



Breakout Session 6-IV: Open Source

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Breakout Session Objective and Plan

SESSION OBJECTIVE

- Explore how the Open Source approach may advance the CV pilot deployment program

SESSION PLAN

- OSADP Apache 2.0 Open Source License: Overview and Quiz (10 minutes)
 - Other licenses will be considered on a case-by-case basis
- Game I: Prioritize CV Pilot Applications for releasing as Open Source (10 minutes)
- Game II: Prioritize Type of CV Pilot Code for releasing as Open Source (10 minutes)
- Game III: Identify and Prioritize Options for Protecting IP Rights while Enabling CV Pilots (20 minutes)
- Discussion (10 minutes)

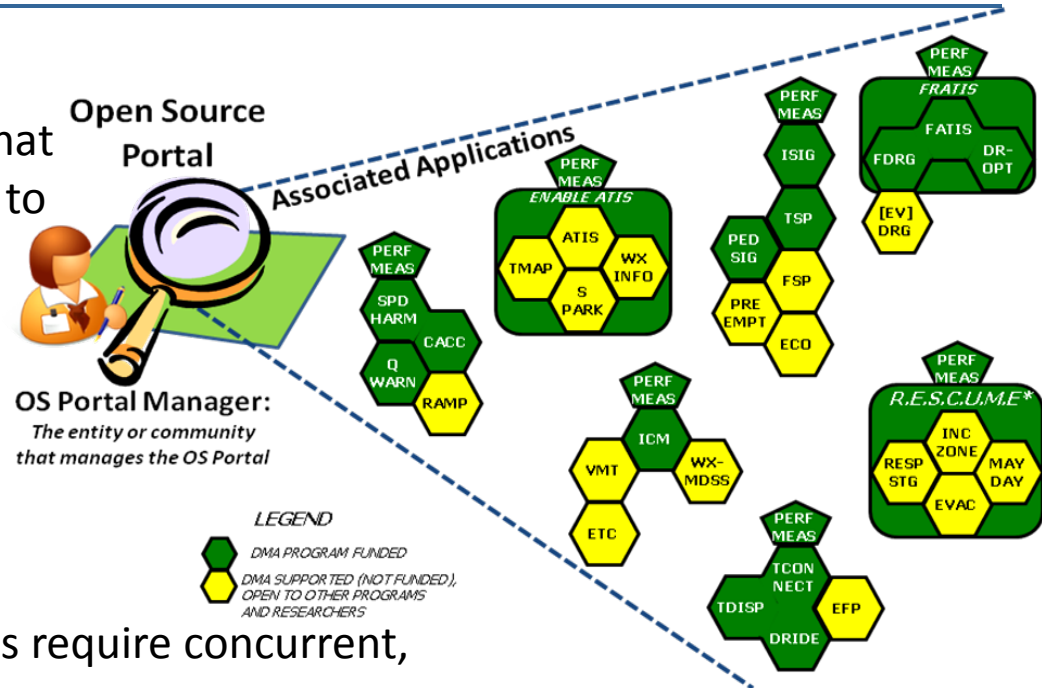
WEBINAR PROTOCOL:

- Please use chat box when voting or if you have a comment or a question
- Please MUTE your phones



USDOT Mobility Program – OSADP Scope

- Purpose:** Develop, operate, and maintain an open source portal that will enable multiple stakeholders to collaborate on application development



- Coordination:** Application bundles require concurrent, collaborative development
 - For example, in the M-ISIG bundle, pedestrian signal phases in the PED-SIG application must be coordinated with applications providing priority or pre-emption services
 - This coordination extends to both DMA-funded application development and research conducted at UTCs and other organizations
- Transparency:** the Open Source Portal provides the mechanism to ensure application development is transparent and broadly available



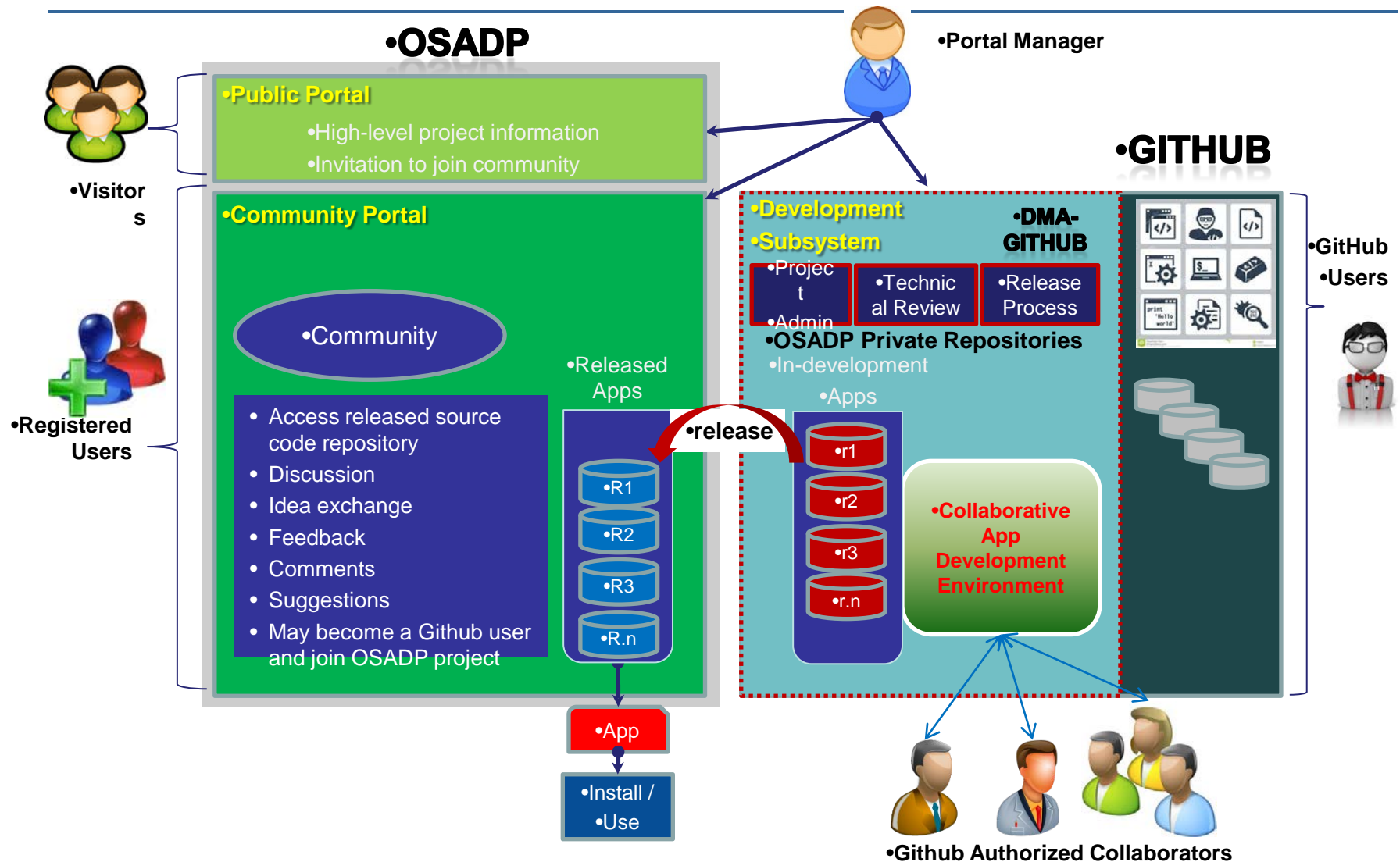
Open Source Portal Performance Goals and Outcomes

- Open Source Portal supports:
 - Configuration management of core assets
 - Creation of new projects by stakeholders
 - Submission of new applications and corresponding benchmark test data sets, test procedures and documentation to a project
 - Collaboration among stakeholders interested in inter-related projects
 - Recognition of contributors of core assets

- Open Source Portal outcomes:
 - Portal governance development and licensing agreement
 - Well-documented and accessible core assets
 - Deployment of secure portal infrastructure
 - Promotion of collaboration and preservation of intellectual capital
 - Engagement of partners from academia and industry who may not be directly involved in funded applications development and testing



Current OSADP Architecture



Apache 2.0 Open Source License: Overview

Can

Download and use
for free

Incorporate
software in
proprietary
package you
create

Make changes
without having to
resubmit as open
source

Cannot

Redistribute without
proper attribution

Use any
Trademarks or
Logos that may
State that the
Organization
Endorses your
Distribution

Restrict use of the
software

Must

Include License in
any redistribution that
includes the software

Document which files
were modified in any
New Distribution



Apache 2.0 Open Source License Quiz

- **Apache 2.0 software can be used for commercial purposes. (True or False)**

- **You can restrict how people apply an Apache 2.0 licensed program. (True or False)**

- **You can sell services and code based on the Apache 2.0 code, including selling warranties and other assurances, and selling customization and maintenance work, etc. (True or False)**



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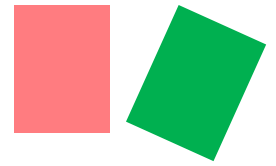
•False

- You can sell services and code based on the Apache 2.0 code, including selling warranties and other assurances, and selling customization and maintenance work, etc. (True or False)

•True



Prioritization Game Voting Rules



- Each game requires participants to vote using the following **voting rules**:
 - **Hand in your card**: Highest Priority (5 POINTS)
 - Can use only **ONCE in each game but must be used**
 - **Raise you hand**: Medium Priority (1 POINT)
 - May be done multiple times in each game, but **not with card**
 - **Do nothing**: Low Priority (0 POINTS)

- Webinar participants will **use the chat box to specify “points”** for each option. (NOTE: 5 points may be used only once per game)

- Facilitators will tally the votes and reorder the items in descending order of priority for further discussion.



Game I: Prioritize CV Pilot Applications for releasing as Open Source

- Which group of CV Pilot Applications should be released as Open Source?
 - Mobility applications (Speed Harmonization, ATIS, etc.)
 - Safety applications (Collision Warning, Blind Spot Warning, etc.)
 - Security applications (Applications that support the security of information sharing between applications)
 - Environment applications (Eco Signal Priority, Eco-Ramp Metering, etc.)
 - All applications



Prioritized List of CV Pilot Applications for releasing as Open Source: Results and Discussion

1. Mobility applications
2. Safety applications
3. Environment applications
4. All applications
5. Security applications



Game II: Prioritize Types of CV Pilot Code for releasing as Open Source

- Which type of CV Pilot code should be released as Open Source?
 - **Full Source Code:** All source code files, including the test data sets to run the code
 - **Basic Functionality Libraries:** Basic libraries or toolkits that can be added to other programs to create CV applications
 - **Communication API / Interfaces:** The communication API for connecting the libraries
 - **Architecture information:** Architecture information for the applications without code



Prioritized Types of CV Pilot Code for releasing as Open Source: Results and Discussion

1. Basic Functionality Libraries
2. Full Source Code
3. Architecture information
4. Communication API / Interfaces



Game III: Identify and Prioritize Options for Protecting Intellectual Property Rights (IPR)

- Participants will **discuss options** for protecting IPR of the proprietary code while maximizing availability of the new open code
 - Require that any modified code be released under an open source license
 - Require that new functions be added only in new open source software modules and create an open source API to access the proprietary code
 - Changes to these options? Other choices?
 - **NOTE:** Facilitators will capture options on flip chart
- Participants will **vote** on the options



Prioritized Options for Protecting IPR: Results and Discussion

1. Require Open Source License
2. open source API to access the proprietary code
3. Item 3
4. Item 4



Discussion

- The RFI responses provided mixed information about the Safety and Security Applications being open source. What advantages and disadvantages are there for using or not using Open Source for these applications?

- What is the greatest hurdle to the CV pilot program releasing applications as Open Source? Why?

