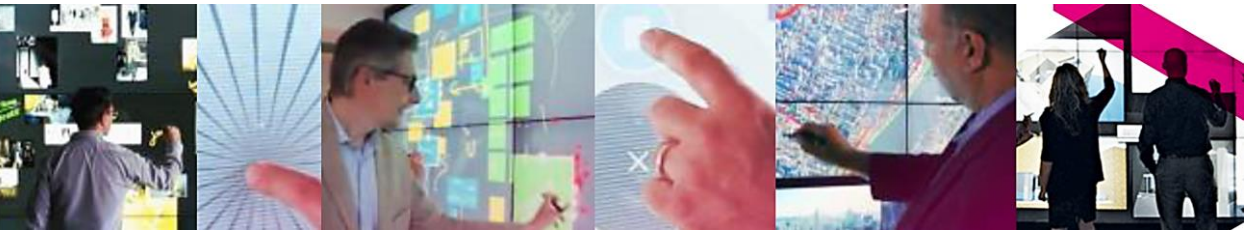
MULTITACTION



MT CANVUS 1.7
USER MANUAL

Revision 5
October 2017

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This manual is intended for the owners and operators of MT Canvus. It contains guidelines for the proper usage of the products. Information in this manual is subject to change without prior notice to product owners. For the latest product details and guidelines please visit the product website.

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1 Introduction

This manual describes how to use MT Canvus 1.7.

MT Canvus is an engaging and intuitive software solution for interactive video walls. It helps organizations to visualize big data, socialize ideas, educate clients and work collaboratively.

Multiple users can work on a video wall at the same time, using their hands, fingers and infrared pens to interact with screen content. MT Canvus also allows users to share content from their smart devices onto the video wall and, conversely, to share content from the video wall onto external monitors, projectors, or virtual webcams.

By encouraging users to collaborate to develop and circulate new ideas, MT Canvus can boost productivity and accelerate business processes.

MT Canvus on an interactive video wall

1.1 Desktop mode or video wall mode?

MT Canvus can run in *desktop mode* or *video wall mode*. The mode is set when MT Canvus is installed.

- **Video wall mode:** This is the standard mode for MT Canvus, and refers to MT Canvus running on a multi-touch video wall.
- **Desktop mode:** This mode refers to MT Canvus running on a Windows computer for a single user. In this mode, you can install and run MT Canvus on your laptop or desktop computer. This can be useful if you want to develop and test new canvases, or review existing canvases, away from your main video wall.

  MT Canvus in desktop mode differs slightly from a conventional MT Canvus installation. For details, see section 3.6.

Note: *It is not possible to directly switch modes after installing MT Canvus. If you do want to switch modes, you will need to uninstall and re-install MT Canvus.*

1.2 Which features have license restrictions?

This manual describes all features in the current MT Canvus release. However, some features may be restricted, depending on the terms of your license.

- **Workspaces:** These enable you to split the viewport into separate sections. In desktop mode, this can be useful if you want to view different areas of the same canvas, or if you want more than one canvas open at the same time.

  The maximum number of workspaces is defined in your license. When MT Canvus runs in desktop mode, you are typically only permitted to have two workspaces open at the same time.

  Workspaces are described in section 2.3.

- **Video outputs:** MT Canvus allows you to stream content from your canvas to an external monitor, projector, or virtual webcam. The stream is sent from a video output on your laptop or desktop computer.

  The maximum number of video outputs is defined in your license. When MT Canvus runs in desktop mode, you are typically only permitted to stream content through one video output. For example, even if the graphics card in your desktop computer has dual HDMI and DVI ports, you can only stream MT Canvus through one of them.

  Video outputs are described in section 19.

- **Codice cards:** These are user ID cards in the form of a 2D barcode printed on paper or card. Users can have their own Codice card to access their *personal items* folder, while a special Codice card supplied with MT Canvus also functions as an eraser for deleting annotations.

  Codice support is defined in your license, and support for *personal items* Codice cards may be disabled. Conversely, eraser Codice cards are always enabled.

  Codice cards are described in section 3.4; personal items are described in section 13.

2 Concepts

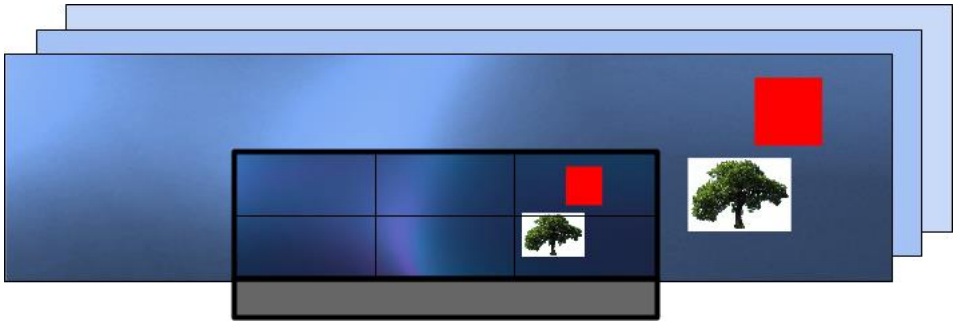
Four key concepts in MT Canvus are *canvas*, *viewport*, *workspace* and *widgets*. These are discussed below.

2.1 Canvas

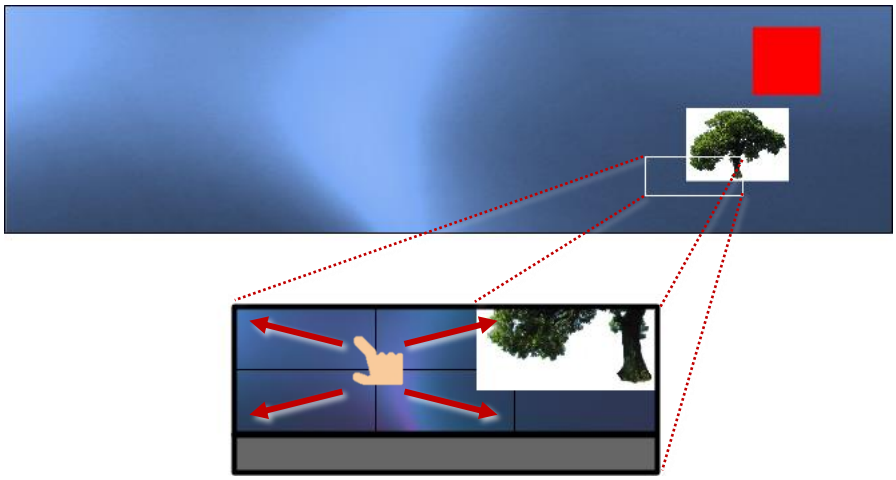
A *canvas* is the basis for displaying and organizing content—images, videos, documents, and so on—on your video wall. A single MT Canvus installation can support multiple canvases.

Each canvas is extremely large and extends well beyond the physical screen area. Use hand and finger gestures to drag and resize the visible portion of the canvas.

You can split the screen into two or more *workspaces* and have a different canvas open in each workspace. You can also export a canvas to a USB drive (for example, for backup purposes) and re-import canvases that were previously exported.



Each MT Canvus installation supports multiple canvases. In this example, the video wall is displaying an entire canvas.

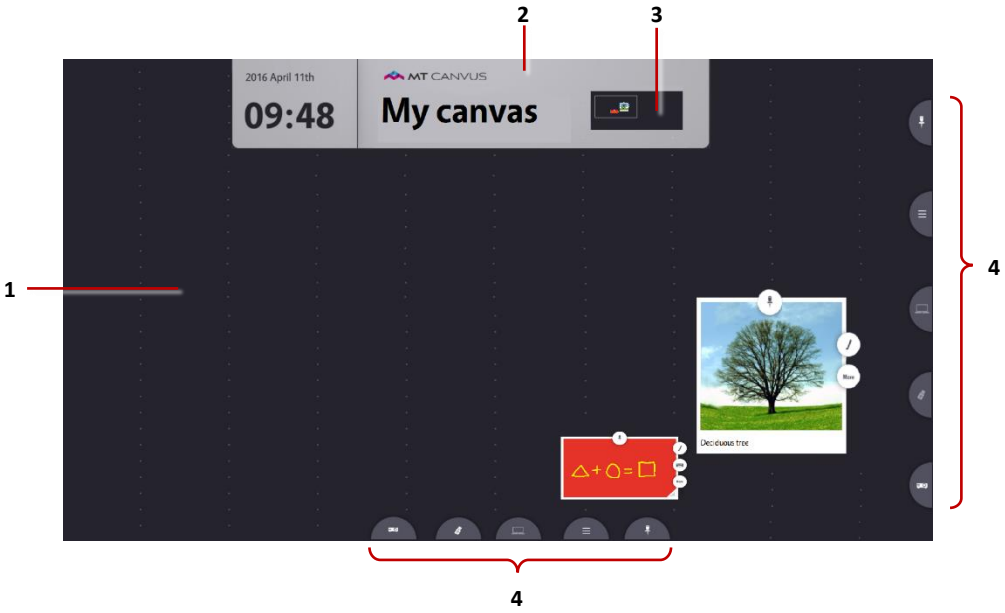


Usually, only a portion of the entire canvas is visible on the screen. Use hands and fingers to drag and resize the visible portion. In this example, the user has zoomed in so the video wall now only displays a small portion of the canvas.

2.2 Viewport

The combined physical screen area of the Cells represents a *viewport* that shows the visible portion of a canvas. Technically, when you use hand gestures to bring other areas of the canvas into view on the screen, you are moving and resizing the *viewport*.

As an analogy, consider a long document in Microsoft Word. Here, the viewport is represented by the window in which Word runs. You can move the viewport to see other sections of the document by zooming and scrolling. In MT Canvus, you zoom and scroll around the canvas using finger gestures.



MT Canvus screen: 1 *Screen area. Represents a viewport onto the canvas.* 2 *Info panel.* 3 *Canvas viewer.* 4 *Canvas menus.*

Note: *For details about the info panel and canvas viewer, see section 2.3.3.*

2.3 Workspace

Workspaces enable you to split the viewport into separate sections so that two or more users can work independently on the screen without interfering with each other's work.

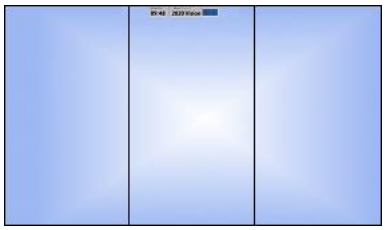
By default, there is a single workspace that extends across the entire screen. But you can split the screen into multiple workspaces. Each workspace extends over a specific section of the screen *and* presents the user with an independent viewport onto the canvas. Or users can choose to view a different canvas in each workspace.

For details about how to create or remove workstations, see section 9.

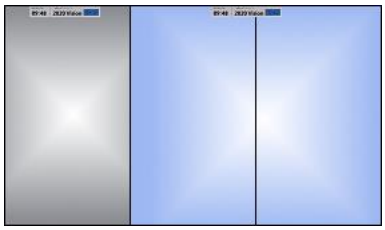
Note: *The number of workspaces open at the same time may be restricted by the terms of your MT Canvus license; see section 1.2.*

2.3.1 Split the screen

Typically, you create workspaces that align with Cell boundaries. For example, a Meeting Room display has three Cells in portrait mode so you might split the screen into two separate workspaces, allowing two users to simultaneously prepare their own presentations:



Display comprising three Cells



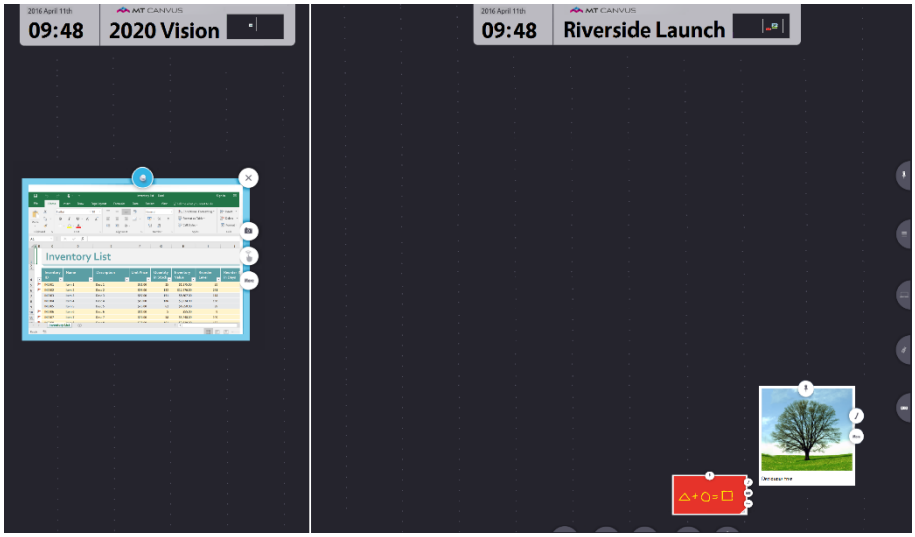
The same display, split into two workspaces

Note: *You can only split the screen area vertically into workspaces. You cannot split the screen horizontally.*

2.3.2 Choose what to view in each workspace

Each workspace provides an independent viewport onto the canvas. Within that viewport, a user can choose which canvas to open and keep their personal view of that canvas, without any interference from colleagues working further along the display.

For example, two users split a Meeting Room display into two workspaces. In the first workspace, the user is working on the '2020 Vision' canvas. In the second workspace, the other user is working on their 'Riverside Launch' canvas. (See the screenshot on page 3.)



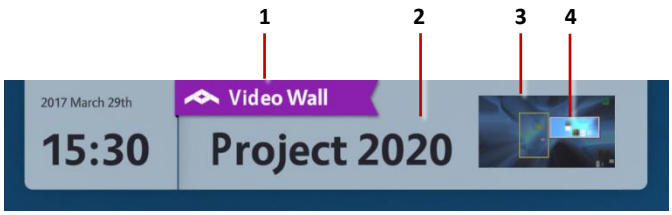
Example screen split into two-workspaces, each displaying a different canvas

It is also possible for the same canvas to be open in different workspaces. For example, a user in one workspace may want to zoom in and pin a specific area of the canvas. If a user in a different workspace zooms out or moves the canvas, the first user's view is unaffected. (Of course, if any user adds or removes items from the canvas, these changes are visible in all workspaces that have the canvas open.)

2.3.3 Info panel and canvas viewer

Each workspace has an info panel at the top of the screen. The info panel shows the name of the canvas and the canvas viewer. The canvas viewer is a map of the canvas. It shows a small-scale view of the current viewport relative to the entire canvas.

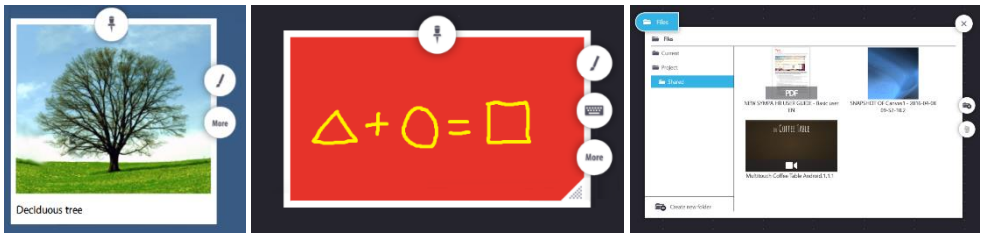
Users can choose to hide or re-display the info panel; see section 5.2.



Workspace info panel. 1 *Workspace identifier. Present only when multiple workspaces are defined.* 2 *Canvas name.* 3 *Canvas viewer, showing the total canvas.* 4 *Current size and location of viewport, showing the area of canvas that is currently visible on-screen.*

2.4 Widgets

Widgets are the individual screen items on a canvas. They are similar to computer windows. You can create, delete, move and resize widgets to suit your needs.



Example widgets: image, note and folder

MT Canvus supports a range of widgets, including screen content widgets and tool widgets.

2.4.1 Screen content widgets

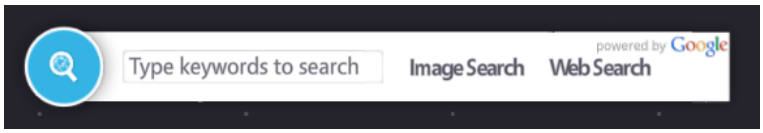
These widgets contain the text, images and video content that you want to show on your video wall:

- **Image:** This widget supports .png and .jpeg file formats. You can search the internet directly for images or download images from web sites. In addition, you can copy images from USB sticks and create images by taking snapshots of the canvas.
- **Note:** This is a simple widget with text content or pen annotations, and a colored background. See section 6.4.
- **Video:** All common video file formats are supported. The video widget includes the usual video controls (play, pause, stop and so on).
- **PDF:** This widget includes controls for paging through PDF documents, and annotating or taking screenshots of individual pages.
  Tip *You must pin this widget before you can page through the document.*
- **Browser:** This widget displays a browser on your canvas. You can specify web page URLs, bookmark pages, take snapshots, and download images or files (from web pages with a download capability). See section 6.7.
  Tip *You must pin this widget before you can browse the web page or enter search terms.*
- **Screen share:** This widget shows the screen of a computer or laptop that is sharing its screen with MT Canvus. Screen sharing is described in section 18.
- **Video stream:** This widget can connect to a media stream server to display streaming video. For example, you can use this widget to display video streamed from a webcam. See section 15.

2.4.2 Tool widgets

These widgets contain no content themselves. Instead, they are tools that allow users to organize the screen content:

- **Search:** This widget allows you to run internet searches for images and web pages. See section 6.7.
- **Snapshot:** This widget has a capture frame for taking screenshots of specific areas of the screen. Snapshots are saved as images. See section 7.4.
- **Folder widget:** For files, anchors, canvases and a user's personal items. This widget resembles a File Explorer window in Microsoft Windows. It simply provides a list of saved items. In folder widgets for files and personal items, you can define subfolders within a folder.
- **Table:** The main purpose of tables in MT Canvus is for organizing screen items ie, arranging items into tidy rows and columns. The table widget lets you specify the number of rows and columns in table. You can also nest tables within the cell of a parent table, enabling you to define complex table layouts. See section 16.
- **Anchor:** This widget is a capture frame that lets you define the size and position of a new anchor area. See section 7.3.
- **Create video output:** This widget allows you to stream content from a specific area of your canvas to an external monitor or projector. See section 19.2.



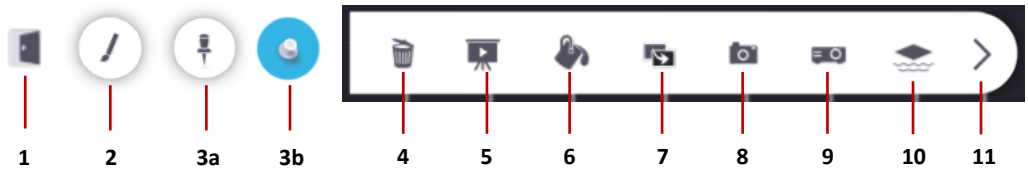
Search widget

Example snapshot widget

2.4.3 Common widget tools

Most MT Canvus widgets include Pin and Annotation tools. Many also have a

More button that a displays a submenu of common tools. The Close tool is also permanently available from the System menu.



Common tools

1 *Close. Available in the System menu; see section 5.6*

2 *Annotations drawn on a widget with an infrared pen or mouse; see the screenshots below. For annotations drawn directly on the canvas, see section 6.4*

3a *Pin and* 3b *Unpin; see section 10.1*

Widget submenu

4 *Trash. Tap to delete the widget*

5 *Presentation. Launches a presentation of the widget; see section 14*

6 *(Notes only) Change the background color; see section 6.4*

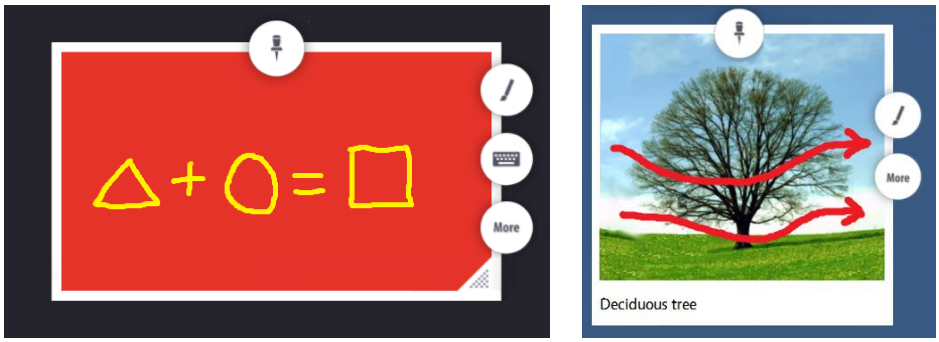
7 *Duplicate this widget; see section 12*

8 *Capture a snapshot image of this widget; see section 7.4*

9 *Video output. Send the widget content to an external monitor; see section 19*

10 *Float this widget above the canvas; see section 10*

11 *Close this submenu*



Example annotations on note and image widgets

3 Using the touch screen

MT Canvus users can interact with the touch screen by using hand and finger gestures, an infrared pen, a mouse, and Codice cards.

3.1 Hand and finger gestures

Note: *If MT Canvus is installed in desktop mode on a computer that does not have a touch screen, you will not be able to use hand and finger gestures. Instead, you will need to use a mouse to interact with canvas content; see section 3.3.*

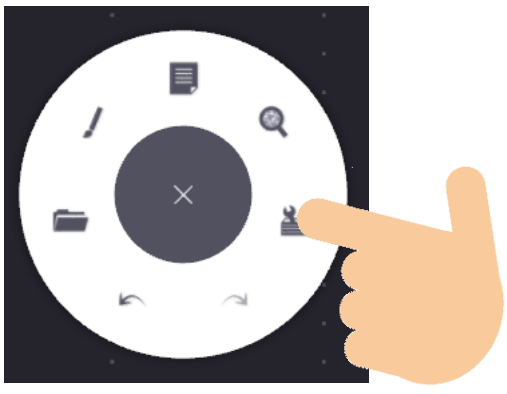
The hand and finger gestures recognized by MT Canvus are generally the same as the gestures for using smart phones or tablets. For example, use the familiar pinch and spread gestures to zoom in or out:

You can also use your finger to drag or swipe items on screen. Tap the screen with your finger to 'press' buttons and open or close menus.

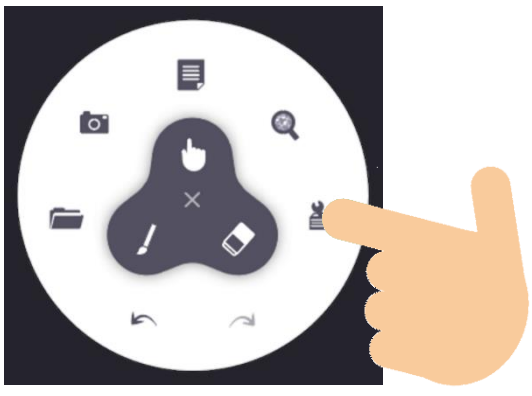
A 'long press' (tap and hold) is equivalent to right-clicking with a mouse.

To open the finger menu, tap and hold any empty area of the canvas. See section 6.3.

When MT Canvus runs on a video wall that uses touch screen overlays, you see a modified version of the finger menu. This version includes three 'touch mode' buttons that allows you to use your finger like a mouse pointer and to draw or erase annotations on the screen. For details, see section 6.2.



Standard finger menu



Finger menu with touch modes

You can also use your finger like a mouse pointer and to draw or erase annotations if your administrator has enabled the touch selector. See section 3.5.

3.2 Pens and styluses

You can use infrared pens and third-party styluses to draw on a canvas and interact with canvas content such as menus.

Use an infrared pen or stylus to draw sketches and captions on a canvas

Note: *You can also use a mouse to draw and erase annotations; see section 6.5.*

3.2.1 MultiTaction infrared pens

Infrared pens supplied with MT Canvus have a touch-activated infrared LED in their tip. You can use these pens to annotate screen items such as images, or to draw directly onto the canvas itself.

MultiTaction infrared pen

You can set the color and weight of the pen stroke. To draw on a widget, use the widget's Annotation button; see section 2.4.3. To draw directly on the canvas, use the finger menu; see section 6.4.

You can also use infrared pens to erase annotations. Simply select the Eraser tool from the finger menu; see section 6.5.2.

Note: *The infrared pens supplied by MultiTaction are only supported on video walls of MultiTaction Cells. This means, for example, you cannot use these infrared pens if MT Canvus is running on a third-party touch screen or on a laptop or tablet.*

3.2.2 Third-party styluses

You can use the stylus supplied with your third-party touch screen or tablet to interact with canvas content. These styluses behave almost exactly like an infrared pen.

However, you cannot use these styluses to *erase* annotations. Instead, you must use your finger after choosing *eraser mode* in the Touch Selector (see section 3.5).

Microsoft Surface Hub stylus

3.3 Mouse

MT Canvus users can use a mouse to interact with canvas content. Indeed, if MT Canvus is installed in desktop mode on a computer that does not have a touch screen, a mouse is the *only* way to interact with canvas content.

The mouse can be any mouse or equivalent device connected to a USB port on the application computer. Wired mice are naturally supported, though MT Canvus users typically need a wireless mouse. This can be a conventional wireless mouse designed for use on a desk, or a gesture-controlled gyroscopic device designed for use in-air (such as a Gyration® Air Mouse®).

When a using a mouse with MT Canvus, click the right-mouse button to cycle through the available mouse modes. The cursor changes accordingly:

- **Finger:** In this mode, the mouse pointer behaves exactly like a user's finger. A left-click of the mouse is interpreted as finger touch event.

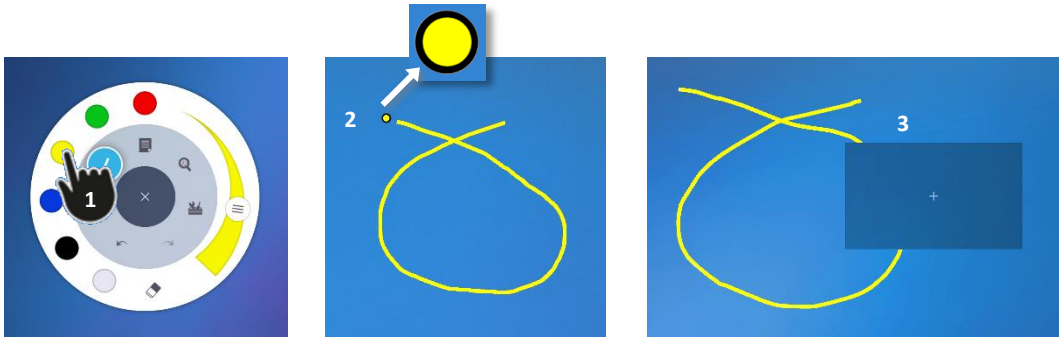
  Tip: *Hold down the left mouse button on any empty area of the canvas to open the finger menu. Click the left mouse button to select menu items.*

- **Pen:** In this mode, the mouse pointer behaves exactly like an infrared pen. Hold down the left mouse button to draw annotations on the canvas; see section 6.5.1.

  Tips:
  - *Scroll with the mouse wheel to change the width of the pen stroke.*
  - *Click the mouse wheel (or middle button) to cycle through the annotation colors.*

- **Eraser:** In this mode, the mouse pointer behaves exactly like an eraser card. Hold down the left mouse button and drag the rectangular eraser to delete annotations drawn with an infrared pen; see section 6.5.2.

  Tip: *Scroll with the mouse wheel to change the size of the eraser.*



1 *Finger mode* **2** *Pen mode* **3** *Eraser mode*

Mouse mode cursors. In these examples, a mouse is used to select the annotation tool from the finger menu, draw an annotation, and erase an annotation.

3.4 Codice cards

Notes

- *Support for personal items Codice cards may be disabled, depending on the terms of your MT Canvus license. Conversely, eraser Codice cards have no license restrictions and are always enabled. See section 1.2.*
- *Codice cards only work on video walls of MultiTaction Cells. If MT Canvus is running on a third-party touch screen or on a laptop or tablet, you cannot use any type of Codice card (including eraser cards), even if they are enabled by your MT Canvus license.*

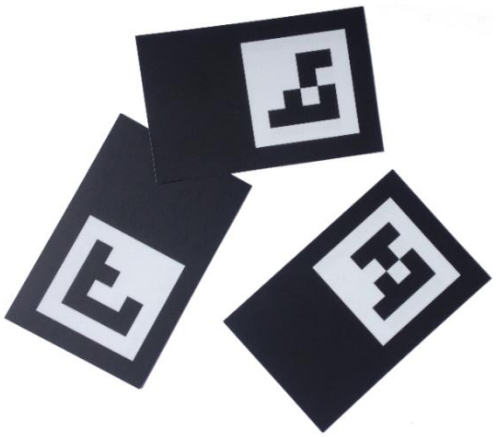
Codice cards are user ID cards in the form of a 2D barcode printed on paper or card.

A user has their own Codice card to access their *personal items* folder; see section 13. They can then drag items into or out of the folder and onto the canvas. With a Codice card, a user can access their personal items from any canvas. In fact, Codice cards offer the easiest way to copy files from one canvas to another. Users can also send personal items to their registered email address, providing a simple method for exporting screen content out of MT Canvus.

Users must register their Codice cards before they can use it to save personal items. First, you distribute the printed Codice cards to your users. Then, each user must register their card by holding it against the screen. MT Canvus prompts them for their name and email address. After the Codice is registered, the user can then access their personal items as described above. For details, see section 7.5.1.

A special Codice card supplied with MT Canvus also functions as an eraser for deleting annotations drawn with an infrared pen (see section 3.2). Place the eraser card face down on the screen and rub out the annotation.

MT Canvus is supplied with a set of Codice cards but you can also create your own. You can download ready-made sets of Codice markers in .pdf format, or you can generate Codice markers in .png format using the MultiTaction MarkerFactory application. In either case, you can then print the markers onto paper or card and distribute to your users. For details about creating your own Codice markers, see the *MultiTaction Cell User Manual*.



Example Codice cards

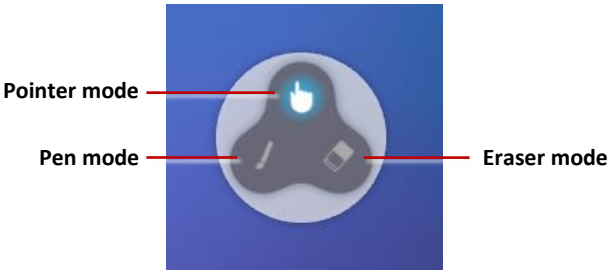
3.5 Touch selector

If your administrator has enabled the touch selector in MT Canvus, or if you installed MT Canvus in desktop mode, you can use the selector to quickly change touch mode.

Note: *The touch selector is normally used when MT Canvus runs on a video wall of touch screen overlays by third-party manufacturers or in desktop mode, not on a video wall of MultiTaction Cells.*

The touch selector is permanently visible in the corner of the screen and includes three 'touch mode' buttons. Tap the mode you want. If you tap:

- Pointer mode, you can use your finger like a mouse pointer. For example, you can move or resize widgets, tap buttons, and browse web pages or PDF documents.
- Pen mode, you can use your finger to draw annotations on the screen.
- Eraser mode, you can use your finger to erase annotations.

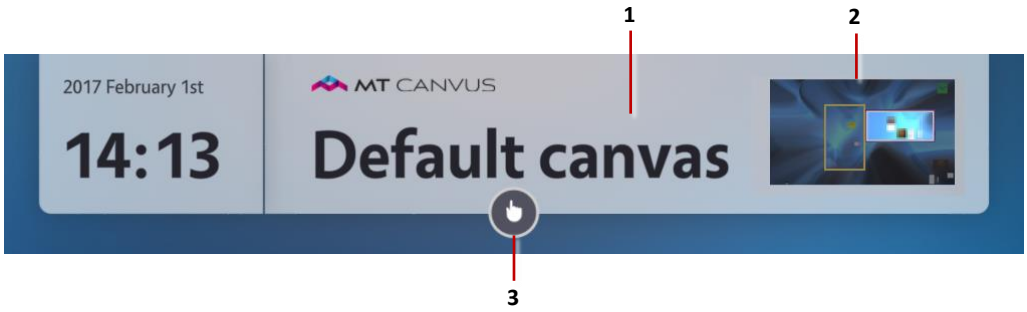


Touch selector with touch mode buttons

By default, the touch selector is in the bottom-right corner of the workspace. If you drag the selector to a new location, it automatically returns to its original location after a short delay. If a video wall has multiple workspaces, each workspace displays a touch selector.

When the touch selector is enabled, the info panel also includes a touch mode button. You can tap the button to cycle through pointer, pen and eraser mode.

Tip: *If you select pointer mode using the info panel button, the touch selector automatically returns to its original location. This is useful if you want to quickly retrieve a misplaced touch selector!*



Info panel. 1 *Canvas name.* 2 *Canvas viewer, showing a small scale view of the total canvas.* 3 *Touch mode button.*

3.6 Desktop mode

Note: *Desktop mode is only supported on Windows computers. It is not supported on Ubuntu computers.*

MT Canvus is primarily designed to run on large interactive video screens. When MT Canvus runs in desktop mode, there are some subtle differences:

3.6.1 Interacting with canvas content

The primary method of interacting with canvas content is by hand and finger gestures. However, If MT Canvus is installed in desktop mode on a computer that *does not have a touch screen*, you will not be able to use hand and finger gestures. Instead, you will need to use a mouse:

- **Use a mouse to interact with canvas content:** This works in the same way as using a mouse with MT Canvus on a video wall. Click the right-mouse button to cycle through the available mouse modes (finger, pen and eraser); see section 3.3.
- **Use the mouse wheel to resize widgets:** You cannot use the usual pinch and spread finger gestures to resize widgets. Instead, you can use the mouse wheel.

  For widgets such as notes (but not images), you can also drag the lower-right corner to resize them:

Drag to resize the widget

Note: *If MT Canvus is installed in desktop mode on a computer that does have a touch screen (for example, tablets and some laptops), you can still use hand and finger gestures.*

3.6.2 Full Screen mode and Windows mode

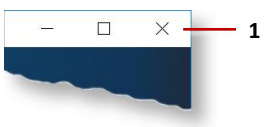
In desktop mode, MT Canvus always opens in Full Screen mode.

To switch from Full Screen mode back to Windows mode, you can:

- Press F11.
- Click the Restore button on the System menu.

To switch from Windows mode back to Full Screen mode, you can:

- Press F11.
- Click the Full Screen button on the System menu.
- Click the Maximize button in the title bar to switch to Full Screen mode.



*MT Canvus title bar. **1** Minimize, Maximize and Close buttons.*

While in Full Screen mode or Windows mode, you can also press Alt+Tab to switch from MT Canvus to other applications.

3.6.3 Importing and exporting items

In video wall mode, you can only import images, videos, PDFs and other documents onto a canvas from a USB memory stick (or similar device). You also need a memory stick to export items from the canvas. See section 4.4.

In desktop mode, import and export operations are simpler and more flexible:

- **Drag items onto or off a canvas:** You can simply drag items from your Windows desktop directly onto your canvas. You can also drag items off the canvas into folders on your computer or into network folders.
- **Import or export saved files:** You use the Storage menu to access files saved on your local computer or on mapped drives; see section 4.5.

3.6.4 Hide the Info panel

In video wall mode, each workspace has an info panel at the top of the screen. This shows the name of the canvas and the canvas viewer; see section 2.3.3.

However, in desktop mode screen space is limited and you may prefer to hide the info panel. To hide the info panel; see section 5.2.

3.6.5 Close MT Canvus

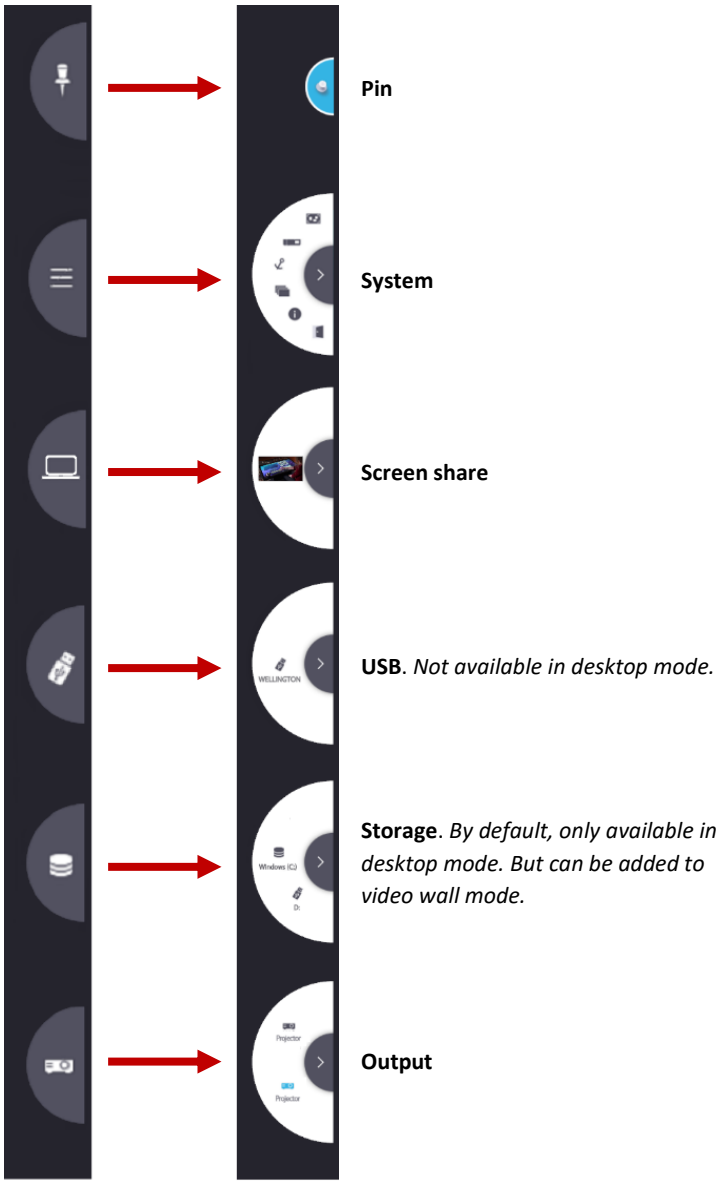
In video wall mode, you tap the Close button to quit to the start screen or display the Pause or Exit dialog; see section 5.6.

In desktop mode, to quit MT Canvus you must switch to Windows mode and tap the Close button in the MT Canvus title bar; see section 3.6.2.

MT Canvus title bar

4 Canvas menus

The canvas menus are positioned on the right-hand side of the screen. On wider displays, the canvas menus are also shown along the bottom of the screen.



Canvas menus, closed and open

See the following sections for details about individual menu items.

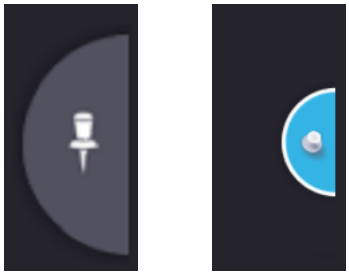
4.1 Pin the canvas

Normally, you can move and resize a canvas. For example, you can drag a canvas and all its content to the left. Or you can zoom in to focus on a specific area of the canvas.

But this is not always desired behavior. The Pin feature lets you pin or lock the visible area of canvas so that it cannot be moved or resized. More accurately, the Pin feature locks the current *workspace* (see section 2.3). This feature is particularly useful where multiple users are working on the same canvas.

For example, if you split the screen into multiple workspaces and assign each workspace to a different user, any user can pin their own workspace. This allows them to work without interruption from other users working on the same canvas.

To pin the canvas, tap the button in the Pin canvas menu; tap it again to unpin the canvas.

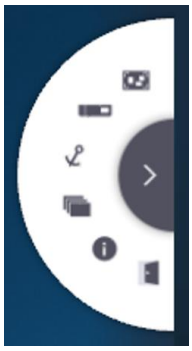


Pin button, unpinned and pinned

Note: *You can also pin individual widgets to the canvas; see section 10.*

4.2 System menu

The System menu includes various features for managing the current canvas or switching to a different canvas. Available features include Fit to Screen, Anchor List, About and Close. For details about these menu items, see section 5.



System menu

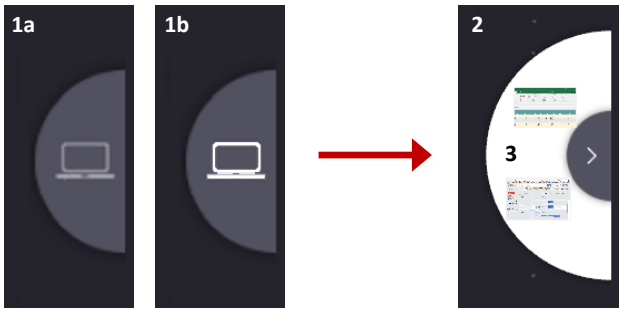
4.3 Screen share

The screen sharing feature enables you to display your laptop screen on the canvas.

First, you must connect your laptop to a video input on the capture card (a PCIe card installed on the Canvus application computer). Wired and wireless connections are supported. Then you tap the Screen Share menu and choose the option for your laptop.

You can also use the screen sharing feature to set up two-way video conferencing on your video wall.

For full details about screen sharing, see section 18.



Screen share menu

1a *Closed menu. No shared screens available.*

1b *Closed menu. Shared screens are available.*

2 *Open menu.*

3 *Available shared screens.*

4.4 USB menu

Notes

- *The USB menu is not available in desktop mode; section 3.6.*
- *The USB menu is not shown in video wall mode if your administrator has configured MT Canvus to display the Storage menu; see section 4.5.*

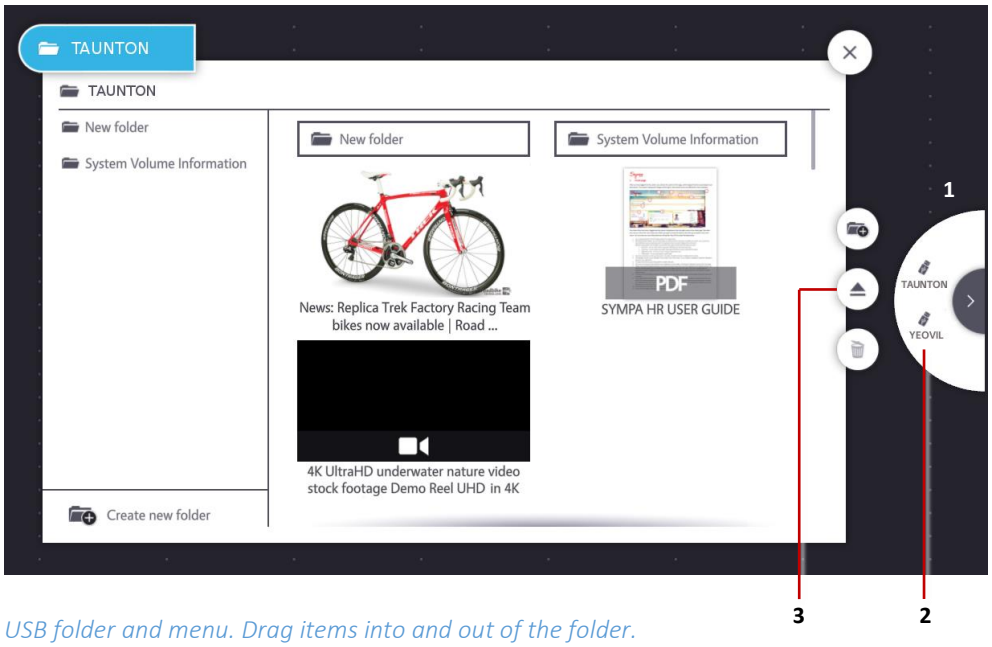
You can import images, videos, PDFs and other documents onto your canvas from a USB memory stick or similar device (for example, a USB portable hard drive). You can also export items from the canvas onto the USB memory stick.

4.4.1 Import and export items

Follow these steps:

1. Attach your USB memory stick to the application computer.
2. Open the USB menu.
3. Tap the USB memory stick that contains the files you want.
4. When the USB folder opens:
   - **Import:** Drag items from the USB device onto the canvas or into the main Files folder or your personal items folder.
   - **Export:** Drag items into the USB folder from the canvas, main Files folder or your personal items folder.

   Note that items are *copied*, not *moved*.



USB folder and menu. Drag items into and out of the folder.
1 *USB menu.* **2** *USB memory sticks connected to the application computer.* **3** *Eject button.*

4.4.2 Eject the USB device before unplugging it!

Always tap the ⏏ Eject button before unplugging your USB memory stick.

Important! *If you unplug a USB memory stick while files are being copied, you may lose data. To safely disconnect it from the application computer, you must first* ***eject*** *it.*

4.4.3 Import files from a secure USB memory stick

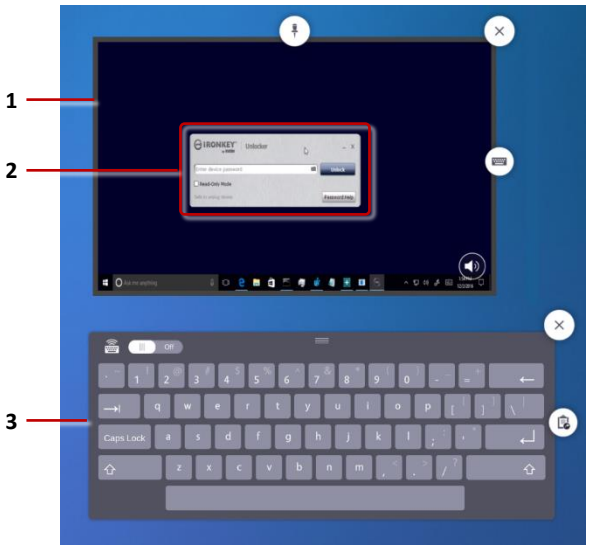
MT Canvus supports secure USB memory sticks that use hardware encryption. This feature requires an *auxiliary computer*. The auxiliary computer must be set up before you can use secure USB memory sticks with MT Canvus. For details, see the *MT Canvus Installation Manual*.

Follow these steps:

1. Attach your secure USB memory stick to the *auxiliary computer*.
2. MT Canvus detects that the USB memory stick is encrypted and displays a Shared Screen widget for the auxiliary computer plus an on-screen keyboard.

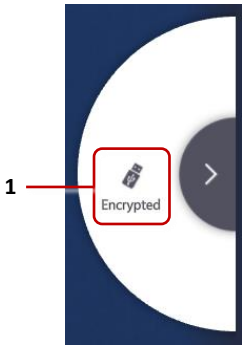
   The Shared Screen widget will be displaying the unlock dialog for the USB memory stick. (Note that this dialog is proprietary and its design will vary according to the manufacturer of the USB memory stick.)
3. Type the password for the USB memory stick directly into the unlock dialog.

   Tip: *The Shared Screen widget and unlock dialog already have focus, so you can start typing immediately. You do not need to tap the widget to select it. Also, you do not need to pin the widget.*



1 *Shared screen widget, showing the auxiliary computer.* 2 *Unlock dialog for secure USB memory stick.* 3 *On-screen keyboard.*

4. In MT Canvus, open the USB menu.
5. Tap the secure USB memory stick. In the example below, the USB stick is named ‘Encrypted’.



USB menu. **1** *Secure USB memory stick attached to auxiliary computer*

6. When the USB folder opens, drag items from the USB memory stick onto the canvas or into the main Files folder or your personal items folder.

4.5 Storage menu

Note: *By default, the Storage menu is only available in desktop mode; see section 3.6. However, your administrator can configure MT Canvus to display the Storage menu in video wall mode.*

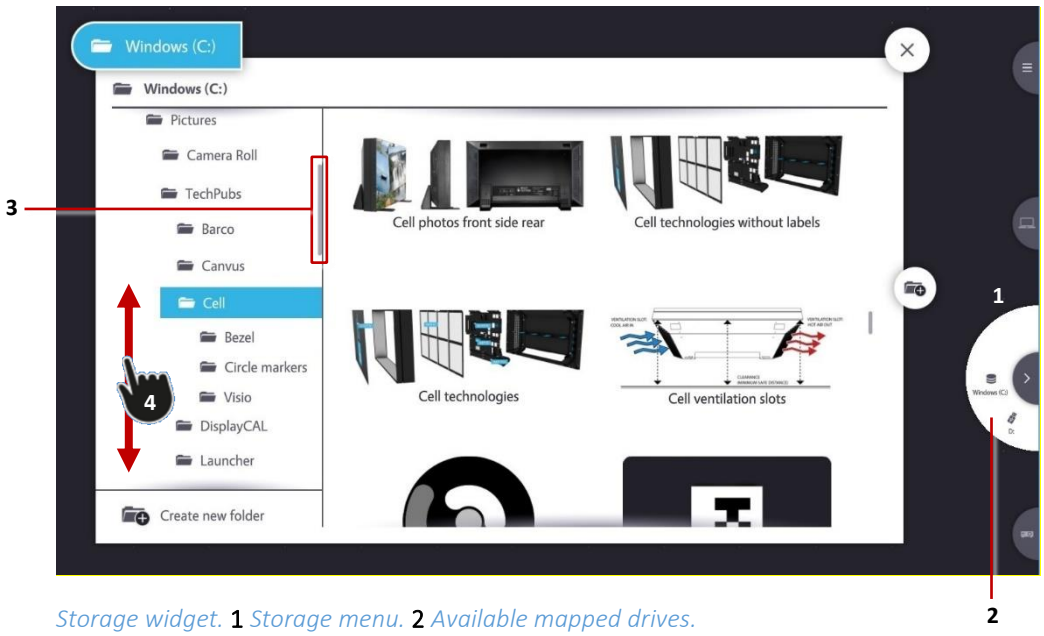
You can import images, videos, PDFs and other documents onto your canvas from your computer's hard drive (C:) or from any mapped drive. For example, if a network location is mapped to Z: drive, you can import items onto your canvas from this network location. Likewise, if a USB memory stick or similar device is mapped to D: drive, you can import items from the memory stick.

You can also export items from the canvas to the local hard drive or to any mapped drive (including USB memory sticks).

To import or export items, follow these steps:

1. Open the Storage menu.
2. Tap the drive that contains the files you want.
3. When the storage widget opens, browse to the folder you want:
   - **Import:** Drag items from the folder onto the canvas.
   - **Export:** Drag items from the canvas into the folder.

   Note that items are *copied*, not *moved*.



Storage widget. 1 *Storage menu.* 2 *Available mapped drives.*

Tip: *To move the scroll bar (***3***), click and hold the left mouse button on any empty area in the navigation pane (***4***). Then drag the mouse upwards or downwards.*

4.6 Output menu

MT Canvus allows you to stream content from your canvas to an external monitor or projector, or to a virtual webcam. This feature is useful for reaching audiences who cannot see the screens. For example, you may want to output screen content to a projector so that people sitting at the back of the conference hall, or in a different room, can see your presentation.

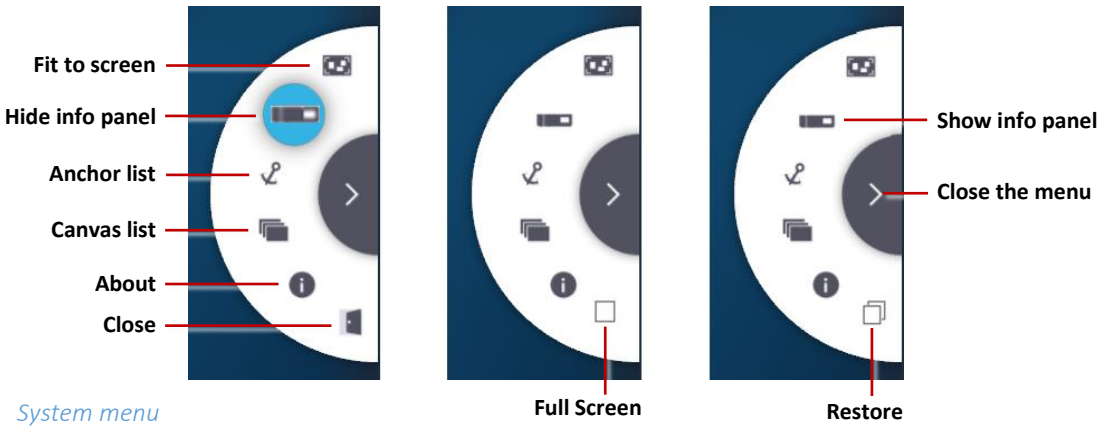
Tap the Output menu to stream the entire workspace to an external monitor. Because a typical MT Canvus installation has just one workspace, this feature effectively outputs the entire screen area to an external monitor. For details about video output, see section 17.

Note: *You can also output video from a specific area of the canvas or an individual widget.*

Output menu

5 System menu

An MT Canvus installation can support multiple *canvases*, with each canvas having its own screen content. The System menu includes various tools for managing the current canvas or switching to a different canvas.



System menu

5.1 Fit to screen

This feature chooses a zoom to achieve a 'best fit' on the screens available. In technical terms, it expands or shrinks the viewport to include all items on the canvas.

Tap the Fit to Screen button to zoom the canvas in or out so that all content is visible on the screen.

5.2 Info panel

The info panel button hides or re-displays the info panel (see section 2.3.3).

If the info panel is displayed, tap the blue button to hide it.

If the info panel is hidden, tap the gray button to re-display it.

Note: *If your administrator has disabled the info panel, the button is not available in the System menu.*

5.3 Anchor list

Anchors are fixed areas of the canvas, defined by users. You can define any area on the canvas as an anchor. You can then jump to an individual anchor or launch a presentation, displaying each anchor in sequence.

Note: *To create a new anchor, use the toolbox menu. See section 7.3.*

To manage your existing anchors, follow these steps:

1. Tap the Anchor List button to show all existing anchors.
2. In the Anchor List widget, tap an anchor to jump directly to it.

   Or you can launch a presentation, or rename and delete anchor areas:

   - **Make a presentation:** Tap the Presentation button to run a presentation. For details, see section 14.

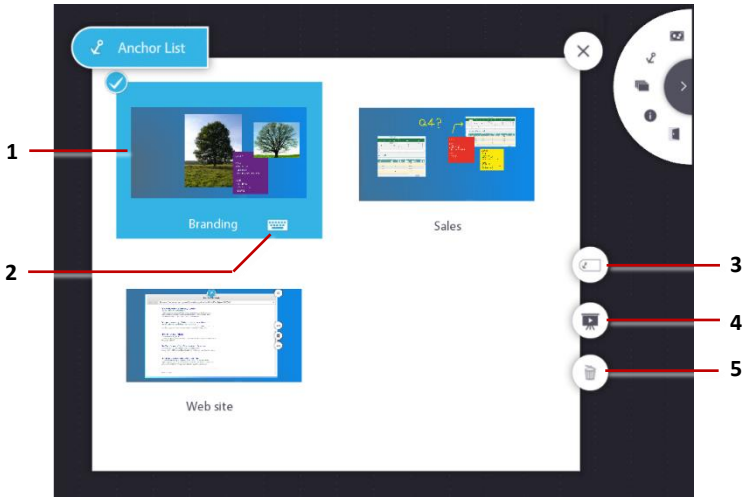
     Tip: *In a presentation, the anchor sequence is defined by the order of anchors in the Anchor List widget. To change the sequence, drag the anchors into the order you want*.

   - **Rename an anchor:** Tap the anchor name or the keyboard button and then type the new name.

     Note: *For more about keyboards, see section 17.*

   - **Hide anchor labels:** By default, each anchor area is identified by a label to help users locate and identify the anchor. But you can tap the anchor labels button to hide these labels; see section 5.3.1.

   - **Delete an anchor:** Tap and hold an anchor. When it activates, drag it to the trash button. (The trash button is disabled until you hold and activate an anchor.)

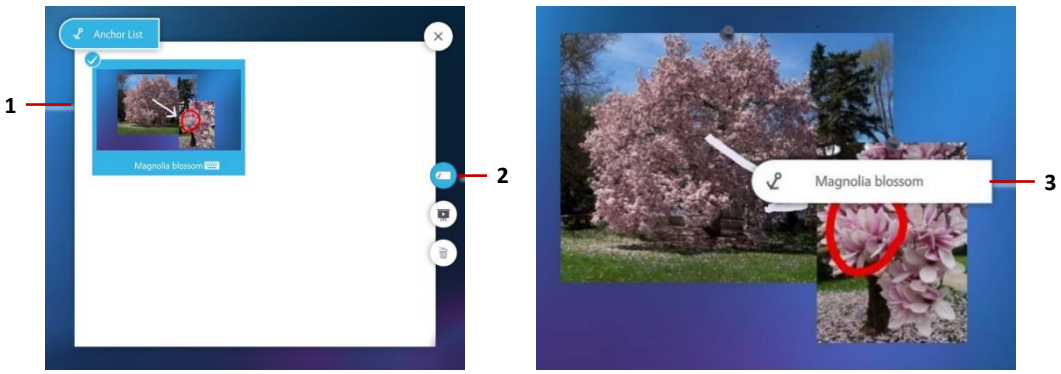


Anchor List widget. **1** *Drag the anchors into the sequence you want for a slideshow.* **2** *Keyboard button. Tap to rename the anchor.* **3** *Anchor labels button.* **4** *Slideshow button.* **5** *Trash button.*

5.3.1 Hide or re-display anchor labels

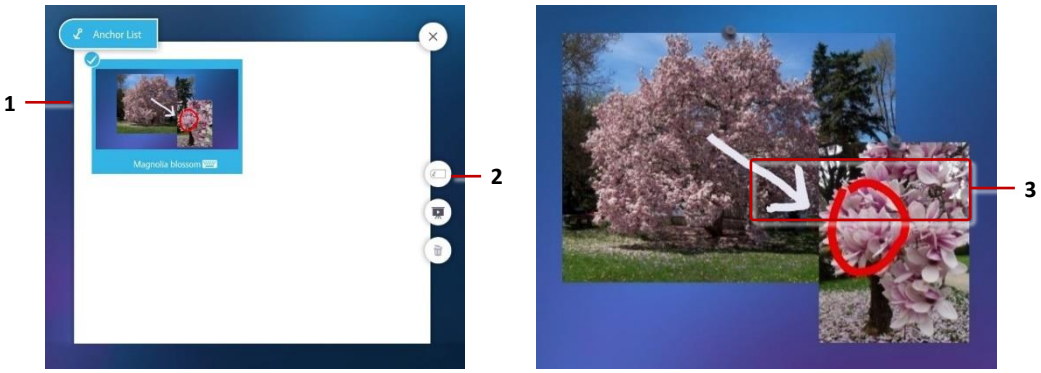
By default, when you create a new anchor area (see section 7.3), its label is displayed on the screen to help users locate and identify the anchor. But you can hide these labels.

To hide the labels, tap the blue anchor labels button in the Anchor List widget. The anchor labels are now hidden and the blue button changes to a white button.



1 *Anchor List widget.* 2 *Blue labels button.* 3 *Canvas with displayed anchor labels.*

To re-display the labels, tap the white anchor labels button.



1 *Anchor List widget.* 2 *White labels button.* 3 *Canvas with hidden anchor labels.*

5.4 Canvas list

An MT Canvus installation can include multiple *canvases* on which you can display and organize content. A single canvas is similar to a PC desktop. See section 2.1 for details.

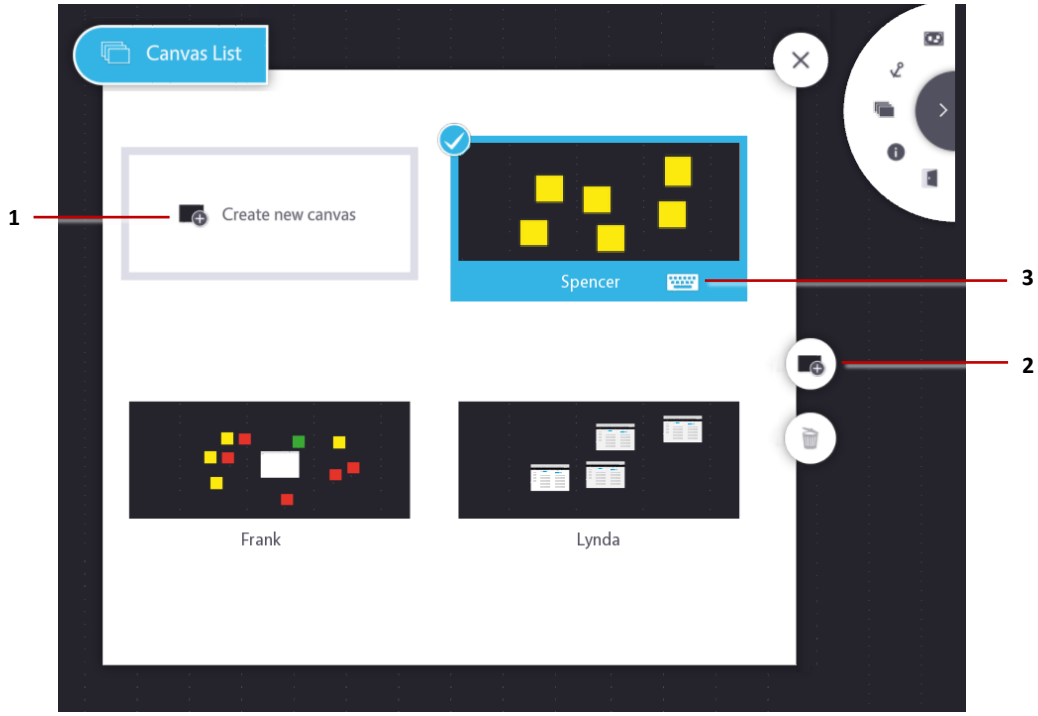
Follow these steps:

1. Tap the Canvas List button to show all existing canvases.
2. In the Canvas List widget, tap the canvas you want.

   Or do one of the following:

   - **Create a canvas:** Tap the *Create new canvas* hotspot or the New Canvas button to create a new canvas.
   - **Rename a canvas:** Tap the canvas name or the keyboard button, then type the new name. The canvas name is shown in the info panel; see section 2.3.3.

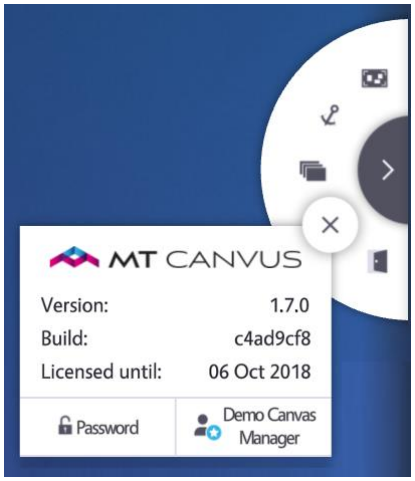
     Note: *For more about keyboards, see section 17.*
   - **Delete a canvas:** Tap and hold a canvas. When it activates, drag it to the trash button. (The trash button is disabled until you hold and activate a canvas.)
   - **Export and import a canvas:** You can export or import a canvas to or from a USB drive. You may want to do this for backup purposes or to import the canvas onto a different video wall. For details, see section 20.



Canvas List widget. 1 *Create new canvas hotspot.* 2 *New canvas buttons.* 3 *Keyboard button.*

5.5 About

Tap the About button to see the MT Canvus version, build number and license expiry date:



About dialog

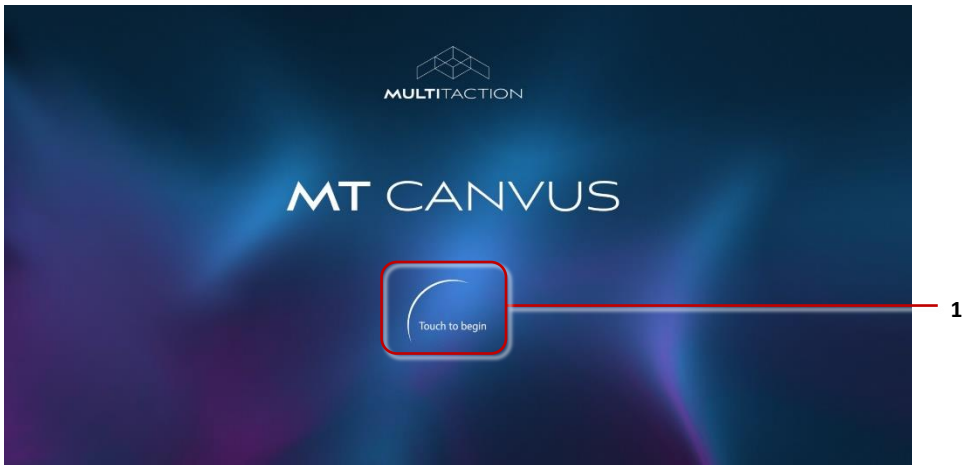
5.6 Close

Note: *The Close button is not available when MT Canvus runs in desktop mode.*

The Close feature is useful if you want to declutter the screen, for example, before starting a presentation or team meeting. Note that the canvas is saved when you close it.

Follow these steps:

1. Tap the Close button. By default, MT Canvus quits to the start screen.
   Alternatively, if your administrator has enabled logout options, MT Canvus presents you with a Pause or Exit dialog; go to section 5.6.1.
2. To quickly return to the canvas, tap the *Touch to begin* hotspot.

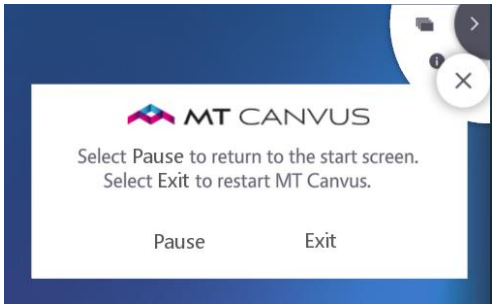


MT Canvus start screen. **1** *Touch to begin hotspot. Tap here to return to the current canvas.*

5.6.1 If Pause or Exit options are enabled

If your administrator has enabled the Pause or Exit logout options, MT Canvus presents you with two options when you tap the Close button:

- **Pause:** This option saves and closes the current canvas and displays the MT Canvus start screen, as normal. In effect, MT Canvus is paused until you tap the *Touch to begin* hotspot to return to your canvas.
- **Exit:** This option saves the current canvas and exits MT Canvus. If you launched MT Canvus from:
  - MT Launcher, the Exit option saves the current canvas, closes MT Canvus and returns you to MT Launcher. Note that MT Canvus is *not* restarted.
  - A launch script, the Exit option effectively restarts MT Canvus. In practice, the current canvas is saved, MT Canvus closes, and the launch script reruns.



Pause or Exit options

5.7 Full Screen and Restore

Note: *These buttons are only available in desktop mode.*

In desktop mode, MT Canvus always opens in Full Screen mode.

- Click the Restore to switch from Full Screen mode to Windows mode.
- Click the Full Screen button to switch from Windows mode back to Full Screen mode.

6 Finger menu

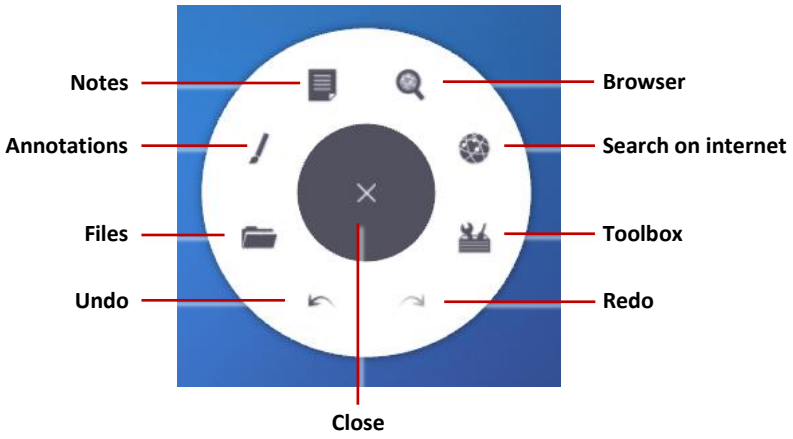
The finger menu gives access to the most common MT Canvus features. Two versions of the finger are supported:

- **Standard finger menu:** When MT Canvus runs on a video wall of MultiTaction Cells, you see the standard finger menu; see section 6.1.
- **Finger menu with touch modes:** When MT Canvus runs on video wall made from touch screen overlays, the finger menu includes three 'touch mode' buttons; see section 6.2.

6.1 Standard finger menu

The standard finger menu includes these items:

- **Notes:** Create a new note. See section 6.4.
- **Annotations:** Set the color and line thickness for annotations drawn on the canvas with an infrared pen. You can also select an eraser to delete annotations. See section Annotations.
- **Files:** Open items saved in the MT Canvus file system. These can include images, movies, and PDF documents, plus snapshots and notes. See section 6.6.
- **Browser:** Open a browser to display web sites, search for videos or documents, and download images or files. See section 6.7.
- **Search on internet:** You can search the internet for web pages and images. See section 6.8.
- **Toolbox:** Open a submenu of useful tools to manage the content on your canvas. For details, see section 7.
- **Undo and redo:** Undo the most recent changes to the canvas. Or tap Redo to cancel the previous Undo action.



Standard finger menu

6.2 Finger menu with touch modes

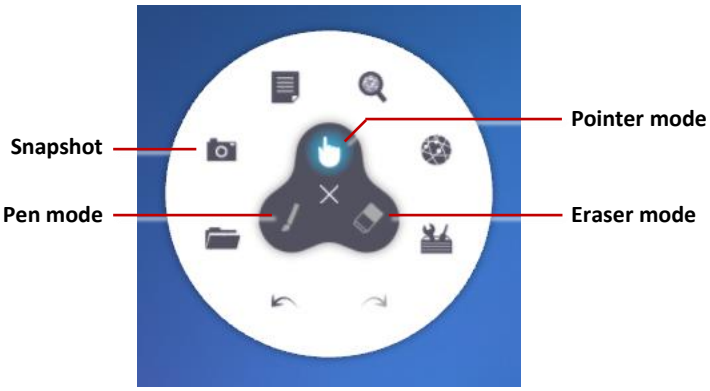
MT Canvus typically runs on a video wall of MultiTaction Cells. However, MT Canvus also supports touch screen overlays by third-party manufacturers.

When MT Canvus runs on a video wall of touch screen overlays, you see a modified version of the finger menu. This version includes three 'touch mode' buttons. Open the finger menu (see section 6.3) and tap the mode you want. If you tap:

- **Pointer mode**, you can use your finger like a mouse pointer. For example, you can move or resize widgets, tap buttons, and browse web pages or PDF documents.
- **Pen mode**, you can use your finger to draw annotations on the screen.
- **Eraser mode**, you can use your finger to erase annotations.

To switch modes, open the finger menu and tap the mode you want.

The touch mode finger menu also includes a **Snapshot** button; see section 7.4. (On the standard finger menu, this button is on the Toolbox submenu.)



Touch mode finger menu. For button descriptions, see section 6.1.

6.3 Open the finger menu

You can open the finger menu with your finger or with a mouse.

Follow these steps:

1. Do one of the following:

   - **If using your finger:** Tap and hold any empty area of the canvas.
     Note that you can open a *touch mode finger menu* while in any mode. For example, even if you are in eraser mode or pen mode, you can still tap and hold the screen to open the finger menu.
     Note: *Touch modes only apply if MT Canvus is running on a video wall made from touch screen overlays; see section 6.2.*

   - **If using a mouse:** Confirm the mouse pointer is in finger mode (see section 3.3). Then left-click and hold any empty area of the canvas.

2. When the finger menu appears, tap or left-click the menu item you want.

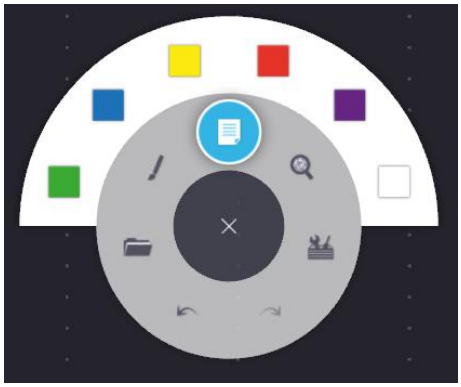
Using a finger

Using a mouse

1 *Tap and hold, or left-click and hold, an empty area of canvas.* 2 *The finger menu appears.*
3 *Tap or left-click the menu item you want.*

6.4 Notes

Use the Notes submenu to create a new note and choose its background color.

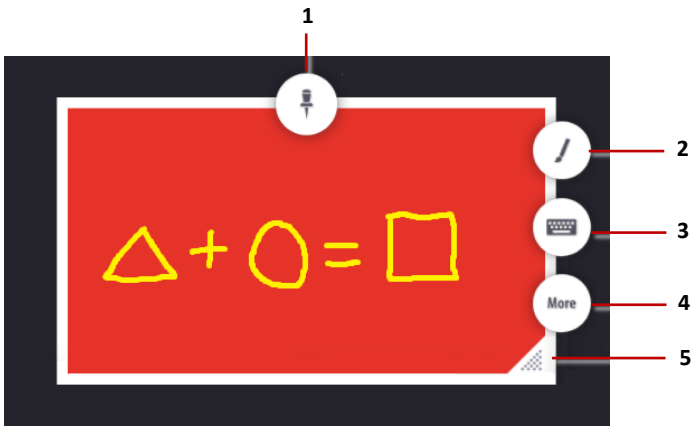


Note submenu. Tap a color to set the note background.

Follow these steps:

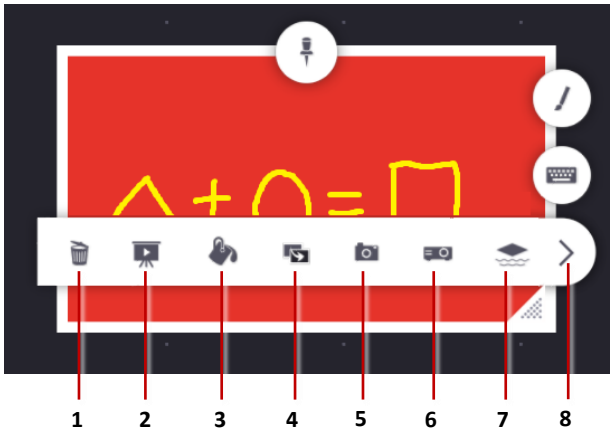
1. Open the Finger menu; see section 6.3.
1. Tap the Note button.
2. When the new note displays, do one of the following
   - Drag the lower-right corner to resize the note.
   - Use an infrared pen to write or draw annotations.
   - Tap the keyboard button to add text to a note; see section 17.
   - Tap the stroke button to specify the color and weight of annotations.

     Note: *This button is not available if MT Canvus is running on a video wall made from touch screen overlays.*
   - Tap the More button to display a submenu of extra tools; see on page 41.



Note widget. 1 *Pin this widget.* 2 *Stroke button.* 3 *Keyboard button.*
4 *More button.* 5 *Drag to resize.*

The following tools are available in the Note submenu:



Note submenu

1 *Delete the note*
2 *Launch a widget presentation*
3 *Change the background color*
4 *Duplicate this note*
5 *Capture a snapshot image of this note*
6 *Send to video output*
7 *Float this item above the canvas*
8 *Close this submenu*

6.5 Annotations

Note: *To configure annotations drawn on a widget, see section 2.4.3.*

You can draw annotations directly on the canvas with an infrared pen, stylus or mouse.

The Annotation tool in the finger menu lets you set the color and weight of the pen stroke. In the standard finger menu, this tool It also lets you select an eraser and set the size of the eraser.

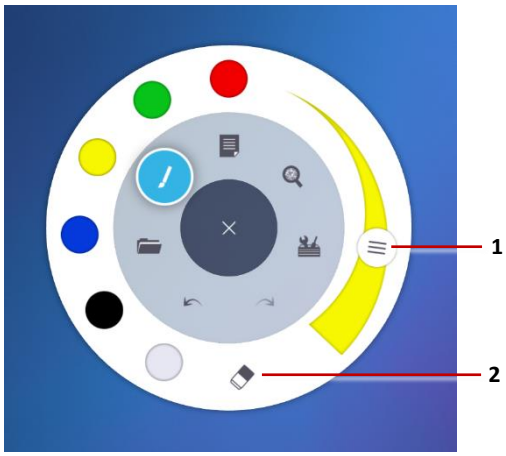
6.5.1 Set the color and weight of the pen stroke

Follow these steps:

3. Open the Finger menu; see section 6.3.
4. Do one of the following:
   - **Standard finger menu:** Tap the Annotations button to open the annotations submenu.
   - **Touch mode finger menu:** Tap the pen mode; see section 6.2.
5. Select the color of the pen stroke.

   Tip: *If using a mouse in pen mode, you can also click the mouse wheel (or middle button) to cycle through the annotation colors.*
6. Use the slider to set the weight (ie, thickness) of the pen stroke.

   Tip: *If using a mouse in pen mode, you can also scroll with the mouse wheel to change the width of the pen stroke.*



Standard finger menu, Annotations submenu.

1 *Slider. Tap a color then drag the slider to set the stroke weight.*

2 *Eraser. Drag the slider to set the eraser size.*

Touch mode finger menu, Pen mode.

3 *Slider. Tap a color then drag the slider to set the stroke weight.*

4 *Undo and redo buttons.*

6.5.2 Erase annotations

You can erase annotations with a pen, mouse or eraser card.

If using an eraser card: Follow these steps:

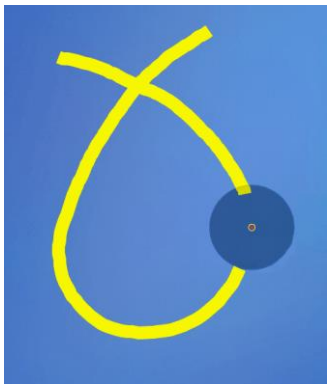
1. Place the eraser card face down on the screen.
2. Rub out the annotation with the rectangular eraser.

For more on eraser cards, see section 3.4.

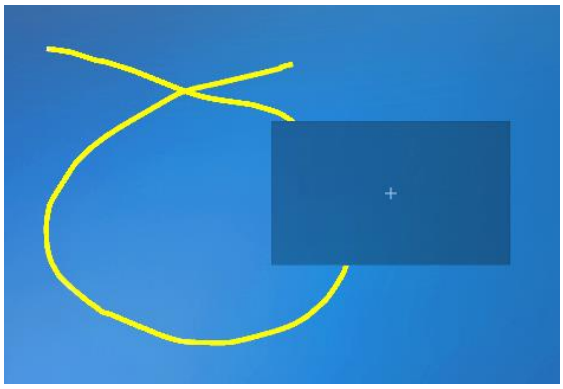
If using a pen or mouse: Follow these steps:

1. Open the Finger menu; see section 6.3.
2. Do one of the following:
   - **Standard finger menu:** Tap the Annotations button to open the annotations submenu. Then select the eraser; see the screenshot in section 6.5.1.
   - **Touch mode finger menu:** Tap the eraser mode see section 6.2.
3. Use the slider to set the size of the eraser.

   Tip: *If using a mouse in eraser mode, you can also scroll with the mouse wheel to change the size of the eraser.*
4. Rub out the annotation with the eraser.



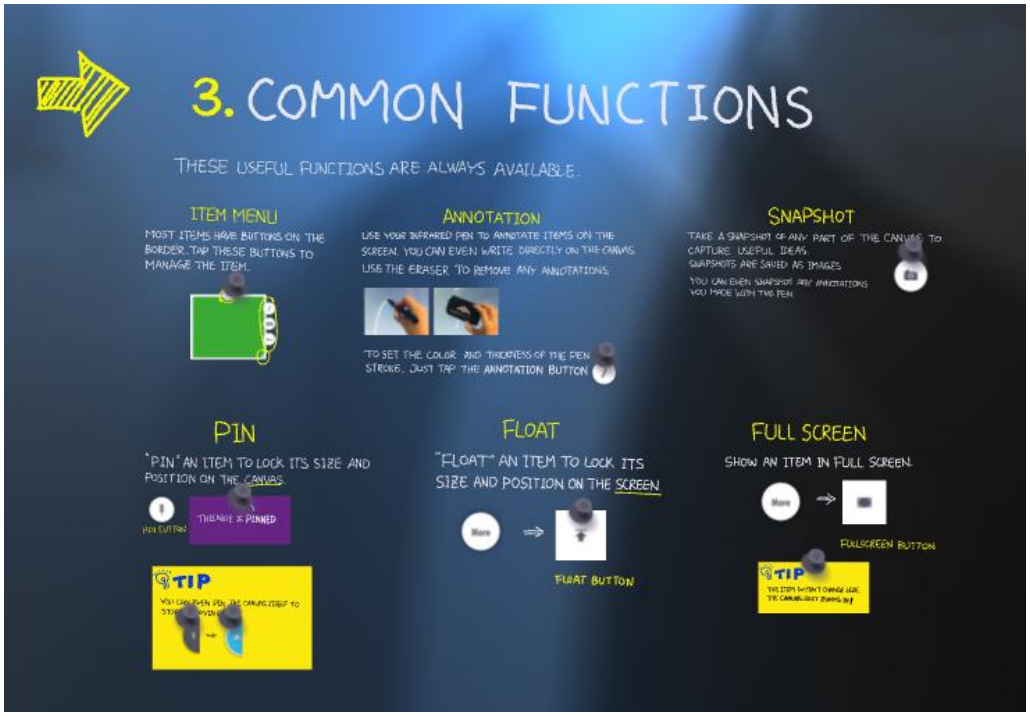
Erasing annotations with a pen or mouse



Erasing annotations with an eraser card

6.5.3 Annotation example

The example below shows an extract from the MultiTaction tutorial canvas, which makes extensive use of annotations drawn and written directly onto the canvas.



Example annotations in the MT Canvus tutorial canvas

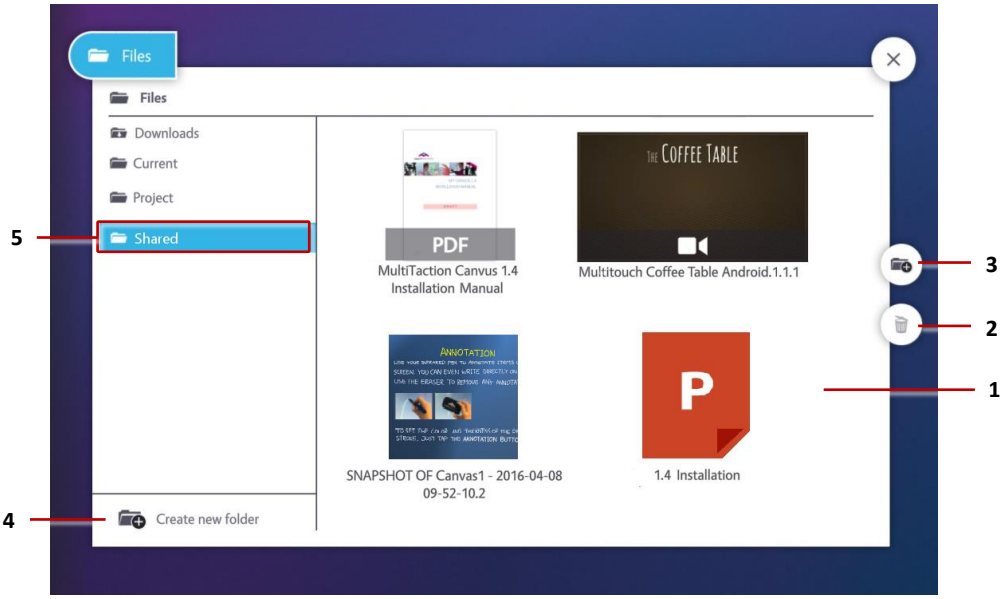
6.6 Files

In MT Canvus, each canvas has its own file system for storing items such as images, movies, PDF documents. You can also store snapshots and notes. In the Files widget, you can organize stored items into folders and delete unwanted items.

Follow these steps:

1. Open the Finger menu; see section 6.3.
2. Tap the Files button.
3. In the Files widget, do one of the following:
   - **Store items in the folder:** Drag and drop items into the Files widget. You can drag items from the canvas, a Personal Items folder, a USB device, or from a browser.
     - To copy items from a USB device, open the USB menu and select the USB device that contains the files you want; see section 4.4.
     - To download items from a web page, see section 6.7.5.
     - To download images after running an internet search, see section 6.8.3.
   - **Create a folder:** Tap the *Create new folder* hotspot or the New Folder button. Then type the folder name. For keyboard details, see section 17.
   - **Organize items into folders:** Tap and hold an item. When the item activates, drag it to the folder you want.
   - **Delete an item:** Tap and hold it. When the item activates, drag it to the trash button. (The trash button is disabled until you hold and activate an item.)

Note: *You cannot rename items or resize the Files widget.*



Files widget. 1 *Files in current folder.* 2 *Trash button.* 3 *New Folder button.* 4 *Create new folder hotspot.* 5 *Example external folder containing shared files; see section 6.6.2.*

6.6.1 Copy files to a different canvas

The Files widget contains files associated with the current canvas and, if enabled, shared files in the external folder. You can also copy files to another canvas by using the external folder, the USB menu or your Personal Items folder.

- **USB menu:** Use the USB menu to copy items, via a USB device, from one canvas to another. See section 4.4.
- **Personal Items folder:** A user can access their personal items from any canvas. The Personal Items folder is a simple and convenient method for copying from one canvas to another; see section 10.
- **External folder:** This folder contains shared files. See section 6.6.2.

6.6.2 Shared files in external folders

The 'external folder' is a folder containing shared files. It can be a local folder on the application computer or a network location. In MT Canvus, it is listed in the Files widget alongside any folders created by the canvas users. In the example screenshot of a Files widget on page 45, the external folder is named 'Shared'. (Your MT Canvus administrator defines the name of the external folder.)

By default, MT Canvus supports canvas-level external folders; each canvas has its own external folder and files in this folder are only available to users of that canvas. But MT Canvus also supports a single external folder; files in this folder are available to all users from any canvas.

External folders are a convenient method for:

- **Importing or exporting files from MT Canvus:** Because the external folder is a file system directory (either a local folder or a network folder), you can use programs such as File Explorer or Nautilus to copy files into or out of the external folder. For example, to import a video into a canvas, simply drag the MP4 file into the external folder.
- **Copying files between canvases:** If MT Canvus is configured to use a single external folder, any file in this folder can be opened in any canvas.
- **Displaying existing file collections in MT Canvus:** Here, a file collection is a group of files (such as Office documents) associated with a specific project or team. Typically, this file collection is stored in a share on your network. If you designate this network share as the external folder, MT Canvus automatically gains access to these files, allowing users to display them in a canvas.

  (In previous versions of MT Canvus, users would need to manually import these files before displaying them in a canvas.)

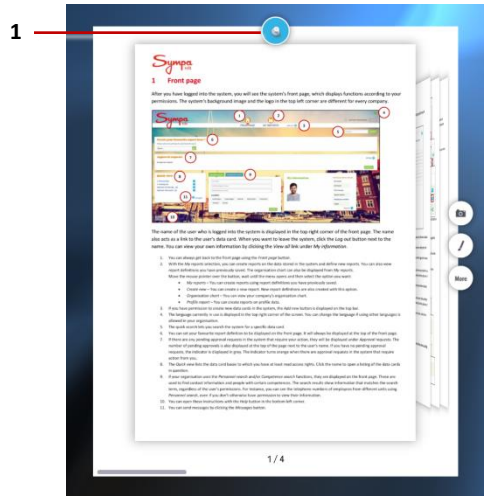
Note: *An external folder must be set up in advance before you can use it in MT Canvus. For full setup details, see the MT Canvus Installation Manual.*

6.6.3 Special file types

The following widgets have special features:

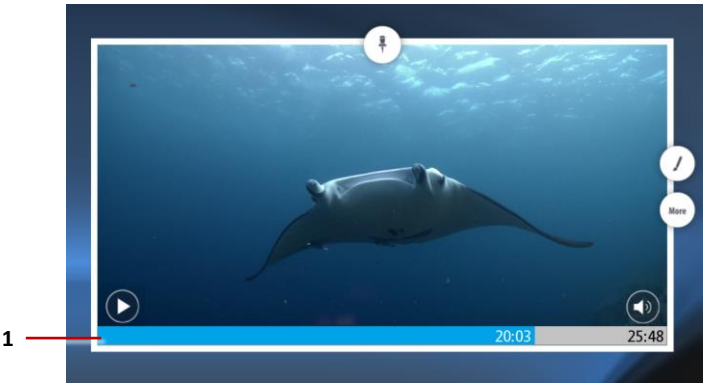
- **PDF documents:** These files display in a PDF widget that allows you to page through the document, and to annotate and take snapshots of individual pages.

  Important! *You must pin the PDF widget before you can page through the document!*



*PDF widget. Pin the widget (**1**) before swiping left or right to page through the document.*

- **MP4 movies:** These files display in a simple video player. Tap anywhere inside the widget to pause or resume a movie. While a movie is paused, a progress bar appears.



*Movie widget. Tap the progress bar (**1**) to jump to a specific time in the movie.*

6.7 Browser

You can open a browser on your canvas and use it to display web sites or search for items such as videos or PDF documents. You can also bookmark pages and download images or files from pages that have a download capability.

6.7.1 Open a browser

1. Open the Finger menu; see section 6.3.
2. Tap the Internet button.
3. Pin the browser.

   Important! *You must pin the browser widget before you can start browsing web pages or following hyperlinks.*

   a. Tap the Pin button.

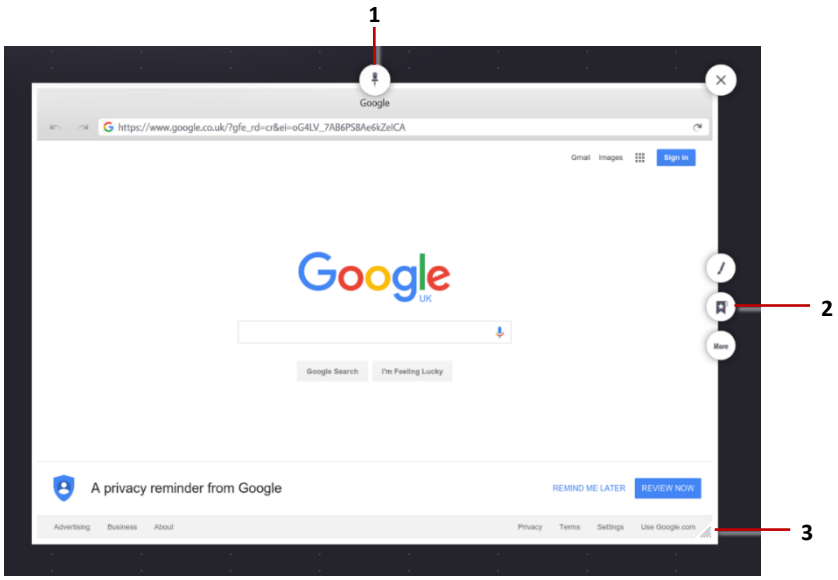
   b. The white Pin button changes to a blue Pinned button.

   Note: *You do not need to pin the browser widget before typing a URL in the browser address bar.*

6.7.2 Resize a browser

Like all widgets, you can use hand and finger gestures to zoom in or out of a browser. But you can also change the dimensions the browser without zooming:

1. Tap and drag the lower-right resize handle to change the width and height of the browser widget.
2. When you drag the resize handle, the browser widget's top-left corner does not move and its content (text and images) does not change in size.



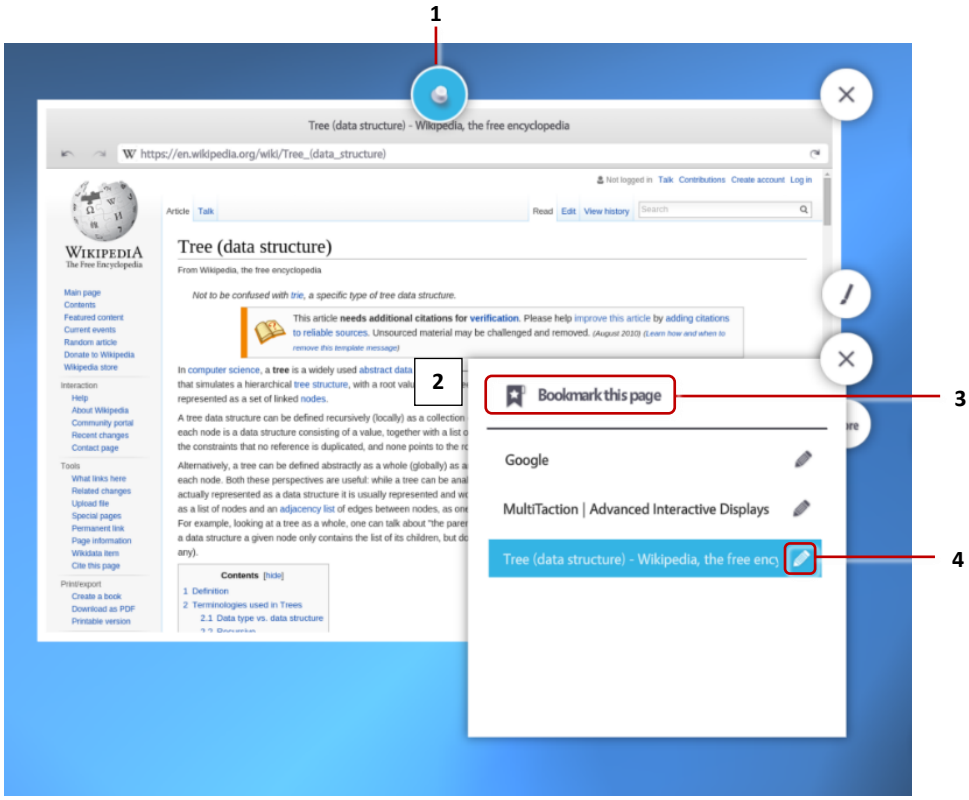
Browser widget. **1** *Pin button.* **2** *Bookmark button.* **3** *Resize handle.*

6.7.3 Bookmark a web page

You can bookmark web pages for later retrieval.

Note: *Bookmarks are only saved with the current canvas. You cannot bookmark a web page and then later retrieve the bookmark while using a different canvas.*

1. Open and pin a browser; see section 6.7.1.
2. Browse to the web page you want.
3. Tap the Bookmark button.
4. When the bookmark list appears, tap the *Bookmark this page* hotspot.
5. *Optional*. Tap the Edit button to change the bookmark name.



Browser and Bookmark list. **1** *Pin the browser widget before using the browser.* **2** *Bookmarks list.* **3** *Bookmark this page hotspot.* **4** *Edit button.*

6.7.4 Retrieve a bookmark

You can quickly open web pages that you (or a colleague) previously bookmarked.

1. Open a browser; see section 6.7.1.
2. Tap the Bookmark button.
3. Tap the bookmark you want.

6.7.5 Download and upload items

You can download images or files from web pages that have a download capability, such as Google Drive or Dropbox. You can also upload items to these web pages.

To download items:

1. Open and pin a browser; see section 6.7.1.
2. Browse to the web page you want.
3. Download the item you want, using the web page's own download method.
   For example, in Google Drive you tap and hold the item. Then tap Download in the pop up menu.
   Tip: *In MT Canvus, a 'long press' (tap and hold) is equivalent to right-clicking with a mouse.*
4. The item is saved to the Downloads folder in the Files widget.
   From here, you can drag the item onto your canvas or move it to different folder. The Files widget is described in section 6.6.

To upload items:

1. Drag the item you want to upload onto the canvas.
2. Open and pin a browser; see section 6.7.1.
3. Browse to the web page you want.
4. Drag the item you want onto the web page. Typically, this starts the web page's own upload method.

6.8 Search

The Search widget lets you run internet searches for images and web pages.

Note: *The Search widget uses proprietary Google technology. Web searches are free but you need a license to run image searches. The first few images searches are free for testing or evaluation purposes; subsequent images searches require a license.*

6.8.1 Run a search

1. Open the Finger menu; see section 6.3.
2. From the Toolbox menu, tap the Search on Internet button.
3. In the Search widget:
   c. Type the search terms using a keyboard; see section 17.
   d. Tap the *Image Search* or *Web Search* hotspots.

   Note: *If image searches are disabled, ask an administrator for assistance or refer to the 'Enable image searches' section of the MT Canvus Installation Manual.*

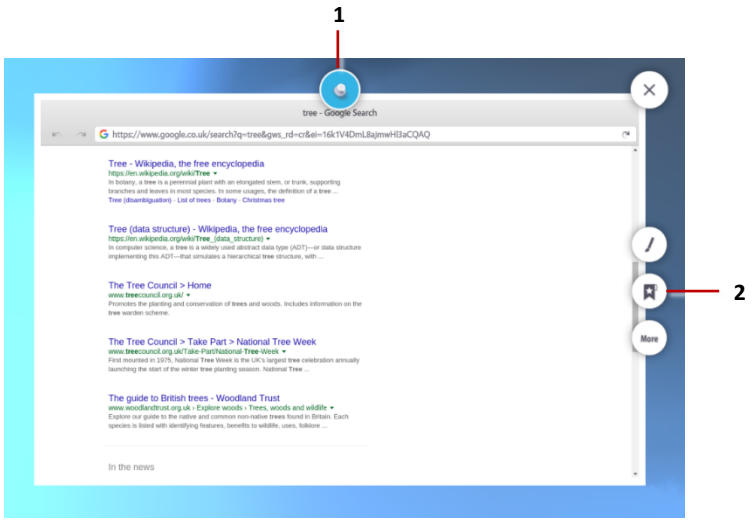
Search widget. 1 *Type the search terms here.* 2 *Image Search hotspot.* 3 *Web Search hotspot.*

4. View the search results. See section 6.8.2 and section 6.8.3.

6.8.2 Web search results

Important! *You must pin the browser widget before you can start using it!*

Use your fingers to scroll through the Google results and select the web page you want. You can also bookmark web pages of interest; see section 6.7.3.

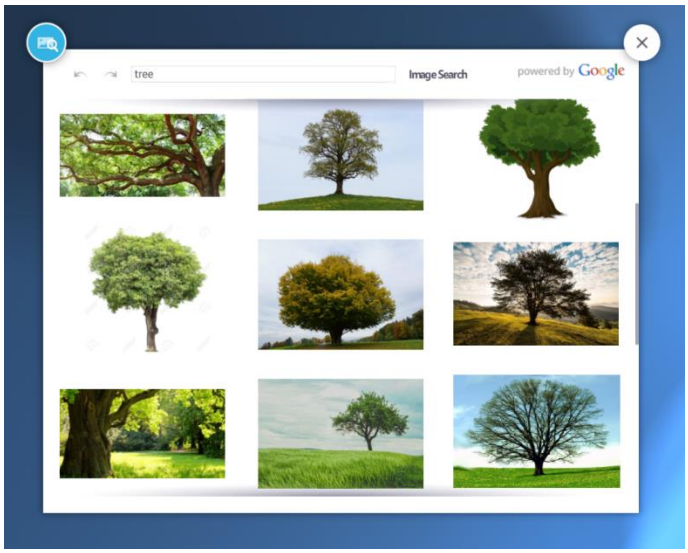


Browser widget with web search results. 1 *Pin the widget before browsing the search results.* 2 *Bookmark button.*

6.8.3 Image search results

Use your fingers to scroll through the results. To save an image:

1. Tap and hold the image you want.
2. When the image activates, drag it onto the canvas or into the Files folder or your Personal Items folder.



Browser widget with image search results

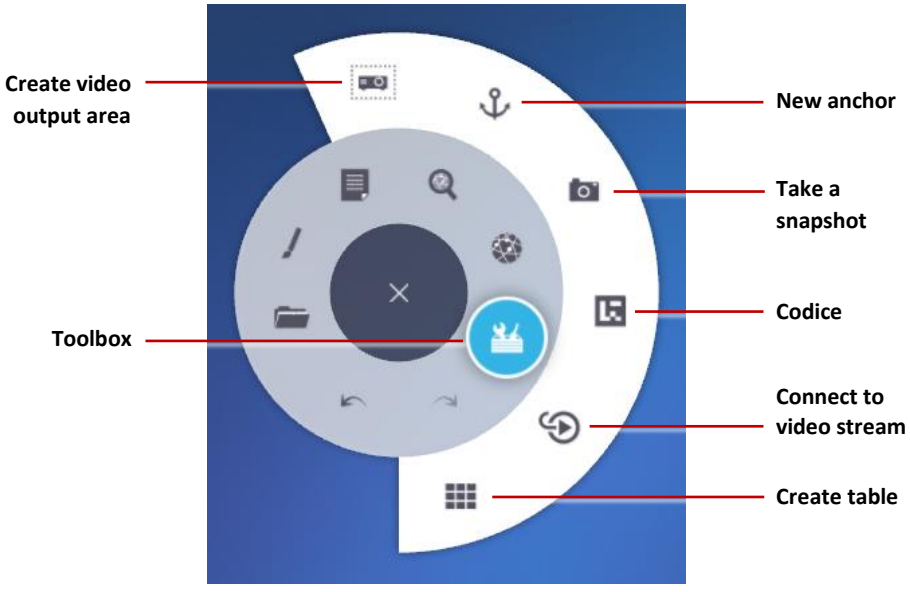
7 Toolbox menu

The toolbox menu includes tools for managing the content on your canvas. For example, you can designate areas on the screen as *anchor areas* and *video output areas*. You can capture screenshots, launch a browser or stream a video.

7.1 Standard toolbox menu

The standard finger menu includes these items:

- **Create video output area:** You can stream canvas content to an external monitor or projector, or to a virtual webcam. This menu item allows you to define a video output area. See section 19.2.
- **New anchor:** Anchors are fixed areas of the canvas, used for navigation or presentation purposes. See section 7.3.
- **Take a snapshot:** You can take a snapshot of any part of your canvas. See section 7.4.
- **Codice:** Codice cards are ID cards for storing and retrieving personal items. This menu item allows you to register your Codice card. See section 7.5.
- **Connect to a video stream:** You can play video streams on the canvas. For example, you can display video streamed from a webcam or you can play a video running on an external computer. This menu item allows you to specify a video stream URL. See section 15.
- **Create table:** In MT Canvus, tables are a fast and easy way to organize screen content into a regular grid. See section 16.

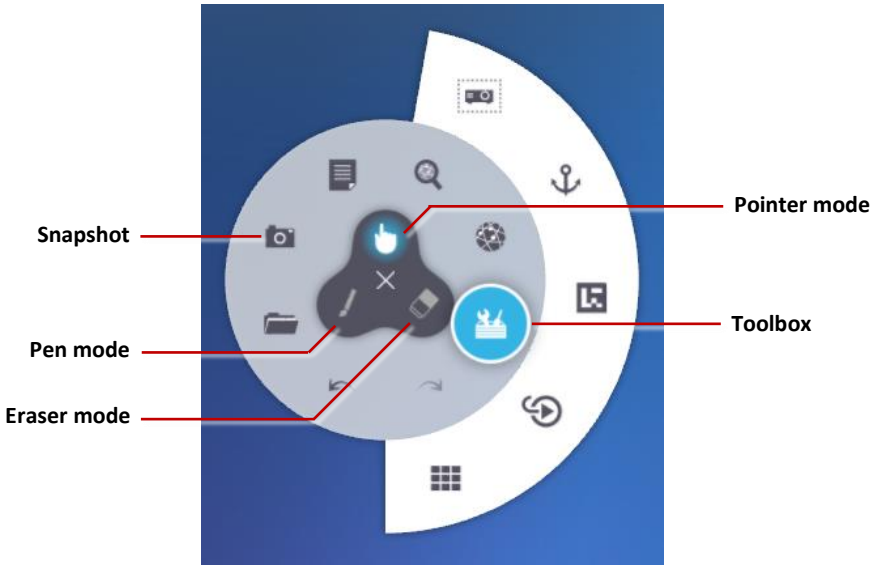


Standard toolbox menu

7.2 Toolbox menu with touch modes

When MT Canvus runs on a video wall of touch screen overlays, you see a modified version of the toolbox menu. This version includes three 'touch mode' buttons; see section 6.2. Otherwise, the touch mode toolbox menu is similar to the standard toolbox menu

Note: *This toolbox menu does not include a Snapshot button. Instead the Snapshot button is located on the finger menu.*



Touch mode toolbox menu. For button summaries, see section 7.1.

7.3 New anchors

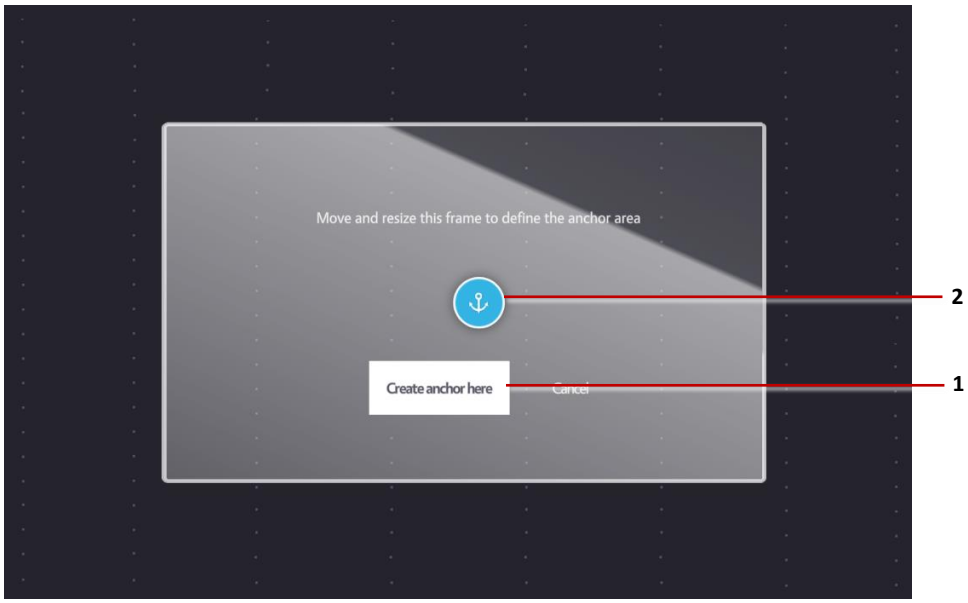
Anchors are fixed areas of the canvas. You can jump to an individual anchor or you can make a presentation or 'slideshow' that glides through a series of anchors in a predefined sequence (see section 14).

To create an anchor:

1. Open the Finger menu; see section 6.3.
2. Tap the Toolbox button.
3. Tap the New Anchor button.
4. Move and resize the anchor frame to cover the area you want.

   Note: *You cannot change the shape of the anchor frame. Its shape is locked to the aspect ratio of the current workspace.*
5. Tap the Create Anchor Here button and name the new anchor.

   Tip: *Do not tap the blue anchor in the center of the frame. The blue anchor is only displayed to help you locate and reposition the frame.*
6. Find the new anchor in the Anchor List widget. See section 5.3.



Anchor frame. 1 *Create Anchor Here button.* 2 *Blue anchor. This is not a button!*

7.4 Snapshots

Note: *If using a touch mode finger menu, the snapshot button is included in the finger menu directly, not on the toolbox menu; see section 6.2.*

Take a snapshot of any part of your canvas to capture useful ideas.

1. Open the Finger menu; see section 6.3.
2. Tap the Toolbox button.
3. Tap the snapshot button.

   A capture frame appears, with a snapshot button in the center.

Example snapshot capture frame. This example shows a snapshot of the MultiTaction tutorial canvas. 1 *Snapshot button.* 2 *Resize handle.*

4. Drag and resize the capture frame to include the screen area that you want to capture in a snapshot. Drag the lower-right resize handle to change the frame's height and width.
5. Tap the center snapshot button to take the snapshot.

   The snapshot is saved as image file that you can copy or share in the usual way.

7.5 Codice

Note: *Support for Codice cards may be disabled, depending on the terms of your MT Canvus license; see section 1.2.*

Codice cards are user ID cards in the form of a 2D barcode printed on paper or card.

Codice cards give users access to their personal items (see section 13). The user simply holds their personal Codice card against the screen to open their personal items. They can then drag items into or out of the folder and onto the canvas.

A user must first register their Codice card before they can use it to store and retrieve personal items; see below.

For more information about Codice cards, see section 3.3.

7.5.1 Register a Codice card

Follow these steps:

1. Simply hold the Codice card face-down anywhere on the screen.

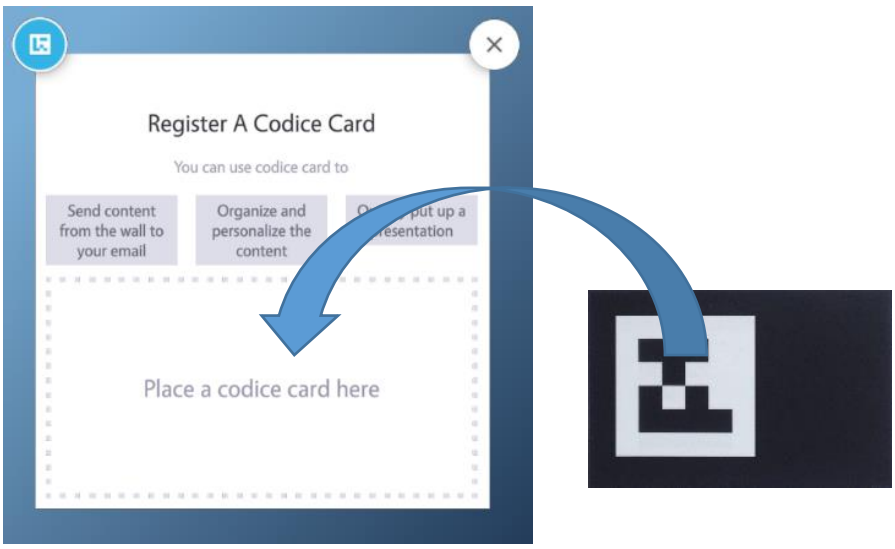
   Alternatively, you can:

   a. Open the Finger menu; see section 6.3.

   b. Tap the Toolbox button.

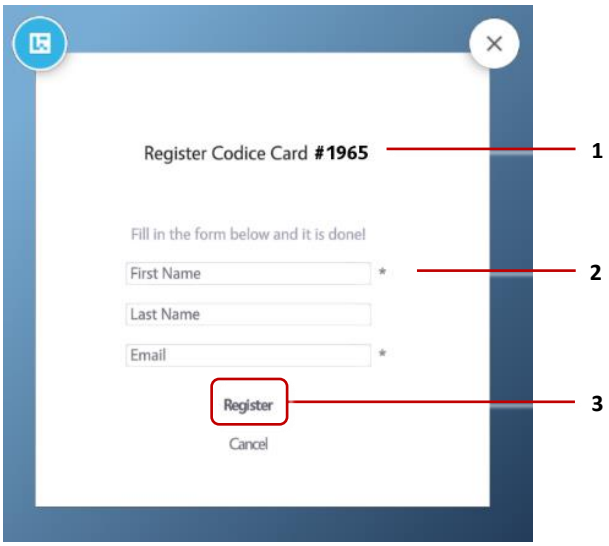
   c. Tap the Codice button.

   d. In the Codice registration widget, hold the Codice card face down against the screen.



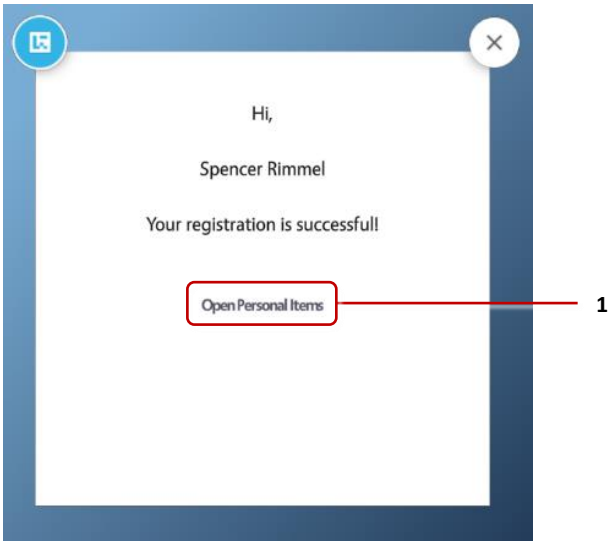
Codice registration widget. Hold the Codice card face down as shown.

2. MT Canvus recognizes the Codice card's unique ID and prompts for your credentials.
   a. Enter your name and email address.
   b. Then tap the *Register* hotspot.



Codice registration widget, user details form. 1 *Codice card ID.* 2 *User name and email address fields. (The Last Name field is optional.)* 3 *Register hotspot.*

3. An advisory dialog confirms that your Codice card has been successfully registered.
4. Tap the *Open Personal Items* hotspot to open the folder for your personal items.



Successful Registration advisory dialog. 1 *Open Personal Items hotspot.*

5. Your empty Personal Items folder now appears. You can now drag items into and out of this folder.

   For details about personal items, see section 13.

8 Password protection

You can password protect your canvas to prevent unauthorized changes. When a canvas is protected, any user who wants to open the canvas must enter the password.

Users must also re-enter the password if they want to:

- Delete the canvas
- Export the canvas
- Change the canvas password
- Remove the canvas password
- Re-open the canvas if it has timed out. (A protected canvas is automatically locked if it has been inactive for a period of time.)

Note that your MT Canvus administrator may choose to enforce protection (ie, all new canvases *must* be password protected) and may also enforce password rules. For example, they may dictate that passwords must contain at least 8 characters, including a mix of uppercase and lowercase letters and numbers.

Important! *The usual advice about sharing passwords applies here. Be aware that anyone who knows the canvas password can change or remove it!*

8.1 About password-protected canvases

If you protect your canvas with a password, be aware of the following issues:

- Password rules: Your password may need to comply with rules set by your MT Canvus administrator. For example, your password may need to be a minimum length and contain a combination of uppercase and lowercase letters, digits and symbols.

  If such rules apply, they will be displayed in the New Password dialog; see the screenshot on page 60.

- Timeout: Your administrator may have activated an inactivity timeout for password-protected canvases. If you do not interact with the canvas for, say, 90 seconds, the timeout expires and the canvas is locked. You will need to re-enter the password to resume using the canvas.

- Exporting and importing a protected canvas: You must enter the password to *export* a protected canvas. You do not need to enter the password to *import* a protected canvas, but you will need the password to open the canvas after importing it.

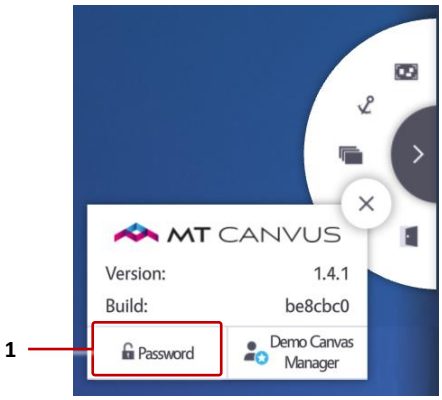
- Forgotten passwords: If you forget your password, you will need to ask your MT Canvus administrator to remove password protection from your canvas. See section 8.4.

Note: *Instructions for defining password rules and specifying a canvas timeout are included in the MT Canvus Installation Manual.*

8.2 Assign a password

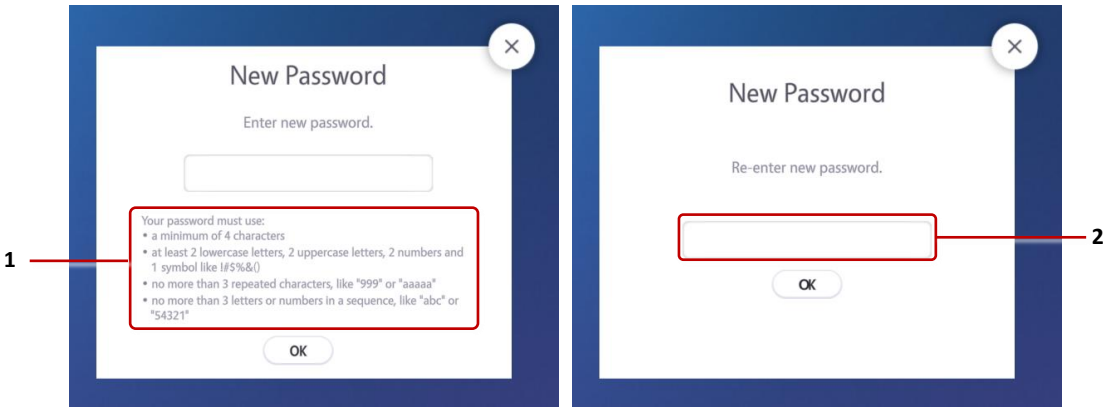
Follow these steps:

1. Tap the About button in the System menu; see section 5.5.
2. In the About dialog, tap the Password button.



About dialog. 1 *Password button.*

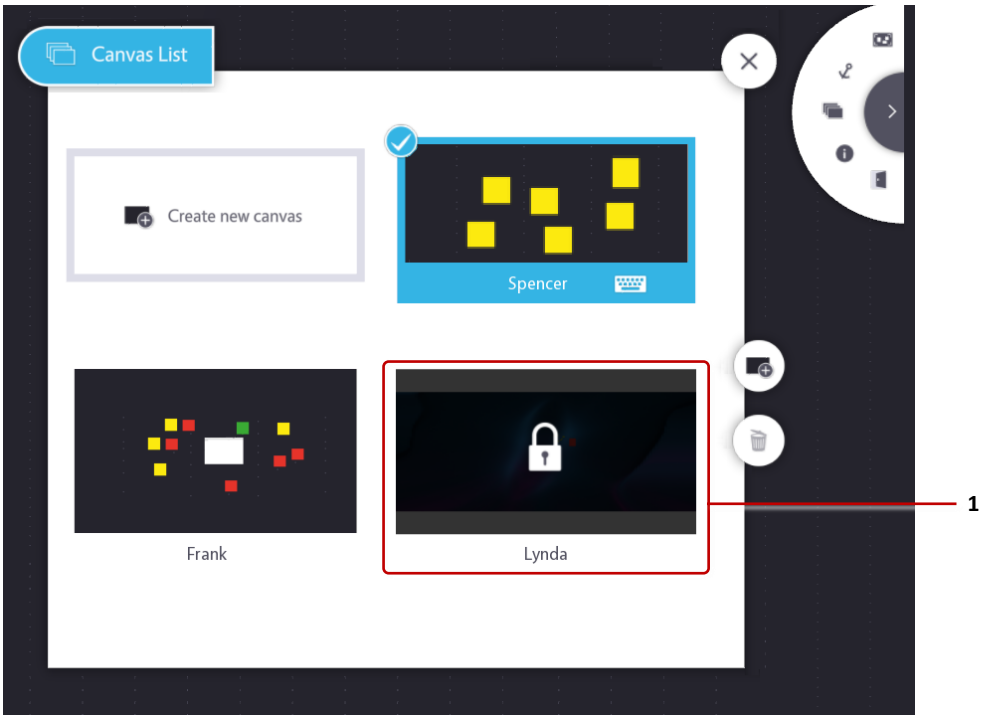
3. In the New Password dialog, enter the new password for the canvas and tap OK.
   Pay attention to any password rules.
4. Re-enter the password and tap OK.



New Password dialog. ***1*** *Password rules (if defined).* ***2*** *Re-enter the new password*

5. Close the About dialog.

6. In the Canvas List widget (see section 5.3.1), password protected canvases are indicated by a padlock icon.



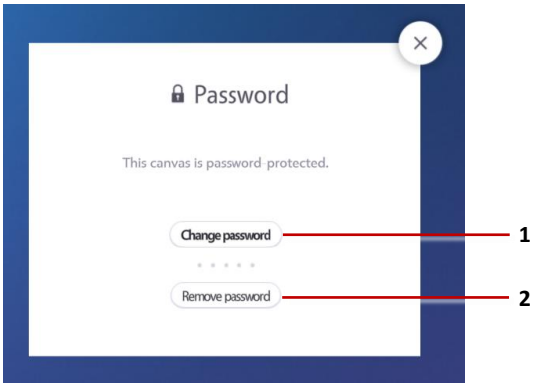
Canvas list widget. **1** *Padlock icon indicates password protected canvas.*

8.3 Change or remove a password

For any password protected canvas, you can change the password or remove password protection.

Follow these steps:

1. Open the password protected canvas.
2. Tap the About button.
3. In the About dialog, tap the Password button.
4. In the Password dialog, tap the **Change password** or **Remove password** button.

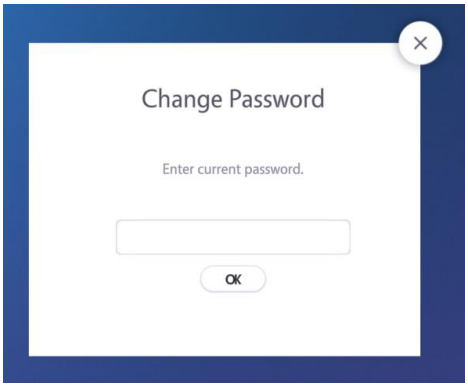


Password dialog. 1 *Change password button.* 2 *Remove password button.*

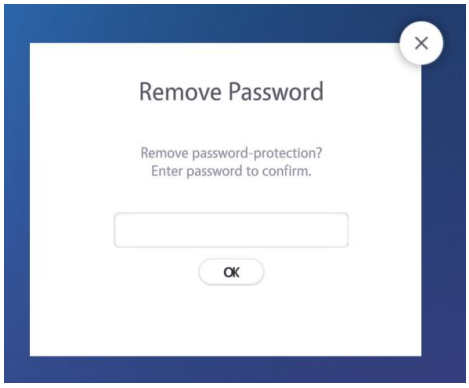
5. **To change the password**
   a. In the Change Password dialog, enter the current password and tap OK.
   b. In the New Password dialog, enter the new password for the canvas and tap OK. Pay attention to any password rules; see the screenshot on page 60.
   c. Re-enter the password and tap OK.

To remove the password

In the Remove Password dialog, re-enter the password and tap OK.



1 Change Password dialog.



2 Remove Password dialog.

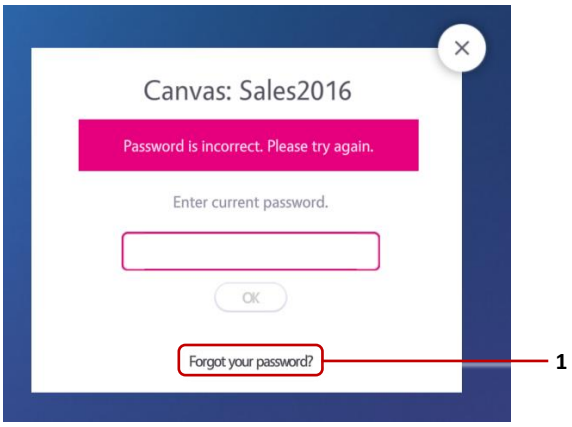
8.4 Forgot your password?

If you forget your password, you will need to ask your MT Canvus administrator to remove password protection from your canvas. This will enable you to open your canvas and, if required, set a new password.

If you enter an incorrect password:

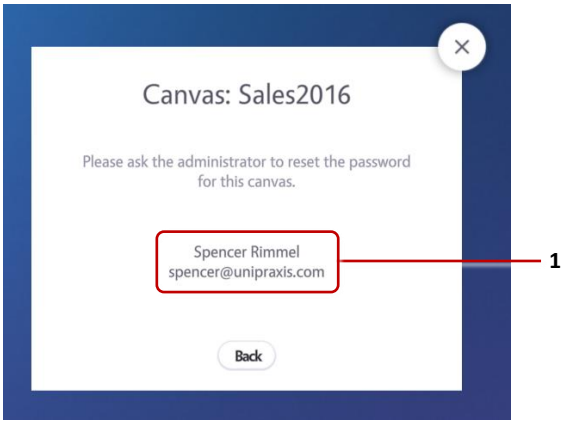
1. MT Canvus displays a warning.

   Note: *This can happen if you are trying to open a protected canvas, change a password, or remove a password.*



Incorrect password warning. 1 *Forgot your password hyperlink.*

2. Do one of the following:
   - Try again. You can re-enter the password as many times as you like. There is no limit on the number of retries.
   - Tap the **Forgot your password** hyperlink to view a password reset advisory. This contains contact details for your MT Canvus administrator.



Password reset advisory. 1 *Contact details for MT Canvus administrator.*

Note: *Instructions for defining administrator contact details are included in the MT Canvus Installation Manual.*

9 Workspaces

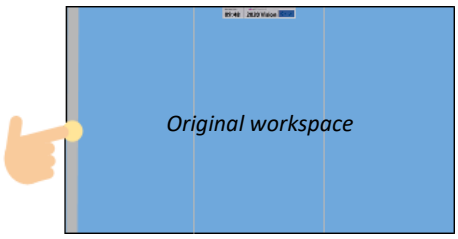
Note: *The number of workspaces open at the same time may be restricted by the terms of your MT Canvus license; see section 1.2.*

Workspaces enable you to split a canvas into separate sections so that two or more users can work independently on the screen without interfering with each other's work. Each workspace extends over a specific section of the screen *and* presents the user with an independent viewport onto the canvas. See section 2.3 for an overview.

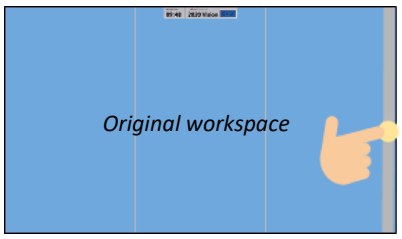
By default, a canvas has a single workspace that extends across the entire screen. But you can split the screen into multiple workspaces. This section describes how to add or remove additional workspaces.

9.1 Create a new workspace

1. Tap and hold *any empty area* on the left edge or right edge of the screen.

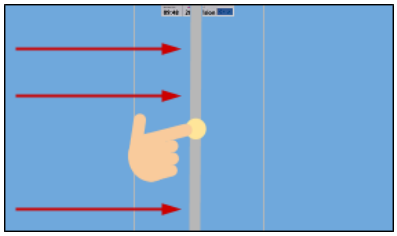


Tap the left edge of the screen.

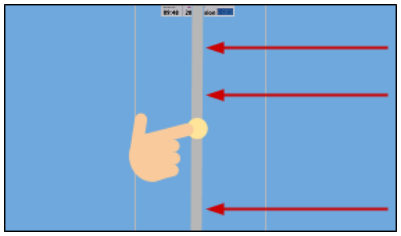


Tap the right edge of the screen.

2. When the vertical *split line* appears, drag it to the position you want.



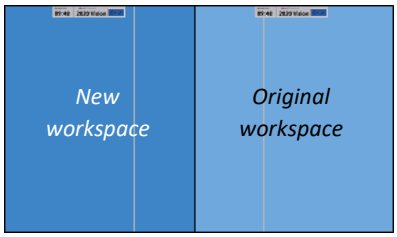
Drag the split line to the right.



Drag the split line to the left.

Note: *Workspaces have a minimum width of (approximately half a Cell's width). For example, you cannot create a very thin workspace that is only 15cm wide.*

3. The new workspace fills the area between the split line and screen edge. At the same time, the existing workspace shrinks to fill remaining area.



New workspace fills the left side of the screen.

New workspace fills the right side of the screen.

9.2 Remove a new workspace

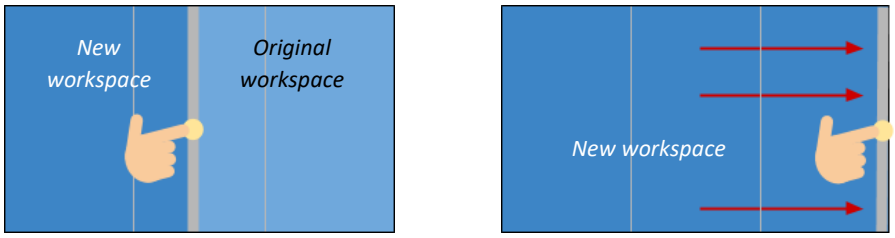
To remove a workspace, you drag the split line:

1. Tap and hold the split line between the two workspaces.

   Note: *There is always a split line between two workspaces.*

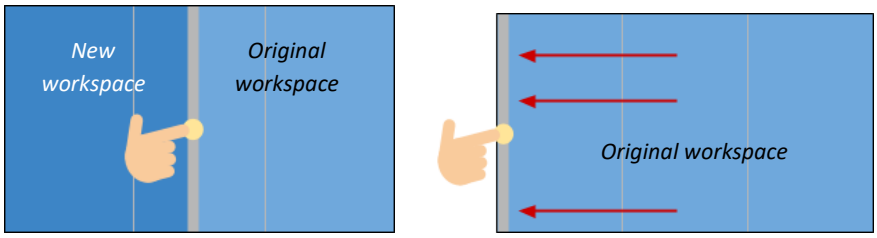
2. Drag or flick the split line left or right, depending on which workspace you want to remove.

   - To remove the right-hand workspace and extend the left-hand workspace, drag the split line to the right *until it fully covers the right-hand workspace*.



Drag right to remove the right-hand workspaces

   - To remove the left-hand workspace and extend the right-hand workspace, drag the split line to the left *until it fully covers the left-hand workspace*.



Drag left to remove the left-hand workspaces

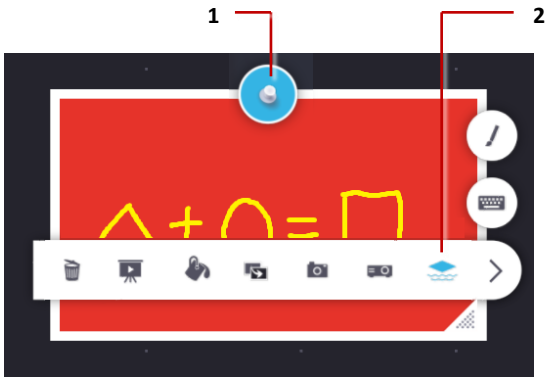
Note: *When you remove a workspace, the adjacent workspace extends automatically to fill the vacant space.*

10 Pin and float

Normally, you can freely move and resize individual items without affecting other items on the canvas. At the same time, if you move or resize the canvas, all items on the canvas are moved or resized. For example, if you drag the canvas to the left, all items move to the left. If you zoom in, all visible items are enlarged.

But these are not always desired behaviors. Sometimes you may want to lock the size and position of an item so you do not inadvertently move it off the screen or make it too small to be useful. Similarly, you may want to lock an item so it is permanently visible on-screen, regardless of how you move or zoom the underlying canvas.

The *pin* and *float* features allow you to lock the size and position of screen items.



1 *Pin button.* **2** *Float button. Blue buttons indicate the features have been activated.*

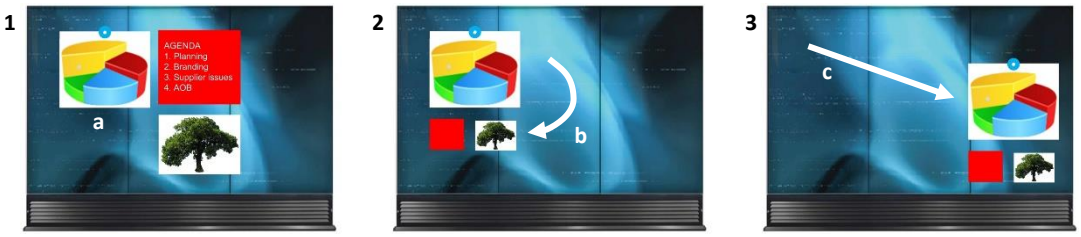
10.1 Pin

Most screen items (images, movies, browsers, notes, and so on) can be *pinned*.

You *pin* an item to the *canvas*. Its size and position relative to the canvas is fixed. You cannot use your fingers to move or resize the item independently of the canvas. But if you move or zoom the canvas, the pinned item also moves or zooms. To pin a widget:

1. Tap the widget's Pin button.
2. The white Pin button changes to a blue Pinned button.

Note: *You must pin a browser before you can browse the web page. You must also pin a PDF widget before you can page through the document.*



1 *An item is pinned* (**a**).

2 *Associated items are not pinned and can be moved and resized* (**b**).

3 *If you move or resize the canvas, the pinned item moves or resizes with the canvas* (**c**).

10.2 Float

Most screen items can *float*.

You *float* an item above the *canvas* so its position and size do not change if you move or zoom the canvas. Think of floating items as items that are stuck to the screen glass.

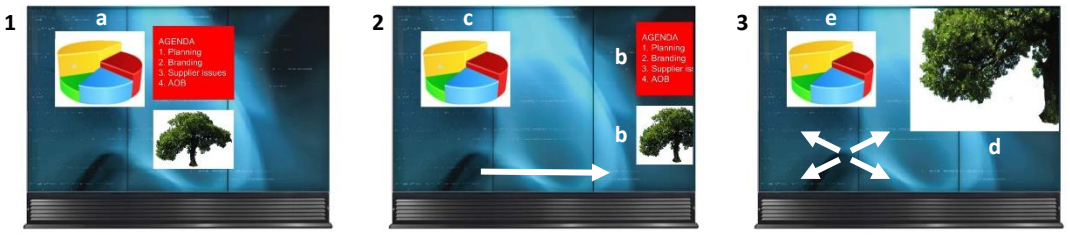
However, unlike pinned items, you *can* still use your hand or fingers to move or resize floating items independently of the canvas beneath.

To float a widget:

1. Tap the widget's

More button.

2. In the widget submenu, tap the Float button.



1 *An item is floating* (**a**).

2 *If you move the canvas, associated items move* (**b**) *but the floating item does not move* (**c**).

3 *If you zoom in on the canvas, associated items resize* (**d**) *but the floating item does not resize* (**e**).

10.3 Pin and float

You can pin and float an item at the same time. In effect, this locks the size and position of the floating item. You cannot move or resize the items and it stays in a fixed position on the screen.

11 Group items together

You can group items on the canvas, allowing you to move and resize them together.

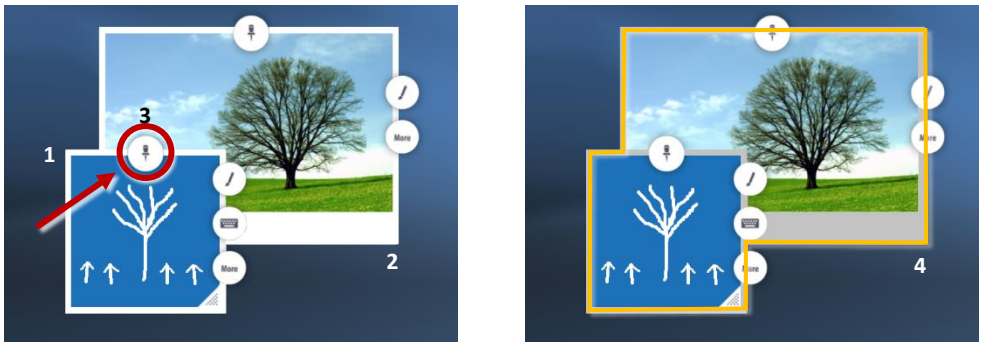
1. If required, resize the child item.

   Note: *When you group items, the child item must be smaller than the parent item. If the child is too big, you cannot group it with the parent.*

2. Drag and hold the child item over the parent item so the pin on the child's top border is positioned anywhere inside the parent's border.

3. When two items are grouped, their borders briefly flash.

To ungroup an item, simply drag it away from its parent.



*Drag the child item (**1**) over the parent item (**2**) until its pin (**3**) is inside the parent's border. When the items are successfully grouped, the combined border (**4**) briefly flashes.*

12 Duplicate items

The Duplicate feature allows you to quickly create copies of screen items such as notes, tables, images and browsers. You can then modify the copied items as required.

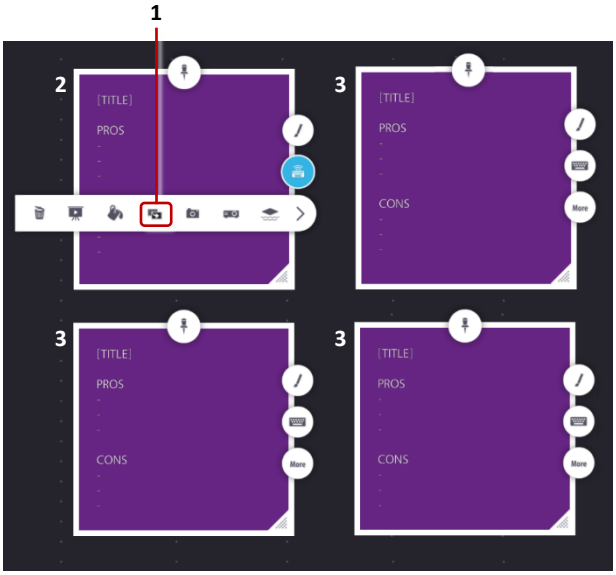
For example, you may need a series of notes with the same size and text headings. You can set up your first note as a template and then duplicate it several times.

To duplicate an item:

1. Tap the widget's

More button.

2. In the widget submenu, tap the Duplicate button.



1 *Duplicate button.* **2** *Original note.* **3** *Duplicated copies.*

3. Now you only need to edit the text content of each note and, if required, change the background color:

Customized duplicate copies

13 Personal items

Using a Codice card (see section 3.3), you can store personal items in your own folder. Personal items can include images, videos, PDF documents, notes and snapshots.

Note: *Support for Codice cards may be disabled, depending on the terms of your MT Canvus license; see section 1.2.*

13.1 Why use personal items instead of the Files widget?

Personal items offer several features not available in the Files widget:

- **Send items as email attachments:** You can send personal items to your registered email address; see section 13.3.
- **Presentations:** The Personal Items widget has a *presentation mode*, allowing you to launch a presentation, or slideshow, of your personal items; see section 14.
- **Save widget annotations:** Unsurprisingly, a Files widget can only store files. But your personal items can include files *and* annotated widgets (typically notes, images and PDFs). For example, if you have extensively annotated a photo using an infrared pen, you can save the photo plus your annotations by dragging the image widget into your personal items.
- **Copy items between canvases:** You can access your personal items from any canvas. This is the easiest way to copy items from one canvas to another.

  Note: *It is also possible to set up MT Canvus so that items in the external folder of the Files widget can be accessed from any canvas; see section 6.6.2.*

13.2 Open your Personal Items widget

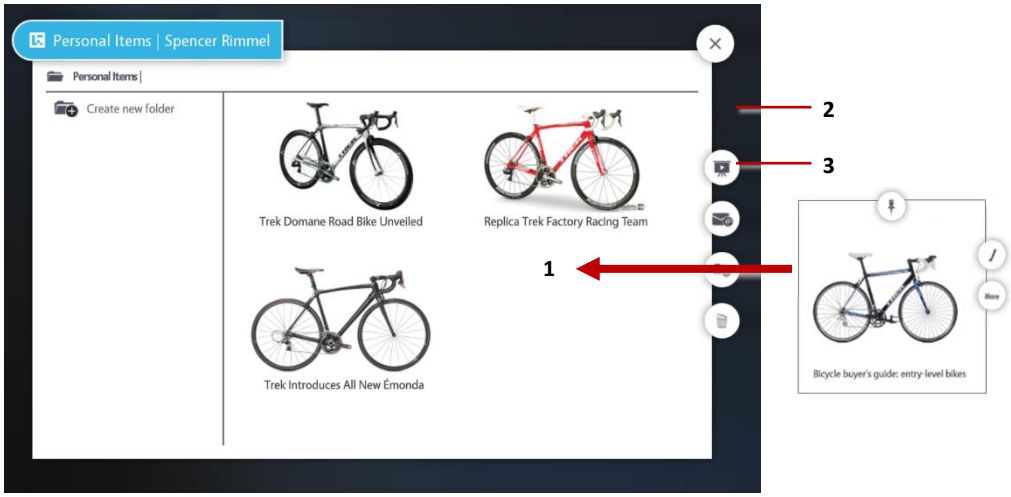
1. Hold your Codice card against the screen.
2. *(Applies only if Remote Codice is implemented on your video wall)* Enter your network password. This is the password for your domain account.

   Note: *The Remote Codice feature enables MT Canvus users to store personal items on a network share. For details, see the MT Canvus Installation Manual.*
3. In the Personal Items widget, do one of the following:
   - **Store items:** Drag items in or out of the widget. For example, you can drag items from the canvas, the main Files widget, a USB device, or from a browser.
   - **Organize items into folders:** Tap and hold an item. When the item activates, drag it to the folder you want.
   - **Create a new folder:** Tap the Create New Folder button.
   - **Make a presentation:** Tap the Presentation button to run a presentation. For details, see section 14.

     Note: *In a presentation, the item sequence is defined by the order of items in the Personal Items widget. (You cannot skip items. If you don't want one in your presentation, move it to a subfolder or delete it.)*

- **Delete an item:** Tap and hold it. When the item activates, drag it to the trash button. (The trash button is disabled until you hold and activate an item.)

Note: *You cannot rename items or resize the Personal Items widget.*



Personal Items widget. 1 *Drag and drop items into the widget.*
2 *Presentation button.* 3 *Email button.*

13.3 Send personal items as email attachments

Note: *You cannot send personal items to an email address if Remote Codice is implemented on your video wall.*

You can send personal items to your registered email address (that is, the email address specified when the Codice card was registered). This provides a simple method for exporting screen content out of MT Canvus.

To send personal items as email attachments:

1. Confirm that email support has been set up; see section 13.4.
2. Open the personal items widget.
3. Tap Email button.

   All items in the folder are sent as email attachments

   Tip: *If you only want to send a single item, create a new subfolder. Then move the item into the subfolder and tap the Email button.*

13.4 Set up email support

Support for sending personal items as email attachments must be set up in advance before you can use it in MT Canvus. For example, Specifically, you must specify the SMTP server and email account that you want to use. You must also specify envelope details for emails sent by MT Canvus (the sender account, email subject and so on).

For full setup details, see the *MT Canvus Installation Manual*.

14 Presentations

You can make a presentation (or slideshow) based on content in your canvas. Each item in the presentation is a 'slide' and navigation buttons at the edge of the screen let you move backwards and forwards through the slides.

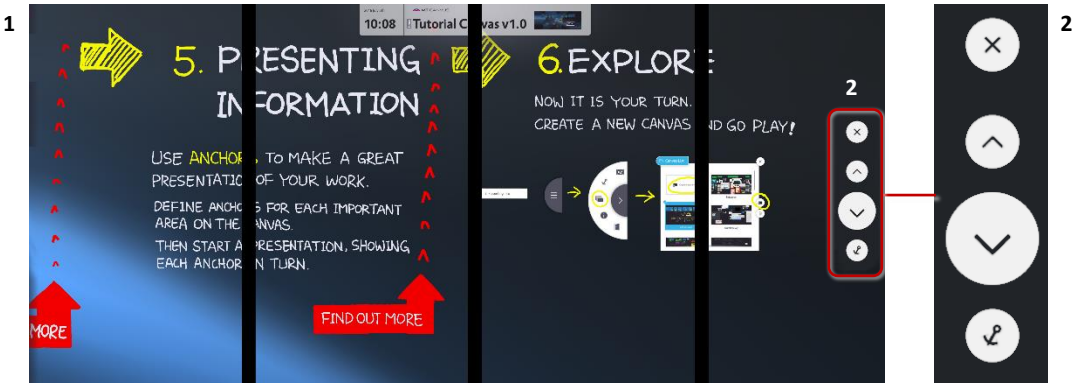
14.1 Presentation types

You can make a presentation based on a list of anchor areas defined in the current canvas. You can also make a presentation of your personal items. Finally, you can make presentations of individual widgets, including cell-by-cell presentations of table widgets.

14.1.1 Anchor presentations

When the presentation starts, buttons at the edge of the screen let you glide backwards and forwards through the slides (ie, the anchor areas). Each slide resizes automatically to fit the screen. You can define the order in which anchors appear in the presentation:

The anchor sequence is defined by the order of anchors in the Anchor List widget. To change the sequence, drag the anchors into the order you want. (If you don't want an anchor in your slideshow, delete it or you can skip it.)



Presentation of anchors. **1** *Anchor area resized to fit screen.* **2** *Navigation buttons.*

14.1.2 Personal item presentations

When the presentation starts, buttons at the edge of the screen let you move backwards and forwards through the slides (ie, the personal items). Each slide resizes automatically to fit the screen. You can define the order in which personal items appear in the presentation:

The item sequence is defined by the order of items in the Personal Items widget or in a Personal Items subfolder. Note that the presentation only incudes items in the current folder or subfolder. (If you don't want an item in your presentation, move it to a different subfolder, or delete it or you can skip it.)

Tip: *You can set up multiple presentations, each using a different set of personal items; see section 14.3.*

Presentation of personal Items. 1 *Image resized to fit screen.* 2 *Navigation buttons.*

Note: *Personal item presentations are not available if Remote Codice is implemented on your video wall.*

14.1.3 Widget presentations (including table presentations)

Most widgets include a presentation button on the submenu. When you launch the presentation, the widget resizes automatically to fill the screen. This is useful if, for example, you want to zoom in on an image.

Widget presentations are also used to display the contents of a table. When you launch a 'table presentation', the slides are the individual cells in the table. Buttons at the edge of the screen let you move backwards and forwards through the cells. Cells are displayed by column ie, cells in the first column are shown, then cells in the second column, and so on.

You can also maximize a displayed item so that it expands to fill the available screen. This is particularly useful when displaying videos.

Note: *If a table includes a nested table, these nested cells are also included in the table presentation.*

Table presentation. 1 *Source table on the canvas.* 2 *First slide in presentation is an overview of the table.* 3 *Subsequent slides show individual cells.* 4 *Navigation buttons display in side panels.* 5 *Cell display sequence.*

14.2 Launch a presentation

Follow these steps

1. Do one of the following:
   - **Anchor presentations:** Open the Anchor List widget (section 5.3)
   - **Personal item presentations:** Open the Personal Items widget (section 13.2).
   - **Widget presentations:** Open the widget's submenu (section 2.4.3).
2. Tap the Presentation button to launch the presentation.
3. (*Anchor and personal item presentations only*) Navigation buttons appear on the left and right sides of the workspace.
   - Use these buttons to move from anchor to anchor, or from personal item to personal item.
   - To skip an anchor or personal item, re-open the Anchor List or the Personal Items widgets and tap the anchor or item you want to restart from.
   - To open these widgets, tap the Anchor or Personal Item buttons.
4. (*Widget presentations only*) Navigation buttons appear in side panels on the left and right sides of the workspace. If viewing:
   - A browser or PDF document, tap the Pin button.
   - A table presentation, use the navigation buttons to move from cell to cell.
   - An image, PDF or video (*but not a browser*), tap the Fit to screen button to expand the item to fit the available screen. The navigation buttons now display on top of the displayed item.

     Tap the Undo button to return to the default display layout.

     This feature is particularly useful for maximizing videos.

1 *Default widget presentation.* **2** *Navigation buttons display in side panel.*

3 *Widget presentation expanded to fill available screen.* **4** *Navigation buttons display on top of displayed item.*

5. Tap the Close button to quit the presentation.

14.3 Multiple presentations of personal items

You can set up multiple presentations, each using a different set of personal items.

To do this, you use subfolders. For example, to set up two presentations, Design and Branding, follow these steps:

1. Open the Personal Items widget (section 13.2).
2. Create two subfolders, Design and Branding.
3. Add relevant items to the subfolders:
   - Add design images and documents to the Design subfolder.
   - Add branding images and documents to the Branding subfolder.
4. Launch a presentation:
   - **Design presentation:** Go to the Design subfolder and tap the Presentation button.
   - **Branding presentation:** Go to the Branding subfolder and tap the Presentation button.

15 Video streams

You can play video streams on the canvas. For example, you can display video streamed from a webcam or you can play a video running on an external computer.

You can add multiple video streams to a video stream widget, switch between video streams, and edit the video stream name and URL.

Note: *Do not confuse incoming video streams with streamed video outputs (section 19).*

15.1 Supported protocols for decoding video streams

MT Canvus supports an extensive range of protocols for decoding video streams, including HTTP, RTSP, RTP and UDP. Specifically, MT Canvus uses tools and libraries in the **ffmpeg** framework to decode video streams. These libraries include the **libavcodec** library of decoders for AV codecs.

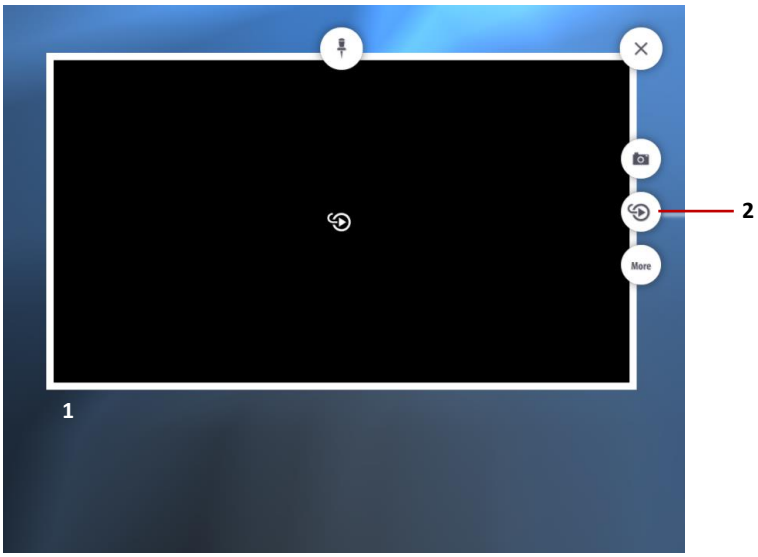
Run this command to see a list of supported codecs:

```
$ /opt/multitouch-ffmpeg2/bin/ffprobe -codecs
```

For full details about ffmpeg, including its tools and libraries, see www.ffmpeg.org.

15.2 Add a new video stream

1. Open the Finger menu; see section 6.3.
2. Tap the Toolbox button.
3. Tap the Connect to a Video Stream button.
4. When the video stream widget opens, tap the Connection button.
   (If no buttons are visible, tap the widget to display them.)



1 *Video stream widget.* **2** *Connection button.*

5. In the video stream address dialog, enter the URL for the video stream or webcam.

   Example: This URL is for a video stream running on a network computer:

   rtsp://10.36.0.122:8554/presentations

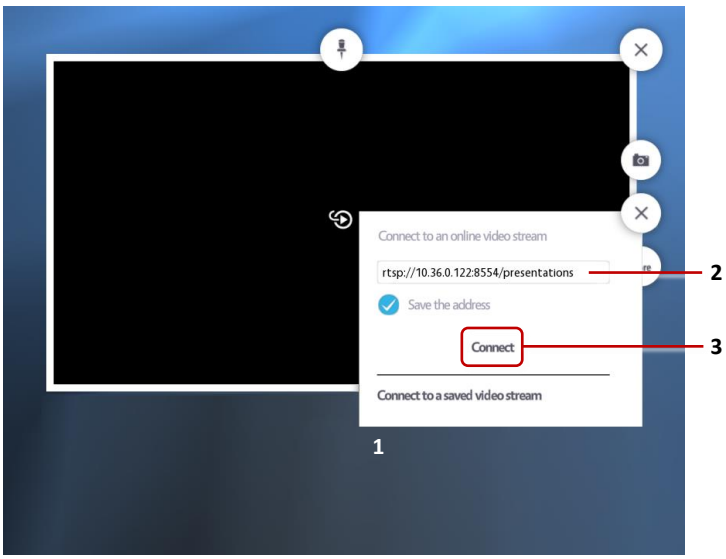
   Where:

   - rtsp specifies an RTSP video stream
   - 10.36.0.122 is the IP address of the computer hosting the video streaming server;
   - 8554 is the port used to deliver the video stream
   - presentations is the source folder for the video stream

   Note: *The Real Time Streaming Protocol (RTSP) is a protocol designed for controlling streaming media servers. RTSP is used to establish and control media sessions between end points.*

6. Tap the *Connect* hotspot to start streaming the video.

   The new video stream is now available for streaming from any video stream widget open on the canvas.



1 *Video stream address dialog.* **2** *Video stream URL.* **3** *Connect hotspot.*

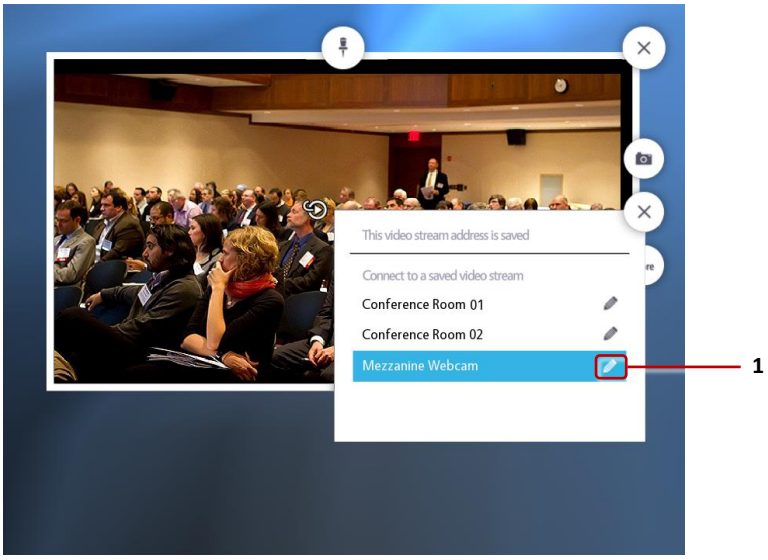
15.3 Edit a video stream

After you have added a video stream, you can edit its display name or URL, or you can delete it.

1. Open any video stream widget and tap the Connection button.

   Note: *All video stream widgets in the workspace share the video streams. If you add a new video stream in one widget, it will be available for streaming in all video stream widgets. Likewise, if you delete a video stream from one widget, it will be removed from all widgets.*

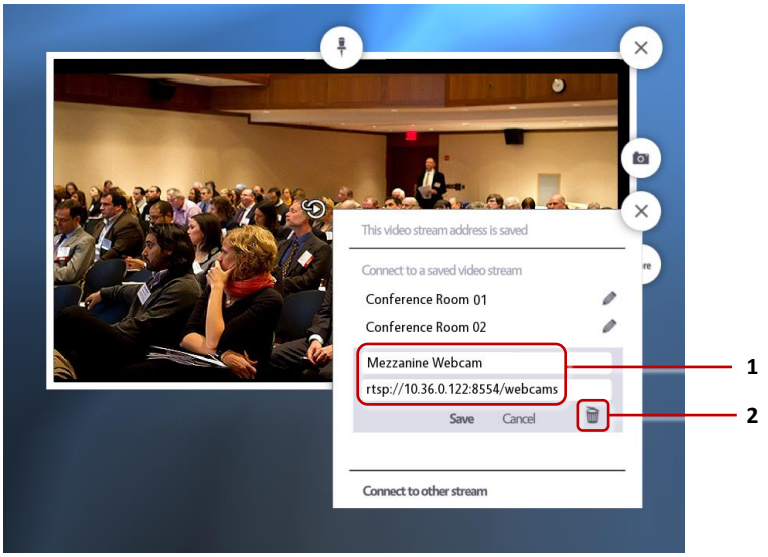
2. From the list of available video streams, tap the Edit button for the stream you want.



List of available video streams. 1 *Edit button.*

3. In the resulting dialog, you can edit the video stream's name or URL, or you can delete the video stream.

   - **Edit:** Tap the video stream name or URL. Then type the new name or URL. Finally, tap the Save button to save the changes.
   - **Delete:** Tap the Trash button to delete the video stream.



Edit video stream dialog

15.4 Switch to a different video stream

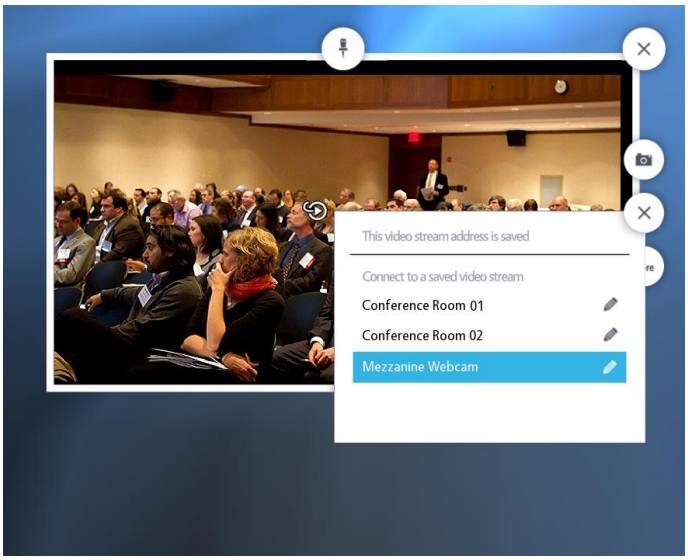
To switch from one existing video stream to another:

1. Go to the video stream widget and tap the Connection button (see step 4, section 15.2).

   (If no buttons are visible, tap the widget to display them.)

2. When the list of available video streams appears, tap the one you want.

   The widget now plays the selected video stream.



List of available video streams

16 Tables

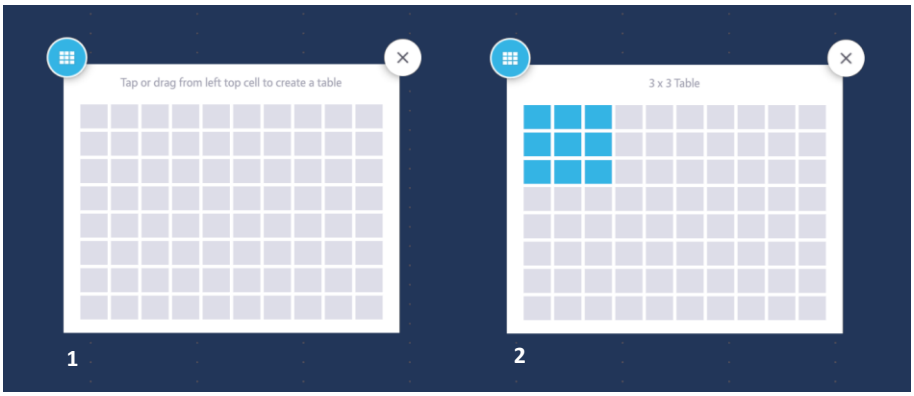
Tables are a fast and easy way to organize screen content into a regular grid. For example, you can add images, videos, browsers, and notes into table cells.

You can set the overall size of the table and choose the number of rows and columns. For more complex table layouts, you can nest tables by dragging a smaller table into any cell of a larger table, and you can arrange multiple tables into a single extended grid.

16.1 Add a new table

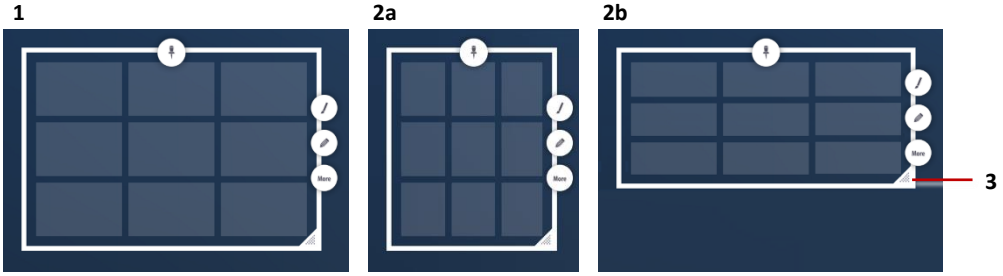
Follow these steps:

1. Open the Finger menu; see section 6.3.
2. Tap the Toolbox button.
3. Tap the Create Table button.
4. In the Create Table widget, tap or drag your finger to select the number of rows and columns.



1 *Create Table widget.* **2** *Drag to select the number of rows and columns.*

5. (*Optional*) When the new table appears, you can drag the lower-right corner handle to change the table aspect ratio (ie, width to height ratio).



1 *Original table.* **2a, 2b** *Examples of new aspect ratio.* **3** *Corner handle.*

6. You can now drag content into the table cells.

   Tip: *The item you are dragging into the table must be smaller than the cell. If necessary, make the table bigger or make items smaller before dragging them!*

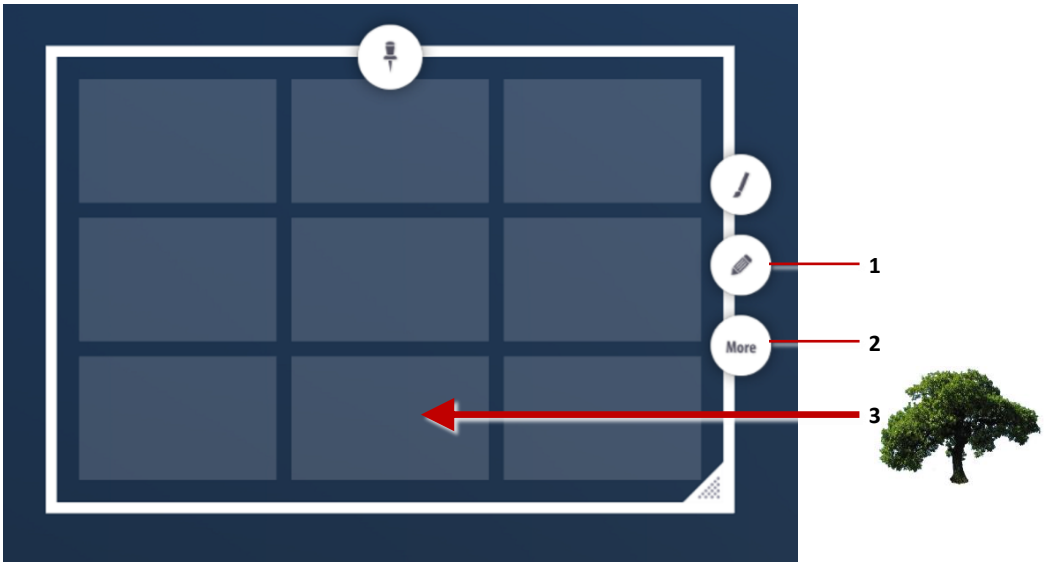


Table widget. 1 *Edit Table button.* 2 *More button.* 3 *Drag resized content into table cells.*

16.2 Add or remove rows and columns

Follow these steps:

1. Tap the table to display widget buttons.
2. Tap the Edit Table button and then tap the More button to display the table submenu (see the screenshot above).
3. From the table submenu, you can add or remove rows and columns or delete the entire table.
   - **Add a row:** Tap the Add Row button. If any cell is currently selected, the new row appears *above* the selected cell. If no cell is selected, the new row is added to the bottom of the table.
   - **Add a column:** Tap the Add Column button. If any cell is currently selected, the new column appears *to the left* the selected cell. If no cell is selected, the new column is added on the right of the table.
   - **Delete a row:** Select any cell. Then tap the Remove Row button to delete the row with the selected cell.
   - **Delete a column:** Select any cell. Then tap the Remove Column button to delete the column with the selected cell.

1 *Table submenu. To display the submenu, tap the Edit Table button* (**2**) and *then tap the More button.*

16.3 Remove content from a table cell

You must *pin* a table before you can drag widgets out of table cells.

1. Tap the Pin button; see section 10.1.
2. Drag the widget out of the cell.

You must *unpin* the parent table before you can select and remove a *nested table* (see section 16.6).

1. If the parent table is pinned, tap the blue Pinned button to unpin the table.
2. Tap the Edit Table button.
3. Tap twice on a cell in the nested table. This selects the entire nested table.
4. Now pin the parent table. Tap the Pin button.
5. Drag the nested table out of the cell.

16.4 Run a table presentation

You can display the contents of a table in a presentation. When you launch a *table presentation*, the slides are the individual cells in the table. Buttons at the edge of the screen let you move backwards and forwards through the cells. For details, see section 14.1.3.

16.5 Delete a table

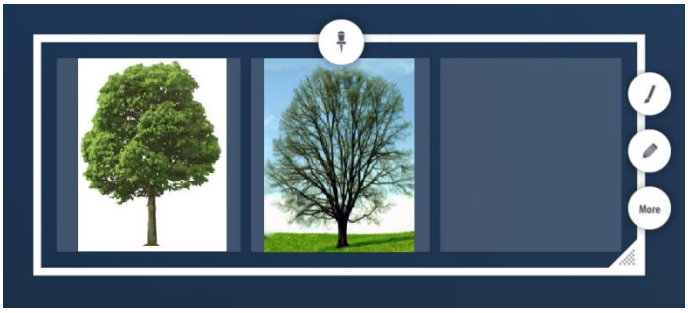
Follow these steps:

1. Tap the table to display widget buttons.
2. Tap More button to display the table submenu (see the screenshot on page 81).
3. Tap the Trash button.

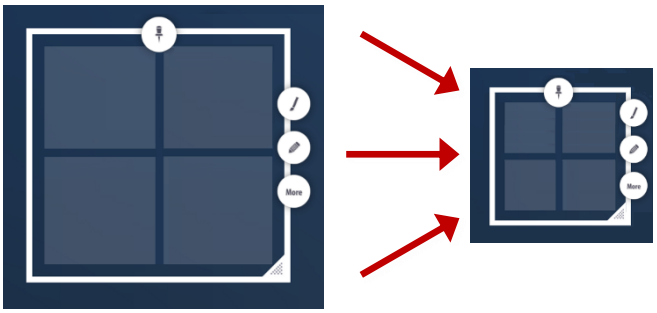
16.6 Nest a table

To nest a table inside an existing table:

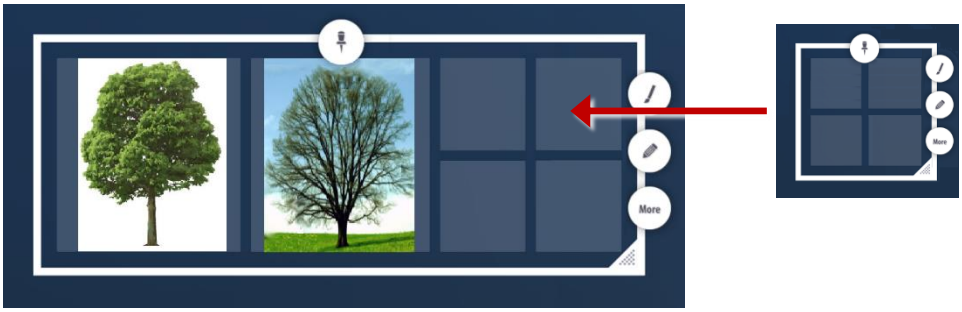
1. Identify the existing table that you want to augment:



2. Create and resize a secondary table to fit inside a cell of the existing table.



3. Drag the secondary table into a cell of the existing table.

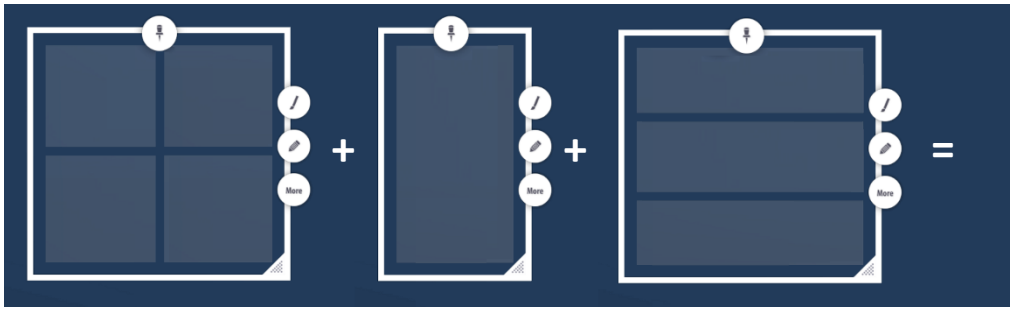


Note: *To remove a nested table, see section 16.3.*

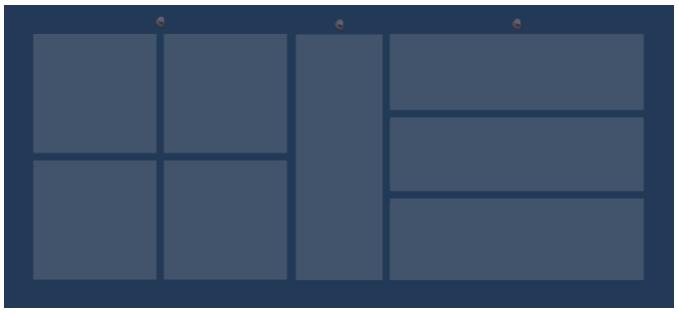
16.7 Arrange multiple tables into a single grid

Despite the flexibility afforded by nesting tables, there may still be occasions where you need more flexibility. In these situations, you can often can create the required layout by arranging multiple tables into a single grid.

For example, with careful sizing and positioning you can arrange these three tables:

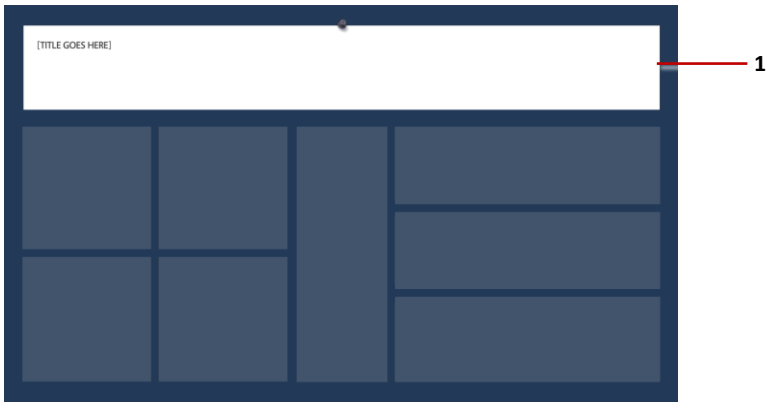


Into this single grid on the canvas:



Tip: *Trying to arrange tables can be tricky. The Duplicate and Pin features help you create tables of matching size and align them neatly on the canvas. You can even group these tables to a note to preserve the arrangement on the canvas. For details, see:*

- *Duplicate items, section 12.*
- *Pin and float, section 10.*
- *Grouping items, see section 11.*



Drag each 'child' table onto a 'parent' note (1) to create a group of screen items that can be moved and resized together.

17 Keyboards

You need to use a keyboard for many MT Canvus features, such as renaming folders, anchors or canvases, and running internet searches for images and web pages.

17.1 On-screen and physical keyboards

MT Canvus supports on-screen keyboards and physical keyboards:

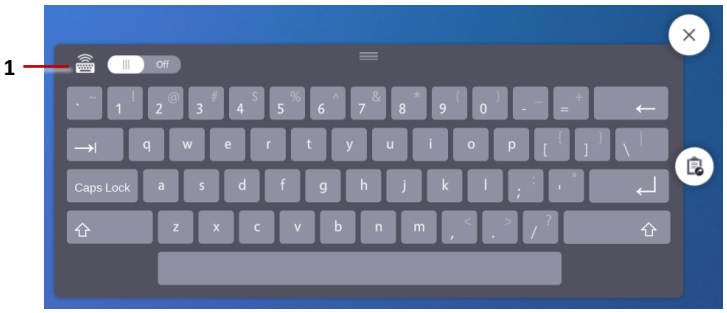
- **On-screen keyboard:** To open an on-screen keyboard, tap the keyboard button . For examples, see the screenshots in section 5.3 and section 5.3.1.

  Note: *When you open a Search widget (see section 6.8.1), the on-screen keyboard displays automatically*.

- **Physical keyboard:** You can connect a physical keyboard to the MT Canvus application computer wirelessly or with a cable. To use a physical keyboard:

  a. Open an on-screen keyboard; see above.

  b. Set the keyboard slider to On in order to use a physical keyboard connected to the application computer.



On-screen keyboard. ***1*** *Keyboard slider. Set to 'On' to use a physical keyboard.*

Note: *The current version of MT Canvus does not support characters with diacritics or accents such as ö and é.*

17.2 Predefined text

To speed up text entry and avoid typing errors, MT Canvus supports predefined text (also called 'keyboard shortcuts'). This feature is designed primarily to streamline demonstrations and presentations.

You often need to type text in MT Canvus, such as when you add text to a Note widget or run an internet search for a web page. When you use an on-screen keyboard to type, you can insert items of predefined text. This is useful when you need to repeatedly enter the same text string such as a web site URL or email address.

17.2.1 Set up predefined text

Predefined text must be set up in advance before you can use it in MT Canvus. Briefly, items of predefined text must be defined in files on the application computer.

MT Canvus supports *named* and *unnamed* items of predefined text. For example, an unnamed item may simply be an email address, such as "support@unipraxis.com". Similarly, your MT Canvus administrator may have defined a *named* item called 'strapline' which inserts the text "Specialists in advanced visualization". Named and unnamed items are listed differently when you choose from the list of predefined text.

For full setup details, see the *MT Canvus Installation Manual*.

17.2.2 Insert items of predefined text

To insert items of predefined text, follow these steps:

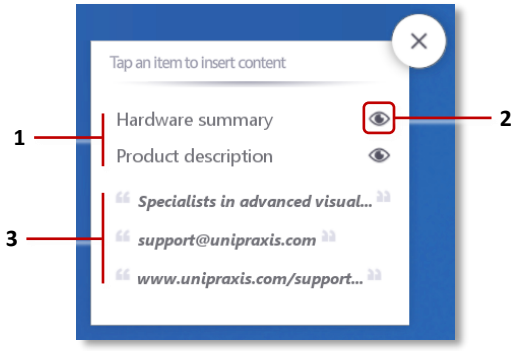
1. Open an on-screen keyboard; see section 17.1.
2. Tap the predefined text button on the on-screen keyboard.

On-screen keyboard. **1** *Predefined text button.*

3. Tap the item you want in the pop-up list of predefined text.

   For *unnamed* items, the list shows the exact text that will be inserted.

   For *named* items, the list shows the item name; tap the 👁 button to see the actual text that will be inserted.



Example list of predefined text items. **1** *Named items. Tap the eye button (***2***) to see the actual text that will be inserted.* **3** *Unnamed items.*

18 Screen sharing

The screen sharing feature enables you to display the screen of your laptop on the canvas. This section describes how to set up screen sharing.

While sharing your screen, you can also use the remote touch feature. This feature allows you to edit your documents *on the video wall*. When you edit a document on the video wall using hand or finger gestures, the edits are simultaneously applied to the source document on your laptop. See section 18.4.

Terminology: *For simplicity, the instructions below refer to 'your laptop' when describing the external computer that shares its screen on the canvas. Although this external computer is generally a laptop, screen sharing is supported from any compatible device including tablets and desktop computers*.

Note: *Screen sharing is typically for users in the same room as the MT Canvus video wall. However, screen sharing by remote users is also supported but requires a more complex setup involving video output from MT Canvus to the remote user; see section 19.4.*

18.1 Set up screen sharing

The screen sharing feature must be set up in advance before you can use it in MT Canvus. Specifically, a suitable capture card *and* the required driver for the capture card must be installed on the MT Canvus application computer before you can set up screen sharing.

For full setup details, see the *MT Canvus Installation Manual*.

18.2 Share your laptop screen

Note: *The screen sharing feature must be set up in advance before you can use it in MT Canvus. For details, see section 18.1.*

Follow these steps:

1. Connect your laptop to the video wall, using either a wired or wireless connection; see section 18.3.

   Canvus automatically detects the incoming video stream and adds your laptop to the list of available screens in the Screen Share canvas menu.

2. In Canvus, tap the Screen Share canvas menu.

3. When the menu opens, it lists the available shared screens. Tap the option for your laptop.

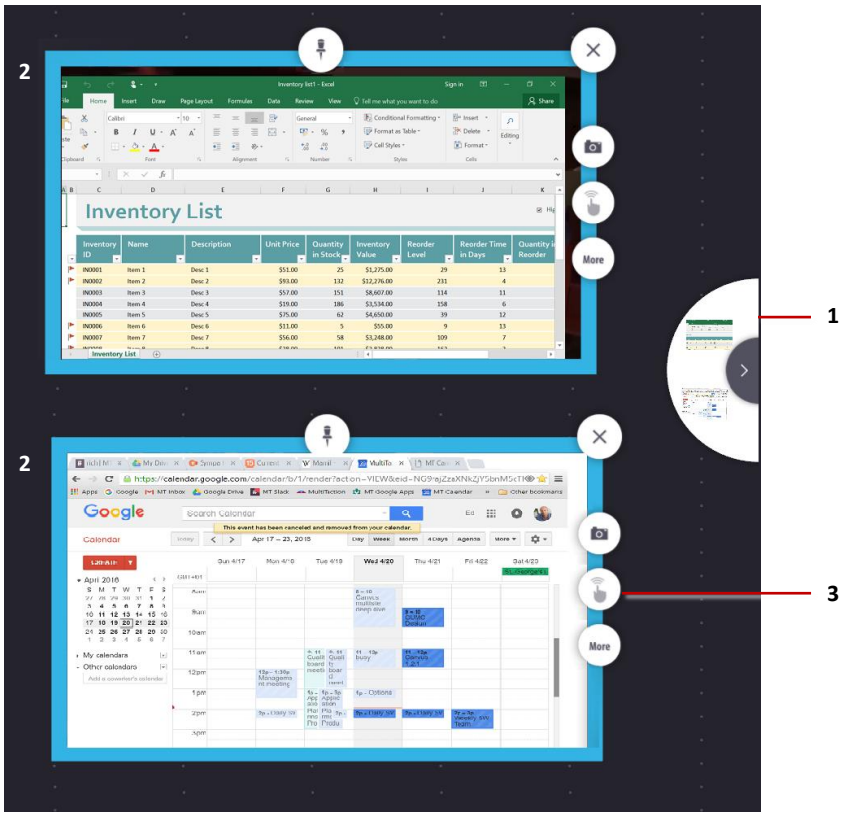
4. *(Optional)* To enable Remote Touch, MT Canvus assigns a unique port number on the application computer to each screen-sharing instance. You need to discover which port has been assigned to your laptop.

   a. Tap the Remote Control Info button in the Screen Share.

   b. Make a note of the IP address and port number.

   c. You will enter these details in config.txt when you configure your laptop to recognize touch data received from MT Canvus.

   For full details about remote touch setup, see the *MT Canvus Installation Manual*.



Screen sharing. 1 *Screen share menu, showing two available shared screens.* 2 *Shared screen widget.* 3 *Remote Control Info button.*

18.3 Screen share connection methods

You can use wired and wireless connections between your laptop and the MT Canvus application computer.

18.3.1 Cable connection:

Use a suitable cable and, if required, adapter to connect the video output on your laptop to the video input on the application computer.

Note: *The application computer recommended by MultiTaction has two DVI* ***video inputs****. If your laptop has an HDMI or DisplayPort* ***video output****, you will need to use a suitable adapter or converter cable.*

18.3.2 Wireless connection

Use a Barco Clickshare device for wireless screen sharing. B

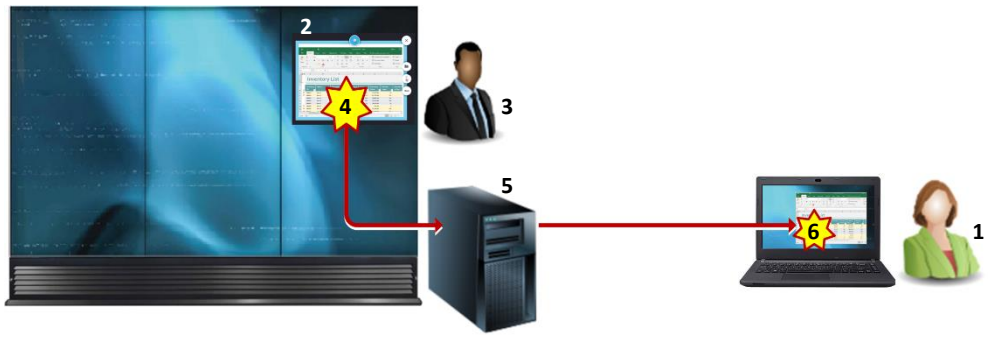
Briefly, you must connect the ClickShare base unit to the application computer and then connect a ClickShare button to your laptop. Now you simply click the ClickShare button to share your laptop screen with MT Canvus. For full setup details, please refer to your Barco ClickShare documentation, available to download on www.barco.com.

*Example Barco ClickShare base unit (**1**) and two ClickShare buttons (**2**)*

18.4 Screen sharing and remote touch

While sharing your screen, you can use the remote touch feature to allow editing of your documents on the video wall. When you edit a document on the video wall using hand or finger gestures, the edits are simultaneously applied to the source document on your laptop.

For example, a team is using MT Canvus to plan a new product. A team member is running a touch-enabled spreadsheet on her laptop and shares her screen with MT Canvus. The team leader stands in front of the video wall and is able to update the spreadsheet directly from MT Canvus using hand and finger gestures on the screen.



Remote Touch example. A team member (**1**) *shares the spreadsheet on her laptop with MT Canvus* (**2**)*. The team leader* (**3**) *updates the spreadsheet displayed on the canvas* (**4**)*. MT Canvus, running on the application computer* (**5**)*, applies the update to the spreadsheet running on the laptop* (**6**)*.*

The remote touch setup involves several steps on both the MT Canvus application computer and the laptop belonging to the user who wants to share their screen. For full details about remote touch setup, see the *MT Canvus Installation Manual*.

19 Video output

MT Canvus allows you to stream content from your canvas to an external monitor or projector, or to a virtual webcam. This feature is useful for reaching audiences who cannot see the screens. For example, you may want to output screen content to a projector so that people sitting at the back of the conference hall, or in a different room, can see your presentation.

The video output feature is available at three levels. You can stream:

- The entire workspace; see section 19.1.
- A specific area of the canvas; see section 19.2.
- An individual widget; see section 19.3.

Notes

- *Do not confuse streamed video outputs with incoming video streams (section 15).*
- *The video output feature must be set up in advance before you can use it in MT Canvus. For details, see section 19.4.*
- *The number of permitted video outputs may be restricted by the terms of your MT Canvus license; see section 1.2.*

19.1 Stream the entire workspace

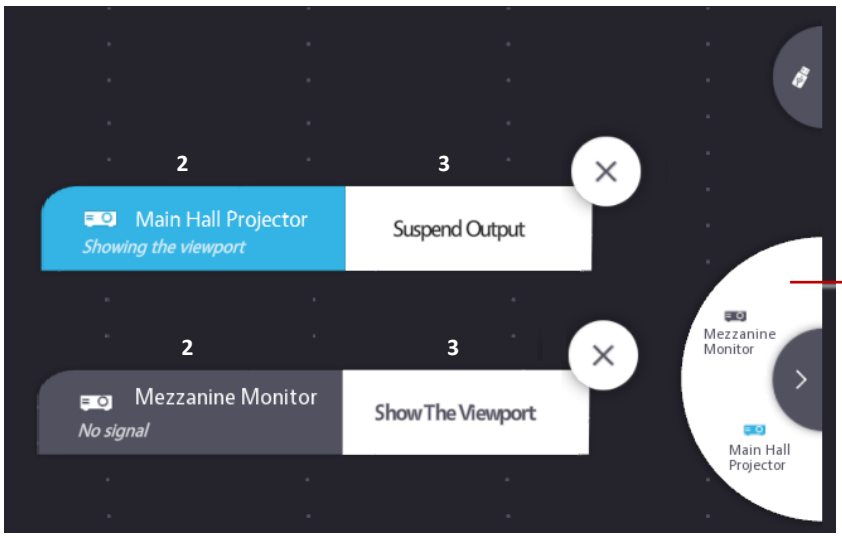
The Output menu lets you output the entire workspace. Because a typical MT Canvus installation has just one workspace, this feature effectively outputs the entire screen area to an external monitor or projector.

To output the entire workspace:

1. Open the Output menu.

2. Select the receiving device, typically an external monitor or projector.
3. When the Output Status widget displays, tap the *Show the Viewport* output button to transmit a video stream of the entire workspace to this device. See the screenshot on page 92.

   Note: *For an explanation of viewports, see section 2.2.*
4. To suspend video output:
   a. Repeat steps 1 and 2.
   b. When the Output Status widget displays, tap the Suspend Output button.

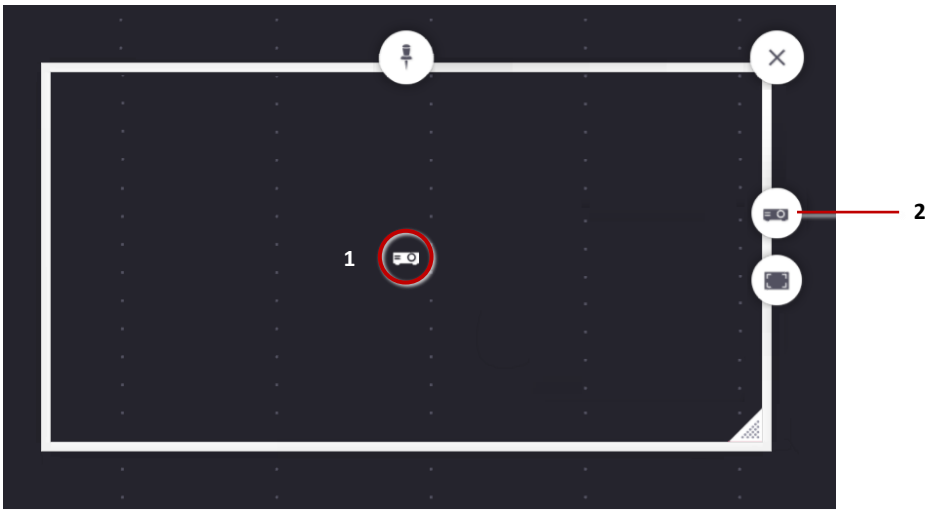


*Video output. **1** Output menu and available video receiving devices. **2** Output status widget. **3** Output buttons: Suspend Output and Show The Viewport.*

19.2 Stream an area of the canvas

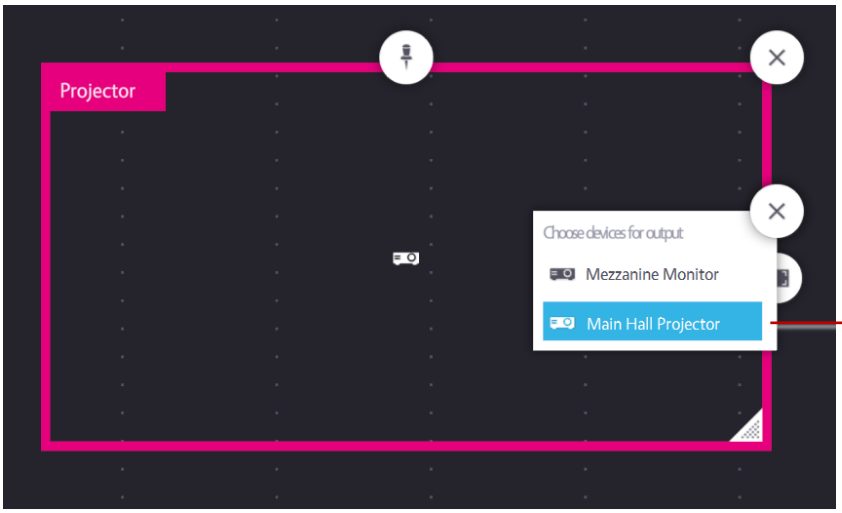
The *video output area* is the area of the canvas that you want to stream to an external monitor. To define your video output area:

1. Open the Finger menu; see section 6.3.
2. Tap the Toolbox button.
3. Tap the Video Output button.
4. When the capture frame appears, drag and resize it to cover the canvas area that you want.



Capture frame for video output area. 1 A projector icon helps you locate and position the capture frame on the screen. 2 Output button.

5. Tap the output button on the capture frame border and choose from the list of available output devices (monitors or projectors).



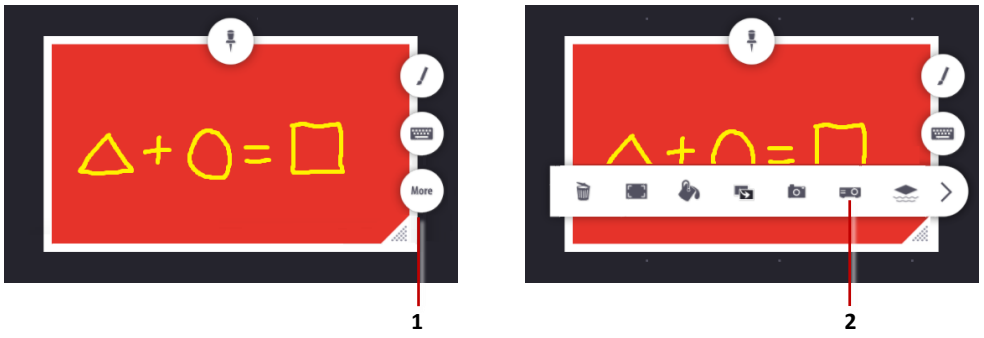
Capture frame for the Create Video Output Area tool. 1 *List of available output devices.*

Note: *MT Canvus continues streaming video from the video output area even if that area of the canvas is no longer visible on-screen, for example, because you have zoomed or moved the canvas to focus on a different area.*

19.3 Stream the contents of a widget

Most widgets support the video output feature. To stream the contents of an individual widget:

1. Tap the widget's More button.
2. In the widget submenu, tap the output button and choose from the list of available output devices (monitors or projectors).



1 *More button.* 2 *Output button.*

19.4 Set up video output

The video output feature must be set up in advance before you can use it in MT Canvus. For full setup details, see the *MT Canvus Installation Manual*.

Briefly, the setup requires these steps:

1. **OS setup:** Attach the external monitor to the application computer and configure the operating system to recognize the monitor.

   To provide the operating system with the necessary details, you must configure the driver for the Cell graphics card(s). Typically, you do this with a proprietary configuration tool such as NVIDIA X Server Settings.

2. **Cornerstone screen configuration file:** Map the video output area onto the physical screen area of the external monitor. To do this, you specify a video output window in screen.xml.

3. **MT Canvus configuration file:** Provide MT Canvus with details about the name, size and location of the video output window. To do this, you must edit the mt-Canvus.ini configuration file.

4. **Define the video output source:** In MT Canvus, choose the source for your video output stream. You can stream the entire workspace (section 19.1), a specific area of the screen (section 19.1), or the contents of an individual widget (section 19.3). At any time, you can easily switch between these three options.

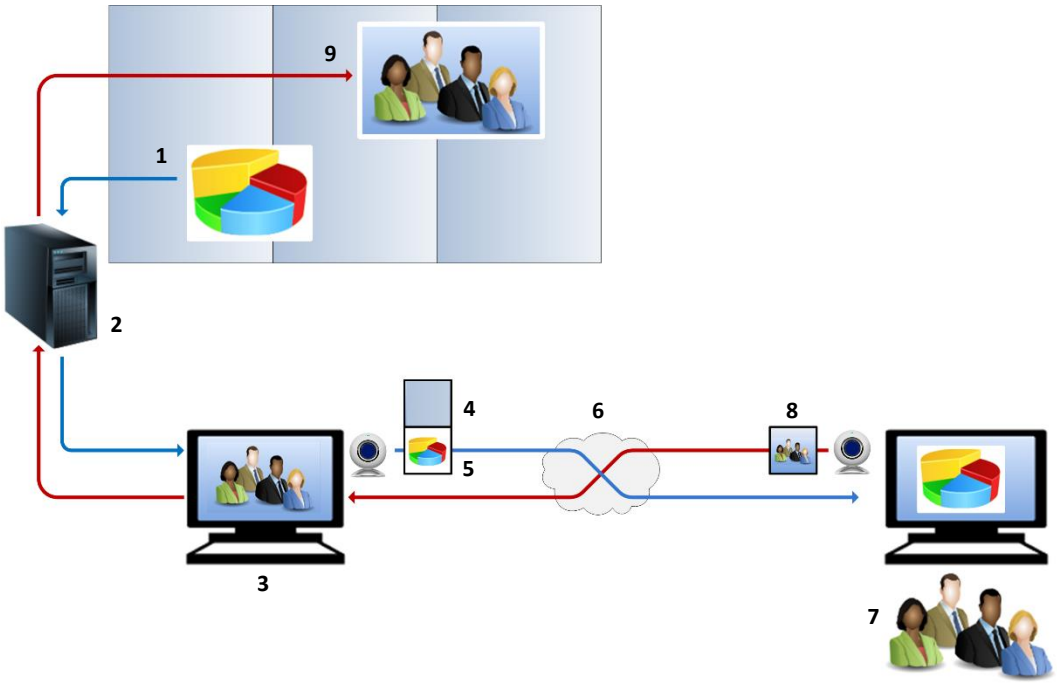
   The named video output window is presented as an option when you select the source screen area in MT Canvus.

5. **(Optional) Set up video conferencing:** Set up a 'virtual webcam' to stream video from MT Canvus to another computer or laptop. If you want two-way video-conferencing, you will also need to set up screen sharing. For full details, see section 19.5.

19.5 Set up video conferencing

As described, MT Canvus supports video output to an external monitor or projector. But you can also send video output from MT Canvus to a 'virtual webcam' connected to another computer or laptop. In turn, this enables you to share the canvas in online meetings and video conference calls, using applications such as Skype, Webex, Google Hangouts and GoToMeeting.

You can also combine this virtual webcam capability with the screen sharing feature (section 17) to set up your MT Canvus display for two-way video conferencing. See the summary diagram below.



Using MT Canvus for two-way video conferencing.

Video output from screen area in MT Canvus (**1**) *is sent from the application computer* (**2**) *to the meeting room computer* (**3**). *Video conferencing software on the meeting room computer detects the unused built-in webcam* (**4**) *but also detects video output from MT Canvus and interprets this as a virtual webcam* (**5**).

When the video conference starts, video from the virtual webcam is streamed over the internet (**6**) *to the remote team* (**7**). *In return, video of the remote team is streamed back to the meeting room computer* (**8**).

At the same time, the meeting room computer uses the Screen Share feature to display video of the remote team on the canvas (**9**).

19.5.1 Set up a virtual webcam

Follow these steps

1. Set up a video output in MT Canvus. You can stream the entire workspace (section 19.1) or a specific area of the canvas (section 19.2).

2. Connect a video output from the MT Canvus application computer to a USB port on the meeting room computer; see section 19.5.3.

   This video output will be interpreted as a webcam (the *virtual webcam*) by the video conferencing application on the meeting room computer.

   Note: *The 'meeting room computer' refers to any PC or laptop in the same room as the MT Canvus video wall. The meeting room computer also runs the video conferencing application.*

3. Start up your video conferencing application on the meeting room computer and edit the video settings:

   a. The application lists the available webcams. In addition to any built-in cameras or an attached external webcam, the application also detects and lists the virtual webcam showing video output from MT Canvus.

   b. Select the virtual webcam from the list.

4. (*Optional*) For two-way video conferencing, you must share the screen of the meeting room computer with MT Canvus. This allows video of the remote team to be shown on the canvas.

   For details about screen sharing, see section 18.2.

5. Start the video conference call.

   The video conferencing application now streams video output from MT Canvus to the remote callers.

19.5.2 Example setup

A user is making a presentation on a video wall in the meeting room of the London office. But they also want to stream the presentation to a team in Helsinki who will attend the meeting online using Skype.

1. The user connects a video output on the MT Canvus application computer to USB port 1 on the meeting room computer.

   (Because the application computer typically has DVI and DisplayPort video outputs, the user will need a suitable adapter or converter cable to connect to this USB port.)

2. The user then starts a Skype session. Skype now detects the available webcams.

   The available webcams include an external webcam connected to USB port 2 plus the virtual webcam on USB port 1.

3. Before the presentation starts, the user configures the video settings in Skype and chooses to use the virtual webcam.

4. When the Skype call starts, video from the virtual webcam ie, the MT Canvus screen, is streamed to the Helsinki team. At the same time, video from the Helsinki team's webcam is streamed back to the meeting room computer in the London office.

5. To enable two-way video conferencing, the user now shares the screen of the meeting room computer with MT Canvus.

   The simplest way to do this is to connect an HDMI-to-DVI cable from the video output on the meeting room computer to a video input on the MT Canvus application computer. The user then opens the Screen Share menu in MT Canvus and selects the meeting room computer from the list of available shared screens.

19.5.3 Virtual webcam requirements

You need a wired connection from the video output on the MT Canvus application computer to a USB port on the user's laptop. This connection requires a video-to-USB converter.

The recommended graphics cards for MT Canvus application computers have DVI outputs, so you need either a DVI-to-USB adapter or an equivalent connection. For example, MultiTaction staff currently use the following setups:

- A DVI-to-HDMI cable, USB 3.0 cable, and the following HDMI-to-USB adapter: Magewell XI100DUSB-HDMI 3.0 video capture dongle
- A DVI-to-DVI cable, USB 3.0 cable, and the following DVI-to-USB adapter: INOGENI HDMI/DVI-D to USB 3.0 converter

Both the Magewell and INOGENI adapters are USB 3.0 devices, so your laptop must have the latest USB 3.0 drivers installed.

Note: *We would expect other suitable adapter and cable combinations to work equally well, but these have not been tested.*

20 Export and import canvases

You can export or import a canvas to or from a USB drive. You may want to do this for backup purposes or to import the canvas onto a different video wall.

Note: *You can also export and import images, videos and PDFs; see section 4.4.*

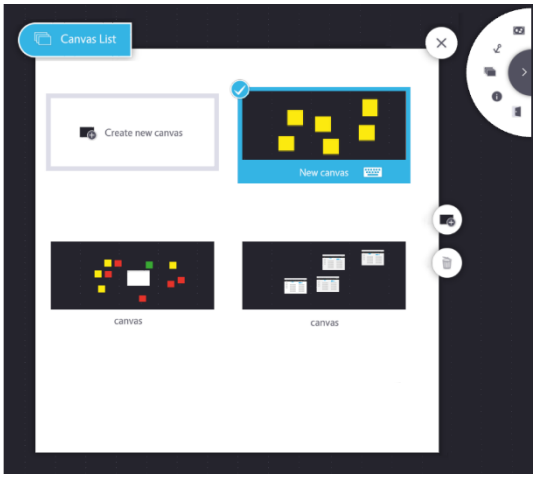
20.1 Export a canvas

1. Open the USB menu to display the target USB memory stick.

USB menu. Any USB drives attached to the application computer are listed in the open menu

2. Tap the USB memory stick to open the USB folder (see section 4.4.1).
3. Open the Canvas List widget. Then tap and hold the canvas you want.

   Note: *Do not select the canvas that is currently open. You cannot export an open canvas.*



Canvas list widget

4. Drag the canvas to the open USB folder (see step 2).
5. Wait while the canvas exported. Depending on the amount of screen content, the export may take several seconds.

20.2 Re-import a canvas

1. Open the source that contains your exported canvas.
2. Drag the exported canvas onto the existing canvas.
3. When prompted by MT Canvus, confirm that you want to import the canvas.

21 Support for Microsoft Office documents

MT Canvus supports Microsoft Office documents. The Office documents display in a shared screen widget. This is feature is designed primarily for presentation purposes.

Note: *This feature requires an auxiliary computer. Instructions for setting up the auxiliary computer are in the MT Canvus Installation Manual.*

Shared screen widget, displaying example Microsoft PowerPoint presentation

21.1 How does this feature differ from using remote touch?

How does the 'Support for Microsoft Office documents' feature differ from simply using remote touch to update a document on your video wall? For example, the remote touch feature allows you to open an Excel spreadsheet on your Windows laptop and share your screen with MT Canvus. You can then use hand gestures to update the spreadsheet while it is displayed on the video wall.

However, in the remote touch scenario, the spreadsheet is saved on your laptop. If you are not sharing your laptop screen with MT Canvus, the spreadsheet is not available to other users. Conversely, the 'Support for Microsoft Office documents' feature saves Office documents in the MT Canvus file system. This means that if you save the spreadsheet on a canvas, it is available to anyone using that canvas.

Note: *The remote touch feature is described in section 18.4.*

21.2 Open an Office document in MT Canvas

You cannot create an Office document in MT Canvus. You must import a document from a USB memory stick or a web page with a download capability, such as Google Drive or Dropbox. Follow these steps:

1. If you have already imported the Office document onto your canvas, go to step 3.
2. If you are importing an Office document into MT Canvus for the first time:

   Downloading from a web page:

   a. Download the document, using the web page's own download method; see section 6.7.5.

   b. The document is saved to the Downloads folder in the Files widget. Drag the *placeholder widget* for the Office document onto the canvas.

   Importing from a USB memory stick:

   a. Import the document from a USB memory stick; see section 4.4.1.

   b. When the USB folder opens, drag the *placeholder widget* for the Office document onto the canvas.

Placeholder widgets for Microsoft Office documents. 1 *Word document.* 2 *PowerPoint presentation.* 3 *Excel spreadsheet.*

3. Tap the placeholder widget to open the Office document in a *shared screen* widget.
4. **Important!** *You must pin the shared screen widget before you can start browsing the document or using the Microsoft Office menus and toolbars.*

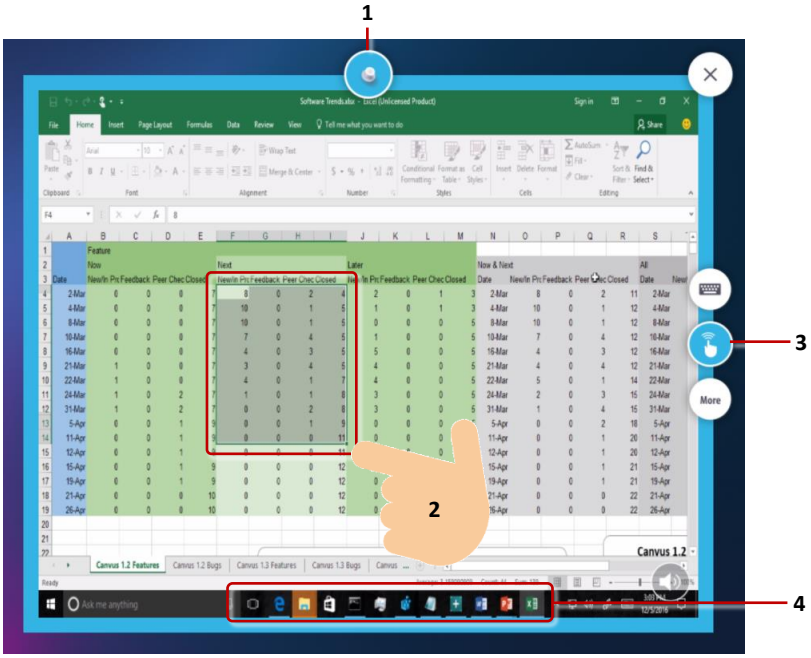
   c. Tap the Pin button.

   d. The white Pin button changes to a blue Pinned button.

5. You can now browse the Office document. For example, you can page through the slides in a PowerPoint presentation or select cells in an Excel spreadsheet.

6. (Optional) Save the Office document in the Files widget (section 6.6) or your Personal Items widget (see section 13).

   To do this, close the document. Then drag its *placeholder widget* into the Files or Personal Items widget.



Shared screen widget, displaying example Microsoft Excel spreadsheet.

1 *Pin the widget.* **2** *Use your finger to highlight cells.* **3** *Remote Touch button.*

4 *Windows taskbar. The taskbar icons can help with troubleshooting if you experience issues when opening Office documents on your video wall.*

21.3 Changes to Office documents are not saved

In the current version of MT Canvus, you cannot save changes to an Office document.

MT Canvus support for Office documents is intended primarily for presentation purposes. By default, changes to Office documents are not saved. For example, if you edit an Excel spreadsheet saved on your canvas, these edits are discarded when you close the canvas or end the MT Canvus session.

21.4 Troubleshoot opening an Office document

You can only have one Office document open in MT Canvus at any time. If an Office document is already open in the shared screen widget when you open a second Office document, the first document is closed automatically.

However, issues can sometimes occur when switching between Office documents in MT Canvus. For example, if you try to open a PowerPoint presentation while an Excel spreadsheet is open, it may appear that MT Canvus has incorrectly reopened the spreadsheet in the shared screen widget.

This issue is usually caused by incorrect application switching on the auxiliary computer. If you examine the taskbar icons in the shared screen widget, you can normally tap the icon for the application you want (in this example, PowerPoint) to display it in the shared screen widget.

Windows taskbar. 1 *Taskbar icons for Excel, Word and PowerPoint.*