

Note: This presentation was given on February 15 2023 at the MWVGIS user group meeting in Eugene by John Sharrard and John Ruffing of Esri. This presentation was mostly based on the following Powerpoint slides authored by Eric Redmond and Preston Beck of the Washington County GIS Infrastructure Group (GIG) (as noted below). John Sharrard & John Ruffing inserted their own slides and insights into the slide deck in order to give the Esri perspective on the project.

# ArcGIS Online Partnered Collaboration Experiences of The GIG's SEPRR Project

Eric Redmond, TVF&R

Preston Beck GISP, City of Tigard

# Our Presentation

- What is the GIG?
- The backstory
- Look at what we did
- Tell me, where is this going?



# The GIG –Who we are

- Oregon Geospatial Infrastructure Group
- 14 Agencies –cities, county, special districts
- GIS support services to our departments
- GIS Professionals
- We're formal –IGA/budget authority
- Elect positions to oversee and provide accountability
- Report to a Governing Board



# The Geospatial Infrastructure Group (GIG)

(All Members)

- City of Banks
- City of Beaverton
- City of Cornelius
- Clean Water Services
- City of Forest Grove
- City of Hillsboro
- King City
- City of Lake Oswego
- City of North Plains
- City of Sherwood
- City of Tigard
- Tualatin Hills Parks & Recreation
- Tualatin Valley Fire District
- Washington County
- WCCCA (911)
- WCCLS

# The GIG –What We Do

- Strategic Planning
- Set policy & standards for members
- Emphasize cost-effective solutions
- Seek projects where there is joint benefit
- Aerial photos, lidar, oblique imagery
- Build partnerships



## Our Mission:

Coordinate, plan, and execute GIS activities within the region represented by GIG participants

# Emergency Management in Washington County

- Composed of emergency managers from member agencies
- Our primary client
- Overlap between GIG & EMC
- Nearly all EMC members have GIS programs



The EMC develops and maintains a countywide, integrated system to prepare for, respond to, recover from, and mitigate against disasters

# Where We've Been

- Current Problems
  - Inability to reliably share and edit data in real time
  - Inadequate GIS communication/coordination between agencies
- Current limitations
  - 2020 Firestorm experience
  - Current methods for Rapid Damage Assessment
- The Challenge –to improve this without additional IT support/admin



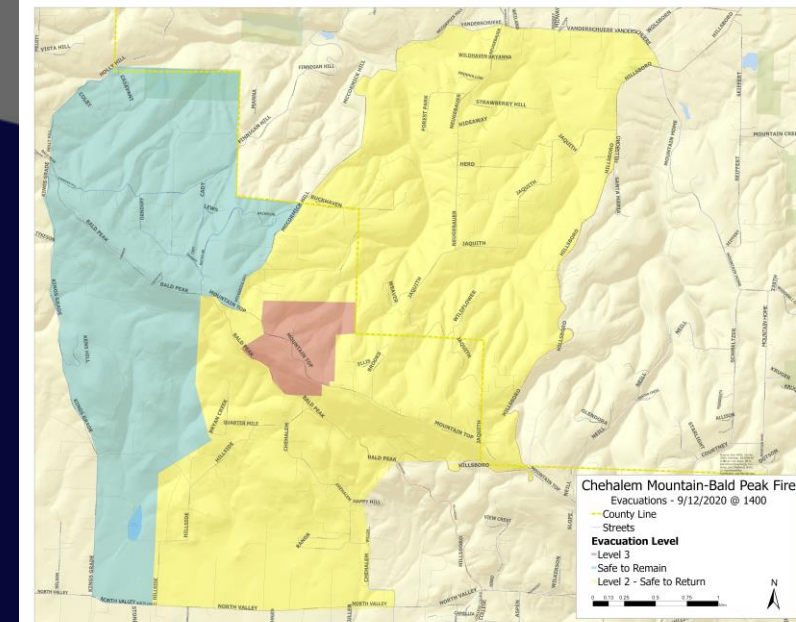
Washington County  
Wildland Survey Form

Date: 7/13/2022 Surveyor: TUA01

What to look for:  
• Structural damage (frame, roof, walls, alignment, collapse, includes damage caused by large debris falling on structure)  
• Non-structural damage (ceilings, glass, water leaks)  
• Other problems affecting building use or access (fire, green cloud, debris blocking access, power outages)  
• "Significant" problems along route, even if not at a listed facility (e.g., major fire/smoke release, etc.)

Facility	Time	Damage Category	Observations
Facility Name: Bobs Burgers	1201	Severe	
Facility Address: Bobs Burgers			
Facility ID #: Bobs Burgers			
Facility Name: Bobs Burgers			
Facility Address: Bobs Burgers			
Facility ID #: Bobs Burgers			
Miscellaneous Observations			
Observation			
Time			

\*Damage Categories = None/Minor, Moderate, Severe (See reverse for descriptions)





# ‘Where we are’ the project

- Multi phase project – Began in 2017
- First Plan - On premise solution \$\$\$\$\$\$
- Better Plan - Collaboration
  - Partnered Collaboration
  - Distributed Collaboration

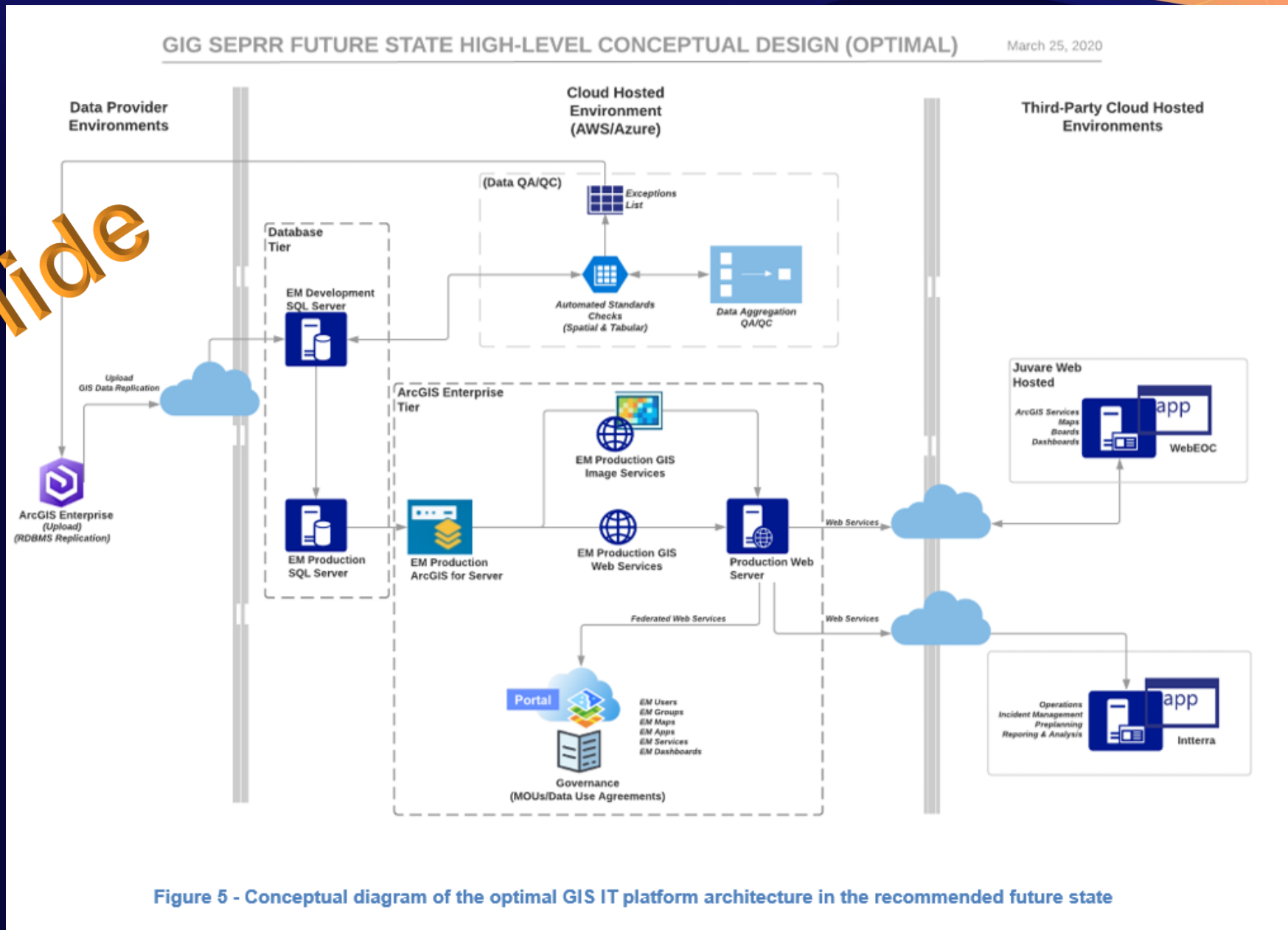
Is sharing collaborating?



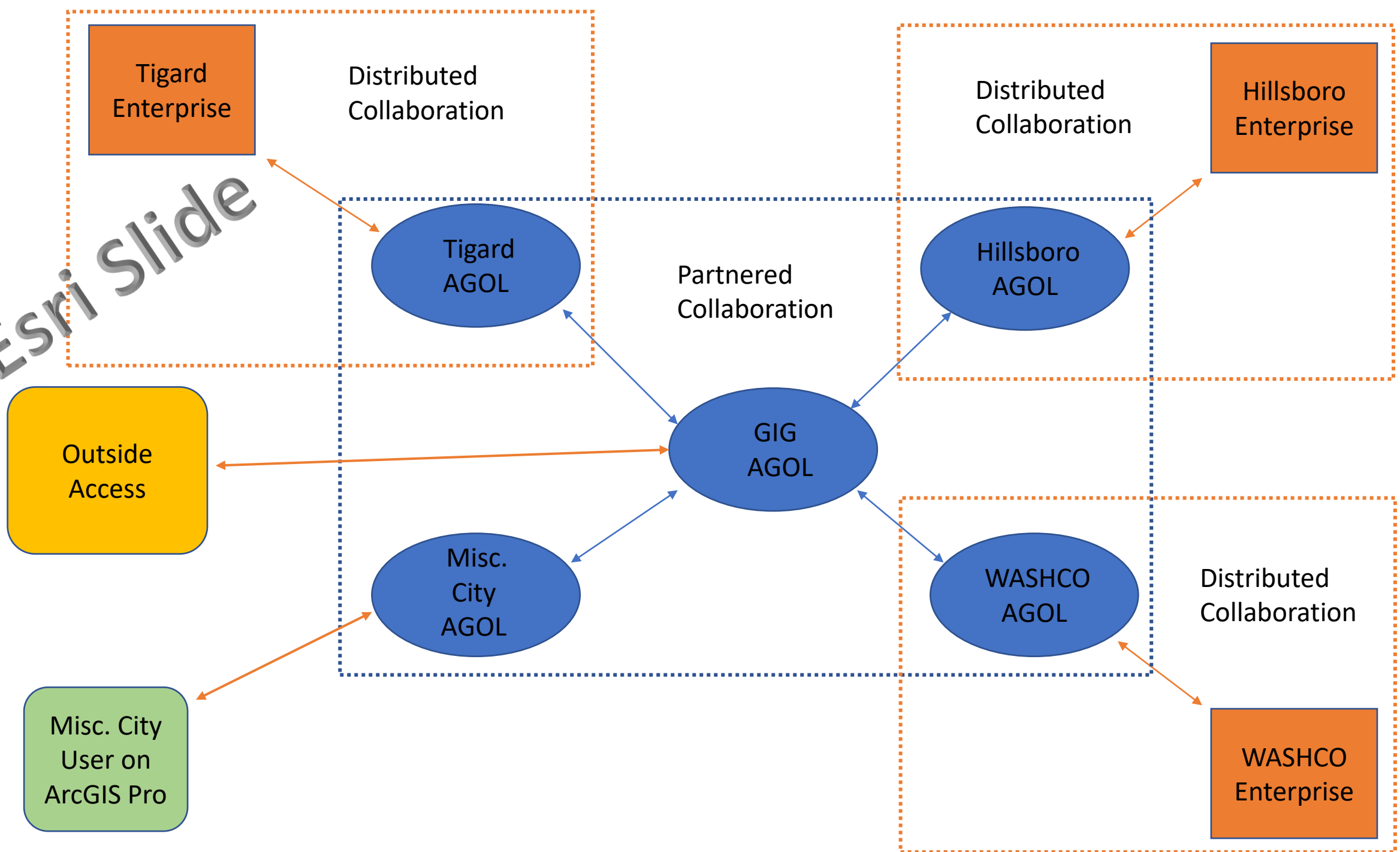


# Proposed Architecture: Initial Plan - On Premise Solution

Esri Slide

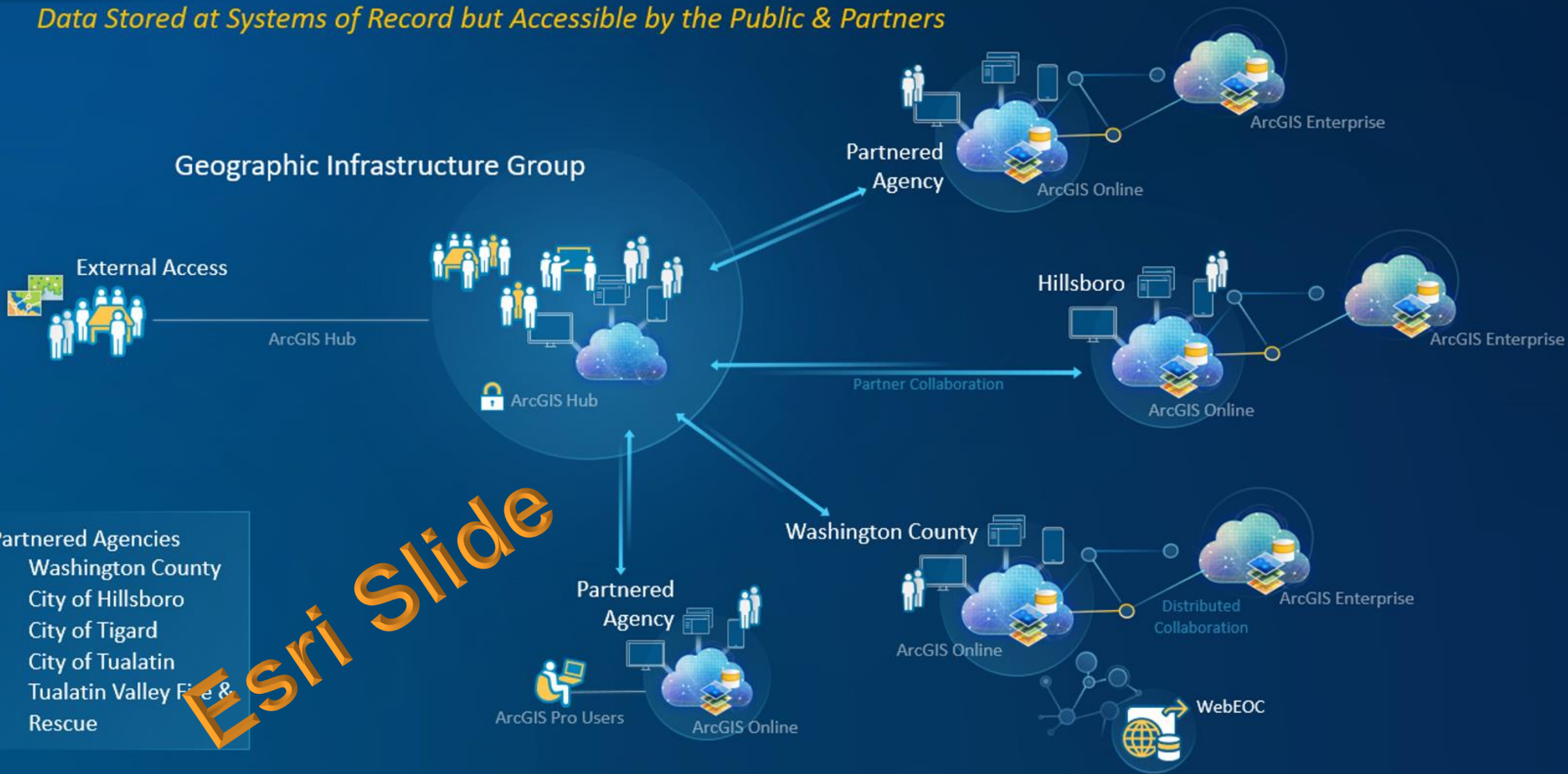


Esri Slide



# Centralized Geospatial Data Hub

*Data Stored at Systems of Record but Accessible by the Public & Partners*

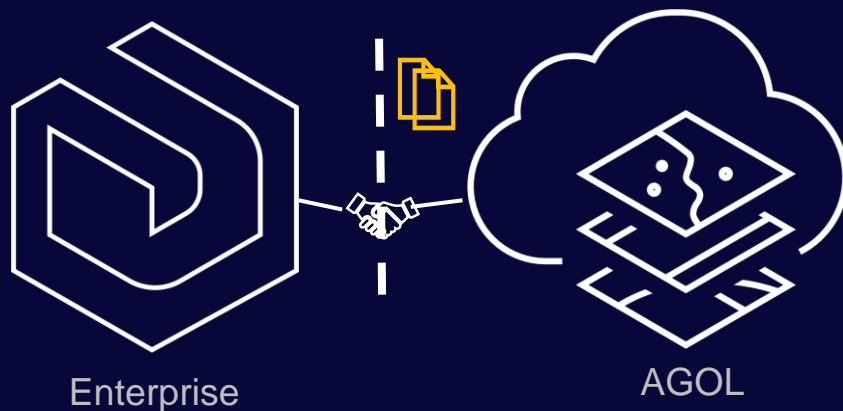


## Partnered Agencies

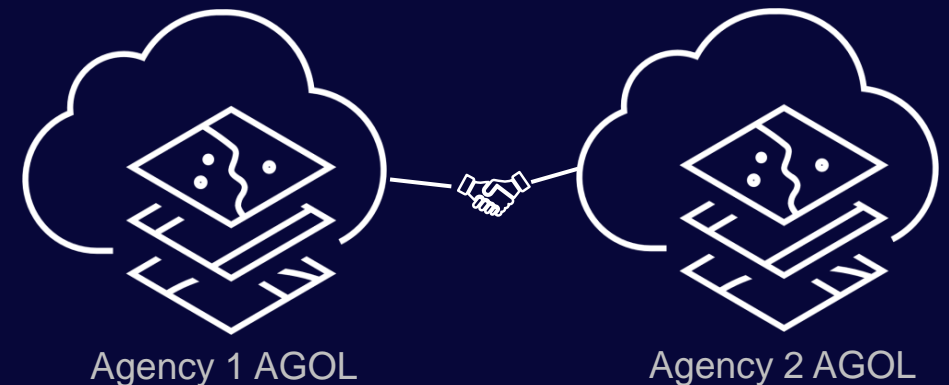
- Washington County
- City of Hillsboro
- City of Tigard
- City of Tualatin
- Tualatin Valley Fire & Rescue

# ‘Where we are’ the project

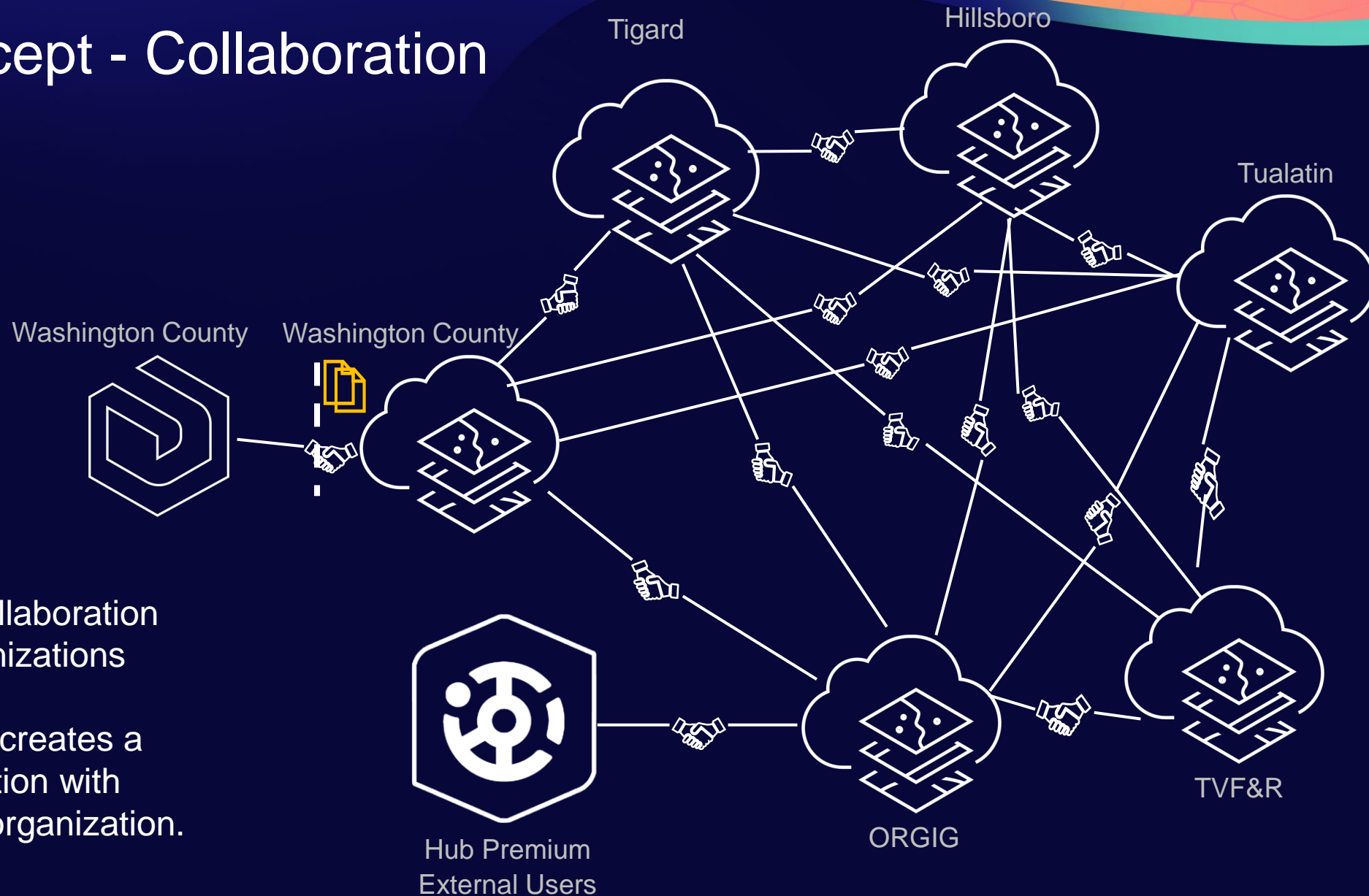
Distributed collaborations allow **ArcGIS Online** and **ArcGIS Enterprise** organizations to share and sync content in groups.



Partnered collaborations allow **ArcGIS Online organizations** to work closely and securely with each other **in groups**.



# Proof of Concept - Collaboration

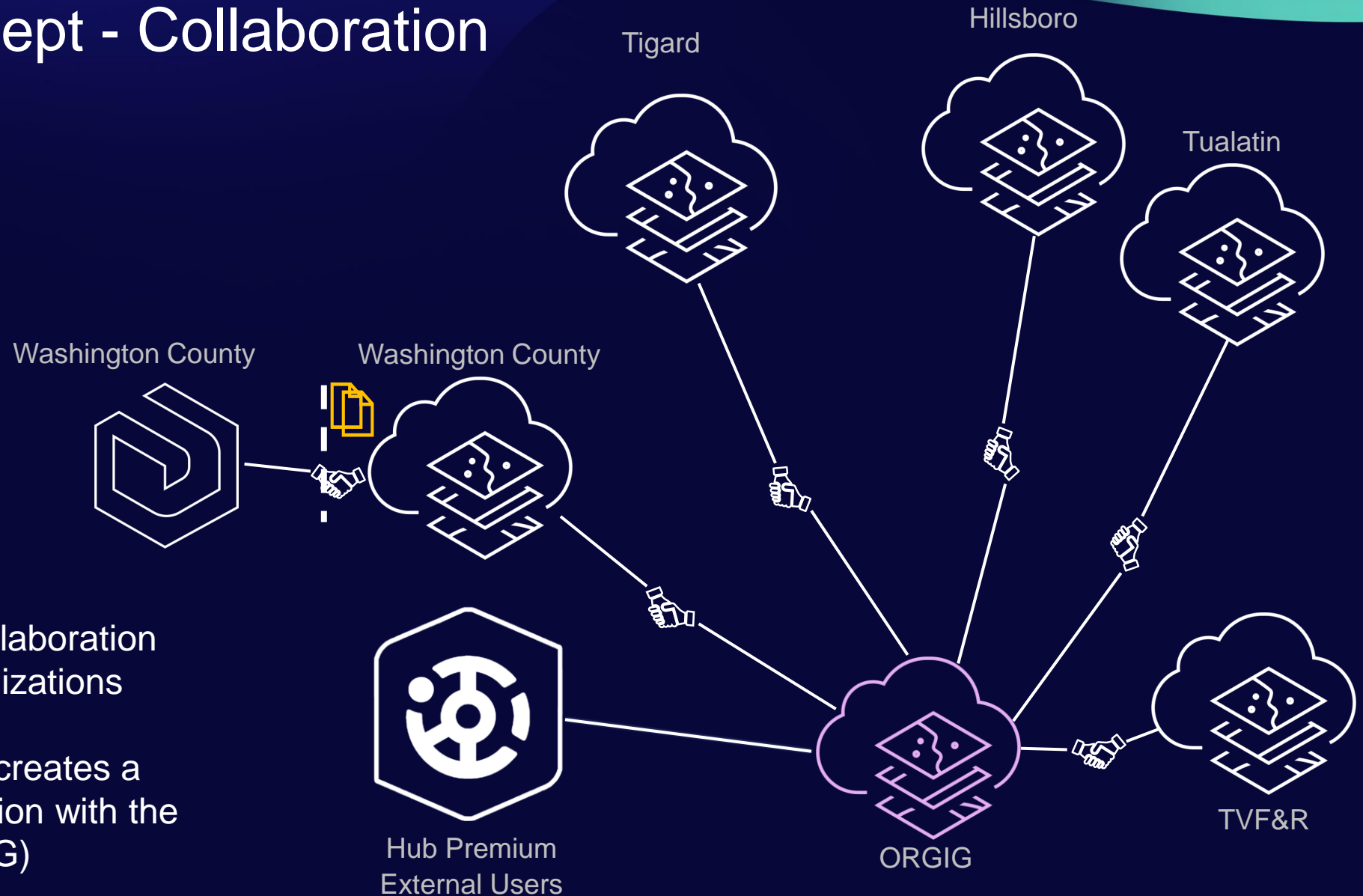


Relationship: Partnered Collaboration between participating organizations

- Option 1:
  - Every Organization creates a partnered collaboration with every participating organization.



# Proof of Concept - Collaboration



Relationship: Partnered Collaboration between participating organizations

- Option two:
  - Every Organization creates a partnered collaboration with the group owner (ORGIG)

# ‘Where we are’ the project

- Pilot project to test AGOL Collaboration
- Configured Partnered and Distributed Collaboration
- Tested 3 proof of concept use cases
  - 1) Edit collaborated data through ArcGIS Pro
  - 2) Damage Assessment Survey
    - ArcGIS Hub community user accounts
  - 3) Impact area updates



# ‘Where we are’ the project

## Use Case 1 – Edit Data

Groups

My GroupsFeatured GroupsMy Organization's Groups

Create group

Search My Groups

TitleFilter

Filters

1 - 9 of 9

Only show groups with new membership requests

Owner

Distinctive\_GIG

Another organization member

Someone outside the organization

Group membership setting

My organization only

Partnered organizations

Any organization

Current members are from

My organization only

Another organization

City of Forest Grove, Oregon

City of Tigard, Oregon

City of Tualatin, Oregon

Hillsboro ArcGIS Online

ORGIG - Proof of Concept Site

Hub Community

Tualatin Valley Fire & Rescue

Washington County, Oregon

Special groups

Open Data

Shared Update

Distributed

Administrative

Organization Settings

Date created

Today

Yesterday

Last 7 days

Last 30 days

Custom range...

ORGIG Critical Facilities Edit

Owner: Distinctive\_GIG

Created: Dec 2, 2021 Last updated: Mar 1, 2022 Viewable by: Organization

Any organization

ORGIG Collaboration group for critical facilities editors

Delete group

ORGIG Critical Facilities View

Owner: Distinctive\_GIG

Created: Dec 2, 2021 Last updated: Mar 1, 2022 Viewable by: Group members

Any organization

ORGIG Collaboration Group for Critical Facilities View only

Delete group

ORGIG Development Shared Update

Owner: Distinctive\_GIG

Created: Dec 2, 2021 Last updated: Jan 13, 2022 Viewable by: Group members

Shared Update

Partnered

ORGIG Collaboration Group for Development Shared Update

Delete group

ORGIG Impact Area Edit

Owner: Distinctive\_GIG

Created: Dec 2, 2021 Last updated: Feb 17, 2022 Viewable by: Group members

Any organization

ORGIG Collaboration Group for Impact Area Editors

Delete group

ORGIG Impact Area View

Owner: Distinctive\_GIG

Created: Dec 2, 2021 Last updated: Jan 13, 2022 Viewable by: Group members

Partnered

ORGIG Collaboration Group for Impact Area Viewers

Delete group

ORGIG Reference View

Owner: Distinctive\_GIG

Created: Dec 2, 2021 Last updated: Jun 15, 2022 Viewable by: Group members

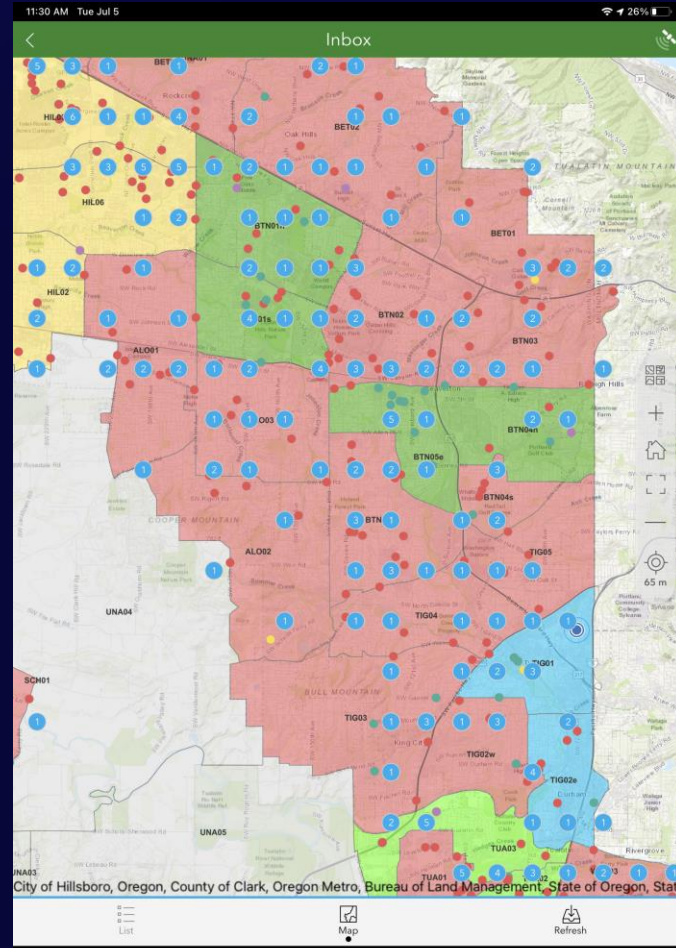
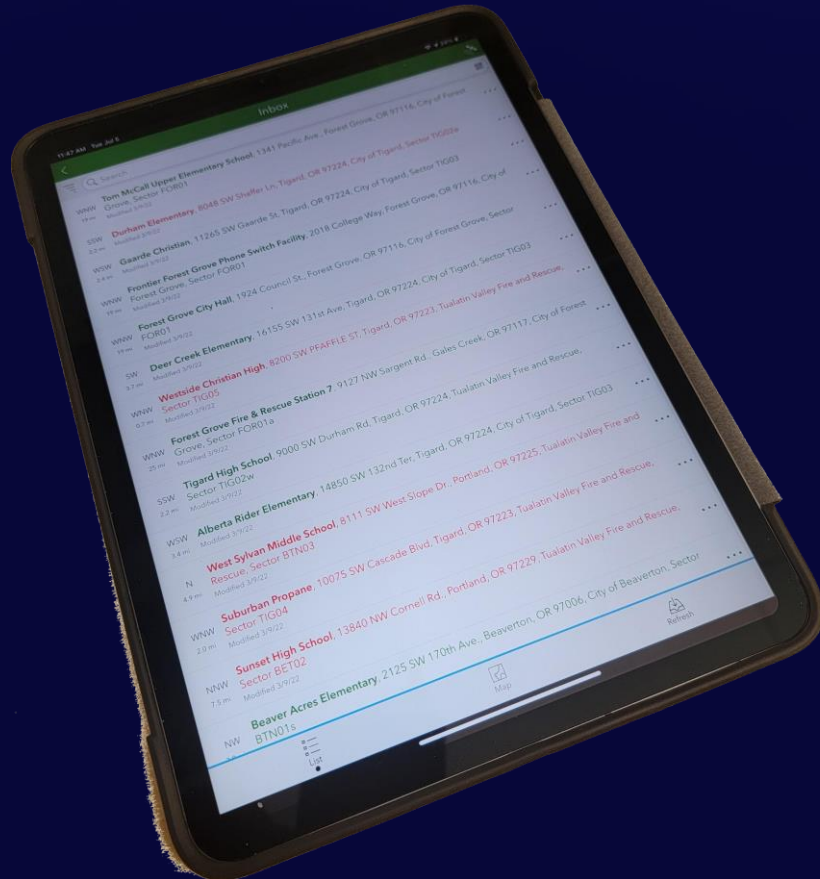
Partnered

ORGIG Collaboration Group for Reference Data Viewers

Delete group

# ‘Where we are’ the project

## Use Case 2 – Windshield Surveys



11:30 AM Tue Jul 5 Washington County Windshield Survey

Point  
45°28'N 122°47'W

Facility  
McKay Elementary School

Facility Id  
SC053

Facility Type  
School

Address  
7485 SW Scholls Ferry Rd., Beaverton, OR 97008

Agency Assignment  
Tualatin Valley Fire and Rescue

Agency Assignment Secondary

Sector  
BTN04s

Route

Status \*

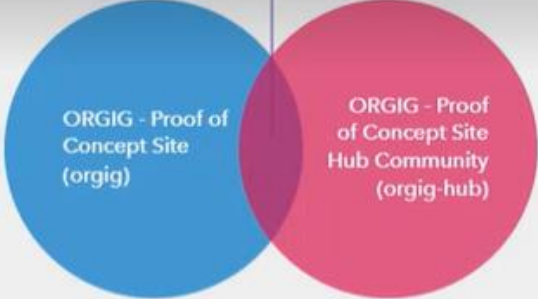
● Undetermined  
○ NoneMinor  
○ Moderate  
○ Severe

Medical Observation Category \*

Medical Observations  
○ Undetermined  
○ No Evidence  
○ Significant Medical Problems  
○ Mass Casualty Incident

# 'Where we are' the project

## Use Case 2 – HUB Premium



Your employee organization  
<https://orgig.maps.arcgis.com>

Your community organization  
<https://orgig-hub.maps.arcgis.com>

---

What is the ArcGIS Hub community organization? ▼

**Community Organization Title \***

ORGIG - Proof of Concept Site Hub Community 43/75

This name will be used when referring to your community organization in emails and other notifications.

**Short Name \***

This short name will be displayed at the front of the URL when viewing links for content hosted in the community organization. Choose wisely as changing the short name could result in broken links for community content.

- Must be between 2-16 characters long
- Hyphens are the only special character that can be used, but they cannot be the first or last character
- No space or capital letters

orgig-hub 9/16

URL preview: <https://orgig-hub.maps.arcgis.com>



# 'Where we are' the project

## Use Case 2 – HUB Premium

## User Access Request Form


ORGIG User Access Request

First Name\*

Last Name\*

Agency\*

Email\*



Phone Number\*

Submit

```
create_user_accounts_notebook (unsaved changes)
```

File Edit View Insert Cell Kernel Help

Run

Markdown

## Welcome to your notebook.

Run this cell to connect to your GIS and get started:

```
In [9]: from arcgis.gis import GIS
community_org = GIS("home")
print(community_org)

GIS @ https://www.arcgis.com version:9.4

/opt/conda/lib/python3.7/site-packages/arcgis/gis/___init___py:575: UserWarning:
You are logged on as rlesperance_orghub with an administrator role, proceed with caution.
```

Now you are ready to start!

```
In [10]: parent_org = GIS("https://orgig.maps.arcgis.com", 'rlesperance_orgig', 'orgigEsri123!')
print(parent_org)

GIS @ https://orgig.maps.arcgis.com version:9.4
```

```
In [11]: import random
import string
import re
import datetime

email_template = '/arcgis/home/email.txt'
custom_role_id = None
roles = community_org.users.roles.all(max_roles=50)
for role in roles:
    if role.name == "Data Editor Custom":
        custom_role_id = role.role_id
        print(f"custom role id : {custom_role_id}")
        break

print(f"connected to {community_org}")
new_reg_view = community_org.content.get("e8c09a37c60f493483b6ea98c74548ad")
new_reg_layer = new_reg_view.layers[0]
email_message = "Hello"
with open(email_template, "r") as msg:
    email_message = msg.readlines()
print(email_message)
print("loaded email template")
default_groups = ["0d1af8693b3f4e1f81476043dafcc71", "0a063e4494b24e7393398278fd29fb41", "b41465597dc443fa95ecc93e313fadf9"]

subject = 'User account for ORGIG HUB'
reg_updates = []
print("querying registrations")
try:
    reg_data = new_reg_layer.query(where="acct_status is null or acct_status = ''")
    print(f"{len(reg_data.features)} new registrations found")
    for reg_row in reg_data.features:
        password = ''.join(random.SystemRandom().choice(string.ascii_letters + string.digits) for i in range(10))
        suffix = 1
        reg_attributes = reg_row.attributes
        first_name = reg_attributes["first_name"]
        last_name = reg_attributes["last_name"]
        email = reg_attributes["email"].strip().lower()
        #get rid of special characters in last name
```

# ‘Where we are’ the project

## Use Case 2 – HUB Premium

orgig-test-initiative-orgig.hub.arcgis.com/edit?pagelid=d38f9b2e5d8740cc8b09e5189c5de9e8

Hub > ORGIG Test Initiative > Pages > Washington County Windshield Survey ExB

Customize

Page Info

Layout

ORGIG Test Initiative

Washington County Windshield Survey

- Accukraft Inc. / City of Hillsboro / HIL02
- Advanced Injection Molding Inc. / City of Cornelius / CON01
- Advanced Surfaces and Process Inc. / City of Cornelius / CON01
- Agia Sophia Academy / City of Beaverton / BTN01n
- Air Liquide America / Tualatin Valley Fire and Rescue / TUA01
- Air Products / Tualatin Valley Fire and Rescue / TUA01
- Airgas-Nor Pac Inc. / City of Hillsboro / HIL01
- Airgas-Nor Pac Inc. / Tualatin Valley Fire and Rescue / TUA01
- Alberta Rider Elementary / City of Tigard / TIG03
- Albertina Kerr/PACE / City of Hillsboro / HIL06
- Aloha - Huber Park / Tualatin Valley Fire and Rescue / ALO03
- Aloha High School / Tualatin Valley Fire and Rescue / ALO03
- Ammcon Corp / Tualatin Valley Fire and Rescue / BET03
- Arbor School of Arts & Sciences / Tualatin Valley Fire and Rescue / WES03
- Archer Glen Elementary School / City of Sherwood / SHE01
- Arcis Corp / City of North Plains / NOR01
- Arts & Communication Magnet Academy / Tualatin Valley Fire and Rescue / BTN02
- Arts & Technology Charter High School / Tualatin Valley Fire and Rescue / WIL02
- AT&T Wireless NOC / Tualatin Valley Fire and Rescue / ALO01
- AT&T Wireless NOC / Tualatin Valley Fire and Rescue / BTN02
- Athey Creek Middle School / Tualatin Valley Fire and Rescue / WES03
- Avamere at Bethany / Tualatin Valley Fire and Rescue / BET02
- Avamere at Hillsboro / City of Hillsboro / HIL02
- Avamere at Sherwood / City of Sherwood / SHE01
- Avamere Rehabilitation of Beaverton / City of Beaverton / BTN05e
- Avamere Rehabilitation of Hillsboro / City of Hillsboro / HIL01
- Banks Christian Academy / Banks Fire District #13 / BAN01
- Banks City Hall / Banks Fire District #13 / BAN01
- Banks Elementary School / Banks Fire District #13 / BAN01
- Banks Fire Department Station 13 / Banks Fire District #13 / BAN01
- Banks Fire Department Sub-Station 14 / Banks Fire District #13 / BAN01
- Banks Fire Department Sub-Station 15 / Banks Fire District #13 / BAN01c
- Banks Work School / Banks Fire District #13 / BAN01

Observations

no damage observed

Observation History

Photo 1

Capture Photo

Photo 1 Name

Test

Photo 1 Description

Test

Photo 2

Test

Powered by Esri

We recommend you work in a single tab to prevent lost work.

Edit thumbnail



Members of this group can create, edit, and manage the site, pages, and other content related to ORGIG Test Initiative.

Edit

owned by rlesperance\_orgig

Shared Update

Partnered

### Description

Edit

Adding members to the core team adds them to this group. These team members are also added to the initiative's content and followers groups so they can edit and manage initiative items in the content group as well as view and send email updates to followers. This group is an update group which means that your team members can update its content. Other members of your ArcGIS Online organization can see this group, but only your team can see what it includes and make changes.

If you have additional questions about the core team group, please see Esri documentation or contact support.

DO NOT DELETE THIS GROUP.

### Recently added content

Curate featured content



Page 2

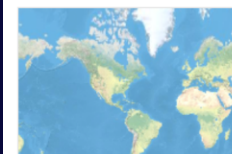
Hub Page

Created: Mar 9, 2022

Updated: Mar 9, 2022

View Count: 5

rlesperanc...



ORGIG Test Initiative

Hub Initiative

Created: Feb 18, 2022

Updated: Feb 18, 2022



Washington County Windshi...

Hub Page

Created: Mar 4, 2022

Updated: Mar 9, 2022

View Count: 8

rlesperanc...



Washington County Windshi...

Hub Page

Created: Mar 4, 2022

Updated: Mar 9, 2022

View Count: 26

rlesperanc...



ORGIG Test Initiative

Hub Site Application

Created: Feb 18, 2022

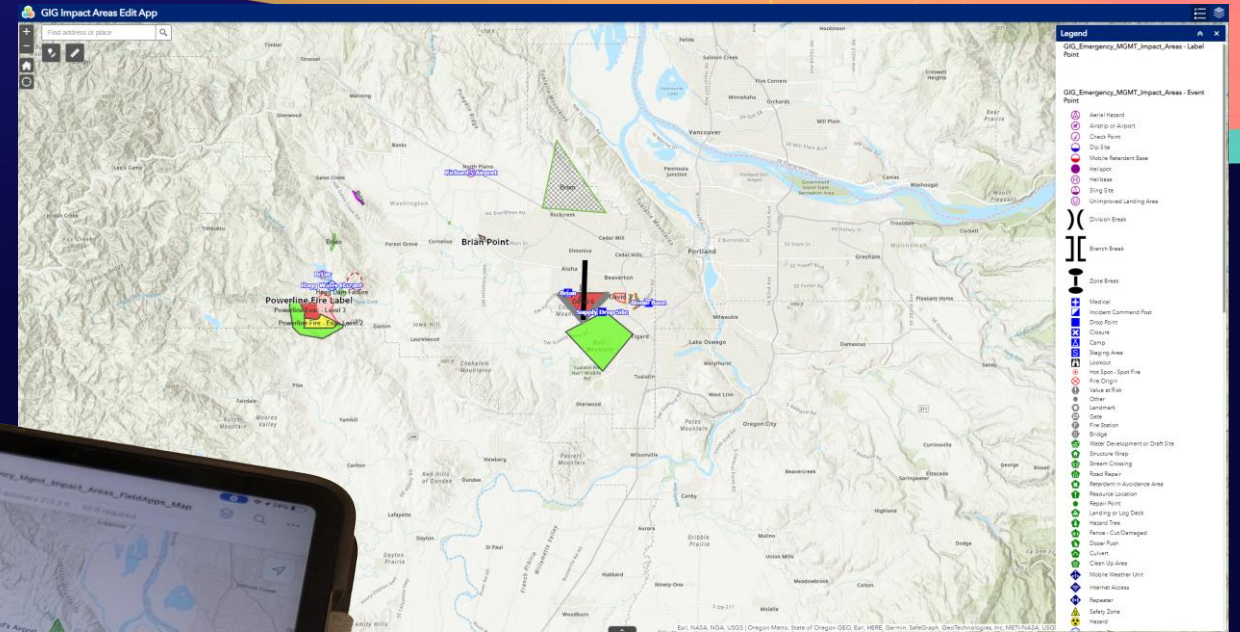
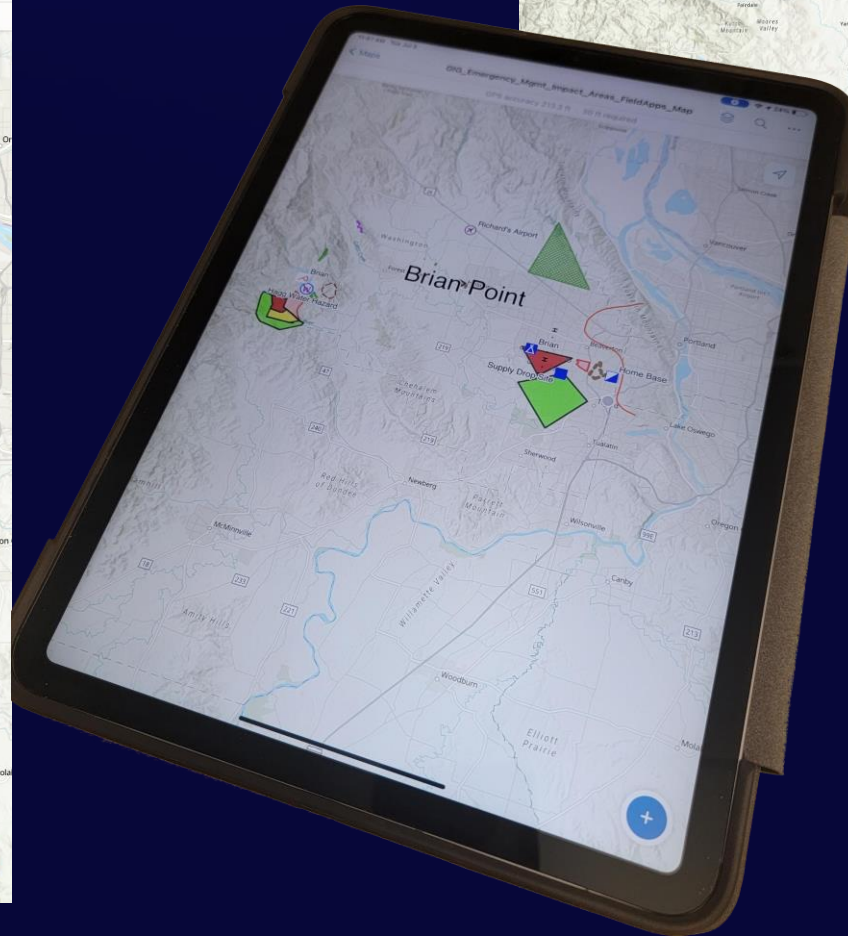
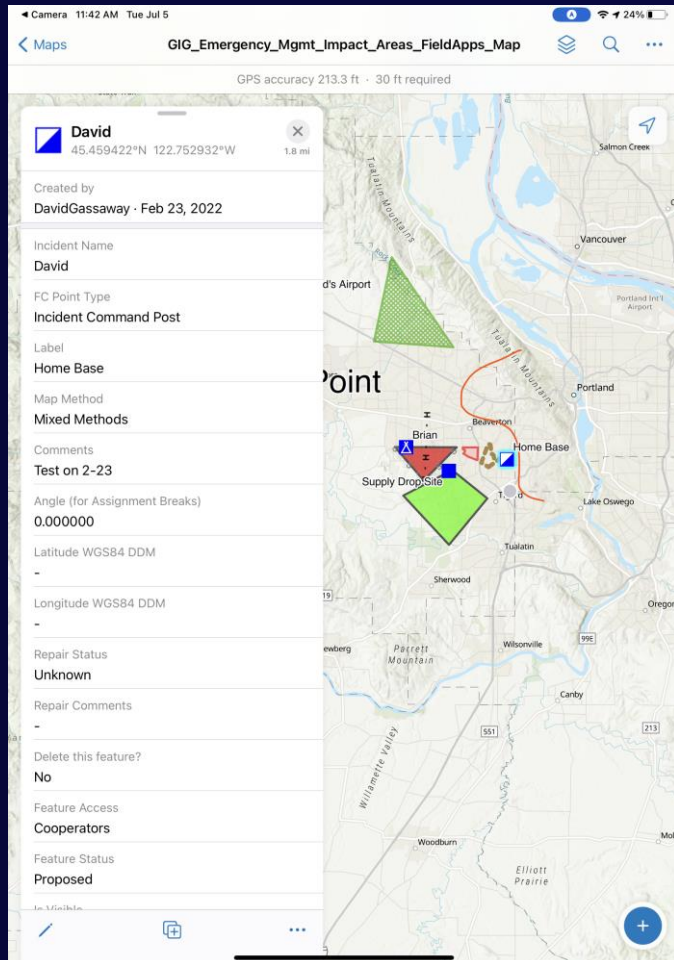
Updated: Mar 9, 2022

View Count: 281

rlesperanc...

# ‘Where we are’ the project

## Use Case 3 – Impact Areas





# Next Steps

- Extend ArcGIS Online Partnered Collaboration
- Resource the ORGIG
- Take some use cases and implement to production
- Develop policies/administrative guidelines
- Investigate other use cases of AGOL Partnered Collaboration beyond EM (e.g., editing other data)