AIM Innovation Showcase Application

# 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 present the innovation at the Innovation Showcase during the AASHTO Spring Meeting.

1. Sponsoring DOT (State): Colorado Department of Transportation (CDOT)

2. Name and Title: Gary Vansuch, Director of Process Improvement, on behalf of two fellow TeamCDOTers: Randy Foose and Josh Horton.

Organization: Colorado Department of Transportation (CDOT)

Street Address: 2829 W.Howard Place

City: Denver

State: Colorado

Zip Code: 80204

Email: gary,vansuch@state.co.us

Phone: 303-913-1773

# Innovation Description (30 points)

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

3. Name of the innovation:

Corbel Lifting and Installation Tool

4. Please describe the innovation.

**This innovation eliminates the need for employees to lift and move 400-pound corbels by hand, which significantly improves safety.**

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

The existing practice is for employees to lift and move 400-pound corbels by hand when a corbel is needed for bridge work**.**

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

Installing corbels is necessary part of certain operations Corbels *(sometimes known as brackets.)* are reinforced structural members or short structural projections used to transfer vertical and horizontal forces from beams to walls or columns. They are extensively used in the design of reinforced concrete structures, such as bridge structures on our Colorado highway system. And, unfortunately, corbels are extremely heavy – often 400 pounds or more, And, when they need to be installed, the locations are often in very space-limited areas. The prior practice was to have 2 people lift and place these corbels where they need to be, a taxing and tough chore.

7. Briefly describe the history of its development.

CDOT Maintenance personnel are engaged in installing corbels from time to time. Two of our professional maintainers were engaged in installing one, and noted how difficult it was to do correctly. And, they noticed some potential safety issues, too. With support and encouragement from the chain of leadership, they decided to develop a better method.

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 below (if electronic, please provide a separate file). Please list your attachments or weblinks here.

Information about this innovation is available to the public on the CDOT Innovation, Improvement and Engagement Hub. 1 ) This is a summary card about it: <https://docs.google.com/presentation/d/1g7vqErWcIrFtYes-j976v7bv_F5N3toQPBsgVumS2Sg/edit#slide=id.g5ad4d43e00_0_10> 2) The “Click Here for More Details” button goes to this website, which contain additional information, including instructions for “How to Borrow This Idea”: <https://drive.google.com/drive/folders/1VwySuLe3_xe0GEv9erwWuHkZrxuT2div>

# State of Development (10 points)

Innovations must be successfully deployed in at least one State DOT. The AIM 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.

Innovation is fully functional and yet to be piloted.

Innovation has been piloted successfully in an operational environment.

Innovation has been deployed multiple times in an operational environment.

Innovation is ready for full-scale implementation.

This innovation is in use at CDOT.

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

This innovation is in use at CDOT

11. Do you have knowledge of other organizations using, currently developing, or showing interest in this innovation?  Yes  No

If so, please list organization names and contacts.

|  |  |  |  |
| --- | --- | --- | --- |
| **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. Identify the top three benefits 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 Safety | This innovation improves safety by eliminating the need to manually handle 400-puond corbels. |
| Organizational Efficiency | This new method is not only safer, it is also quite a bit faster than the previous method. |
| Shorter Schedule | This new method is not only safer, it also allows this job to be done more quickly. |

Provide any additional details below:

Click or tap here to enter text.

# Deployability (30 points)

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

13. What challenges and/or lessons learned should other organizations be aware of before adopting this innovation?

As with any change, it requires support from the chain of leadership.

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

**Cost**: Click or tap here to enter text.

**Level of Effort**: Click or tap here to enter text.

**Time**: Click or tap here to enter text.

15. 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.

Third parties are not involved.