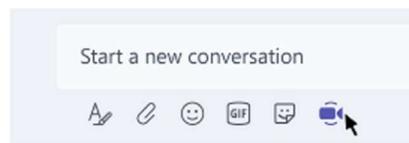
### Using Teams for meetings

#### Team meetings

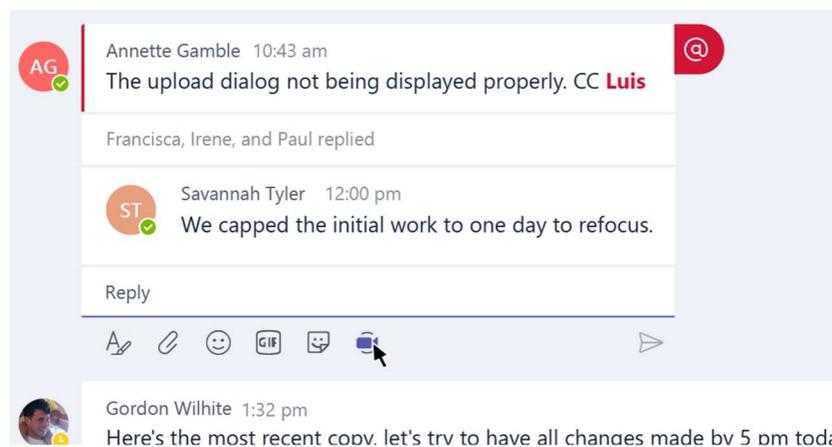
A team meeting is held online in a channel, so you can go from a conversation to a meeting with the click of a button. Team meetings are open meetings, so anyone on the team can join.

Team meetings include audio, video, and desktop sharing. And because they're online, you'll always have a meeting space and never need a room or projector.

To start a team meeting, click Meet now beneath the compose box in a new conversation.



Or keep the context of the conversation and bring in the people you're already talking to by clicking Meet now beneath the compose box in an existing conversation.



When you start a meeting in a particular channel, the whole team can see that a meeting is happening and join from that channel.

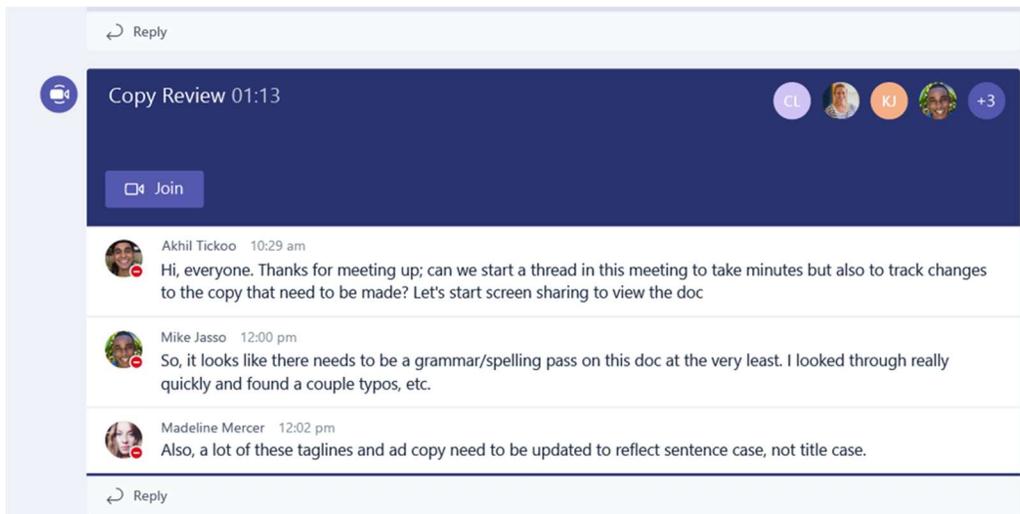
### Join a team meeting

You'll know a team meeting is happening in a channel when you see an invitation to join.

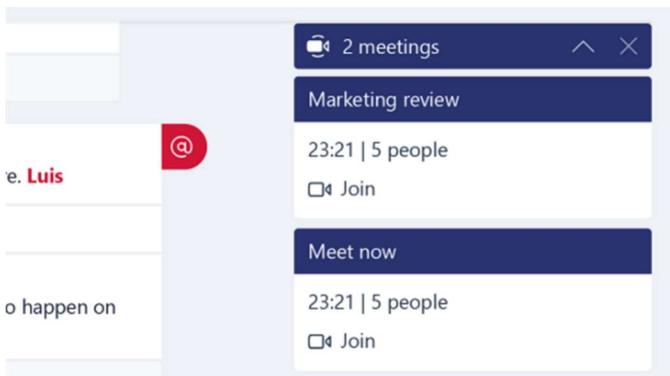
It will provide a preview of any content shown and who's in the meeting. If the meeting is scrolled out of view in the conversation, you'll get a notification in the channel.

There are three ways to join meetings in Teams:

You can join from a message within a conversation.



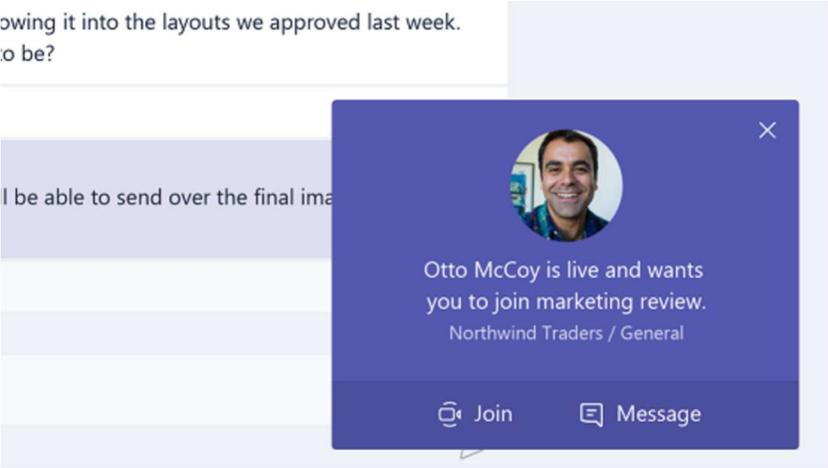
If you're working in another channel and your messages aren't currently in view, you can join a meeting from a notification that appears in the top right corner of your screen.



Or, if you're busy in a chat, you'll receive a notification that you've been invited to a meeting, and you can join from there.

oving it into the layouts we approved last week.  
o be?

I be able to send over the final ima



## Private meetings

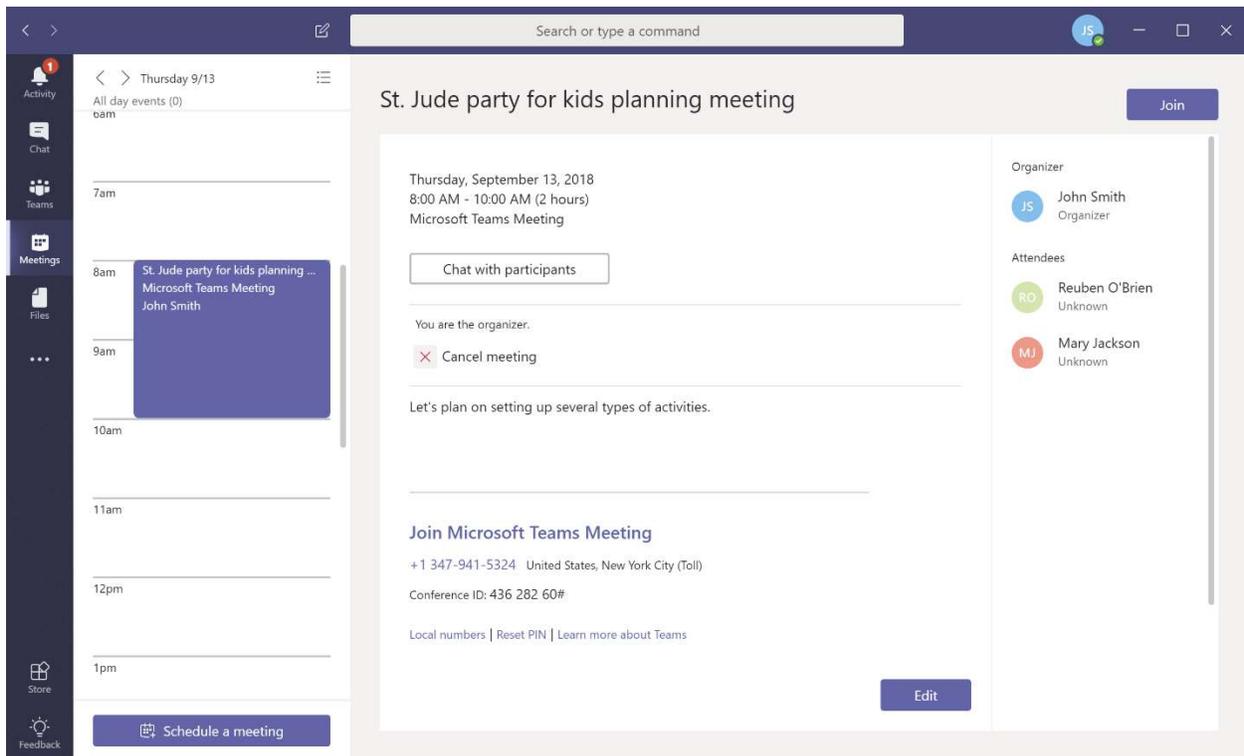
A private meeting only includes the people who were explicitly invited when the meeting was scheduled. The meeting can include audio, video, and screen sharing. You can schedule a private meeting with anyone in your organization—whether they're on Teams or not.

Every private scheduled meeting also starts a new chat thread for everyone in the meeting.

To schedule a private meeting, click Meetings on the left side of the app and then click Schedule a meeting. To make sure your meeting isn't open to an entire channel, select None under Select a channel to meet in. Then all you have to do is start inviting people.

## Join a private meeting

There are a several ways to join a private scheduled meeting.



- Click Meetings on the left side of the app and you'll see a list of all your meetings for the week. Find the meeting you want, and then click Join.
- If the meeting has already begun, it appears in your recent chat list. Select the meeting in your chat list and then click Join from the chat header.
- You can also join a meeting from a calendar invite in Outlook. If you click the link in your email invite, you'll be directed to Teams and can join your meeting from there.

## Participate in a meeting from the mobile app

### Here's what you can do if you're a meeting participant:

- Tap the meeting to see the meeting header where you can return to the team channel or chat, start a chat with participants, or add people from your team to the meeting
- Tap in the meeting for the meeting controls such as audio, video, and end call.
- Pinch to zoom in and out when someone is sharing their desktop.

### In addition, if you are the meeting organizer you can do the following:

- Mute all or individual participants.
- Remind people who accepted the meeting (but haven't joined) to call into the meeting.
- Cancel or reschedule a meeting.

## Call in to a meeting

To get the call-in number, click Meetings on the left side of the app, then select the meeting. The phone number appears in the meeting details.

### Use a phone for meeting audio

When you join a meeting, you can choose how you get audio for the meeting.

If you want to use your computer, click Use mic and speaker.

If using a phone is a better option for you, click Dial in using your phone.

## Share your desktop

Desktop sharing lets you present your screen or the app you're using during a meeting. To share your screen in a meeting, click Share in your meeting controls. You can choose to present your entire desktop, a specific app, or a file.



### Share PowerPoint slides in a meeting

If you choose to share a PowerPoint file in a meeting, rather than your desktop, meeting participants will get some special capabilities:

They'll be able to move around to different slides without interrupting the main presentation. They can sync their view back to the presenter's view with one click.

Click Share in your meeting controls. In the PowerPoint section, click the file you want. Click Browse to look for a different file.

#### Notes:

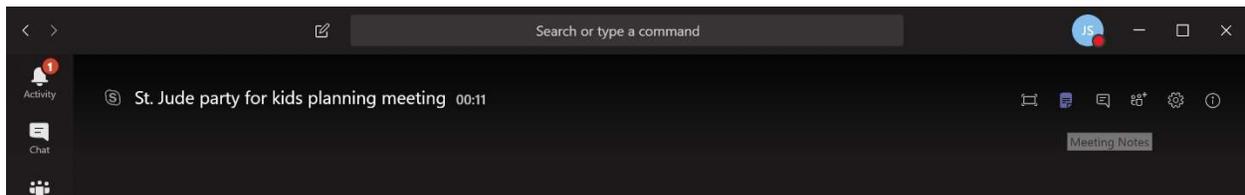
- The PowerPoint section lists the most recent files you've opened or edited in your team SharePoint site or your OneDrive. If you select one of these files to present, all meeting participants will be able to view the slides during the meeting. Their access permissions to the file outside of the meeting won't change.
- If you select Browse and choose to present a PowerPoint file that hasn't been uploaded to Teams before, it will get uploaded as part of the meeting. If you're presenting in a channel meeting, the file is uploaded to the Files tab in the channel, where all team members will have

access to it. If you're presenting in a private meeting, the file is uploaded to your OneDrive, where only the meeting participants will be able to access it.

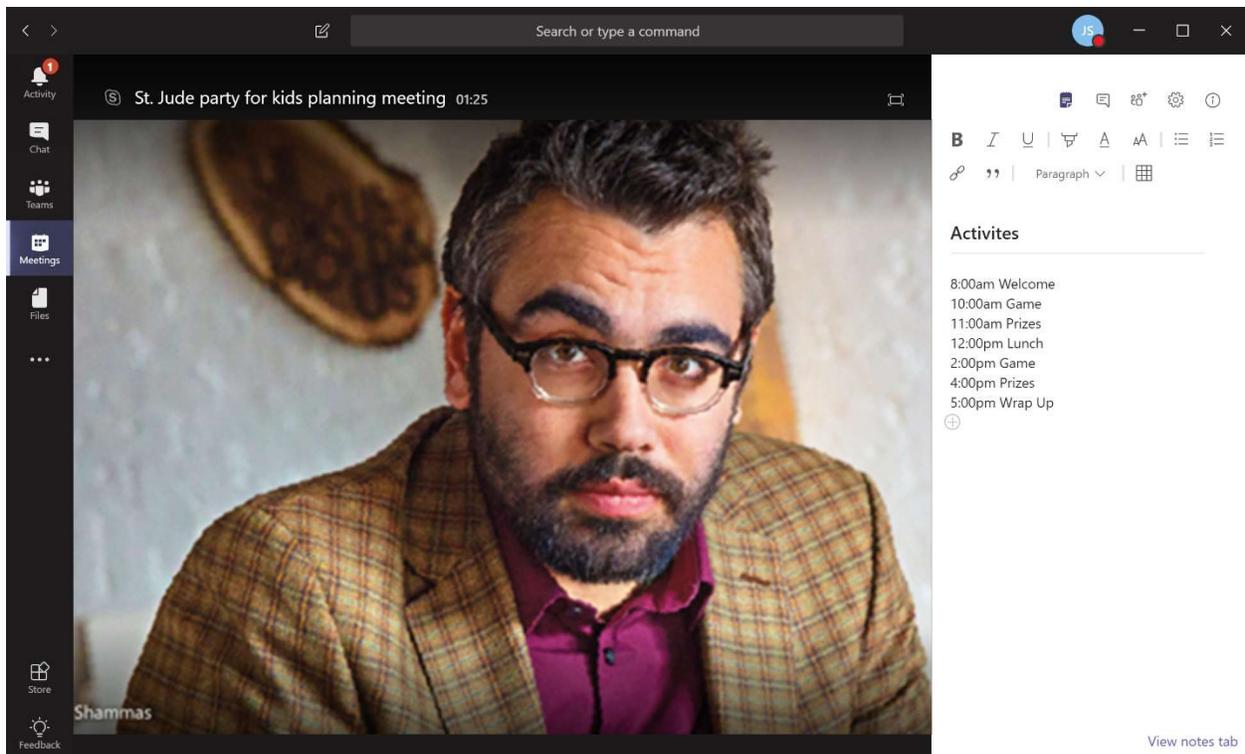
## Take meeting notes

During a meeting you can take notes in the notes tab and these will be saved with the meeting history in chat.

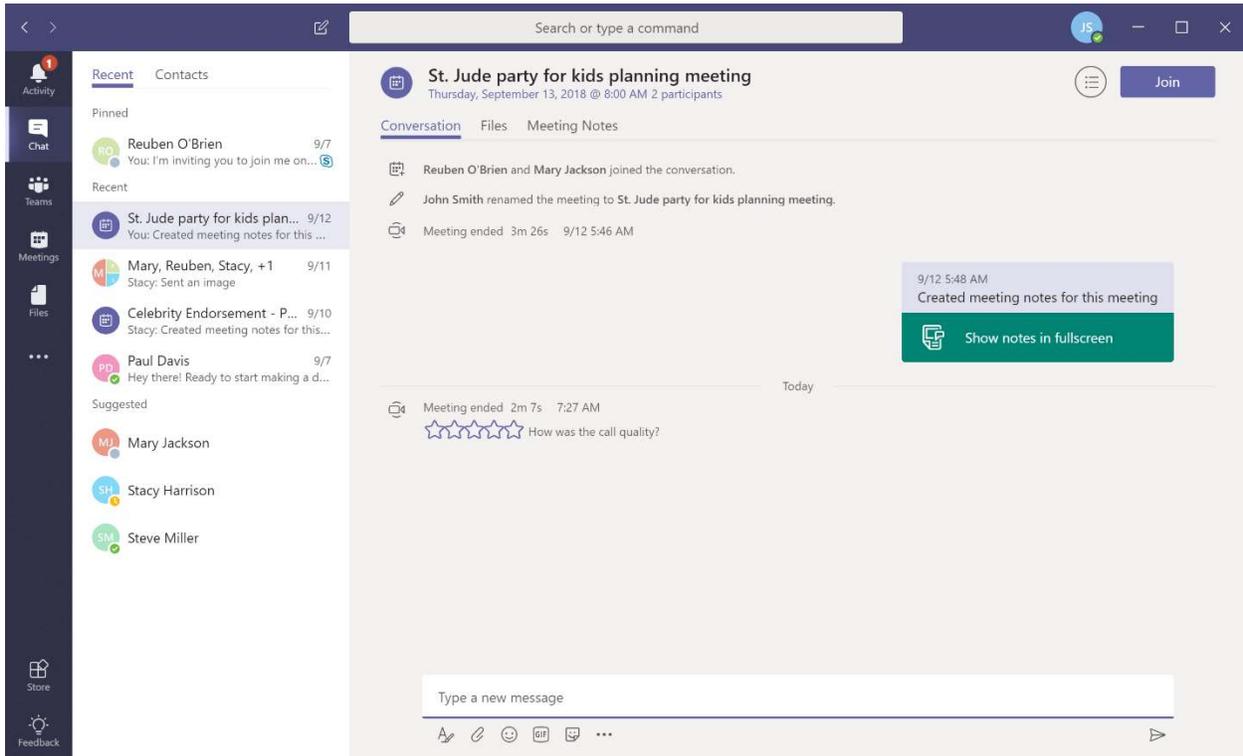
To take notes, click the Meeting notes icon in the top right corner of the meeting.



In the notes tab, you can add any notes for the meeting.



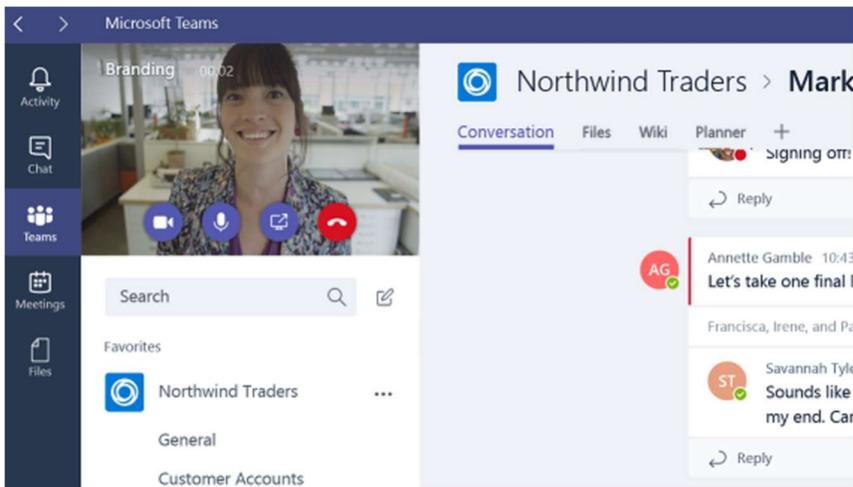
After the meeting is over, you will see the notes in the chat history for the meeting.



### Multitasking in a meeting

You can continue to use Teams during a meeting. Just click outside of the meeting, and you can check on what's going on in other channels or catch up on your messages.

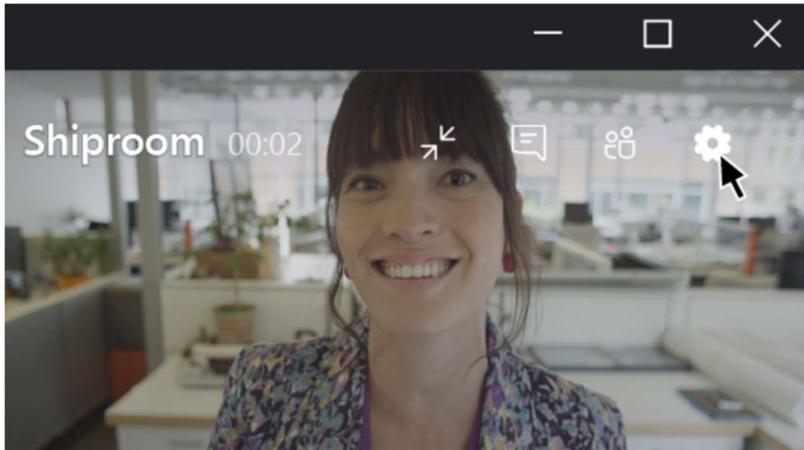
Whenever you click away from a meeting, it becomes a smaller window at the top of the app. Click that window to return to your meeting in an instant if you need to.



## Manage audio settings

If people in the meeting can't hear you, you might be muted or you might not have configured your mic correctly.

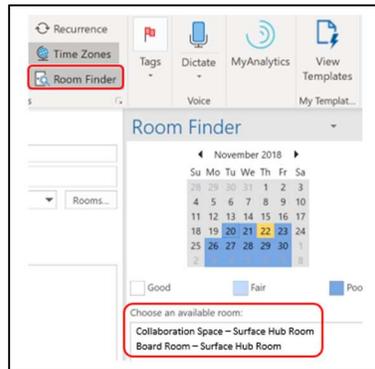
To change your speaker, microphone, or camera settings when you're on a call or in a meeting, click Choose devices at the top right. Use the menus to select the speaker, microphone, and camera options you want.



## Schedule a Teams meeting from Outlook

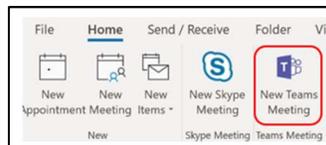
All activities on your Surface Hub are considered sessions, whether they include ad-hoc or scheduled meetings with remote participants or brainstorming and planning with a group of your teammates. Aside from being scheduled in advance, there's no difference between an ad-hoc and a scheduled meeting. All of your Surface Hub's features and applications are available in both types of meetings.

Inviting a Surface Hub to a meeting is similar to booking a conference room for a meeting. If you are scheduling your meeting in Outlook, select the Surface Hub room you want to use from the list of available rooms.

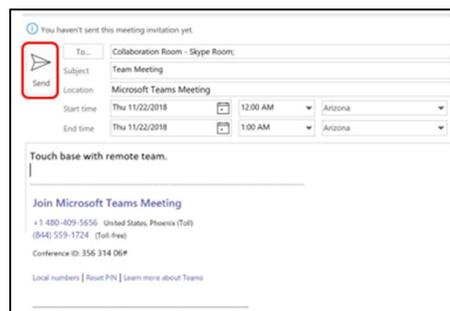


**Note:** If you're not sure what the Surface Hub room is called or how resource accounts have been set up, ask your company's support person.

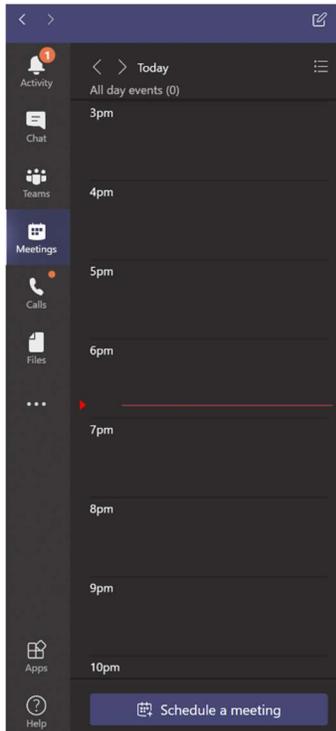
To make the meeting a Teams meeting, with conference call and presentation capabilities, select **Teams Meeting** in the toolbar to add it to the meeting.



Add the people that you want to invite to the meeting. Be sure to include any other important meeting info such as the time/date and agenda, and then select **Send**.



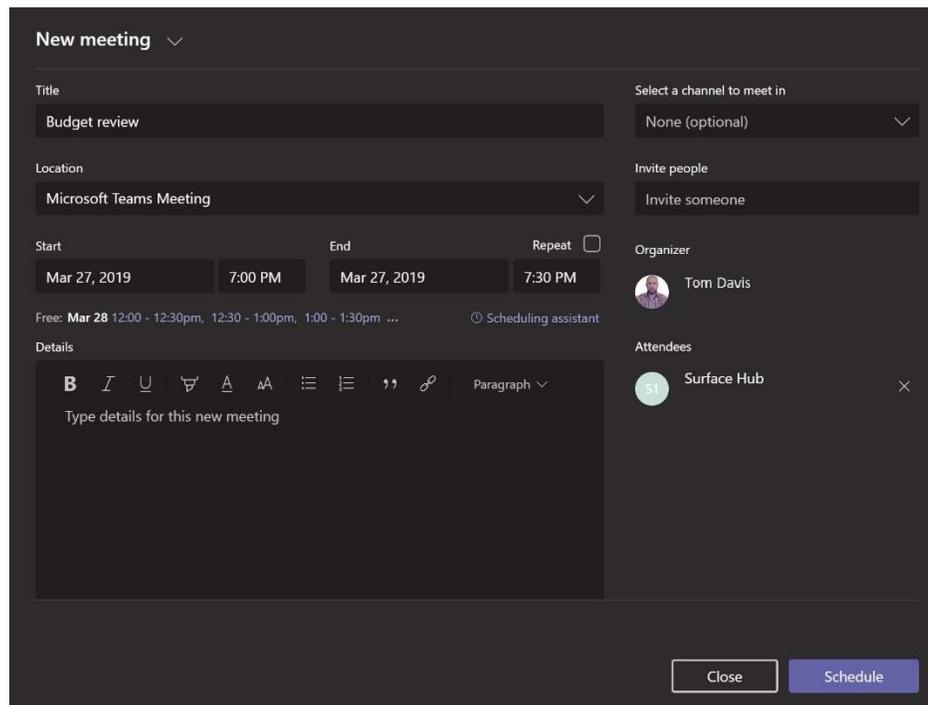
## Schedule a Teams meeting in Teams



You can also schedule a meeting using the Teams desktop client. To create a new meeting, select **Meetings** from the left navigation pane.

Then select **Schedule a meeting**.

You can add invitees and Surface Hubs to the meeting by searching for their name. When you are finished select **Schedule**.



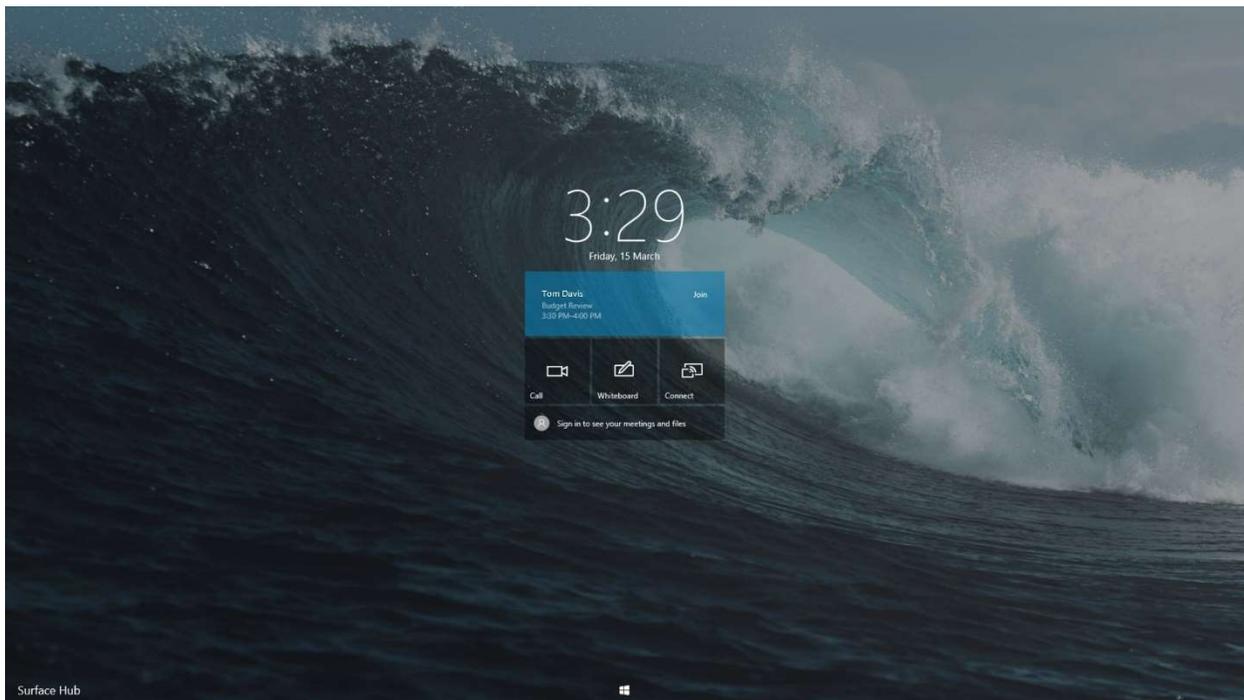
## Starting a Meeting on Surface Hub

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Starting a meeting with Surface Hub is easy. Whether you scheduled the meeting in advance and reserved the Surface Hub or walked into the room for an unscheduled or ad-hoc meeting, Surface Hub is already ready for you at the Welcome screen.

### Scheduled Meetings

If you have already scheduled a meeting and included the Surface Hub, you will see the meeting on the **Welcome** screen. To join the scheduled meeting, select it from the Welcome screen. You can swipe through the list of meetings left and right to see the room or device availability for the day.



**Note:** If you have scheduled a Teams meeting, when you select your session from the Welcome screen, the call will start automatically. The camera and microphone will turn on so the people on the call can see and hear the people in the room.

### Ad-Hoc Meetings

Surface Hub is ideal for collaboration and brainstorming. A brainstorming session might come up that hasn't been previously scheduled. To see if the Surface Hub is available for an **ad-hoc** session, check the Welcome screen. If no scheduled meetings are listed for the current time, then you can start using it by selecting any of the on-screen apps or tiles.

## Switch to a Meeting



If you are using the Surface Hub and an actual meeting starts in a few minutes, you have several options for joining that meeting.

Open the Start screen and select the meeting to join. You can also log in with your credentials to view your own meetings using **My meetings and files**.



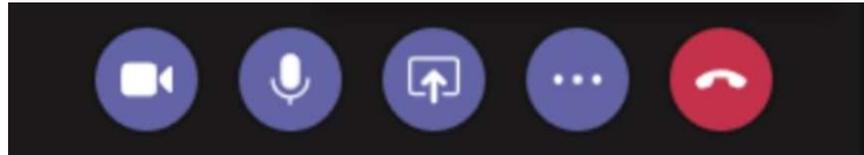
You can also select **Teams** to view upcoming meetings. The Microsoft Teams panel will list up to three meetings.

## Microsoft Teams meetings

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During a Teams meeting, Surface Hub has several options available to allow meeting participants to manage the audio and video, add and remove participants, and other settings.

At the bottom of the Teams panel are the control buttons.

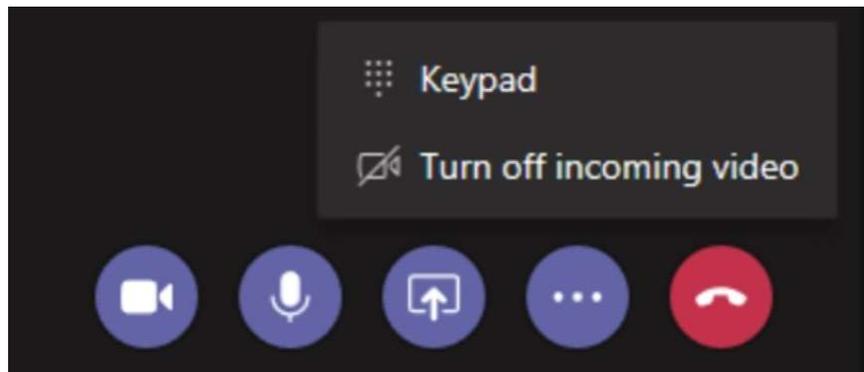


The camera button will turn the camera off and on.

The microphone button will mute the Surface Hub microphone so remote participants cannot hear the audio from the room.

The share button will present the whole screen to the participants in the meeting.

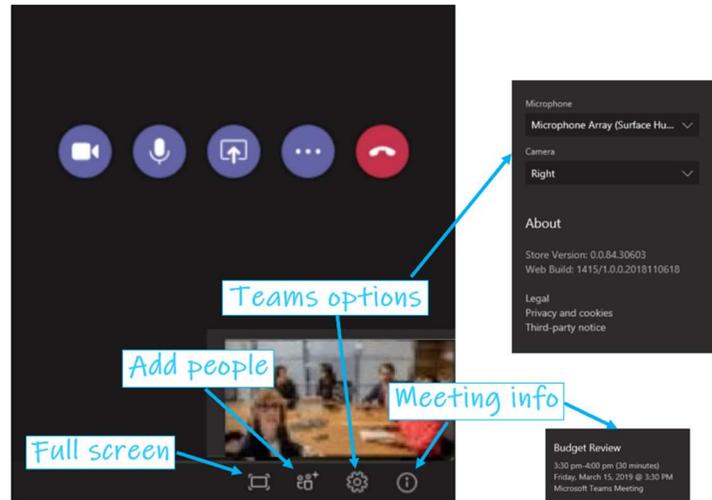
The more options button will display your numeric keypad and incoming video options.



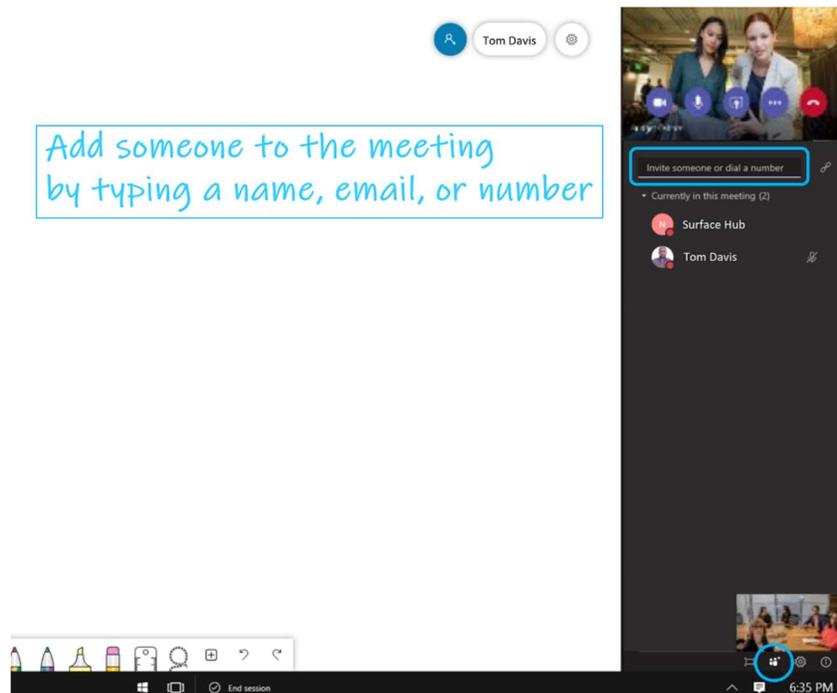
And the red button will leave the meeting. If you leave a meeting by accident or need to return to the meeting you can rejoin the meeting after leaving.

## Manage a Teams meeting

At the bottom of the screen are additional buttons that allow you to make the meeting full screen, add and remove participants, change the camera, and view the meeting info.



To add someone to the meeting, press the Add people button.



## Skype for Business meetings

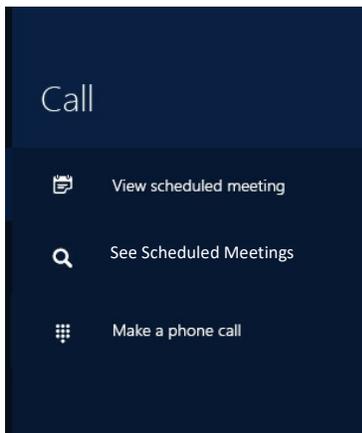
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If your organization is using Skype for Business for meetings you can use Surface Hub in those meetings as well. Use Outlook to schedule a **Skype for Business** meeting that includes your Surface Hub and any remote Surface Hubs that other participants will be using. Skype for Business uses the camera, microphone, and speakers on your Surface Hub to give all attendees, whether they are in the room or attending remotely, the full meeting experience.

### Before the Meeting

You can join the meeting before it starts to get things ready. Just select your meeting from the Welcome screen.

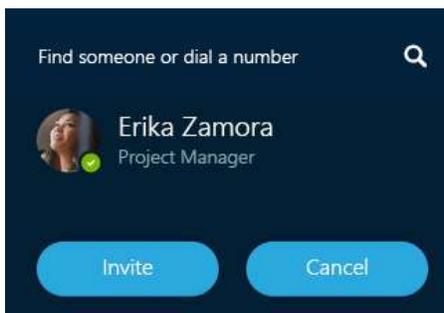
### Add Participants to a Meeting



To add the first person to an ad-hoc meeting:

1. Open the **Start screen**.
2. Select **Skype**.
3. Select **Search for someone** and enter his or her name or email address, then select **Invite**.
4. Otherwise, select **Make a phone call** and enter the number of the person you want to call.

To invite additional people to a scheduled or ad-hoc meeting:



1. Select **People** at the bottom of the screen  , then select **People plus**.
2. Enter the email address of each person you want to invite and select the name from the list.
3. Select **Invite** to send the person a pop-up invitation to join the Skype for Business meeting.

## Skype for Business Icons



**People:** Shows the people participating in the Skype for Business call.

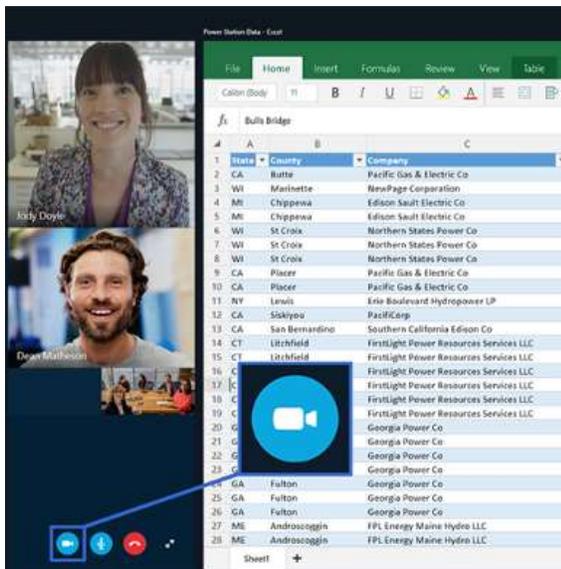


**Messages:** Displays IM conversations among meeting participants.



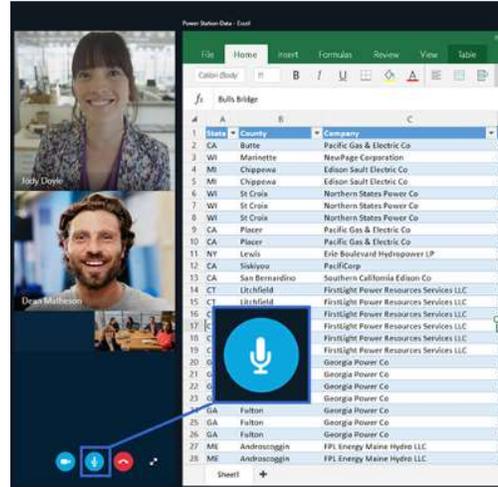
**Content:** Shows the list of files that have been uploaded to the meeting space.

## Adjust Cameras, Microphone, and Volume



You can turn the camera on and off on the screen by pressing the Camera  button in the Skype panel.

The microphone can be toggled between active and muted by selecting the **Microphone**  icon on the screen.

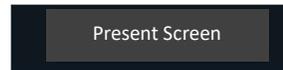


The volume of the sound coming from the Surface Hub can be adjusted by using the buttons on the bottom of the Surface Hub or using the touchscreen **More**  settings panel and selecting **Volume**.

## Share Content with Remote Participants

Sharing your Surface Hub screen is a lot like sharing your screen in Skype for Business.

- Select **Present Screen** to start sharing your screen.



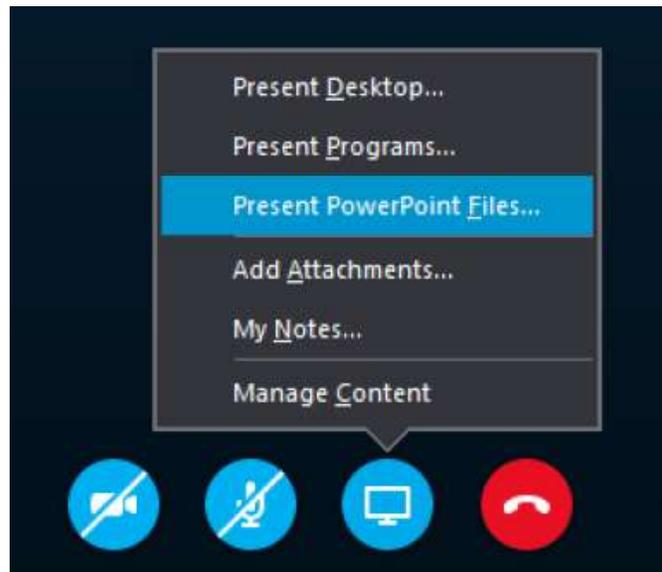
- Select **Stop Presenting** when you are done.



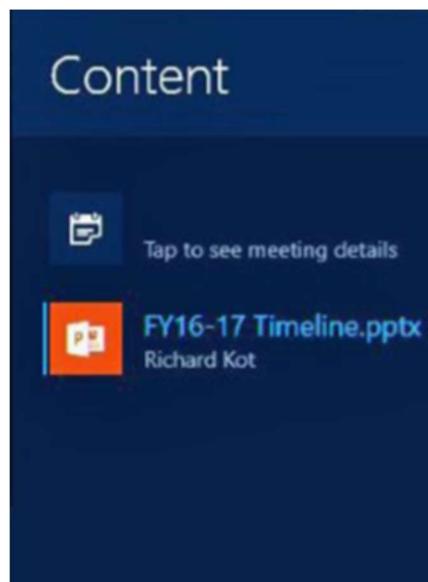
## Upload Content to the Meeting Space

During a Skype for Business meeting, remote users can share PowerPoint files with the Surface Hub as well as all participants. Any shared files will be shown on the Surface Hub in the Content tab.

To begin sharing a file with the meeting participants, click **Present** within your Skype for Business desktop client and choose **Present PowerPoint Files...**



Once you have chosen your file and clicked **Open**, the file will be automatically uploaded and shared to the meeting space. Click the **Content** tab  on the Surface Hub to select the file you want to present. You may need to request a **Content PIN** from a meeting presenter to access the content panel.



## Access files on the Surface Hub and USB flash drives

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The Surface Hub is great for bringing in your content and working with it on a large screen. For example, you may want to open and display a PowerPoint presentation or Excel spreadsheet and collaborate on the document. The Surface Hub can open files stored on a USB Memory Stick or access your OneDrive.

### File Explorer

To access the **File Explorer** on the Surface Hub, select the Start button and then select File Explorer. The Files on the Surface Hub are cleaned off every time the device is reset and prepared for a new group.



### USB Memory Stick

To access files that are stored on a USB Memory Stick, plug the USB drive into the USB port on the bottom of the Surface Hub before opening File Explorer. Then in File Explorer, the USB drive will be displayed on the left.

You can also open an app, such as PowerPoint, and then open the files from the USB drive from inside the app.



## Close Applications

You can switch between active applications and close any running application throughout a meeting. To display all of the currently running applications, select **Task View** at the bottom of the screen. To make an application active, select it from the list. To close an application, select the X in the corner.



## Ending a Session on Surface Hub

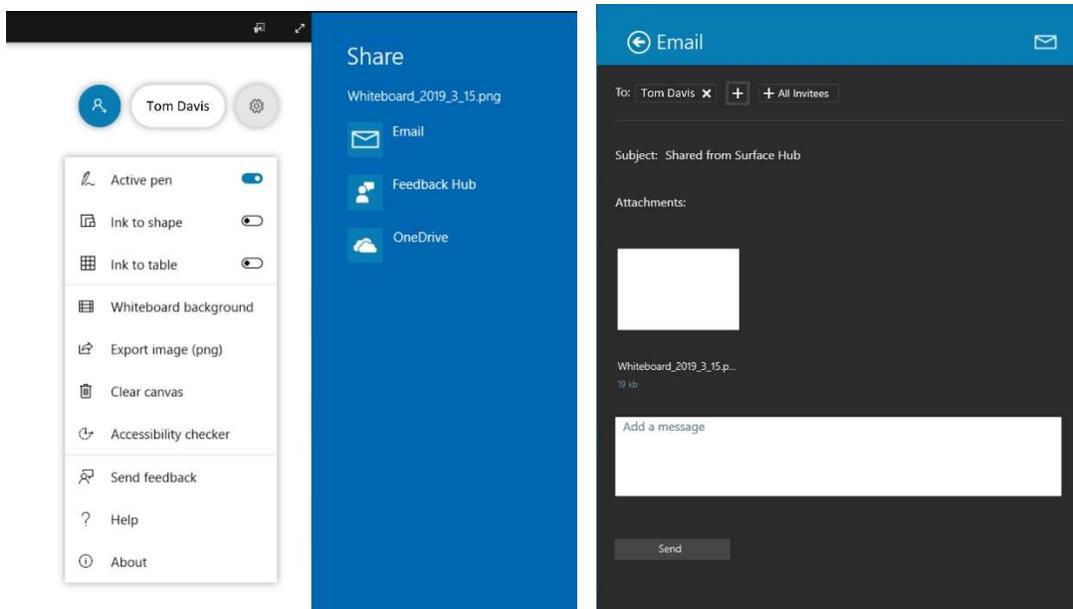
After a productive meeting, it is important that all of the hard work doesn't disappear. Collaboration creates ideas and action points, tasks and results. Once the meeting is over, work continues with purpose and direction.

Surface Hub allows the content and notes of the meeting to be emailed to all attendees in the meeting. In addition, after the meeting is over, the Surface Hub is reset, cleaned and ready for the next group.

### Save / Send Meeting Notes to Attendees

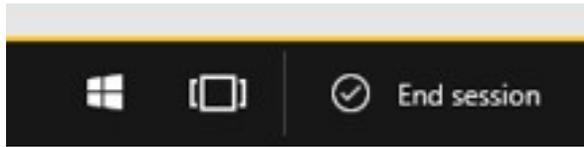
From the Whiteboard, you can email the contents of the canvas to all attendees or save it to OneDrive. If you signed in to Office 365, then your Whiteboard is saved automatically as you work.

If you want to send the Whiteboard to someone as an image, select the gear icon in the top right corner, then select **Export image (png)**. Select the **Email** option and compose the email with the whiteboard attached.



When you create an email, all meeting attendees are automatically added in the **To:** field and all invitees can be added with one button. You can edit this field as well. Modify the **Subject** and/or enter a message if necessary in the **Message** field, then select **Send**.

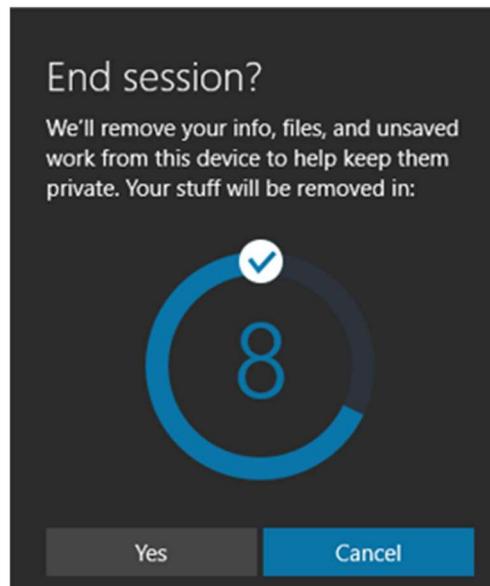
## End Session



To end a meeting or session on Surface Hub, select **End Session** at the bottom of the screen. When you select End Session, you'll see a 10-second countdown during which you can cancel to go back and save your work. This is your last chance to save or send any files.

When you end your meeting:

- If you are projecting to your Surface Hub from a device in the room, that connection closes.
- If you are in a Teams or Skype for Business meeting, Surface Hub leaves the meeting.
- Any open applications on Surface Hub are closed.
- Data and files from the session are deleted.



**Note:** Selecting End Session will erase any content that you had stored on the Surface Hub and prepare it for the next group. Make sure you have saved or emailed any work before selecting End Session and resetting the Surface Hub because you will **not** be able to recover it after it has been reset. If you are signed into Office 365, your work is saved to your account as you work.

## Resume a Session

If you forget to end your meeting or need to leave a meeting running on Surface Hub during a break, the session goes to sleep but does not time out or reset automatically by default. The next time someone enters the room, the Welcome screen appears with a prompt to resume the meeting. This means that all the files and information from your meeting will be available when the meeting resumes.

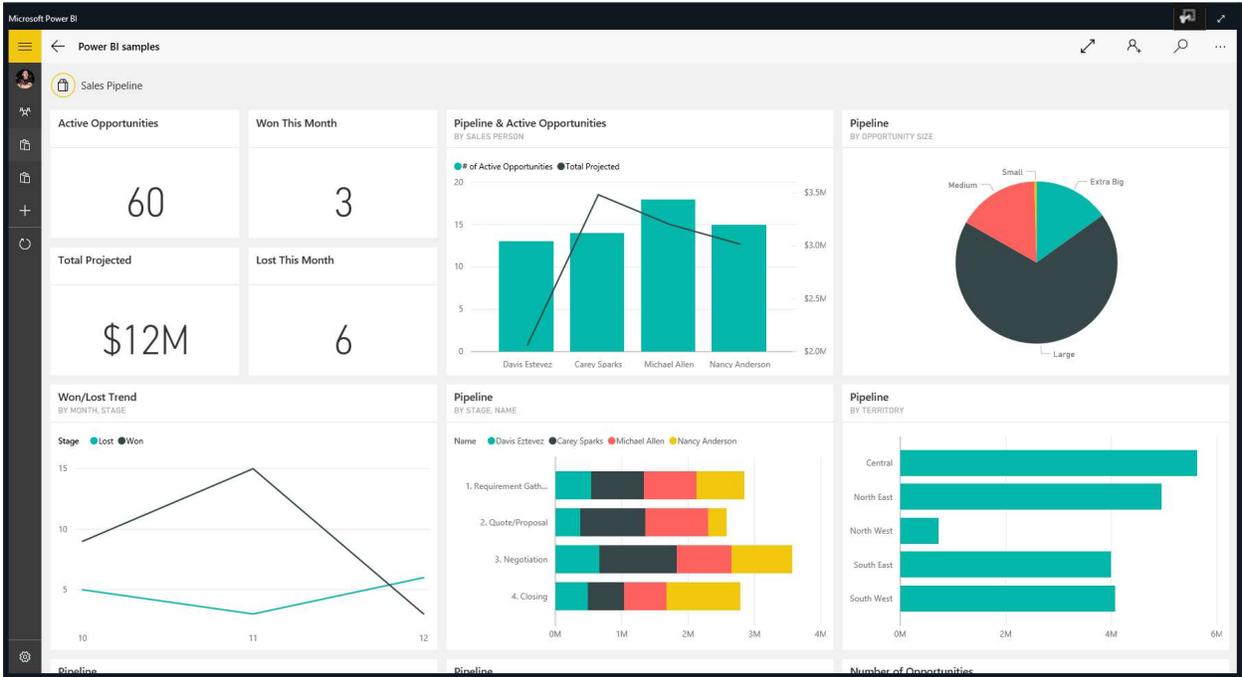
# Appendix A

## Power BI

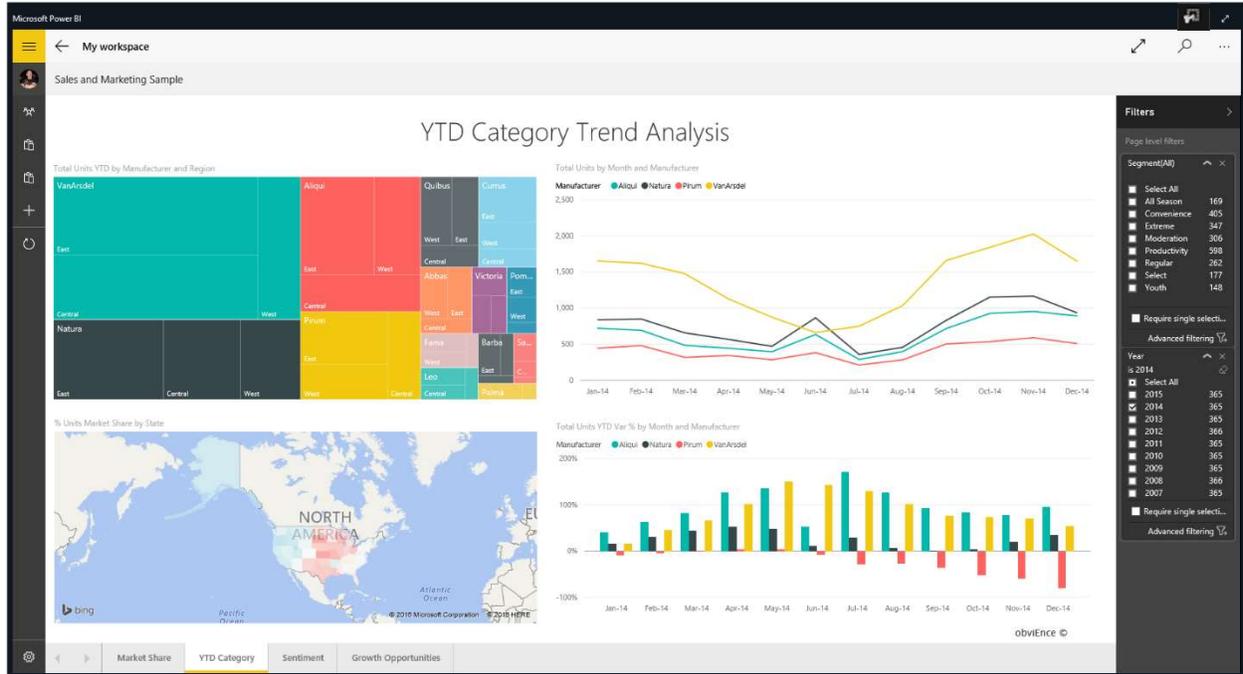
**Power BI** is a collection of software services, apps, and connectors that work together to turn your unrelated sources of data into coherent, visually immersive, and interactive insights. Whether your data is a simple Excel spreadsheet or a collection of cloud-based and on-premises hybrid data warehouses, Power BI lets you easily connect to your data sources, visualize (or discover) what’s important, and share that with anyone you want.

The common flow of work in Power BI begins in Power BI desktop where a report is created. That report is then shared to the Power BI service, and then shared so users of Power BI Mobile apps can consume the information.

Power BI on the Surface Hub includes reports, dashboards, and groups. It is designed to be touch-friendly: tap on a dashboard or report to view it full screen and scroll or zoom with your fingers.



Power BI reports include access to filters to analyze data in different ways. Get more out of your data with large, clear charts.



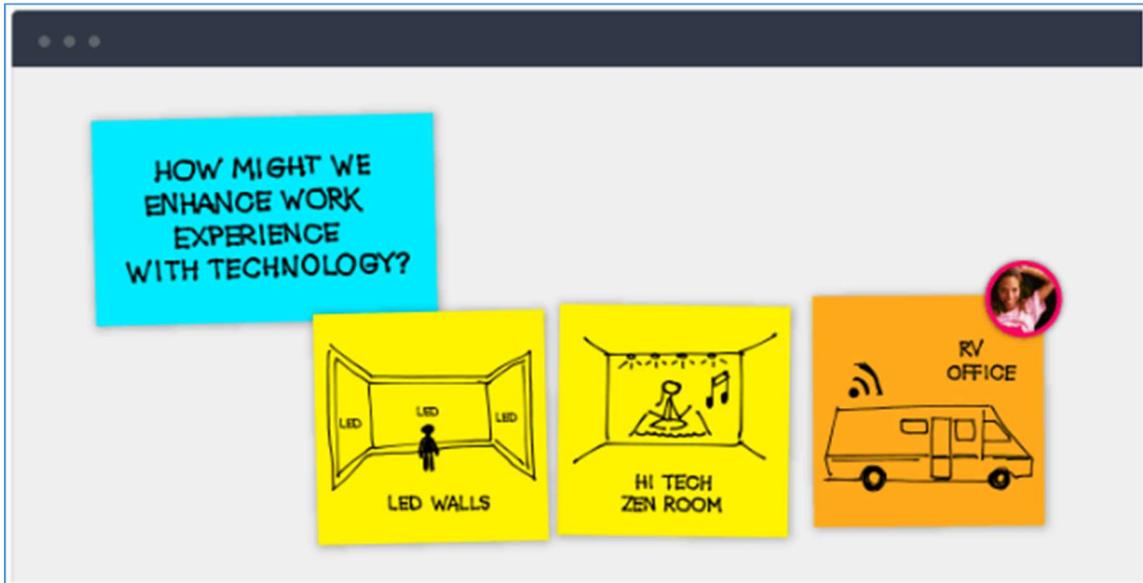
## Annotate on Whiteboard

With the **Annotate** feature on your Surface Hub, clip any Power BI dashboard or report, and annotate on the Whiteboard.

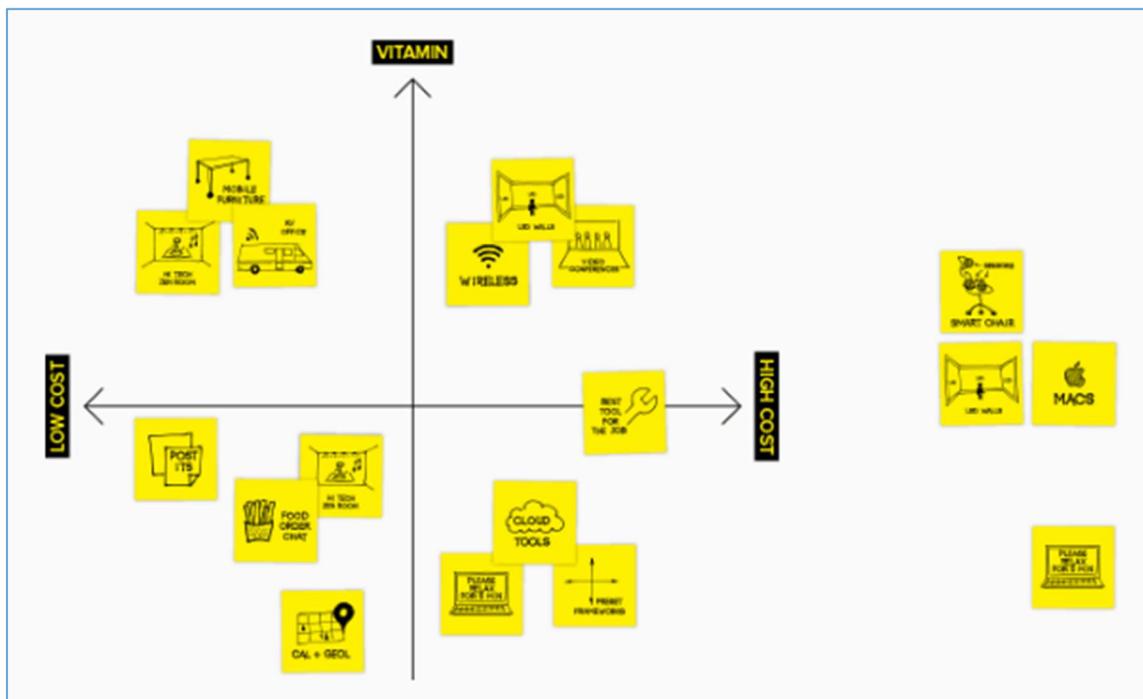
For more information, or to get started with Power BI, visit <http://www.powerbi.microsoft.com>.

## Mural

**Mural** is a visual workspace that gives you and your teammates a place to express ideas and provides flexible elements that force you to synthesize and organize your thoughts. With Mural, you use visual aids such as images, links, and videos to support your ideas, because a picture is worth 1000 words.

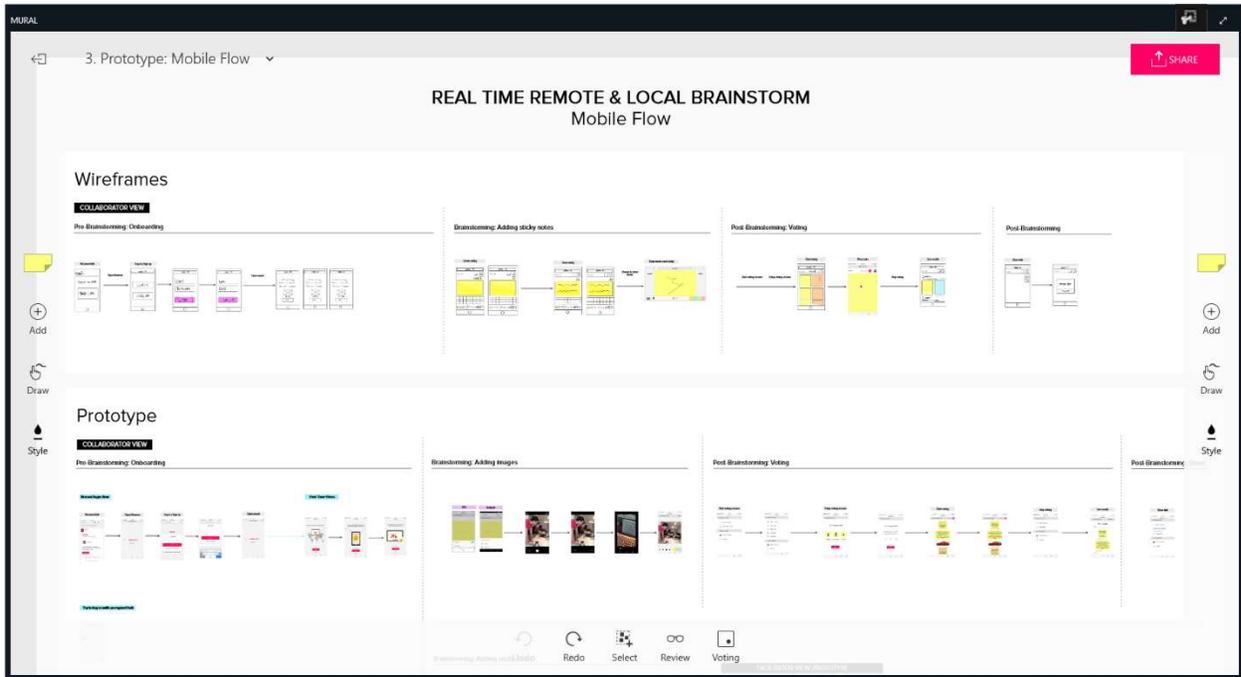


The canvas is ideal for large screens and touch interaction, view your Mural zoomed in for detail, or zoomed out for scope. And remote team members can contribute to the Mural from anywhere.

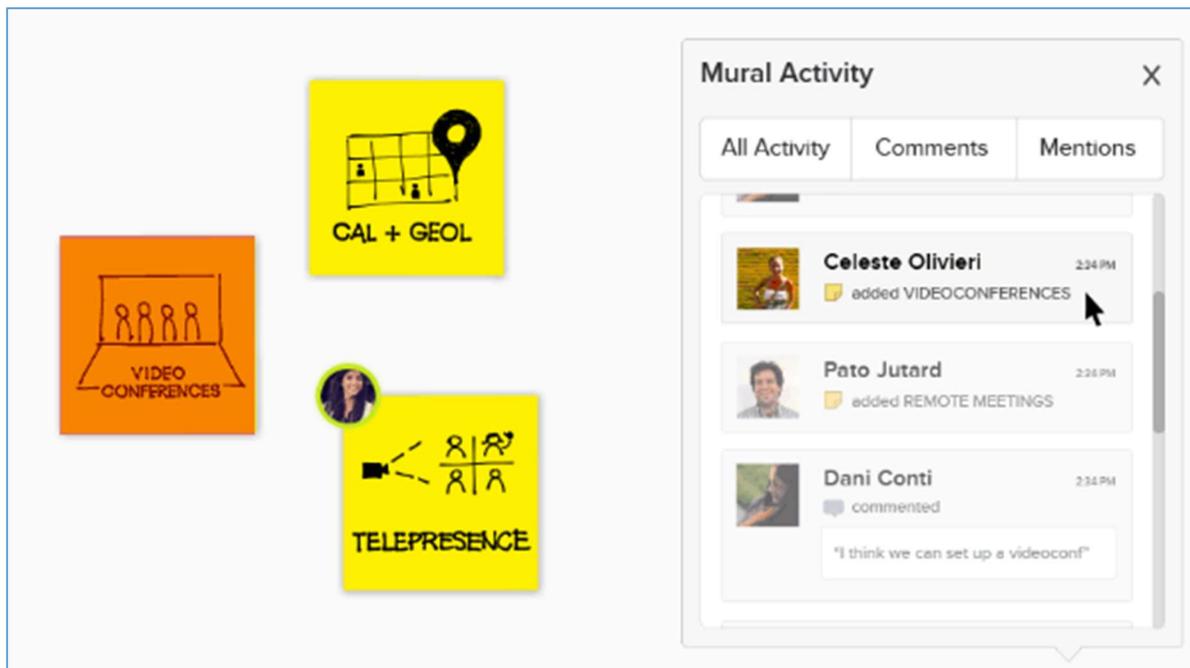


## Mural Canvas

The Mural canvas allow ideas to take shape. Quickly express, organize, and get feedback on your thoughts, with sticky notes, images, text, and drawings.



Share content with your user group, and track changes so that you know who is working on what.

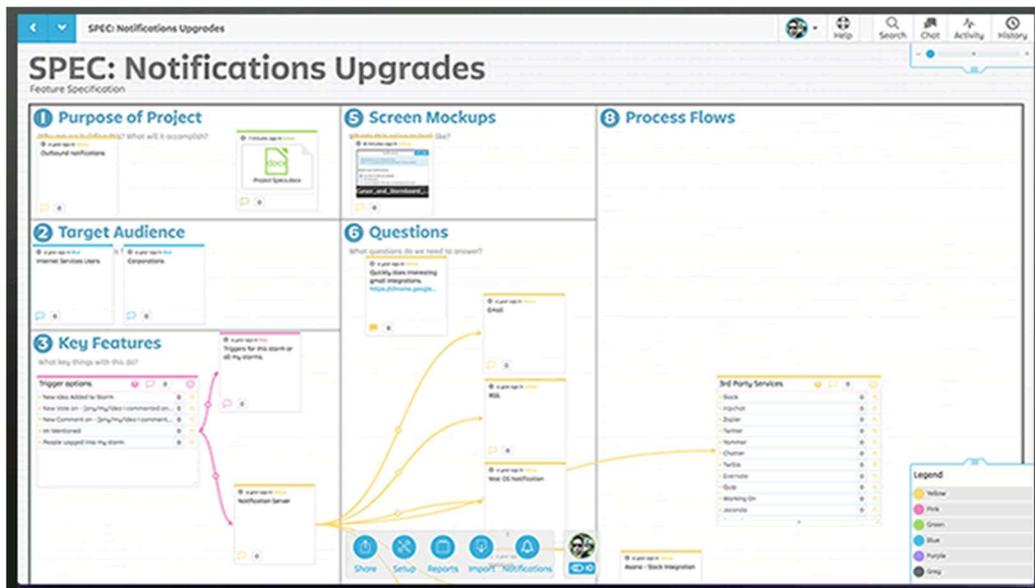


For more information on Mural, visit <http://www.mural.ly>.

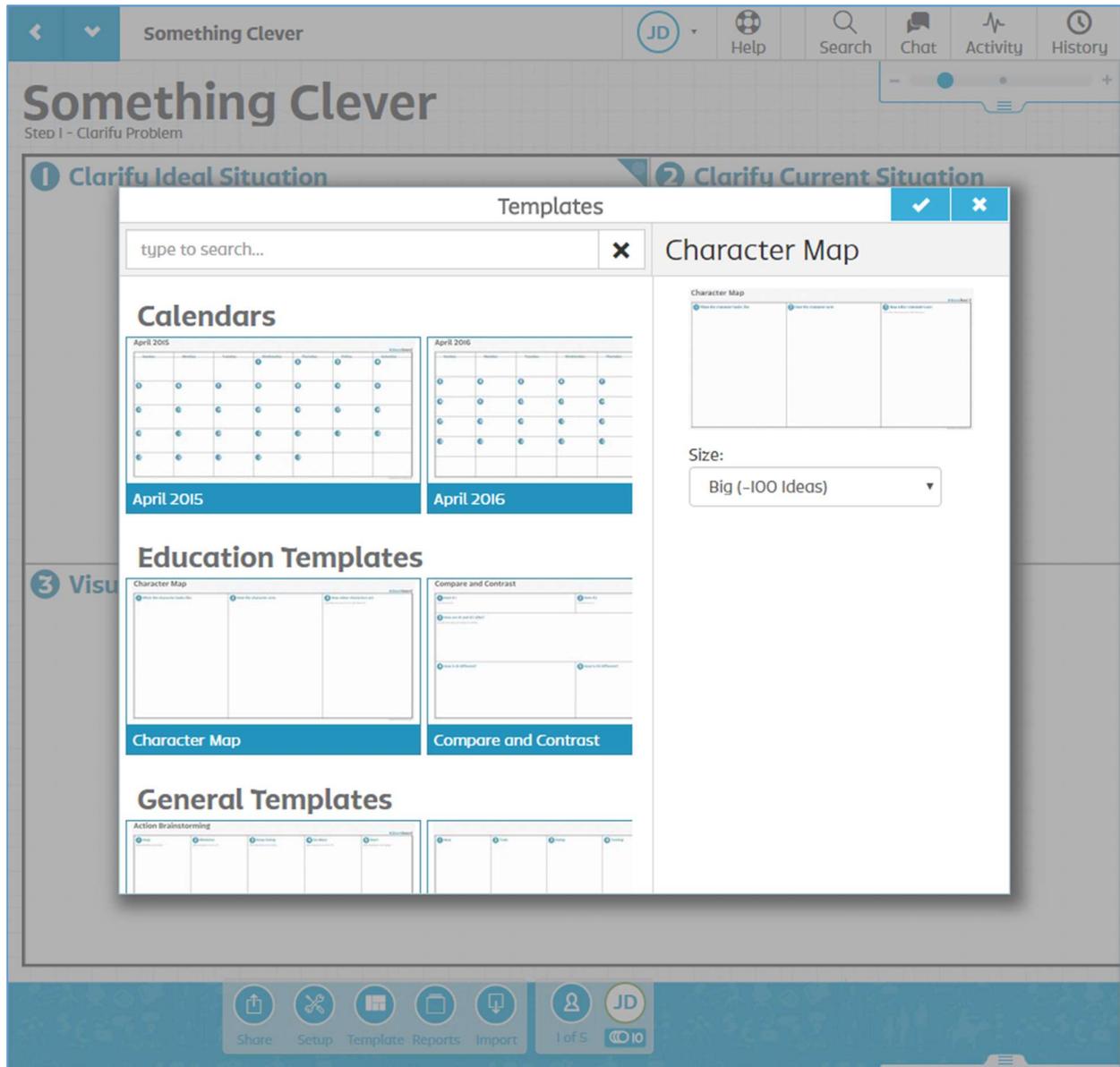
## Stormboard

**Stormboard** is a real-time collaboration and brainstorming tool that uses business process templates to capture, organize, prioritize, and report on your ideas and processes.

On the Surface Hub, the large touchscreen makes working with a Stormboard easy and allows team members to be more productive simultaneously.

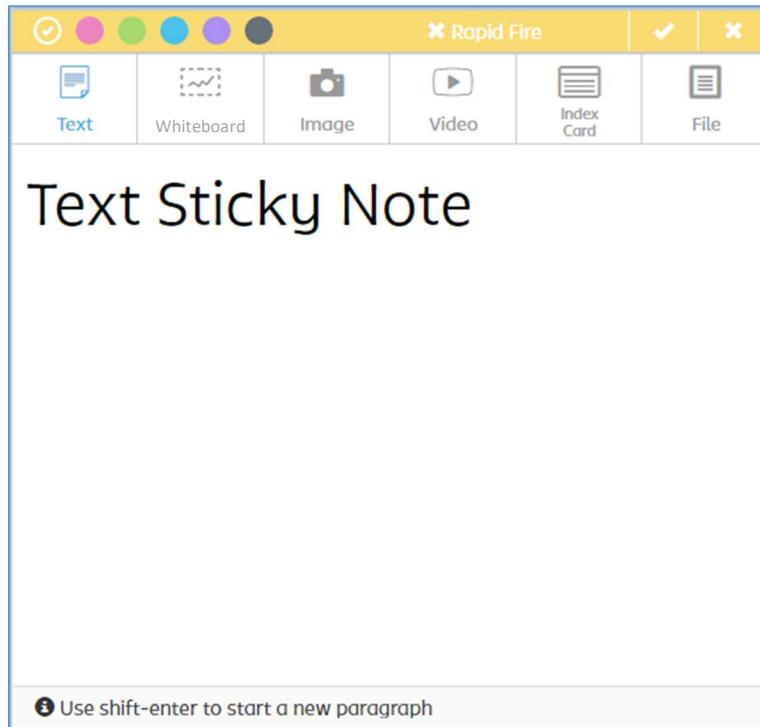


New Stormboards can be blank for all-out brainstorming or based on a business process template with a specific purpose.

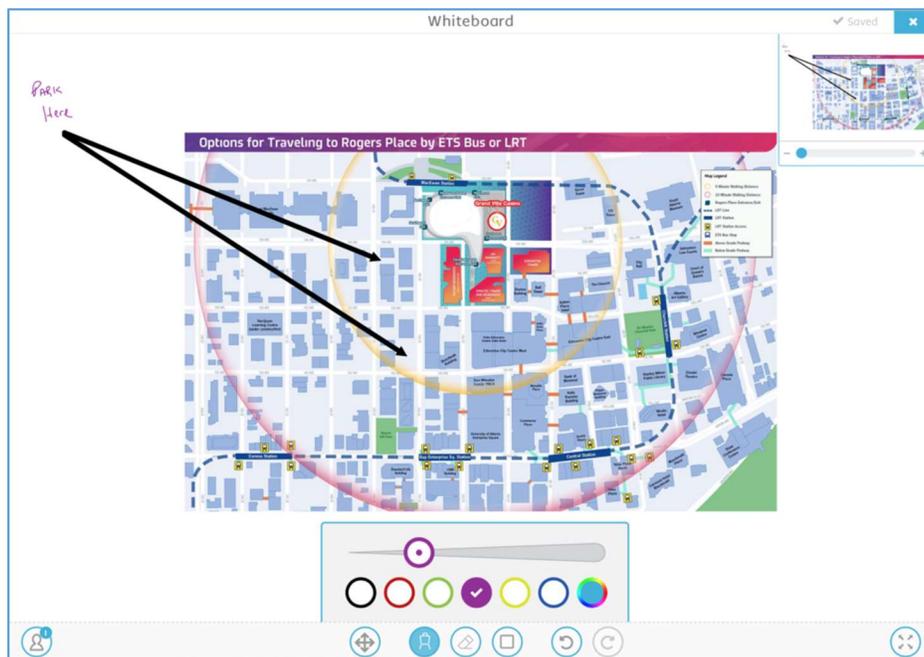


## Sticky Note Types

There are six different kinds of sticky notes: Text, Images, Files, Video, Whiteboard, and Index Cards. Select the type of sticky note you want to create from the menu at the top of the note.



The Whiteboard in Stormboard allows multiple users to collaborate in real-time.



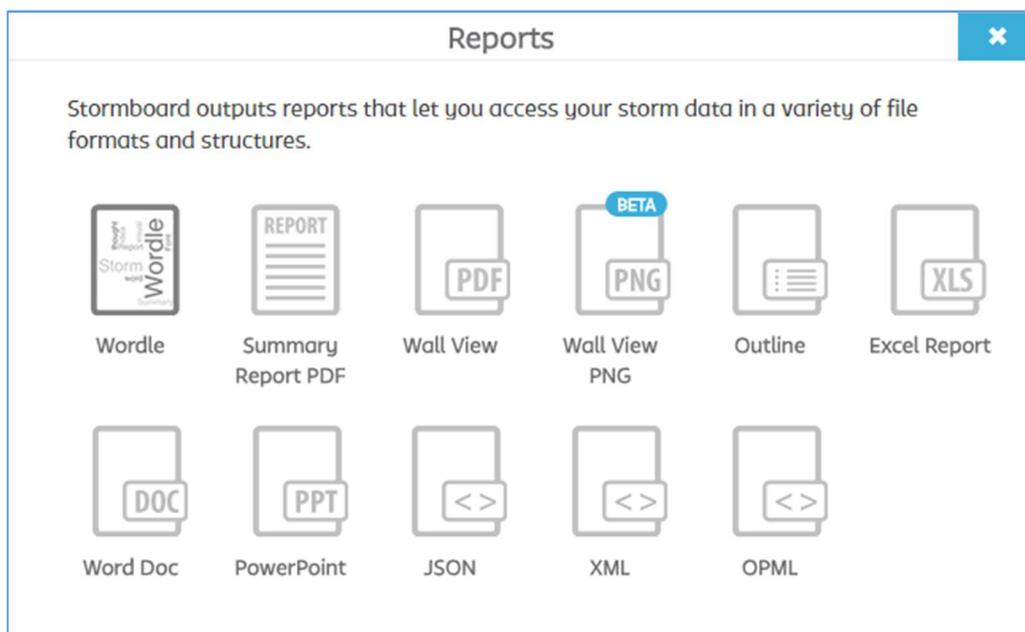
## Commenting and Voting

To comment on a sticky note, click the **speech bubble** in the lower left hand corner of the note, type your message, and press enter.

Each participant on a Stormboard is assigned a number of votes (this can be changed by the board admin) that can be distributed however they choose across any number of notes. To add a vote, click the plus sign to add how many votes you want to give the note.

## Reports

One of the most powerful features of Stormboard is the reporting capabilities. **Reports** are available to all Start up or team subscribers. Stormboard data can be output to many different formats, including: Excel, Word, PDF, JSON, XML, and OPML.



For more information on Stormboard, visit <http://www.stormboard.com>.

## Check Your Progress

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1. What are some of the ways to start a meeting with Surface Hub?
2. How do you clip an image for annotation on the Whiteboard?
3. How do you add someone to the meeting once you've started?
4. Where do you go to find all the applications on Surface Hub?
5. What should you do in every meeting before you select End Session?
6. How is the Surface Hub going to be used in your meetings to change how work gets done?