Transforming Transportation Through Innovation

Sara Lowry, PE
STIC Program Coordinator
My Visit Today

- FAST ACT Authorization
- EDC - 4
- Funding Opportunities
Question to ponder today…

“And if…”

(Blank)

 “…we will ACCELERATE innovation”

Where are your opportunities to accelerate innovation in your organization?

With Whom? How? When?
Transforming Transportation Through Innovation

Authorization

STIC Network

Every Day Counts

[AID] Demo

Other Resources
P.L. 114-94
Fixing America’s Surface Transportation Act

December 4, 2015
Signed by President Obama on December 4, 2015

First long-term authorization act in a decade

Result of bipartisan cooperation and compromise

Provides 5 years of funding certainty for infrastructure planning and investment

Authorizes $305 B (all surface modes) over FY 2016-2020

$70 Billion in transfers to keep the Highway Trust Fund solvent; fully “paid for” (offset) by unrelated savings
Key Highway Facts

$226.3 B for highways over five years (FY 2016-2020)
  • $225.2 B in contract authority
  • $1.1 B from the General Fund

Builds on the program structure & reforms of MAP-21

Continued focus on accelerating project delivery

Adds a new freight formula & expands freight network

Adds a new discretionary program for nationally significant freight & highway projects

Provides a new tribal self-governance option
§1444 Every Day Counts Initiative.

(a) IN GENERAL.—It is in the national interest …—

(1) to identify, accelerate, and deploy innovation aimed at shortening project delivery, enhancing the safety of the roadways of the US, and protecting the environment;
(2) to ensure that the planning, design, engineering, construction, and financing of transportation projects is done in an efficient and effective manner;
(3) to promote the rapid deployment of proven solutions that provide greater accountability for public investments and encourage greater private sector involvement; and
(4) to create a **CULTURE OF INNOVATION** within the highway community.

(b) EVERY DAY COUNTS INITIATIVE.—…to identify and deploy proven innovative practices and products that—

(1) accelerate innovation deployment;
(2) shorten the project delivery process;
(3) improve environmental sustainability;
(4) enhance roadway safety; and
(5) reduce congestion.

(c) INNOVATION DEPLOYMENT.—

(1) IN GENERAL.—At least every 2 years, the Administrator shall work collaboratively . . .
Creating a Culture of Innovation
Define *Innovation*

1: the introduction of something new

2: a new idea, method, or device

- Save Lives
- Save Money
- Save Time
- Improve Mobility / Connectivity
- Resource Responsible
The STIC Network

The COMPLETE National STIC Network established – April 2016
GOAL: STIC

Nurture a *culture of innovation* through leadership within the transportation community

Ingredients for success:

- Well organized **STIC** *(State Transportation Innovation Council)*
- Broad stakeholder engagement
- Defined processes and procedures
- Performance monitoring
- Engaged leadership
STIC Incentive Program

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<th>Complete!</th>
<th>STIC Incentive Projects</th>
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<td>Each STIC can receive up to $100,000 / FY</td>
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STIC Incentive Program - Funding Used

- FY2014: $3,517,000
- FY2015: $4,238,000
- FY2016: $4,171,804
- FY2017: Available Now

FY2017 funding is available now.
EVERY DAY COUNTS (EDC)
Heading into Round 4

EDC-1 2011-2012
14 Innovations

EDC-2 2013-2014
13+ Innovations

EDC-3 2015-2016
12+ Innovations

EDC-4 2017-2018
11 Innovations:
- Automated Traffic Signal Perf. Measures
- Collaborative Hydraulic Community Connections
- Data-Driven Safety Analysis
- e-Construction and Partnering
- Integrating NEPA and Permitting
- Pavement Preservation
- Weather-Savvy Roads
- Safe Transportation for Every Pedestrian
- Ultra-High Perf. Concrete Connections
- Data to Improve Traffic Incident Mgmt.
Center for Accelerating Innovation

Mobility
Safety
Quality
Environment
Shortening Project Delivery

https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/
Automated Traffic Signal Performance Measures (ATSPMs)

- Improve retiming process
  - Save time, money, & improve performance

Road Weather Management – Weather-Savvy Roads

- Proactive when it comes to weather
  - Improved communications, save lives / time
Using Data to Improve Traffic Incident Management (TIM)

• Improve adoption and consistency of TIM data collection and increase its volume across transportation, law enforcement and other responder agencies
  
  o Improved decision making, save lives
Safe Transportation for Every Pedestrian (STEP)

- Pedestrians 16% of roadway fatalities
- 6 cost-effective countermeasures with known safety benefits
  - Including: Road Diets
    - Save Lives

Data-Driven Safety Analysis (DDSA)

- More sound approach to allocating resources
  - Save lives... fewer & less severe crashes
Collaborative Hydraulics: Advancing to the Next Generation of Engineering (CHANGE)

• Offers planners…to…designers more accurate modeling technology through 3D visualization
  o Save Money, Improved Performance

Ultra-High Performance Concrete (UHPC) Connections for PBES

• Address a key challenge in PBES
  o Improved performance
    Faster construction
    Save money / time
Pavement Preservation (When, Where, and How)
at the right time (when),
on the right project (where),
with quality materials and construction (how)

critical investment strategy to help meet pavement Performance expectations
Community Connections

• Achieve designs that best suit the purpose and needs of individual communities.
  o Timing is ripe to hold forums to discuss & consider retrofit or removal options to connect/reconnect and revitalize urban cores and adjacent communities

Integrating NEPA and Permitting

• …promotes synchronized reviews, where the various environmental reviews and permitting procedures are performed concurrently.
  » Save time and money
e-Construction and Partnering: A Vision for the Future

• ... take advantage of e-Construction technologies to enhance partnering among the project team
  o improve communications and workflow for the efficient delivery of projects in the electronic age
MAP-21 to FAST Act

http://www.fhwa.dot.gov/innovation/grants/
**AID Demonstration**

- Continuing in FY16 with **new NOFO** (Notice of Funding Opportunity), opened September 1st 2016
- Total annual award up to $10M/year ($50M over FAST Act)

- **Funds are used to pilot an innovation for a project**, activity must be eligible under 23 CFR for federal-aid
- Up to 20% match is required
- Up to full cost of the innovation, w/ maximum of $1 M
- Up to 2 applications per State DOT per FY
  - can be awarded to State DOT, sub recipient, Federal Land Management Agency, or tribal government
Increased Federal-share for Project-level Innovation
Increased Federal-share for Project-level Innovation

§120(c)(3) title 23 U.S.C. provides...

• …option of an **increased Federal share** for projects using innovative project delivery methods.
• Established by MAP-21 / amended FAST Act
• **up to 5% for innovative techniques**
  • to deliver projects more efficiently
  • to deploy rapidly proven solutions

https://www.fhwa.dot.gov/innovation/resources/increased_federal_share.cfm
Center for Accelerating Innovation

Get Connected

https://www.fhwa.dot.gov/innovation/resources/
“Culture of Innovation”

-- what does that mean to you?

-- Where are the opportunities to accelerate innovation in your organization?
Questions / Discussion

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