NEVADA CENTER FOR ADVANCED MOBILITY

MOBILITY CHALLENGE
REQUEST FOR INFORMATION

X2V Interoperability Playground

Issued: ***December 23, 2016***

Submissions Due: ***January 30, 2017***

1. Purpose (Scope & Objectives)

With the advent of connected and autonomous vehicles the future of intelligent transportation systems (ITS) and related infrastructure has become unclear. Metropolitan planning organizations in the past have been able to look 40 years in advance, now find themselves challenged by fast moving technologies that have development cycles measured in months.

The objective of this mobility challenge is to gather expressions of interest, information and guidance regarding the creation of a multivendor X2V Playground with the goal of accelerating development, validating interoperability and in turn deployment of advanced mobility hardware, software and services.

Why "X2V"? As a State the "X" rather than the "V" has to be the priority for Nevada. States and cities have little influence over the manufacturing of vehicles, but we do have a primary responsibility to focus on the role of pedestrians and related infrastructure.

The Nevada Center for Advanced Mobility (Nevada CAM) creates advanced mobility opportunities for visitors, residents and industry. This is achieved by bringing together industry, government and academia to develop and deploy policy, standards and technology around advanced mobility including electric, connected, autonomous vehicles and related infrastructure. The X2V Interoperability Playground aims provide an environment that helps contribute to level of confidence needed to enable government and industry to make smart connected vehicle infrastructure investments.

2. Background (Overview)

The data networking and communications industry has spent decades working towards a level of standardization that ensures general interoperability between multivendor hardware and software. We want to drive transportation technologies towards becoming more like a traditional data communications network which when compliant with standards allow equipment in mixed vendor environments to communicate seamlessly. This robust platform combined with rational data architecture provides an ecosystem upon which tools and applications can be developed with the assurance that broad deployment will be relatively painless.

WHO: Including, but not limited to Automotive OEM's, Tier 1 & 2 Automotive Suppliers, Networking Companies, Telecommunications Operators, Energy Utilities, Technology Startups, Software Developers, Media and content providers.

WHERE: One proposed area for an X2V Playground is bounded by Sahara Avenue (North), McCarran Airport (South), Koval Lane (West) and Maryland Parkway (East).

Las Vegas traffic infrastructure map:

http://gis.rtcsnv.com/flexviewers/FAST/

Notable characteristics of this area include:

- Parallel to Las Vegas Boulevard (The Strip)
- Includes McCarran International Airport and University of Nevada, Las Vegas
- Right of ways ranging from 7-8 lane 45mph arterial roads to residential streets
- Directly accessible to the Sands Expo and Convention Center and Las Vegas Convention Center
- Extensive (lit/dark fiber, copper) network terminating at RTC's Freeway & Arterial System of Transportation (FAST)
- >70 signalized intersections
- >14 DSRC RSU's from 2 vendors already deployed

WHAT: Validate security, standards compliance, interoperability and city architecture integration of on-board and roadside equipment with:

- other vendor RSE
- WiFi mobile applications
- cellular mobile applications
- in-car infotainment systems
- distributed/centralized data processing and storage
- legacy city infrastructure (signal controllers)
- legacy city data systems
    - traffic signal, ramp meters, traffic counters, dynamic messaging
    - public transportation schedules
    - emergency services and maintenance vehicles
    - dynamic traffic management

3. Goals / Points of Interest

Through this RFI, Nevada CAM and its partners are interested in gathering expressions of interest, information and guidance for an X2V Playground that may lead to the following outcomes and opportunities:

Potential Outcomes

- Laboratory and showcase for vendors
- Advise metropolitan planning and decision making
- Living and open data lab for cloud, mobile and in car application developers
- Reference for other states and cities (technical, regulatory, community)

- Architecture solutions avoiding proprietary technology and 'vendor lock-in'

Potential Opportunities

- Explore and understand how connected infrastructure can supplement, accelerate and improve the development, adoption and overall CAV experience.
- Understand the deployment options for big data and cloud based mobility applications (development pathway from phone to vehicle)
- Validate both short-term and long-term the difference city infrastructure can make to the promise of autonomous vehicles with the intention of permanent deployment
- Involvement in the definition of a city mobility data communications platform and ecosystem that is conducive to multivendor interoperability (beyond standards)

4. Evaluation Process.

Nevada CAM and its partners intend to evaluate the proposed offers, ideas and solutions and invite the most promising and innovative submitters to enter into further negotiation.

5. Response Format

Responses to this RFI must not exceed 4 pages in length (not including supplemental materials). Supplemental materials, if necessary, must not exceed an additional 4 pages in length. Respondents are asked to submit their responses in English in the following format.

SECTION 1 - VENDOR INFORMATION

a. Name of Company
b. Address and Telephone Number
c. Vendor Representative, contact number and email address

SECTION 2 - VENDOR OVERVIEW & EXPERIENCE

Briefly describe your company, your products and services, history, and ownership; for example:

a. Web site address
b. Main product/services
c. Main market/customers
d. Company location(s)
e. Product deployment sites, examples

SECTION 3 - ENGAGEMENT INFORMATION

- Feedback and comment on the concept of an X2V Playground (everything is on the table)
- How your organization would like to be involved
- What would your organization look to gain from being involved
- Resources your organization could contribute
- Resources your organization would require
- Role and interaction with other vendors
- Timeframe and duration or projects (short term demo – medium term pilot – long term R&D or deployment)
- Example Project

6. Disclaimer

This Request for Information (RFI) is for planning purposes only and is not a Request for Proposals (RFP), Invitation for Bid (IFB) or any obligation on the part of Nevada CAM as to acquire any services. Responses to this RFI are not offers and cannot be accepted by Nevada CAM to form a binding contract. Nevada CAM reserves the right to determine how it should proceed as a result of this notice. Furthermore, those who respond to this RFI should not anticipate feedback with regard to its submission. Nevada CAM will not pay any cost incurred in response to this RFI. Nevada CAM reserves the right to contact any references provided. All costs associated with responding to this RFI will be solely at the responding party's expense. The information provided in this RFI is subject to change and is not binding on Nevada CAM.

7. How to Respond

Please submit any questions and your response to this RFI via email to challenge@nevadacam.org, with the words "**X2V Playground**" in the email subject line. The closing time for responses is 4:00 P.M. PST on Monday, January 30, 2017. ***Responses will be accepted any time before the closing date.***

For more information on Nevada CAM, please visit NevadaCAM.org.