

CASE STUDY



Joint Development Helps AASHTOWare Project™ Agencies Drive Enhancements Forward

WHAT IS JOINT DEVELOPMENT? ▼

Joint development is unique because it capitalizes on the many benefits of the AASHTOWare Project user community. Members join together in cooperative efforts to develop, maintain and enhance AASHTOWare Project modules. Joint development provides a means for AASHTO member agencies to pool their business, technical, and financial resources together on a voluntary basis to produce a product that is truly created for the user community, because it's created by the user community. Agency participation and user community involvement is critical to ensure specific federal and state requirements are addressed. The joint development process depends on users to share experiences and best business practices to make the product successful. Agencies greatly benefit from joint development's reduced software development costs as well as stable long-term operational costs.

Through Ticketed Modification Requests (TMRs) agencies can work together to enhance the software. The TMRs are reviewed for potential selection by the AASHTOWare Project Task Force (PTF), a group of volunteers from the user community with business expertise in the various product areas. These TMRs become enhancements to the software. Agencies can also partner together to fund enhancements.

"By [jointly] funding these things, we recognize that we've made the software better, improved business processes, and achieved a quicker turnaround on certain activities."

Ty Carlson, NDOT

"It's what AASHTOWare Project is all about - bringing in other agencies and working with them to get the best bang for your buck."

Charles Groshens, MnDOT

Charles Groshens

AASHTOWARE PROJECT SUPERVISOR

Devin Townsend

CHIEF TECHNOLOGY OFFICER, NDOT

Ty Carlson

**CONSTRUCTION SYSTEMS IT SUPERVISOR,
NDOT**

Joint development projects in Nebraska and Minnesota

Joint development projects have a rich history in both the Nebraska and Minnesota DOTs. After all, each agency was a foundational part of the development of AASHTOWare Project Construction & Materials™ (Nebraska) and AASHTOWare Project Civil Rights & Labor™ (Minnesota). Both agencies are involved in funding the SaaS-based AASHTOWare Project Data Analytics™ module. Of course, joint development projects are rarely centered around creating an entire module. Usually, these joint ventures are focused on TMRs that

are mutually beneficial to each agency. The respective teams at Nebraska and Minnesota will look at their list of prospective TMRs and determine the best way to move forward.

“The PTF can only fund so much, so you have to start seeing what you can do with other agencies. For our purposes, we’ve collected a list of enhancement TMRs that we really want to move on, and with those I’ll start working with other agencies to see who is interested in doing it. I’ll base that off what’s in the [Customer Support Dashboard]

on aashtowareproject.org.” - Charles Groshens, MnDOT

“We identified a TMR in the Estimation module... and it came down to being a timing thing. Nebraska and other agencies wanted this TMR in a sooner release and we wanted it more quickly than we were willing to wait for the PTF to select it for future development. That is the biggest motivation for some of these. There was a small group of us that needed this functionality, and we needed it sooner rather than later.” - Ty Carlson, NDOT

The core benefits of joint development

Joint development allows agencies to save on costs, have direct input into the software, and prioritize their needs during the development cycle.

SAVING COSTS ▼

The cost savings aspect of joint development is straightforward - software development costs less when you split the price between multiple agencies. When agencies receive a proposal from Infotech on what a development project may cost, they have an easy baseline for what they can save by jointly funding the project.

“The shared funding model allows us to reduce our specific agency expenses.” - Devin Townsend, NDOT

DIRECTING GROWTH ▼

Changes in AASHTOWare Project happen in three ways: releases with enhancements directed by the PTF, features that are funded by a sole agency, and jointly-funded TMRs that are driven by agency partnerships. The direct hand that agencies can have in AASHTOWare Project’s evolution is not common to most enterprise software.

“You get direct input on what goes into the software. You don’t get that with any other vendor-owned project. It’s that member-driven, member-controlled portion... that doesn’t exist anywhere else.” - Devin Townsend, NDOT

“We don’t do an official analysis but we know we’re saving money if we’re in a joint venture because we have the original proposal.”

Charles Groshens
MnDOT

As Charles points out, it's often far more productive to go through the PTF or try and get agency support for a jointly-funded TMR than it is to fund and maintain your own customizations. The generic, configurable nature of AASHTOWare Project encourages agencies to remain flexible and capitalize on the system's adaptability.

"MnDOT is not in the boat of trying to build a customization and maintain it afterwards. Trying to maintain something like that as an agency can be difficult. We'd prefer to have it as part of the product line than something stuck with MnDOT."
- Charles Groshens, MnDOT

PRIORITIZING DEVELOPMENT ▼

AASHTOWare Project updates occur every six months, releasing a host of user-directed enhancements to the user community. These enhancements are determined by the PTF. When multiple states come together to fund a TMR, it shows the PTF the level of need and often results in that enhancement being prioritized in the development stack.

"It allows the agencies to push the priorities themselves... When agencies coalesce together and are willing to provide funding outside of what the PTF provides, it allows us to say, 'this is a priority for us and here's the money for it,' which usually makes it a higher priority for development." - Devin Townsend, NDOT

DRIVING STANDARDIZATION ▼

AASHTOWare Project is an enterprise system that meets the needs of 40+ agencies - and those needs have a tendency to vary. Agencies that try to customize the software to meet the needs of their pre-existing processes often have to deal with the extended maintenance of customizations. It's more productive for agencies to remain flexible and find ways to genericize processes that can work for multiple agencies. Joint development drives the standardization of these

processes, as multiple agencies have to agree on the points of a TMR.

"You have to have the same process as everyone else, so you're going to come to a common process or try and work the flexibility into the process to be able to do what you want within the framework. We benefit from a standardized framework process, if we try to put all these little caveats into it, it adds to maintenance costs elsewhere."

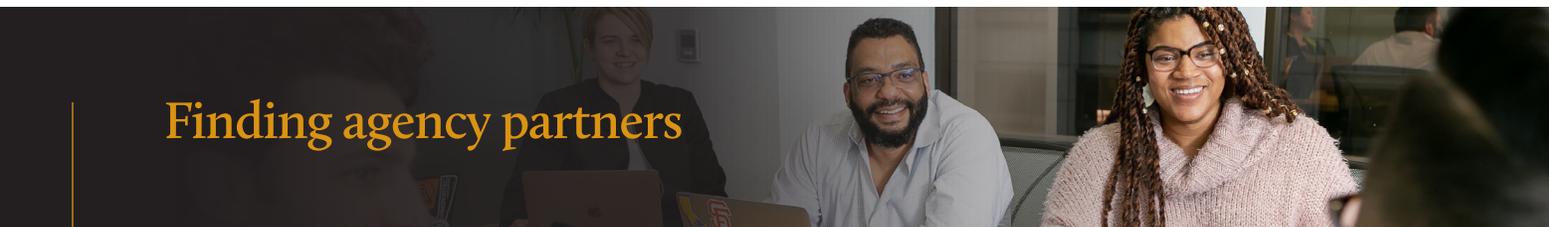
Devin Townsend, NDOT

"Thinking about some of our joint development projects with other agencies, while what we're trying to do with the enhancement might not be the exact same thing. If whatever's being developed solves a problem for us and solves a problem for someone else in a slightly different way, that's where we've found success." - Ty Carlson, NDOT

Finding agency partners

Say you're working for an agency and trying to find potential partners for joint funding a TMR. Where do you start? Our interviewees shared a strong message for agencies looking to get started with joint development: get involved. Involvement in AASHTOWare Project's many volunteer organizations is key to building relationships with agencies for future partnerships.

Technical Advisory Groups (TAGs) meet monthly or quarterly to discuss potential enhancements with a representative from every agency. They're a great place to connect with the AASHTOWare Project user community and search for potential partnerships.



“The best thing we have for people who aren’t interested in a leadership role are the TAGs. You can talk about almost anything you want. We talked to Louisiana at one point about funding a TMR, and that’s where it started, the TAG. Even if it doesn’t work out, you’re still making inroads and talking to people and getting ready for next time.”

- Charles Groshens, MnDOT

DOTs should know they’re not alone in these efforts. AASHTO’s Customer Success program is currently evolving, but it’s still a reliable resource for agencies that are ready to start exploring partnerships.

“AASHTO is a really good source to help with making agency funding connections. That’s the reason the Customer Success Manager was brought on board, to help with customer success and customer relationships, so you can reach out to her as well. She’s worked with agencies on a bunch of TMRs to get funding for them.”

Charles Groshens, MnDOT

Balancing agency priorities

How do agencies with slightly different priorities and requirements balance their needs?

Finding common points of interest and agreeing on an approach can be one of the biggest obstacles to the joint development process. Flexibility is crucial to progressing these projects forward as agencies attempt to balance their business requirements.

“The agencies are working together to create a business flow inside the software, and a lot of times the requirements are derived from business processes that vary just a little bit in every state. That’s where the flexibility comes in.” - Devin Townsend, NDOT

The willingness to adapt a TMR to another agency’s needs is the kind of compromise that moves joint development projects forward faster. Groshens points out that every enhancement needs to be fairly generic to be in AASHTOWare

Project anyway, so evolving the TMR to meet different needs is just part of the joint development process.

“MnDOT is funding three of the four small business TMRs that are out there. We’ll make sure our interests are in play, but it will be generic enough that everyone can use it. For example, we only have two small business needs but Virginia has five, as at that point, it needs to be accommodating to Virginia as well. That’s the kind of stuff that will get built out throughout the process.” - Charles Groshens, MnDOT

Advice to interested agencies

We asked our interviewees to share some advice:

What would they tell agencies that are getting involved with joint development efforts for the first time?

“Be patient and be flexible. Where we run into a lot of issues is every agency thinks the way they do it is the best way and they’re not willing to adjust their business processes to another state’s needs... I think it would be good for somebody that hasn’t been engaged before to go in with an expectation of ‘we do it this way, but we might need to change the way we do it if we want to work with other states.’” - Devin Townsend, NDOT

“Have managed expectations. There’s no one standard way to do this, it just kind of happens. There are conversations that happen that lead to this or that, and the next thing you know, we have these agencies committed and the PTF is committed to selecting the development.” - Ty Carlson, NDOT

“Make sure you’re on board with your internal people - your attorneys, your finance people. Everybody has their wishlist and you have to have the finances to manage it and the attorneys on board to make sure the contracts are done correctly. You have to have that kind of infrastructure up front to make sure that you can move forward.”

“Anything you want today, you need to understand that it might not go into the pipeline for a year, that’s just how this process works. The releases are set up in 6 month increments, so the soonest you’re going to get it is 6 months. You really need to be thinking in advance about what you’re going to need.” - Charles Groshens, MnDOT