Public Engagement Strategies for State DOTs: Dashboards

Webinar Q&As

Webinar Presenters

- Ryan Avery, WSP USA
- Peter Olson, Senior Planner with the Office of Transportation System Management, Minnesota Department of Transportation
- Jay Styles, Division Administrator, Virginia Department of Transportation

What advice can you give to state DOTs who are looking to work with consultants to design and deliver dashboard vs. working on it internally?

Ryan Avery – We've done some work with Washington DOT developing the reporting for WSDOT toll division with a large volume of data. Over time we tried to automate the process which saved a lot of time. With the saved time WSP was able to develop an internal dashboard for WSDOT's use. WSDOT initially had an inefficient process of growing their data in excel and WSP wanted the data management to be consolidated so that the WSDOT can have the most current version of the dataset for people to use as a reference point. We worked closely with WSDOT, using their already existing reporting system and reimplementing it as a dashboard. If I were to advise the other agencies who are thinking about building a dashboard, it's critical to know clearly of your needs because otherwise it's very easy to go astray and consultants might end up doing something totally different. It's better when the agency has their own vision and control and utilize consultants to help execute their vision.

What's the ideal sort of graphs you want to show in a dashboard? How do you best communicate the information on dashboards?

Ryan Avery – It partly depends on the audience. The graphs from the webinar are geared towards the operational group for the tolling division. There are only 3-4 graphs in the dashboard presented to a highly technical group. So, to even a less technical audience, I would include fewer graphs. Also, if information is related and important put them on the same page. If not, put them on another page so it doesn't confuse people.

What kind of foundation or information do you think the DOT should have in place before designing a dashboard?

Ryan Avery – It's important for the state DOT to have a solid understanding of what it needs and wants. Having an IT background is not as important as the solid trust and the ability to track down the issues you are having, provide quality data, and recognize an identifiable path to where you're retrieving the data from. It's also important to have a good partnership amongst the different departments. The technical details are important but they easily manageable while trust and reputation issues aren't.

Assuming VDOT is using POWER BI node not POWER BI embedded, are there reasons for that? What platforms were used for data visualization on power BI?

Jay Styles – I am not the technical person for Power BI so I will answer this as best as I can. We work with Power BI premium and our data comes from data warehouse. We then do data calculations in a

different program then through Power BI. We use power BI as a gateway to update and publish. In terms of displaying it, information is embedded in the actual website so it's easily manipulatable.

What were the challenges that VDOT had integrating internal and external data sources?

Jay Styles – The vast majority of data sources are from the internal system. The biggest challenge was that on our project delivery side, we did not have locally administered construction data so we had to build a separate system for non-administered VDOT projects. There were few projects that were neither locally administered nor VDOT administered, monthly, they would submit project update/related information and we would reflect them on the dashboard.

How do you identify which VDOT projects to track? Are you selecting a certain group? How do you get the update on projects from local agency?

Jay Styles – We get the local agency project information from local agency coordinators. We are working with project managers to get the information for the dashboard and in general. We look at projects in the 6-year program and projects that are active and underway. If there is an active construction phase, and no critical decision were made on the project, we display them on the dashboard.

Did you use the online tableau system or a dedicated server?

Peter Olson – No. Each user has tableau on their desktop and we load our data on our shared drive. We also use tableau public which is a free system to use the embedded code onto our website.

Are you tracking website analytics? And have you noted public's interest towards a particular area?

Peter Olson – We don't track website analytics as closely to what specific area they are looking at. But it's been 4-5 months since we launched the website and our focus has been on what methodology is the most effective in drawing attention for the new website and views. We've only tracked how and why people are getting to the website.

How have you made this information useful people who use screen reads, and do the websites follow ADA standards?

Peter Olson – Everything we make on tableau follows the ADA standards. After we do the design, we go back and review the color and contrast ratios that ensure that they follow the ADA standards as well. After we update the website, we run a chrome extension that would point out any areas that are not meeting ADA standards and we fix those areas that need improvements. Tableau itself is also ADA-compliant.

Jay Styles – We also do compliance testing after we launch and if there is an issue, there is an option for people to contact VDOT to address the accessibility problem.

How would you recommend the displaying progress on objectives that do not have numerical metrics – management reforms, financial reforms etc.?

Peter Olson – We also showcase milestones for public engagement. The general milestone update is a great tool to show that we're moving along the progress. It's sometimes the little things that may not provide data but tells a story for the public to understand.

Jay Styles – You can build quantifiable measures for these qualitative topics and to do so, we had to think about *how* to quantify these subjects. For example, we've developed environmental compliance internal tracking and final performance and looked at how to quantify our transparency levels through the dashboards.

What were the reactions from the public audience (i.e. stakeholders, legislators) on dashboard?

Peter Olson – For Minnesota, it has been very positive. Before dashboards, any information you wanted had to be requested to MnDOT which can be a time-consuming process. We also received positive feedback from people who provided the data, as they could better tell their stories. Dashboards provides unlimited space showcase their stories.

Jay Styles – From VDOT's perspective, there were a lot of public interest. Through dashboards we discovered that VDOT was hitting only 20% on project completion, which we all initially believed neared 100%. After witnessing this, we set a 40% target for the next year and built the target rate every year. Overall dashboards have helped us build credibility back, and we received more funding in the recent years because we ultimately gained back the public's trust. Dashboards have now become a normal course of business so people expect this level of transparency and quality.