Trane Cloud User Guide

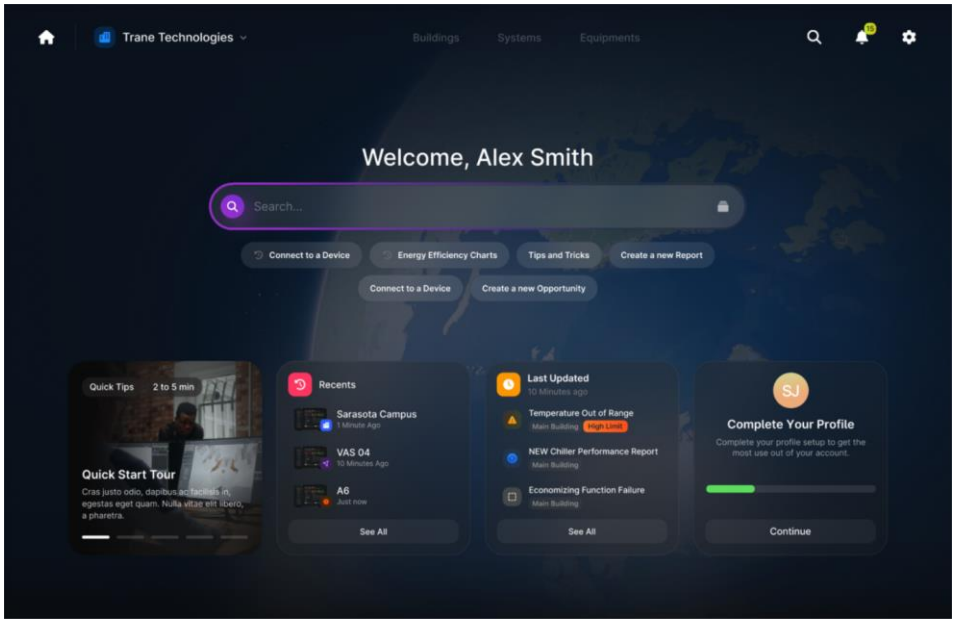
This user guide is not intended to cover every possible scenario, use case or technical issue. If you encounter an unexpected issue or need help beyond what is included here, please contact your local Trane office for assistance.

Getting Started

What is Trane Cloud?

Overview

Trane Cloud is a unified digital platform and user experience. Its primary purpose is to simplify access to building, system and equipment data, making it actionable and meaningful for users.



Use Cases

- Any building stakeholder who needs to monitor, analyze and optimize **long-term building performance**
- Anyone managing outcomes such as energy savings and building operations
- Anyone looking to unify their experience of energy management and analytics capabilities
- Users seeking to add long-term analysis and self-serve capabilities to existing Trane control systems or service agreements

User Access

Access is available to anyone with a connected building or piece of equipment. Additional users can be added for a building by a user administrator. Some functionality is included for all connected buildings. Other features require a paid subscription, service agreement or active trial.

Considerations and Limitations

Trane Cloud is currently not intended for day-to-day building operations. It does not provide real-time data, override capabilities or access to other key operational features in a building. Day-to-day operations should still be managed through the building management system such as Tracer® Ensemble® or Tracer® Synchrony®. Additionally, Trane Cloud is not currently intended for managing non-HVAC equipment or non-HVAC facility operations. Finally, Trane Cloud is currently not used for building installation, changing sequences of operations or other building or equipment configuration tasks.

Navigating Trane Cloud

Home Page

Overview

The Home Page provides a user with an initial experience when they log on to the Trane Cloud platform. Users will gain access to:

- Global search and recommended prompts
- Spine navigation and selector
- Quick tips to help the user navigate the platform
- Recently viewed pages
- Last updated documents
- Profile setup

Use Cases

The Home Page is intended to help all users navigate important features in the application including global search, recently viewed and more.

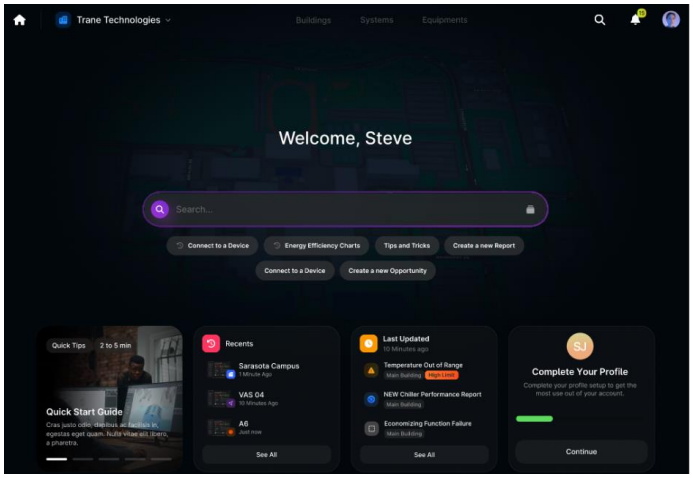
User Access

All users will be able to use the Home Page when they log in to Trane Cloud.

Considerations and Limitations

This page is not intended to be used for in-depth analysis.

How It Works



When the user logs into the Trane Cloud platform, they will see the Home Page. The user can learn how to use the platform by clicking the Quick Start Guide widget.

The user can navigate to recently viewed pages through the Recent widget. If the widget does not show the recent page the user wants to navigate to, they can click See All to get a larger list.

The user can see what documents have been updated recently by looking at the Last Updated widget. If the user wants to see a larger list of updated documents, they can select See All.

The user can complete their profile by selecting Continue on the Complete Your Profile widget. Once the profile is set up, this widget will disappear.

Step by Step Use Case Examples

Since this is a screen rather than a specific feature, there are no specific use cases outside of the screen functionality and definition.

Customization

No customizability is currently available at this time.

Spine Navigation

Overview

The Spine Navigation allows a user to drill down through their organization hierarchy in a simplified manner, optimizing the speed at which insights can be gathered. Users can see where they are in the hierarchy at any point as it is a core navigational structure on the native dashboards as well as individual applications.

Use Cases

The Spine Navigation will be utilized by all users in Trane Cloud. Customers will be able to look at their organization, all buildings in the organization, all systems in a building and all assets in a system.

Trane Technicians will be able to look at multiple organizations that they service to optimize how they gather insights.

User Access

All users that have access to Trane Cloud will be able to use the Spine Navigation.

Considerations and Limitations

For insights related to specific levels in the Spine, the user will leverage the associated dashboard to view specific details.

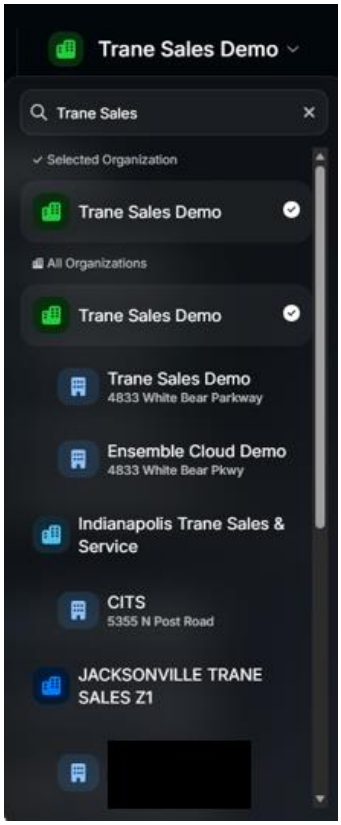
How It Works

The Spine Navigation hierarchy is as follows:

- Organization: Includes all buildings in an organization
- Building: Includes all systems in a building
- System: Includes all assets in a system
- Equipment: View for specific assets

When a user clicks the dropdown menu on the Organization Tab, they see a list of available organizations and associated buildings (see image to the right). The user can also understand how

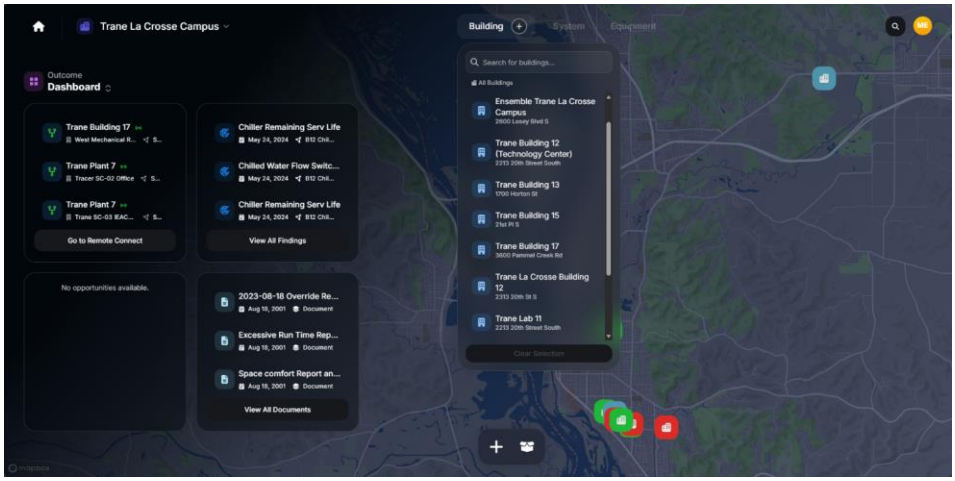
many systems reside in each specific building before they select one.



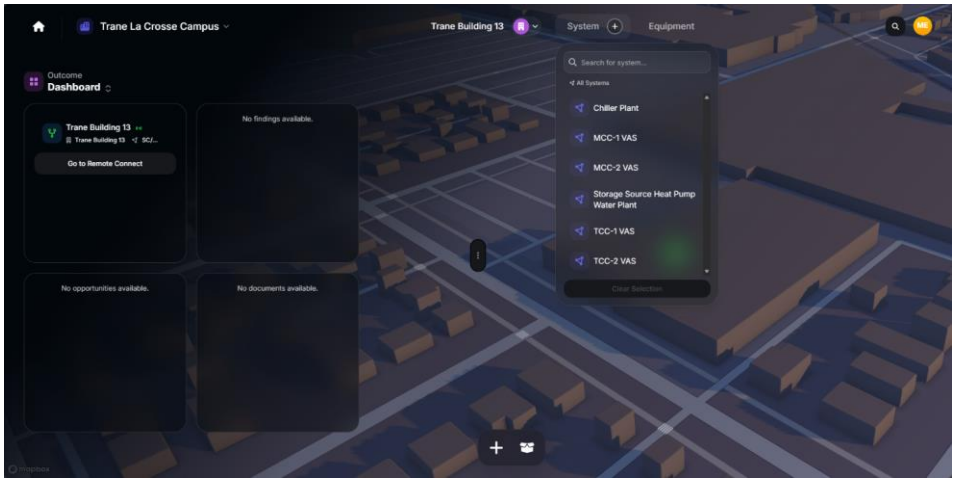
When a user hovers over the Building option, a dropdown menu will appear. The user will then click on a specific building and the Spine will update to reflect that building. The dashboard content will change to only show information related to that building. If the user wants to change the building selection, they can click the dropdown next to the current building to get a list of all available buildings (see image to the right). The hover behavior to access the Spine menu dropdown options

Commented [JH1]: Jason, let's crop this so the church at the bottom doesn't show up (we aren't supposed to have customer names/addresses)

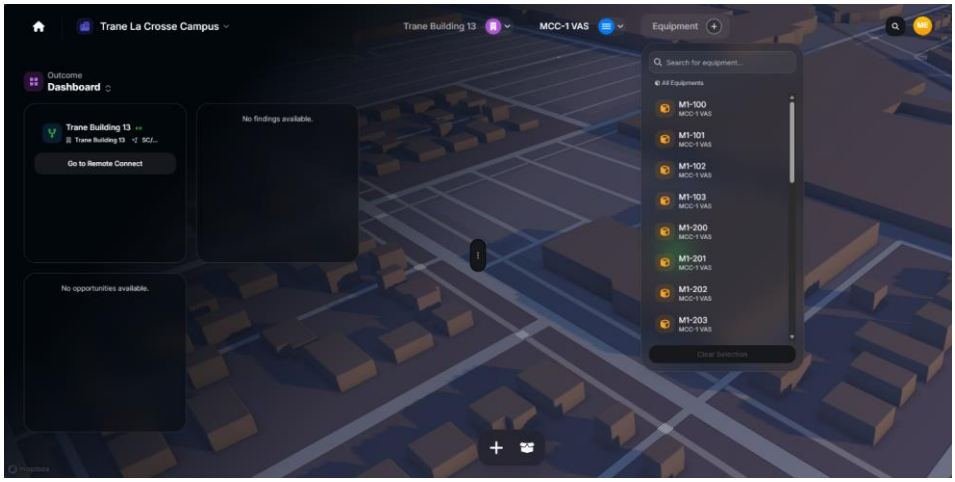
are consistent across each hierarchical level.



Systems are comprised of various assets that work in a common operation (for example: chilled water system). The user can select a specific system or multiple systems in a specific building by navigating to the System dropdown menu (see image to the right). Once the system(s) are selected, then the spine navigation will update accordingly.



“Equipment” refers to an individual piece of equipment in a building or system. Equipment is typically connected to a System but is allowed to be a standalone asset. To select one or multiple pieces of equipment, the user will hover over the Equipment button in the spine to see what assets can be viewed. Once selected, the spine option will update accordingly (see image to the right).



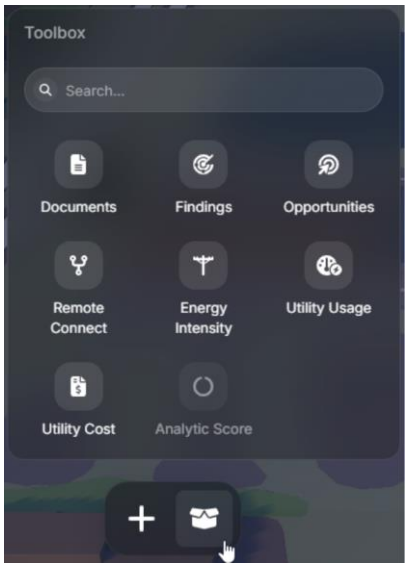
Customization

The user can access recently selected options by navigating to the appropriate Spine dropdown menu. This selection will change based on previous sessions.

Toolbox

Overview

The Toolbox in Trane Cloud is a centralized menu where users can access all available applications and features within the platform. It provides direct navigation to the full functionality of Trane Cloud, supporting efficient workflow and simplified discovery of tools relevant to building management and analytics.



Use Cases

The Toolbox is intended for users who need quick access to the complete set of Trane Cloud features, including analytics, findings and opportunities. This may include facility directors, energy engineers and other decision makers managing multiple buildings or systems who require streamlined navigation.

User Access

The Toolbox is available to users with access to Trane Cloud and a connected building. Feature availability within the Toolbox depends on the user's subscription tier.

Features Shown at the Bottom

All Trane Cloud applications and widgets are accessible from the Toolbox menu at the bottom of the interface, allowing users to navigate directly to any feature they need.

Documents

General Overview

Overview

The Documents feature is a communication tool between Trane and building stakeholders.

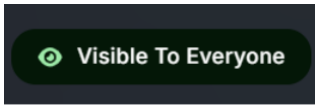
Use Cases

The purpose of Documents are to capture building system information.

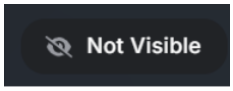
Trane Service and building stakeholders will use Documents during the management of the building lifecycle.

User Access

Access to Documents are managed by Trane Service. A Visible to Everyone icon is selected to provide the building stakeholder access to the document.



Alternatively, a Document can be set to Not Visible while it is being drafted.



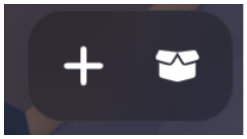
How It Works

Documents are located on the left side of the dashboard under the Documents tile. This feature is available as a standard feature offering.

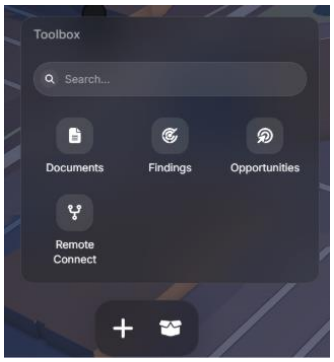
There are two ways to create a Document in Trane Cloud.

1. **Documents**

   In Trane Cloud, at the bottom of the screen select the Toolbox icon to access Documents.

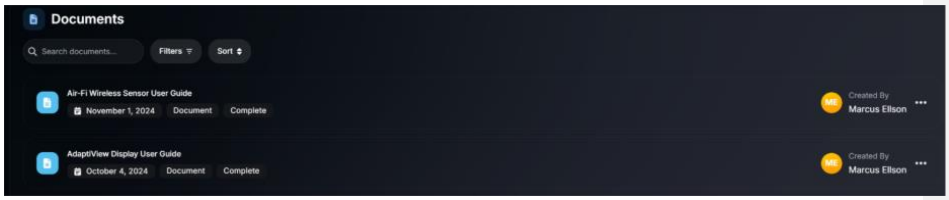


Documents associated with the building are accessed from the Documents icon in the Toolbox.

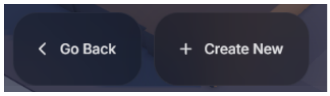


2. Document Summary Page

A summary of building Documents includes Document Title, Date Added to Trane Cloud, Document Type and Document Status.

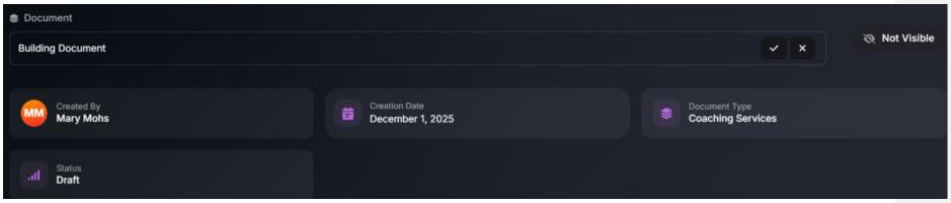


Select the Create New icon to create a new Document Record.

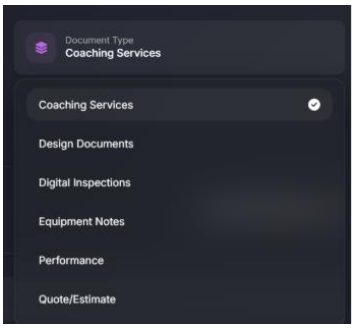


Filling In a Document and Record

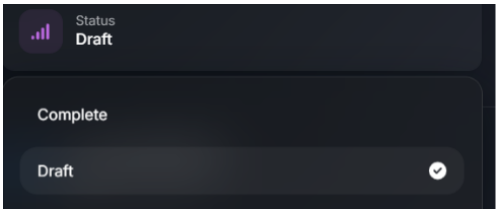
1. Click on the title to update with Document Title, then accept the title by selecting the checkmark icon.



2. Review the Document Type selection (options are visible below). The Document Type is based on the best description for the document's purpose. Coaching Services is the default selection.



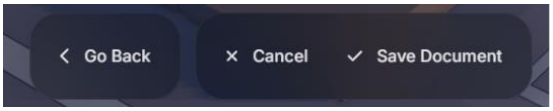
3. Review the Status selection (options are visible below). The document status is either Complete or Draft depending on if the document still needs to be reviewed. Draft is the default selection.



4. Review the building attached to the Document. For Documents added from the Building Dashboard, only the building is selected.

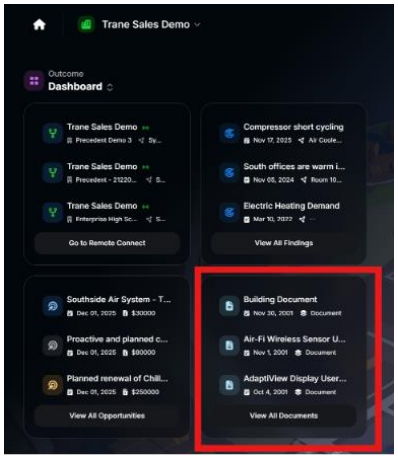
5. Add a brief description of the document.

6. Select the Save Document icon at the bottom of the screen to save the document.

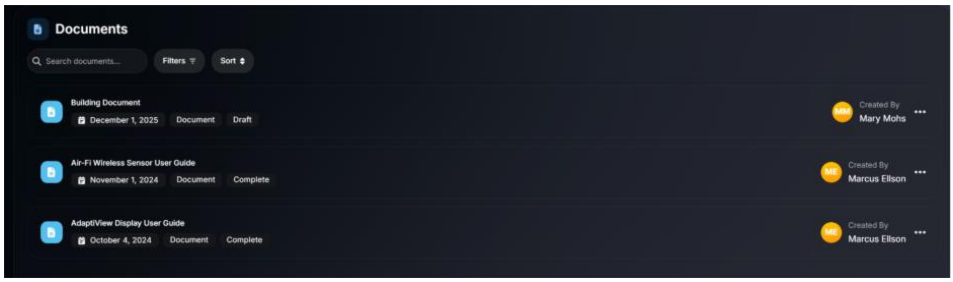


Managing Documents

A list of Documents is displayed on the Building Dashboard on the left side of the screen.

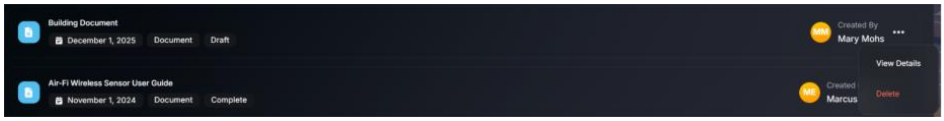


To delete a Document Record from the building, click on View All Documents from the Building Dashboard.

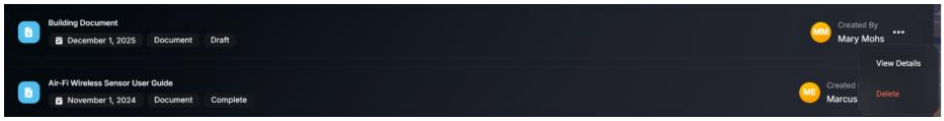


Select the three dots at the far right of the document to open the options list.

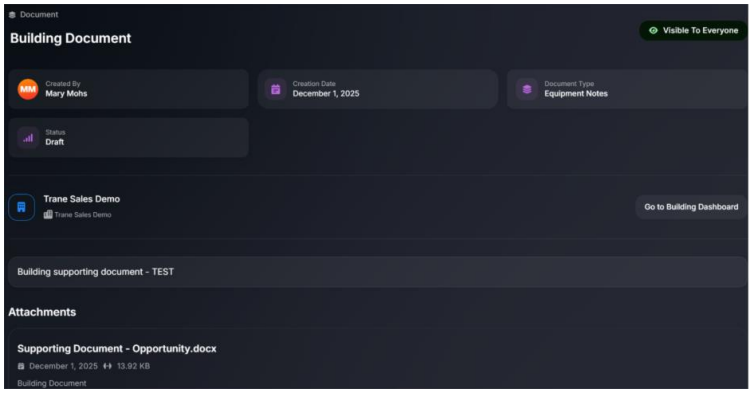
Select Delete from the options list.



Alternatively, to update the Document details, select View Details.



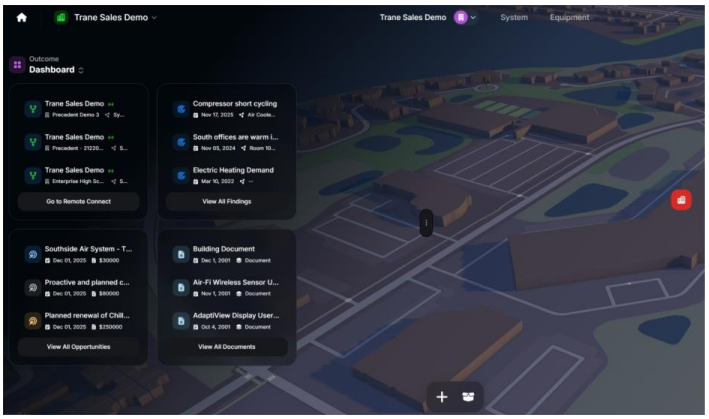
Note: This is where the visibility of the document can be changed.



Step by Step Use Case Examples

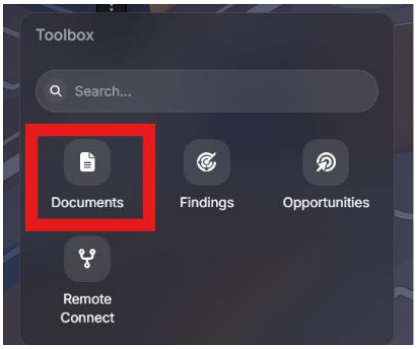
For Trane Service Technicians who want to add a Building Reference Document to Trane Cloud.

1. Navigate to the building you are working on.

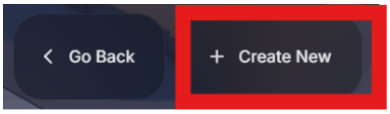


2. Click on the Toolbox icon at the bottom of the screen.

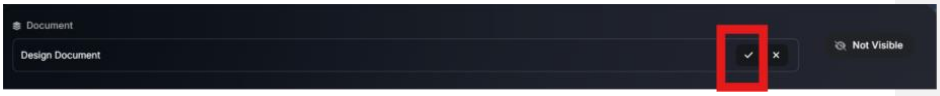
3. Click on the Documents icon to create a new document record.



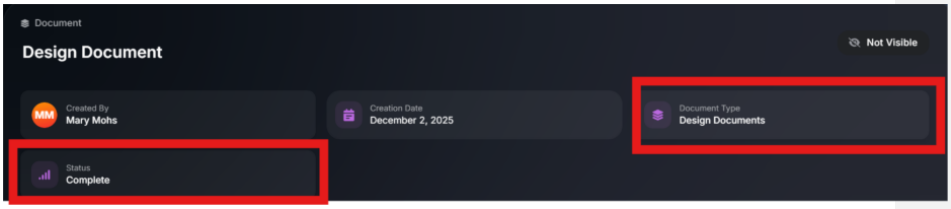
4. Select the + Create New icon at the bottom of the screen.



5. Update the Document Title to “Design Document” and click on the checkmark icon on the right to accept the change.
   Note: If you do not click on the checkmark you will get an error message when you try to save the Document.

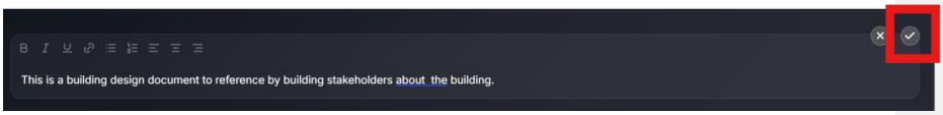


6. Review the default field values and update the Document Type to Design Documents from the list of values. Change the Status field to Complete.

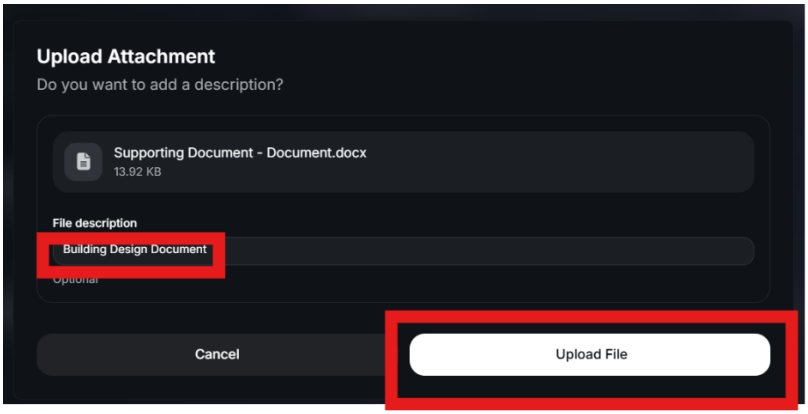


7. Add a brief Document Description for building stakeholders to reference. Click on the pencil icon to start typing in the field. Click on the checkmark icon on the right to accept the

Document Description.

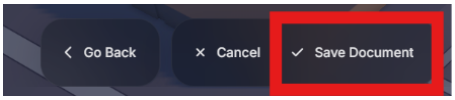


8. Upload the building Design Document to the Document Record by dragging the file under Add Attachment. In the attachment wizard, add a File Description and click Upload File.



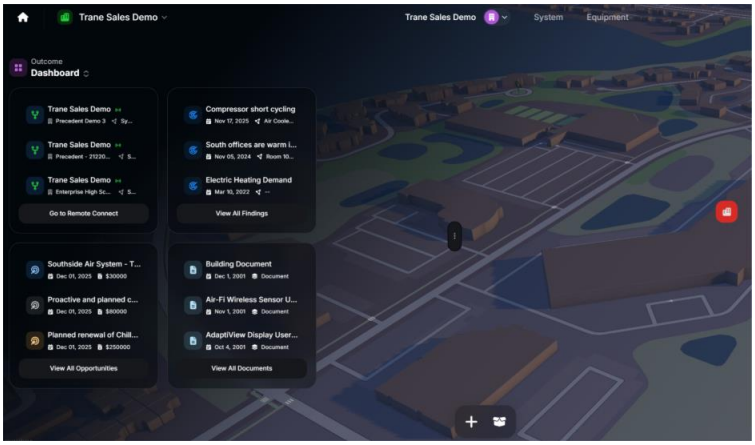
9. Update the visibility of the document to Visible to Everyone.

10. Click Save Document on the bottom of the page to save the Document to the Building in Trane Cloud.

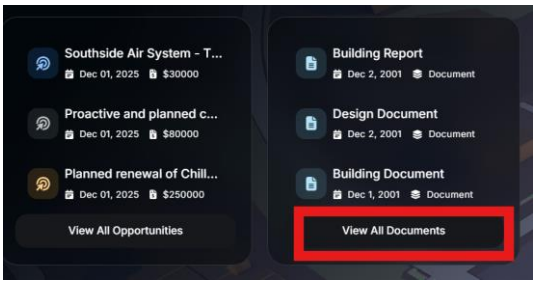


For facility managers who want to find and download a building document:

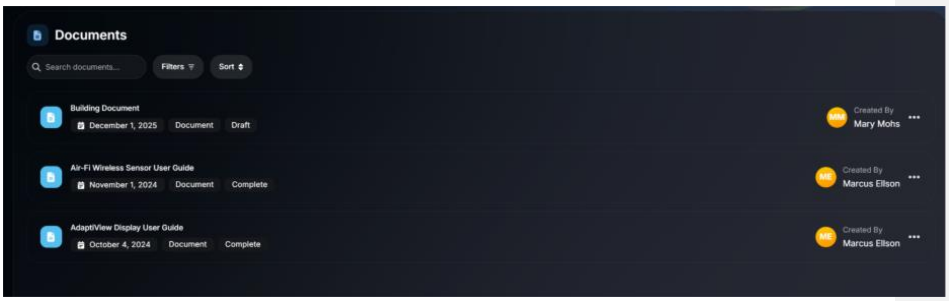
1. Navigate to the building you are working on in Trane Cloud.



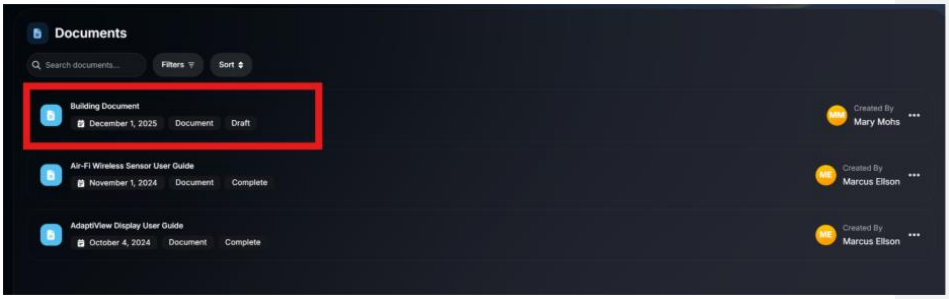
2. Select View All Documents to view the documents that are visible to you.



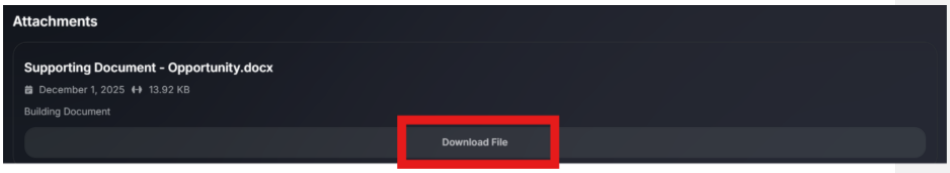
3. Review the available documents for the building.



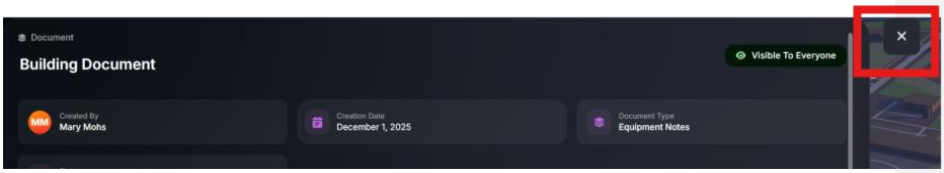
4. Click on the Building Document Record to view the record details.



5. Scroll down to the Attachments section of the Document's Record and select Download File.



6. You will now have access to the building document on your computer. To close the Document page, click on the X in the upper right corner of the document page.



Customization

There is no customizability available at this time for Documents.

Building Operations

Remote Access

Overview

Remote Access allows trusted users — such as a building manager or Trane Service Technician — to connect to the heating and cooling system using the internet, no matter where they are. This means:

- No one needs to be physically present in the building to make changes or see what's happening.
- Tasks like adjusting settings, troubleshooting issues and performing regular checkups can be done simply and remotely.

Use Cases

Remote Access is intended for use by building managers and Trane Service Technicians to view building information remotely.

User Access

Only users who have permission can connect. They must log in using their credentials and verify their identity. Every remote session is monitored, and the connection is encrypted — similar to putting your information in a locked box to keep it safe. When a user finishes, the Remote Access session automatically turns off until someone logs in again.

Findings

Overview

A Finding is a place to capture, collaborate and communicate between Trane and building stakeholders on building outcomes to improve their building. These building outcomes may include energy savings, improved comfort, enhanced compliance, increased system performance and greater equipment reliability.

This feature is accessible from the left toolbar under Service. Findings are organized with attributes to connect to the building, system and equipment in scope.

Use Cases

A Finding captures issues or improvement opportunities identified by technicians during routine building inspections. Findings provide facility managers with a place to document building anomalies for further investigation.

User Access

Findings are visible to Trane Cloud users with access to the Building or Building Organization when the Finding's green eye icon indicates Visible to Everyone.

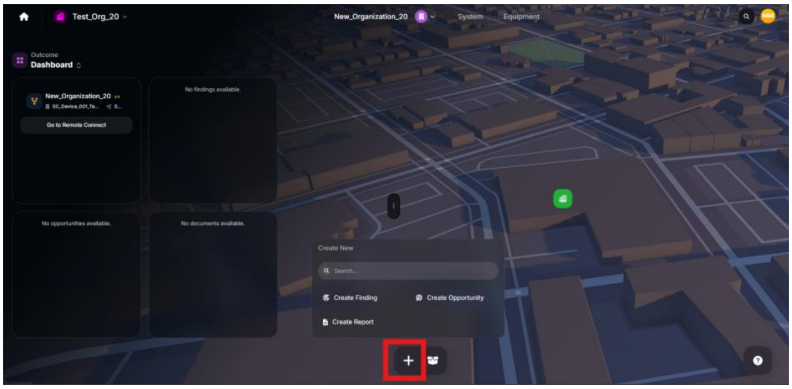
A Finding has reduced access when there is a gray eye icon that indicates Not Visible. Typically, a Finding will be Not Visible when the Finding is being reviewed or waiting for more information to be added. The default selection is Not Visible.

Viewing Findings which a user has access to is available on all Buildings and included in the standard Trane Cloud offering.

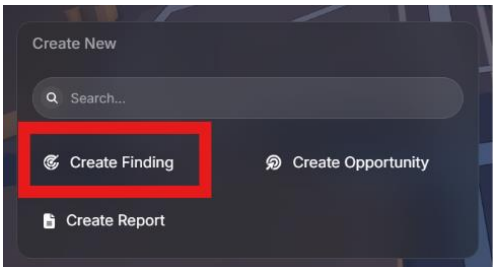
How It Works

Adding a Finding

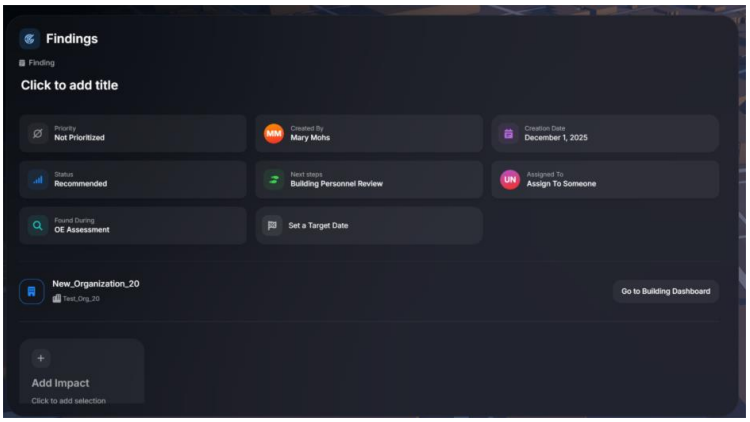
1. From the Building Dashboard, select the plus icon in the lower middle of the screen.



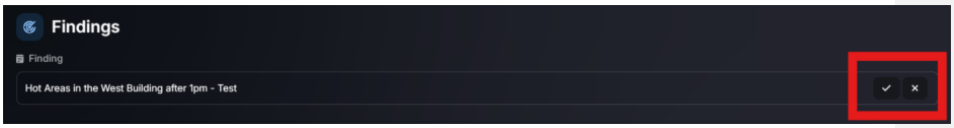
2. Select the Create Finding icon.



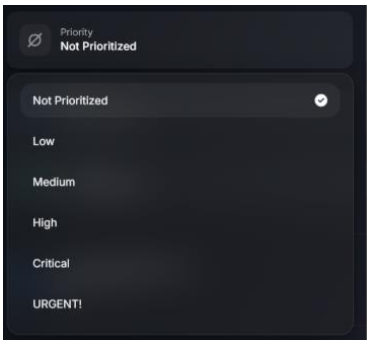
3. A new Finding starts with default selections.



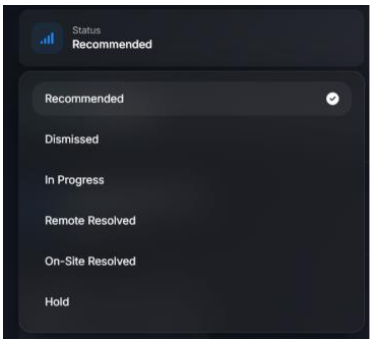
4. Update the Finding Title with a summary of the Finding and select the checkmark or X to save or not save respectively.



5. Review the Finding Priority selection (options are visible below). The Priority selection is based on the urgency of the Finding. Not Prioritized is the default value for new Findings.

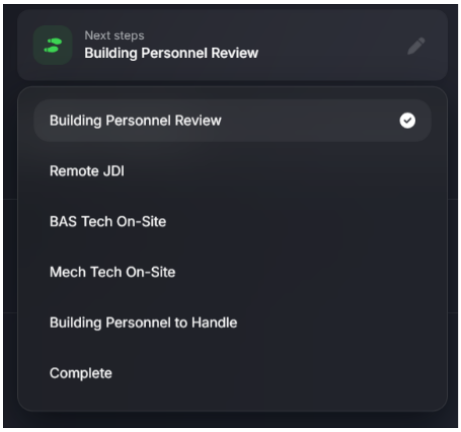


6. Review the Status selection (options are visible below). Recommended is the default value. The Status selection is based on the initial recommendation of the technician.

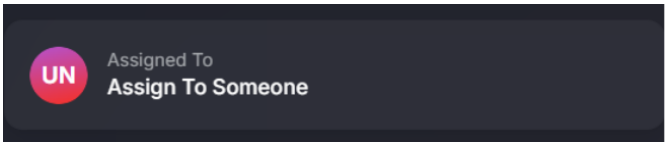


7. Review the Next Steps selection (options are visible below). Building Personnel Review is the default value. The Next Steps selection is based on the next agreed action in the

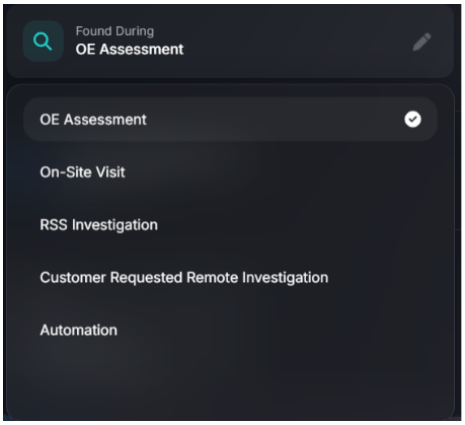
Finding's process.



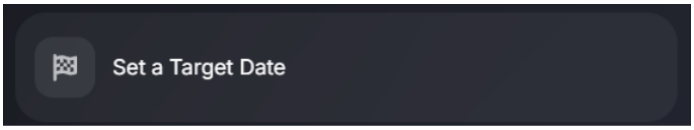
8. Review the Assigned To selection. Assign to Someone is the default value. To select a Trane Cloud user to assign the Finding to, select the dropdown and select the appropriate building user to assign the Finding to.



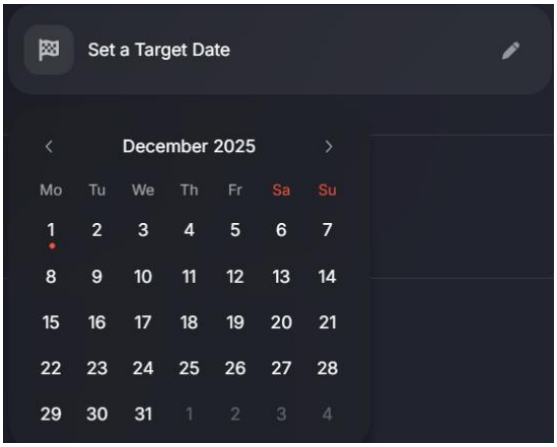
9. Review the Found During selection (options are visible below). OE Assessment is the default value. Found During is the activity that triggers the Finding to be created.



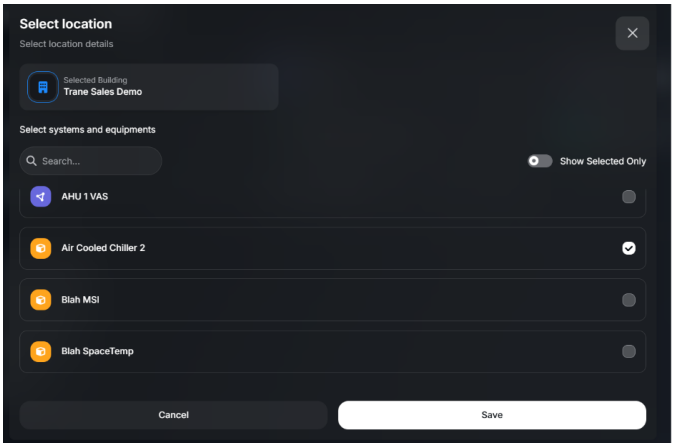
10. Select a Set Target Date.



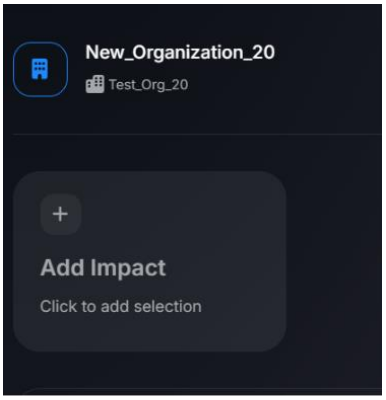
11. To enter a Set Target Date, click the field to open a calendar for selecting the Target Date in the future.



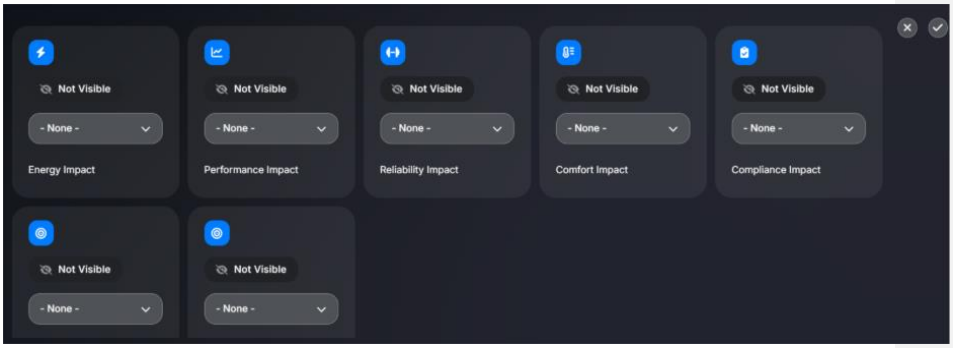
12. Select the building, building system and building equipment that is in scope for the Finding.



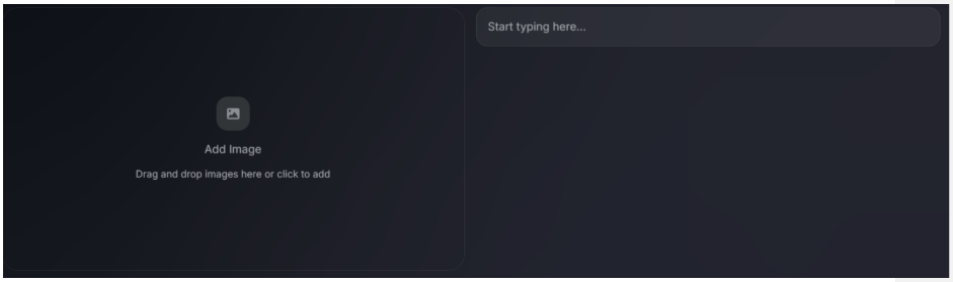
13. Select the Finding Impact by clicking on the Add Impact button.



14. Select the appropriate Impact category and the Impact Priority. Multiple Impacts can be selected and added to the Finding. Click on the checkmark to save Impact selections.

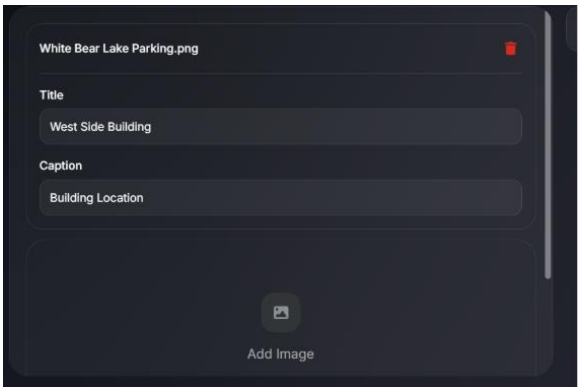


15. Add supporting images to the Finding and include a brief description of the image. Some examples of images to include are charts, screenshots or photos.

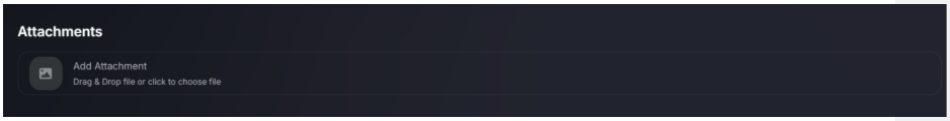


16. Drop an image file to launch the image wizard.
    Add a title and caption and scroll down to save the image to the Finding. The image will

appear in the Finding. The image title and caption appears when hovering over the image. Multiple images can be added to the Finding.

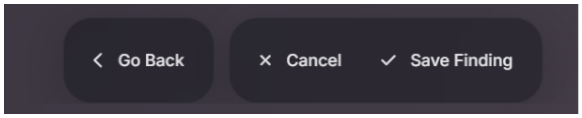


17. Add Attachments to the Finding. Attachments provide additional supporting documentation to the Finding. Some Examples of attachments include spreadsheets or other notable reference files.

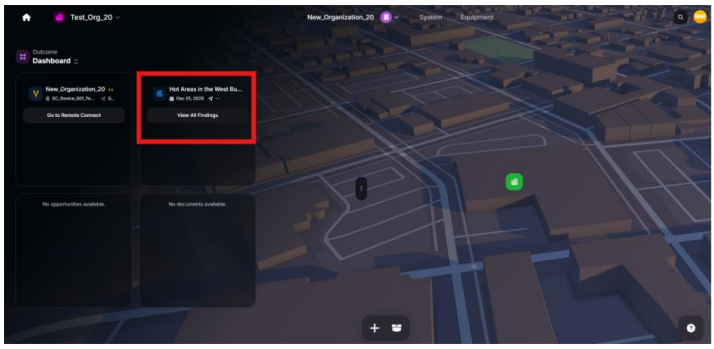


Managing Findings

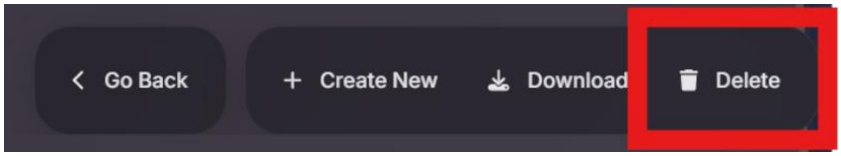
When editing Finding, select Save Finding button located at the bottom of the Finding screen. Select Cancel button to cancel the creation of Finding. This selection is located next to the Save Finding button at the bottom of the screen.



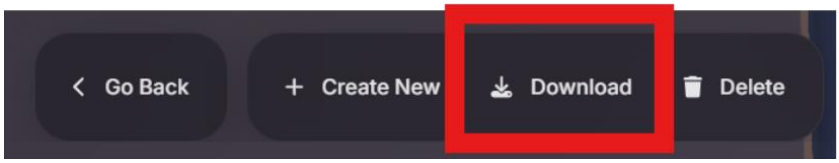
A finding can also be deleted after it has been created. From the Building Dashboard, select the Finding you want to delete.



At the bottom of the Finding, select the Delete button to remove the Finding from Trane Cloud.



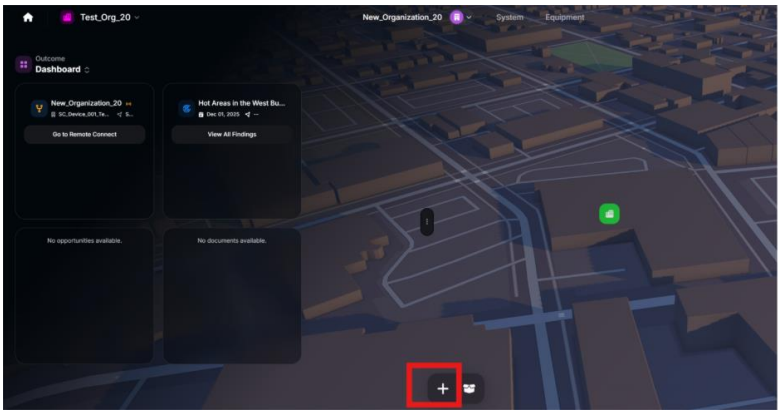
From this same menu, you can also download the Finding from Trane Cloud. You can also select Go Back at any time when a saved Finding is open to close the Finding and return to the Building Dashboard.



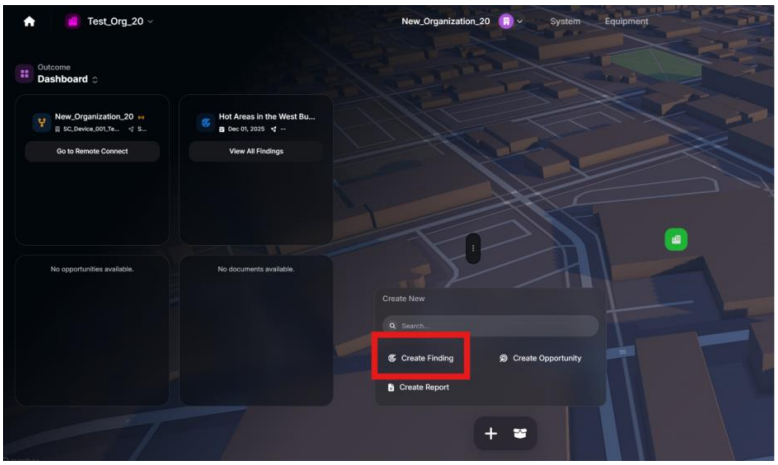
Step by Step Use Case Examples

For Trane Service Technicians who are off-site and identify an anomaly with the building system during routine evaluations.

1. In Trane Cloud, locate the Building Organization and select the Building that you want to create a Finding on. Select the plus icon to create a new Finding.

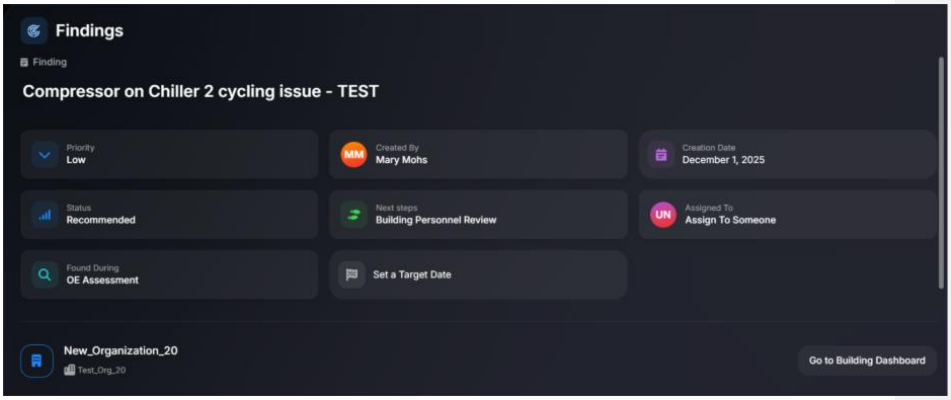


2. Select the Create Finding icon that appears.



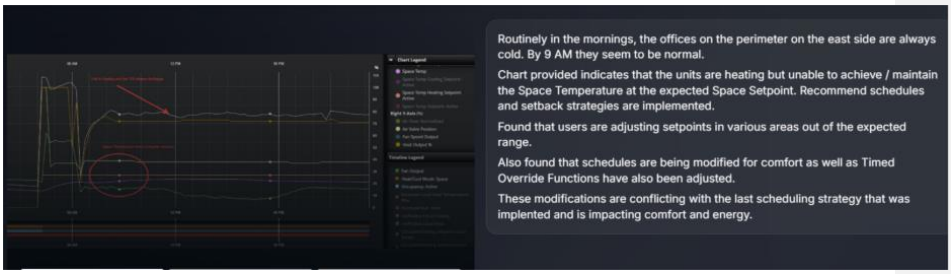
3. Update the Finding title, adding a brief summary of the building issue. Set the Priority and verify the default fields. At this time, the issue is captured and completed with the fields

filled in where you have information.



4. Select the Building System and Equipment that are affected.

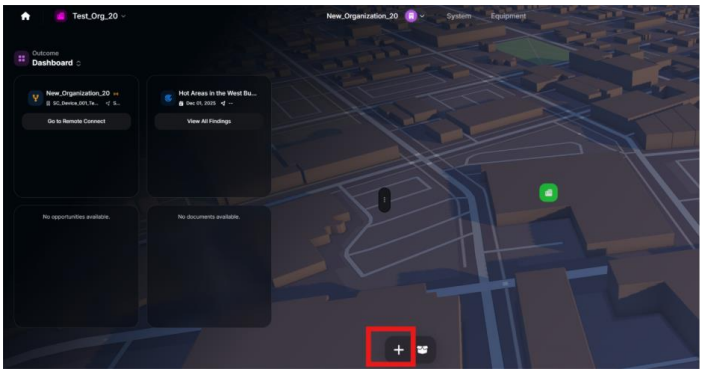
5. Add a graph showing the issue with a brief explanation of what the graph is showing.



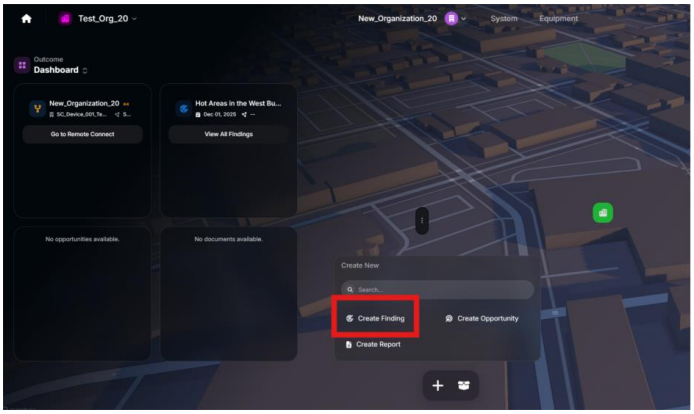
6. Select Save Finding to save the Finding to the Building.

For building managers that need to capture a comment about the building's behavior.

1. In Trane Cloud, locate the Building Organization and select the Building that you want to create a finding on. Select the plus icon to create a new Finding.

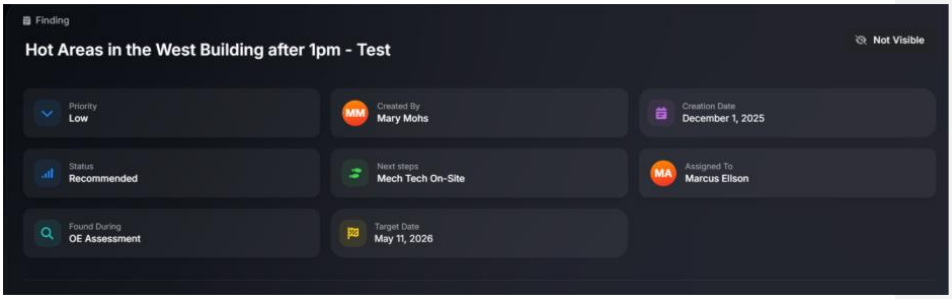


2. Select the Create Finding icon that appears.



3. Update the Finding Title to a brief summary of the building issue you uncovered. Set the Priority and verify the default fields. At this time, you are capturing the issue and completing the fields with the information you have available. Keep the visibility of the Finding as Not

Visible until you are ready to share the Finding with building stakeholders.

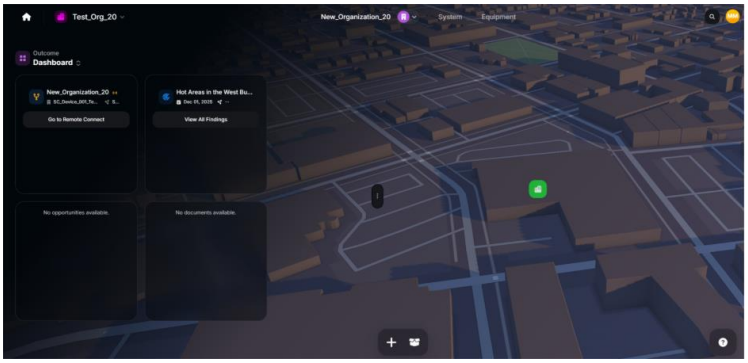


4. Select the Building System and Building Equipment affected by the Finding. The Building System and Equipment is used when comparing Findings within the building.

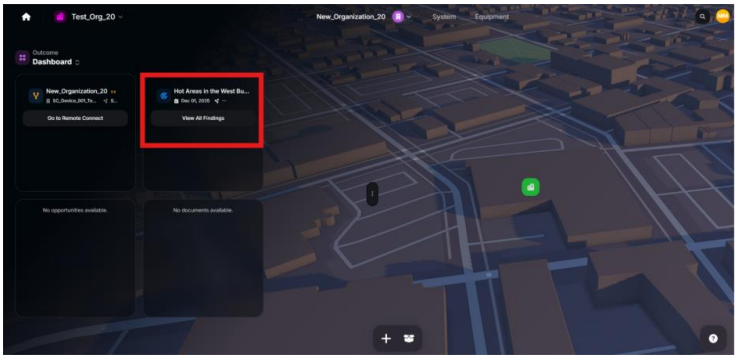
5. Add supporting information in Attachments.
6. Select Save Finding to save the Finding to the Building.

For Trane Service Technicians who are ready to add additional Finding information and to change the status to Visible.

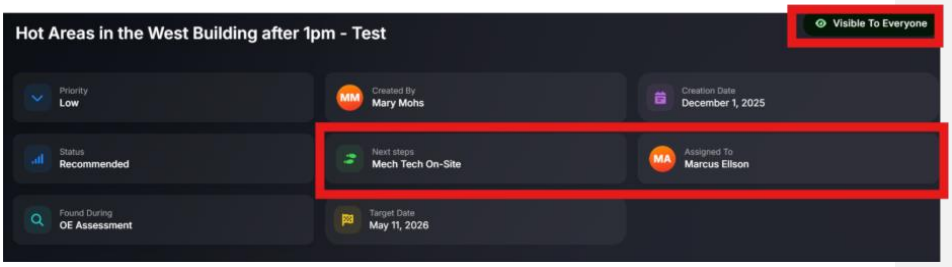
1. Navigate in Trane Cloud to the appropriate organization and select the building you are reviewing.



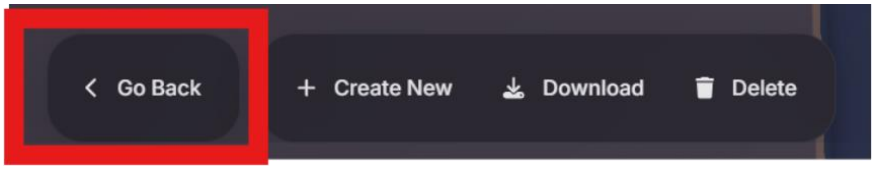
2. You can see the Finding you need to update on the Building Dashboard. Open the Finding by clicking on the Finding name.



3. Review the information in the Finding. Update the Next Steps field and update the Assigned To value to the technician who will complete the Next Steps. Change the Finding visibility to Visible to share the Finding with more building stakeholders.



4. Review and add additional supporting information to the Finding under Images and Attachments.
5. When you have completed your review of the Finding, select Go Back at the bottom of the screen and any changes made will be automatically saved to the Finding.



Customization

There is no customizability for Findings available at this time.

Opportunities

Overview

Opportunities are a snapshot of a possible building enhancement. Opportunities are selected and managed from the Services section in Trane Cloud. An Opportunity is linked to one or more Findings. A building, system or specific piece of equipment in scope is selected on the Opportunity. The Opportunity includes data information to support the business case for change.

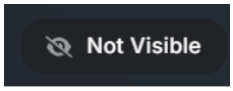
Use Cases

An Opportunity is a summary of a high-level scope of work for a building enhancement. The Opportunity includes building data information to support the business case for change. Opportunities are managed and used by Trane and building stakeholders.

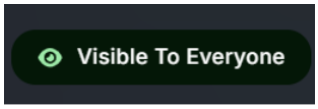
Findings related to the Opportunity are linked in the Opportunity. There can be more than one Finding linked to an Opportunity. This provides traceability of where the Opportunity originated.

User Access

When an Opportunity is initially created, the visibility is limited to Trane with a Not Visible status.



As details are added or refined in the Opportunity, the visibility of the Opportunity can be changed to Visible so that end users can see the Opportunity.

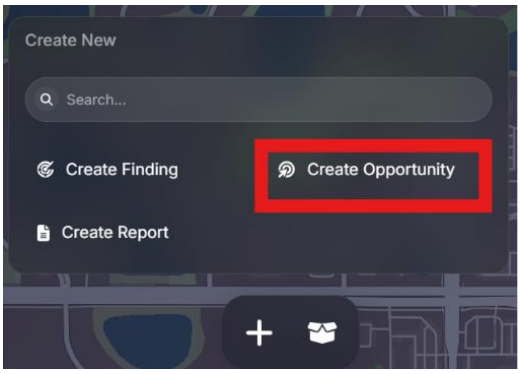


Access to Opportunities is included in the base license offering and is located under the Services tab.

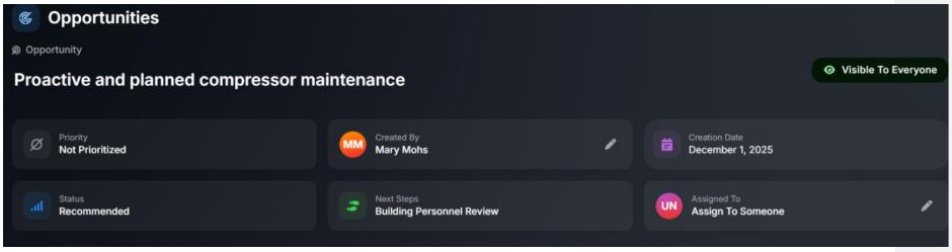
How It Works

Creating an Opportunity

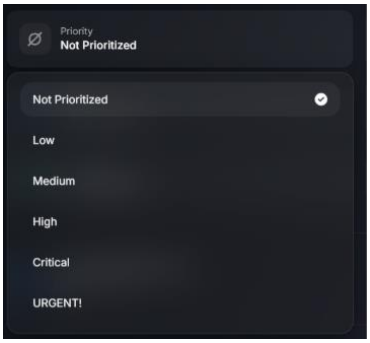
1. Select the plus icon at the bottom of the screen then click on the Create Opportunity icon that appears.



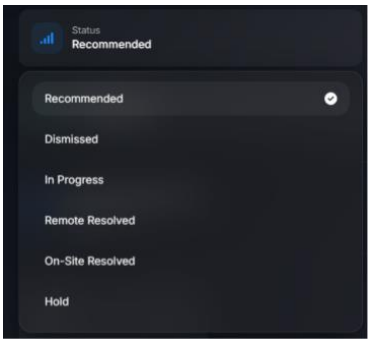
2. Select Click to Add Title to update the new Opportunity with a brief description.



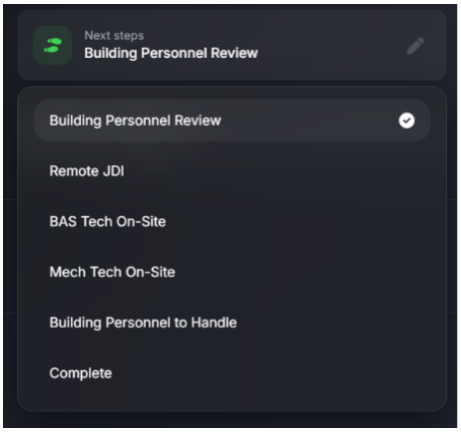
3. The default visibility setting is Not Visible. Opportunities start as Not Visible and can only be seen by Trane employees.
4. Review the Opportunity Priority selection (options are visible below). The Priority selection is based on the urgency of the Opportunity. Not Prioritized is the default value for a new Opportunity.



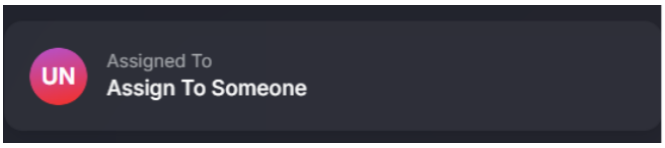
5. Review the Status selection (options are visible below). Recommended is the default value. The Status selection is based on the initial recommendation of the technician.



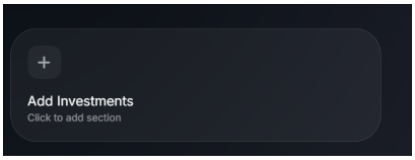
6. Review the Next Steps selection (options are visible below). Building Personnel Review is the default value. The Next Steps selection is based on the next agreed action in the Opportunity's process.



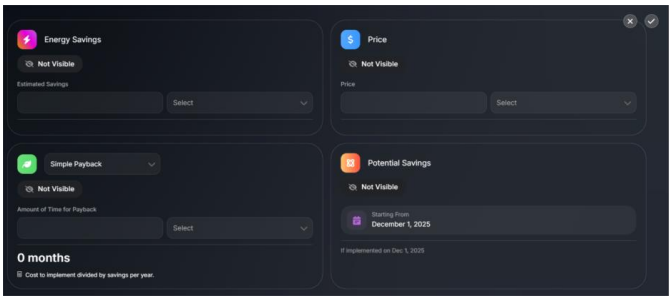
7. Review the Assigned To selection. Assign to Someone is the default value. To select a Trane Cloud user to assign the Opportunity to, select the dropdown and select the appropriate building user to assign the Opportunity to.



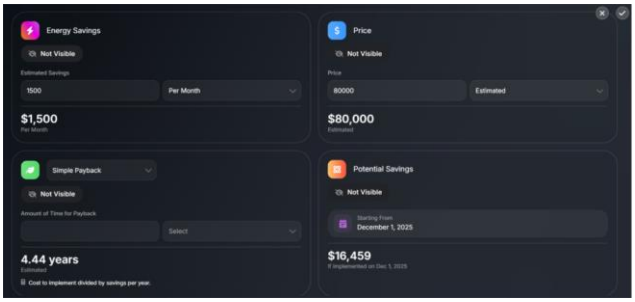
8. Similar to the Impact section in Finding, the Opportunity captures Investments.



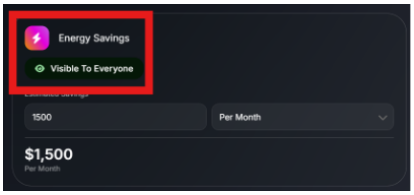
9. Click on the plus icon to add details to Impacts this Opportunity is related to.



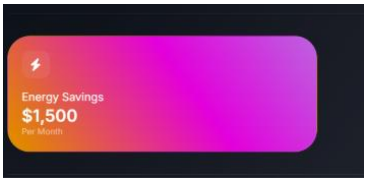
10. Each section in the Investment contributes to the Estimated Investment working on the Opportunity creates. Below is an example of a completed Investment section.



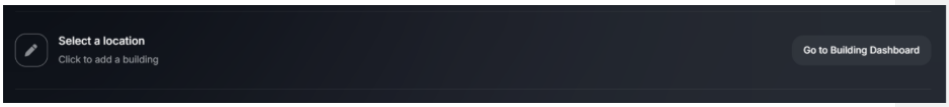
11. For each Investment section, select the visibility icon to Visible to Everyone for the Investment to be shown on the Opportunity.



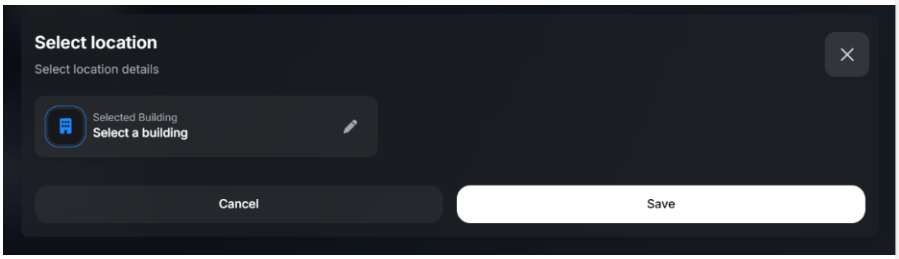
12. See how the Investment will appear in the Opportunity below.



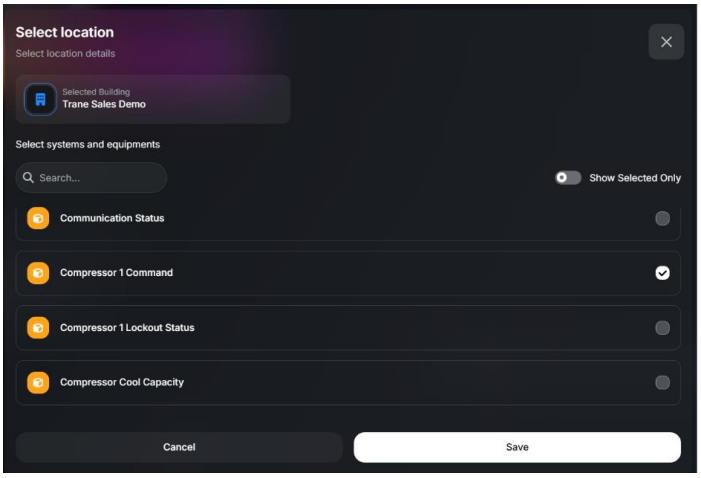
13. Select the location of the Opportunity.



14. Select the Building from the Organization.

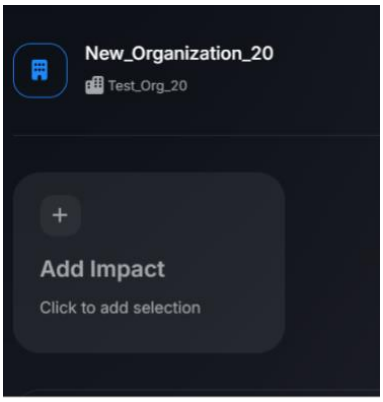


15. Select the Building, System and Equipment and select Save.

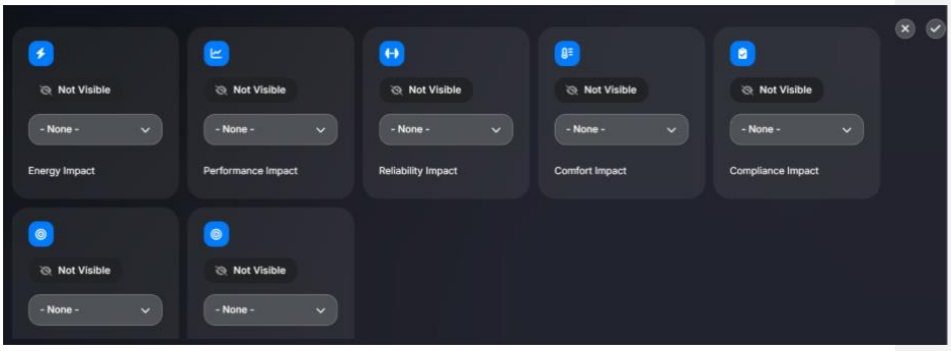


16. The selected Building and Equipment is summarized in the Opportunity.

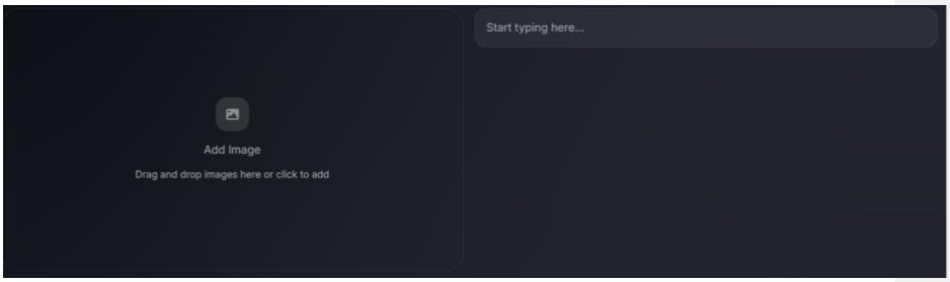
17. Impacts can be added to the Opportunity. Select the Impact by clicking on the Add Impact button.



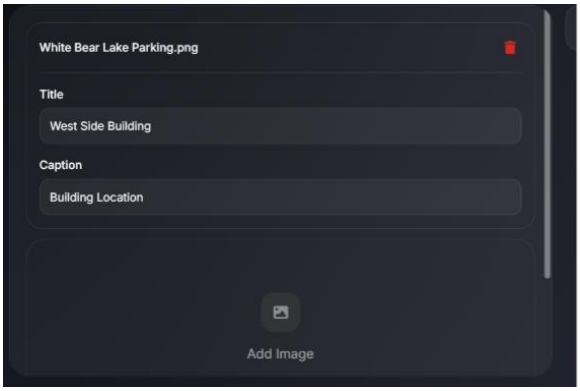
18. Select the appropriate Impact Category and the Impact Priority. Multiple Impacts can be selected and added to the Opportunity. Click on the checkmark icon to save Impact selections.



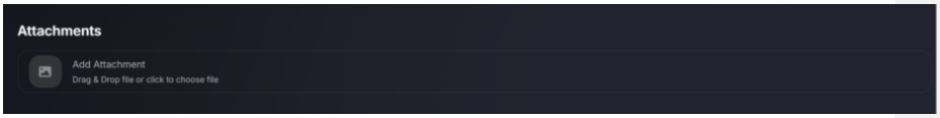
19. Add supporting images to the Opportunity and include a brief description of the image. Some examples of images to include are charts, screenshots or photos.



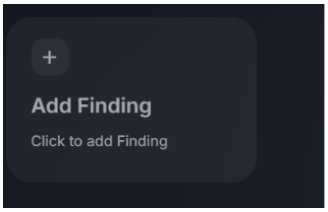
20. Drop an image file to launch the image wizard.
    Add an image Title and Caption and scroll down to Save to add it to the Opportunity. The image will appear in the Opportunity. The image Title and Caption appear when hovering over the image. Multiple images can be added to the Opportunity.



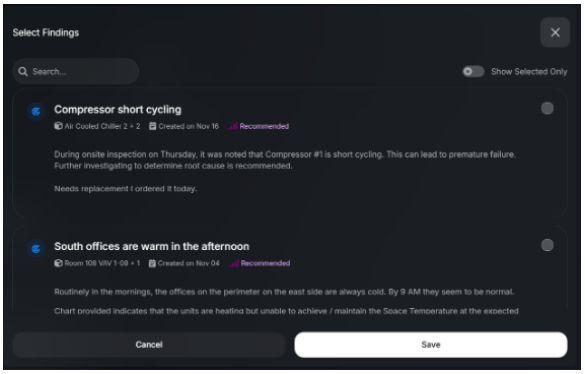
21. Add Attachments to the Opportunity. Attachments provide additional supporting documentation to the Opportunity. Some examples of attachments include spreadsheets or other notable reference files.



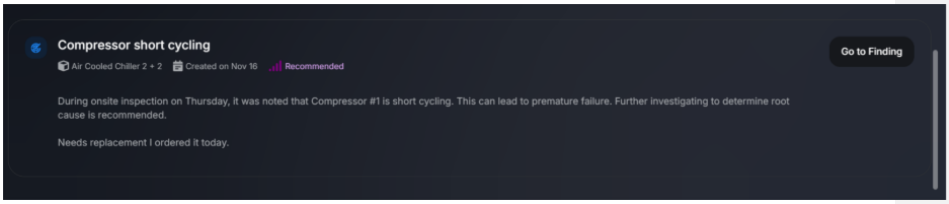
22. Add Findings to the Opportunity. Multiple Findings can be added to a single Opportunity.



23. Click on Add Finding to open Findings attached to the Opportunity's building.

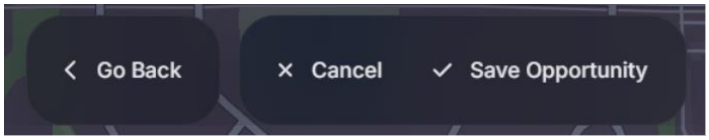


24. Select Save to add the Finding.

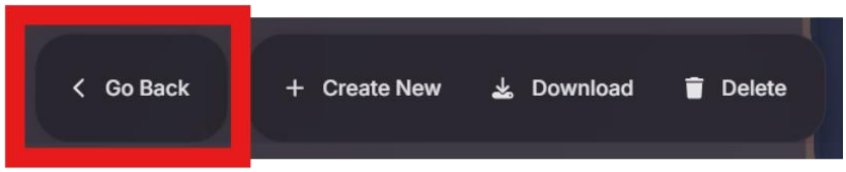


Manage Opportunities

To save a new Opportunity, select the Save Opportunity at the bottom of the page. Alternatively, to return to the Building Dashboard from a new Opportunity, select Go Back. You can also select cancel.



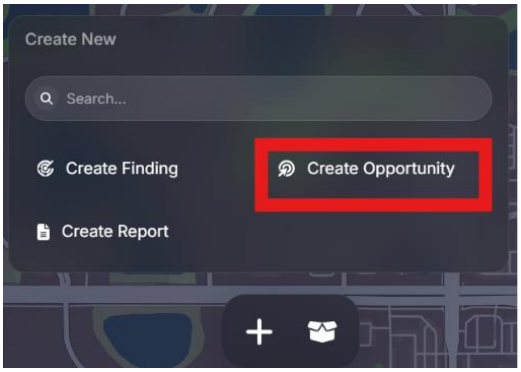
From an existing Opportunity select Create New to create a new Opportunity for the current Organization. From this same menu you can also download a PDF of the Opportunity from Trane Cloud or Delete the existing Opportunity. At any time, you can exit by selecting Go Back to return to the Building Dashboard.



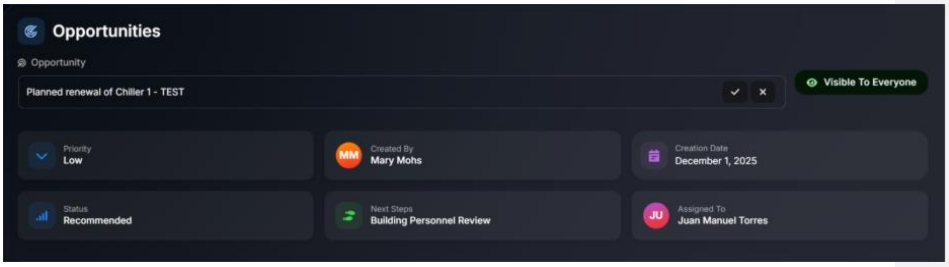
Step by Step Use Case Examples

For building managers who need to prepare for a budget meeting and want to include a chiller replacement in the meeting agenda.

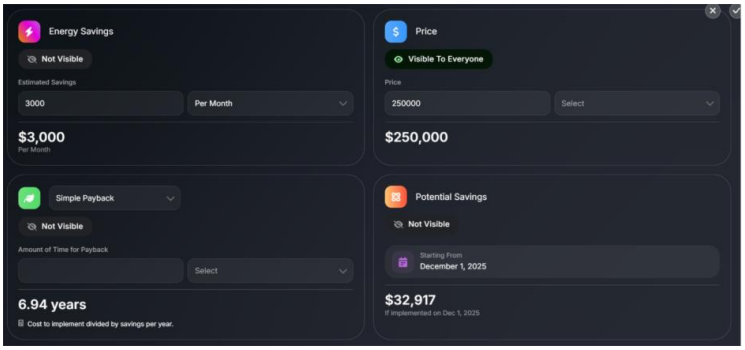
1. In Trane Cloud, select Create Opportunity.



2. Update the Opportunity Title and review the Opportunity default fields. Change the visibility to Visible to Everyone as you will be reviewing the Opportunity with other building stakeholders.

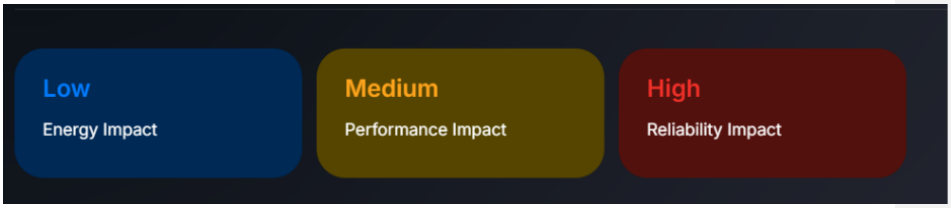


3. Update the Investment section with values provided by Trane and your energy engineer.



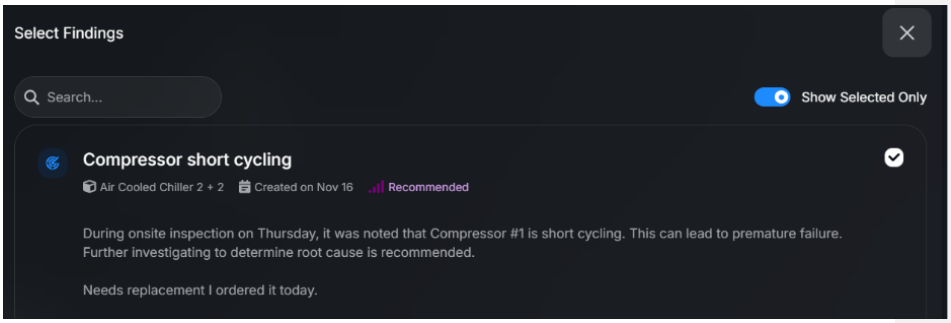
4. Select the Building System and Equipment this Opportunity affects. You can then see other Findings or Opportunities that are linked to this System or piece of Equipment.

5. Add additional Impacts to support the budget discussion on updating the Equipment, selecting different values for Energy, Performance and Reliability based on discussions with your team.

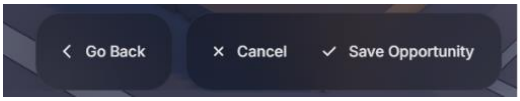


6. Add an image if you have one or skip that section.

7. Add Findings to link to from recent Equipment performance reviews by selecting Add Finding and selecting the Finding, in this case about the compressor short cycling.

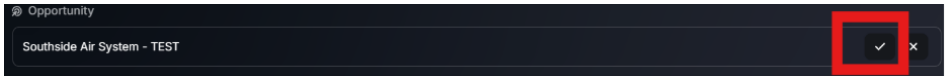


8. Save the Opportunity by selecting Save Opportunity at the bottom of the screen.

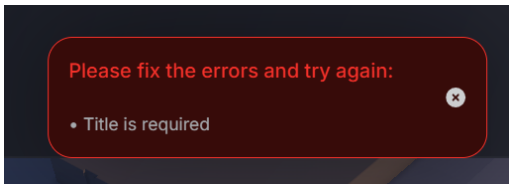


A couple of things to keep in mind:

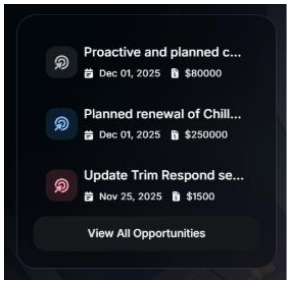
Don't forget to click the checkmark by the Title to accept.



If you do not remember to save the Title, you will see this error.

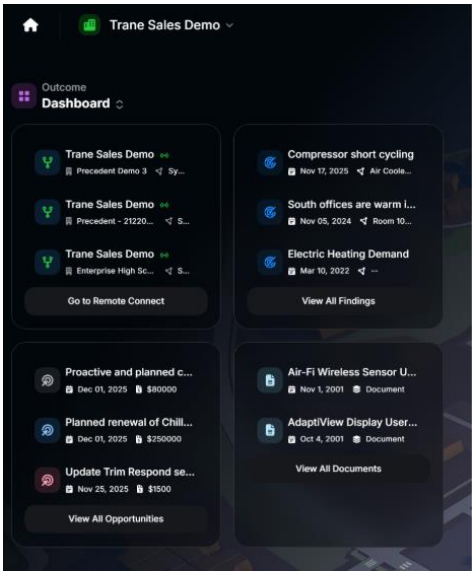


You can see the Opportunity with other Opportunities on your dashboard.

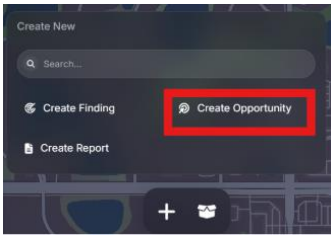


For Trane Service Technicians who are on-site and reporting a potential issue to escalate to the customer.

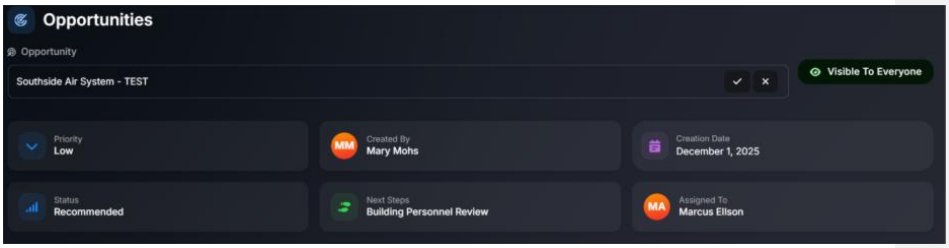
1. Navigate to the Building in Trane Cloud.



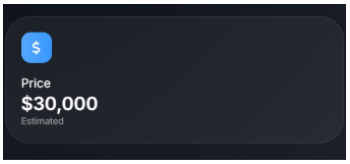
2. Create an Opportunity by clicking the Create Opportunity icon.



3. Add a title to the Opportunity and review the default fields. Change the visibility to Visible to Everyone as you want building stakeholders to view this Opportunity.

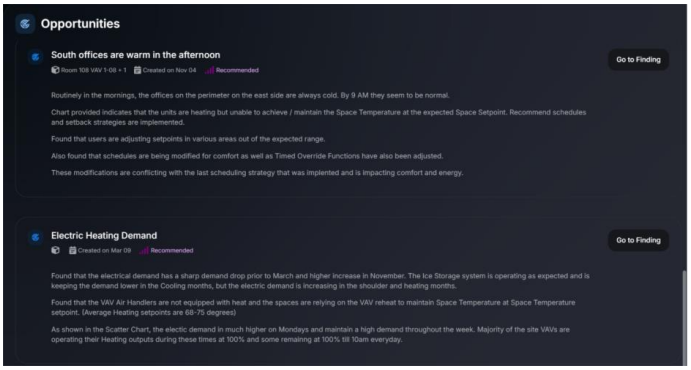


4. Add investment estimates to the Opportunity and make Price Visible to Everyone with an estimated cost.



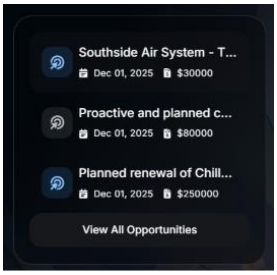
5. Select the Building System and Equipment affected by the Opportunity. Add other information on the Building System and Equipment such as Findings.

6. Select and save the Findings that are related to this Opportunity.

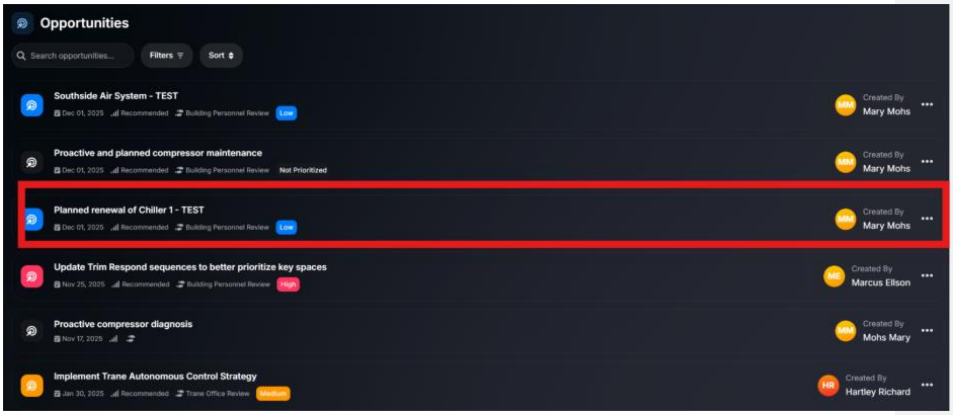


For Trane Service Account Managers who are supporting building managers with estimating project scopes.

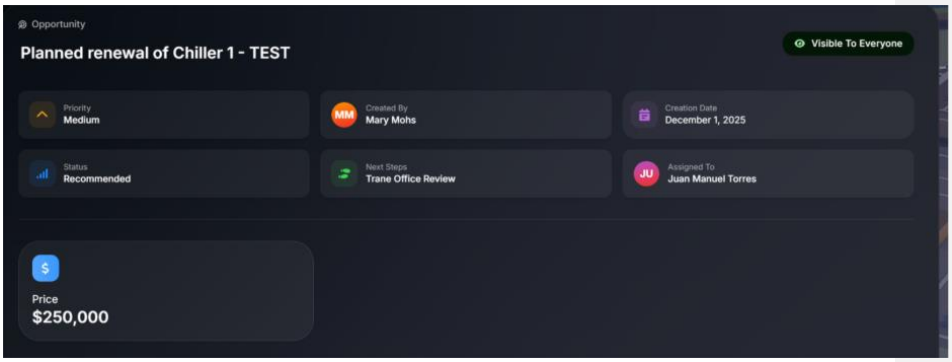
1. In Trane Cloud, navigate to the Building Dashboard and select View All Opportunities.



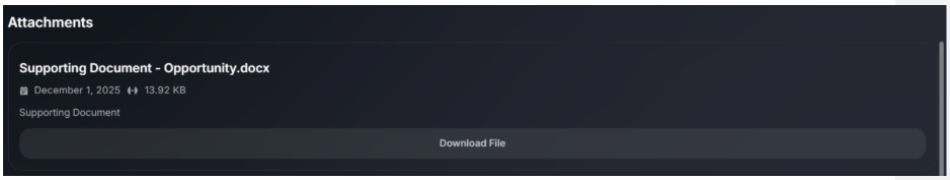
2. Review the Opportunity list and click on the Opportunity and add more information.



3. Review the Opportunity information and update Next Steps, Priority and Price.



4. Under Attachments, add the supporting files to the Opportunity.



5. When you have completed making updates to the Opportunity, click Go Back to return to the Building Dashboard.

Customization

No customizability in Opportunities is available at this time.

Energy Management

Energy Usage & Cost Intensity Chart

Overview

The energy intensity application is designed to be used to view historical trends of energy use intensity (EUI) and energy cost intensity (ECI) based on utility data by displaying values on a chart and providing detailed information in a tabular format for the chart visualization. At least 12 consecutive months of data is required to calculate both EUI and ECI values.

EUI is typically expressed as energy consumption per square foot per year (kBtu/ft^2/year). EUI helps building managers understand how much energy their building uses relative to its size, allowing comparisons with other buildings, and can be used to identify energy savings opportunities.

ECI is calculated by dividing the total cost incurred by a building over 12 months by the total floor area of the building and is expressed as cost per square foot per year ($/ft^2/year).

EUI and ECI are both calculated using bill data that has been manually uploaded or provided by third-party API.

Use Cases

It is recommended that users and their service providers track their energy intensity and cost over time to better analyze the building's performance. This is intended to measure the severity of building performance problems and create compelling events to talk about projects to improve performance. Additionally, by analyzing these trends, users will be able to simply measure the impact of any previously implemented energy cost measures and may be effective with consultations.

This feature is best used by:

- Building operators
- Energy engineers (at corporate level)
- Facility managers (as a stakeholder and not a direct user)
- Trane Building Optimization Coaches
- Trane Optimization/Energy Engineers
- Trane Intelligent Services (TIS) Account Engineers

User Access

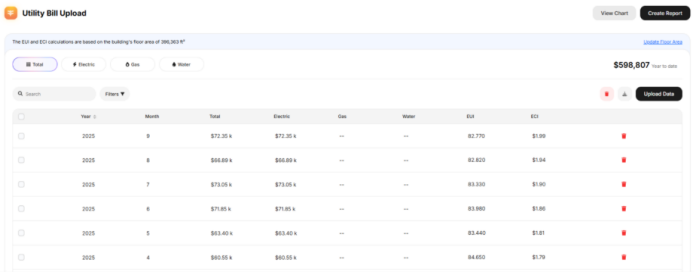
Accessing EUI and ECI data on Trane Cloud does not require a subscription tier if utility bill data is uploaded in Trane Connect under current offerings. Users with Platinum tier subscriptions have the option to use Trane's automated utility bill data collection solution which is much more accurate and reliable than manually entered data.

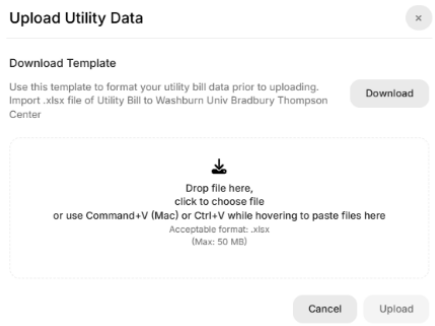
The following users will be able to access and interact with EUI and ECI data with appropriate permissions:

- Facility managers
- Building engineers
- Building operators
- Trane Service Technicians
- Trane Energy Engineers
- Trane Technical Support

How It Works

To calculate EUI and ECI, there must be at least 12 consecutive months of electric and gas utility bill data prior to the month that is being calculated. After uploading utility bill data to Trane Connect (.xlsx) or by utilizing data provided over third-party utility provider APIs. Users will have this data available to view in graph and tabular format in Trane® Connect™.

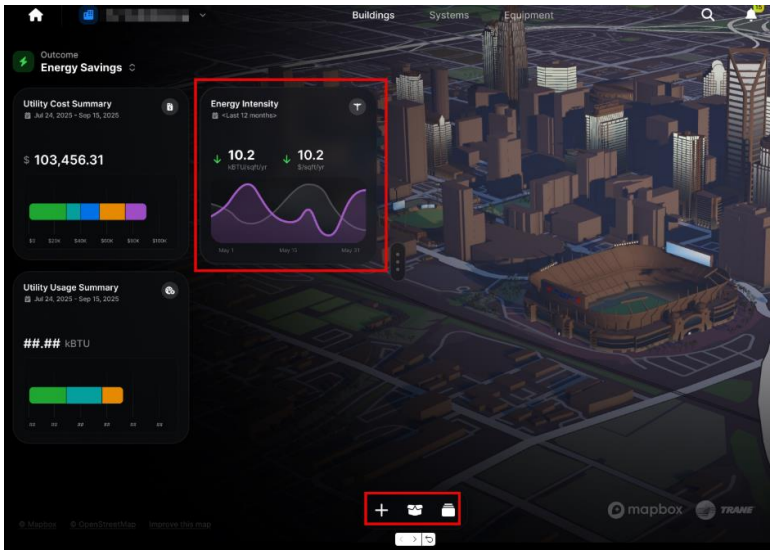




Step by Step Use Case Examples

Once available, data is available for display on both the organization-level and building-level dashboards for the Energy Intensity widget. The Energy Savings Dashboard provides specific details pertaining to energy usage and cost, including energy intensity.

After clicking on the widget, additional details including a data chart and associated data table are available in the Energy Intensity Application. Additionally, navigation options at the bottom of the Dashboard provide an alternative way to access Applications besides using the Dashboard widgets.



Organization-Level View

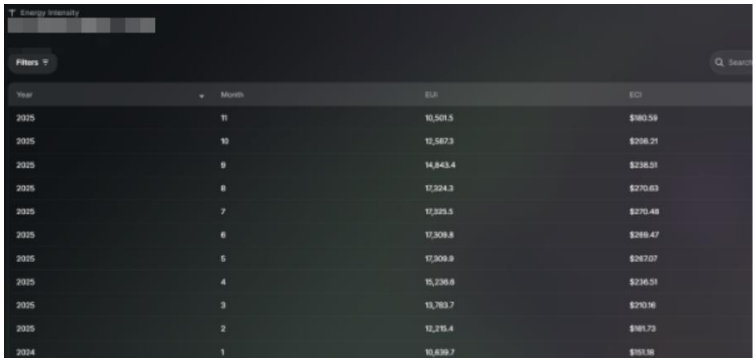
The top portion of the application displays a chart with EUI/ECI values for a selected date range. Highlights of the chart include:

- X axis: Date select/slider
- Left Y axis: $/ft^2/year
- Right Y axis: kBtu/ft^2/year
- Key summary metrics

The bottom portion of the chart includes a two-column grid view to display all associated Buildings' EUI/ECI values for the same date selected as the Organization-level view and is searchable by Building name. With this card view users can see additional details for each Building in the Organization and make easy visual comparisons. The cards also provide the ability to navigate and drill down to view Building-specific details and navigate back up to the Organization.

Building-Level View

A table is displayed below with monthly EUI and ECI values, searchable and filterable by year or a multi-year view.

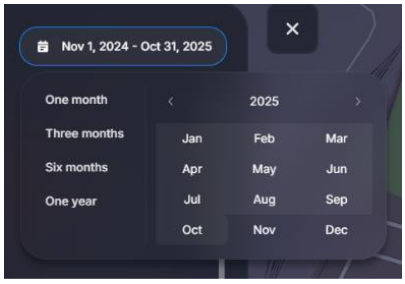


Customization

Within this tool, you can customize the layout, dropdowns, widgets and more by clicking Edit or by dragging in the corner. Users can toggle between a line chart of vertical bar chart and will have an option to select a customized date range or choose from presets (one month, three months, six months and one year).

How to Customize

Navigate to the Chart Type selector at the top right corner of the screen to plot data as either a line or vertical bar chart. Navigate to Date Picker and select a start and end date or one of the preset options.


Nov 1, 2024 - Oct 31, 2025
One month
Three months
Six months
One year
2025
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

Analytic Score

Overview

An Analytic Score is a representation of how well automated tests are running for an Organization, Building, System or piece of Equipment. High scores (up to 100%) indicate that the underlying Systems and Equipment are performing within expected ranges. A low score will indicate that there are analytics that produce many cautionary and potentially critical results.

While analytics do not run based on Organization- or Building-specific data, the analytic results of the underlying Systems and Equipment will be aggregated to produce Analytic Scores for Organizations and Buildings.

Use Cases

Building stakeholders will be able to view Analytic Scores for the organizations they have access to so that they can assess the health of their Systems and Equipment. Scores that have lower values should be looked at more closely to identify specific Systems and Equipment that may need service or need to have their analytic limits adjusted by a service technician.

User Access

Any user that has access to an Organization and/or the underlying Building will be able to view Analytic Scores. Scores will only be available for Buildings that have an active offering which includes analytics such as Intelligent Services, Silver, Gold or Platinum.

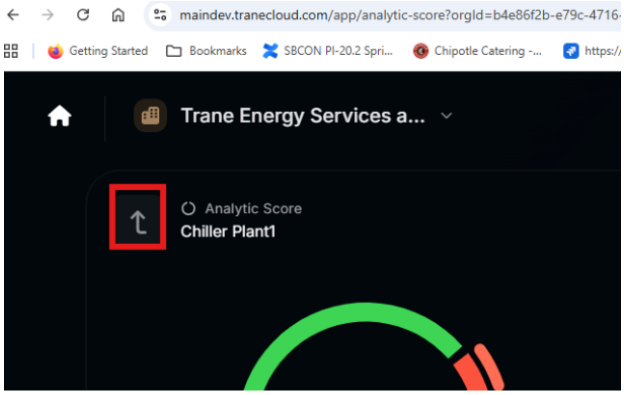
Considerations and Limitations

Only users that have an interest in knowing the health of their systems and buildings need to pay attention to Analytic Scores. Analytic Scores do not reflect the current, up-to-the-minute operation of Equipment, but rather the performance over days, weeks or months.

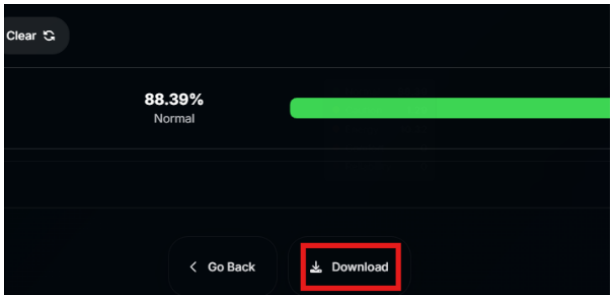
How It Works

In general, each Building, System or piece of Equipment Analytic Summary screen will be able to:

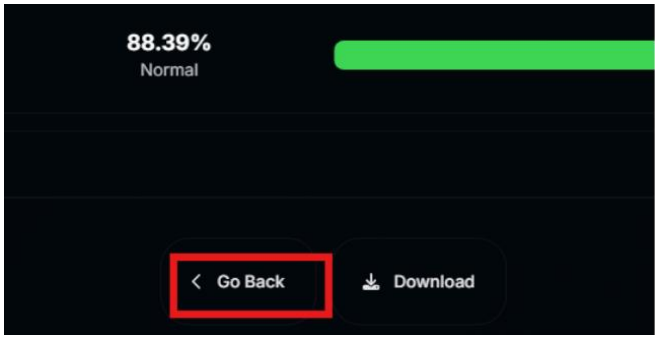
1. Navigate to its parent by selecting the up arrow at the top left of the screen.



2. Be able to download the Analytic Summary as a PDF via the Download icon at the bottom of the page.



3. Be able to go back to the previous screen using the link at the bottom of the page.



Organization-Level Analytic Summary Screen

A Trane Cloud Organization Dashboard will have an overall score for all the Systems and Equipment aggregated from all the Buildings within that Organization. This score (from 0 to 100%) is the percentage of passing automated tests for all Systems and Equipment for the specified time period. There is a graphical representation of the status of those tests:

1. Passed (called Normal Results)
2. Exceeded a cautionary limit (called Caution Results)
3. Exceeded a critical limit (called Fault Results)

Selecting the Analytic Score widget will present additional details (called an Analytic Summary) for that organization's Analytic Score, including specifying the potential percent impact of the faults:

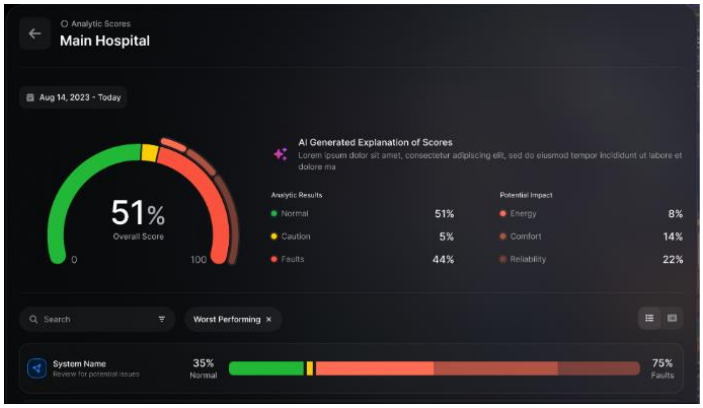
1. Energy impact
2. Comfort impact
3. Reliability impact

This Analytic Summary will have the Analytic Scores (and details) for each building that is part of the Organization. These Buildings will be sorted by Worst Performing by default.

Building-Level Analytic Summary Screen

Selecting a Building from the list in the organization's Analytic Summary will navigate to that building's Analytic Summary. Just like the organization's Analytic Summary, there will be an overall, aggregated Analytic Score of all the Systems and Equipment analytic outputs, but only from that single Building. There will also be status and impact details for the building.

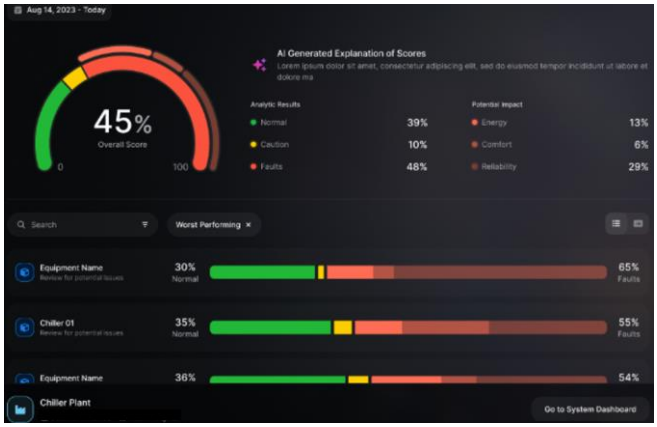
The Building-level Analytic Summary will also have a list of all the systems that are in that building. Each system will have Analytic Score details aggregated from that System and all the Equipment associated with it.



System-Level Analytic Summary Screen

Selecting a System from the list in the building's Analytic Summary will navigate to that System's Analytic Summary. There will be an overall, aggregated Analytic Score for all the analytics in that system and all the Equipment that is part of the system. There will also be status and impact details for the system.

The System-level Analytic Summary will also have a list of all the Equipment that is in that System. Each piece of Equipment will have Analytic Score details for that Equipment.



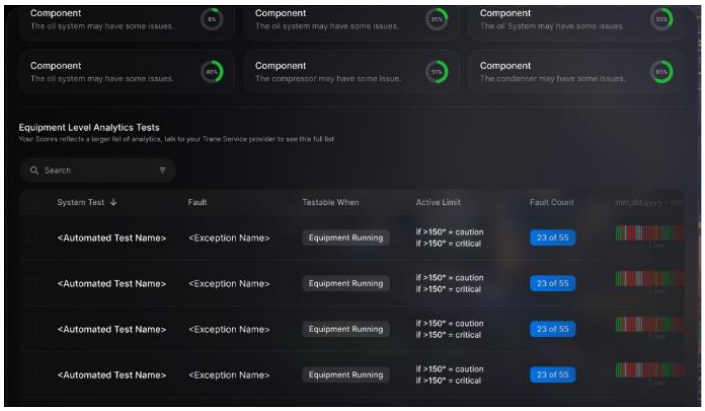
At the bottom of the System-level Analytic Summary are details about each of the System's analytics.

Equipment-Level Analytic Summary Screen

Selecting Equipment from the list in the system Analytic Summary will navigate to that Equipment's Analytic Summary. There will be an overall, aggregated Analytic Score for all the analytics for that Equipment. There will also be Status and Impact details for the Equipment.

This screen will also have a section for each Analytic Category type. For each category, there will be an indication of the percentage of normal results — based on the total number of valid test results for that category.

Just like the System-level Analytic Summary screen, there are Equipment-level details for each of the Equipment analytics.



Step by Step Use Case Examples

A user will navigate to the Analytic Score content to evaluate the health of their Buildings and the Systems and pieces of Equipment within those Buildings. Building owners may be interested in only seeing a high-level account of their Building's health and only view the Analytic Score information from an Organization or Building level to gain confidence that their occupants are comfortable and the Building is running efficiently. Service technicians may be more interested in Analytic Score information at a more granular System or Equipment level to understand what equipment may need service.

Customization

At the Organization, Building and System level, the members of those higher-level components can be viewed either as rows or cards by toggling the switch just above the list of members on the right side.