




Memorandum

September, 28, 20145

Subject :**ACTION:** STIC Incentive Program
FY15

From: Matthew Hake 
Division Administrator

In Reply Refer To:
HDA-VT

To: Mary Huie
FHWA Center for Accelerating Innovation HIHL-1

Vermont's State Transportation Innovation Council (STIC) has developed an application with two proposals for the use of FY15 STIC incentive funds. The Vermont STIC consists of the Division Administrator and the VTrans Chief Engineer, Deputy Chief Engineer and Performance, Innovation and Excellence (PIE) Section Chief. The STIC meets every month and these proposals were selected from numerous requests submitted from across the agency.

The two proposals in the application are:

- Training in Lean methodologies in support of an innovative Continuous Improvement (CI) initiative at VTrans; and
- Participation in peer exchange scan tours for documenting and implementing innovative practices and technologies at VTrans in designated areas.

More details on the proposals are in the attached documents. The Division finds the application eligible and fully supports the use of the \$100,000 towards these two initiatives. We plan on being involved in the implementation of both programs.



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September 24, 2015

Federal Highway Administration
 Matthew Hake, Division Administrator
 Federal Building - P.O. Box 568
 Montpelier, VT 05601

Subject: FFY 2015 STIC Incentive Application

Dear Mr. Hake,

This letter is to put forward a recommendation of a proposed STIC Incentive Program application for 2015.

The VTrans STIC Committee solicited proposals and received several submissions. By consensus the Executive Council supported the attached proposals for the Incentive Program. The proposal for funding under FHWA's STIC Incentive Program includes:

- Training in Lean methodologies in support of an innovative Continuous Improvement (CI) initiative at VTrans; and
- Participation in peer exchange scan tours for documenting and implementing innovative practices and technologies at VTrans in designated areas.

The break down for the funding for the proposal is as follows:

- The cost to complete the projects is estimated at \$125,000 and will be administered by VTrans, the State Transportation Agency (STA).
- It is planned that the federal share will cover 80% of project costs (\$100,000).
- The STA is committed to providing the remaining 20% share (\$25,000).
- The project tasks, deliverables/activities, schedule, and cost are summarized in the attached proposal.

I would like to thank you and your staff for your assistance and look forward to implementing these important innovative initiatives.

Respectfully,

Kevin S. Marshia, P.E.
 Acting Director/Chief Engineer

cc: Mike Lozier, VTrans Performance, Innovation and Excellence (PIE) Section



Vermont STIC Incentives Application

ABSTRACT:

Lean

The Vermont Agency of Transportation (VTrans) is embarking on an innovative Continuous Improvement (CI) initiative. Specifically, VTrans is ramping up to deploy Lean methodologies within and across the organization. Lean is a structured process improvement model used widely in the government sector to engage the workforce in transforming the organization to operate with a focus on process efficiency and service excellence. A new Section (Performance, Innovation, and Excellence (PIE)) has been created within the Finance and Administration Division of VTrans. PIE is staffed with a Lean Program Manager responsible for completing and making operational a VTrans Lean Implementation Plan (Plan).

The Plan includes cost-bearing components, including training, conducting and attending Lean workshops, and specific equipment and supplies to support Lean events, or “Kaizens”, at VTrans. STIC incentive funds may be utilized to cover these and other related costs.

Scan Tours

From the AASHTO Standing Committee on Highways website:

Developed by AASHTO and administered by NCHRP, the U.S. Domestic Scan Program facilitates technology transfer among transportation agency staff by creating opportunities for face-to-face information exchange on selected timely topics. On a typical scan, a traveling scan team of state DOT staff and federal representatives will visit and exchange knowledge with several host agencies identified as technical experts or early adopters of the selected innovative technology or practice. Additionally the AASHTO Innovation Initiative supports state level networking through lead state team deployments, FHWA fosters interaction through summits, and SHRP2 through its products supports regional workshops.

VTrans envisions a void can be filled by developing a Vermont STIC Scan Tour program that fosters scan tours to other State DOT host sites for peer exchange in subject areas that continue to drive innovation across Vermont’s transportation network and programs, and in some cases spreads ideas from Vermont to other states. These tours will provide the benefit to VTrans staff and VTrans partners across Vermont by obtaining face to face insights about innovative practices and technologies utilized by other State DOTs.



VTrans has recognized a powerful resource of knowledge sharing and innovation cultivated through its Tri State Partnership with Maine and New Hampshire. Rolling out a VTrans STIC Scan Tour program will provide a similar yet broader net to cast in gathering new ideas from across the country. Knowledge gained from these tours will be utilized to establish and implement innovative practices and technologies at VTrans. STIC incentive funds will be utilized to cover allowable expenses for VTrans staff attending the tours, and for any costs (including vendor services) associated with the documentation and implementation of innovative practices and technologies for and at VTrans.

Innovations, like light bulbs, are turning on across the country every day and VTrans wants to be in the best position possible to go out and gather these new ideas in line with the Every Days Counts initiative. Examples that come to mind are, and not limited to:

- New ways of utilizing GIS to deliver projects, operate the transportation system, and perform asset management functions.
- Transportation System Management and Operations (TSM&O) organizational structures and procedures
- Right of Way programs and platforms
- NEPA procedures and processes
- Contracting methodologies and interactions with industry
- Road building and maintenance materials
- Advancements in construction equipment as well as means and methods

The success of an organization does not wait. It is dictated in real time, day-to-day, and the sooner best practices can be implemented the better the near and long-term health, and growth, of the organization.

GENERAL INFORMATION:

Lean

The primary goal of a Lean training program will be to build within VTrans a network of skilled staff, with the added benefit of establishing a CI culture within the organization. Initial training efforts will include outside vendor instructor(s) as needed. Trainings will be piloted with agency staff, and ultimately offered to all state personnel to include other government agencies with the objective of spreading Lean to other areas of State government. Designated VTrans staff will have first priority in attending trainings. It is not anticipated that the entire scope of the overall training program will be completed under this funding request. The training program will include the following offerings:





For PIE Section Chief, VTrans managers/supervisors, and targeted facilitator staff (short term):

For all VTrans staff (long term):

LEAN 101 (offered bi-monthly) half-day class

An overview of Lean continuous process improvement principals with an emphasis on the common tools used to apply Lean. Designed for all staff interested in understanding the basic techniques and concepts including 5S, Visual Cues, Value Stream Mapping, A3 Problem Solving, Mini-Lean events, and Kaizen Events.

For VTrans managers/supervisors and targeted staff (short term):

For all VTrans staff (long term):

LEAN YELLOW BELT: Introduction To Lean Process Improvement Techniques (offered quarterly) 3-day class

This program features a hands-on introduction to the philosophy and methodology of Lean process improvement. Participants apply the techniques to an actual work process and construct an implementation plan to enact the improvements. Participants should consult with Lean Program Manager or staff in advance about the process selected and with the manager who will sponsor the project. Those registering without a work group will join a team from another agency for the hands-on portion of the program. *Pre-requisite: Lean 101*

For targeted VTrans managers/supervisors and staff interested in facilitator training:

LEAN GREEN BELT: Facilitator Skills, Change Management, and Practicum (offered semi-annually) 3-day class

Learn how to lead and guide a group through the Lean process, use techniques to deal with a range of challenges when initiating organizational change and manage implementation plans. Graduates of this level will have the ability to easily use Lean tools with minimal assistance as well as train and educate others about Lean concepts. *Pre-requisite: Lean Yellow Belt*

For Lean Program Manager, and targeted VTrans managers/supervisors and facilitator staff:

LEAN BLACK BELT: Master Level Lean Implementation (offered annually) 7-day class

Staff interested in this level training will represent the agency as a full time resource dedicated to Lean process improvement. Training for this level may be provided outside of VTrans (TBD). *Pre-requisite: Lean Green Belt and multiple Lean event facilitation experience*

NOTE: "Belt" Credentials were encouraged by other state agencies to provide participants a level of qualification and achievement for professional development. Each participant is given a framed certificate at the conclusion of each training level.

Included in the scope of work are other activities not specific to the Lean Training Program, including vendor services for hosting workshop(s), staff expenses for





attending off-site Lean workshops, and purchasing specific equipment and supplies to support Lean events, or “Kaizens”, at VTrans.

The cost to complete the project is estimated at \$62,500 and will be administered by VTrans, the State Transportation Agency (STA). It is planned that the federal share will cover 80% of project costs (\$50,000). The STA is committed to providing the remaining 20% share (\$12,500). The project tasks, deliverables/activities, schedule, and cost are summarized in the table below.

Deliverables, Schedule and Estimated Cost (sample)

Task	Deliverable/Activity⁽¹⁾	Timeframe⁽²⁾	Estimated Cost
1	LEAN 101 (120 VTrans Staff/40 Interagency Staff)	Bi-monthly	\$ 28,000
2	LEAN Yellow Belt (60 VTrans Staff/20 Interagency Staff)	Quarterly	\$ 18,000
3	LEAN Green Belt (30 VTrans Staff/10 Interagency Staff)	Semi-annually	\$ 9,000
4	Hosting/Attending Lean Workshops	Annual	\$ 5,000
5	Equipment and Supplies for Lean events (<i>Kaizens</i>)	Annual	\$ 2,500
Total Estimated Cost			\$ 62,500
Total STIC Incentive (TIDP) Funds			\$ 50,000

⁽¹⁾ Designated trainings will be conducted at the VT Center in Achievement for Public Service (CAPS)

⁽²⁾ Approximate timeframe for deliverable from NTP

Commitment of Other Funds

VTrans plans to match the federal funds with the appropriate 20%, totaling \$12,500.

Project Administration

This project will be administered by VTrans and the overall Project Manager will be Michael Lozier. It is anticipated that VTrans will use a combination of in-house personnel and outside vendors to complete the tasks.

A supporting initiative for the Lean training program is to update the VTrans Strategic Plan by adding specific objectives, measures, benchmarks, and targets for Plan Strategic Goals #4, and #5, stated as follows:

Goal 4: Cultivate and continually pursue innovation, excellence and quality customer service.

Goal 5: Develop a workforce to meet the strategic needs of the Agency.

In this manner, CI through Lean activities will be strategically linked to the overall VTrans Mission and Vision.





TIDP funds obligated within 6 months

VTrans fully anticipates TIDP funds will be obligated within six months of the date funds are made available, with reimbursable work commencing following funds obligation.

Scan Tours

Scan Tour scope of work includes peer exchange at the host sites to learn more about innovative practices and technologies utilized by other State DOTs related to the designated subject areas; and documenting and implementing innovative practices and technologies for and at VTrans.

The implementation of the scan tours will work to accomplish the following two TIDP goals:

- Significantly accelerate the adoption of innovative technologies by the surface transportation community; and
- Develop and deploy new tools, techniques, and practices to accelerate the adoption of innovation in all aspects of highway transportation.

The cost to complete the project is estimated at \$62,500 and will be administered by VTrans, the State Transportation Agency (STA). It is planned that the federal share will cover 80% of project costs (\$50,000). The STA is committed to providing the remaining 20% share (\$12,500). The project tasks, deliverables/activities, schedule, and cost are summarized in the table below.

Deliverables, Schedule and Estimated Cost (sample)

Task #	Deliverable/Activity	Timeframe⁽¹⁾	Estimated Cost
1	Scan Tour- Innovation 1	0 months	\$ 3,500
2	Scan Tour- Innovation 1 Documentation	3 months	\$ 8,500
3	Scan Tour- Innovation 1 Implementation	6 months	\$ 8,500
4	Scan Tour- Innovation 2	9 months	\$ 3,500
5	Scan Tour- Innovation 2 Documentation	12 months	\$ 8,500
6	Scan Tour- Innovation 2 Implementation	15 months	\$ 8,500
7	Scan Tour- Innovation 3	18 months	\$ 3,500
8	Scan Tour- Innovation 3 Documentation	21 months	\$ 8,500
9	Scan Tour- Innovation 3 Implementation	24 months	\$ 8,500
10	Miscellaneous	0-24 months	\$ 2,500
Total Estimated Cost			\$62,500
Total STIC Incentive (TIDP) Funds			\$50,000





(1) Approximate timeframe for deliverable from NTP

Commitment of Other Funds

VTrans plans to match the federal funds with the appropriate 20%, totaling \$12,500.

Project Administration

This project will be administered by VTrans and the overall Project Manager will be Kevin Marshia. It is anticipated that VTrans will use a combination of in-house personnel and outside vendors to complete the tasks.

TIDP funds obligated within 6 months

VTrans fully anticipates TIDP funds will be obligated within six months of the date funds are made available, with reimbursable work commencing following funds obligation.

