

Avitas Systems Platform Quick Start Guide

Prepared for Sempra Energy
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1 ABOUT THIS GUIDE

This quick start guide provides introductory material for using the Avitas Systems Platform software.

Note: The Avitas Systems Platform is under development. Information in this guide is limited to features and functionality that were available at the time of its writing. While using the software, you may encounter features and functionality added subsequent to this guide’s publication date. Contact your Avitas Systems representative with questions.

2 ABOUT THE AVITAS SYSTEMS PLATFORM

The Avitas Systems Platform is the cloud-based interface through which users access Avitas Systems data. The platform provides access to:

- > Inspection results including: images, sensor data, findings, and recommendations
- > Persona-based dashboards that let you view Key Performance Indicators and other important industry metrics
- > Warnings and alerts
- > Analytics
- > Reports
- > Details of your company’s asset inventory

The Avitas Systems Platform is accessible through a supported web browser.

3 SYSTEM REQUIREMENTS

3.1 Network Connectivity

The computer in use must be connected to the Internet to access the Avitas Systems Platform. Offline capabilities are not currently available. We recommend a 3G, 4G, or Wi-Fi connection for optimal viewing.

3.2 Supported Platforms

The following platforms are supported for use with the Avitas Systems Platform. Mobile is not currently supported.

OPERATING SYSTEM	RESOLUTION	RAM
Windows 8 and up	Minimum 1024 x 768	8GB recommended (for 3D visualization)
Mac OS 10.12 and up		

3.3 Browser Support



Google Chrome is the only browser currently supported with the Avitas Systems Platform. Other browsers will not render the application correctly.

3.4 Browser Settings

The following settings must be enabled in the internet browser to view the Avitas Systems Platform. See browser documentation for instructions on enabling browser features.

- > Cookies
- > Pop-up windows
- > JavaScript (to view errors, alerts, and preview screens)

3.5 How Avitas Systems Uses Cookies

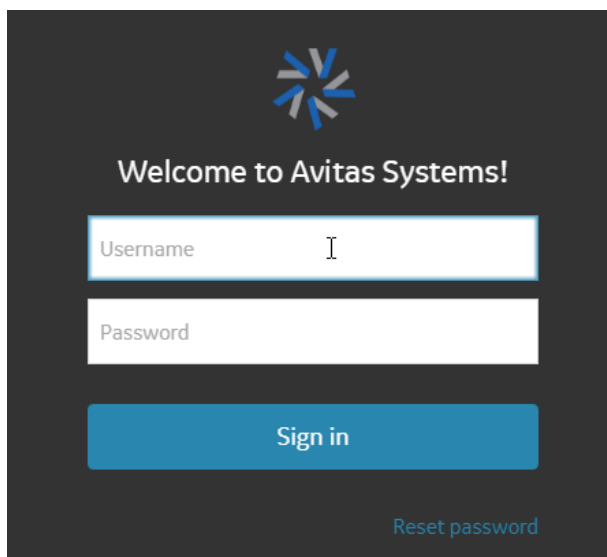
Avitas Systems uses session cookies to remember changes and to keep you logged in as you navigate between pages.

3.6 Logging In to the Platform

To log in to the Avitas System Platform:

1. Ensure that the computer in use meets the systems requirements.
2. In the browser's address bar, enter: <https://inspections.run.aws-usw02-pr.ice.predix.io>. The Avitas Systems Platform **Login Page** opens.

Note: Bookmark the **Login Page** for future sessions.



The screenshot shows a dark-themed login page. At the top center is the Avitas Systems logo, a stylized blue and white starburst. Below the logo is the text "Welcome to Avitas Systems!". There are two input fields: "Username" and "Password". Below the password field is a blue "Sign in" button. At the bottom right, there is a link that says "Reset password".

3. For **Username** and **Password**, enter the alphanumeric user ID and password credentials provided by Avtas Systems customer support. Passwords are case-sensitive.
4. Click **Sign In**.

3.7 Logging Out of the Platform

When finished with a platform session, be sure to log out of the system. Logging out is important to ensure data security.

To log out of the platform, on the lower-left of the platform window, click on the **User Name** and then **Log Out**.

4 CONTACTING CUSTOMER SUPPORT / TROUBLESHOOTING PLATFORM ISSUES

If you have trouble logging in, or if a site feature does not work as expected:

1. Ensure your computer meet the systems requirements described in Section 3.
2. If you meet the system requirements and still have issues, please contact your Avtas Systems Customer Support representative at:

support@avitas-systems.com

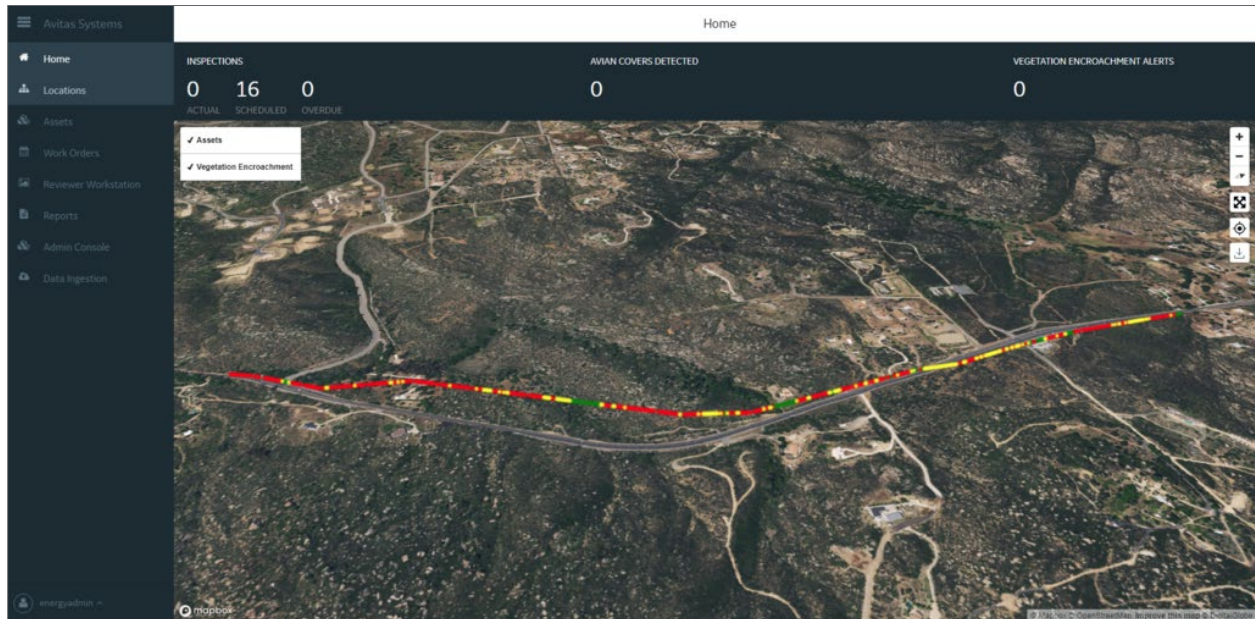
When contacting support, please provide the following information:

- > An explanation of the issue
- > Your browser version
- > A screenshot showing the issue

5 USING THE HOME PAGE

The **Home Page** is the first screen to appear after logging in to the platform. It includes:

- > A Key Performance Indicator (KPI) Bar that displays important metrics relevant to your inspections and industry.
- > A geographic map showing your company's assets. You can filter the map to show assets of certain types. You can click on an asset to view details about it, and to open its inspection history and 3D model (if one exists). If one has been loaded, the map can also display a heat overlay highlighting asset issues such as vegetation alerts.







Platform home page showing heat overlay

5.1 Accessing the Home Page

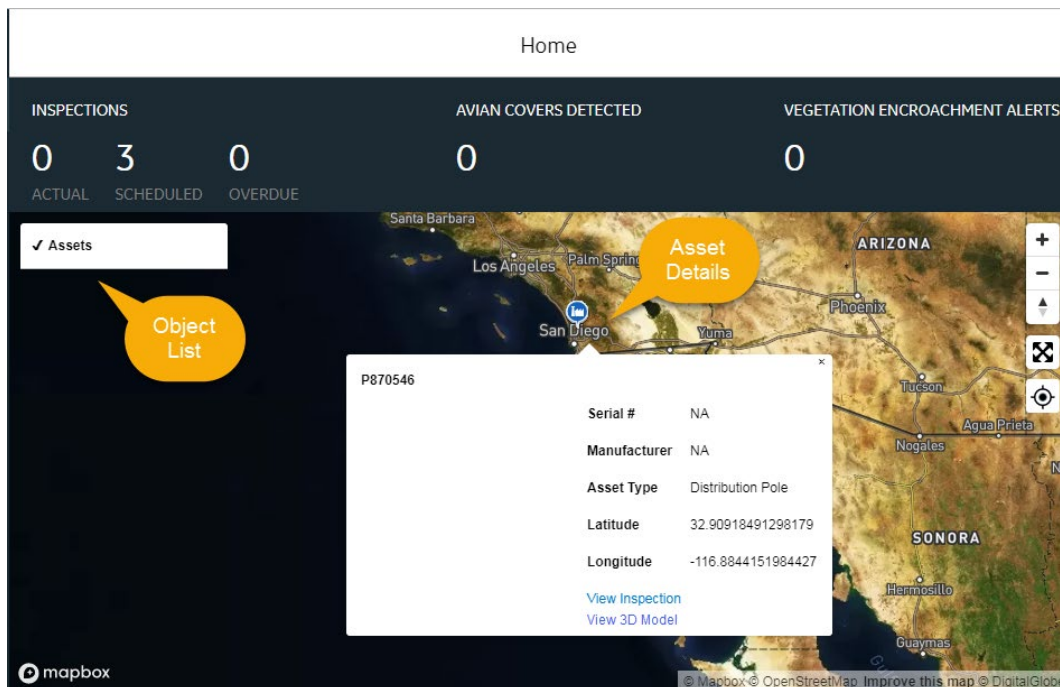
The **Home Page** opens automatically after you log in to the platform.

To return to the **Home Page** during a session, on the platform menu, click **Home**.

5.2 Changing the Map View

To:	Use:
Zoom in or out on the map.	
Toggle between Full and Regular screen mode	
Pan the map	Click and drag in the direction you want to view
Reset the map to its original settings	
Download the map's GEO data file	

5.3 Working With Map Objects



The screenshot displays the Avitas Systems map interface. At the top, there are three summary cards: 'INSPECTIONS' with 0 actual, 3 scheduled, and 0 overdue; 'AVIAN COVERS DETECTED' with 0; and 'VEGETATION ENCROACHMENT ALERTS' with 0. Below these is a map of the southwestern United States, showing Arizona and Sonora. A popup window for asset P870546 is open, displaying the following details:

Serial #	NA
Manufacturer	NA
Asset Type	Distribution Pole
Latitude	32.90913491298179
Longitude	-116.8844151984427
View Inspection View 3D Model	

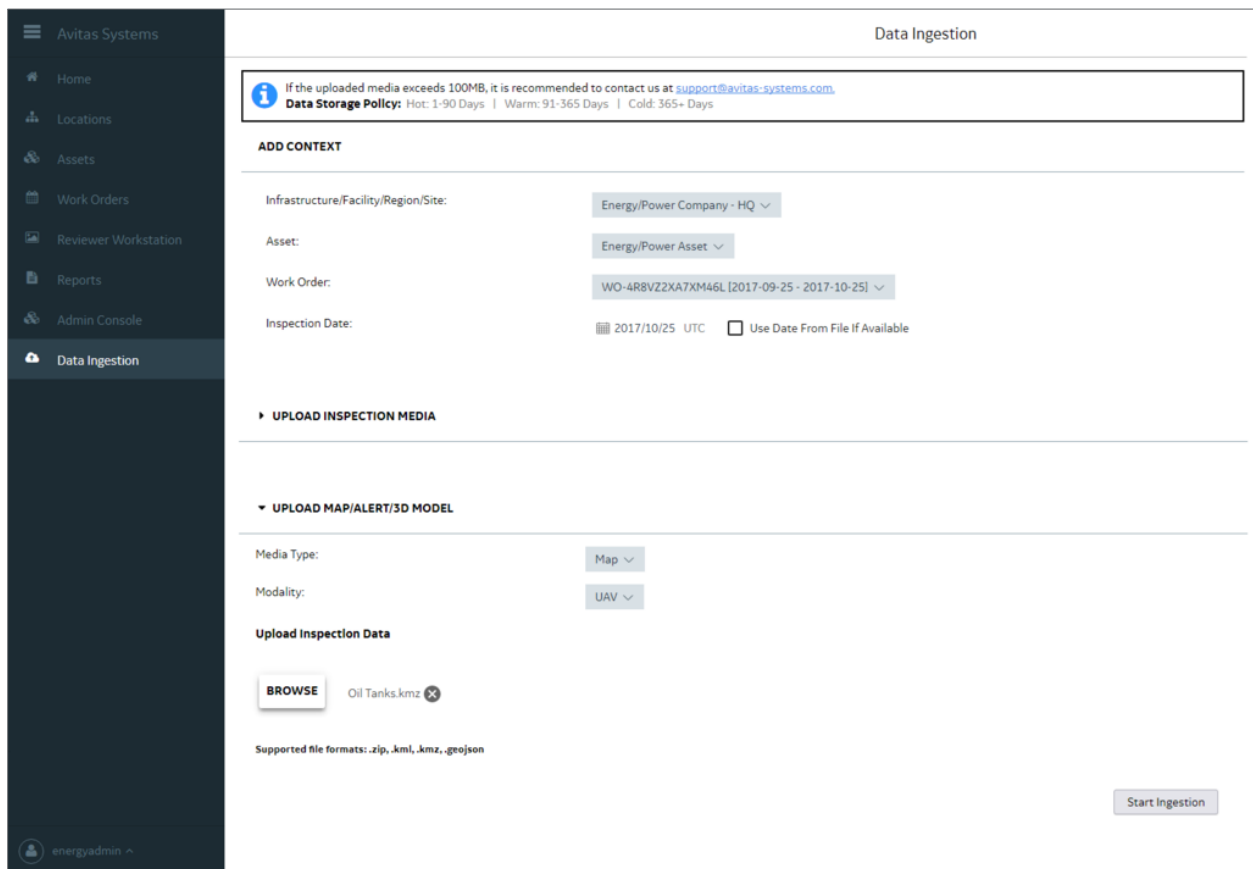
Other interface elements include a search bar with 'Assets' selected, an 'Object List' callout, and a 'Mapbox' logo at the bottom left. The map includes standard navigation controls like zoom in/out, pan, and reset.

- > To show or hide a particular object type (e.g., assets), in the map, check or uncheck it in the Object List.
- > To view details for an object, click its icon in the map.
- > To view an asset’s inspection history or 3D model, first click its icon to display its details, then click the **View Inspection** or **View 3D Model** link.

6 INGESTING INSPECTION DATA

Use the Data Ingestion screen to upload image and data files to make them available in the platform.

- > For visual inspections, use the **Data Ingestion** screen to upload still picture, video, and 3D model image files. The image files you upload will then be available for viewing in the **Reviewer Workstation**.
- > Use the use the **Data Ingestion** screen to upload data files such as maps and alerts.



Data ingestion screen

6.1 Accessing the Data Ingestion Screen

From the **Platform** menu, select **Data Ingestion**. The **Data Ingestion** screen opens.

6.2 Ingestion File Support and Limitations

File ingestion from the **Data Ingestion** screen is subject to these limitations:

File location	Files must be located on a local or mapped network drive.
Max file size	Individual files: No limit During a single upload: 100MB
Number of Files	During a single upload: 1000 files For a single inspection: No limit
Supported file types	Pictures: BMP, JPG, PNG, TIFF Videos: AVI, MP4, MOV Map/Alert/3D Models: GEOJSON, LAS, KML, KMZ, ZIP
Characters in file names	No limitations – Any illegal characters in file names will be automatically removed during ingestion.
Duplicate files	The Data Ingestion screen prevents file duplication by automatically preventing ingestion of files that have already been uploaded to the current inspection. This determination is made by comparing file content – file name is not a determining factor.

6.3 Ingesting Files from the Data Ingestion Screen

With the **Data Ingestion** screen displayed:

1. In the **Add Context** section, choose the inspection to upload files for by selecting the Site, Asset, Work Order, and Inspection Date.
 - Inspection Date associates the file with a specific date (which may be different from the date on the work order).
 - Optionally, instead of selecting an inspection date, you can opt for the platform to use the date embedded in the file (e.g., in the image metadata).
 - Note: Currently, the **Context** section must be completed even for file uploads not associated with a specific inspection (e.g., a GEOJSON file containing vegetation alerts).
2. To upload still image or video files:
 - a. Expand the **Upload Inspection Media** section.

- b. Specify the **Sensor Type**: RGB, IR, LiDAR. Note: This is not necessary for video files.
- c. Click the **Select Media** button to browse to and select the files you want to upload.
 - > Note: The **Select Inspection Details** button is not currently functional.
 - > Note: The **Select Corrosion Details** button is not currently functional.
3. To upload map or 3D model files:
 - a. Expand the **Upload Map/Alert/3D Model** section.
 - b. Specify the **Media Type**: 3D Model, Alert, or Map.
 - c. Specify the **Modality** that was used to collect the media.
 - d. Click the **Browse** button to browse to and select the files you want to upload.
4. After selecting files, click the **Start Ingestion** button. A status bar displays the ingestion process.
5. When ingestion is complete, click **View Ingestion Logs** to see the results.



For LAS (3D model) files, after ingesting the file, please contact Avitas Systems Customer Support so that they can complete the setup process for the file. Please provide the location, asset, and date that the LAS file has been ingested for.

6.4 Data Ingestion Tips

- > Caution: Do not navigate away from the Data Ingestion screen or close your browser while data ingestion is in process. Doing so will terminate the process.
- > If ingestion “hangs” for any reason without completing, click the Stop Ingestion button. Once ingestion stops, click Start Ingestion to re-start the process. The process will resume at point that it left off.
- > To speed ingestion, you can open multiple concurrent instances of the Data Ingestion screen in separate browser tabs and perform ingestion in each.
- > The following the Data Ingestion screen controls are in development and not currently supported:
 - > Custom Tag/Value
 - > Select Inspection Details
 - > Select Corrosion Details

7 USING THE REVIEWER WORKSTATION

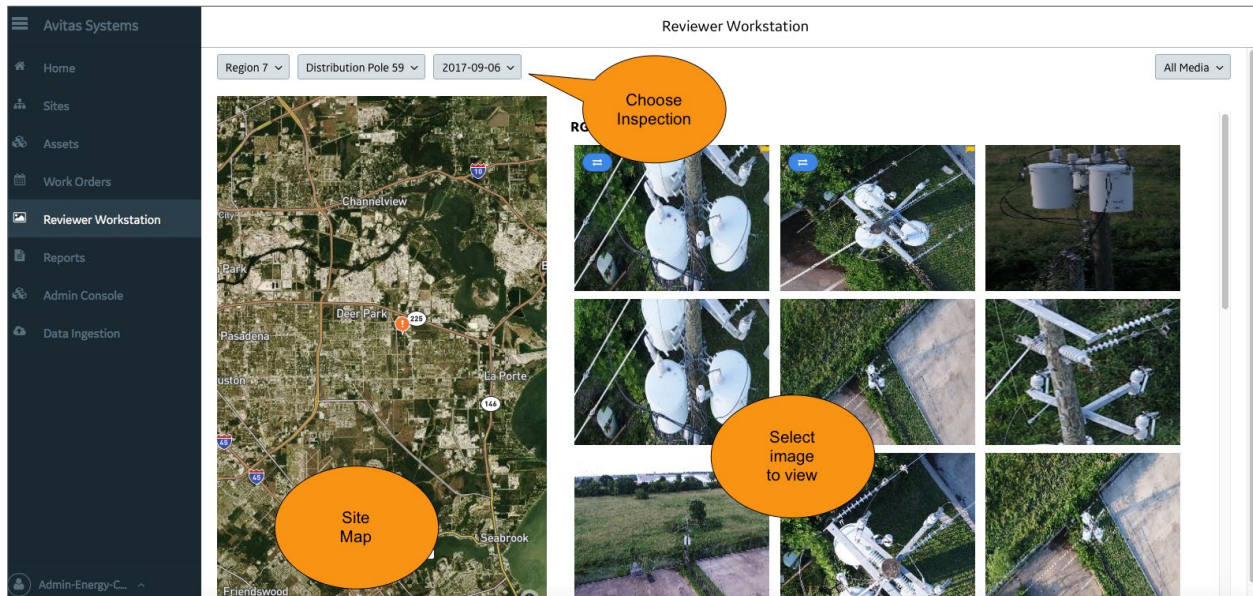
The **Reviewer Workstation** is where you can view the results of visual inspections. Here you can:

- > View color (RGB) and Infra-red (IR) images taken during an inspection
- > View video taken during an inspection
- > View a 3D model of an asset. You can pan and zoom on the model as well as view any ingested images that have been associated with points on it.
- > View annotations added to the images. Image annotations identify anomalies found during the inspection. Annotations can be added manually by the inspector or automatically by image analytics. An annotation can include text that describes a finding, damage mechanism, and/or provides a recommendation.
- > Run analytics against images for automatic detection of things like asset components and corrosion.

7.1 Accessing the Reviewer Workstation

From the **Platform** menu, select **Reviewer Workstation**. The **Reviewer Workstation** screen opens.

You can also launch the Reviewer Workstation from the map on the **Home Page** by clicking an asset icon to display its details and then clicking the **View Inspection** link.



Reviewer Workstation

7.2 Viewing Inspection Images

With the **Reviewer Workstation** displayed:


1. To find an inspection, use the dropdown lists at the top left of the screen to select the **Site**, **Asset**, and **Inspection Date** of the inspection. If assets are associated with a Unit (e.g., a plant) they are sorted alphabetically by Unit.

After you select an inspection, the left side of the screen displays either:

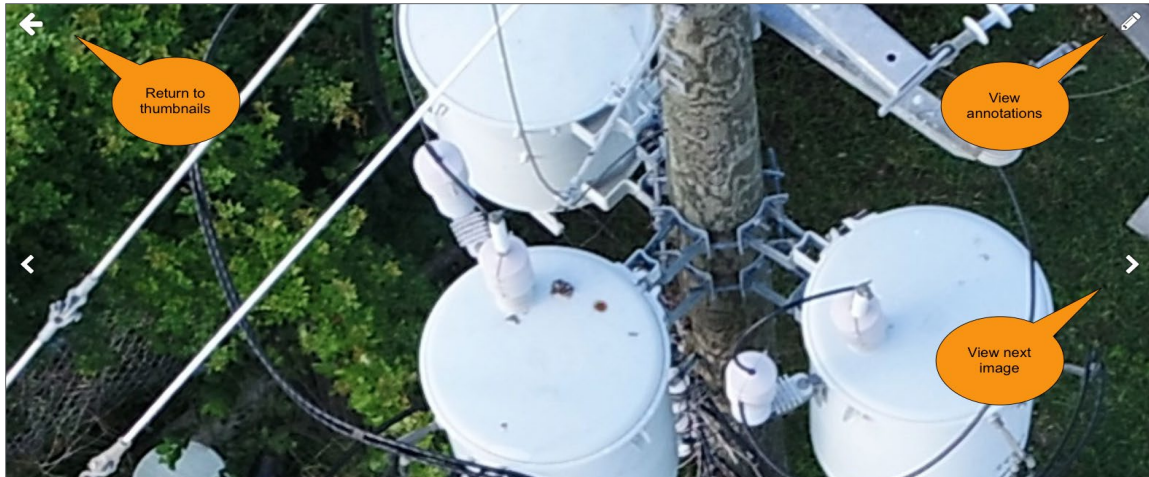
- > A 3D model of the asset, if a 3D model has been loaded into the system.
 - > A geographic map showing the asset's location, if no 3D model is available.
2. If images exist for that inspection, they will be displayed as thumbnails on the screen. If no thumbnails appear, images are not yet available for this inspection. Check back later or consult your Avitas Systems inspection support personnel.

Images that have been annotated include a yellow flag in the upper-right corner of their thumbnail. Images with annotations are listed first.



Optionally, use the  link in the top-right of the screen to filter the display by media type (for example, RGB, IR, Video, etc.).

3. Click any thumbnail to view that image. Clicking a thumbnail opens the full image.
4. With the full image displayed, to:
 - > Return to thumbnails, click the arrow in the top left.
 - > Browse to the previous or next image, use the < > icons on either side of the screen.
 - > To view annotations, click the Pencil icon in the upper-right.



Full image, highlighting action controls

7.3 Working with Image Annotations

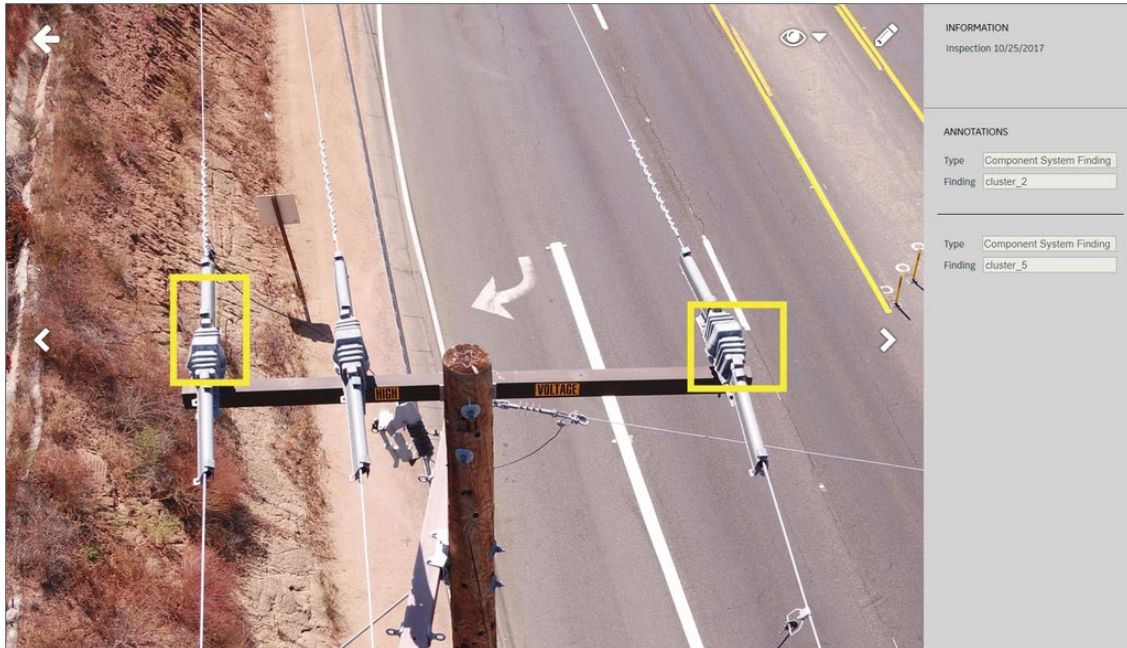
Annotations on images communicate findings about an asset. These can be added manually by an inspector, or automatically by running analytics on an image.

To view and work with annotations:

1. On the initial **Reviewer Workstation** screen, select an image to view by clicking its thumbnail. This opens the image in full size. Images that currently have annotations include a flag in their upper corner of the thumbnail.
2. With the full-size image displayed, click the Pencil icon in the upper right of the image. The annotated version of the image is displayed.

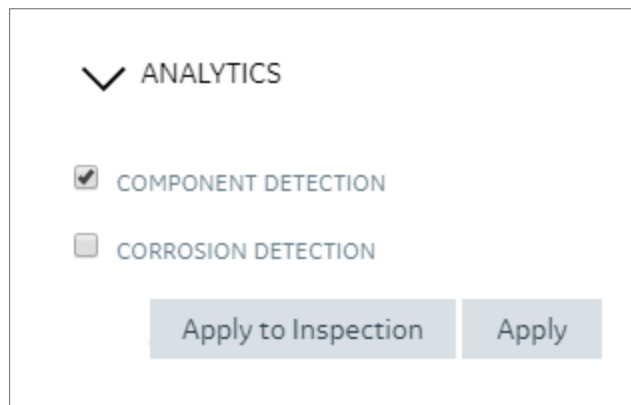
For each annotation, the following information may be available:

- Finding provides a description of the anomaly.
- Damage Mechanism indicates the anomaly category.
- Severity provides a numeric assessment of the anomaly's potential for disruption, from 1 (lowest) to 5 (highest).



Example of annotation

3. An image can have multiple annotations. To see which Finding goes with which an annotation, position the mouse pointer over the annotation box in the picture.
4. Optionally, you can choose to run analytics on an image to automatically detect asset components and/or corrosion. To run analytics:
 - > Check the box(es) for the analytics you want to run.
 - > Click either Apply to Inspection (to apply the analytics to all images in the inspection), or Apply (to apply the analytics to only the current image).

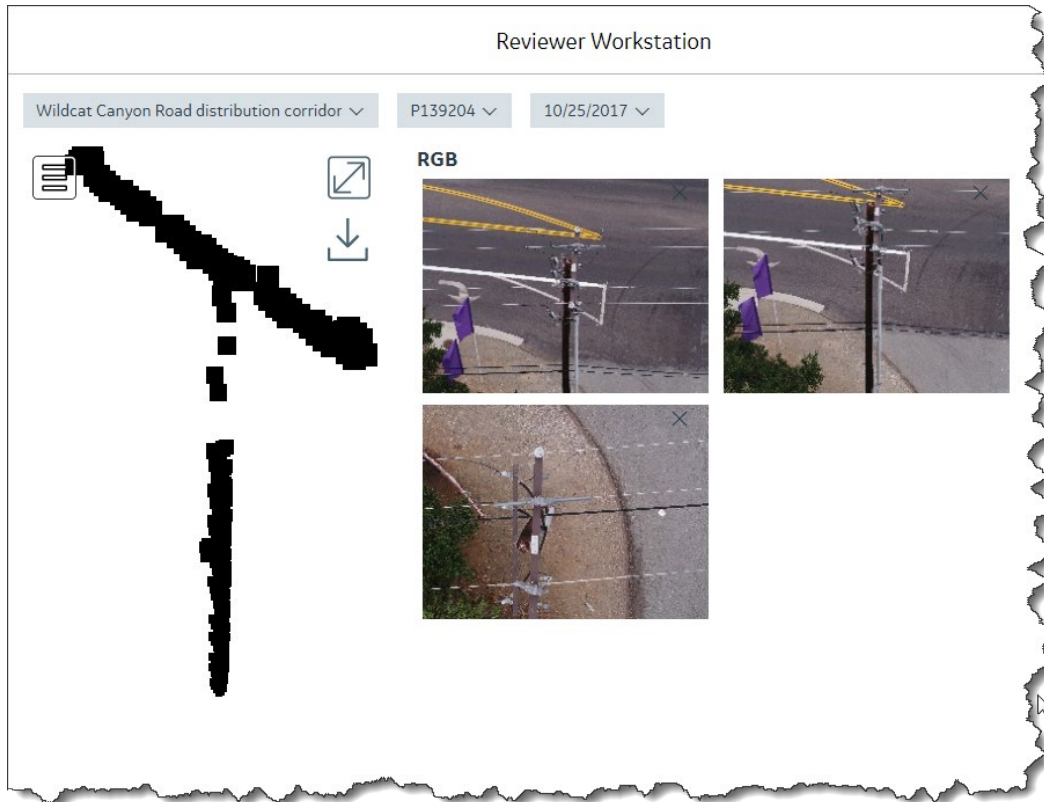


5. To show/hide annotations on the image, click the Eye icon at the top of the image to open the Annotation Filter.

7.4 Working with 3D Models

If a 3D model of a site or asset has been loaded into the system, that model is available when you select the site or asset in the **Review Workstation**. You can manipulate the models to gain insights into the site or asset.

For site models, you can also view inspection images associated with specific points on the model. Note: This functionality will be extended to asset models in a future release.





Asset 3D model in the Reviewer Workstation

7.5 Navigating a 3D Model



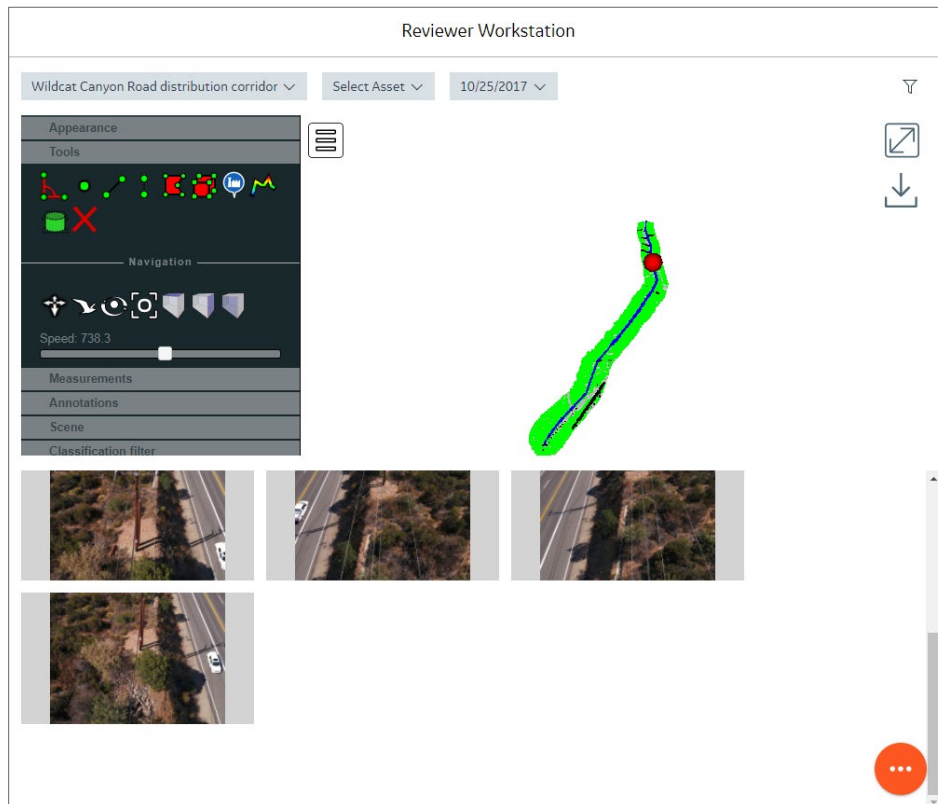
3D site model in the Reviewer Workstation

1. To pan the model image, click and drag in the desired direction.
2. To zoom in on the image, scroll up. To zoom out, scroll down.
3. To view the model in full screen mode, use the  icon.
4. Use the  icon to open the 3D Model Toolbox. The Toolbox contains a set of utilities you can use to manipulate and provide different views of the model. For best results, enter full screen mode before using the Toolbox.

Note: Not all Toolbox utilities are functioning or supported at this time. They will be fully supported in a future release of the Platform. For more information, contact Avitas Systems Customer Support.

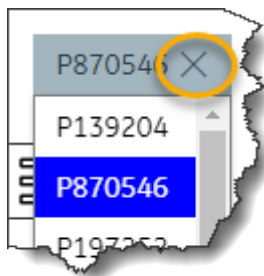
7.6 Viewing Inspection Images for a Site Model

For site models, you can select and view inspection images that were collected for points on the model.




To view the inspection images associated with a point on a site model:


1. In the **Reviewer Workstation**, select the Site and Inspection Date that you want to view. Do not select an asset. If you previously selected an asset, to clear the selection, expand the Asset list and click the **X** next to the asset name:



2. Display the model in full screen mode. You may also want to zoom in on the model to make point selection easier.

3. Open the **3D Model Toolbox**. In the Tools group, click . This places you in a point selection mode. Now, as you move your mouse pointer over the model, the pointer changes to a pink dot.



4. Click on the spot in the model for which you want to view images.
 - If images were collected for that point, their thumbnails are displayed on the screen. By default, the screen will display up to 10 images at a time. To view additional images, click .
 - If no images were collected within 50 meters of that point, a message is displayed alerting you.
5. Click a thumbnail to view it at full size. Click the Back arrow at the top left of the screen to return to thumbnail view.
6. To view images for other points on the model, click and drag the pink dot to additional points on the model.

8 VIEWING REPORTS

The Avitas Systems Platform provides a range of reports on mission-critical subjects including inspections, histories, key metrics, assets, and regulatory compliance. (Note: Currently, only inspection reports are available.)

Access reports from the **Reports** module. In the **Reports** module, you can:

- > Browse a personalized list of recent reports
- > Search for and retrieve all system reports
- > View, print, and download individual reports
- > Email reports (not currently available)

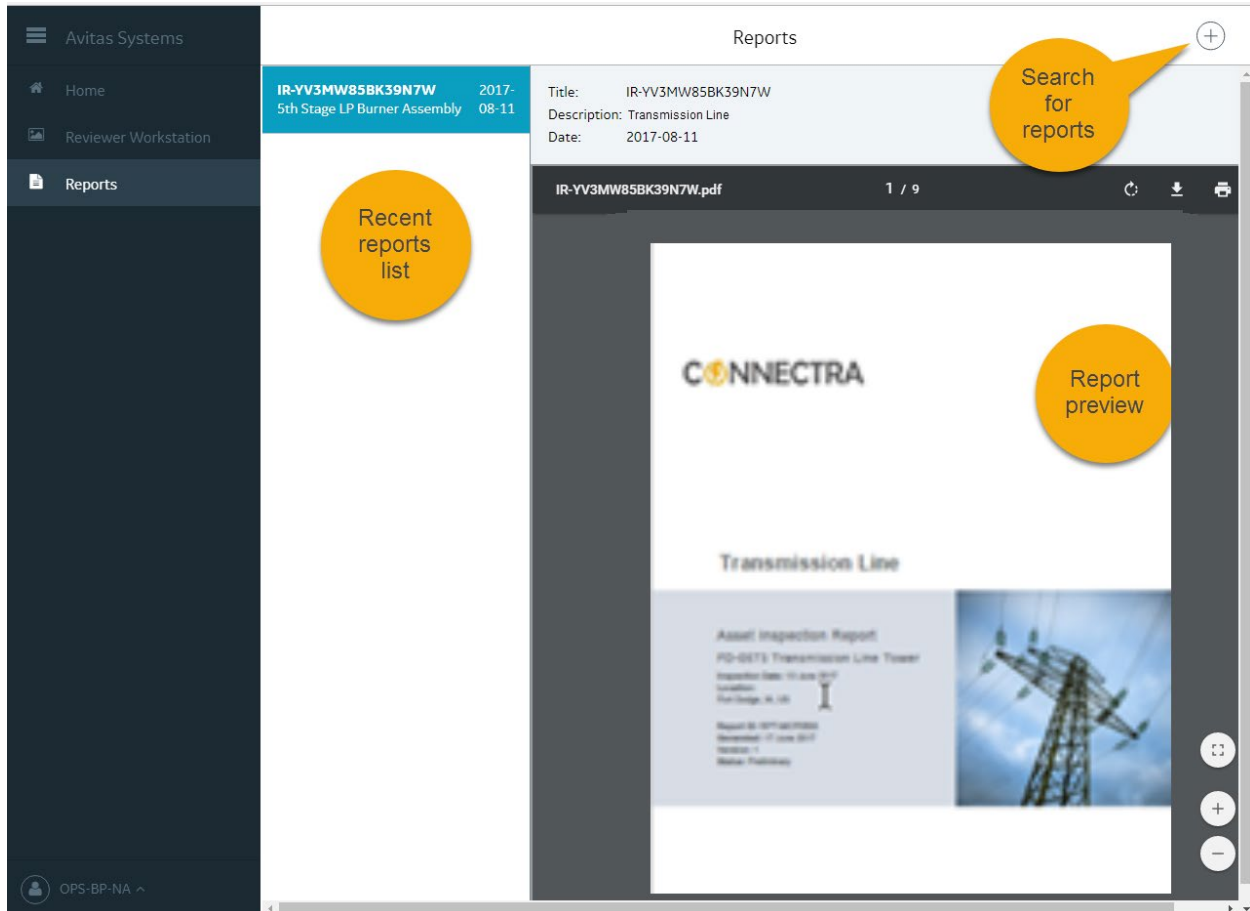
Platform reports are provided in PDF format. The reports you can access may vary depending on to your user role.

8.1 Accessing the Reports Module

From the **Platform** menu, select **Reports**. The **Reports** screen opens.

The **Reports** screen includes:

- > A list of recent reports - Reports are ordered with the most recent at the top. Click any report in the list to view it.
- > A preview area to view, download, and print a selected report.
- > A search utility to search for reports.



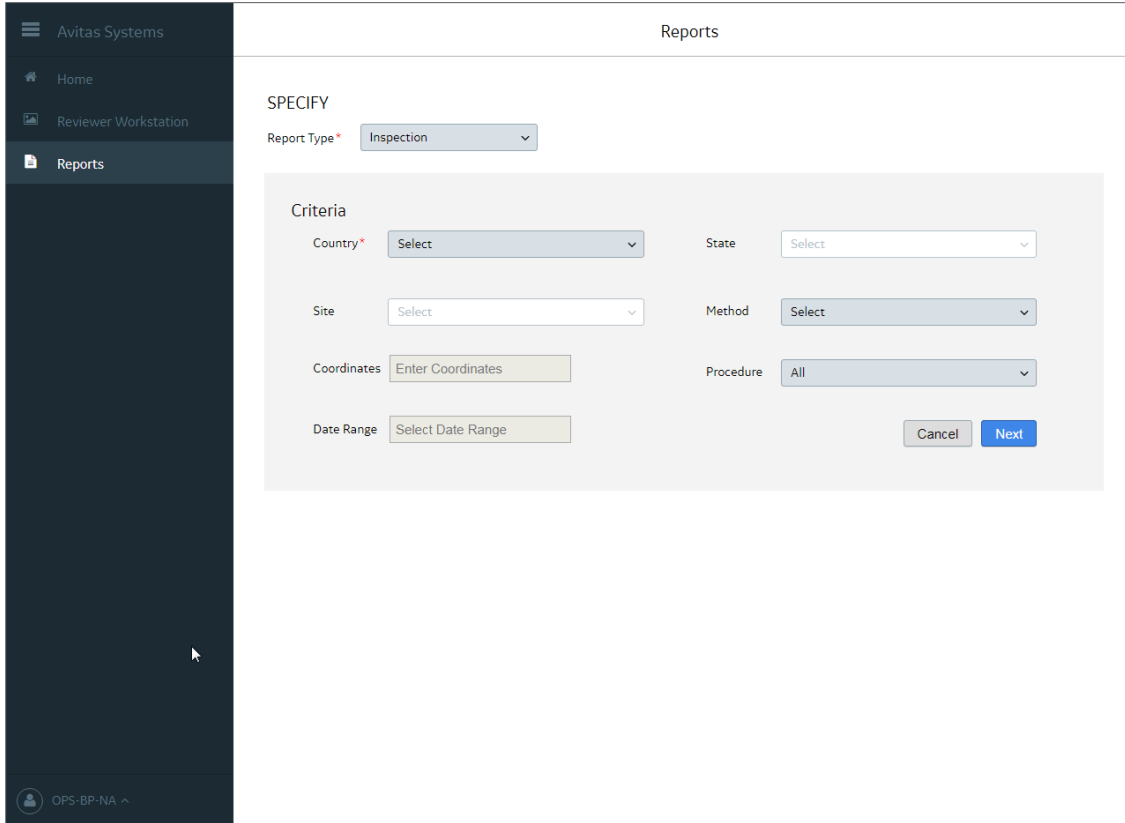
Reports screen showing sample list and report preview

8.2 Searching for a Report

From the **Platform** menu, select **Reports**. The **Reports** screen opens.

To Search for a report:

1. Click the “+” in the upper-right of the **Report** screen. The **Search** screen opens.



2. In **Report Type**, select the applicable category of report. Search criteria fields for that report type are displayed.

Note: Currently, only “Inspection” type is supported.

3. Enter search information per each field for the desired reports.
4. Click **Next**. Reports that match the criteria entered are listed.

Avitas Systems

Home

Reviewer Workstation

Reports

Reports

SPECIFY

Report Type* Inspection

REPORT

Selected (0)	Asset Name	Inspection Date	Method	Procedure	Country	State
<input type="checkbox"/>	<input type="text" value="Filter"/>	<input type="text" value="Filter"/>	<input type="text" value="Filter"/>	<input type="text" value="Filter"/>	<input type="text" value="Filter"/>	<input type="text" value="Filter"/>
<input type="checkbox"/>	K-LPCGCP-4938-1808-STK	2017-08-14	UAV	ALL	United States	Alaska
<input type="checkbox"/>	5th 'A' Stage HP Burner Assembly	2017-08-14	UAV	ALL	United States	Alaska
<input type="checkbox"/>	K-GC2-408-STK-02-7704B	2017-08-14	UAV	ALL	United States	Alaska
<input type="checkbox"/>	K-GC2-408-STK-02-7704A	2017-08-14	UAV	ALL	United States	Alaska
<input type="checkbox"/>	4th Stage HP Burner Assembly	2017-08-14	UAV	ALL	United States	Alaska
<input type="checkbox"/>	3rd Stage HP Burner Assembly	2017-08-14	UAV	ALL	United States	Alaska
<input type="checkbox"/>	3rd Stage LP Burner Assembly	2017-08-14	UAV	ALL	United States	Alaska
<input type="checkbox"/>	K-CGF-4957-1857T	2017-08-14	UAV	ALL	United States	Alaska
<input type="checkbox"/>	1st Stage LP Burner Assembly	2017-08-14	UAV	ALL	United States	Alaska
<input type="checkbox"/>	HP Backup Burner Assembly	2017-08-14	UAV	ALL	United States	Alaska

Rows per page 10 1-10 of 31 < 1 2 3 4 >

Cancel
Download PDF

Example of report search results for entered criteria

5. Optionally, to further filter the list, enter values for one or more of the column filter boxes.
6. To download a report, check the box on the left side of its row and click **Download PDF**.