# AASHTO Innovation Initiative

[Proposed] Nomination of Innovation Ready for Implementation

## Sponsor

Nominations must be submitted by an AASHTO member DOT willing to help promote the innovation. If selected, the sponsoring DOT will be asked to promote the innovation to other states by participating on a Lead States Team supported by the AASHTO Innovation Initiative.

1. Sponsoring DOT (State): Arizona DOT

2. Name and Title: Steven Olmsted – Program Manager

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## Innovation Description (10 points)

The term "innovation" may include processes, products, techniques, procedures, and practices.

3. Name of the innovation:

Interactive Environmental Impact Statement (EIS)

4. Please describe the innovation.

All EIS materials were turned into digital versions for the I-11 Final Tier 1 EIS. Subsequently, an online, customizable, and interactive platform for creating, editing, and publishing was developed using a virtual

public involvement platform. http://i11study.com/Arizona/Documents.asp and the digital platform itself as also found on the previous project link https://i11.ee.alytics.com/I11Arizona-Tier1EIS/chapter/FRONT-MATTER . The Software-as-a-Service (SaaS) solution provides ADOT access to a web interface for the platform through an ongoing monthly fee. The first use of this technology on a transportation project in the U.S. The only other U.S. example was on behalf of the United States Army Corps of Engineers for the inaugural National Environmental Policy Act-compliant digital statement and to our knowledge two others in the world – one in Europe and one in Australia.

5. What is the existing baseline practice that the innovation intends to replace/improve?

Typical and antiquated paper-based environmental planning process, PDF-based documentation searching, and manual environmental activities as the EIS moves in years forward to EIS Re-evaluation build segments. In addition, platform data analytics allow real time analysis of user interaction.

6. What problems associated with the baseline practice does the innovation propose to solve?

Painful manual recreation of historical NEPA actions as the document ages, lack of fluid, openly available, and user friendly, interactive, single point of contact tools for the public, tribes, resource agencies, local governments, planning entities, and ADOT to utilize. In addition, it introduces dynamic time scale mapping in a publically available format to easily view current and future land use plans, traffic projections, alternatives evolution etc. In summary, the product streamlines environmental documentation and stakeholder engagement by presenting highly technical information in an interactive online format.

7. Briefly describe the history of its development.

As part of ADOT's advanced adoption during the pandemic of virtual public involvement tools - https://aashtos-etap-podcast.simplecast.com/episodes/etap-podcast-arizona-dots-innovative-approach-to-virtual-public-involvement - ENV Planning and Communications group were looking to reach farther into the remote, virtual, and public tools development arena. From this, and working with the Engineering Consultant on the 280-mile congressionally established I-11 EIS project, an SaaS platform was identified. There are numerous SaaS platforms in the marketplace.

8. What resources—such as technical specifications, training materials, and user guides—have you developed to assist with the deployment effort? If appropriate, please attach or provide weblinks to reports, videos, photographs, diagrams, or other images illustrating the appearance or functionality of the innovation (if electronic, please provide a separate file). Please list your attachments or weblinks here.

We developed updated language to address VPI in ADOT Public Involvement Plan. Other than that we just did it.

Attach photographs, diagrams, or other images here. If images are of larger resolution size, please provide as separate files.

## State of Development (40 points)

Innovations must be successfully deployed in at least one State DOT. The AII selection process will favor innovations that have advanced beyond the research stage, at least to the pilot deployment stage, and preferably into routine use.

9. How ready is this innovation for implementation in an operational environment? Please select from the following options. Please describe.

☐ Prototype is fully functional and yet to be piloted

☒ Prototype has been piloted successfully in an operational environment

☐ Technology has been deployed multiple times in an operational environment

☒ Technology is ready for full-scale implementation

Click or tap here to enter text.

10. What additional development is necessary to enable implementation of the innovation for routine use?

State DOTs would need to address where SaaS would be housed and be able to fund document and mapping conversion costs and nominal annual software subscription fees. The costs were not something we found to be cost prohibitive for the benefit. In the first month (August 2021) the platform received 1,000 hits.

11. Are other organizations using, currently developing, or have they shown interest in this innovation or of similar technology?? ☐ Yes ☒ No

If so, please list organization names and contacts. Please identify the source of this information.

| Organization | Name | Phone | Email |
|---|---|---|---|
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# Potential Payoff (30 points)

Payoff is defined as the combination of broad applicability and significant benefit or advantage over baseline practice .

12. How does the innovation meet customer or stakeholder needs in your State DOT or other organizations that have used it?

Broadly expands the Agency reach on public involvement, web-based services, NEPA and environmental justice, rural and tribal outreach, and socioeconomic equity through advancing computer and smart phone virtual services

13. Identify the top three benefit types your DOT has realized from using this innovation. Describe the type and scale of benefits of using this innovation over baseline practice. Provide additional information, if available, using quantitative metrics, to describe the benefits.

| Benefit Types | Please describe: |
|---|---|
| Improved Customer Service | Broadly expands the Agency reach on public involvement |
| Environmental Benefits | NEPA and environmental justice |
| Other (please describe) | Socioeconomic equity through rural and tribal outreach |

Provide any additional description, if necessary:

It has been a huge success that was supported by both FHWA AZ Division Office and ADOT leaderships

14 How broadly might this innovation be deployed for other applications. in the transportation industry (including other disciplines of a DOT, other transportation modes, and private industry)?

Every mode that especially has NEPA requirements and/or digital public involvement goals

## Market Readiness (20 points)

The AII selection process will favor innovations that can be adopted with a reasonable amount of effort and cost, commensurate with the payoff potential.

15. What specific actions would another organization need to take along each of the following dimensions to adopt this innovation?

| Check boxes that apply | Dimensions | Please describe: |
|---|---|---|
| ☒ | Gaining executive leadership support | Support for VPI tools |
| ☒ | Communicating benefits | Advertise the added tool |
| ☐ | Overcoming funding constraints | Click or tap here to enter text. |
| ☐ | Acquiring in-house capabilities | Click or tap here to enter text. |
| ☐ | Addressing legal issues (if applicable) (e.g., liability and intellectual property) | Click or tap here to enter text. |
| ☐ | Resolving conflicts with existing national/state regulations and standards | Click or tap here to enter text. |
| ☐ | Other challenges | Click or tap here to enter text. |

16. Please provide details of cost, effort, and length of time expended to deploy the innovation in your organization.

**Cost**: Varies by job but would be in the $10K - $75K range

**Level of Effort**: Low – document conversion, software adoption, build platform

**Time**: 60 days

17. To what extent might implementation of this innovation require the involvement of third parties, including vendors, contractors, and consultants? If so, please describe. List the type of expertise required for implementation.

SaaS is better suited to be managed by a third party vendor for the State DOT