

Pennsylvania State Transportation Innovation Council

ACCOMPLISHMENTS 2015



INNOVATION THROUGH COLLABORATION

2015 STIC MEMBERS

CO-CHAIRS

Leslie Richards
Pennsylvania Department
of Transportation

Renee Sigel
Federal Highway
Administration

MEMBERS

John Becker, P.E.
American Concrete Pavement Association

Rodney Bender, P.E.
Pennsylvania Public Utility Commission

Stan Caldwell
Carnegie Mellon University

Will Clark
York County Planning Commission

Mark P. Compton
Pennsylvania Turnpike Commission

Crystalann Deardorff, P.E.
Women in Transportation Seminar

Nathan Flood
Pennsylvania Department of Conservation and Natural Resources

Douglas J. George, P.E.
American Society of Highway Engineers

Charles Goodhart
Pennsylvania Asphalt Pavement Association

Kelly Heffner
Pennsylvania Department of Environmental Protection

Bradley J. Heigel, P.E.
Pennsylvania Turnpike Commission

Elam Herr
Pennsylvania State Association of Township Supervisors

Steve Howsare
Southern Alleghenies Planning & Development Commission

Bob Latham
Associated Pennsylvania Contractors

Mark Magalotti, Ph.D., P.E.
University of Pittsburgh

Doug McLearn
Pennsylvania Historical and Museum Commission

Scott Sternberger
American Council of Engineering Companies

Darlene Stringos-Walker
Pennsylvania Association of Environmental Professionals

Martin Pietrucha, Ph.D., P.E.
Pennsylvania State University

Jim Runk
Pennsylvania Motor Truck Association

Richard Sause, Ph.D., P.E.
Lehigh University

Mark Hartle
Pennsylvania Fish and Boat Commission

Peter Vlahos
Pennsylvania Aggregates and Concrete Association

Sherri Zimmerman
American Public Works Association



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PennDOT District 3-0 used Accelerated Bridge Construction (ABC) techniques to expedite two bridge replacement projects on State Route 287.

A MESSAGE FROM THE CO-CHAIRS

OVER THE PAST YEAR, the State Transportation Innovation Council (STIC) has made incredible progress to promote new ideas and support the deployment of innovations through outreach and education. In 2015, the STIC approved eight new initiatives, trained more than 1,000 transportation professionals, partnered with five Districts to host Innovation Day workshops, and promoted innovations through hands-on demonstrations and presentations at industry conferences and events. We are proud to present you with the 2015 Accomplishments Summary which details the progress we achieved over the past year.

Pennsylvania leads the nation in deploying innovations which are proven to streamline environmental review and reduce impacts; decrease construction time and reduce delays to the traveling public; and make work zones smarter and safer. The STIC provides us with a framework to pilot new products and to collaborate with our partners in private industry and local government to explore new ideas. That is the most unique and successful part of the STIC; it provides an environment where new ideas are not only encouraged, they can flourish.

Although we have made great strides in deploying innovative technologies, we recognize there is always room to grow. Looking ahead, we are exploring how technology can be harnessed to improve the efficiency of our work, enhance work zone safety, and reduce congestion. We are piloting new products and creative approaches that improve storm water management and at the same time enhance the quality of life for Pennsylvanians. Finally, we are partnering with the Office of Planning and the Local Technical Assistance Program (LTAP) to strengthen our services for local governments, including providing training on best practices for salt application and snow removal.

We commend the STIC on its accomplishments over the past year, and we challenge you to continue to help us lead the way through innovation.



Leslie S. Richards

Leslie Richards
Secretary of Transportation



Renee Sigel

Renee Sigel
FHWA Division Administrator

Thank You...

to the PennDOT Districts who are putting innovation into practice every day. This report captures a few examples of their exemplary work.

THE STATE TRANSPORTATION INNOVATION COUNCIL: MOVING INNOVATION FORWARD

“ The most effective part of the STIC is the commitment of leadership. This top-down engagement encourages participation of other industry leaders and executives and keeps the momentum going. ”

Stan Caldwell, Carnegie Mellon University and STIC Member (2010-2015)

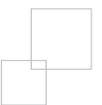
The State Transportation Innovation Council (STIC) is composed of a multi-stakeholder leadership team co-chaired by the Pennsylvania Department of Transportation (PennDOT) and the Federal Highway Administration (FHWA). The STIC brings together a diverse team of transportation stakeholders to forge an environment of innovation, imagination, and ingenuity to pursue specific initiatives and their rapid implementation to deliver a modern, high-quality transportation system to the citizens of Pennsylvania. The STIC supports the deployment of FHWA Every Day Counts initiatives and identifies new strategies and innovations to enhance safety, efficiency, and sustainability.



Quarterly STIC Business Meetings provide an opportunity for leaders in the transportation industry to gather and discuss new innovations.

“ There are few opportunities outside of the STIC where industry leaders can gather together to share perspectives and discuss new trends. I credit the STIC for challenging organizational culture and norms to encourage innovation and open lines of communication. ”

Mark Compton,
PA Turnpike CEO and STIC Member



OUR STRATEGY FOR SUCCESS

ADVANCE the deployment of innovations

IMPROVE & EXPAND technology transfer activities

ESTABLISH & TRACK performance of innovation implementation

TO MEET THESE GOALS,

the STIC identified ten market-ready innovations and organized almost a dozen ad-hoc committees of subject matter experts to customize action plans to market each innovation. The marketing plans define the target audience, identify opportunities and challenges to deployment, catalog existing communication materials, and set a strategy to break down barriers to educate stakeholders. The communication strategies include the development of infographics, factsheets, demonstration days, videos, and pilot projects. These efforts to enhance communications are underway and the STIC plans to continue to use the marketing plans to guide the deployment of innovations in 2016.



PennDOT District 1-0 is paving 100% of projects with Warm Mix and used the product and Intelligent Compaction to resurface 12.5 miles of Interstate 90 in Erie County.



PennDOT District 12-0 is constructing Pennsylvania's first Diverging Diamond Interchange on Interstate 70 at State Route 19, Washington County.

PUTTING INNOVATION INTO PRACTICE

Over the past year, PennDOT has made significant progress deploying innovations across the State and a few standout successes are included here.

Adaptive Signal Control Technology (ASCT)

PennDOT supports the use of Adaptive Signal Control Technology (ASCT) to alleviate congestion and has constructed 176 ASCT sites with 246 more projects planned. For example, PennDOT District 11-0 was awarded FHWA Accelerating Innovation Deployment funds to support infrastructure improvements, ITS technologies, and travel demand management solutions on the busy commercial corridor of McKnight Road in Pittsburgh, Allegheny County. The project is one example of PennDOT's statewide initiative to use ASCT and ITS applications to modernize operations.

Innovative Interchange Geometrics and Modern Roundabouts

PennDOT is embracing roundabouts as intersection solutions and has constructed 25 roundabouts with 10 more under construction and another 26 in design. In Washington County, PennDOT District 12-0 has taken an innovative approach to complex intersection and interchange designs and is constructing Pennsylvania's first dual-lane, double roundabouts and Diverging Diamond Interchange. The dual-lane, double roundabouts were constructed to address a high crash rate at the complex skewed intersection of State Route 519 and State Route 1055 in North Strabane Township, Washington County. The dual roundabout design offers all the benefits and safety improvements of a typical roundabout while providing an innovative solution to address the complex intersection design. The Diverging Diamond Interchange, the first of its kind in Pennsylvania, will replace the current "cloverleaf" configuration at the Interstate 70 and State Route 19 interchange. The unique design reduces conflict points and allows traffic to move more efficiently.

High Friction Surface Treatment (HFST)

By the end of 2015, PennDOT will have applied HFST at 202 high priority crash locations throughout the State. The site-specific application of this very high-quality durable aggregate and polymer binder is proven to restore and maintain pavement friction and reduce the frequency and severity of crashes. For example, PennDOT District 5-0 applied HFST at 12 pilot locations in Northampton and Lehigh Counties. At the pilot locations, there was a 100% reduction in fatalities and major injuries and a 93% reduction in property damage. This is due to the significant decrease in crashes from 136 crashes in three years to 17 crashes after the installation of the high friction surfaces. To promote the deployment of HFST, the STIC hosted a Local Government Demonstration Day, developed infographics on impacts, and filmed a video to convey the benefits. More information is available on page 16.



High Friction Surface Treatment applied to “S” Curve on Schantz Road, Lehigh County, PennDOT District 5-0.

Warm Mix Asphalt

In 2015, PennDOT paved 48% of all asphalt project tonnage using Warm Mix Asphalt (WMA). As Districts 1-0, 2-0, 3-0, 4-0, 5-0 and 6-0 committed to use 100% WMA on projects let in 2016, PennDOT expects this rate to increase as other PennDOT Districts convert to 100% WMA on their roadway

network. This technique allows for asphalt to be produced and placed on the road at lower temperatures than the traditional hot mix method which reduces hazardous emissions and extends the paving season.



On the Keyser Avenue project in Lackawanna County, PennDOT District 4-0 utilized a program to accelerate the adoption of innovations and new technologies, including Warm Mix Asphalt wearing course with three different pavement additives at different sections of the project. Intelligent compaction rollers were used on the northbound side of this 3.8 mile project.

Accelerated Bridge Construction

PennDOT utilizes Accelerated Bridge Construction (ABC) methods, including the Geosynthetic Reinforced Soil–Integrated Bridge System (GRS–IBS) and Prefabricated Bridge Elements and Systems, to reduce onsite construction time when building new bridges or replacing and rehabilitating existing bridges. PennDOT utilized ABC construction methods on 11 bridges in 2015 and plans to construct another 22 ABC bridges in 2016. For example, two bridge replacement projects on State Route 287 in Lycoming County created a more than 30-mile detour for local residents. PennDOT District 3-0 utilized Accelerated Bridge Construction to complete both projects in two weeks and significantly reduced impacts to the community.

PENNDOT DISTRICTS
CONSTRUCTED
11
ABC BRIDGES
IN 2015
& PLAN TO
CONSTRUCT
ANOTHER **22**
ABC BRIDGES
IN 2016



Accelerated Bridge Construction on SR 3005 over Bear Creek in Fulton County, PennDOT District 9-0.

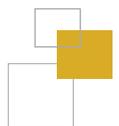


Smarter Work Zones

PennDOT is integrating smarter work zone strategies and new technology to dynamically manage traffic in the work zone environment, minimize travel delays, and help maintain motorist and worker safety. For example, PennDOT District 10-0 deployed sequential lighting on the State Route 422 South Sixth Street Bridge Projects in Indiana County to increase visibility and safety for motorists in the work zone.

In Clarion County, PennDOT District 10-0 is piloting an Automated Queue Warning (AQW) System on the multi-year I-80 Clarion County Preventative Maintenance project to enhance safety for the traveling public and construction workers. Speed sensors, a queue warning server, and dynamic message boards alert motorists to slowed and stopped traffic.

PennDOT District 10-0 is piloting an Automated Queue Warning (AQW) System on the I-80 Clarion County Preventative Maintenance project.





The Service Creek Road Bridge in Beaver County, PennDOT District 11-0, was replaced in 51 days using A+Bx Time Based Bidding process, reducing the anticipated construction time by 35 days.

New Application of Innovative Bidding (A+Bx)

PennDOT is utilizing the new application of A+Bx to expedite construction through competitive bidding on construction time as part of the total price. There are A+Bx success stories from every corner of the State.

- PennDOT District 5-0 employed A+Bx bidding on the Jim Thorpe Bridge Project in Carbon County. The contractor bid 650 days at a cost of \$28.18 million, providing a savings of both time and money.
- In PennDOT District 9-0, A+Bx bidding was effective in reducing the project schedule by almost half from 47

days to 26 days on the State Route 4001 Burns Creek Bridge Replacement Project in Bedford County.

- PennDOT District 11-0 utilized A+Bx bidding for the Service Creek Road Bridge Project in Beaver County. The contractor completed the project in 51 days, reducing the anticipated construction time by 35 days which resulted in time and cost savings.

PennDOT supports the use of A+Bx on projects where there is a need to expedite construction and reduce delays to the traveling public, and is developing a specification for guidance.





Innovations Accelerate Project Delivery

STIC innovations are proven to streamline environmental review, decrease construction time, and make work zones smarter and safer. PennDOT Districts are capitalizing on these benefits and using more than one innovation to expedite construction on complex projects.

For example, PennDOT District 6-0 bundled two bridge replacements on State Route 41 in Atglen, Chester County to gain efficiency from the close proximity of the projects and to meet a tight timeline. The project was bid using A+Bx bidding to expedite construction and accommodate environmental restrictions due to a bog turtle habitat in areas adjacent to the bridges. Using STIC innovations, such as Accelerated Bridge Construction, Ultra High Performance Concrete Connections, Warm Mix Asphalt, and other new technologies, the contractor completed the complex project in just 42 days.

The contractor sets beams for the State Route 41 Con-Span Bridge over Valley Creek in Atglen, Chester County, PennDOT District 6-0.



DISTRICT SPOTLIGHT:

An Interview with District 8-0 Executive Mike Keiser, P.E.

Innovation is making a big impact in Pennsylvania. In PennDOT District 8-0, Mike Keiser, P.E. and his dedicated staff are using innovations to improve safety, reduce costs, and increase the quality of products. We asked Mike to share his strategies for success.

STIC innovations and Every Day Counts initiatives have become part of our culture here in District 8-0.

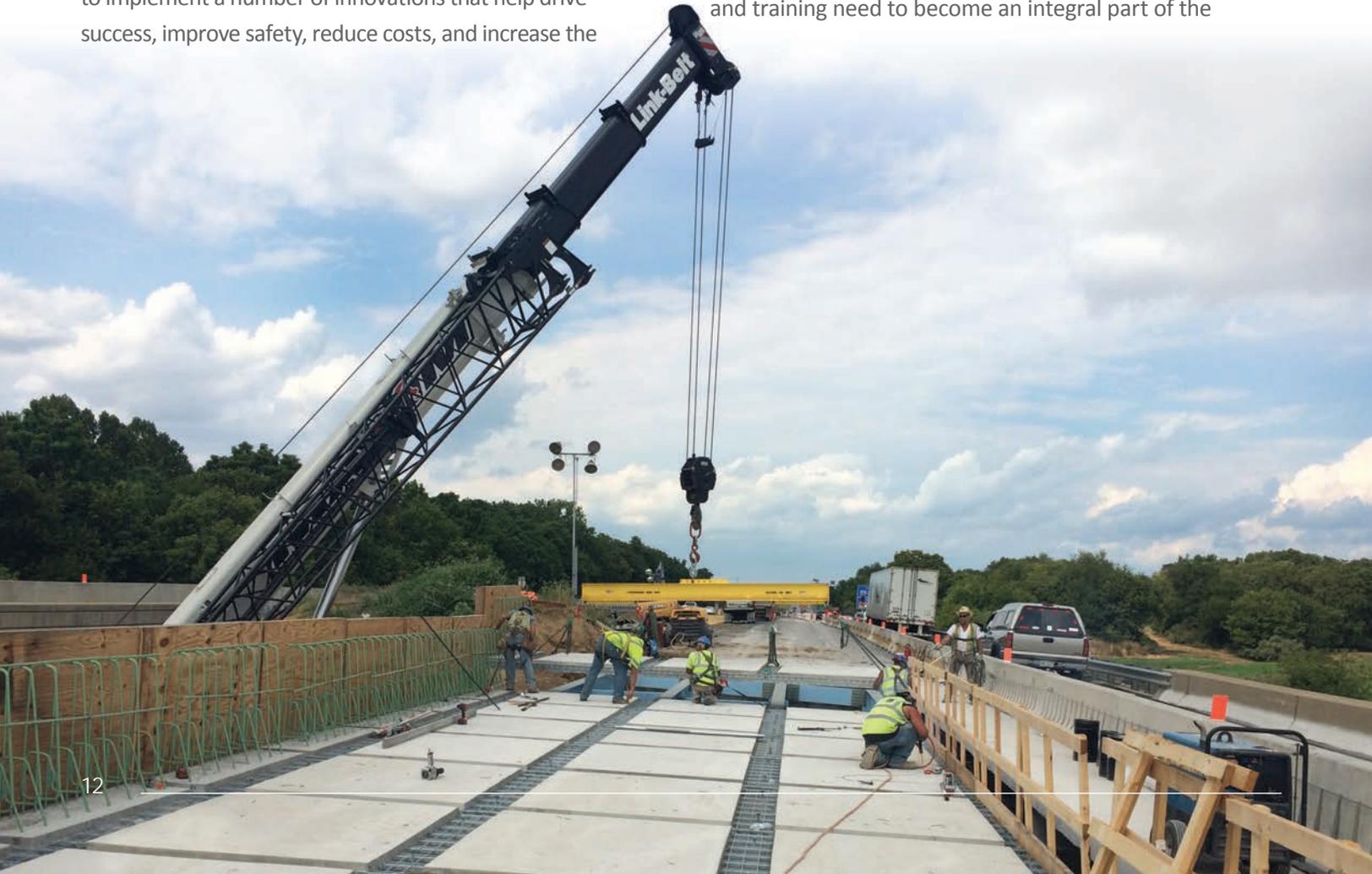
We work very closely with our six planning partners to ensure innovations are considered early in the project identification process. Project managers and team members, including our consultant partners, are encouraged to consider if and how STIC innovations can be incorporated. Feedback from our construction and maintenance staff is a necessary requirement for success.

Our broad portfolio of assignments gives us the flexibility to implement a number of innovations that help drive success, improve safety, reduce costs, and increase the

quality of our products. For example, to date we have used Accelerated Bridge Construction techniques on two high profile projects, adopted Warm Mix Asphalt across the board, have a number of Adaptive Signal Contracts underway, successfully utilized A+Bx Bidding, and gained positive results using High Friction Surface Treatments on several rural highways located throughout the District. These projects are coordinated closely with our construction staff to ensure constructability, positive bid results, quality, and completion dates that meet the expectations of our customers.

Innovation carries over into our maintenance operations as well, where county bridge crews are prefabricating structure components, generating winter savings by reducing material usage, and partnering with private sector fabricators to manufacture and deliver large concrete pipe sections to the work site where installation is completed by department forces.

Our staff becomes more engaged through the success realized on previous projects. Pushing forward, education and training need to become an integral part of the



process to capture results, best practices, and to ensure decision makers are fully aware of the options now available as a result of the leadership generated through the STIC members and technical advisory groups.

What impact have STIC innovations made in your District?

The Accelerated Bridge Construction techniques utilized on Route 581 over 10th Street made it our most successful project to date. The I-83/Route 581 West Shore Safety and Congestion Interchange improvements included replacing a full superstructure on Route 581 (dual structure over 10th Street) over four weekends. High traffic volumes with 84,000 vehicles traveling the roadway each day and limited right-of-way in the surrounding area required the use of a unique approach to address this structurally deficient bridge. The contractor, J.D. Eckman, Inc., manufactured the superstructure as seven separate components in a staging area adjacent to the interchange. Two weekends were required to remove the existing superstructure and mobilize and set the bridge components in place, including the necessary closure pours between segments. Two additional weekends were used to apply the concrete latex overlay.

Time, safety, and quality were clearly the major benefits of this accelerated technique. We are certain the approach taken was also the most economical since traditional construction processes would have required long-term lane closures and multiple construction phases.

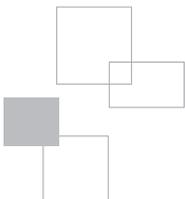
District 8-0 projects on Interstate 81 (left) and Route 581 (right) utilized Accelerated Bridge Construction.

“ It’s very likely that had we not used this approach, construction of the new superstructure would have taken an entire construction season. We continue to receive positive feedback from the public and elected officials regarding projects like this one that have implemented STIC innovations. ”

Mike Keiser, P.E., PennDOT District 8-0 Executive

What advice can you share with others?

Innovations will continue to play an important role as we plan, design, fund, and construct modern transportation improvements. Our customers demand and deserve cost-effective, long-term, high-quality solutions with minimal disruptions to their commute and holiday travel. Improving safety and reducing congestion are also high priorities that must be incorporated into each solution. Selling the approach during the design process is an important component as local leaders and managers convey the advantages and expectations of the project to their constituents. In order to be successful, leaders must encourage their staff to adopt innovative techniques that capture the latest technology, rely on the expertise and knowledge of industry, and produce a multimodal and sustainable project that supports the goals of our local, State, and federal partners.





PENNSYLVANIA TURNPIKE COMMISSION SPOTLIGHT:

An Interview with Mark Compton,
Chief Executive Officer, Pennsylvania
Turnpike Commission

The Pennsylvania STIC not only brings together FHWA and PennDOT, it also provides an opportunity for our partners at the Pennsylvania Turnpike Commission (PTC) to foster new ideas and share transportation best practices. We interviewed PA Turnpike CEO Mark Compton to learn more about innovation at the PA Turnpike.

What is the Transportation Quality Initiative (TQI)?

The Transportation Quality Initiative (TQI) was formed in 2014 following the passage of Act 89. The transportation owners, PennDOT and the PTC, met with industry leaders to discuss opportunities and challenges to completing projects efficiently. The initiative is led by a core leadership team to define and develop a culture of quality and cooperation. This is done by focusing on shared values including safety, innovation, fair payment, quality, and open communication. Beyond the core team, there are three focus groups (workforce, process, and technical) which tackle issues such as how to develop and sustain a skilled workforce, how to partner during the construction process, and how to evaluate technical issues and material performance.

How does TQI connect with STIC?

STIC is a vital connection to FHWA for the TQI initiatives. Senior leadership from all aspects vet top issues facing



Transportation Quality Initiative Framework

transportation project delivery and offer the mechanisms to pilot solutions. For example, there is an opportunity to partner with the TQI process group to gather feedback and explore solutions to STIC Project Delivery initiatives such as PS&E Plan Sheet Reduction, Special Provision Reduction, Roadway Tab and Summary Sheets, and Simplify Typical Sections. The partnership goes both ways; ideas developed through TQI can also be submitted to TAGs for consideration and presentation to the STIC.

How are you supporting innovation at the Pennsylvania Turnpike?

We foster innovation at the PTC through participation in the STIC, a leadership role in TQI, and through our own PTC Innovation Council. Internally our employees are encouraged to submit innovative ideas to the Council, which includes representatives from each Department with support as needed from senior management. We are open to taking calculated risks on cutting edge techniques and tools. Some examples include alternate additives to asphalt mix designs, crumb rubber, and paying tolls through cell phones. Since 2014, four ideas have been presented and three have been accepted for implementation, with additional research required for the remaining initiative. The Innovation Council complements TQI and gives us the opportunity to vet ideas with our workforce, because no one knows how to improve efficiency better than the person doing the job every day.



PTC is piloting alternate additives to asphalt mix designs and crumb rubber as part of efforts to reconstruct sections of the PA Turnpike.

TECHNICAL ADVISORY GROUP (TAG) PROGRESS

Technical Advisory Groups (TAG) were created to assist the STIC in evaluation of initiatives for promotion and implementation. The TAGs develop white papers and submit the ideas to the STIC for approval.

In 2015, the STIC modernized the TAG structure to expand the level of expertise and increase overall efficiency. The Structures and Facilities TAGs were formed to promote new initiatives. For example, the Structures TAG is developing a statewide bridge instrumentation program to monitor certain types of bridges to capture actual values for stress, accelerations, and other parameters. The Facilities TAG is identifying opportunities where natural gas microturbines can be installed at PennDOT and PA Turnpike facilities to improve efficiency and reduce operational costs. During this time, the STIC also recognized that some activities were better suited for PennDOT to take the lead. Going forward, PennDOT will lead communications and public outreach efforts and the Public Outreach and Technology TAGs will meet on an as-needed basis.

The TAG Progress table highlights the many ideas TAGs have presented to the STIC. After an idea is approved by the STIC, the subject-area TAG collaborates with PennDOT to develop a deployment plan to track progress and

TAG PROGRESS	Innovation Ideas Presented to Date
Construction TAG	4
Design TAG	3
Environmental TAG	5
Facilities TAG	2
Intelligent Transportation Systems (ITS) TAG	8
Maintenance TAG	5
Materials TAG	5
Project Delivery TAG	6
Safety TAG	5
Structures TAG	1
Technology TAG	1
TOTAL IMPACT	45

promote the innovation. For example, the Construction TAG and PennDOT District 2-0 are partnering to pilot innovative construction techniques, including structure backfill using GRS technology to minimize the settlement at structures, and elastomeric spray type waterproofing for structures to improve performance and durability. Over the past year, the TAG members have presented eight new white papers to the STIC, and have supported the deployment of a number of other innovations.

If you are interested in joining a TAG, please contact the STIC at ra-pdpenndotstic@pa.gov.

“ The TAGs are where innovation starts and are key to success. ”

Mark Magalotti, Ph.D., P.E., University of Pittsburgh and STIC Member (2010-2015)

PennDOT District 2-0 is piloting elastomeric spray type waterproofing for structures to reduce water infiltration and improve performance and durability.

2015 OUTREACH: PUTTING TOOLS INTO THE HANDS OF PRACTITIONERS

Effective communication and a robust educational outreach program are essential to expanding awareness of new technologies and institutionalizing innovations. In 2015, the STIC hosted a Local Government Demonstration Day, hosted three Innovation Day workshops, presented at over 15 events, and exhibited at several industry conferences, including the Pennsylvania Association of Township Supervisors (PSATS) Annual Meeting, Pennsylvania State Association of Township Commissioners, and the PA Asphalt and Pavement Annual Conference.



LOCAL GOVERNMENT DEMONSTRATION DAY

The STIC partnered with FHWA, PennDOT District 8-0, North Cornwall Township, Lebanon County, and PSATS to host a Local Government Demonstration Day on May 7, 2015 to promote the benefits of High Friction Surface Treatment (HFST). This innovation is a low-cost safety improvement which is proven to reduce crashes on wet pavements and curves, and save lives. The event attracted more than 20 local government participants and offered an opportunity for attendees to visit a live project site in North Cornwall Township to see a demonstration of the HFST application. In addition, the STIC developed five infographics to showcase the safety benefits and created a short educational video on HFST accessible online at: www.youtube.com/user/PennsylvaniaDOT

Attendees visited a live project site in North Cornwall Township to see a demonstration of the HFST application.



“ Simply put: one fatality, one accident, is one too many. The fact is that when you use this product, the statistics definitively show that it drives down the number of accidents and fatalities. ”

Scott Christie, P.E., PennDOT
Deputy Secretary for Highway Administration

THREE DISTRICTS SHARE BEST PRACTICES AT THE REGIONAL INNOVATION DAY

The first STIC Regional Innovation Day was a tremendous success with more than 250 attendees from PennDOT Districts 10-0, 11-0, and 12-0, PennDOT Central Office, FHWA, and industry partners. The training included nine breakout sessions on STIC topics including safety and operations, design and construction, transportation sustainability, and maintenance. Stan Caldwell, Executive Director of Traffic21

from Carnegie Mellon University, delivered a keynote speech on the future of innovation and highlighted Pennsylvania’s work to develop autonomous vehicle technology. This forum was the first of its kind at PennDOT, bringing together three districts to share in successes and discuss innovative approaches.

Stan Caldwell delivered the keynote speech at the Regional Innovation Day in Latrobe, Westmoreland County.

INNOVATION AT EVERY LEVEL

Over the past year, the STIC has partnered with five PennDOT District Offices to host Innovation Day workshops training over 600 professionals on new products and techniques in transportation. Workshops were held in PennDOT Districts 3-0, 4-0, and a Regional Innovation Day was hosted with Districts 10-0, 11-0, and 12-0 in Latrobe, Pennsylvania.

Each Innovation Day is customized to fit the District's training goals and audience participation is a key component to the success of workshops. The interactive format is facilitated by participation in fun, competitive activities that challenge project teams to explore how innovations could be applied to priority projects in the District. Attendee evaluations showed an overwhelmingly positive response to the workshops, pointing out the impact of PennDOT management support and presentations from peers.



PennDOT District 3-0 Innovation Day participants discuss how to apply new technologies to projects.

“ Innovation Days are effective because the workshops bring the discussion to project managers and engineers encouraging the practitioners to consider how to do their work better. ”

Bradley Heigel, P.E., Chief Engineer of the Pennsylvania Turnpike and STIC Member

“ The best thing about the workshop was learning about the diverse spectrum of projects and innovations in other districts. We tend to be focused on our individual work so much that we don't get to see what the others are doing. Other districts have great ideas and may do things differently, but those differences are possibilities for improvement. ”

Regional Innovation Day Participant



PARTNERING WITH UNIVERSITIES FOR TECHNOLOGY TRANSFER

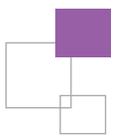
The Pennsylvania Consortium of Transportation Universities (PaCTU) was developed to promote collaboration between transportation research and practice. In May 2015, PaCTU hosted a symposium at Penn State University which brought together more than 75 participants representing Pennsylvania research universities, FHWA, PennDOT, and the Pennsylvania Turnpike. The event offered an opportunity for attendees to identify the top issues facing transportation and to discuss how emerging technologies and new research might present solutions and new ways to do business more efficiently. The event resulted in a report which is being used to connect TAG members with researchers and identify new initiatives.

PROMOTING PROFESSIONAL DEVELOPMENT

The STIC is committed to providing professional development opportunities and has partnered with the American Society of Highway Engineers (ASHE) to bring training to practitioners through one hour lunch and learn webinars. This year, the STIC hosted three webinars on innovative topics, including Smart Intersection Design and a two-part series on integrating the Highway Safety Manual (HSM) into practice. More than 500 professionals participated in the webinars and Professional Development Hour (PDH) credits were awarded for participation. This webinar series was highly successful and the STIC is looking forward to partnering with ASHE to conduct new webinars in 2016.



The PACTU symposium provided an opportunity to identify research needs and discuss emerging technologies.



2015 Webinars

SMART INTERSECTION DESIGN
February 25, 2015

225
ATTENDEES

SPEAKERS

Mark A. Doctor, P.E., FHWA
Office of Technical Services/
Resource Center

HIGHWAY SAFETY MANUAL PART 1
July 16, 2015

150
ATTENDEES

SPEAKERS

Kenita Honesty, PennDOT
Glenn Rowe, P.E., PennDOT
Eric T. Donnell, Ph.D., P.E.
Penn State University

HIGHWAY SAFETY MANUAL PART 2
August 26, 2015

135
ATTENDEES

SPEAKERS

Kenita Honesty, PennDOT
Jason Hershock, PennDOT
Eric T. Donnell, Ph.D., P.E.
Penn State University

A NATIONAL PERSPECTIVE

The Pennsylvania STIC is recognized as a leader in innovation and is often cited as a model for other states that are building their own innovation councils. The strong partnership between PennDOT and FHWA Pennsylvania Division Office has been a key to success. As an early adopter of the STIC, PennDOT has received outstanding feedback from FHWA's Every Day Counts program for Pennsylvania's work to institutionalize innovation.

PennDOT is among a select group of state transportation agencies that have established a formal process to evaluate and select state-specific innovations for advancement. Other states are looking to Pennsylvania as a best-practice for STIC organization, management, and implementation. The PA STIC recently participated in a peer exchange with the Texas Department of Transportation (TxDOT). TxDOT representatives attended the Fall Business Meeting to learn more about the PA STIC organizational structure and decision-making process. This provides the STIC opportunities to share its experience with other states and learn new strategies by collaborating with fresh, outside perspectives.



FHWA STIC Incentive Funds will support a Salt and Snow Training Academy for local governments to improve winter maintenance operations.

LOOKING AHEAD TO 2016

The STIC has set a plan to strengthen communications and outreach to local governments to improve efficiency at every level of transportation planning and project delivery. To help meet this goal, the STIC will partner with PennDOT Districts, local governments, and consultants to offer Innovation Day workshops to more transportation stakeholders, including:

- **PennDOT Districts 2-0, 5-0, and 8-0**
- **PennDOT Central Office and the FHWA PA Division Office**
- **Local Governments and Planning Partners**

This will mark an accomplishment to provide on-the-ground training to each PennDOT Engineering District and the transportation community at-large, and will reinforce efforts underway to enhance STIC outreach to local governments. In 2015, FHWA awarded STIC Incentive Funds to support a Salt and Snow Training Academy for Pennsylvania counties and municipalities. The training will provide local governments with tools to improve winter maintenance operations and promote the benefits of purchasing salt under the PA Department of General Services (DGS) cooperative purchasing program. These educational outreach opportunities offered by the STIC are another example of the value and power of the STIC to bring together transportation stakeholders to support common goals and promote a culture of innovation.

The importance of continuing a culture of innovation in transportation was recognized by Congress in the recent passage of the Fixing American's Surface Transportation (FAST) Act. Congress has stated it is in our national interest for the USDOT, state departments of transportation, and others to continue identifying and deploying proven innovative practices and products through the Every Day Counts initiative.

For more information on Every Day Counts and incentive funding opportunities, please contact Karyn Vandervoort at karyn.vandervoort@dot.gov.



PennDOT District 8-0 used Accelerated Bridge Construction to replace the Route 581 over 10th Street Bridge in just four weekends.

THANK YOU TO OUR MEMBERS

In 2015, the STIC wished farewell to five members as their terms came to a close. The co-chairs, Secretary Leslie Richards and Division Administrator Renee Sigel, wish to express their sincere gratitude for the dedication and outstanding service performed to the Commonwealth of Pennsylvania as a member of the State Transportation Innovation Council from 2010 to 2015.

John Becker, P.E.

American Concrete
Pavement Association

Stan Caldwell

Carnegie Mellon University

Bob Latham

Associated Pennsylvania Contractors

Mark Magalotti, Ph.D., P.E.

University of Pittsburgh

Martin Pietrucha, Ph.D., P.E.

Pennsylvania State University

MARCH 9	SEPTEMBER 21	DATES TO REMEMBER
JUNE 15	DECEMBER 7	

**2016 Quarterly
STIC Business Meetings**



For More Information:
State Transportation Innovation Council

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On the cover: PennDOT District 6-0 used ABC on State Route 41; Warm Mix Asphalt is a standard in District 3-0; Innovation Day participants in District 3-0; District 11-0 pilots Mobile Construction Applications; District 8-0 constructed a roundabout at the intersection of Linglestown Road and North Mountain Road; Accelerated Bridge Construction was used on the Route 581 over 10th Street Bridge replacement in District 8-0; and District 9-0 used HFST on State Route 220.