



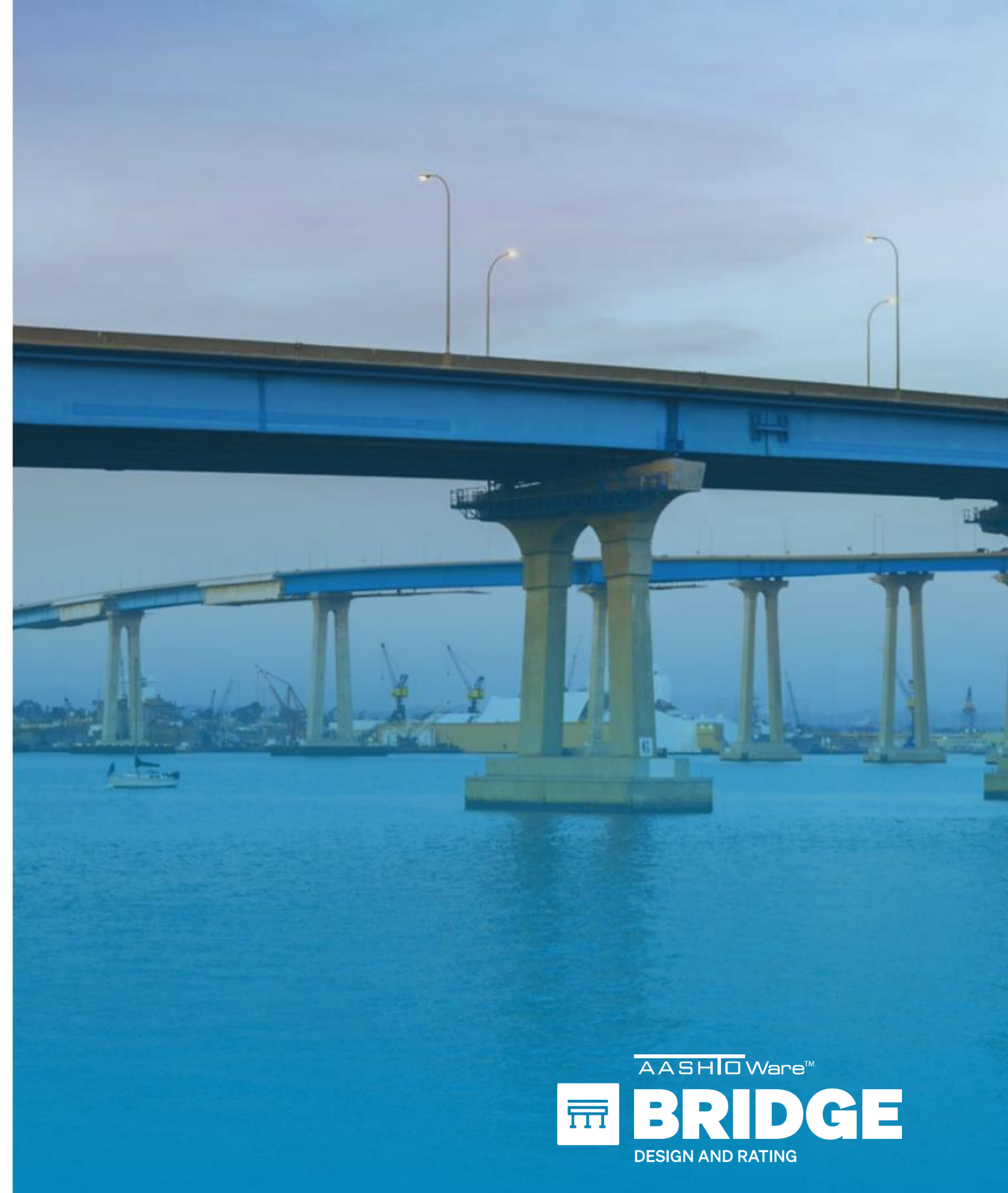
# AASHTOWare BrDR Task Force Update

Jennifer Hart, P.E. [JenHart@indot.in.gov](mailto:JenHart@indot.in.gov)

2025 Rating and Design User Group Meeting  
Boise, ID | August 12-13, 2025

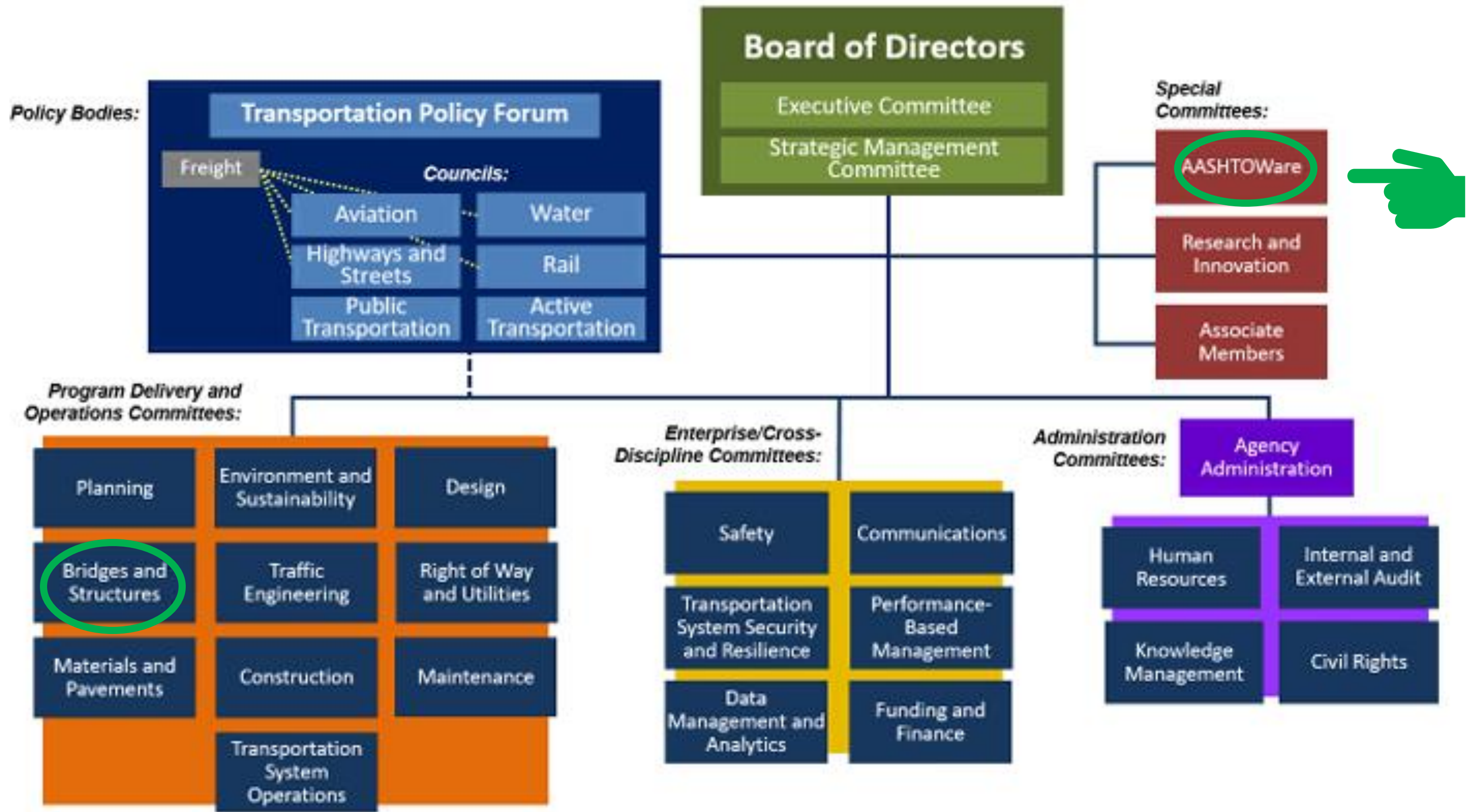
# TOPICS

- Relationship between AASHTO & AASHTOWare
- AASHTOWare BrDR Mission, Vision, and Goals
- User Group Enhancements Survey Results
- AASHTOWare Five Year Strategic Work Plan
- BrDR 7.6, 7.7, and 7.8 Enhancements
- Agency Involvement BrDR Task Force and Technical Advisory Groups
- AASHTOWare BrDR Licensees





# AASHTO Committee Structure





## MISSION

To deliver a software solution through partnerships which enable transportation agencies to accomplish their mission.

## VISION

To be the premier Bridge Design and Bridge Load Rating software solution for the transportation community.

AASHTOWare™



# BRIDGE

DESIGN AND RATING

Development of a  
hybrid on-premise and  
cloud-based solution

Refactor BrDR  
system's core  
foundation and  
analytical  
components

Develop Task Force  
directed features and  
functionality

Address user  
requested  
enhancements

Proactive  
management and  
resolution of  
maintenance issues

Address technical  
debt systematically  
and strategically

Support AASHTO and  
AASHTOWare  
program initiatives

Provide exceptional  
customer support to  
enhance customer  
success



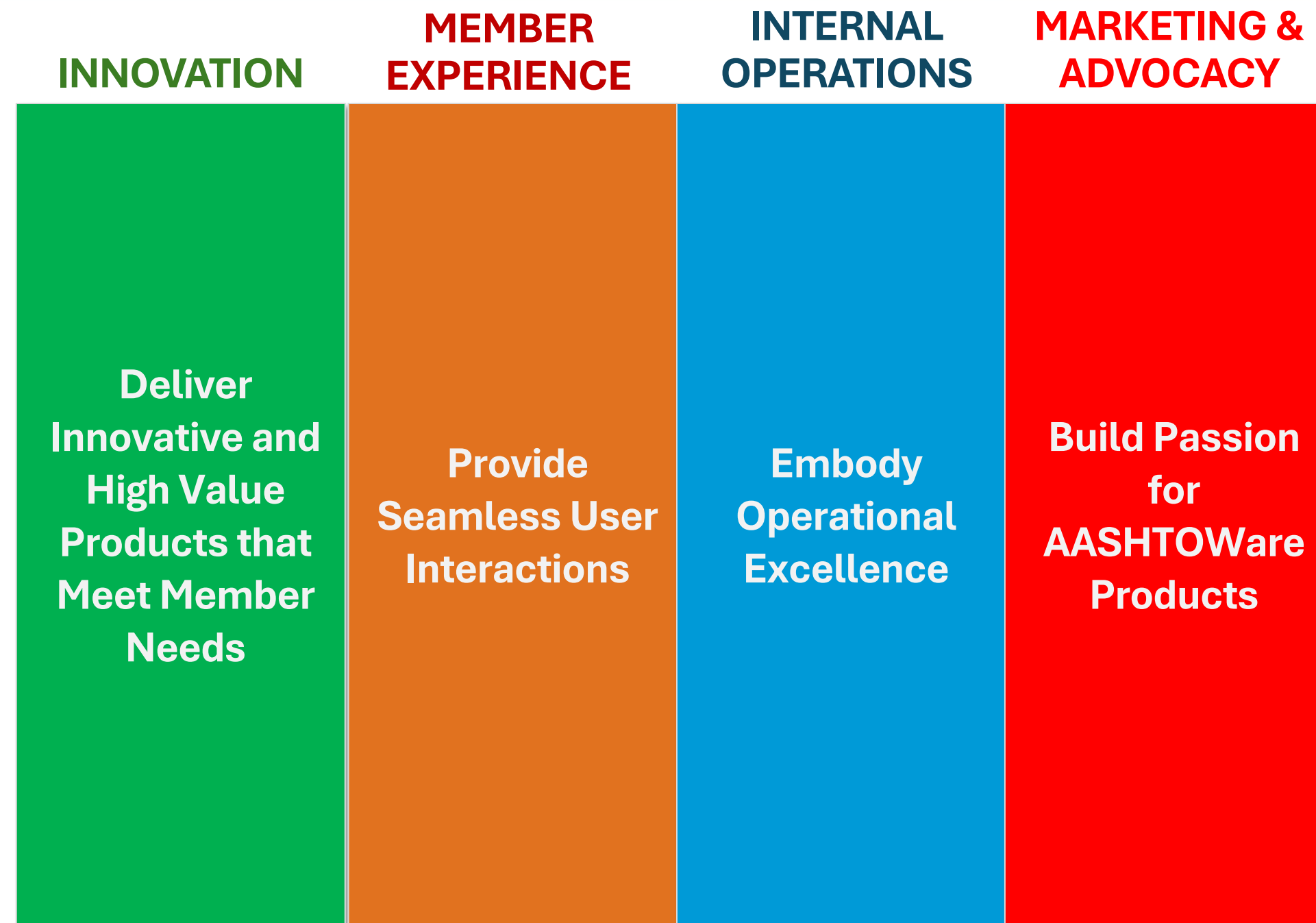
## MISSION

AASHTOWare delivers software solutions through partnerships to enable transportation agencies to accomplish their mission.

## VISION

To be the premier source for innovative technology solutions for the transportation community.

# 5 Year Strategic Work Plan





# 5 Year Strategic Work Plan

INNOVATION	MEMBER EXPERIENCE	INTERNAL OPERATIONS	MARKETING & ADVOCACY
<p>Migrate all AASHTO Products to the cloud</p> <p>Create roadmaps informed by user feedback and agency expertise</p> <p>Data analytics to support user-informed product development</p> <p>Increase interoperability</p>	<p>Develop user focused training program</p> <p>Streamline product renewal/ procurement</p> <p>Self-service options and ticket resolution</p> <p>Create implementation best practices guidelines</p>	<p>Create Strategic Work Plan Implementation Committee</p> <p>Enhance cybersecurity and data governance</p> <p>Improve Task Force efficiency</p> <p>Leverage volunteers strategically</p> <p>Align financial resources to gaps and key initiatives</p> <p>Enhance communications across AASHTO and AASHTOWare</p>	<p>Grow AASHTOWare's Online Presence</p> <p>Promote AASHTOWare Products</p> <p>Develop AASHTOWare as a Community</p>



## 2024 Top 10 Voted BrD User Group Enhancements

### INNOVATION

Migrate all  
AASHTO Products  
to the cloud

Create roadmaps  
informed by user  
feedback and  
agency expertise

Data analytics to  
support user-  
informed product  
development

Increase  
interoperability

Rank	Summary
1	Steel Design Tool (SDT) - Construction staging loading and design checks
2	Provide additional PS strand configuration options and limit checks
3	SDT - Allow variability for different girder spacing and deck overhang
4	SDT - Add field splice design
5	Modeling and analysis of circular concrete piles in pile bent piers
6	Finding/sorting/selecting bridge models in Bridge Explorer based on the structure types and default analysis type
7	Specify separate Default analysis setting template for BrR and BrD
8	SDT - Provide steel weight of each girder design option and review option
9	SDT - Enter exact section configuration in Beam Parameters
10	Improve LLDF calculations report by adding additional indicators and information

## INNOVATION

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## 2024 Top 10 Voted BrR User Group Enhancements

Rank	Summary
1	Allow adding girder(s) to either left or right side of girder system model
2	Finding/sorting/selecting bridge models in Bridge Explorer based on the structure types and default analysis type
3	Default Tabular Report display format to Single Rating Level Per Row
4	Add a Rating Factor plot feature and include in Report Tool 2.0
5	Analyze local web yielding and web crippling for steel beam ends
6	Add timber deck and generic deck types for truss superstructures
7	Vehicle option to load rate interior girder only
8	Provide additional culvert haunch configuration options
9	Analysis Results Comparison (ARC) Tool: Report bridges that failed to analyze
10	LFR shear evaluation per MBE 6A.5.8

## INNOVATION

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Data analytics to  
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## 2024 Top 5 BrD Large Enhancements

Rank	Description
1	Design: Steel Design Tool Enhancements
2	Design: PS Design Tool Enhancements
3	Analysis: Complex framing plans
4	Analysis: Complex curved girder layout
5	Member Types: Concrete - Frame/Arch structures

## 2024 Top 5 BrR Large Enhancements

Rank	Description
1	Rating: Enhanced deterioration modelling
2	Rating: Implement remaining structure types in LRT
3	Member Types: Steel - Tub/box girders
4	Member Types: Concrete - Frame/Arch structures
5	Member Types: Concrete - Channel beams

# 5 Year Strategic Work Plan

## INNOVATION

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### 2025 January

- Top 6 user group enhancements
- Analysis Results Comparison Tool Improvements
- BrDR development migration to the .NET 8 software development platform
- New LRFR control option for compact web section Cb calculation using AISC Article F1 commentary
- New Bridge Workspace windows for entering points of interest along the webs of standard and advanced concrete multi-cell box superstructures

### 2026 June

- LRFR reinforced concrete pier cap analysis
  - Substructure Bridge Workspace architecture revision
  - Control point data entry for substructure reinforcement
- Next Generation of Report Tool - Phase 2
  - Bridge Workspace reporting for all superstructure types
  - Begin implementation of analysis output data reporting
- AASHTO FE Engine non-linear formulation of soil-str interaction
- Improve AASHTO Analysis Engine output data management
- New Geometry computation module

7.6

7.6.1

7.7

7.8

7.9

8.0

### 2025 April

- Maintenance updates to BrDR 7.6 release
- 36 bug fixes

### 2025 October

- Update BrDR/BrM Data Exchange Feature to support BrM's SNBI through AASHTOWare's OpenAPI Web services through 10 API endpoints
- Section 508 Accessibility compliance

### 2027

- IFC 4.3.2 Export Girder System/Girder Line
- Report Tool Phase 3 – Analysis Output
- API Keys
- Engine 2.0 – Influence Module
- Steel Design Tool Integration
- Culvert Soil Structure Interaction Phase 2.1
- Cloud Phase 1

2025 Rating and Design User Group Meeting



## MEMBER EXPERIENCE

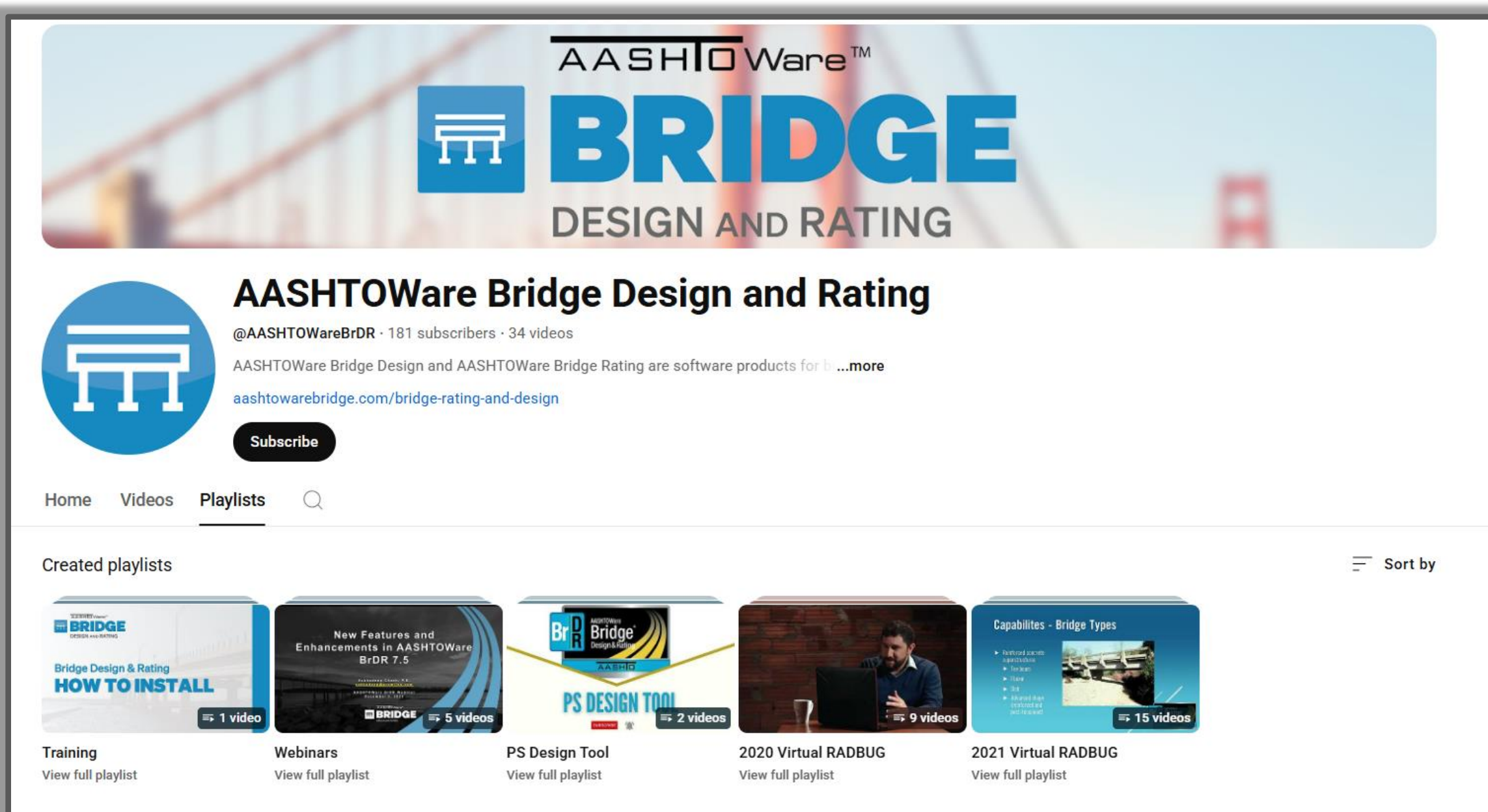
Develop user  
focused training  
program

Streamline  
product renewal/  
procurement

Self-service  
options and ticket  
resolution

Create  
implementation  
best practices  
guidelines

<http://www.youtube.com/@AASHTOWareBrDR>





## INTERNAL OPERATIONS

Create Strategic Work Plan Implementation Committee

Enhance cybersecurity and data governance

Improve Task Force efficiency

Leverage volunteers strategically

Align financial resources to gaps and key initiatives

Enhance communications across AASHTO and AASHTOWare

## BrDR Task Force

Chair	Jennifer Hart	Indiana
Vice Chair	Scott Westerfield	Mississippi
Member – BrD	Jeff Ruby	Kansas
Member – BrD	Mike Johnson	Idaho
Member – BrR	Ruben Boehler	Illinois
Member – BrR	Yihong Gao	Minnesota
Member – BrR	Robby Tennant	West Virginia
FHWA Liaison	Lubin Gao	FHWA



## INTERNAL OPERATIONS

Create Strategic Work  
Plan Implementation  
Committee

Enhance cybersecurity  
and data governance

Improve Task Force  
efficiency

Leverage volunteers  
strategically

Align financial  
resources to gaps and  
key initiatives

Enhance  
communications  
across AASHTO and  
AASHTOWare

## Technical Advisory Groups (TAGs)

 **Analysis** - Structural analysis, specification interpretation, and engineering approach

 **API** - Review, prioritize, and manage third-party software development and integration

 **Backlog** - Review, prioritize, and manage enhancement, maintenance, and bug requests

 **Culvert** - Implement modeling, analysis, and specification checking of structural culverts

 **Design** - Bridge design requirement elicitation, design review implementation and optimization technique guidance

 **Reports** - Input, output, and intermediate data representations, reporting, and processing requirement elicitation and implementation guidance

 **Testing** - Validation, verification, and acceptance testing prior to production release.

 **BrDR/BrM SNBI** - Evaluate, coordinate, and prioritize data exchange requests between BrDR and BrM



## INTERNAL OPERATIONS

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Plan Implementation  
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Align financial  
resources to gaps and  
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Enhance  
communications  
across AASHTO and  
AASHTOWare

## Technical Advisory Groups (TAGs)

 **Analysis** - Yihong Gao (Chair) Minnesota DOT & Robby Tennant (Vice Chair) West Virginia DOT

 **API** - Ruben Boehler (Chair) Illinois DOT & Joseph Barut (Vice Chair) Wisconsin DOT

 **Backlog** - Scott Westerfield (Chair) Mississippi DOT & Jennifer Hart (Vice Chair) Indiana DOT

 **Culvert** - Mike Johnson (Chair) Idaho DOT & Matt Luger (Vice Chair) North Dakota DOT

 **Design** - Scott Westerfield (Chair) Mississippi DOT & Joe Albert (Vice Chair) New York State DOT

 **Reports** - Mike Johnson (Chair) Idaho DOT & To Be Filled (Vice Chair)

 **Testing** - Jeff Ruby (Chair) Kansas DOT & Mike Johnson (Vice Chair) Idaho DOT

 **BrDR/BrM SNBI** - Yihong Gao (BrDR Co-Chair) Minnesota DOT & Jacob Armour (BrDR Co-Chair) Michigan DOT

**State  
Involvement**  
11 Leads  
28 Members



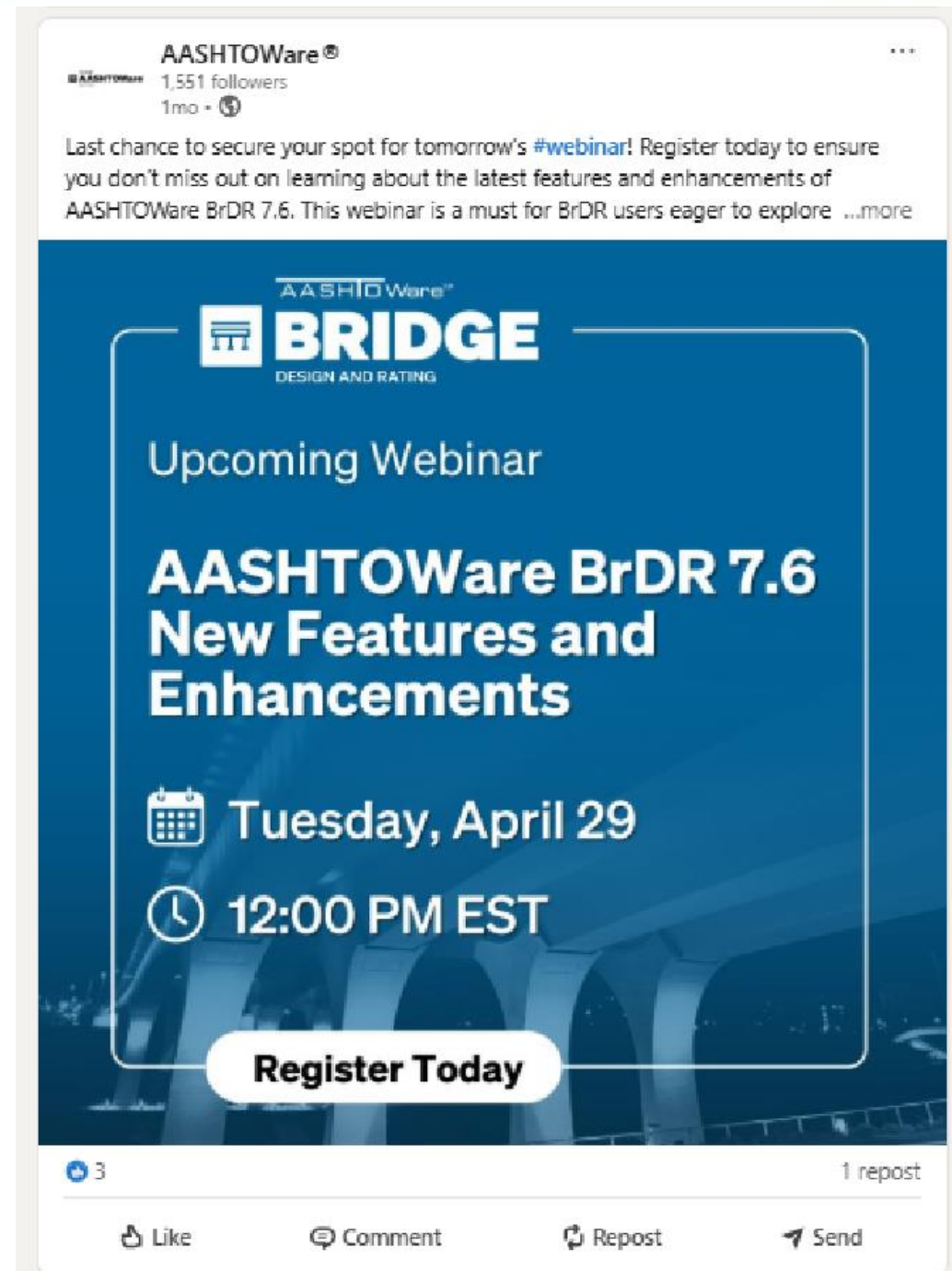
# 5 Year Strategic Work Plan

## MARKETING & ADVOCACY

Grow  
 AASHTOWare's  
 Online Presence

Promote  
 AASHTOWare  
 Products

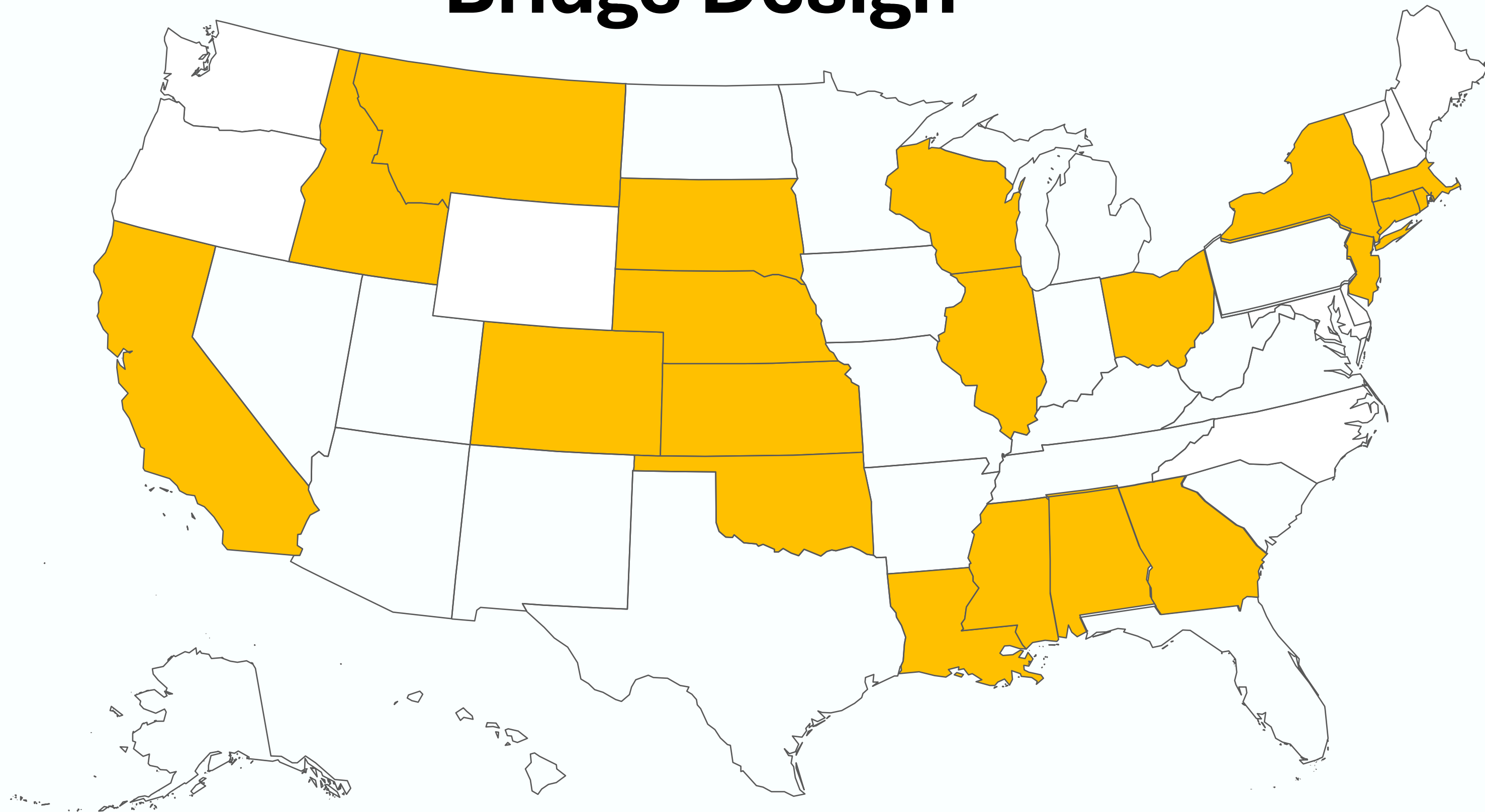
Develop  
 AASHTOWare as  
 a Community



*2025 Rating and Design User Group Meeting*



# Bridge Design



**20 Licensees**  
**State Agencies & Manitoba**

# Dragon Rating

A map of the United States showing state boundaries. Most states are filled with a solid blue color. A few states are left white, representing the 'Dragon' category. These white states include Washington, Oregon, Idaho, Utah, Wyoming, Nevada, Arizona, New Mexico, Texas, Oklahoma, Kansas, Nebraska, South Dakota, North Dakota, Minnesota, Iowa, Missouri, Arkansas, Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina, North Carolina, Virginia, West Virginia, Kentucky, Tennessee, Kentucky, Indiana, Ohio, Pennsylvania, Maryland, Delaware, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, Maine, New York, and Hawaii.

## State Agencies, District of Columbia, Puerto Rico & Manitoba



**Thank You!**

**Jennifer Hart**

BrDR Task Force Chair

Indiana Department of Transportation

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*2025 Rating and Design User Group Meeting*

