The Virtual Coordination Center

A cloud-based congestion management platform

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Washington State Transportation Commission Meeting
May 17, 2022
Today’s agenda

About the Virtual Coordination Center (VCC)
- How the VCC came to be
- Project partners
- Funding

Scope and schedule
- Federal grant funding
- Workflow
- Core functionalities of the Virtual Coordination Center

Progress to date
- Shared situational awareness dashboard
- Congestion management collaboration space
- Coordinated public communications

Next step:
- Operational testing scheduled for Fall 2022
About the VCC
Seattle Metro Facts

King County:
• Home to nearly 30 percent of the state’s population
• 2.3 million residents

Seattle:
• 769,500 residents in April 2021

Geographically constrained:
• Puget Sound to the west
• Lakes divide urban centers
2017: Crash closes I-5 and I-90 in Seattle
Critical routes close for 8 hours

A tanker truck loaded with propane was unable to stop before running into four other vehicles and then rolling over on the southbound collector-distributor lanes to I-5.
A brutal evening commute
VCC partners
Funding overview

- **Proof of Concept development:** Sept. 2020 – Sept. 2023
- **Project Management** – University of Washington
- **Technology Development** – Pariveda Solutions
- **Budget:** $8.5 million
  - Federal award from USDOT/FHWA to WSDOT
  - Additional funding from WSDOT and Challenge Seattle
  - In-kind participation from city, county and state agencies
  - In-kind participation from private sector partners
VCC private sector partners
Scope and schedule
Where are we now?

TIMELINE OF VCC EFFORT

- Seattle I-5 tanker truck incident
  February 27, 2017

- Beyond Incident Response report
  March 2018

- VCC visioning
  Spring 2018 - Spring 2019

- WSDOT submits application for ATCMTD grant
  August 2019

- WSDOT awarded ATCMTD grant
  July 2020

- Design and construction of VCC
  Fall 2020-Summer 2022

- Implementation and evaluation of VCC
  Fall 2022-Fall 2023

- WSDOT and agency partners assume operations and maintenance costs
  Fall 2023

- Expansion to other locations
  TBD

- FHWA grant ends
  Fall 2023
The VCC workflow
Development waves

- **Wave 1:** Shared situational awareness  
  - Integrated dispatch feeds  
  - Incident location map and alerts  
  - Real-time incident status page  

- **Wave 2:** Collaborative planning & response  
  - Regional congestion management planning  
  - Advanced incident detection  
  - Collaboration space  
  Oct. 2021 – June 2022

- **Wave 3:** Incident communications  
  - Collaboration space for public information officers  
  May – Aug. 2022

- **Operational testing and evaluation**  
  Fall 2022 – Sept. 2023

* Federal grant funding ends Sept. 2023
Progress to date
Wave 1: Shared situational awareness

1. Map view of current incident
   - Quickly understand situation from multiple inputs

2. Integrated Dispatch Feed
   - Identified as highest priority knowledge gap

3. Incident Model
   - Enables real-time sharing of information
   - Backbone of shared incident awareness
Incident Model: Details of a multi-agency response
Two weeks of geolocated incidents

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*SPD coded to Beat center
Wave 2: Collaborative planning & response

Currently in development

1. Incident location
Location, incident perimeters, related road closures and detours.

2. Action log
Each agency’s plans to keep people moving (e.g. signal timing changes, transit reroutes etc.).

3. Incident Model
Relevant incident response details.
Wave 3: Communications dashboard

Currently in development

1. Incident model
All relevant details about the incident.

2. Current talking points
Current approved talking points about the incident, response and actionable messaging to travelers.

3. Outreach planning tools
Relevant incident response details.
Next steps
Looking to the future

Testing and evaluation: Fall 2022 – Sept. 2023
- Operational community will use and provide feedback and identify additional use cases
- Produce report for Federal Highway Administration

Preparing for the 23/25 Biennium
- WSDOT seeking funding to develop additional functionalities and expand the VCC throughout King County
- Establish program governance structure
For additional information regarding The Virtual Coordination Center, please contact:

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