

The background features a repeating pattern of chemical structures, including benzene rings and various functional groups, rendered in a light green color against a dark blue gradient background.

2021

CHEMICAL SECURITY SEMINARS

December 15, 2021

#ChemicalSecurity

CHEMICAL SECURITY SEMINARS

P4 – A Platform for Public/Private Emergency Management Collaboration

Cy Smith

Consulting Director, G&H International Services, Inc.

Erik Endrulat

Technology Specialist, G&H International Services, Inc.



#ChemicalSecurity

The Consortium for Emergency Services Technology (CEST)

P4 (*Public-Private Partnerships Platform*)

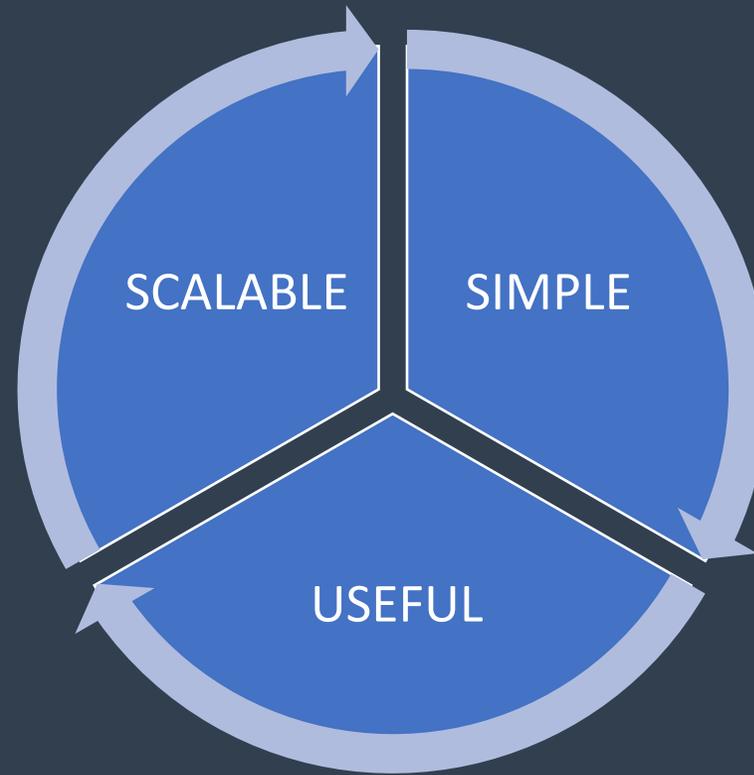
*Enabling Public-Private Partnerships with
innovative technology to build a more
resilient nation*



Founding Public Sector Participants

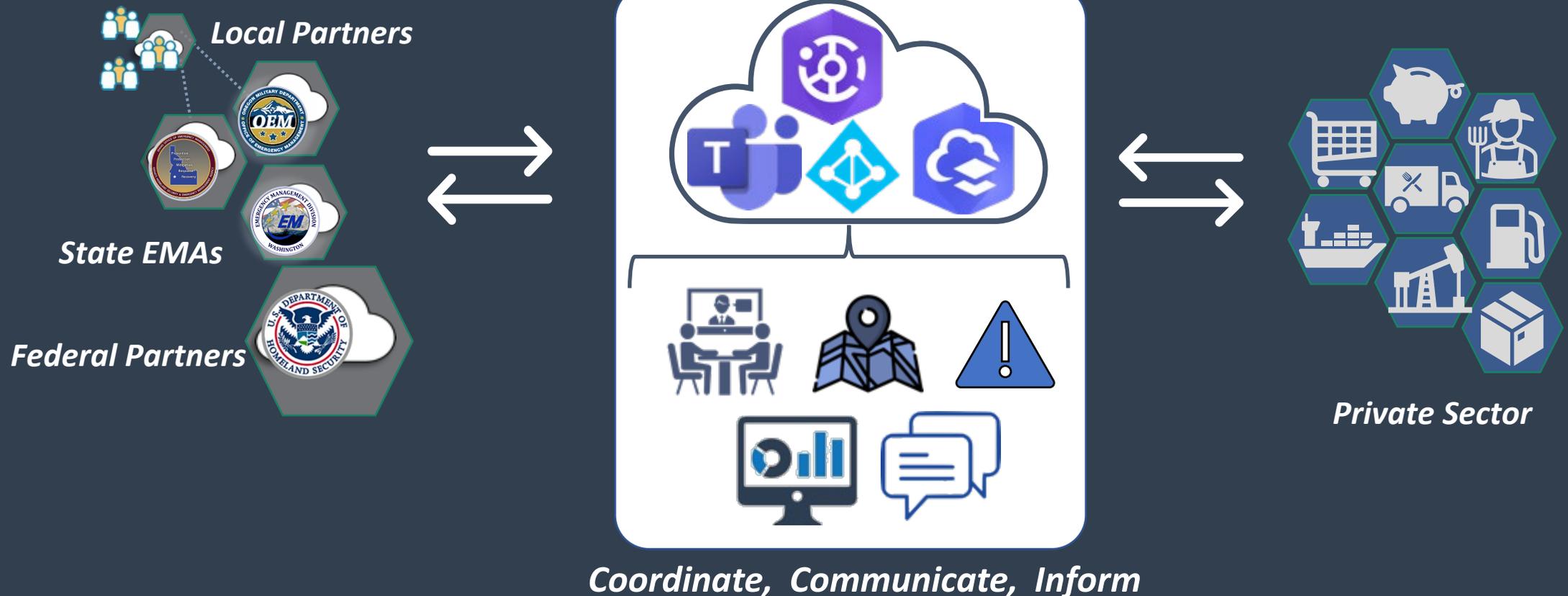
P4 as a Test Bed for an Enhanced Business Emergency Operations Concept

Improving Private Sector Communication & Coordination

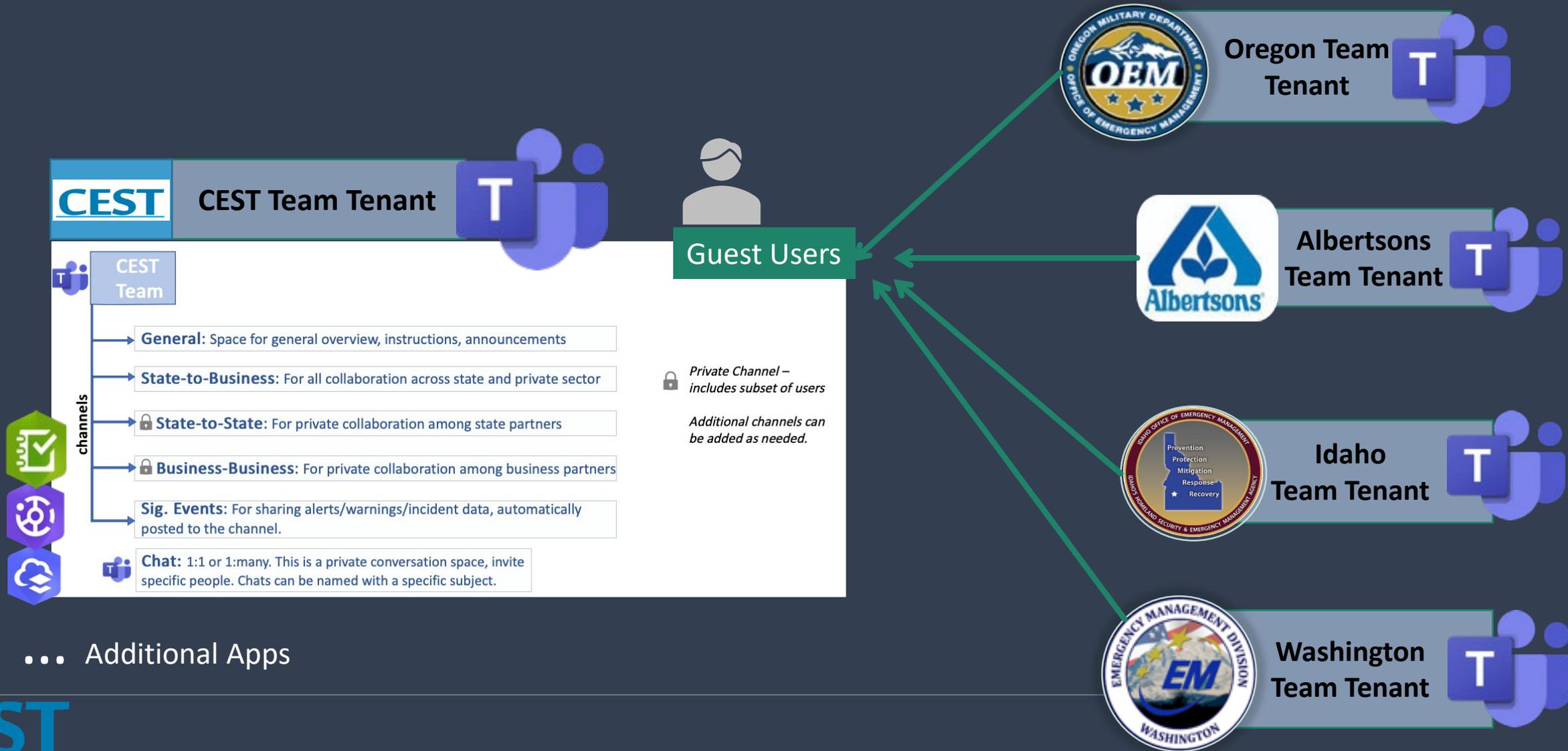


P4 - Bridging the Gap Between Public and Private Sector in Times of Crisis

CEST



P4 - Framework for Public-Private Coordination



P4 - Framework for Public-Private Coordination

CR22 Team

Event Teams are incident-specific

Channels are configured to allow conversations (including chat, video calls) and share files with trusted partners, publicly or privately.

channels

General: Space for general overview, instructions, announcements

State-to-Business: For all collaboration across state and private sector

 **State-to-State:** For private collaboration among state partners

 **Business-Business:** For private collaboration among business partners

Sig. Events: For sharing alerts/warnings/incident data, automatically posted to the channel.

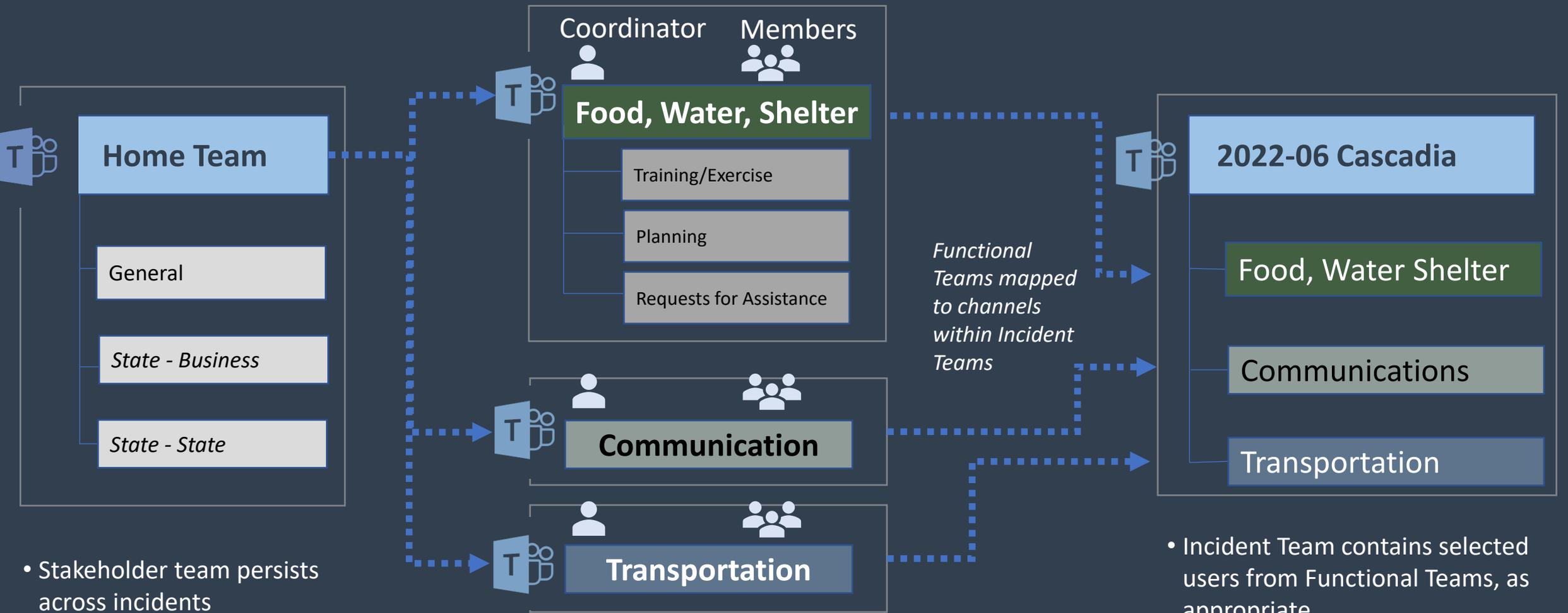
 **Private Channel** – includes subset of users

Additional channels can be added as needed.

 **Chat:** 1:1 or 1:many. This is a private conversation space, invite specific people. Chats can be named with a specific subject.

P4 – Framework

P3P Home Team | Functional Teams | Incident Teams



- Stakeholder team persists across incidents
- Includes all P3P members

- Functional teams persists across incidents
- Channels organized based on needs of the group.

- Incident Team contains selected users from Functional Teams, as appropriate
- Teams are archived when Incident recovery is over

P4 - *Current Capabilities*

**Integrated Teams
and ArcGIS Hub,
Single Sign On**

**Onboarding
Process**

P4 'Home Page'

**Contact
Management
System**

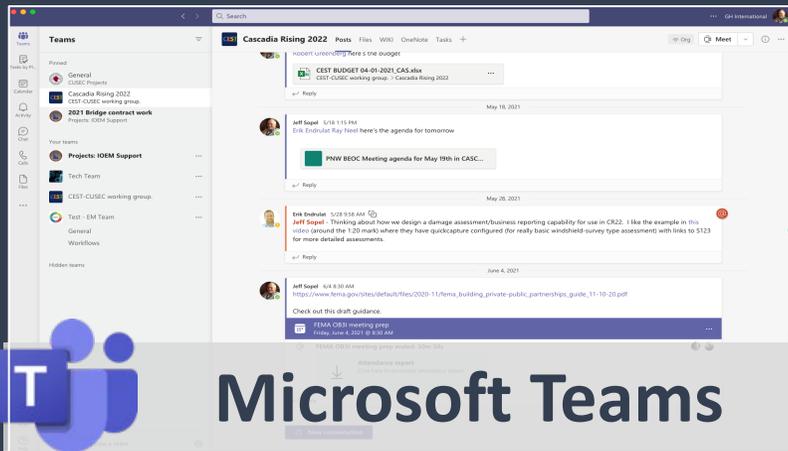
**BEOC Incident
Reporting Form
and Dashboard**

ReportBot

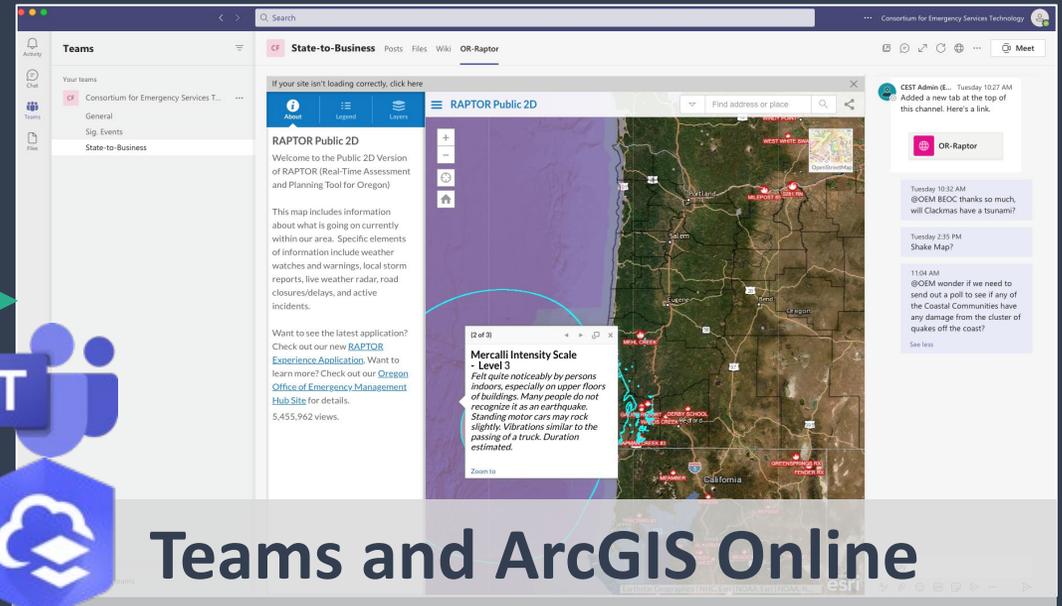
**Bidirectional data
exchange between
ArcGIS and
SharePoint Lists**

**Creating /
uploading files to
share in a team**

P4 - Integrated Teams and ArcGIS Hub through Single Sign-on

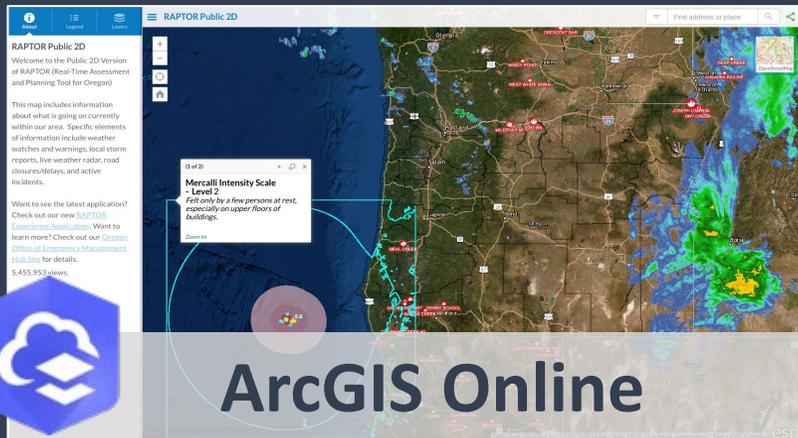


 Microsoft Teams




 Teams and ArcGIS Online

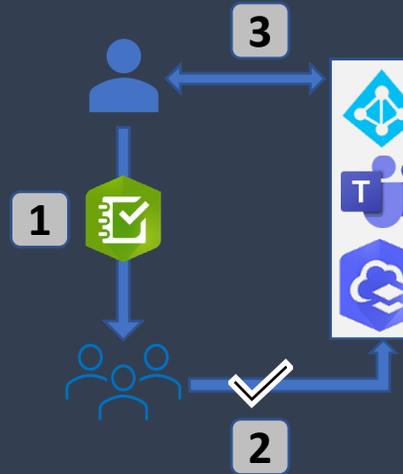
Combining Microsoft Teams and ArcGIS Online into a new virtual workspace



 ArcGIS Online

P4 - Organization Registration process

- Registration Process – invitation only
- Includes Organization Profile (primary contact, service area), Information Requirements
- Coordinator Approves Requests
- Feeds Contact Management System



BEOC Registration and Information Requirement Survey

The Consortium for Emergency Services Technology is building out a **Virtual Business Emergency Operation Center**. The intent of the VBEOC is to enable a reliable two-way exchange of information between IOEM and our private sector partners.

As part of this, we are interested in better understanding your needs to identify information from the state that would be beneficial to your operations during a crisis or disaster. We're also interested in understanding what information you would be able to share with state partners in the Pacific Northwest so we can both maximize response and recovery efforts while minimizing negative impacts to your business.

Business Profile

Business Name*

Acme Food

Business Sector*

Consumer Goods

Business Footprint*

International

Nationwide

Statewide

Regional / Local

Select which states your business operates in:

Idaho

Oregon

Washington

POC Name*

CEST P3 Portal Registration and Information Requirement Survey

The Consortium for Emergency Services Technology (CEST) is building out a P3 Portal. The intent of the P3 Portal is to enable a reliable two-way exchange of information between Idaho, Oregon, and Washington and their private sector partners.

As part of this, we are interested in better understanding your needs to identify information from the state that would be beneficial to your operations during a crisis or disaster. We're also interested in understanding what information you would be able to share with state partners in the Pacific Northwest so we can both maximize response and recovery efforts while minimizing negative impacts to your business.

Organization Profile

Organization Name*

Primary Organization Sector

Private Sector Local Government State Government
 Federal Government Nonprofit Other

Organization Footprint*

International National Regional
 Regional/Local

POC Name*

Contact name for organization

P3Platform Signup
User uses web form to request access to the platform and provide basic information

CEST Membership Request for Acme Communications

Inbox x



Ray Admin <RayAdmin@cestp3.onmicrosoft.com>

2:36 PM (2 minutes ago)



to me ▾

Welcome!

Your request to join the Consortium for Emergency Services Technology Public-Private-Partnership Portal (**CEST P3 Portal**) has been approved! This Portal is being developed through the combined efforts of [Public and Private Sector collaborators](#), and will be tested during the Cascadia Rising 2022 exercise.

Next Steps:

You will receive an email from Microsoft (invites@microsoft.com) shortly, with a link to accept your invitation to the CEST P3 Portal. When you receive that email, please click 'Accept Invitation' to finish setting up access. If you don't receive the invitation, please check your Spam/Junk mailbox.

Once you've accepted the invitation, you will be able to access the P3 Portal Stakeholder Team. Please explore the channels, and post a message in the

[Say Hello](#) Channel

P3P New User Sign-In

New user receives emails with instructions & link to accept CEST membership

P4 - Organization Registration process

Applicant is notified that they are
approved to join P4

P4 - Shared Situational Awareness

The screenshot shows a Microsoft Teams interface for a channel named "State-to-Business". The left sidebar lists several teams, including "P3P - Home Team", "P3P - Cascadia 2022-06", and "Food, Water, Shelter (Functional Team)". The main content area features a header with "State-to-Business" and navigation options like "Posts", "Files", and "Home". Below the header, there are three main sections:

- Coordinate with others using the P3P Home Team:** Accompanied by an image of a group of people in a meeting.
- Access Information & Geospatial Resources shared by your Partners:** Accompanied by an image of a network map.
- Report Issues impacting your Business, Questions, Requests to P3 Coordinators:** Accompanied by an image of a desk with a laptop and a map.

Below these sections is a "Quick links to State Dashboards/Viewers" section with three buttons:

- Idaho Daily Ops Dashboard
- Oregon Hazards Situation Overview
- Washington State Emergency Operations Center Dashboard

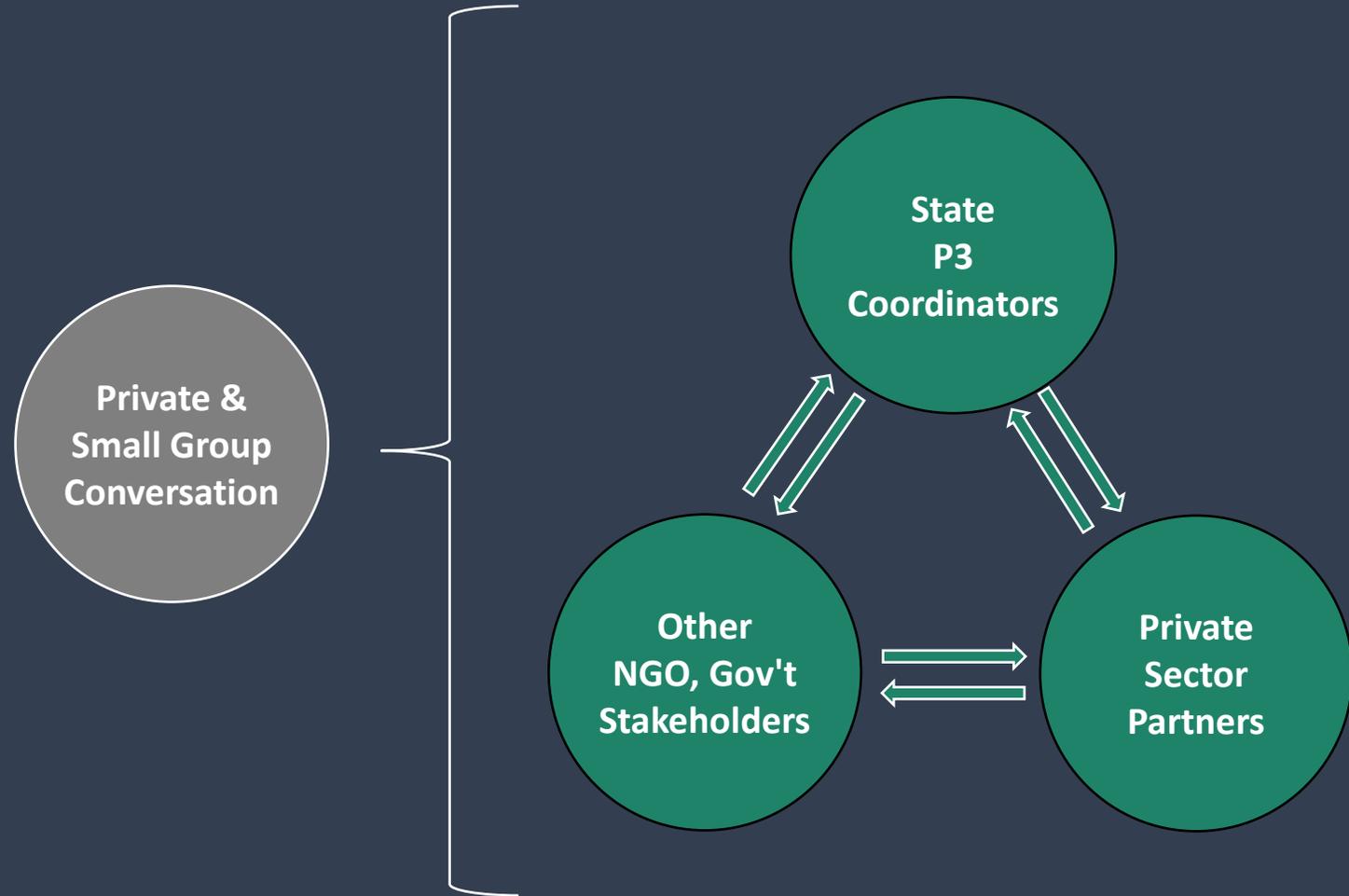
At the bottom, there is a section for "Fuel and Power status Dashboards".

P4 – Contact Management List

Organization Type : Association (3)				
Oregon Bankers Association	Oregon Bankers Association	oregonbankersassociation.com	FinanceInsurance_Real_Estate	statewide
Oregon Bankers Association	John Kasper	jkasper@oregonbankersassociation.com	FinanceInsurance_Real_Estate	statewide
Oregon Restaurant & Lodging Association	Lee Latta	llatta@oregorello.org	Retail_Trade	statewide
Organization Type : Non-Profit (2)				
Center for Innovative Technology	John McCarty	johnmccarty@cit.org	Public_Administration	nationwide
Virginia CIT Public Safety Innovation Cent...	Chris Saylor	Chris.Saylor@cit.org	Other	statewide
Organization Type : Private Sector (13)				
Albertsons Companies	John Lyon	john.lyon@albertsons.com	Retail_Trade	nationwide
UPS	Eric Brown	eric.brown@ups.com	Services	international
Walmart	John Hays	john.hays@walmart.com	Retail_Trade	international
UPS	John Hays	john.hays@ups.com	Services	international
Microsoft	Chris Hays	chris.hays@microsoft.com	Services	international

P4 - Communicate and coordinate with channels or small groups

- Voice / Video Conferencing
- Threaded chat messages
- Communication integrated file sharing, information products



P4 - Communicate and coordinate with channels or small groups

- Voice / Video Conferencing
- Threaded chat messages
- Communication integrated file sharing, information products

The screenshot displays a Microsoft Teams meeting interface. The top portion shows video feeds of participants: Delanda Coleman (Oregon Military Department Office of Emergency Management), Albertsons, and the Emergency Management Division of Washington. A chat window is open in the foreground, showing a conversation between Albertsons POC and CEST Admin (Erik). The chat includes a file share titled "State-to-Business" with a folder named "Dashboards" modified on September 23. The file share interface includes options for New, Upload, Sync, Copy link, and Download.

Microsoft Teams

Creative Review 4:26

Delanda Coleman

+14254664177

Albertsons

EMERGENCY MANAGEMENT DIVISION WASHINGTON

Albertsons POC 4:42 PM
Thanks for providing the daily update - where can I find updates from previous days?

CEST Admin (Erik) 4:44 PM
All the previous updates are in the **Files tab**, under the **Situation Reports** folder.

+ New Upload Sync Copy link Download

State-to-Business

Name	Modified
Dashboards	September 23

Microsoft Teams

Teams

Your teams

- PIP - Casadia 2022-08
- General
- Say Hello 🗨️
- Significant Events 📅
- State-to-Business 🏡**
- Testing and Evaluation ✅

State-to-Business 🏡 Posts Files Wiki Activation Status Power Outages 📄 2 more 📄 - +

10 Team 3 Guests Meet -

Yesterday

CEST Admin (Erik) Monday 4:21 PM

Agenda

- Situation Update
- PI Briefing

See more

Daily PWR PI Coordination Call
Occurs every work day 9AM-10 PM PST

Expires from Erik

Meeting ended

Reply

Today

CEST Admin (Erik) 1:01 PM

Added a new tab at the top of this channel. Here's a link.

Power Outages

Reply

CEST Admin (Erik) 1:01 PM

Added a new tab at the top of this channel. Here's a link.

Daily Coordination Call GoBuddy

User joins call with link posted on State-Business Channel

P4 - Business Incident Reporting

- Issues impacting (or having potential to impact) business
- Requests for assistance
- Offers of donations, goods/services
- Questions for state partners

Report Type

I'm reporting an issue that's **impacting** my business operations

I'm reporting an issue that has the **potential of impacting** my business operations

I'm reporting a **request for assistance**

I'm reporting a **offer** to provide donations / goods / services

Question

Severity of the impact



Report of Issue Impacting my Business ▾

Type of Impact you're reporting

Communications

Food/Water/Shelter

P4 – Business Incident Reporting

ArcGIS Information Products Integrated Seamlessly into Teams

Enabling Conversation Thread around events in a Dashboard

The screenshot shows a Microsoft Teams interface with a dashboard titled "BEOC Incident Reports". The dashboard includes:

- Reports by Business:** A horizontal bar chart showing the number of reports for various businesses. Albertsons Companies LLC has 5 reports, while all other listed businesses (Boise Cascade Wood Products L.L.C., Costco Wholesale Corporation, Idaho Power Company, McCain Foods USA Inc., Sysco Portland Inc., Union Pacific Railroad Company Inc, WinCo Foods LLC) have 1 report each.
- List of Reports from Private Sector:** A list of three reports, each highlighted in red. The first report is from Boise Cascade Wood Products L.L.C. (Report Type: Question, Reported on May 19, 2021). The second is from Costco Wholesale Corporation (Report Type: Issue, Potential Issue, Question | Power/Energy, Reported on May 19, 2021). The third is from Albertsons Companies LLC (Report Type: Request, Reported on May 6, 2021).
- Report Type:** A donut chart showing 5 Questions, 5 Issues, 3 Offers, and 2 Requests.
- Impact Type:** A donut chart showing 1 Transportation, 1 Food, Water, Shelter, 1 Safety, Security, 1 Hazardous Materials, and 3 Power, Energy.
- Reports by Severity:** A donut chart showing 3 High, 6 Medium, and 2 Low severity reports.

A red circle highlights the "Conversation" icon in the top right corner of the dashboard, which is linked to a conversation thread in the adjacent Teams chat window.

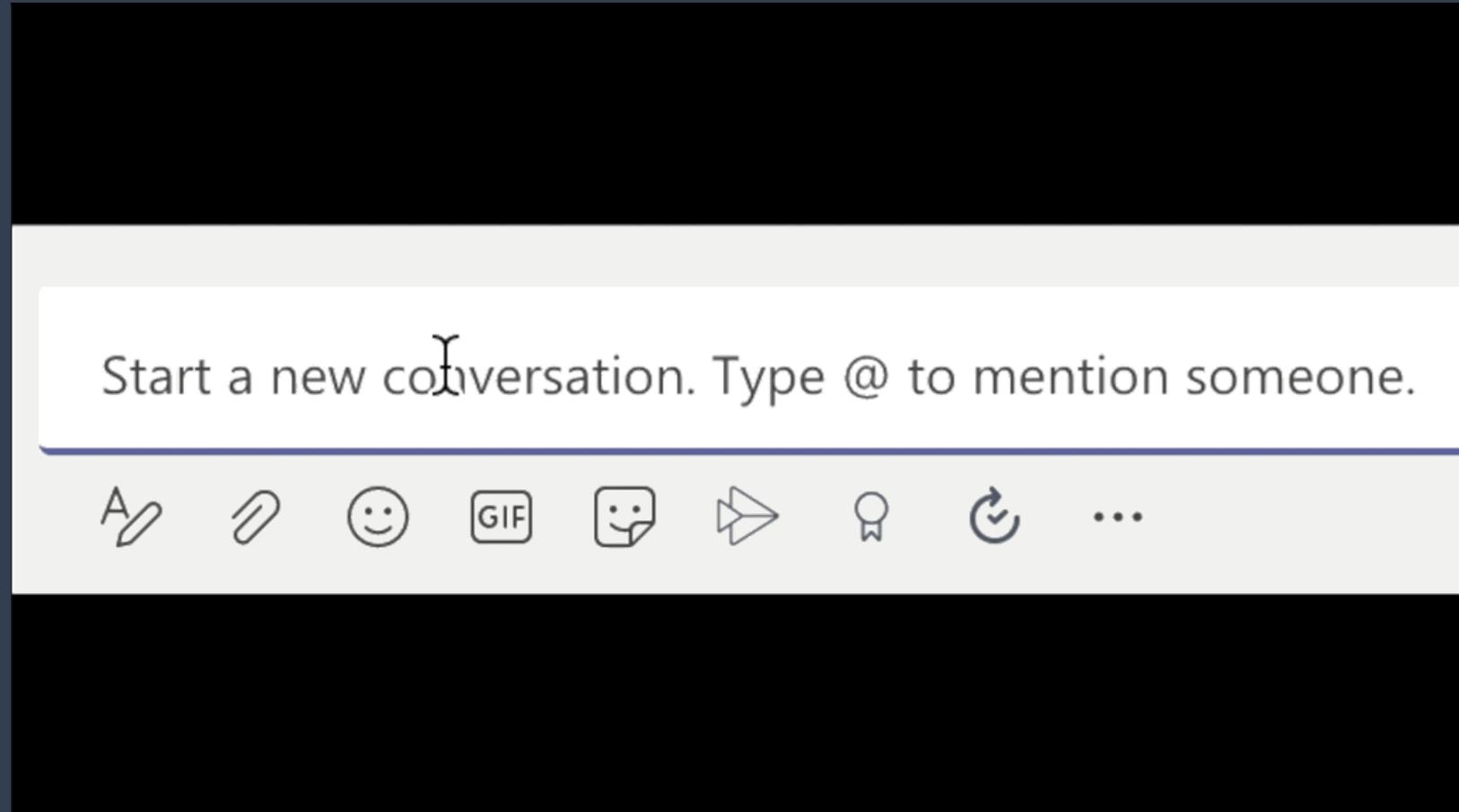
The screenshot shows a Microsoft Teams chat conversation with the following messages:

- 5/18, 1:43 PM Edited jhanian (Guest) - what do you think about the status of Albertsons Dist. centers?
- 5/18, 1:45 PM @Albertsons -what is the status of your distribution centers ? Can you share a map service?
- 5/18, 1:47 PM Edited Status updates can be shared using this Survey123 form.

A green icon representing a Survey123 form is shared in the chat. At the bottom, a message from Jeff Sopel (Guest) says "CUSEClet's make it public".

P4 - ReportBot

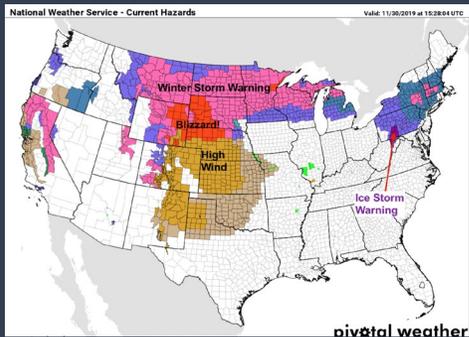
- Reports generated as cards in Teams, PDF files
- Triggers: On-demand, Scheduled or by pre-defined criteria



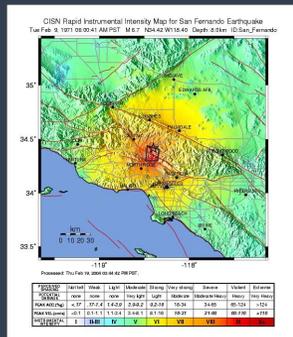
P4 - ReportBot

- Integrated information feeds tailored to public and private sector users

Weather



Seismic

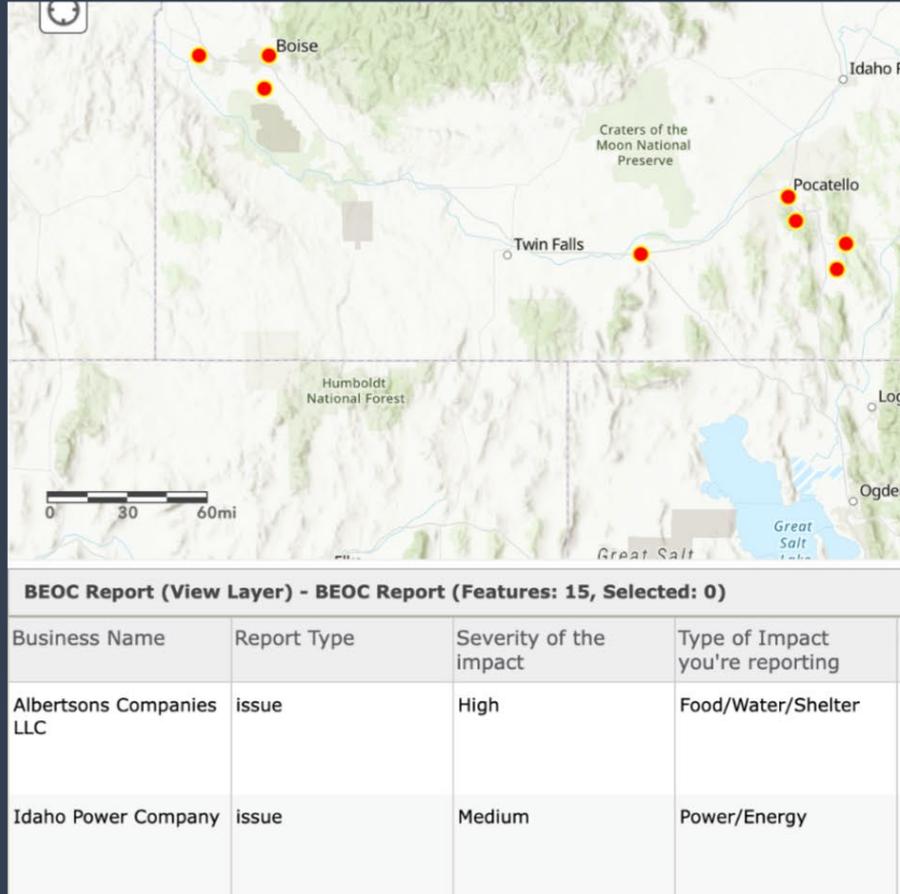


Other, TBD



Microsoft Teams interface showing a channel named "Significant...". The channel list on the left includes "P3 Portal (Stakeholders)", "P3 Portal (DEV)", and "State-to-Business". A post by "CEST Admin (Erik)" is displayed, featuring an "ArcGIS Maps" widget titled "Recent Earthquakes". The widget shows a map of the world with a red circle highlighting a specific location. Below the map, the text reads: "Feature Service by esri_livefeeds2 Last updated: 6/11/2021". The post also includes a "See more" link and an "Open" button.

P4 - Bi-Directional Data Exchange



ArcGIS Online Feature Service



Business Name	Report Type	Severity of the Im...	Type of Impact	Other Impact	Report Details
Idaho Power Company	issue	Medium	Power/Energy		Wildfires in SE Idaho have damaged transmission lines and several transformers.
Albertsons Companies LLC	issue	High	Food/Water/Shelter		Wildfires in SE Idaho are impacting our retail stores, will have to close several.
WinCo Foods LLC	issue	Medium	Power/Energy		Wind storm has knocked out power in several retail WinCo locations in Kootenai County.
Albertsons Companies LLC	issue,question	Medium	Communications		Comms out - can't access stores across WA and OR in impacted area.

SharePoint List in Teams

P4 - Creating or uploading files to share with a team

The screenshot displays the Microsoft Teams interface. On the left, the navigation pane shows 'Your teams' with 'P3P - Home Team' selected, and 'General' as the current channel. The main area shows the 'Files' tab with a toolbar containing 'New', 'Upload', 'Sync', 'Copy link', 'Download', 'Add cloud storage', 'Open in SharePoint', and 'All Documents'. A dropdown menu is open under 'Upload', showing 'Files' and 'Folder' options. Below the toolbar is a table of files:

Name	Modified	Modified By
Meeting Materials	September 2	CEST Admin (Erik)
CEST P3 Instructions.pdf	September 20	CEST Admin (Erik)
CEST_Registering.docx	June 22	CUSEC Admin
Microsoft_Teams_Quickstart.pdf	August 30	Erik Endrulat
Pilot Assessment.xlsx	July 28	SharePoint App

P4 – *Work in Development*

Mission
Tracking

Polling

Group
Assignments

P4 - UAS Mission Tracking Use Case

Virginia VIPC, VDEM, York Co Fire

- Request for assistance received by state coordinators
- State coordinator assigns mission to mutual aid
- Rapid response team accepts mission
- Team coordination associated with a mission
- Mission stakeholders added to the communications
- Mission reporting / video streaming / etc.



P4 - UAS Mission Tracking

Missions Posts Files Wiki **Mission List** Weather 2 more **New**

New Drone Mission

Mission Name * **Requestor**

Mission Title

Mission Type *

- Search and Rescue
- Damage Assessment
- Other
- Specify your own value:

Mission Details

1

A new Mission is added using the easy-to-use data entry form. *Requestor*, *Assigned To* and *Mission Team* fields are populated from registered users in the Drone Partner list.

Microsoft Teams Search

Mission List

+ New item Edit Edit in grid view Copy link Delete ...

Mission Name	Requestor	Assigned To	Mission Type	Mission Details
Yorktown offshore SAR	York County Fire Department	Not Assigned Yet	Search and Rescue	Presumed missing adult male, boat found approximately 1 mile offshore.
York Co. Flood Damage Assessment Support	Virginia Department of Emergency Management	York County Fire Department	Damage Assessment	Support aerial damage assessments. Lorem ipsum dolor sit amet. consectetur

2

Missions are logged in the Mission List.

Missions Posts Files Wiki **Mission List** Weather 2 more **New**

Reply

CEST Admin (Erik) 10/15, 9:27 AM
Added a new tab at the top of this channel. Here's a link.

[Drone Airspace Reporting](#)

Reply

CEST Admin (Erik) via Power Automate 10/15, 11:42 AM

A new mission was just created

Lost hiker - Shenandoah NP

Mission ID: 2021-10-15_Lost hiker - S

Created by: CEST Admin (Erik)
Created Fri, Oct 15, 2021

Last seen Oct 13; Truck at trailhead.

Status: New Request

[Return to TOC](#)

3

An adaptive card is added to the Mission Post, providing members of the team awareness of the new mission

P4 - Polling

1 A new Mission is created

The screenshot shows the 'Missions' page in P4. The mission 'Lost cat' is selected, showing details: MissionID: 2021-10-14_Lost cat, Mission Name: Lost cat, Mission Type: Other, and Mission Team: Ray Neel, John Smith. The status is 'Complete'.

2

UAS Team members are sent update regarding mission, including poll to indicate their availability and ETA if able to respond.

The form is titled 'Drone Team Member Availability'. It asks the user to indicate if they are able to participate in a drone mission today and their estimated time of arrival. The form includes a dropdown for 'Team Member' (currently showing Andrew Smith), radio buttons for 'Are You Available to Assist?' (Yes/No), and a 'Mission ID' field (2021-12-14_SevereStorms). A 'Submit' button is at the bottom.

The screenshot shows the 'Mission Details and Team Responses' page. It lists several missions and a table of team availability. The table has columns for Team Member, Available (Yes/No), and ETA.

Team Member	Available	ETA
Sean Pullen	Yes	09:17
Sean Segerblom	No	
Tyler Seidnitzer	Yes	12:21
Sean Segerblom	Yes	09:24
Adam Bourque	No	
Adam Cooper	Yes	13:37
Andrew Smith	No	
Scott Hartley	Yes	11:43
Brandon Williams	Yes	11:41
Timothy Nunez	Yes	14:33

3

Mission Details page in P4 updated with availability of UAS Team Members to respond. UAS Team Lead can assemble team based on this information.

P4 - Group Assignments

- 1 A Mission Team is assembled based on those available to respond

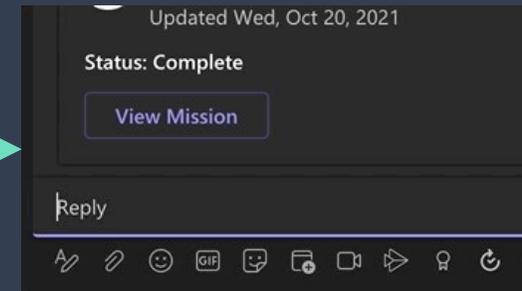
The screenshot shows a mission form titled "Lost cat" with the following fields:

- Content Type: Item
- MissionID: 2021-10-14_Lost cat
- Mission Name *: Lost cat
- Assigned To: —
- Mission Type *: Other
- Mission Details: Enter value here
- Status *: Complete
- MissionTeam: Ray Neel, John Smith (highlighted with a red box)
- Mutual Aid Type: —

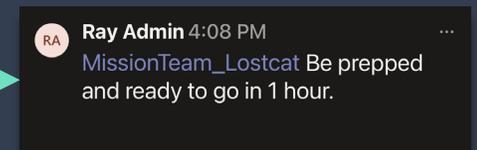
A Group Tag is generated using the Mission Name, and the team members are added to it. Any time the team is updated, the Group Tag is refreshed

2

- 3 The new Group Tag is named "MissionTeam" plus the name of the Mission. It can now be called to get the attention of those involved in the Drone Mission

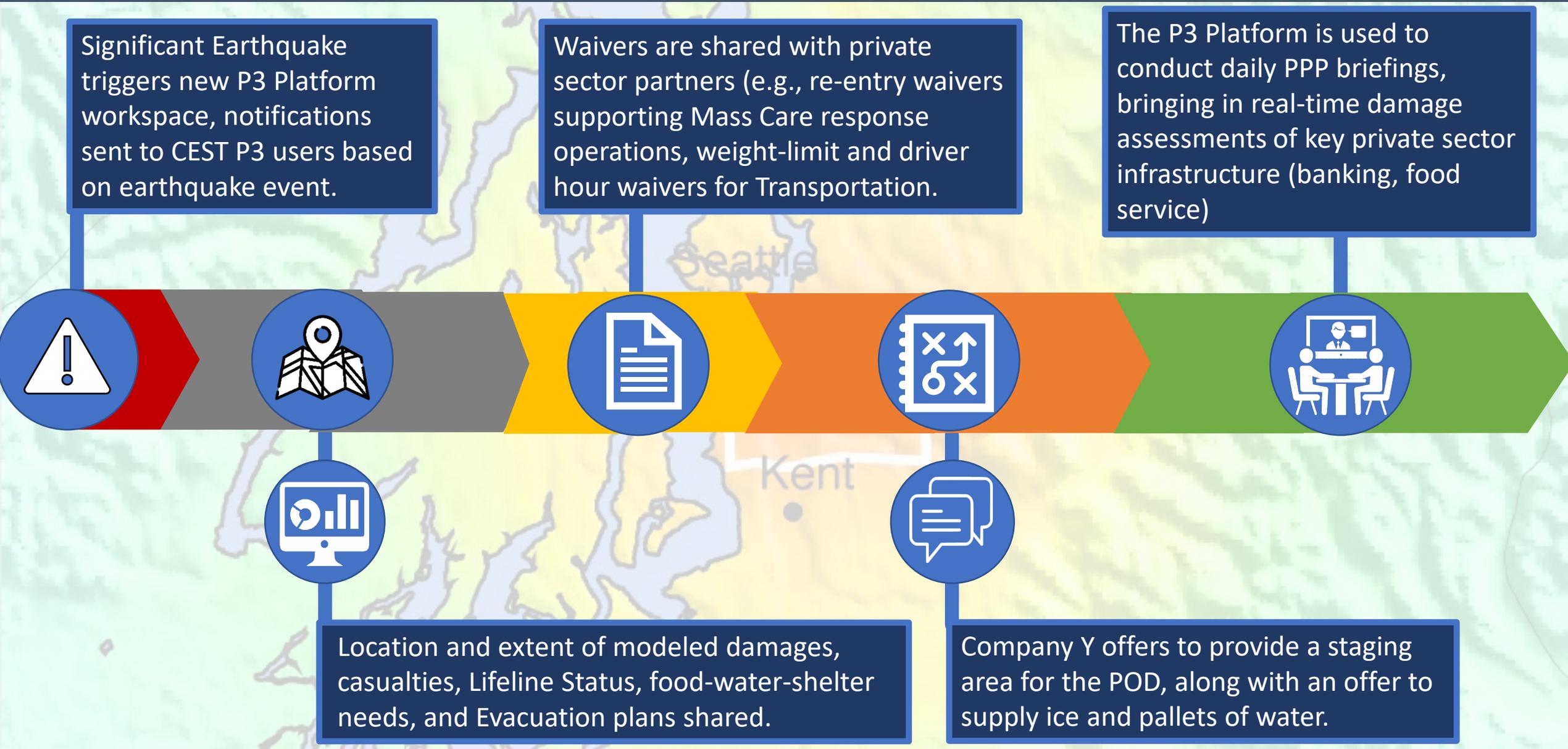


- 4 Notifications are delivered to Mission Team members



The Consortium for Emergency Services Technology (CEST)

Example of CEST P4 in Use



Thank you!

Questions?

Robert Greenberg, CEO rgreenberg@ghinternational.com

Cy Smith, Consulting Director cysmith@ghinternational.com

Erik Endrulat, Technology Specialist eendrulat@ghinternational.com