







NJ STIC Fall Meeting 2020

November 6, 2020

EDC-6 Innovations: Priorities – Interactive Polling Exercise EDC-5 & Other Initiatives – Challenges and Lessons Learned Break-Out Sessions

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Submitted to:

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Introduction

The NJ STIC Fall Meeting 2020 was conducted using an online platform on November 6th 2020. The scheduled meeting included representatives from FHWA, NJDOT, the state's MPOs, local public agencies, university, and industry and trade organizations. There were approximately 63 registrants and 54 individuals attended during all or some portion of the meeting.

NJ STIC meeting attendees participated in two interactive exercises to give their input and feedback on priorities for the upcoming round of Every Day Counts (EDC-6) innovations and to explore challenges and lessons learned in the deployment of the EDC-5 initiatives. Brief summaries of the key results and takeaway observations of these interactive activities are presented below.

Additional information on the agenda topics covered during the NJ STIC Fall Meeting, including presentations and this brief summary of the interactive sessions can be found <u>here</u>.

EDC 6 Innovations: Priorities – Interactive Polling Exercise

Using an interactive polling exercise, meeting participants were introduced to the seven EDC-6 innovation areas that are being promoted in the upcoming round. The innovations include strategies that focus on people, products and processes.

The poll was intended to raise awareness among NJ STIC participants of the upcoming round of innovations and to gauge relative interest in each of the initiatives. The polling exercise also provided an opportunity for participants to indicate the types of technical assistance that they would find most helpful in working toward institutionalization of each initiative. Attendees were told that the responses would help inform the NJ STIC Leadership Team and other STIC participants in their internal discussions around priorities for advancing EDC-6 innovation initiatives.

Two questions were posed for each innovative initiative:

- 1. How interested would your agency, or the people that you represent be in the Initiative?
- 2. What kind of assistance from FHWA or the Local Technical Assistance Program would be most helpful to you in working toward institutionalization of the initiative?

As shown in **Table 1**, participating attendees exhibited the greatest levels of interest in the "Virtual Public Involvement" initiative followed by the "Crowdsourcing for Advancing Operations" and "Strategic Workforce Development" initiatives.

As shown in **Table 2**, participants identified forms of technical assistance that they thought would be most helpful for institutionalizing each of the initiatives. Participating attendees were asked to select their two most preferred forms of technical assistance as a means of eliciting priorities. **Table 3** distills the results into the top forms of technical assistance by initiative.









	Very Interested	Moderately Interested	Slightly Interested	Not Interested at All	Grand Total	Weighted Score	Number of Responses
Virtual Public Involvement (VPI)	75.0%	12.5%	8.3%	4.2%	100.0%	3.54	24
Crowdsourcing for Advancing Operations	38.5%	50.0%	7.7%	3.8%	100.0%	3.19	26
Strategic Workforce Development	38.5%	34.6%	23.1%	3.8%	100.0%	3.04	26
E-Ticketing and As Built Initiatives	31.0%	41.4%	24.1%	3.4%	100.0%	2.97	29
Next-Generation TIM: Integrating Technology, Data, and Training initiative	23.1%	50.0%	23.1%	3.8%	100.0%	2.89	26
Targeted Overlay Pavement Solutions (TOPS)	33.3%	22.2%	37.0%	7.4%	100.0%	2.74	27
Ultra High Performance Concrete (UHPC) for Bridge Preservation and Repair	26.9%	19.2%	42.3%	11.5%	100.0%	2.50	26



Table 2: What Kind of Assistance from FHWA or the Local Technical Assistance Program Would be Most Helpful in Working Toward Institutionalization of the Initiative?

			Example									
		Technical	from Other	Facilitated	Case		Peer		Guidance			Number of
Innovation	Training	Support	States	Discussion	Studies	Webinar	Exchange	Workshop	Documents	Other	Total	Responses
Virtual Public												
Involvement (VPI)	28.3%	6.5%	6.5%	13.0%	4.3%	10.9%	15.2%	8.7%	6.5%	0.0%	100%	46
Crowdsourcing for												
Advancing Operations	30.4%	15.2%	10.9%	4.3%	10.9%	4.3%	8.7%	6.5%	8.7%	0.0%	100%	46
Strategic Workforce												
Development	24.5%	4.1%	14.3%	8.2%	6.1%	8.2%	10.2%	8.2%	14.3%	2.0%	100%	49
E-Ticketing and Digital												
As-Builts	24.1%	12.1%	10.3%	1.7%	10.3%	10.3%	10.3%	3.4%	15.5%	1.7%	100	58
Next-Generation TIM:												
Integrating Technology,												
Data, and Training	29.4%	11.8%	5.9%	3.9%	9.8%	9.8%	2.0%	11.8%	15.7%	0.0%	100%	51
Targeted Overlay												
Pavement Solutions												
(TOPS)	13.6%	18.2%	4.5%	4.5%	13.6%	9.1%	4.5%	9.1%	22.7%	0.0%	100%	44
Ultra High Performance												
Concrete (UHPC) for												
Bridge Preservation and												
Repair	13.6%	9.1%	6.8%	6.8%	15.9%	6.8%	9.1%	4.5%	27.3%	0.0%	100%	44
Total	23.7%	10.9%	8.6%	5.9%	10.1%	8.6%	8.6%	7.4%	15.7%	0.6%	100%	338





Table 3: Summary of Preferred Forms of Technical Assistance by Initiative

Innovation	Forms of Technical Assistance
Virtual Public Involvement (VPI)	Training, Peer Exchange, Facilitated Discussion
Crowdsourcing for Advancing	Training, Technical Support, Examples Applications from Other States,
Operations	Case Studies
Strategic Workforce Development	Training, Example Applications, Guidance Documents
E-Ticketing and Digital As-Builts	Training, Guidance Documents, Technical Support
Next-Generation TIM: Integrating	Training, Guidance Documents, Workshop, Technical Support
Technology, Data, and Training	
Targeted Overlay Pavement	Guidance Documents, Technical Support, Case Studies, Training
Solutions (TOPS)	
Ultra High Performance Concrete	Guidance Documents, Case Studies, Training
(UHPC) for Bridge Preservation	
and Repair	

EDC-5 & Other Initiatives – Challenges and Lessons Learned Break-Out Sessions

In this small group exercise, participating attendees and facilitators were asked to discuss their agency experience with the EDC-5 initiatives including the status of implementation, accomplishments and any challenges encountered. Participants were asked what kind of technical assistance would be most valuable as the agencies and organizations work toward institutionalization of the initiatives. Discussion also explored possible future topics for Tech Talks! and success stories of innovation implementation throughout the State.

The following four questions were discussed in the facilitated breakout room sessions:

- 1. Which EDC-5 initiatives is your organization working on? What stage of implementation are you at? What challenges have you encountered?
- 2. What kind of assistance from FHWA or the Local Technical Assistance Program (LTAP) would still be helpful to you in working toward institutionalization of these initiatives?
- 3. What topics for Tech Talk webinars would you be most interested in attending?
- 4. Do you have "success story" examples or "lessons learned" from the adoption of EDC initiatives or other innovations that you would be willing to share with the STIC and others?

Observations given for each of the questions provided in the various breakout room sessions are summarized below.









1. Which EDC-5 initiatives is your organization working on? What stage of implementation are you at? What challenges have you encountered?

Advanced Geotechnical Exploration Methods	•	NJDOT - Demonstration stage - Procedures and methods, guidance developed. Two-year timeframe for each EDC cycle makes it difficult to assess benefit of emerging technology over the long-term; "institutionalized" means the methods will be tried in 2-3 projects, but the timeframe for seeing actual benefit may take years. Consultant engineering firm - Methods are used regularly but not institutionalized, the 2-year timeframe is short for achieving the institutionalized stage; this is true of all initiatives
	•	Municipalities rely on consultants to be aware of the most current methods on this topic.
Collaborative Hydraulics: Advancing to the Next Generation of Engineering (CHANGE)	•	NJDOT - Demonstration stage - Technology challenges, 2D and 3D software requires robust software, some challenges in procuring; ongoing workload, Hydrology and Hydraulics (H&H) has had some staffing issues while trying to advance use of this technology. Municipalities rely on consultants to be aware of the most current methods.
	•	management rules would help to move this into institutionalized.









Project Bundling	 NJDOT - Institutionalized – NJDOT has changed policies and procedures to include bundling from safety projects to bridge projects all the way from design through construction. NJDOT has had the D&R Canal project bundled, and other projects that are similar in scope, with a similar schedule, and within a defined geographic area have been bundled. NJDOT has produced a guidance document on what projects can and should be bundled. Individual intersection improvements have been reexamined with an eye toward grouping them together. Intersection improvement contracts have been issued together in the North, South, and Central region.
	• NJDOT - Project bundling addresses the lengthy delivery timeframe for planning, design, letting and constructing capital projects (3-5 years). First bundle underway but won't know extent of benefits until effort complete. There is a benefit in design phase because one designer works on multiple projects.
	• NJDOT - One challenge: project bundling actually reduced the number of people involved in NJDOT projects. While this is a benefit from a cost perspective, those savings are coming out of the pockets of workers.
	Cumberland County has put resurfacing projects into one contract.
	• Monmouth County has been bundling resurfacing programs routinely. This is one of the easier places to start bundling. The County generally bundles 15-20 resurfacing sites in about 20 municipalities, realizing a significant cost reduction. This has also been an opportunity to implement STEP policies.
	• Municipalities have been doing this for a while. Lower costs.
	• Limiting competition has been expressed as a concern.
	• NJDOT - Hiring designers for local partners produces efficiencies.









Reducing Rural Roadway Departures	•	NJDOT – Development stage. FHWA Resource Center's Training has been delayed due to COVID. FHWA had planned training to rural roadway owners regarding countermeasures to reduce departures. They had discussions early on during the COVID outbreak and decided that they would rather keep training as an in-person event. That opinion has evolved and they have reached out to FHWA Resource Center to do the training virtually. Training is likely to happen in February or March 2021 at the latest.
	•	NJTPA is at Development stage. NJTPA is very interested, and incorporates into local programs. More training needed. Pushing this information down to the local level is a challenge. Level of willingness to adopt these measures varies among the various agencies.
	•	Challenges include the need to stagger training to MPOs, counties, etc. and COVID delayed training, and the need to target towns with more rural roads to invite those contacts to the training.
	•	NJDOT has received and used a grant to discuss with MPOs how to reduce rural roadway departures. The adoption of a highway safety program also addresses rural roadway departures.
	•	Training is needed with counties, municipalities, via MPOs. Local safety projects via MPOs.









Safe Transportation for Every Pedestrian (STEP)	 NJDOT – Institutionalized – Initiative was started in EDC-4 and has been carried into EDC-5. The focus has been to implement STEP regulations into the Strategic Highway Safety Plan (SHSP). The SHSP has been finalized and implementation steps are being worked on right now. It was noted that we are counting on SHSP to do a lot and that much of the work to implement the plan falls on the Bureau of Safety, Bicycle and Pedestrian Programs. Adequate resources need to be directed to the Bureau of Safety, Bicycle and Pedestrian Programs to ensure initiatives and efforts identified in the SHSP, including STEP, can be effectively implemented.
	 STEP can be considered institutionalized, but there is still work to be done and it cannot be taken for granted. NJDOT needs to regularly consider the countermeasures recommended through the STEP and identify obstacles toward their implementation, to take what we have learned and move it forward.
	 SJTPO just started a new project evaluation criterion to prioritize projects via safety for the TIP. Safety specific projects have been using HSIP money, but the money does not go far in the SJTPO region and that has been an obstacle. The new criterion aims to implement more safety measures in all projects, even typical roadway resurfacing projects to get better features and infrastructure in place. Atlantic City is a good example for STEP. Atlantic Avenue corridor was identified as one of most dangerous in the SJTPO region. Applying their new criteria, SJTPO convinced Atlantic City to do a safety audit of the roadway to come up with something more substantial than just a typical repaving project.
	 NJTPA is very interested in STEP and incorporates STEP into local programs. More information is needed on design of crosswalks, including demarcation and striping. More training is needed. Pushing this information down to the local level is a challenge; the level of willingness to adopt these measures varies among the various agencies. Different types of vehicles, more bikeshare, more scooters.
	• DVRPC incorporates STEP into local programs, countermeasures.
	• STEP is a focus of all municipalities, including Princeton.
	• Princeton is in the Demonstration stage; some more advanced.
	 Some of the countermeasures include changing mindsets. County roadways and county engineers can be challenging.
	 NJDOT noted the need to encourage more local projects









Unmanned Aerial Systems (UAS)	• NJDOT - Institutionalized at NJDOT but not at the MPOs; in the past, challenges have included concerns about insurance, liability and obtaining certification for piloting drones
	 UAS has many champions at NJDOT. The UAS program was advanced, in part, though a STIC incentive grant to work on night- time flights and use of LIDAR.
	• NJTPA (SP&R) interested in being involved in NJDOT drone efforts (how they will be used for planning and what are the standards set). Made comments in SP&R. NJDOT stayed within its own boundaries. This is an expanding program at NJDOT. Getting other stakeholders involved.
	• NJDOT should meet with MPOs and discuss UAS and how they are being used at NJDOT and how they could be deployed in support of planning. The UAS video of how NJDOT is examining various use cases and leveraging staff through training was noted.
	NJDOT – Institutionalized
Use of Crowdsourcing	DVPRC – Development stage
to Advance Operations	
Value Capture: Capitalizing on the Value Created by Transportation.	 Has not been a direct interest of NJDOT, but needs further discussions with NJ TRANSIT and with NJ Transit Oriented Development (NJTOD) community. Municipalities would have great interest with respect to transit service.









	•	NJDOT and NJTPA/DVRPC – Institutionalized
Virtual Public Involvement	•	Regularly used because of COVID but not as an EDC initiative. Need guidance from FHWA whether virtual public involvement can be done in lieu of in-person.
	•	Virtual Public Involvement (VPI) is of great interest. Disappointed that the NJ STIC did not focus on this in the past.
	•	Some concerns expressed about environmental justice, digital divide, access and that VPI cannot replace in-person forms of participation. Good internet coverage can help. Telephone town halls are another option.
	•	NJTPA developed a number of outreach tools on its website. VPI is critical. The group observed that it is a better way of doing business – particularly with stakeholders and to support peer exchanges. NJTPA held the first of 3 brownfields information session which had 60 participants. In some ways, it opens up access to stakeholder events such as the Freight advisory committee.
	•	ACECNJ is using Webex, zoom - virtual public information center
	•	Attendees agreed that meetings like the STIC and last week's research showcase were good examples of the use of online tools for public and stakeholder involvement.
Weather-Responsive Management Strategies	•	NJDOT – Institutionalized. STIC grant for i-Cone technology; AID grant
Other Noteworthy innovative Initiatives	•	None noted









	• LTAP offers courses geared towards STEP and UAS implementation.
Other Comments	 NJDOT Tech Talks series have been one means for disseminating model practices such as for Weather Responsive Management Strategies, STEP, CHANGE and other initiatives.
	 Municipalities: IT-heavy EDC-5 initiatives. Hard to implement. Need to first bring Public Works departments forward before implementing changes.
	 Most respondents knew their organizations were working on something in EDC-5, but were not experts or responsible for any of the specific initiatives to speak in detail about what stage of implementation they were in.









2. What kind of assistance from FHWA or the Local Technical Assistance Program (LTAP) would still be helpful to you in working toward institutionalization of these initiatives?

Advanced Geotechnical Exploration Methods	 ACECNJ - Training is needed to make people aware of how the techniques will be implemented and the expectations
Collaborative Hydraulics: Advancing to the Next Generation of Engineering (CHANGE)	 ACECNJ - Training is needed to make people aware of how the techniques will be implemented and the expectations
Project Bundling	 NJDOT has a guidance document on Project Bundling that should be shared with other agencies
Reducing Rural Roadway Departures	 Training - train-the-trainer, one virtual workshop Training and peer exchanges need to be regular. A lot of information, documents and maps will be generated as Reducing Rural Roadway Departures moves forward through SHSP initiatives. This information needs to be distributed. There needs to be a focus on engagement and stakeholder involvement. Information needs to get out through partners and through continued engagement.
Safe Transportation for Every Pedestrian (STEP)	 FHWA Resource Center & Consultant support with this EDC 4 and EDC-5 initiative Training and peer exchanges need to be regular. Partners and stakeholders need to be reminded about what should be communicated to develop a culture of safety. Look at local safety plans to incorporate STEP recommendations at the Local Public Agency (LPA) level. A lot of information, documents and maps will be generated as STEP moves forward through SHSP initiatives. This information needs to be distributed and there needs to be a focus on engagement and stakeholder involvement. Information needs to get out through partners and through continued engagement.









Unmanned Aerial Systems (UAS)	 Technical assistance, workshops and peer exchanges with other public sector organizations and MPOs The NJDOT Peer exchange was very helpful at the UAS inception. Similar type of events might be valuable to NJ's MPOs and locals.
Use of Crowdsourcing to Advance Operations	None noted
Value Capture: Capitalizing on the Value Created by Transportation	 NJTPA working on transit hubs with local communities. Learning about value created by improving business districts, etc. Metrics to push back up to the state and national level.
Virtual Public Involvement	 Webinars, Case studies of success stories, Demonstration training, Webinar, specifically for planning. Long-range plan.
Weather-Responsive Management Strategies	 Tech talks and webinars to collaborate with other states Ties to resilience. Real-time monitoring of road conditions. NJDOT representative noted that data gained from WRMS can be used for resilience. NJTPA asked about making that data and information available to the MPOs and then down to the local level.
Other Noteworthy Innovative Initiatives	 Excellent and useful resources: Training at LTAP Tech Talks Subject Matter experts/webinars from FHWA Guidance documents, and websites like the new FHWA Local Road Safety Plans Peer exchanges with members from other states who have had successful implementations of initiatives.
Other Comments	 Beyond EDC-5 anything that can address local issues or perspectives. Webinars and/or trainings. For all initiatives, facilitated discussion is the most useful. Case studies are sometimes not applicable. For all initiatives, consultants need guidance on how to track progress and determine stage of implementation.









3. What topics for Tech Talk webinars would you be most interested in attending?

STEP	Tech Talk on what other states are doing
Reducing Rural	None noted
Roadway	
Departures	
Project Bundling	None noted
UAS	DVRPC interested in Tech Talk;
	 NJTPA interested in discussion about UAS Program and congestion, operations and traffic management. NJTPA interested in how it can be used for planning and what ae the standards that should be set. Good opportunity for NJDOT to interact with the region's MPOs and LPAs.
	 NJDOT will sit with MPOs and discuss UAS and how they are being used. The UAS is an expanding program and interested in getting other stakeholders involved.
A-GaME	ACECNJ interested in Tech Talk
	• NJDOT - Anything on A-GaME would be of interest.
CHANGE	ACECNJ interested in Tech Talk
	How can this be implemented?
Crowdsourcing	DVRPC interested in Tech Talk
Value Capture	 Value Capture: what other areas, cities have used it, how they have made it happen, challenges.
Virtual Public Involvement	• Tech Talk on lessons learned from the past 8 months - process of bringing technology up to speed, tools for staff, training for staff, communication with staff, legal aspects.
	• Tech Talk on the technology aspects that can be used for virtual public involvement, Zoom, Webex, Teams etc. Understanding pros and cons and when to use which platform would be helpful. Security is an issue that should also be discussed.
	• Tech Talk on virtual outreach in areas with or to communities with limited internet accessibility. Information about best practices for focusing on equity and which platforms/programs work best with mobile devices and provide the most accessibility.
	Case studies, given the need to push this along quickly
Other Topics	• Tech Talk on the tech solutions for data collection of safety elements, specifically related to the connected vehicles and roadside devices.









	Information on how to leverage ITS devices that are already deployed for the collection of safety data elements including near misses, pedestrian data, and bicycle data.
	 Webinar relating to hiring and retaining transportation workforce, especially given the new realities of the pandemic.
	 NJTPA would be interested in policy and data tech talks, more technical topics like hydraulics, electronic 3D as-builts, particularly with virtual talks, collaboration with policy folks, technical experts, planners, engineers, etc. It would be great to include a broader audience to increase info sharing, particularly with program and project delivery/implementation and in the different phases.
	• Local SHSP.
	 Planning and technologies that they are using can be used with operations and construction. Using planning tools.
Other Comments	• Municipalities would like information on IT-heavy EDC-5 initiatives. Found them difficult to implement. First bring Public Works departments forward before implementing changes.
	 Peer exchanges are extremely helpful. Workshops, other states' best practices.
	• Discussion/presentation on how change can be implemented.
	Tech Talk or other resources on how to partner effectively
	 Importance of facilitated discussions to help advance understanding of innovative and model practices.









4. Do you have "success story" examples or "lessons learned" from the adoption of EDC initiatives or other innovations that you would be willing to share with the STIC and others?

STEP	 Atlantic City is a good example for STEP. Atlantic Avenue corridor was identified as one of most dangerous in the SJTPO region. Applying their new criteria, SJTPO convinced Atlantic City to do a safety audit of the roadway to come up with something more substantial than just a typical repaving project.
Reducing Rural Roadway Departures	• FWHA is providing data for MPO regions. They are completing curve data collection and will use high crash locations and systemic applications towards roadway departure fatality and serious injury reduction. FHWA is currently done with the data for the DVRPC and SJTPO regions, but is still working on data for the NJTPA region. This work extends from EDC-5.
Project Bundling	 NJDOT – Examples include Sign Structure Replacement Program, ADA Compliance Program, Maintenance Roadway Repair Contracts, Statewide Guiderail Replacement, Intersection Improvement Program Contract, D&R Canal Bridge Projects.
	• NJDOT is currently collecting data for the pros and cons and reporting their results. So far, there are absolutely more pros than cons. NJDOT has experienced better efficiency across the board. Going forward they are tracking projects into design and construction phase, more efficiency is experienced. Efficiency in design cost, project cost across the board. Significant cost saving during construction as well.
	• Cons - instead of two people getting work, one gets it.
Virtual Public Involvement	• There need to be discussions about challenges; people can come off as mechanical because meetings are recorded.
	 NJDOT and MPOs have done successful virtual public involvement activities. Videos are made available for constituency.
	• For SJTPO mailers have been sent out and other methods have been used to reach people with limited internet access. Have not done virtual engagement as an EDC-5 initiative, but there has been a lot of progress so will likely do so for EDC-6. Need clarification on applicability to NEPA process.









Other Examples	•	NJDOT - Hiring designers for local partners produces efficiencies.
	•	DVRPC PennDOT Connects Bike Friendly Resurfacing Program: coordination with re-paving to get bike facilities implemented. https://www.dvrpc.org/Transportation/Bicycle/BikeFriendlyResurfacing/
	•	DVRPC ExPo tactical urbanism program temp bike lanes, etc., https://www.dvrpc.org/asp/WorkProgram21/print.aspx?prject=21-52- 110
Other Comments	•	NJDOT has been involved in EDC Rounds 2-5. Previous initiatives have been very successful. NJDOT did things that were not on the radar. NJDOT was already national leader in other initiatives validating that the Department is on the cutting edge.