

(Brief) Introduction to the Natural Hazards Reconnaissance (RAPID) Facility

Joe Wartman

Director, RAPID Facility

University of Washington

CONVERGE Webinar on *RApp*

17 December 2019

NSF Award Number: CMMI 1611820



RAPID Team and Community



RAPID Facility

The RAPID facility provides investigators with the equipment, software, and support services needed to collect, process, and analyze perishable data from natural hazard events.



laser scanners
(up to 2.4 km range)

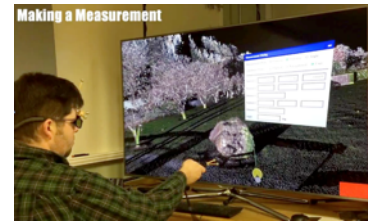


MiniRanger

Suite of drones
with high
resolution
cameras and lidar



Hydrographic survey



Virtual environment
for data visualization
and analysis



“Applied Streetview”
mobile imaging



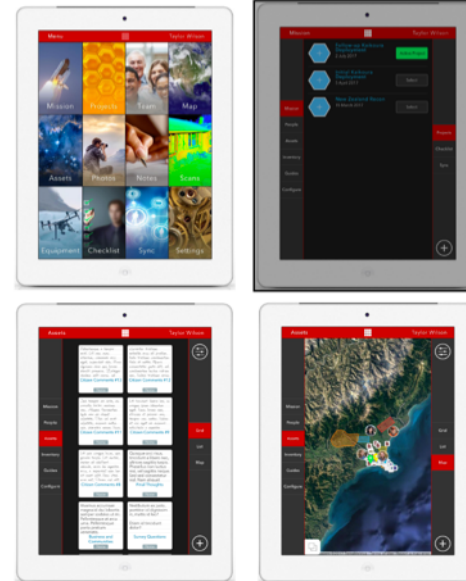
Survey and
geomatics
control



Seismographic
arrays and shear
wave velocity
profiling



Mobile EEG
(electroencephalography)



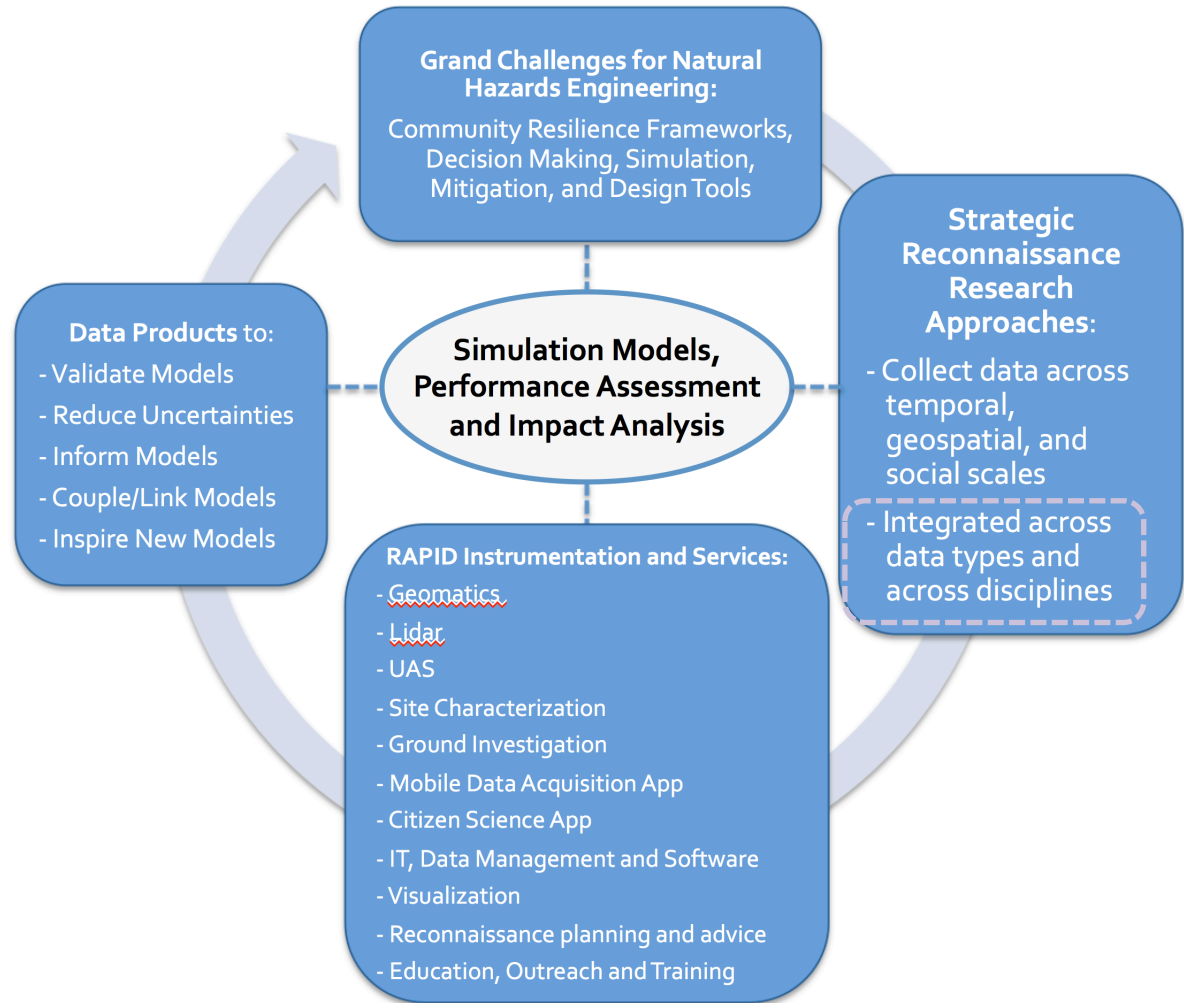
Rapp (“RAPID App”)



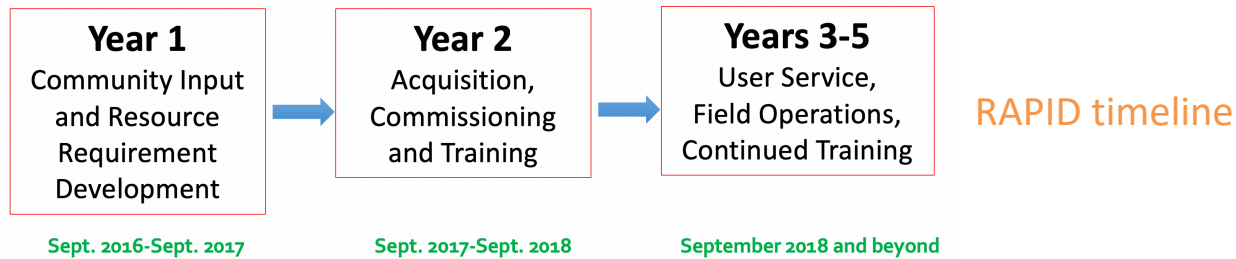
RAPID Facility Science Plan

The principal scientific goal of the RAPID is to:

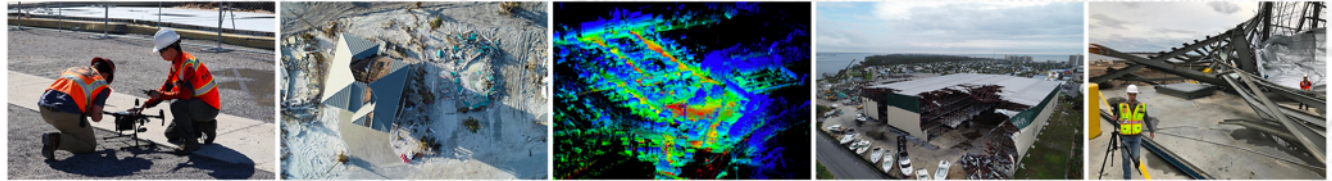
Inform natural hazards computational simulation models, infrastructure performance assessment, and socioeconomic impact analysis by supporting the collection, development, and assessment of high-quality disaster data sets



RAPID Facility 2018-2019 (Year 3) Missions



In Year 3, the RAPID facility supported **36 natural hazard reconnaissance deployments worldwide**, in service to **15 organizations**, representing **26 institutions**.



The RAPID facility provides investigators with equipment, software, and support services needed to collect, process, and analyze perishable data from natural hazards events.

How to Use RAPID

- 1 Read Our User Resources
- 2 Get to know RAPID's Equipment Portfolio
- 3 Submit an Equipment Request
- 4 We will be in touch with you soon!

RAPID Deployments

NHERI RAPID Deployments

Resource Category (Blank) Coastal Ground Investigation Imaging IT, Data Manage... Laser Scannin... Site Characteri... Surveying Unmanned ...



TaskName	RAPIDDeploymentLocation	ResourceName	Jun 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020
3D Model of BNZ Building	Wellington, New Zealand	iPad Pro 10.5 with Accessories								
3D Model of BNZ Building	Wellington, New Zealand	Leica BLK360 Close Range Scan...								
3D Model of BNZ Building	Wellington, New Zealand	Occipital Silver Structure Sensor								
Agricultural Research Project - ...	(Blank)	DJI Mavic 210 with X4S camera								
Agricultural Research Project - ...	(Blank)	DJI Mavic Air								
Agricultural Research Project - ...	(Blank)	Laptops								

News

Upcoming Workshops

Field Training and Deployment for Coastal Events
Duck, NC | Oct 7-11, 2019

Recent Deployments

Ridgecrest Earthquakes, California (July 2019)



Phase II of Hooskanaden Landslide (June 2019)



EERI/QuakeCore Training, New Zealand (May 2019)



For more information, please join a workshop, attend training, visit us online (or in person), or contact us

Google "rapid facility")



RAPID NHERI
Natural Hazards Reconnaissance

RAPP WEBINAR

Introduction to the RAPID Facility Field Data Collection App

17 December 2019

NSF Award Number: CMMI 1611820

Troy Tanner

RAPID IT Director

University of Washington

The data collection ecosystem is comprised of three main components:

DesignSafe-CI

- ◆ Cyberinfrastructure for the natural hazards community
- ◆ Cloud-based data storage, analysis, collaboration, and publication
- ◆ Provides user account services for **RApp**



Mission Control

- ◆ Web-based portal
- ◆ Create Checklists
- ◆ Create Questionnaires
- ◆ Review **RApp** data



RApp

- ◆ Mobile app used for data collection
- ◆ Data collected with **RApp** is automatically synced to **Mission Control** and **DesignSafe-CI**



A cyberinfrastructure for the natural hazards community



- ◆ Field Recon Data Model
- ◆ Metadata
- ◆ Cloud-based Platform
- ◆ Data Storage
 - Curation, Sharing, Publication
- ◆ Tools for Research
 - Recon Portal, HazMapper, & More

RApp : Mission Control

rapid.apl.uw.edu/rapp

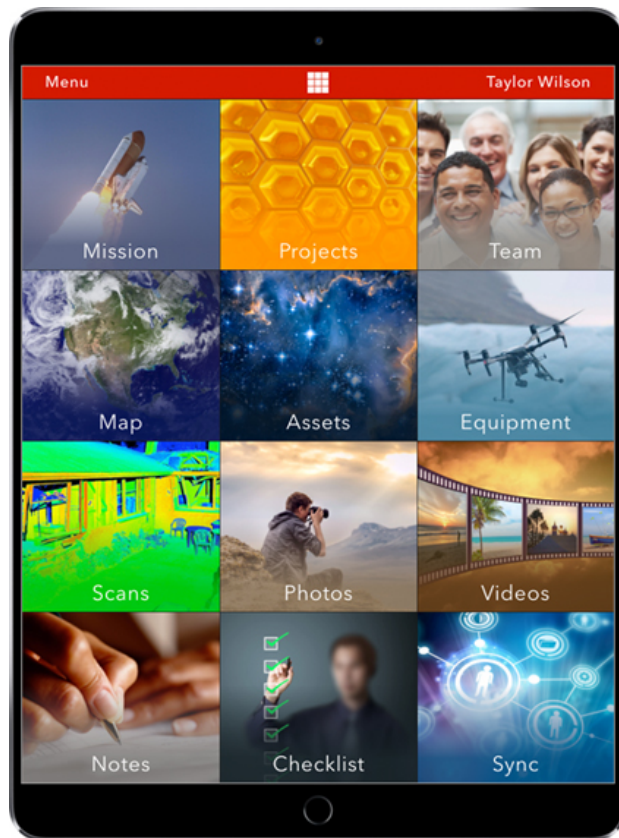
Mission Control provides mission planning and data collection review capabilities.

Items created in **Mission Control** are automatically loaded onto the **RApp** iOS App.

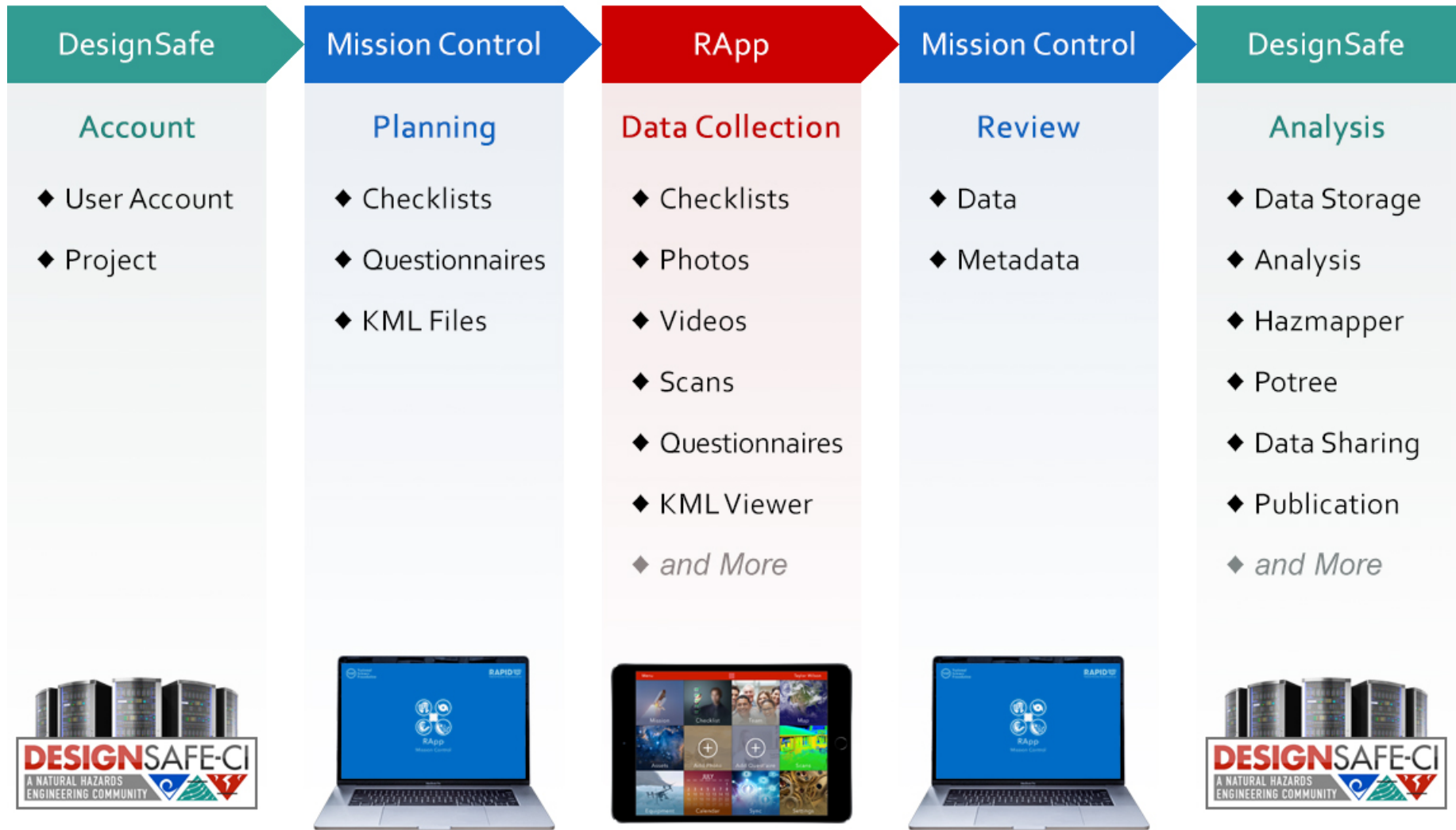


- ◆ Checklists
- ◆ Questionnaire Templates
- ◆ KML/KMZ Viewer
- ◆ Data Review
- ◆ *Integration with DesignSafe-CI*

RApp is a mobile app that provides tools for data collection in the field and synchronizes with [Mission Control](#) and [DesignSafe-CI](#)



- ◆ iOS App for iPads
- ◆ Checklists
- ◆ Photos
- ◆ Videos
- ◆ Scans
- ◆ Questionnaires
- ◆ KML/KMZ Viewer



DESIGNSAFE-CI

Before Data Collection

DesignSafe-CI

Account Setup



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Log in Register

Research Workbench ▾ Learning Center ▾ NHERI Facilities ▾ NHERI Community ▾ About Help ▾

Search DesignSafe 🔍

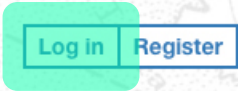
DesignSafe is the web-based research platform of the NHERI Network that provides the computational tools needed to manage, analyze, and understand critical data for natural hazards research.

- Learn how to **Start Using DesignSafe**
- Browse the Data Depot's **Published Data Sets**
- Join the conversation in **DesignSafe's Slack Channel**
- Learn more about **NHERI, the NCO & DesignSafe**

Hope Town, Elbow Cay, Bahamas – Jose Jimenez/Getty Images

Preliminary Virtual Reconnaissance Report for Hurricane Dorian

The NSF-supported Structural Extreme Events Reconnaissance (StEER) team is gearing up to create a Preliminary Virtual Reconnaissance Report for Hurricane Dorian. The PVRR will describe the hazard and impacts to communities based on publicly available information and may be released as soon as September 4. The [DesignSafe Slack channel](#) provides real-time



- Research Workbench ▾
- Learning Center ▾
- NHERI Facilities ▾
- NHERI Community ▾
- About
- Help ▾

REGISTER AN ACCOUNT

Users may register for only one account using the form below. DesignSafe uses the TACC Identity Service, thus you will be registering for a TACC account. Upon submitting this form check your email, possibly your Spam folder, for an email message containing a link to confirm and activate your new account.

First name (required)

Last name (required)

Email (required)



Already have an Account? [Log in.](#)

If you already have a TACC account, simply [log in](#) with your TACC username and password to access DesignSafe.

You may have a TACC account if you have used XSEDE or TeraGrid in the past and had an allocation on a TACC resource.



LOG IN TO CONTINUE

User Name

Password

Log In

[Forgot Username or Password](#) | [Platform Status](#)

DesignSafe is compatible with IE10+, but the latest versions of Firefox or Chrome are preferred. Please allow session cookies.

NSF | **DESIGNSAFE-CI** | NHERI: NATURAL HAZARDS ENGINEERING RESEARCH INFRASTRUCTURE

Welcome, Troy!

Research Workbench ▾ Learning Center ▾ NHERI Facilities ▾ NHERI Community ▾ About Help ▾

Search DesignSafe 🔍

0 Recent Jobs

46 Available Apps

9.6 MB Data Stored

Quick Links

- [Manage Account](#)
- [Data Depot](#)
- [Workspace](#)
- [Recon Portal](#)
- [Training](#)

My Jobs

No recent jobs! You can submit jobs in the [Workspace](#)

Notifications 54

- Sep 20, 2018 file/folder was moved to trash.
- Sep 20, 2018 file/folder was moved to trash.
- Sep 20, 2018 file/folder was moved to trash.
- Sep 20, 2018 file/folder was moved to trash.
- Sep 20, 2018 file/folder was

The screenshot displays the DesignSafe-CI web application interface. At the top left, the NSF logo is followed by the text "DESIGNSAFE-CI" and "NHERI: NATURAL HAZARDS ENGINEERING RESEARCH INFRASTRUCTURE". A user profile dropdown in the top right shows "Welcome, Troy!". The main navigation bar includes "Research Workbench", "Learning Center", "NHERI Facilities", "NHERI Community", "About", and "Help". A search bar labeled "Search DesignSafe" is positioned on the right. A dropdown menu under "Research Workbench" lists "Data Depot", "Workspace", "Recon Portal", "SimCenter Research Tools", and "User Guides". Below the navigation, two large statistics cards are shown: "46 Available Apps" and "9.6 MB Data Stored". To the right of these cards is a "Quick Links" section with links for "Manage Account", "Data Depot", "Workspace", "Recon Portal", and "Training". The "My Jobs" section on the left contains the message: "No recent jobs! You can submit jobs in the [Workspace](#)". The "Notifications" section on the right shows a count of 54 and a list of notifications, each stating "Sep 20, 2018 file/folder was moved to trash."

NSF | DESIGNSAFE-CI | NHERI: NATURAL HAZARDS ENGINEERING RESEARCH INFRASTRUCTURE

Welcome, Troy!

Research Workbench ▾ Learning Center ▾ NHERI Facilities ▾ NHERI Community ▾ About Help ▾

Search DesignSafe

Find in My Projects

Rename Move Copy Preview Download Move to Trash

Project ID	Project Title	Project PI	Last Modified
PRJ-2554	2019 Site Visit	Jake Dafni	9/19/19 6:36 PM
PRJ-2445	2019 RAPID 4-Day Summer Workshop	Jake Dafni	7/23/19 12:28 PM
PRJ-2011	RAPID Workshop July 2018	Joseph Wartman	10/11/18 12:53 PM
PRJ-1367	RAPID Data Model	Maria Esteva	7/24/18 12:39 PM
PRJ-1656	TempProject	Troy Tanner	7/24/18 12:26 PM

Add New Project

• Required to Add a Project

Project Title •
Incorporate the project's focus with words indicating the hazard, model, system, and research approach. Do not use acronyms.

Principal Investigators (PI) •
Can view, edit, curate, and publish. Include Co-PIs.

[+ Add another PI](#)
[- Drop PI](#)

Project Members
These users can view, edit, curate, and publish.

[+ Add another Project Member](#)

[+ Add Project](#)

Published	1656	Temp Project	troy tanner	1/24/18 12:20 PM
Community				

Project ID	Project Title	Project PI	Last Modified
PRJ-2653	Webinar - December 2019	Troy Tanner	12/11/19 1:18 PM
PRJ-2554	2019 Site Visit	Jake Dafni	9/19/19 6:36 PM
PRJ-2445	2019 RAPID 4-Day Summer Workshop	Jake Dafni	7/23/19 12:28 PM
PRJ-2011	RAPID Workshop July 2018	Joseph Wartman	10/11/18 12:53 PM
PRJ-1367	RAPID Data Model	Maria Esteva	7/24/18 12:39 PM
PRJ-1000	TempProject	Troy Tanner	7/24/18 12:26 PM

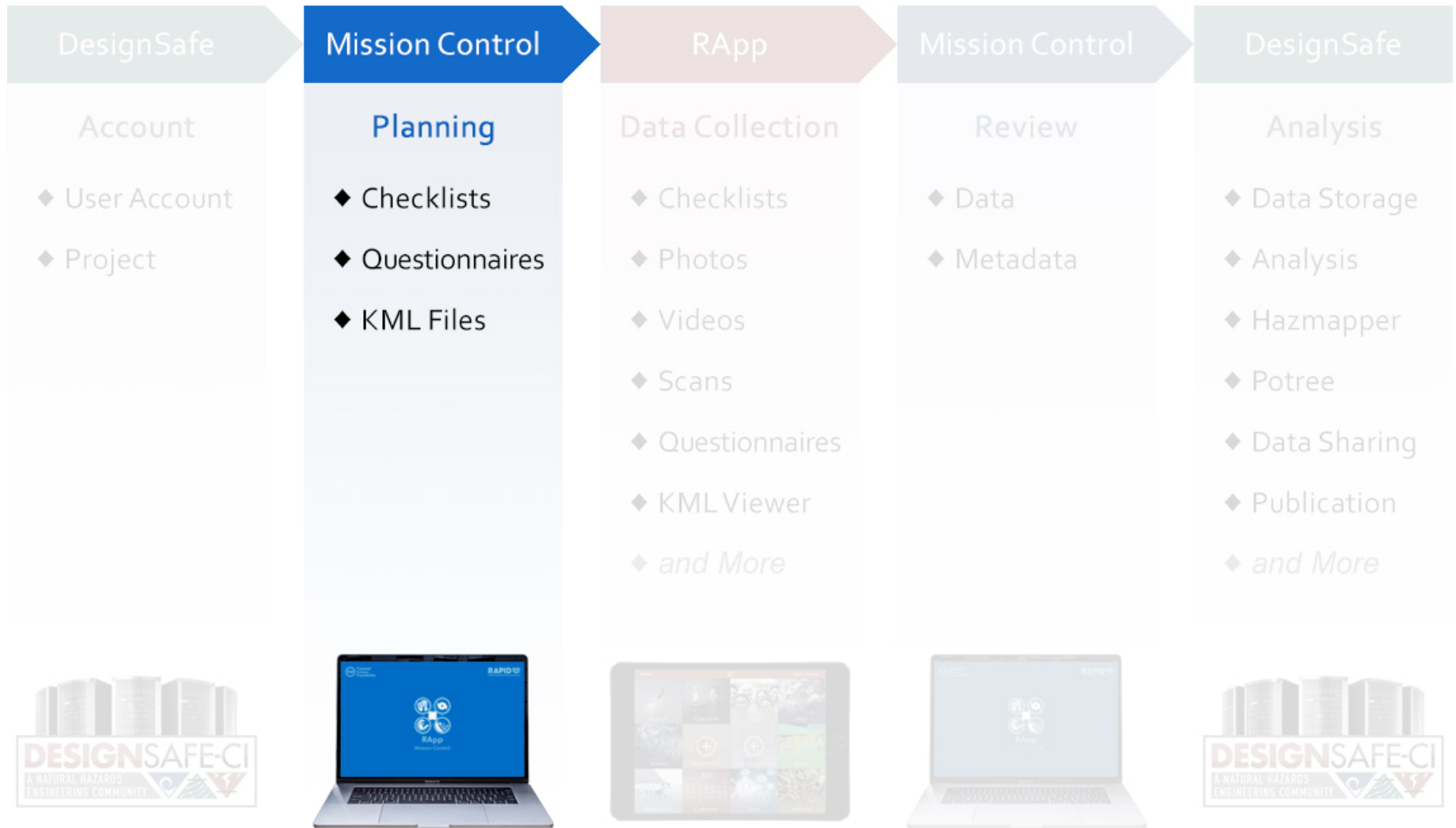
RApp

MISSION CONTROL

Before Data Collection

RApp : Mission Control

Planning





RApp
Mission Control



RApp
Mission Control

DESIGNSAFE-CI

Sign in to DesignSafe

troyt

.....

Sign In

The screenshot shows the RApp: Mission Control interface. At the top, the title bar displays "RApp: Mission Control" on the left, a central icon of four overlapping circles, and the user name "Troy Tanner" on the right. Below the title bar is a dark blue header bar containing three icons: a cloud with a downward arrow, a trash can, and a pencil. A vertical sidebar on the left lists navigation options: "Checklist" (highlighted in blue), "Questionnaire Templates", "Assets", "Files", and "Account". The main content area is dark gray and contains the following text in yellow: "You do not have any Checklists" and "To create a Checklist, click the **Add** button at the lower right of the screen". A large green circular button with a white plus sign is located in the bottom right corner of the main content area.

The screenshot displays the RApp: Mission Control interface. At the top, the title 'RApp: Mission Control' is on the left, a user icon in the center, and the name 'Troy Tanner' on the right. A dark sidebar on the left contains menu items: Checklist, Questionnaire Templates, Assets, Files, and Account. The main area is dark with a faint watermark 'To create a Checklist...'. A white dialog box titled 'New Checklist' is centered, featuring a text input field containing 'Field Equipment', a 'Cancel' button, and a highlighted 'Create' button. A red box highlights the dialog, and a cyan box highlights the 'Create' button. A plus sign icon is visible in the bottom right corner of the main area.

The screenshot shows the 'Edit Checklist' interface in the RApp Mission Control application. The top header is blue and contains the text 'RApp: Mission Control' on the left, a central icon of four overlapping circles, and the user name 'Troy Tanner' on the right. Below the header is a dark grey navigation sidebar with menu items: 'Checklist' (highlighted in blue), 'Questionnaire Templates', 'Assets', 'Files', and 'Account'. The main content area has a blue top bar with a cloud upload icon, a dropdown menu set to 'Field Equipment', and icons for cloud upload, trash, and edit. The checklist content includes a 'Name' field with 'Field Equipment', a section titled 'Section 1' with a minus icon, an 'Add Item' button with a plus icon, and an item titled 'Item 1' with a minus icon. At the bottom, there are two buttons: 'Reorder Sections' (red) and 'Add New Section' (blue), along with a large white plus icon in a circle on the right.

The screenshot displays the RApp: Mission Control interface. At the top, the title "RApp: Mission Control" is on the left, a user icon is in the center, and the name "Troy Tanner" is on the right. Below the title bar, there is a navigation menu on the left with options: Checklist (highlighted), Questionnaire Templates, Assets, Files, and Account. The main content area is titled "Field Equipment" and contains two sections: "Equipment" and "Clothing". Each item in these sections has a grey circular checkbox next to its name. The "Equipment" section includes: Surveys, Pens, Flashlight, Phone, Clipboard, Recorder, Extra Batteries, and iPad. The "Clothing" section includes: Windbreaker and Boots. At the bottom right of the main content area, there is a large white plus sign inside a circle. On the right side of the top bar, there are three icons: a cloud with a downward arrow, a trash can, and a pencil.

RApp: Mission Control

Troy Tanner

Field Equipment

Equipment

- Surveys
- Pens
- Flashlight
- Phone
- Clipboard
- Recorder
- Extra Batteries
- iPad

Clothing

- Windbreaker
- Boots

+

The screenshot displays the RApp: Mission Control interface. At the top, the title "RApp: Mission Control" is on the left, a user icon is in the center, and the name "Troy Tanner" is on the right. Below the title bar, there is a navigation menu on the left with options: Checklist (highlighted), Questionnaire Templates, Assets, Files, and Account. The main content area is titled "Field Equipment" and contains two sections: "Equipment" and "Clothing".

Equipment Section:

- Surveys:
- Pens:
- Flashlight:
- Phone:
- Clipboard:
- Recorder:
- Extra Batteries:
- iPad:

Clothing Section:

- Windbreaker:
- Boots:

At the bottom right of the main content area, there is a large white plus sign icon inside a circle.

RApp: Mission Control Troy Tanner

Field Equipment

Select to copy from public template

RAPID-checklist-4day (Copy 2)	Ningjun Jiang	Copy
Melissa's checklist	Melissa Moulton	Copy
RAPID-checklist-4day (Copy 1)	Melissa Moulton	Copy
Workshop (Copy 1)	Timothy Stark	Copy
Checklist Trial 1 ((Copy 1)	Timothy Stark	Copy

Clothing

- Windbreaker
- Boots


+

The screenshot displays the RApp: Mission Control interface. At the top, the title "RApp: Mission Control" is on the left, and the user name "Troy Tanner" is on the right. Below the title bar is a navigation sidebar with a cloud download icon at the top, followed by menu items: Checklist, Questionnaire Templates (highlighted in blue), Assets, Files, and Account. The main content area is dark gray and contains the text: "You do not have any Questionnaire Templates" and "To create a Questionnaire Template, click the Add button at the lower right of the screen". A large green circular button with a white plus sign is located in the bottom right corner of the main area.

New Questionnaire

Name


Description

Add Item 

Cancel Done

The screenshot displays the RApp: Mission Control interface. At the top, the title "RApp: Mission Control" is on the left, and the user name "Troy Tanner" is on the right. Below the title bar is a navigation menu with options: Checklist, Questionnaire Templates (highlighted), Assets, Files, and Account. The main content area shows a questionnaire titled "Final Hurricane Outlook Study" by user "troyt". The description is "Assessment of impacts caused by hurricane Michael". To the right of the title and description are three buttons: "View", "Edit", and "Copy". A green cloud icon with a download arrow is located at the top left of the main content area. A large white plus sign in a circle is positioned at the bottom right of the main content area.

RApp: Mission Control Troy Tanner



Select to copy from public template

Concrete Moment Frame Notes - Day 1	Jeffrey Berman	<input type="button" value="Copy"/>	<input type="button" value="View"/>
RAPID Demographics Survey	Jacqueline Peltier	<input type="button" value="Copy"/>	<input type="button" value="Edit"/>
Applied StreetView Module (Copy 2)	Melissa Moulton	<input type="button" value="Copy"/>	<input type="button" value="Copy"/>
Applied StreetView Module (Copy 1)	Melissa Moulton	<input type="button" value="Copy"/>	
	Melissa	<input type="button" value="Copy"/>	

RApp : Mission Control

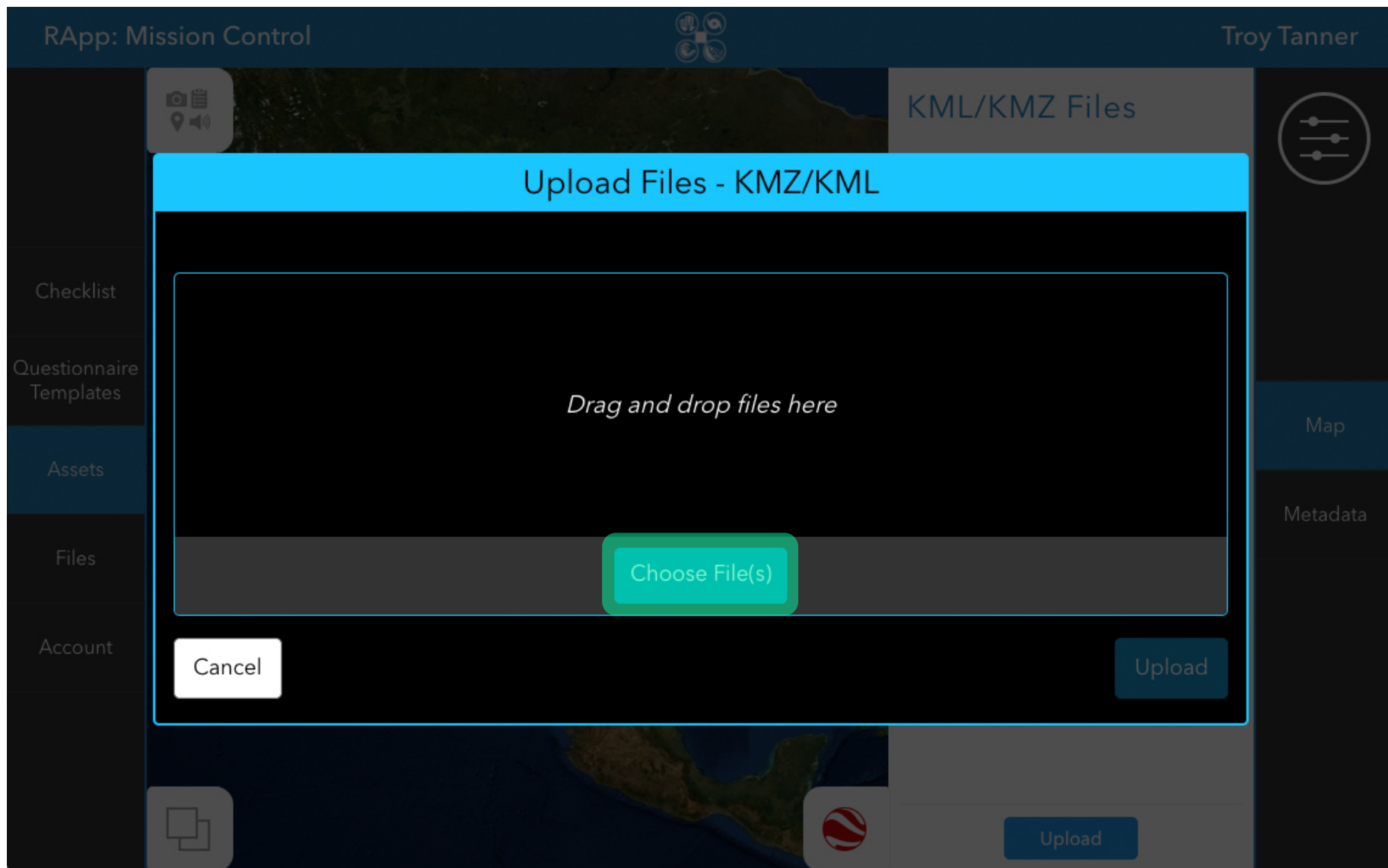
Asset Map

The screenshot displays the 'RApp: Mission Control' interface. At the top, the title 'RApp: Mission Control' is on the left, a set of four circular icons is in the center, and the user name 'Troy Tanner' is on the right. The main area is a satellite map of North America. On the left side, there is a vertical menu with options: 'Checklist', 'Questionnaire Templates', 'Assets' (highlighted in blue), 'Files', and 'Account'. Above this menu are icons for a camera, a document with a location pin, a plus sign, and a minus sign. At the bottom left of the map is a square icon with two overlapping rectangles. On the right side, there is a vertical menu with options: 'Map' (highlighted in blue) and 'Metadata'. Above this menu is a circular icon with three horizontal sliders. At the bottom right of the map is a green rounded square icon with a white globe symbol.

RApp : Mission Control

KML File Panel

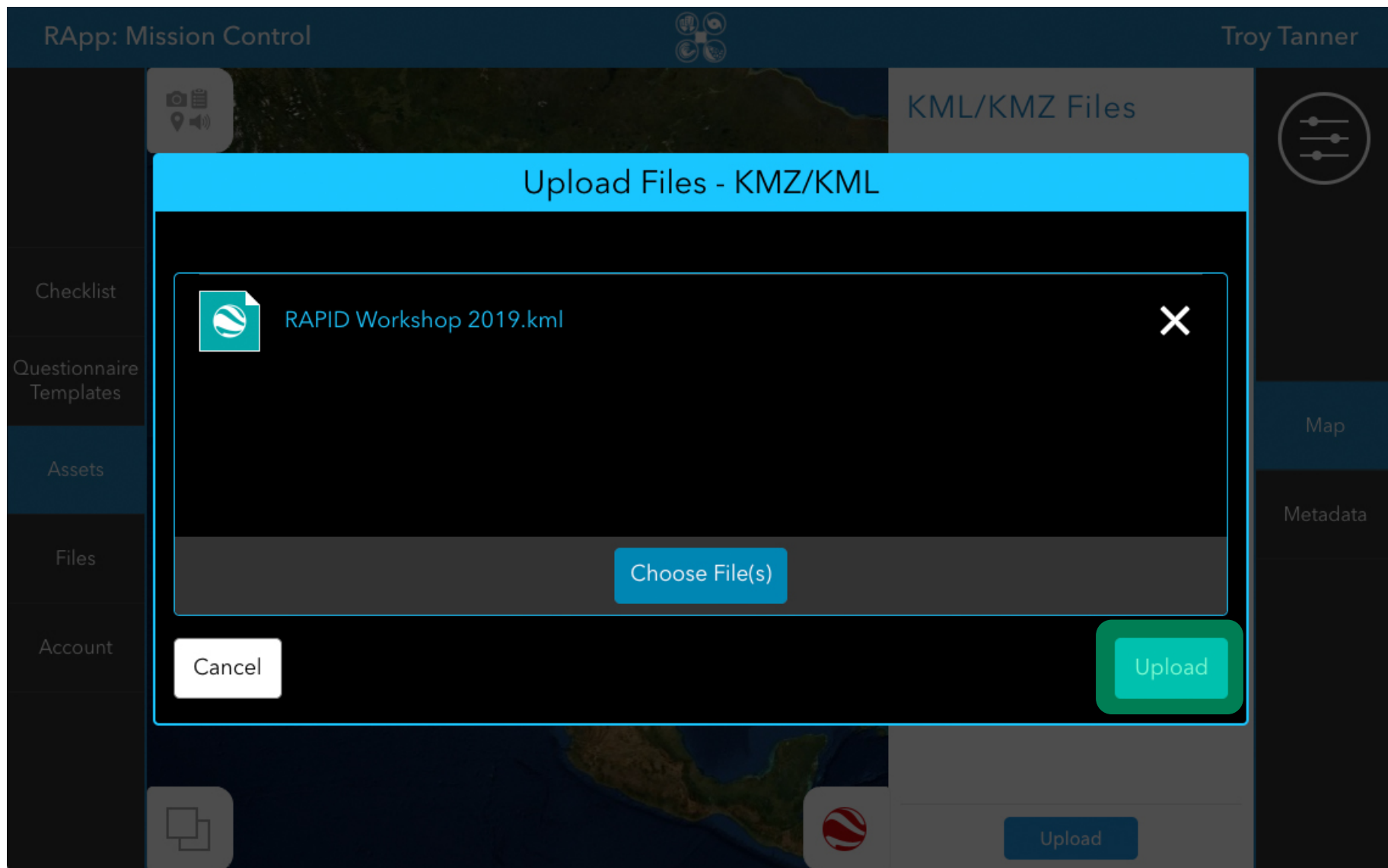
The screenshot displays the RApp Mission Control interface. At the top, the title "RApp: Mission Control" is on the left, and the user name "Troy Tanner" is on the right. The main area is a satellite map of North America. On the left side, there is a vertical navigation menu with options: Checklist, Questionnaire Templates, Assets (highlighted in blue), Files, and Account. Above the map, there are several icons: a camera, a document, a location pin, and a speaker. Below the map, there are icons for a plus sign, a minus sign, a document, and a red and white striped circle. On the right side, there is a "KML/KMZ Files" panel with a list of files: "Landslide_outline.kml" and "Shakemap.kml". Below the list is a green "Upload" button. On the far right, there is a vertical sidebar with a settings icon (a circle with three horizontal lines) and a "Map" button (highlighted in blue). Below the "Map" button is a "Metadata" button.



The screenshot shows the RApp Mission Control interface with a file selection dialog open. The dialog displays the following file details:

Document - 14 KB
Created Today, 1:22 PM
Modified Today, 1:22 PM
Last opened Today, 1:22 PM
Add Tags...

The background interface includes a sidebar with the following items: Checklist, Questionnaire Templates, Assets, Files, and Account. The top bar displays 'RApp: Mission Control' and 'Troy Tanner'. A 'Choose File(s)' button is highlighted in the background.



The screenshot displays the RApp Mission Control interface. At the top, the title bar reads "RApp: Mission Control" on the left and "Troy Tanner" on the right. A central header area shows a satellite map and the text "KML/KMZ Files". A modal dialog titled "Upload Files - KMZ/KML" is open, featuring a green progress bar at the top. Inside the dialog, a file icon is shown next to the text "RAPID Workshop 2019.kml". Below the file name is a "Choose File(s)" button. At the bottom of the dialog are "Cancel" and "Upload" buttons. The background interface includes a left sidebar with menu items: "Checklist", "Questionnaire Templates", "Assets", "Files", and "Account". On the right, there is a settings icon and a vertical menu with "Map" and "Metadata" options. A bottom navigation bar contains a home icon, a RAPID logo, and an "Upload" button.

RApp : Mission Control

KML File Panel

RApp: Mission Control

Troy Tanner

Checklist

Questionnaire Templates

Assets

Files

Account

KML/KMZ Files

- Landslide_outline.kml
- RAPID Workshop 2019.kml
- Shakemap.kml

Map

Metadata

Upload

The screenshot displays the RApp Mission Control interface. At the top, the title "RApp: Mission Control" is on the left, and the user name "Troy Tanner" is on the right. The main area is a satellite map of a city with several yellow and blue pushpins. A left sidebar contains navigation options: Checklist, Questionnaire Templates, Assets (highlighted in blue), Files, and Account. A right sidebar contains a settings icon, Map (highlighted in blue), and Metadata. Below the map is a list of KML/KMZ files: "Landslide_outline.kml", "RAPID Workshop 2019.kml" (highlighted in green with a yellow dot), and "Shakemap.kml". An "Upload" button is located at the bottom right of the interface.

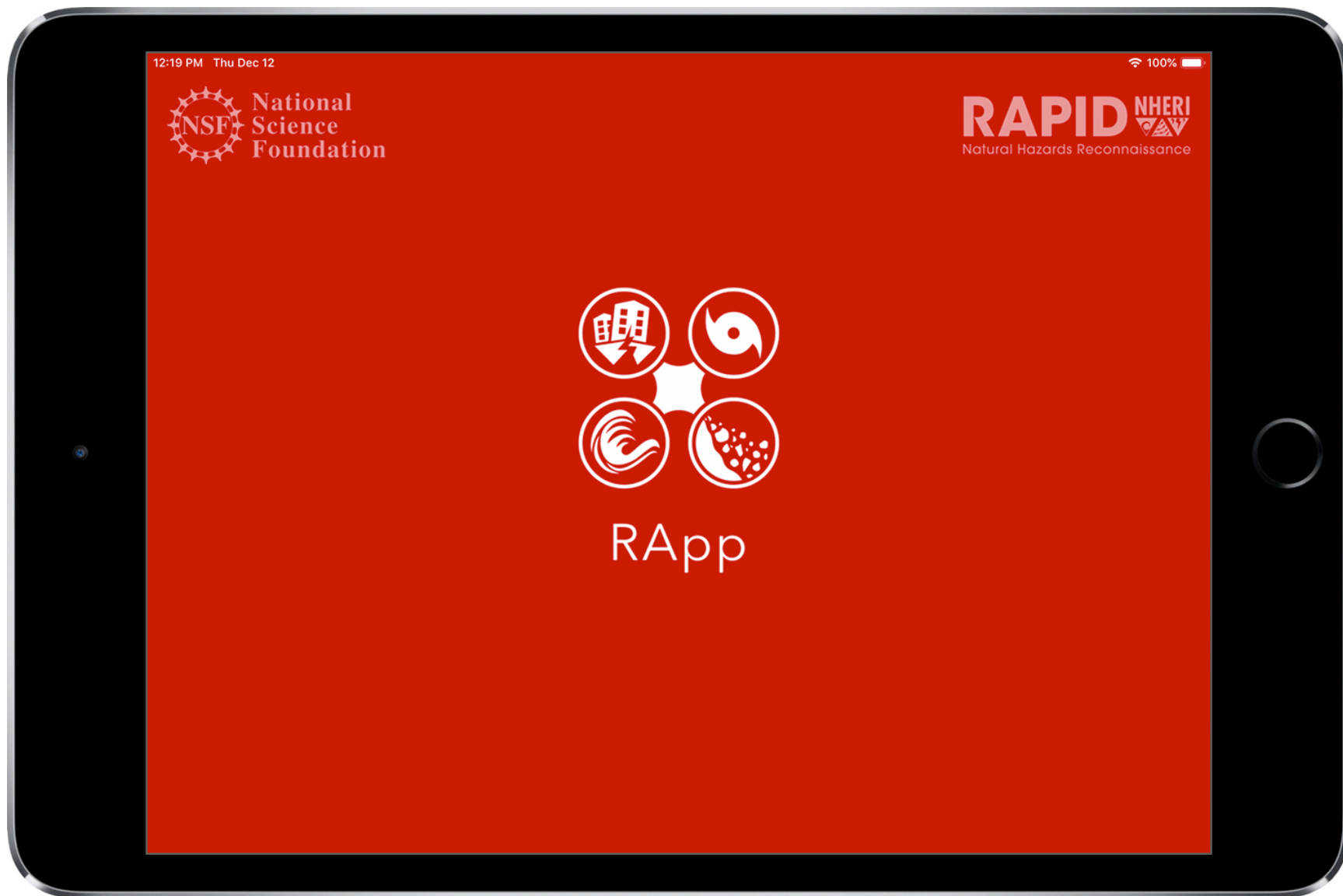
RAPP



RApp

iPad Home Screen





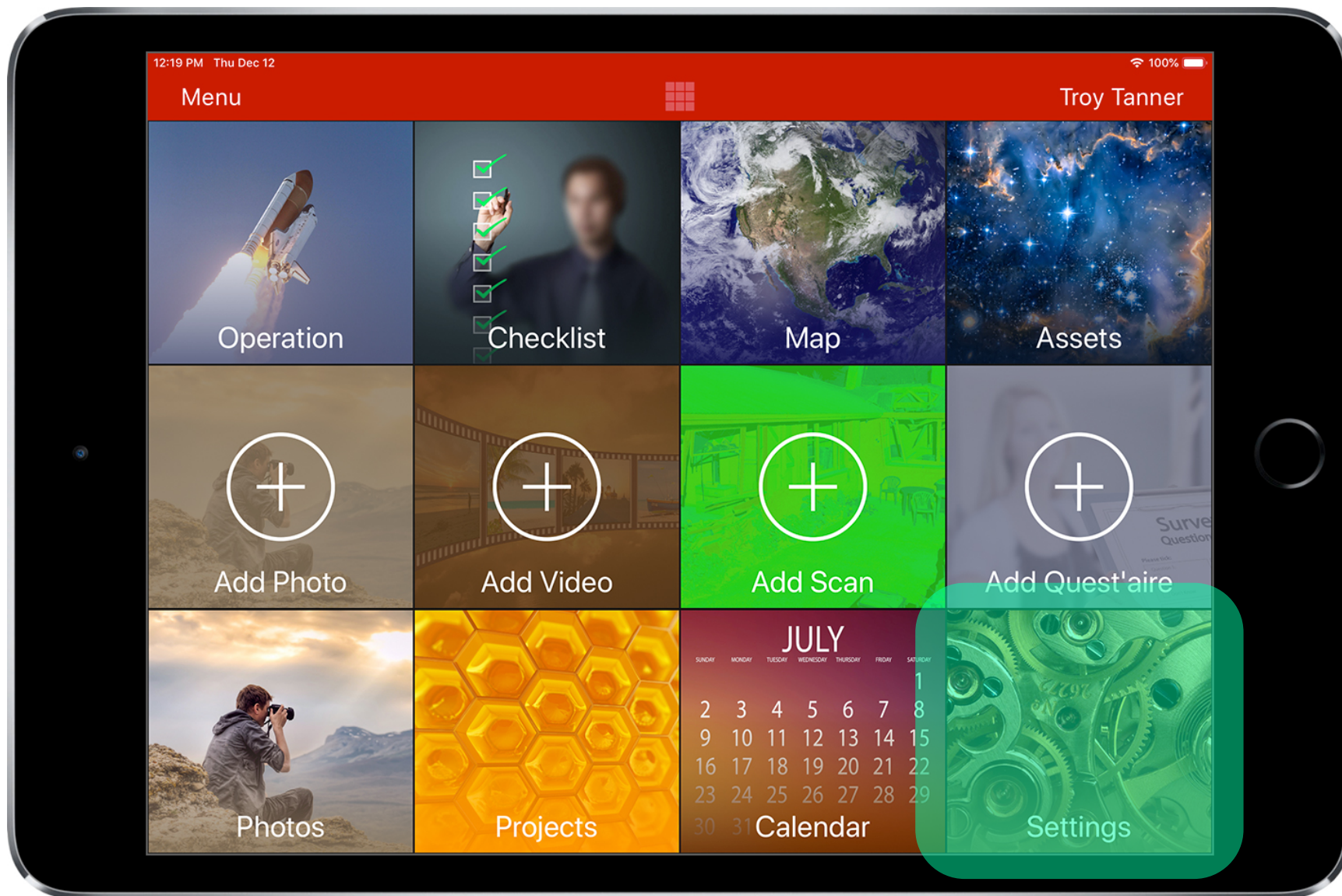


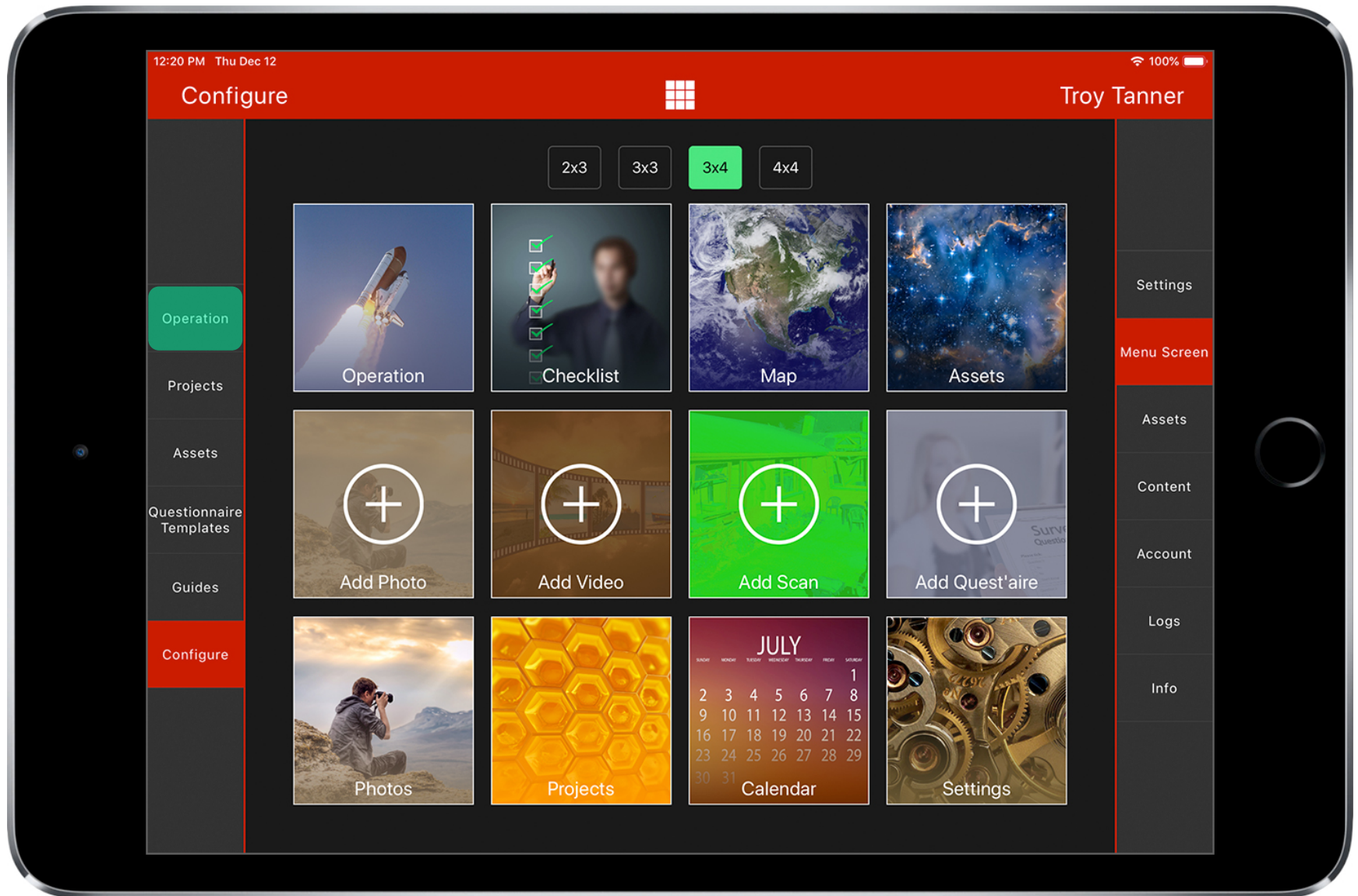


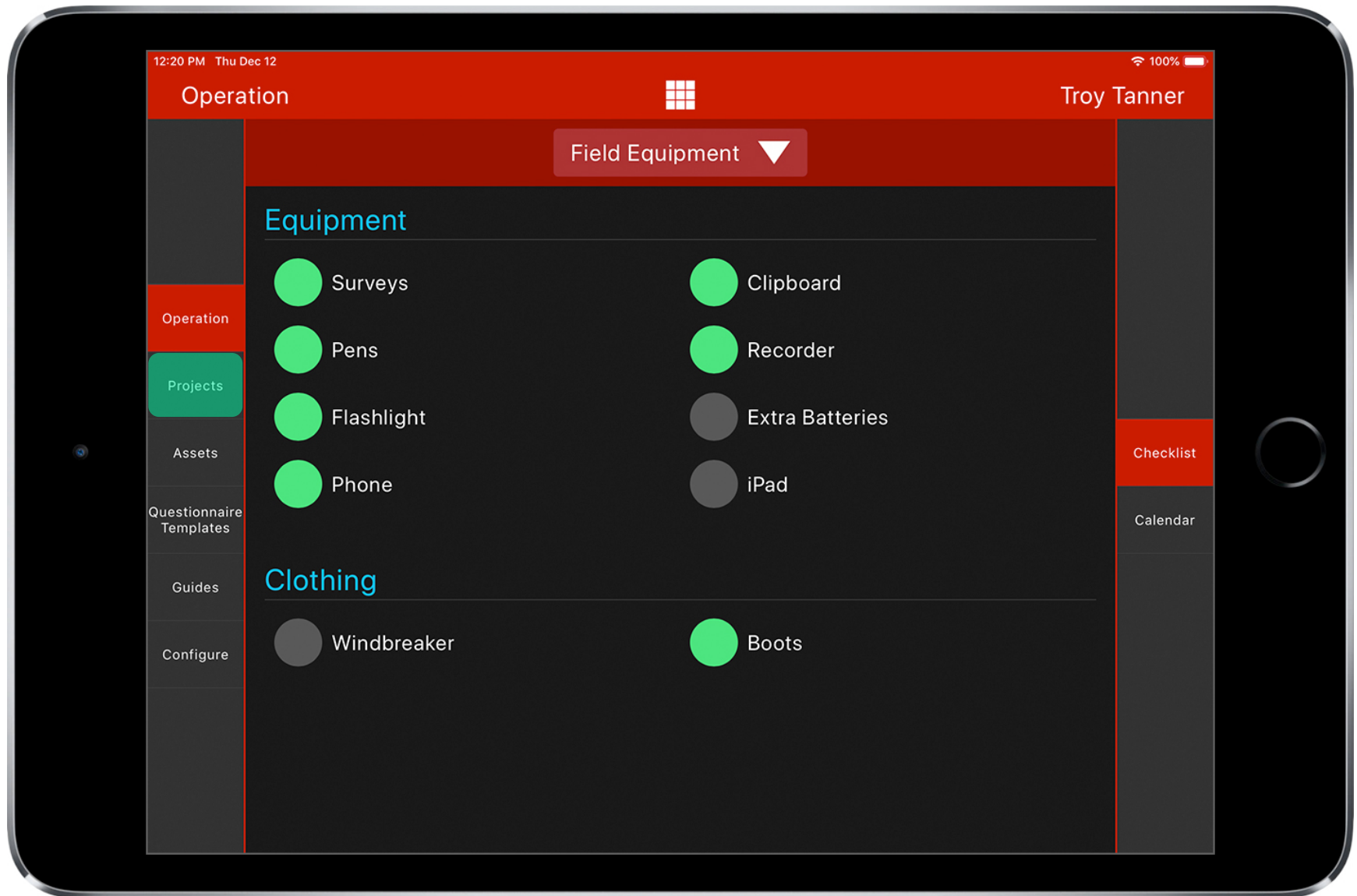
RApp

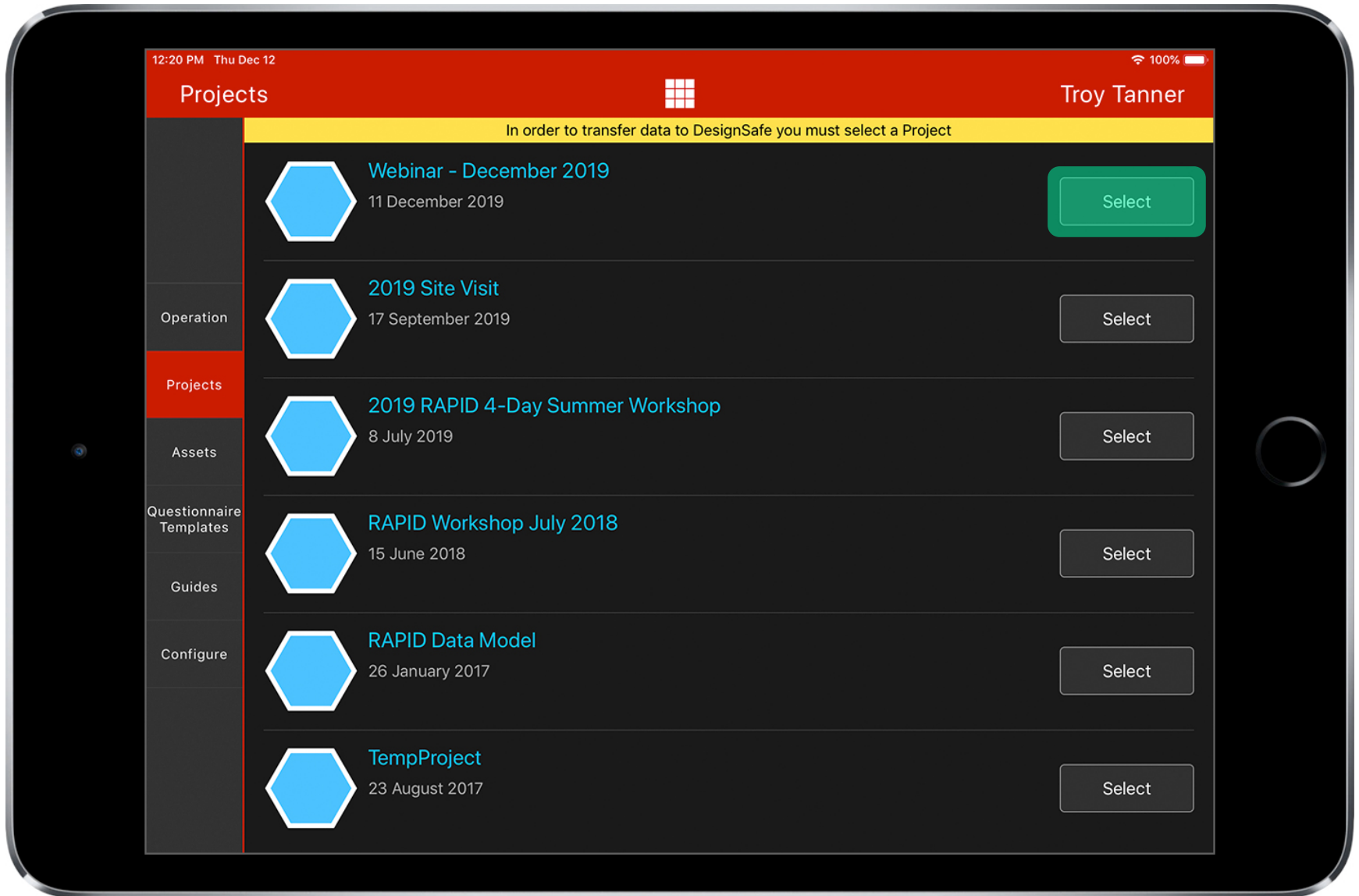
Log In with Touch ID

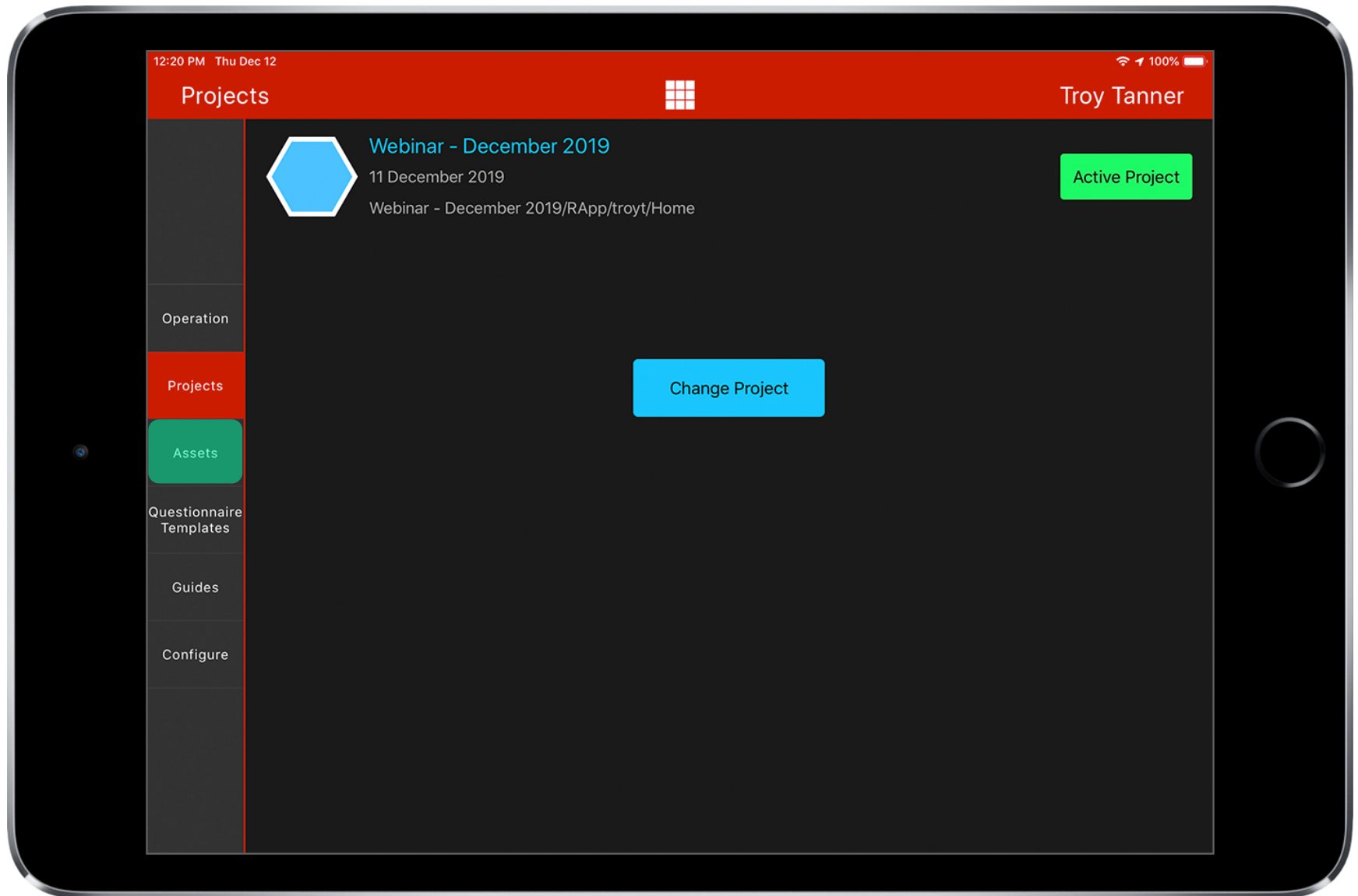


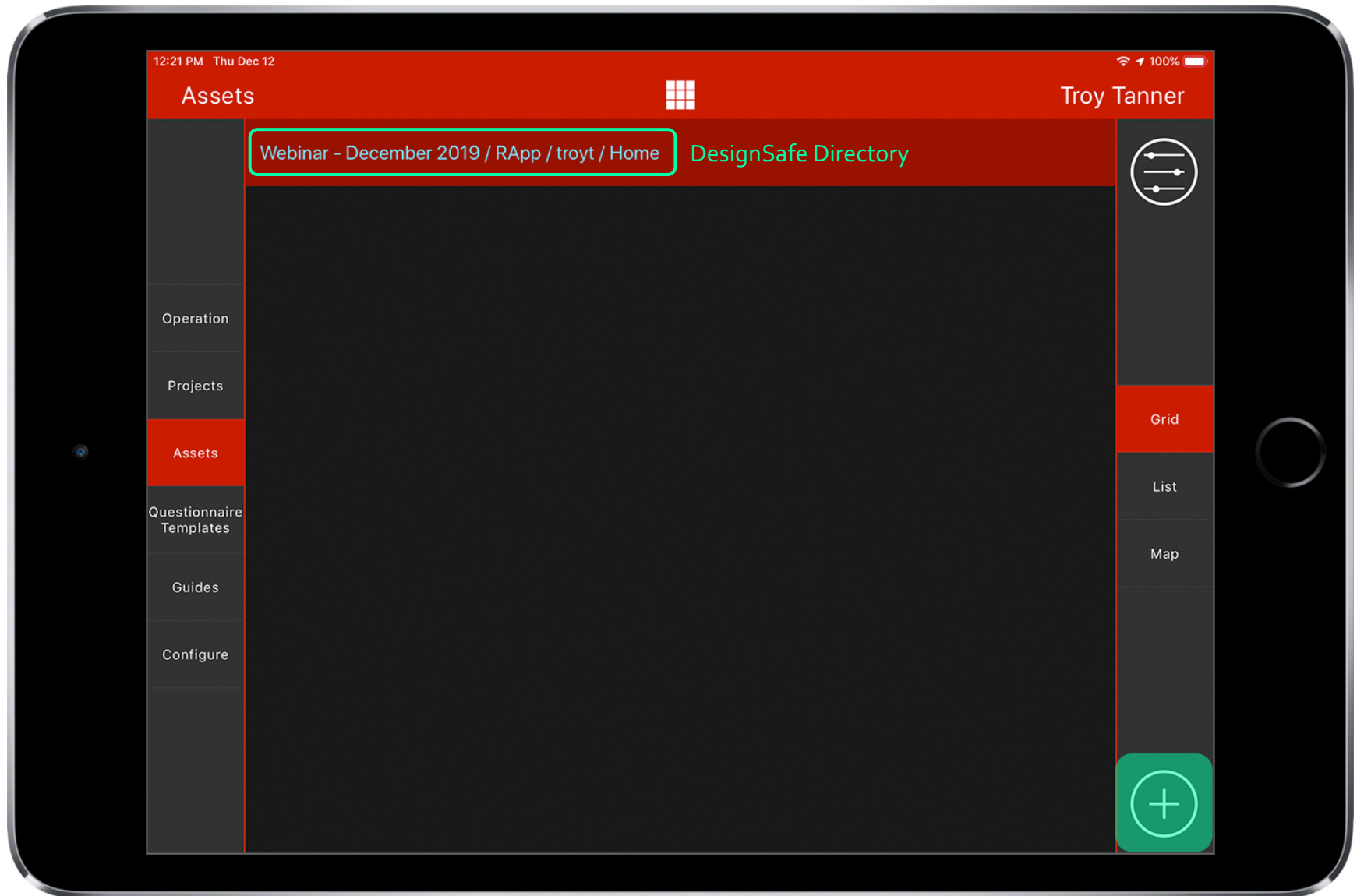


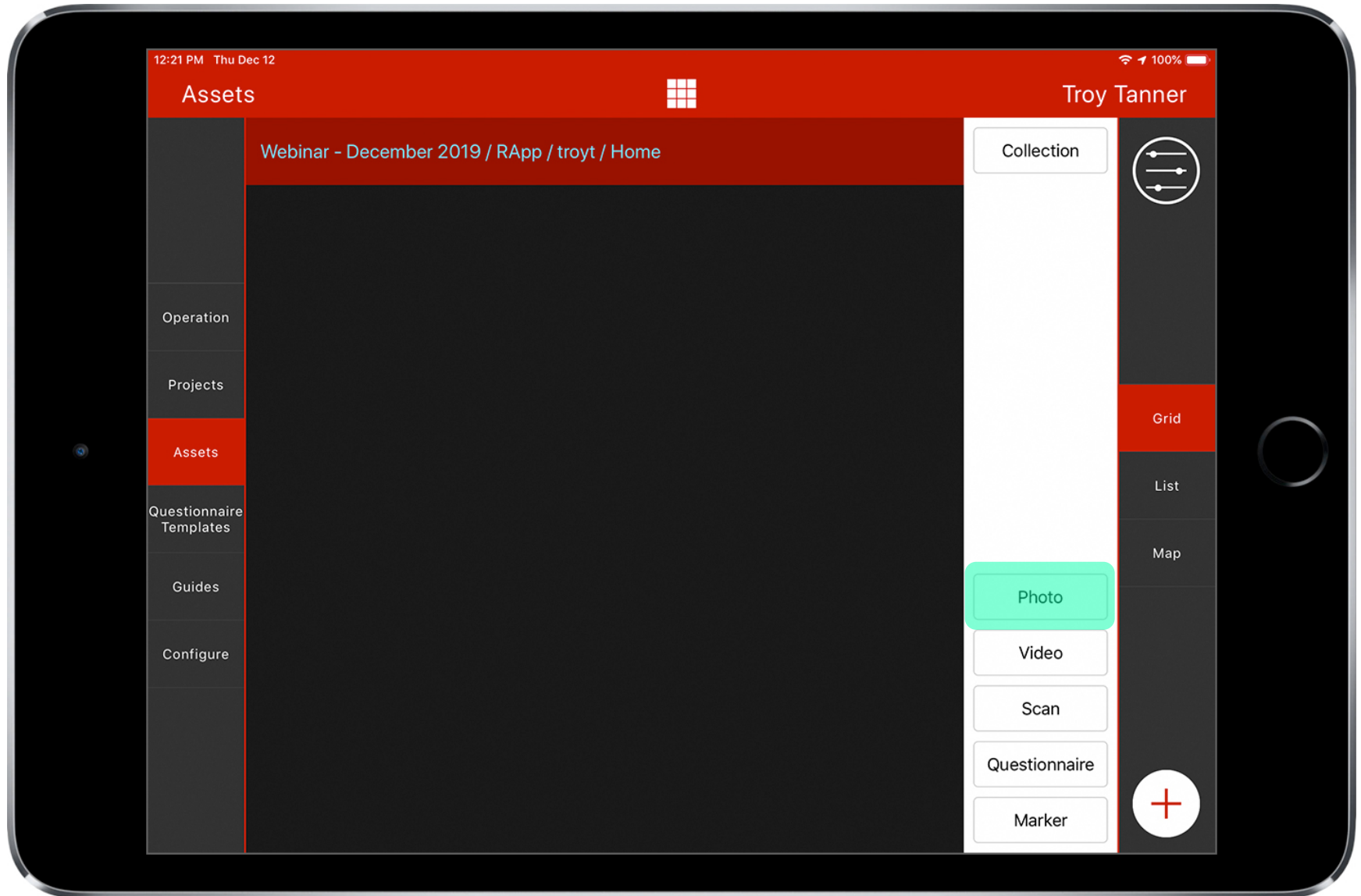




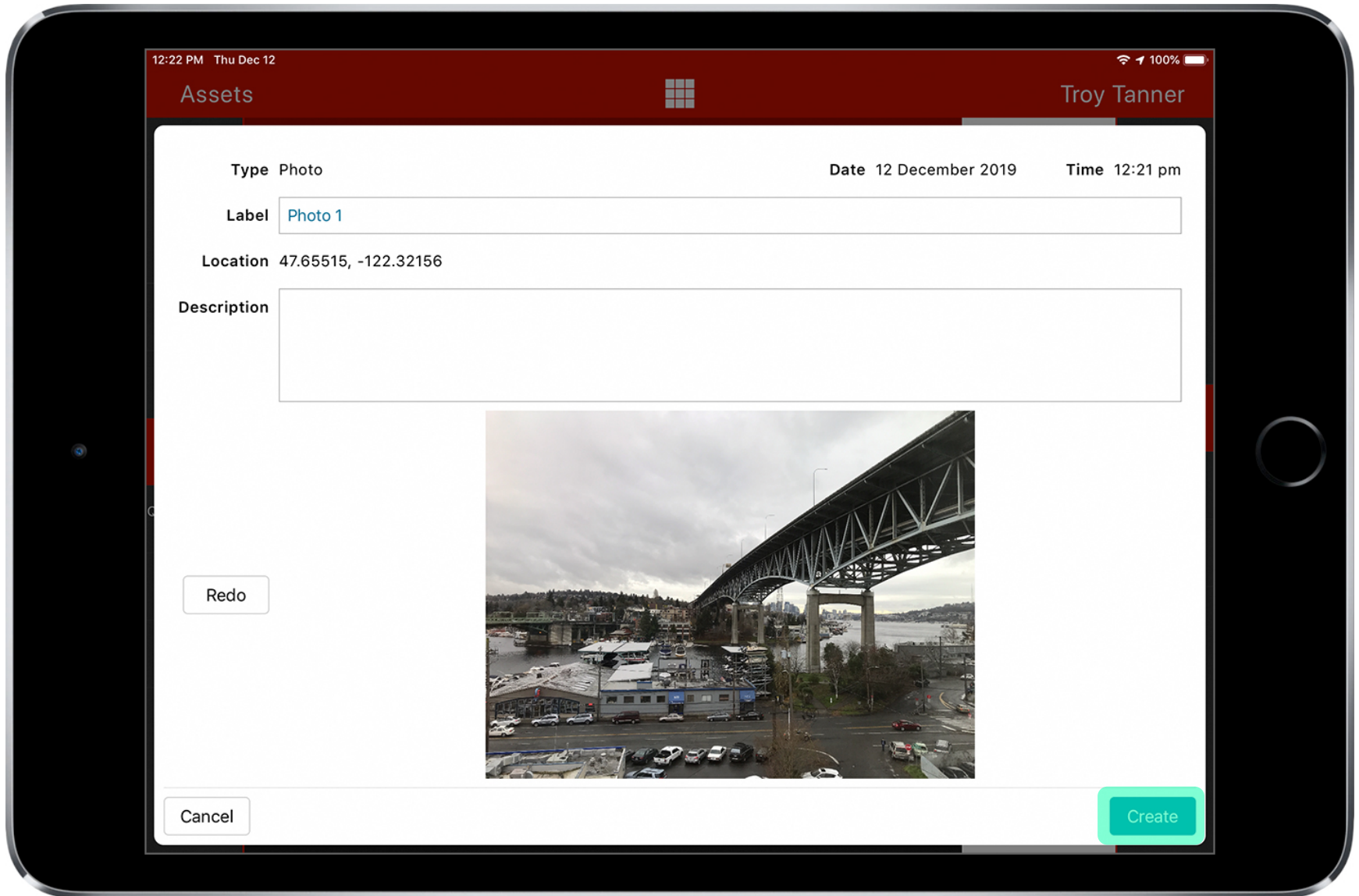


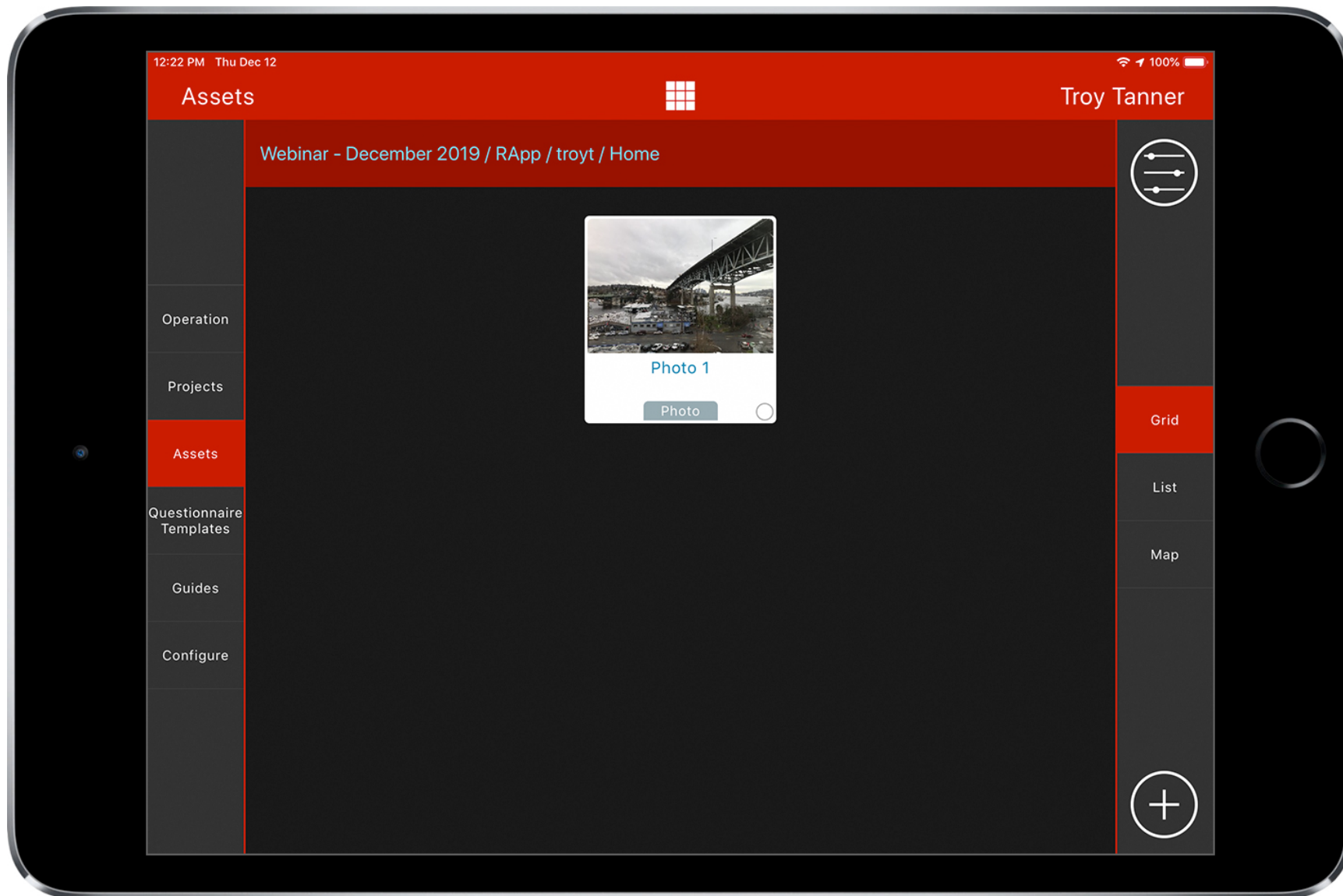


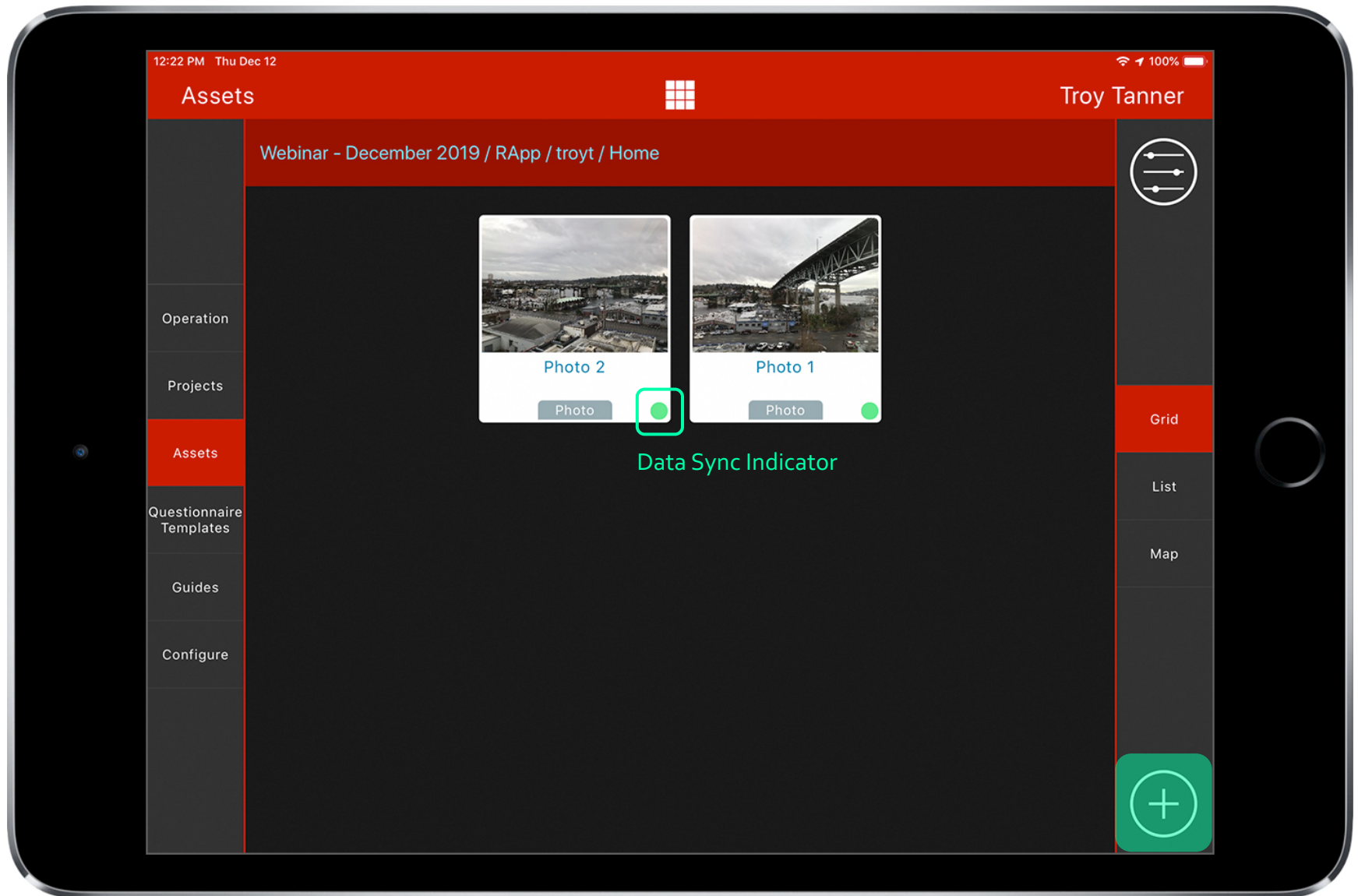


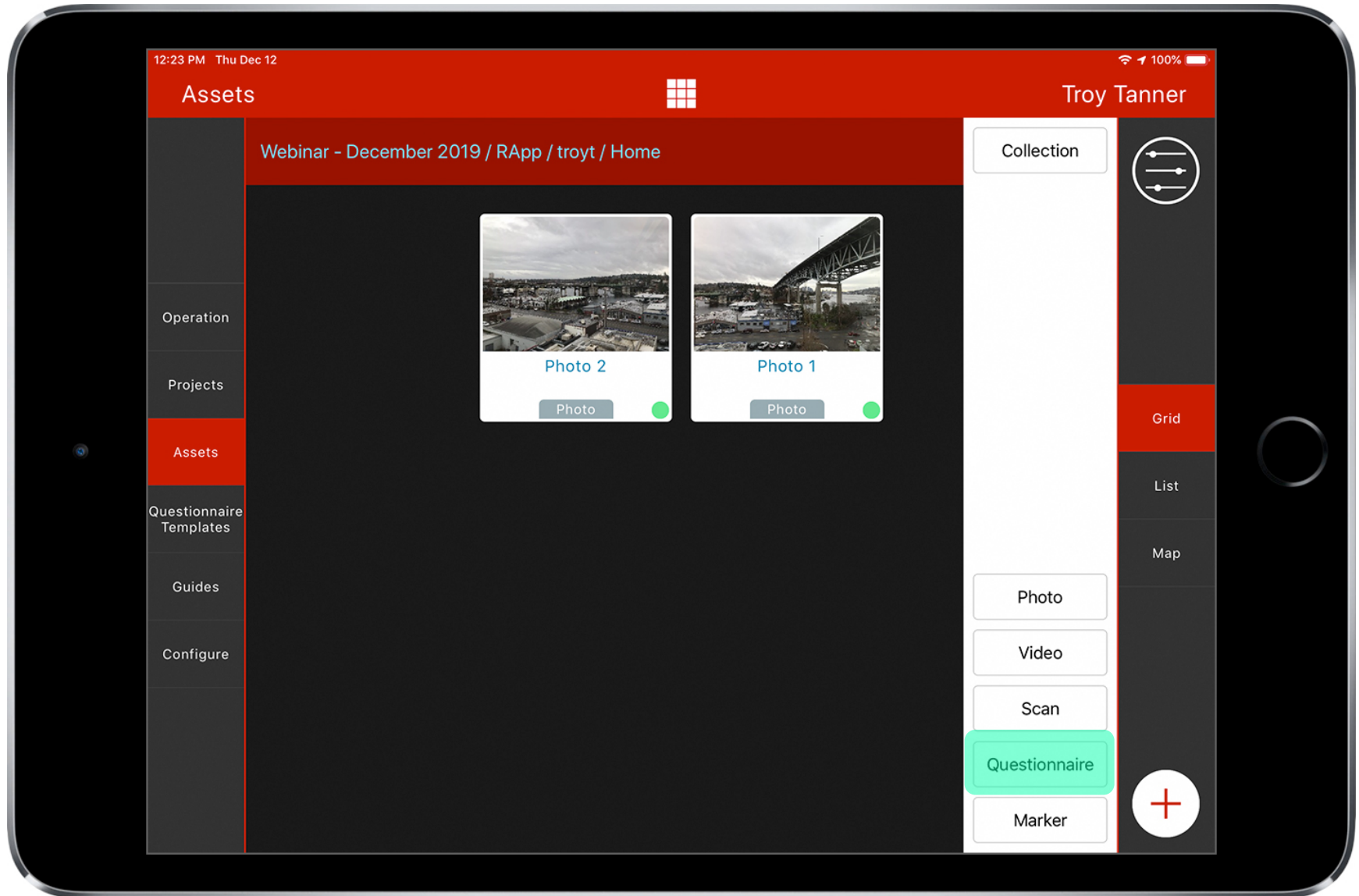


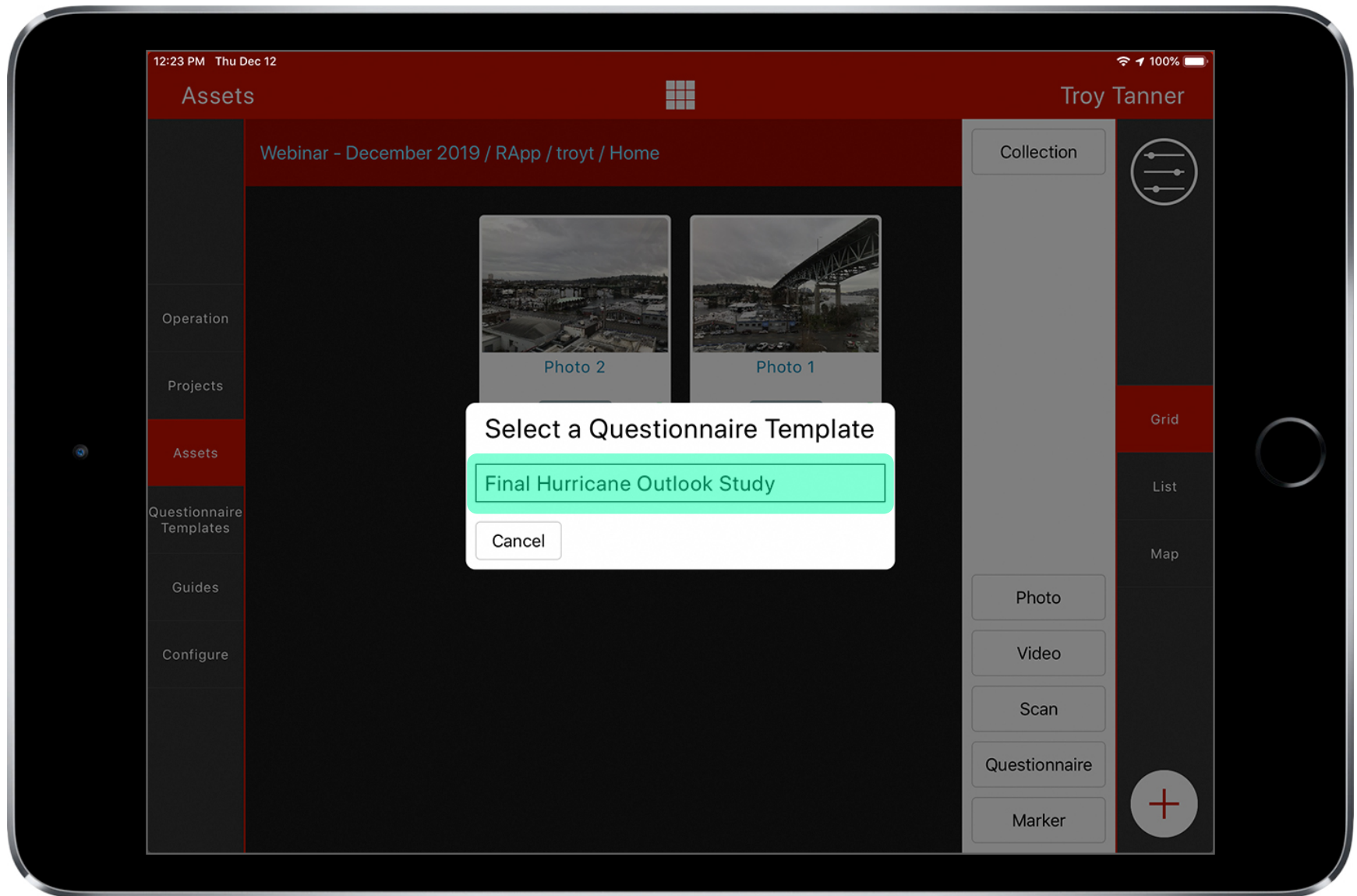


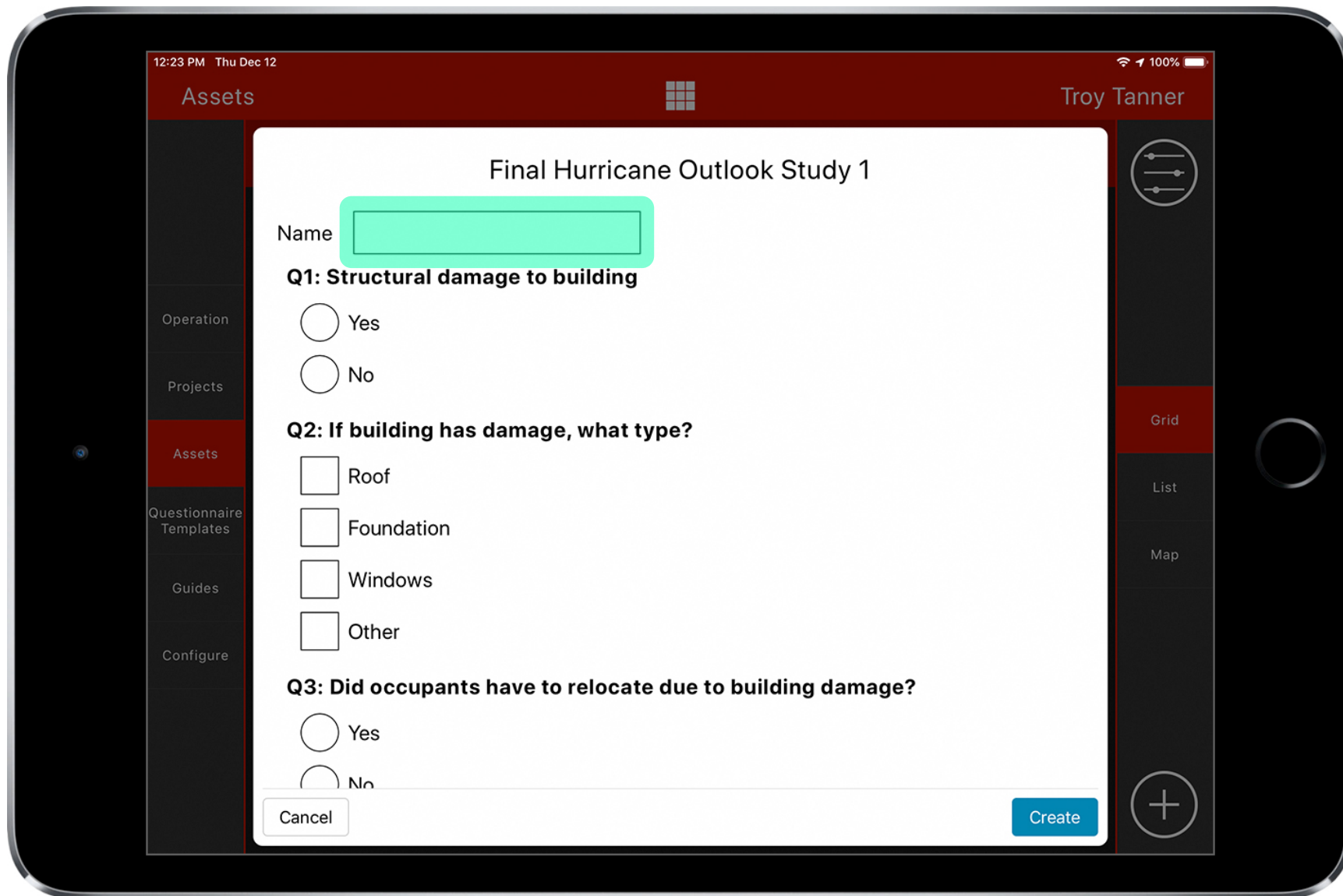


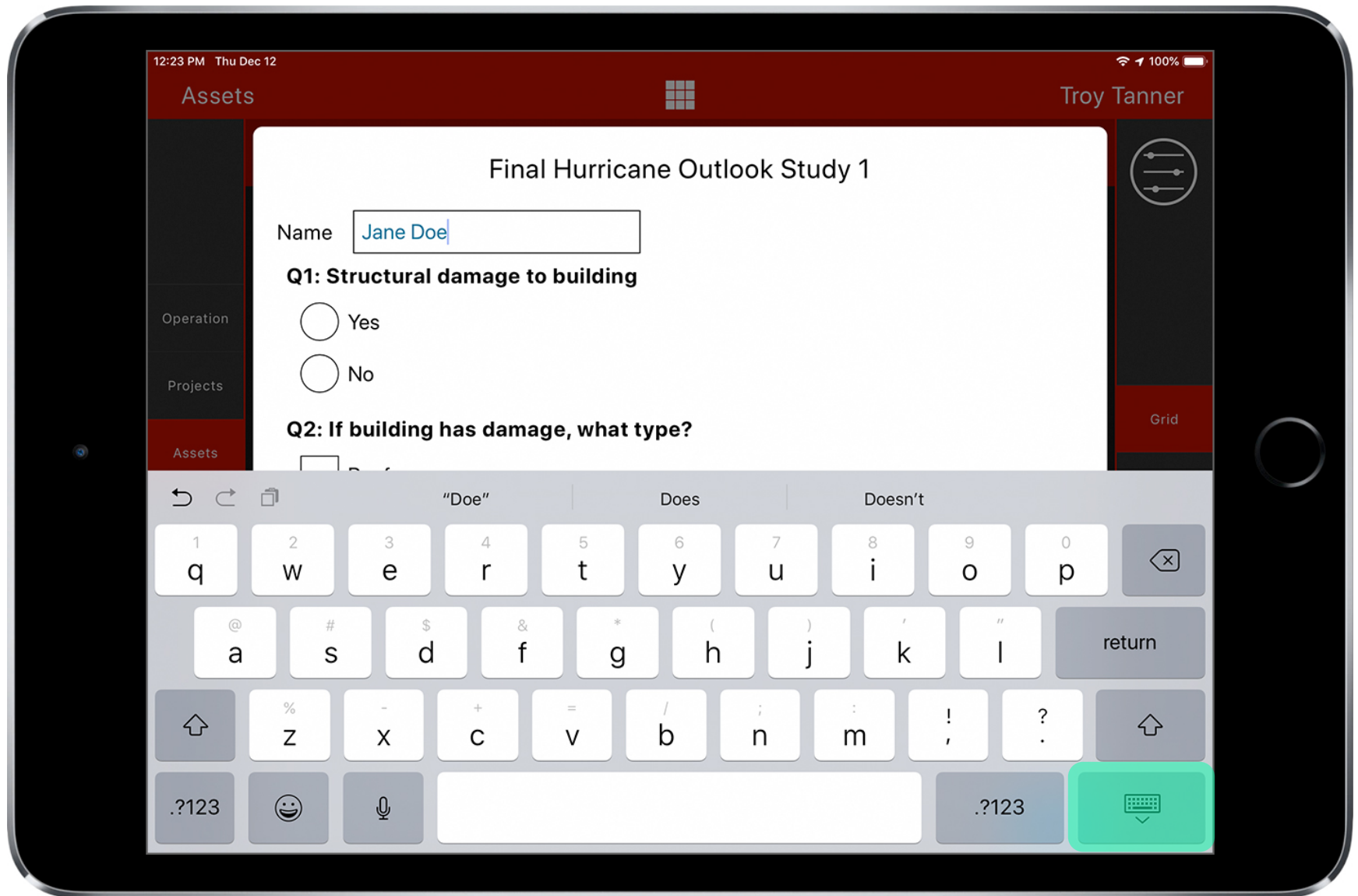


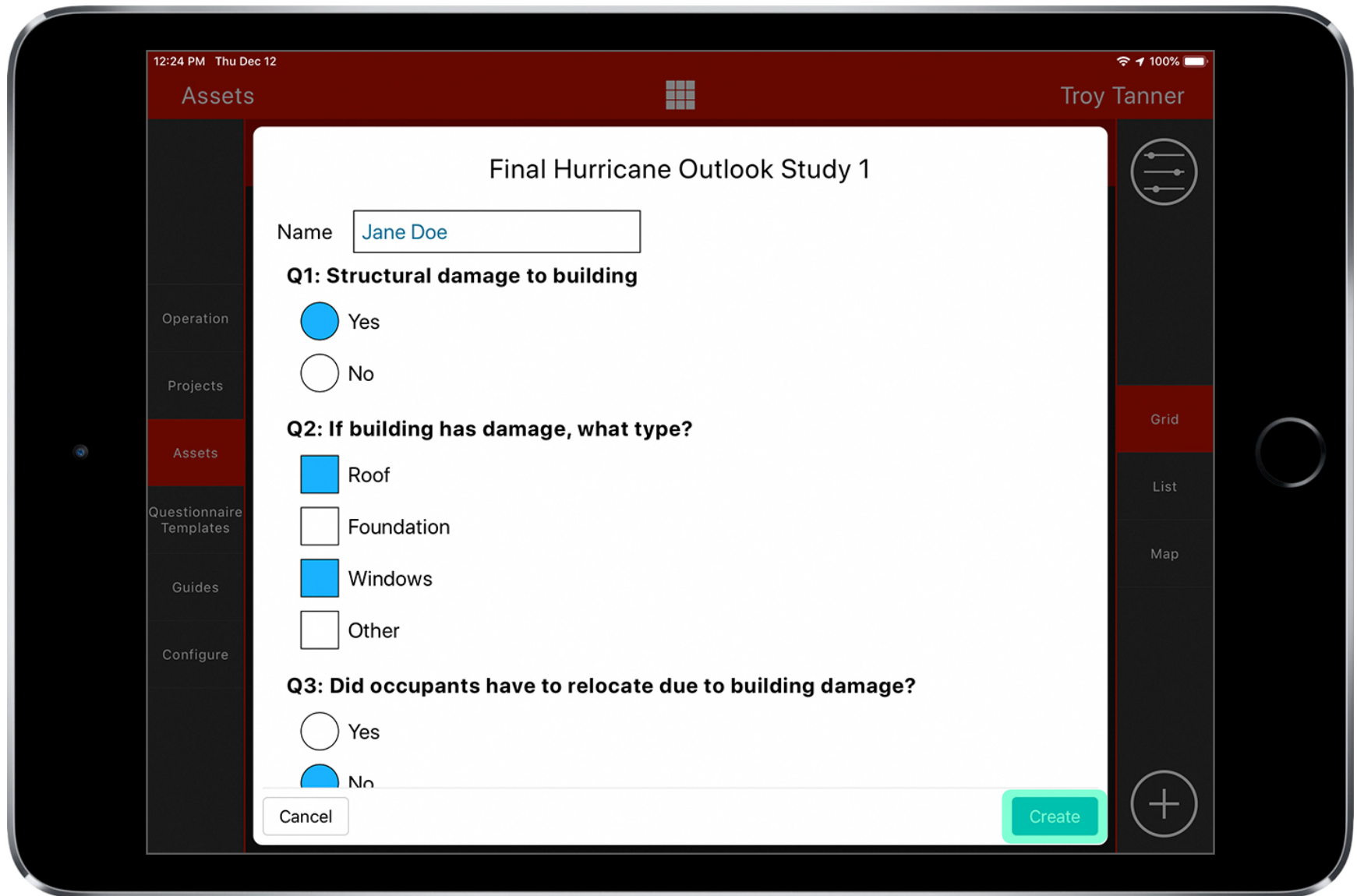


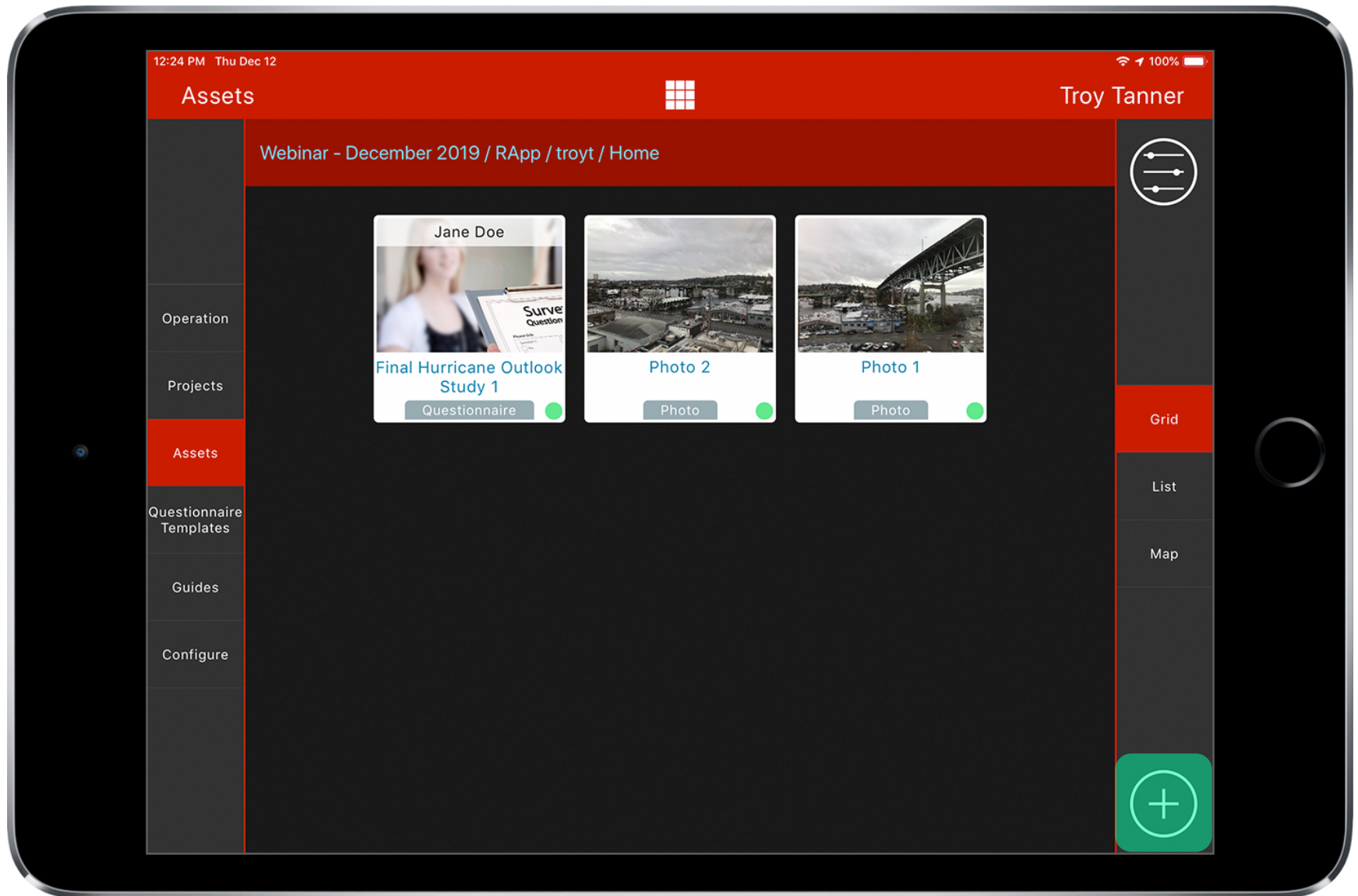


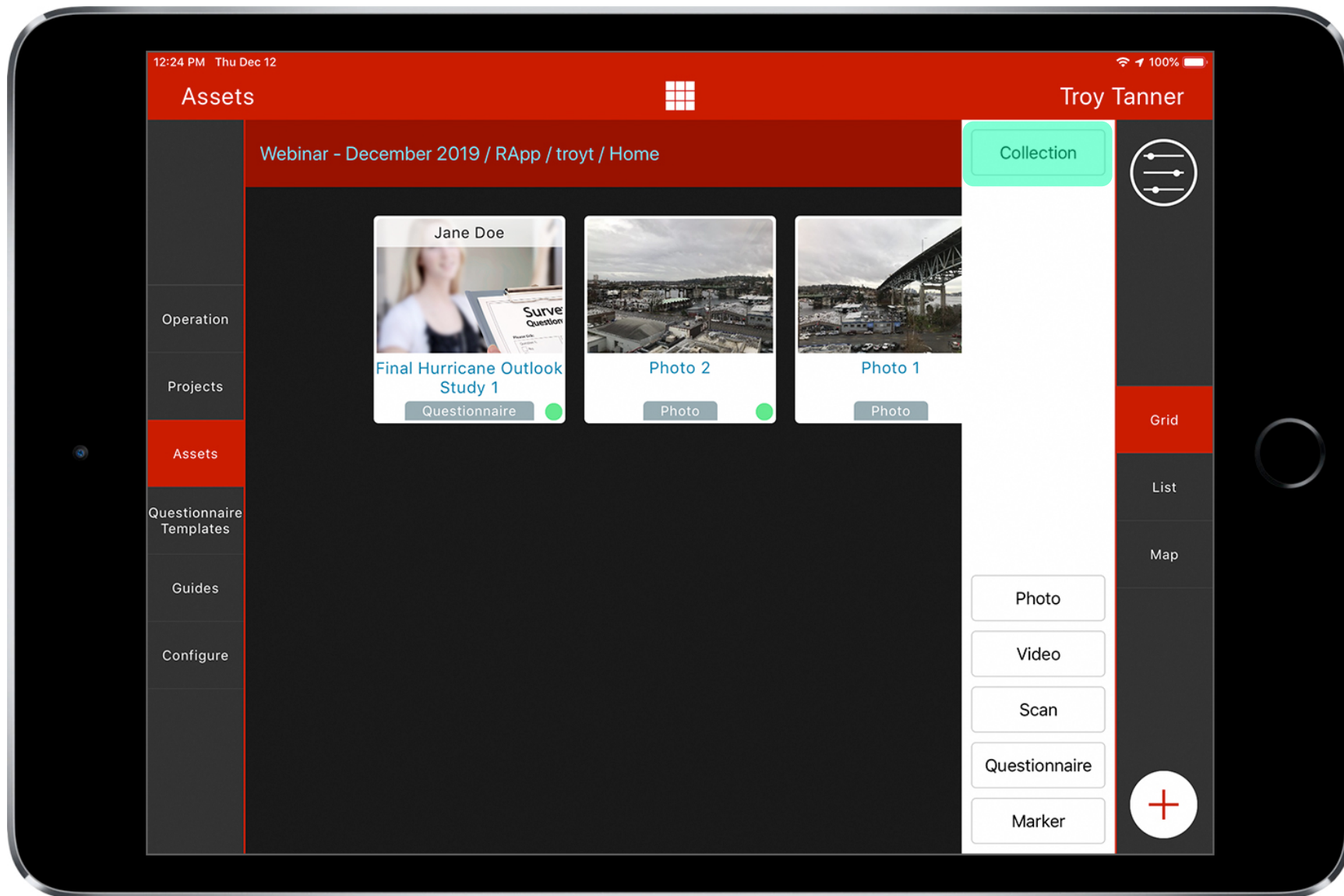


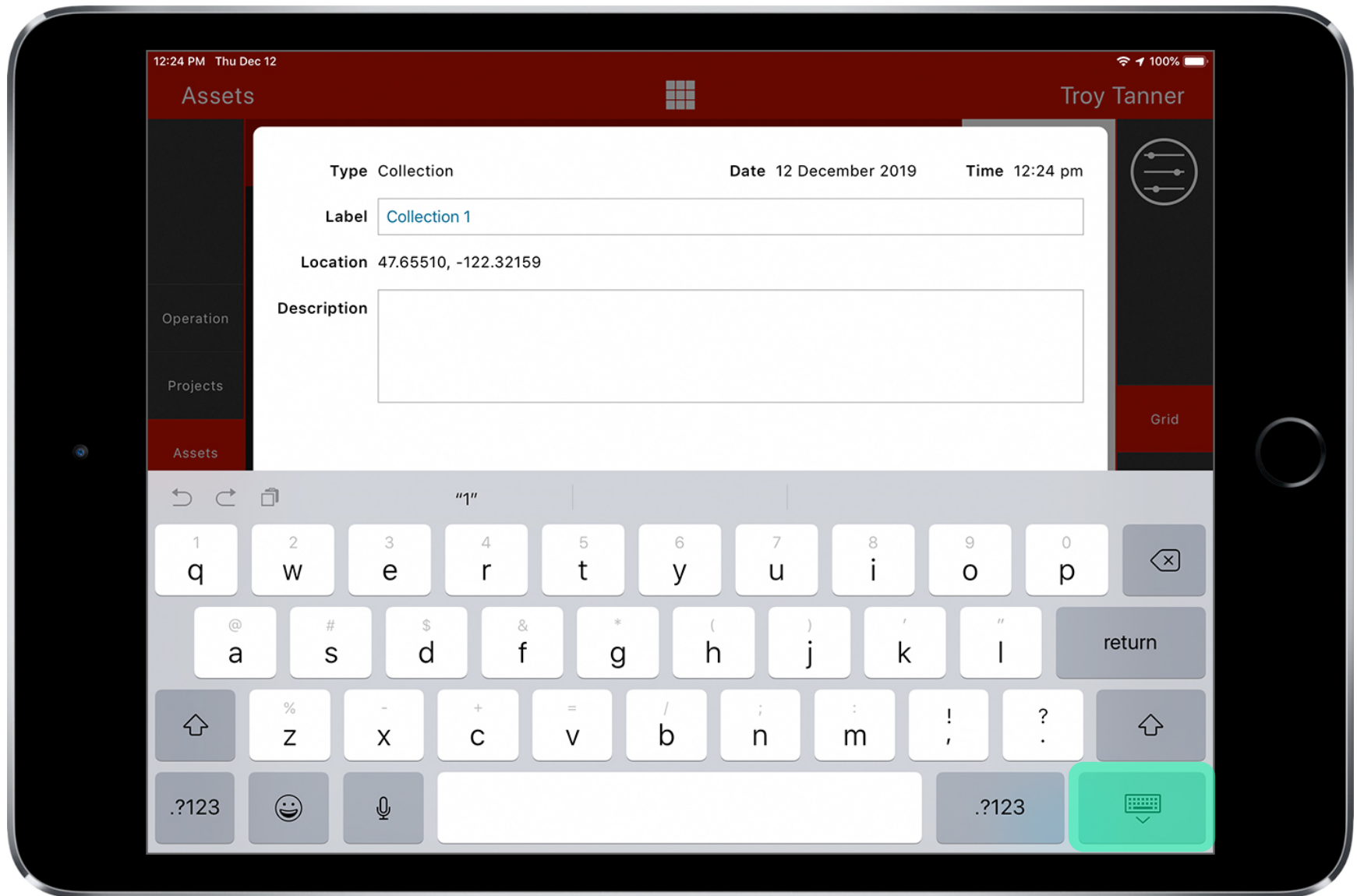


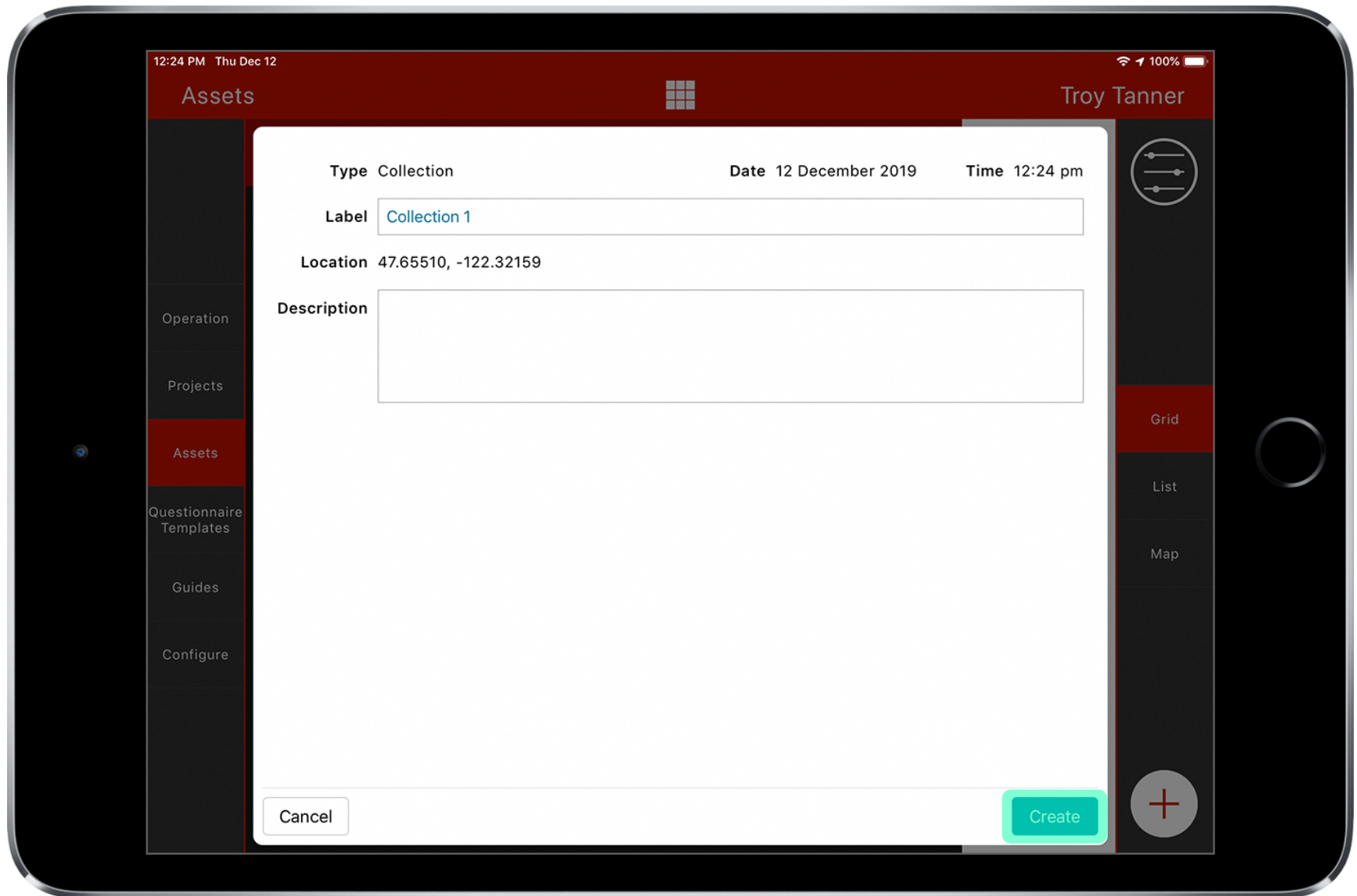


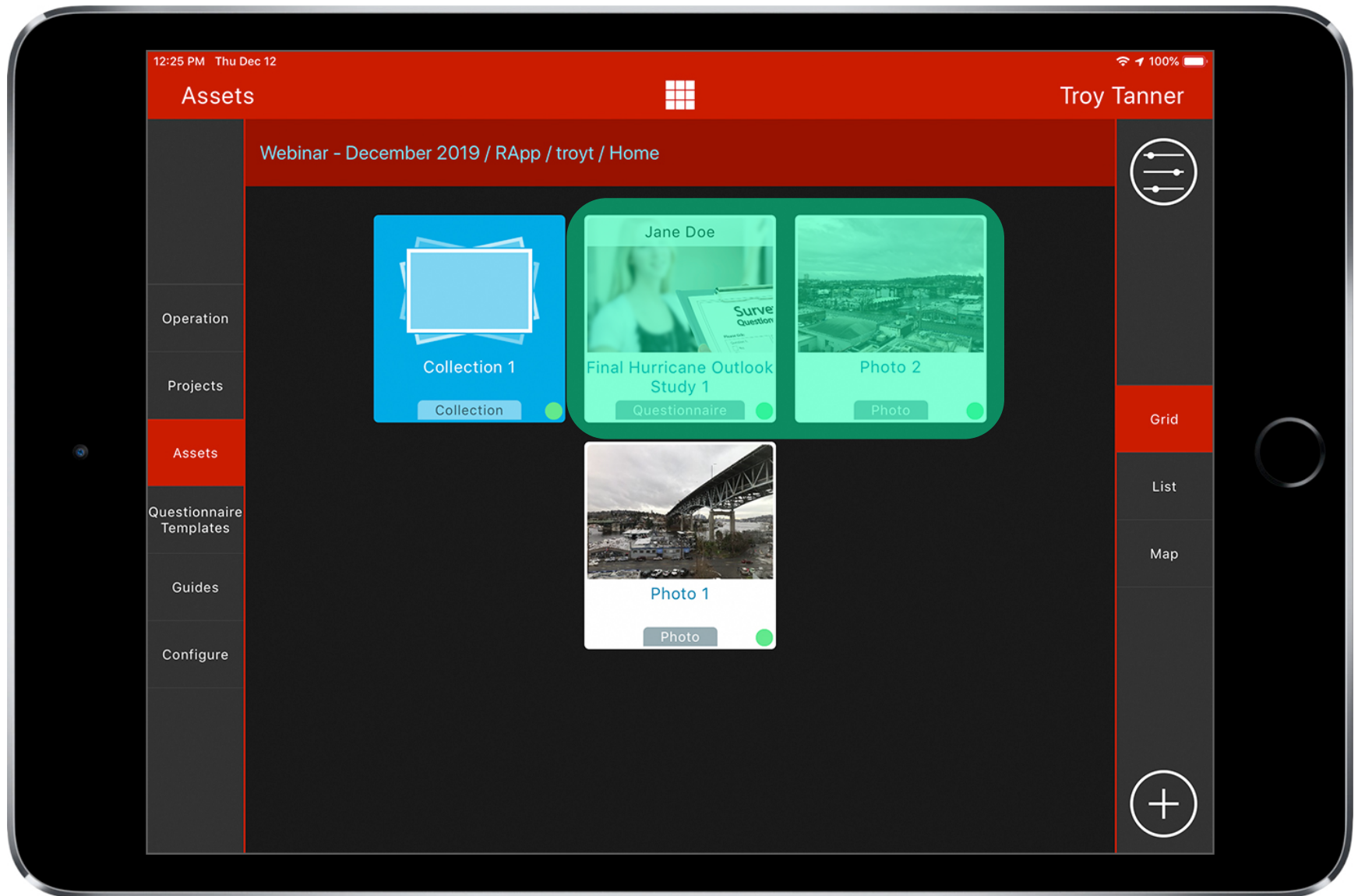


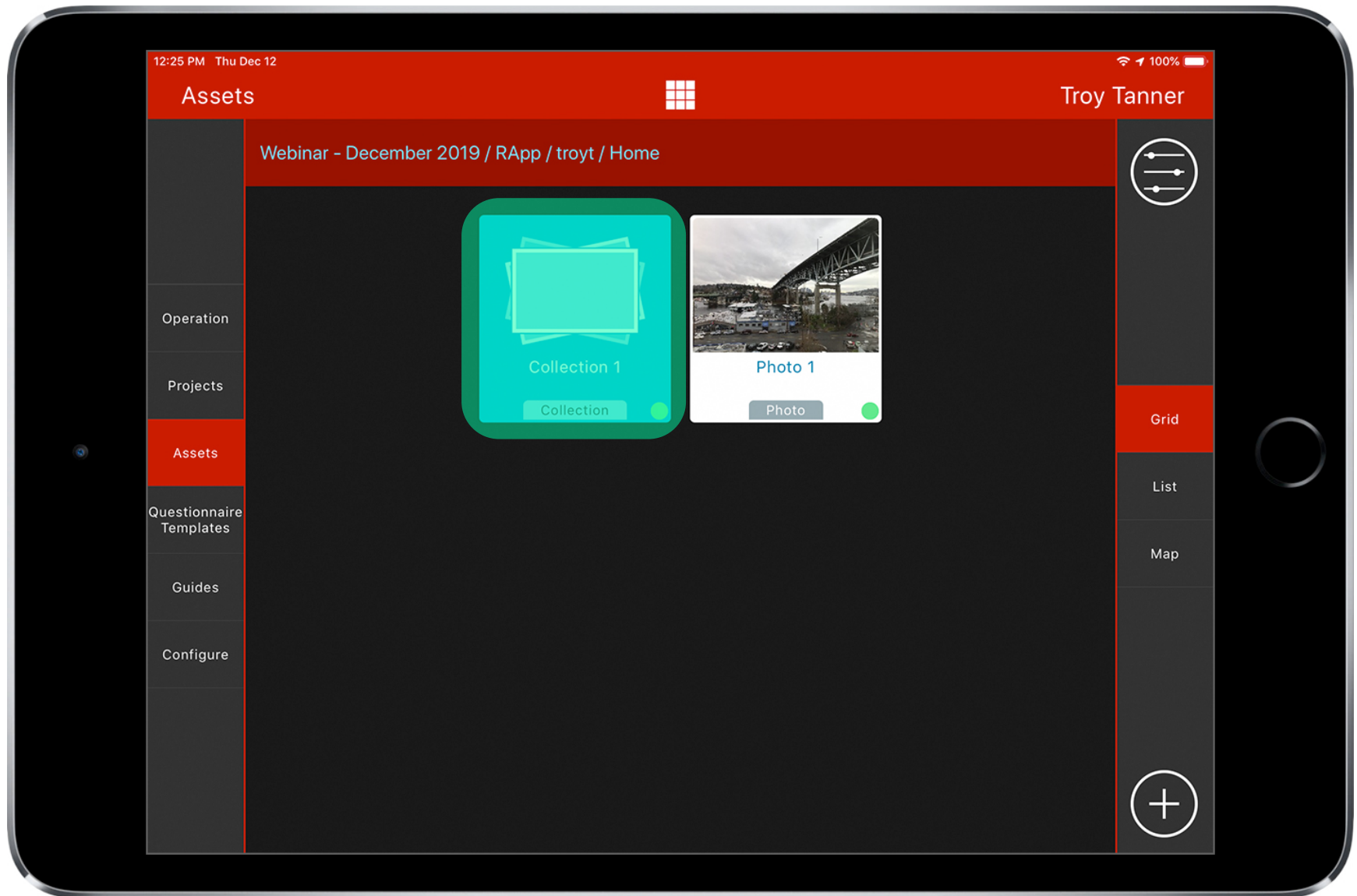


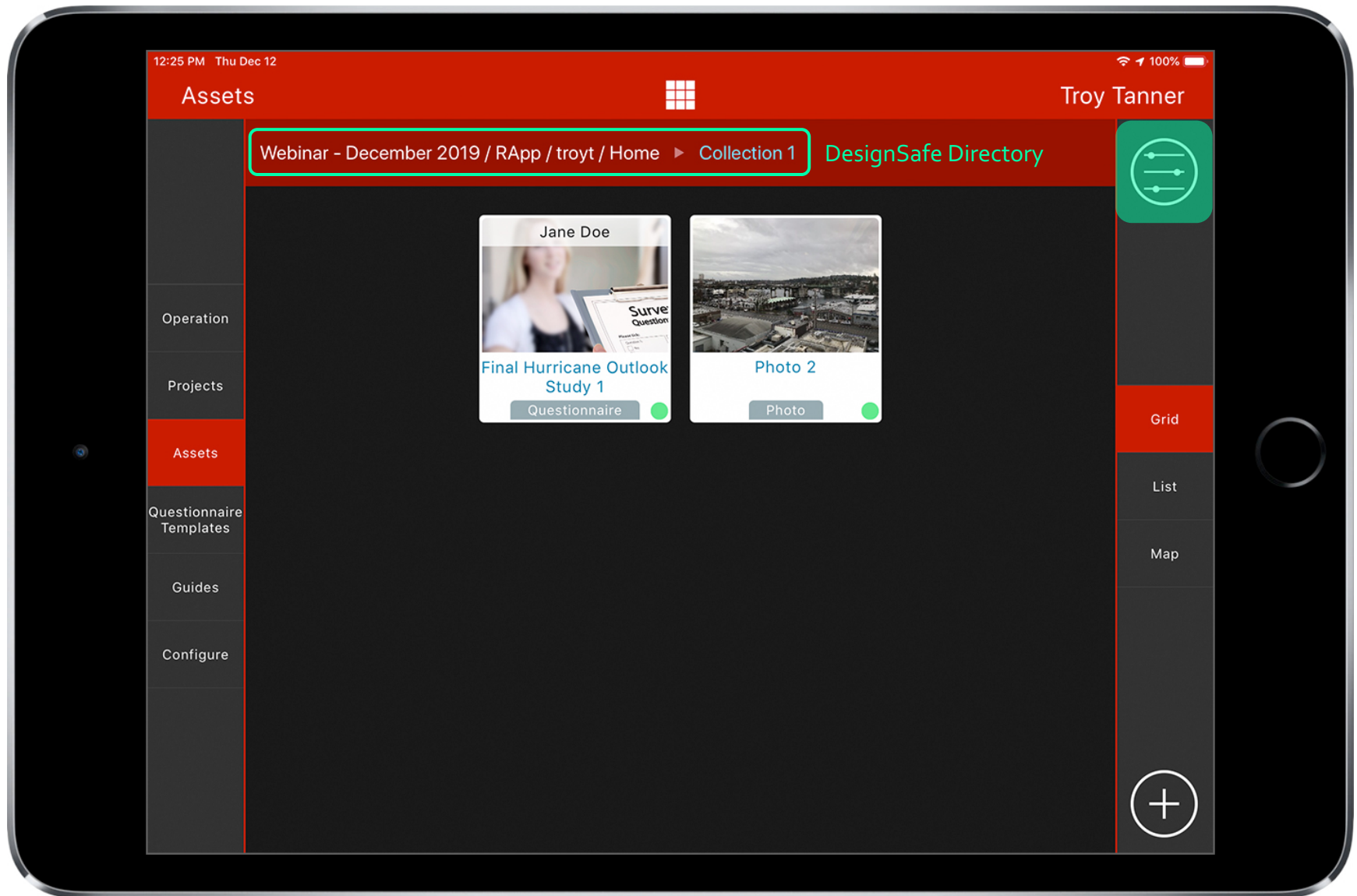


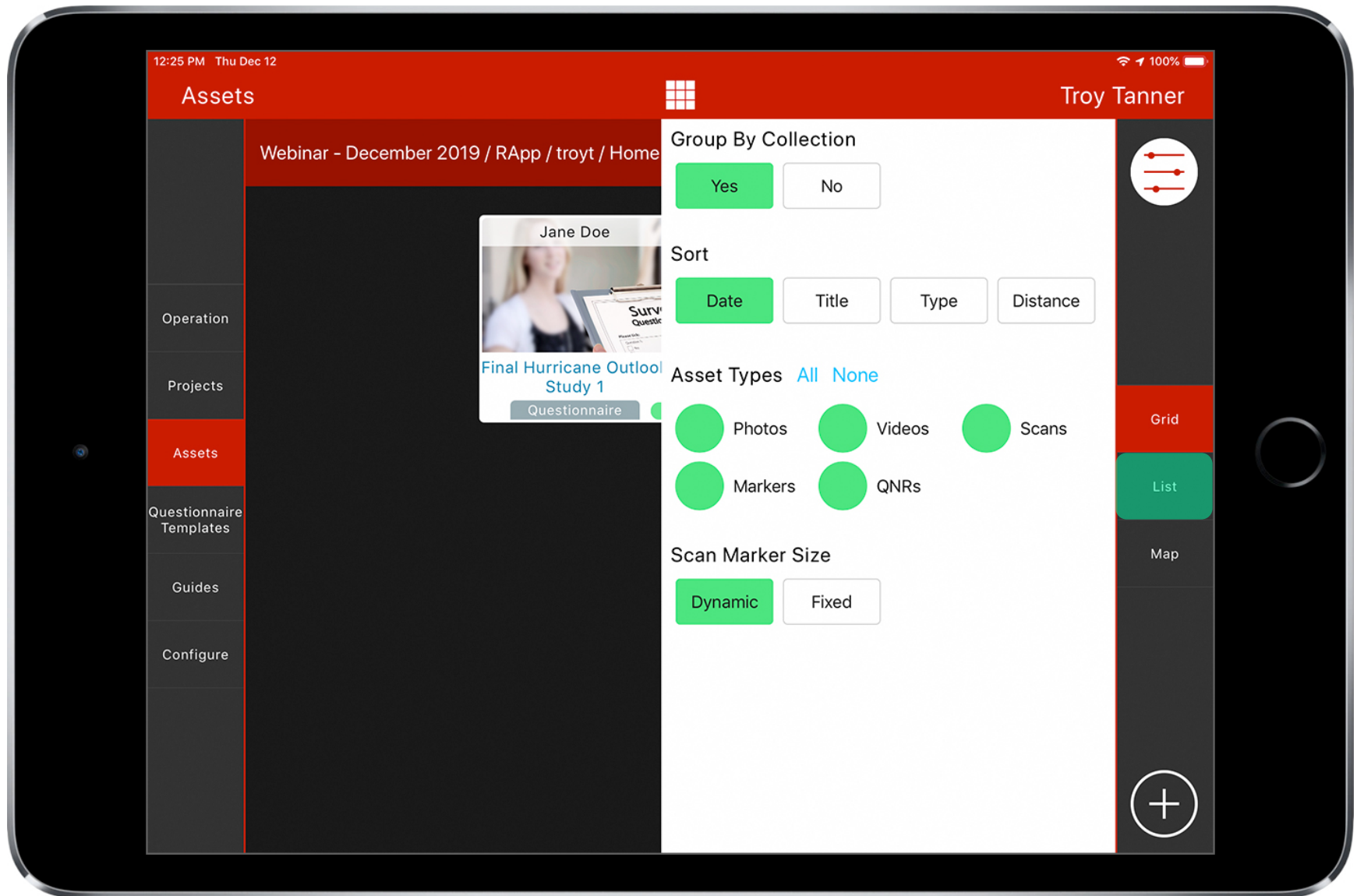


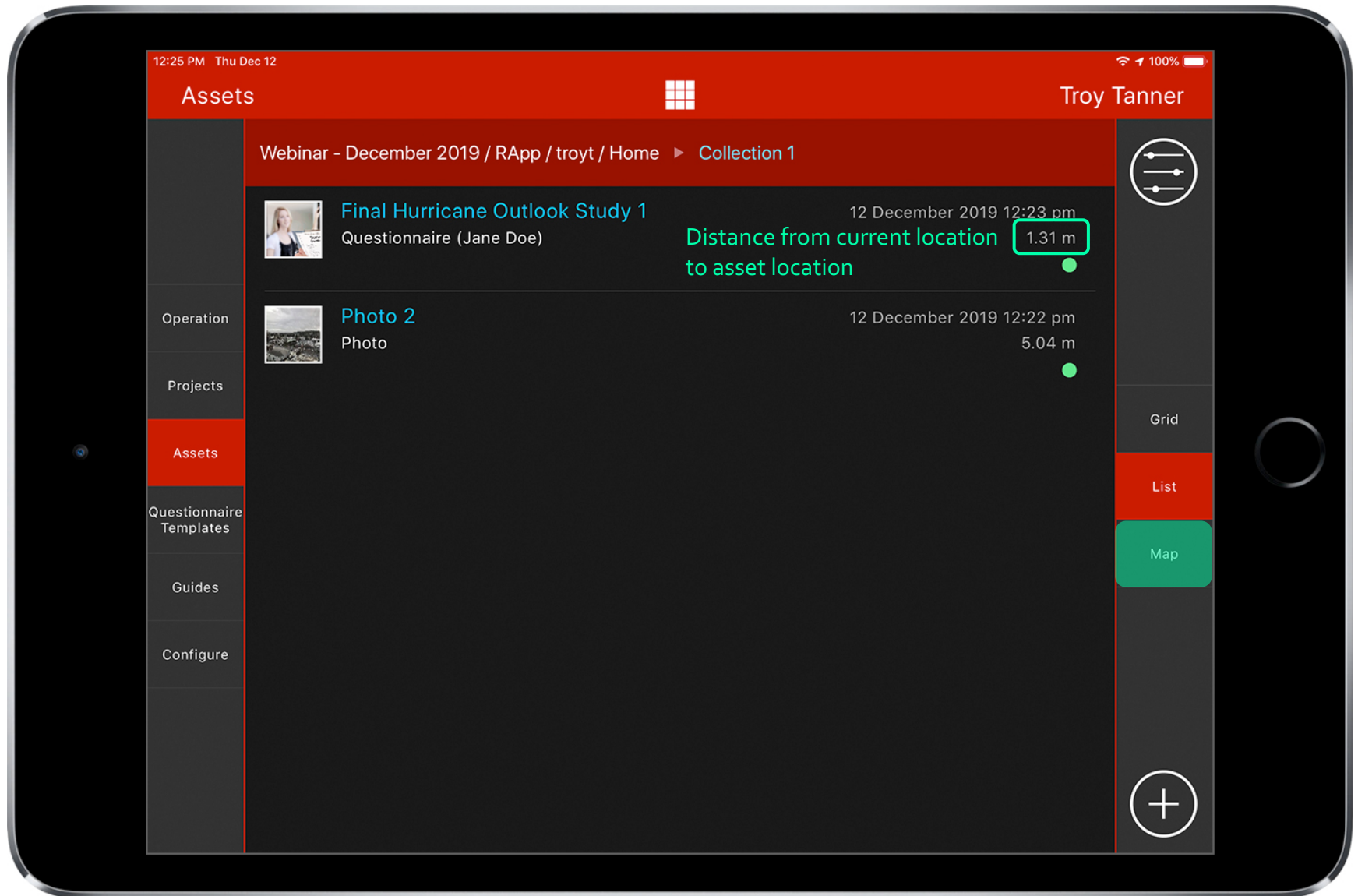


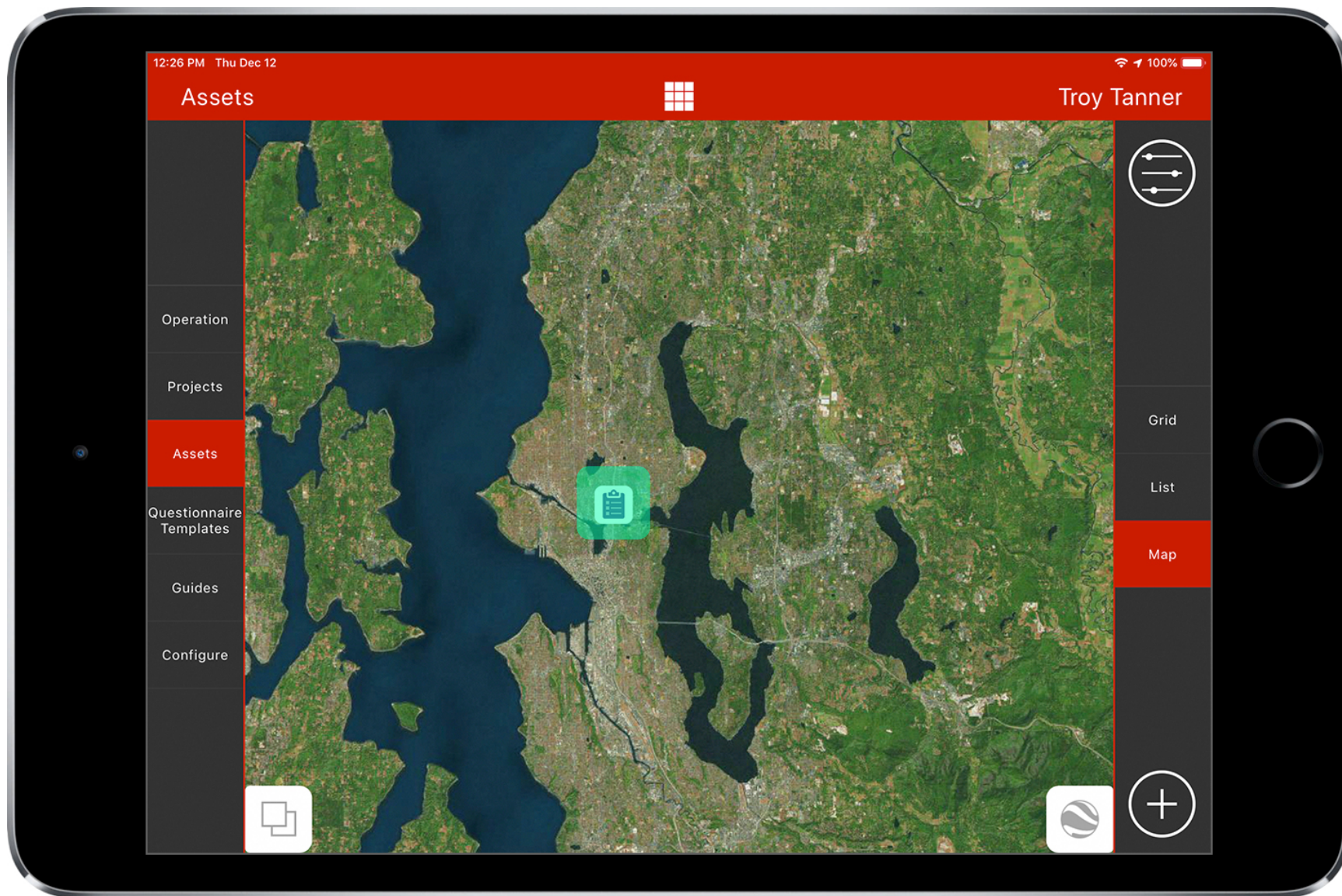


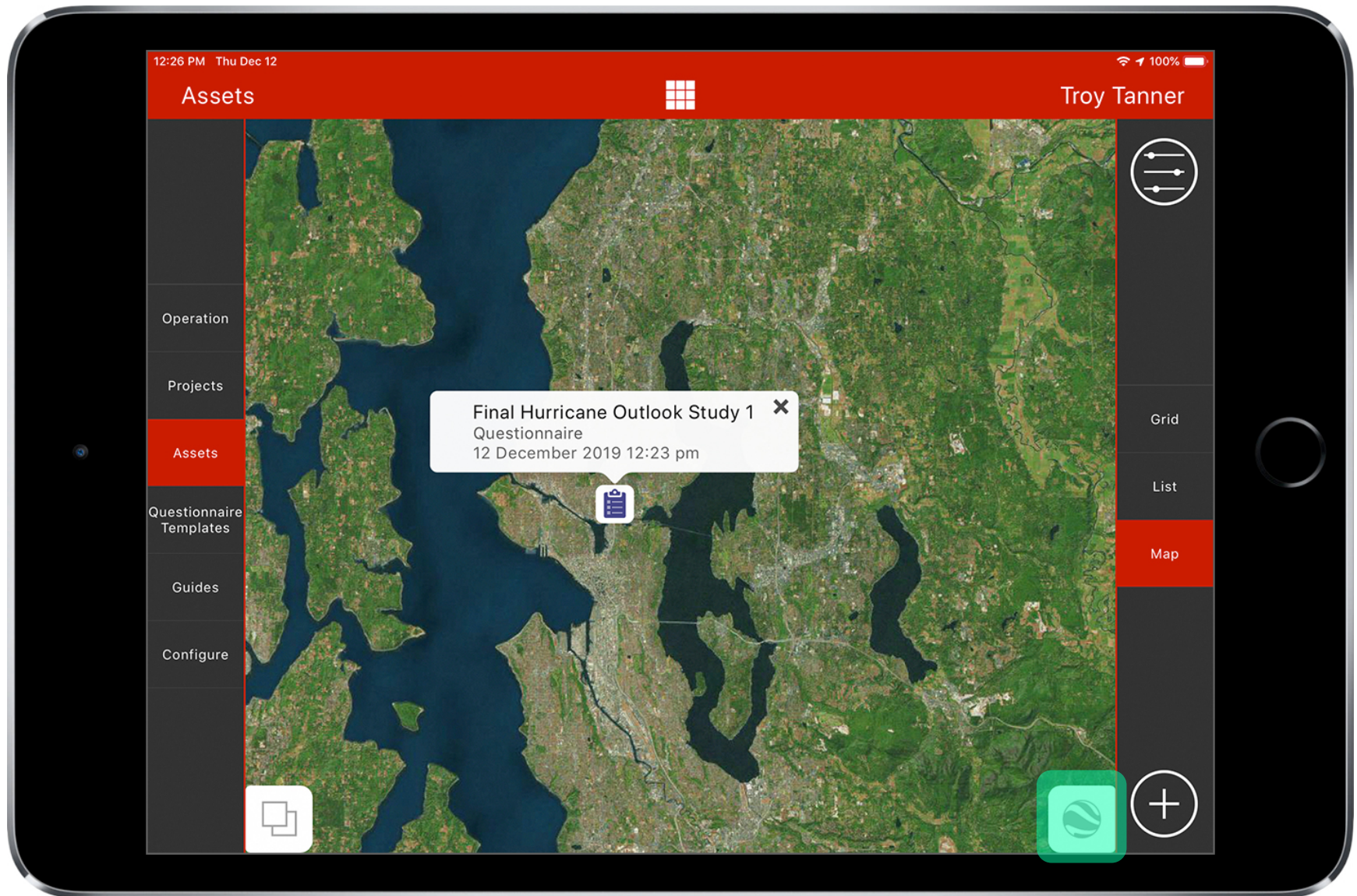


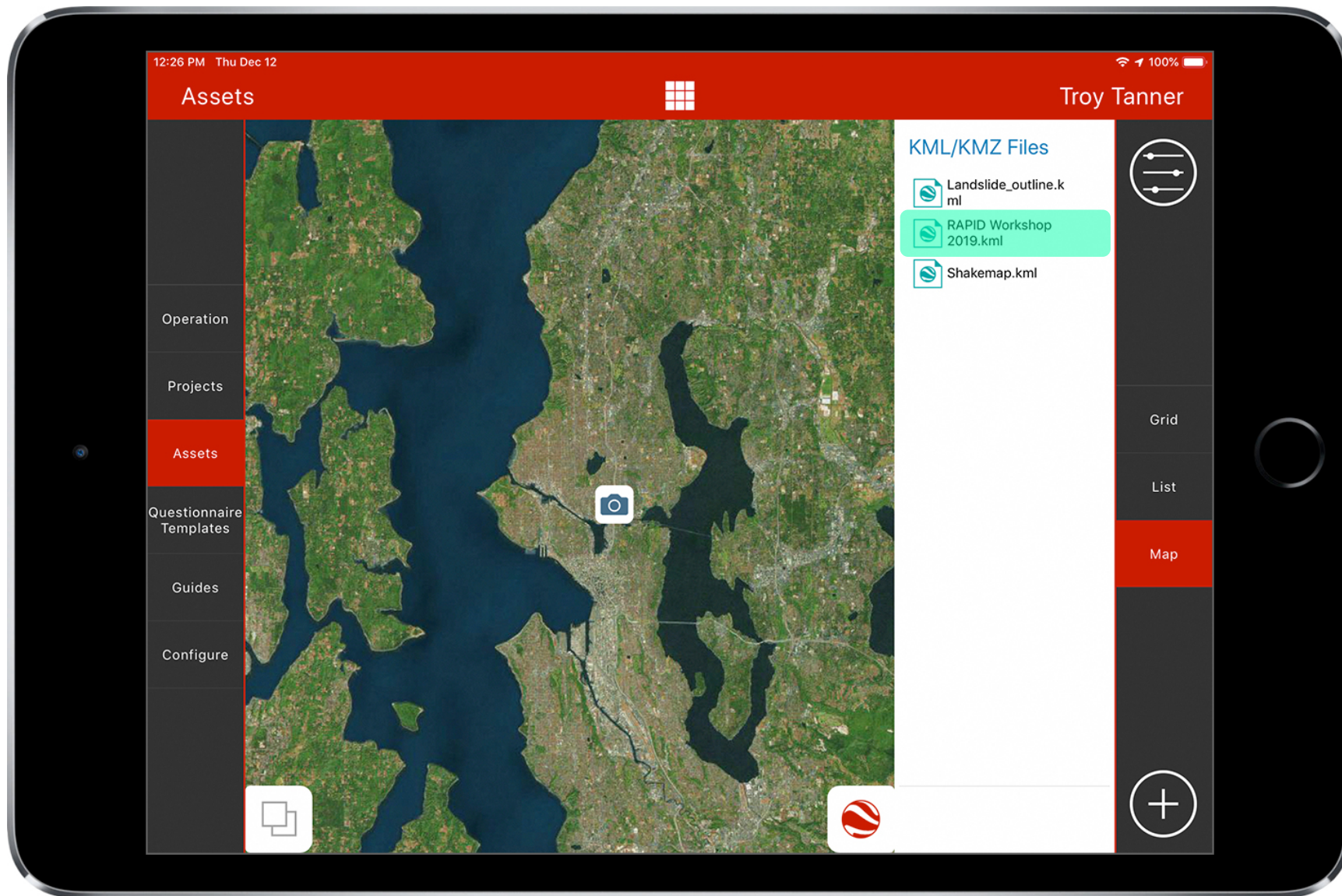


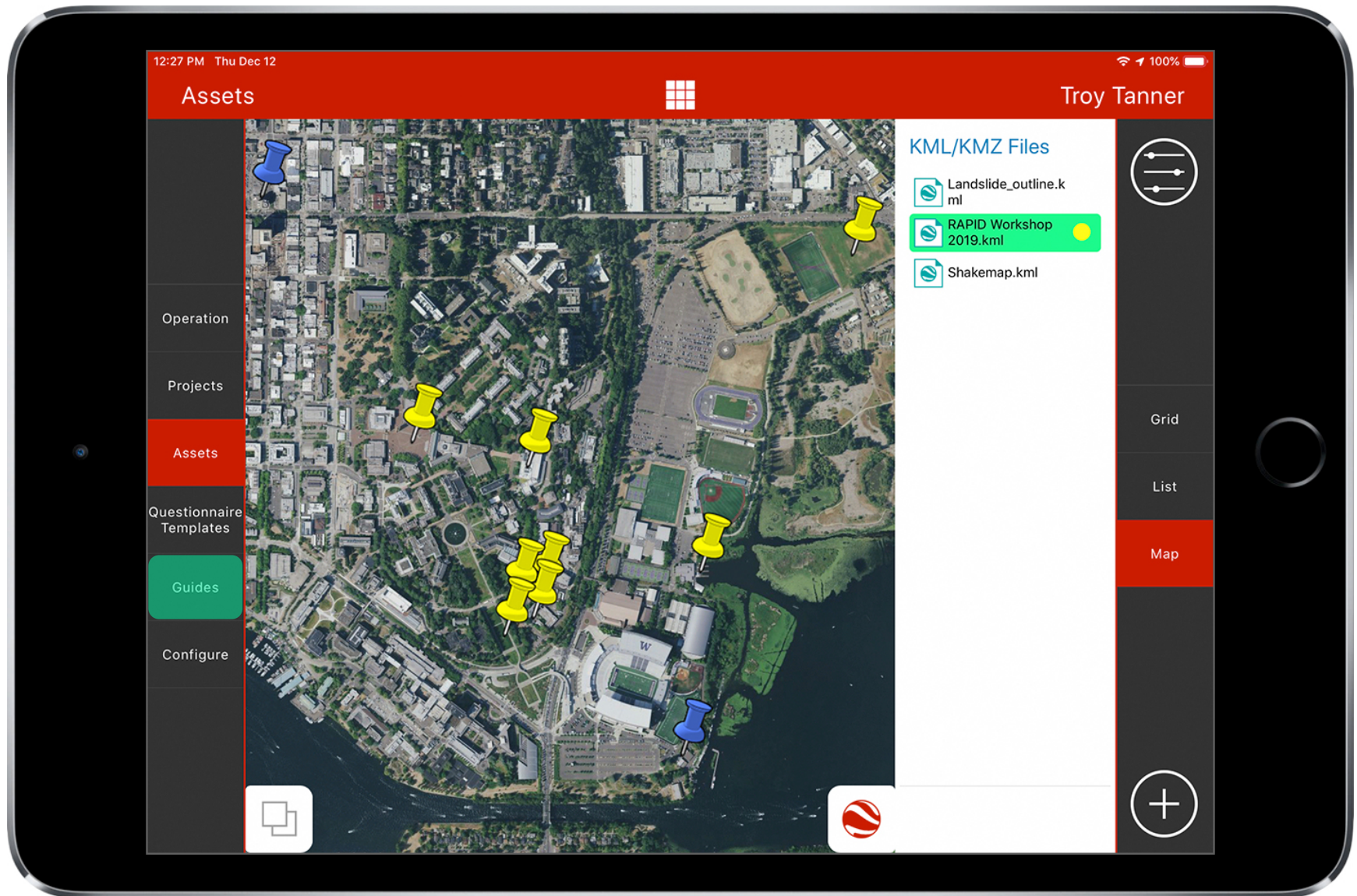


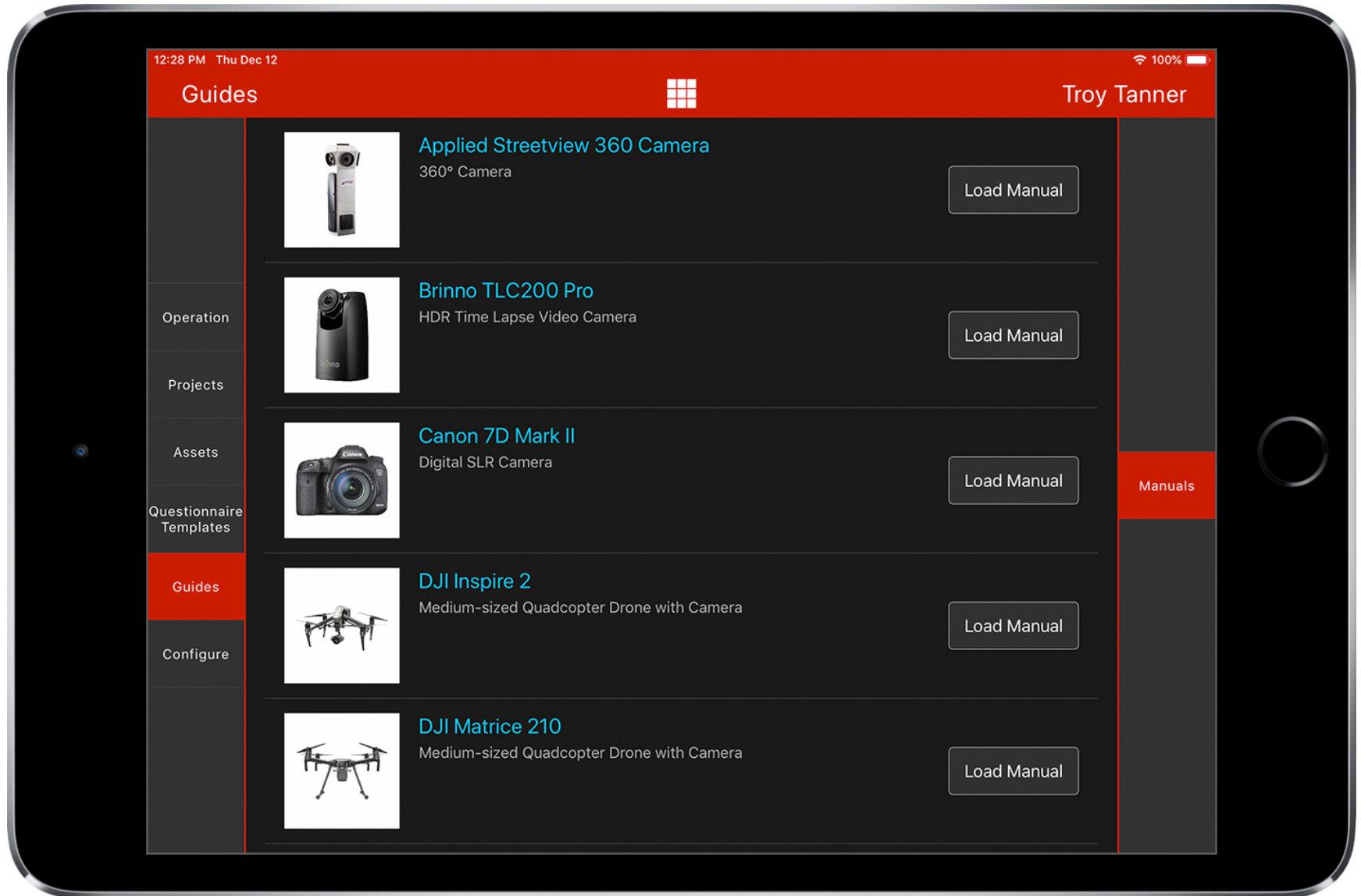












RApp

Network Considerations

If a network is available, **RApp** will automatically upload data to **DesignSafe-CI**. If not, data will be uploaded later.



- ◆ **Wi-Fi & GPS**
 - Included with facility iPads
- ◆ **Cellular Data Available**
 - Can be purchased for facility iPads to provide better network availability in remote locations
- ◆ **Network Speeds May Vary**

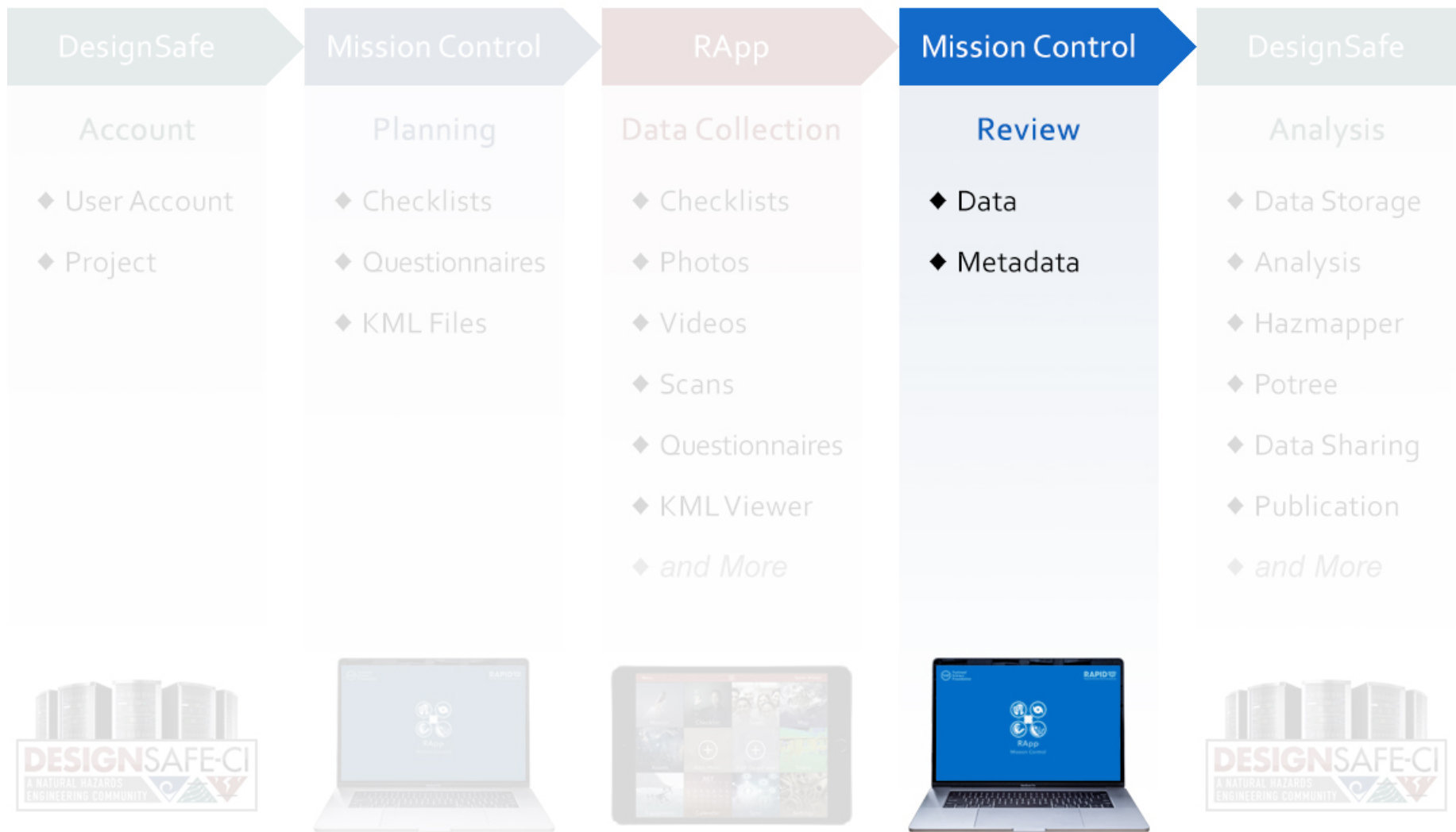
RApp


MISSION CONTROL







After Data Collection


RApp : Mission Control

Review



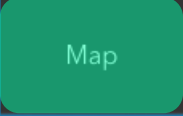

RApp: Mission Control  Troy Tanner

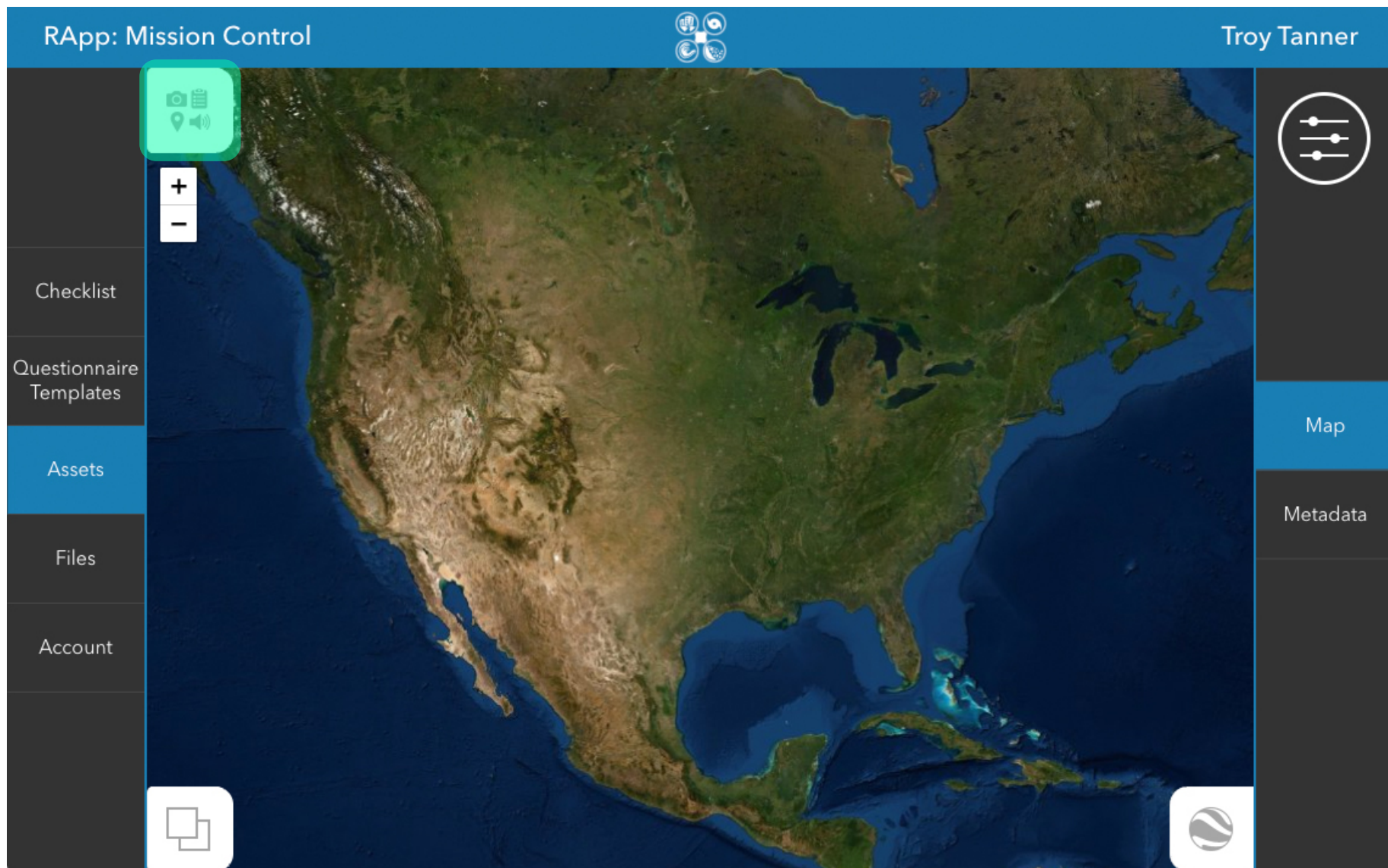
	2019 Site Visit		+	
Checklist	RAPID Workshop July 2018		+	
Questionnaire Templates	TempProject		+	
Assets	Webinar - December 2019			
Files				Map
Account				Metadata

RApp: Mission Control  Troy Tanner

Webinar - December 2019

- Collection 1**
Type Collection Date 12 December 2019
Description
- Final Hurricane Outlook Study 1**
Type Questionnaire Date 12 December 2019 Time 12:23 pm
Location 47.6551, -122.3216
Description
- Photo 2**
Type Image Date 12 December 2019 Time 12:22 pm
Location 47.6551, -122.3216
Description
- Photo 1**
Type Image Date 12 December 2019 Time 12:21 pm
Location 47.6551, -122.3216
Description



The screenshot displays the RApp Mission Control interface. At the top, the title "RApp: Mission Control" is on the left, and the user name "Troy Tanner" is on the right. A central aerial map shows a city street scene with a multi-lane highway and several buildings. A white selection menu is overlaid on the map, listing project names: "None", "Webinar - December 2019", "2019 Site Visit", "RAPID Workshop July 2018", and "TempProject". The "None" option is highlighted in green. To the left of the map is a dark sidebar with navigation options: "Checklist", "Questionnaire Templates", "Assets" (highlighted in blue), "Files", and "Account". To the right of the map is another dark sidebar with a settings icon at the top, followed by "Map" (highlighted in blue) and "Metadata". At the bottom of the map area, there are two buttons: "Export to KMZ" and "Export to CSV".

RApp: Mission Control Troy Tanner

Assets

Project Webinar - December 2019

Collection 1

- Final Hurricane Outlook Study 1
- Photo 2**
- Photo 1

[Export to KMZ](#) [Export to CSV](#)

Map

Metadata

RApp: Mission Control Troy Tanner

Assets

Project Webinar - December 2019

Collection 1

- Final Hurricane Outlook Study 1
- Photo 2**
- Photo 1

Export to KMZ Export to CSV

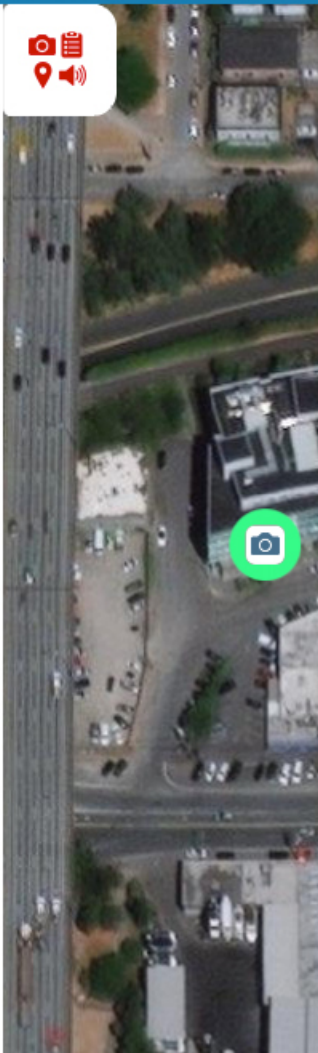



Photo 2 ✕

Image 12 December 2019 12:22 pm



Metadata

Type Image
Title Photo 2
Description
Date 12 December 2019
Time 12:22 pm
Latitude 47.6551

[Download](#)

Map

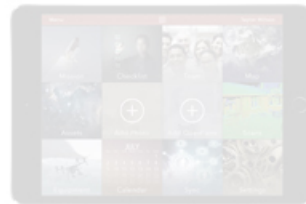
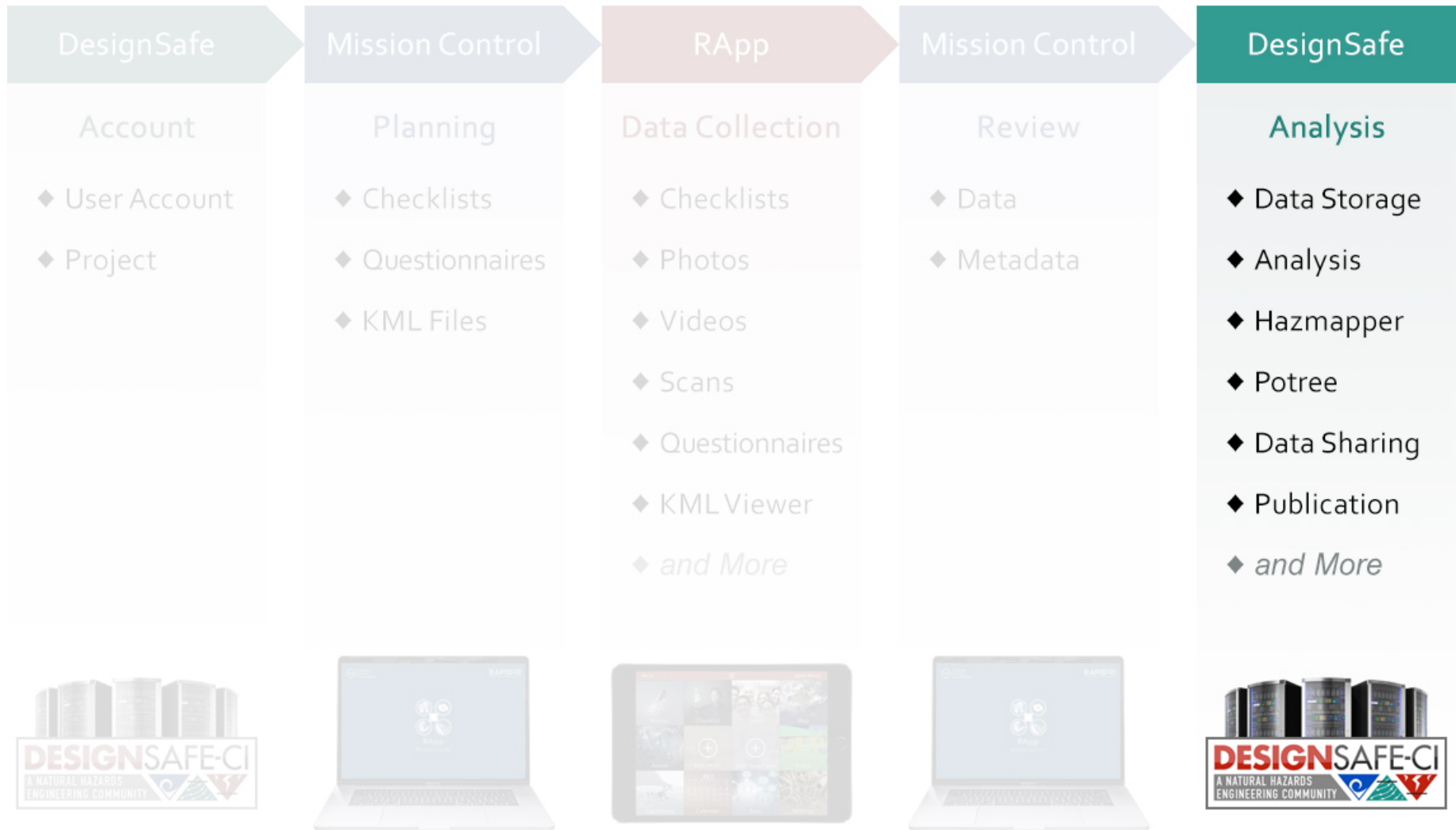
Metadata

DESIGNSAFE-CI

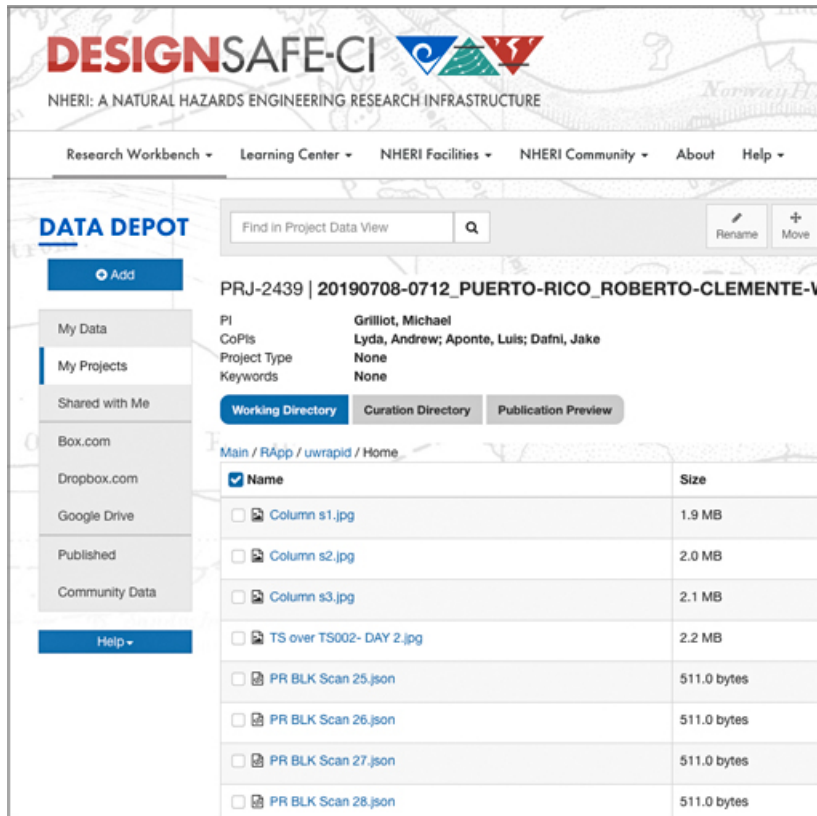
After Data Collection

DesignSafe-CI

Analysis



Data collected with **RApp** is automatically uploaded to **DesignSafe-CI** and is compatible with the Field Data Model.



The screenshot displays the DesignSafe-CI Data Depot interface. At the top, the logo for DesignSafe-CI is visible, along with the text "NHERI: A NATURAL HAZARDS ENGINEERING RESEARCH INFRASTRUCTURE". Below the logo, there is a navigation menu with options: Research Workbench, Learning Center, NHERI Facilities, NHERI Community, About, and Help. The main content area is titled "DATA DEPOT" and features a search bar with the text "Find in Project Data View". Below the search bar, there is a project identifier: "PRJ-2439 | 20190708-0712_PUERTO-RICO_ROBERTO-CLEMENTE-W". The interface shows a list of files and folders, including "Column s1.jpg", "Column s2.jpg", "Column s3.jpg", "TS over TS002- DAY 2.jpg", and several "PR BLK Scan" files. The "Name" column is checked, and the "Size" column shows the file sizes. The interface also includes a sidebar with options like "My Data", "My Projects", "Shared with Me", "Box.com", "Dropbox.com", "Google Drive", "Published", and "Community Data".

Name	Size
<input type="checkbox"/> Column s1.jpg	1.9 MB
<input type="checkbox"/> Column s2.jpg	2.0 MB
<input type="checkbox"/> Column s3.jpg	2.1 MB
<input type="checkbox"/> TS over TS002- DAY 2.jpg	2.2 MB
<input type="checkbox"/> PR BLK Scan 25.json	511.0 bytes
<input type="checkbox"/> PR BLK Scan 26.json	511.0 bytes
<input type="checkbox"/> PR BLK Scan 27.json	511.0 bytes
<input type="checkbox"/> PR BLK Scan 28.json	511.0 bytes

- ◆ Metadata is preserved with data files
- ◆ Field Data Model can be applied to data in DesignSafe-CI
- ◆ Data can be analyzed and published

NSF | **DESIGNSAFE-CI** | NHERI: NATURAL HAZARDS ENGINEERING RESEARCH INFRASTRUCTURE

Welcome, Troy!

Research Workbench | Learning Center | NHERI Facilities | NHERI Community | About | Help

Search DesignSafe

DATA DEPOT

+ Add

- My Data
- My Projects**
- Shared with Me
- Box.com
- Dropbox.com
- Google Drive
- Published
- Community

Find in My Projects

Rename | Move | Copy | Preview | Download | Move to Trash

Project ID	Project Title	Project PI	Last Modified
PRJ-2653	Webinar - December 2019	Troy Tanner	12/11/19 1:18 PM
PRJ-2554	2019 Site Visit	Jake Dafni	9/19/19 6:36 PM
PRJ-2445	2019 RAPID 4-Day Summer Workshop	Jake Dafni	7/23/19 12:28 PM
PRJ-2011	RAPID Workshop July 2018	Joseph Wartman	10/11/18 12:53 PM
PRJ-1367	RAPID Data Model	Maria Esteva	7/24/18 12:39 PM
PRJ-	TempProject	Troy Tanner	7/24/18 12:26

Research Workbench ▾ Learning Center ▾ NHERI Facilities ▾ NHERI Community ▾ About Help ▾

Search DesignSafe

DATA DEPOT



- My Data
- My Projects**
- Shared with Me
- Box.com
- Dropbox.com
- Google Drive
- Published
- Community Data

Find in Project Data View

PRJ-2653 | **WEBINAR - DECEMBER 2019** [Edit Project](#)

PI **Tanner, Troy**
CoPIs **Wartman, Joseph**
Project Type **None**
Keywords **None**

[Main](#) / [RApp](#) / [troyt](#) / Home

<input checked="" type="checkbox"/> Name	Size	Last modified
<input type="checkbox"/>  Collection 1	--	12/12/19 12:25 PM
<input type="checkbox"/>  Photo 1.jpg	2.4 MB	12/12/19 12:22 PM

Research Workbench ▾ Learning Center ▾ NHERI Facilities ▾ NHERI Community ▾ About Help ▾

Search DesignSafe 🔍

Find in Project Data View 🔍

Rename Move Copy Preview Download Move to Trash

DATA DEPOT

+ Add

My Data

My Projects

Shared with Me

Box.com

Dropbox.com

Google Drive

Published

Community Data

Help ▾



PRJ-2653 | **WEBINAR - DECEMBER 2019** [Edit Project](#)

PI **Tanner, Troy**
CoPIs **Wartman, Joseph**
Project Type **None**
Keywords **None**

Working Directory Curation Directory

Publication Preview

[Main](#) / [RApp](#) / [troyt](#) / [Home](#) / Collection 1

<input checked="" type="checkbox"/> Name	Size	Last modified
<input type="checkbox"/>  Photo 2.jpg	2.2 MB	12/12/19 12:25 PM
<input type="checkbox"/>  Final Hurricane Outlook Study 1.json	876.0 bytes	12/12/19 12:25 PM

File Preview: Photo 2.jpg

File Metadata ✓

 Rename

 Move

 Copy

 Download



RApp

First Steps

1

Visit the **DesignSafe-CI** website to sign up for a user account and create a project

www.designsafe-ci.org



2

Visit the **Mission Control** site to set up **RApp** components

rapid.apl.uw.edu/rapp



3

Contact the **RAPID Facility** to acquire an iPad with **RApp** installed

Email
uwrapid@uw.edu



FUTURE RAPP FEATURES

Future RApp Features

Advanced Questionnaires



◆ Branch Logic

- Flow of questionnaire is dictated by responses to key questions. Multiple paths through a branching questionnaire are possible.

◆ Skip Logic

- Questions are hidden (skipped) based on responses to previous questions

◆ Various Data Formats

Future RApp Features

Teams



- ◆ Teams will facilitate mission planning and coordination
- ◆ Any user can create a team
 - Leaders select members
 - Invitees must choose to join
- ◆ Team members can share locations and data
 - Photos, Questionnaires, Scans, Markers, Routes, etc.
- ◆ Data is only shared among team members



- ◆ iPhone version of RApp
- ◆ Modified user interface for smaller screens
- ◆ Simplified controls and actions for one-handed operation
- ◆ Integrates with DesignSafe-CI



RAPID NHERI
Natural Hazards Reconnaissance

CONCLUSION

17 December 2019

NSF Award Number: CMMI 1611820

Troy Tanner

RAPID IT Director

University of Washington