TSM&O Evaluation

PROJECT MANAGER TRAINING

Welcome to TSM&O Evaluation training. I'm San Lee with TSM&O
We plan to spend about an hour providing you with information you will need as a project manager to effectively execute this process.

This is a recorded session so please submit your questions via Zoom and we will answer them at the end of the session. The following people are here to provide information and support the training:

Charles Meyers
Olivia Brey
Nate Algoe and
Kevin Mindenhall

Topics

- TSM&O Evaluation Background & Timeline
- Why TSM&O Evaluation Process?
- What is the TSM&O Evaluation?
- Project Managers' Roles and Responsibilities
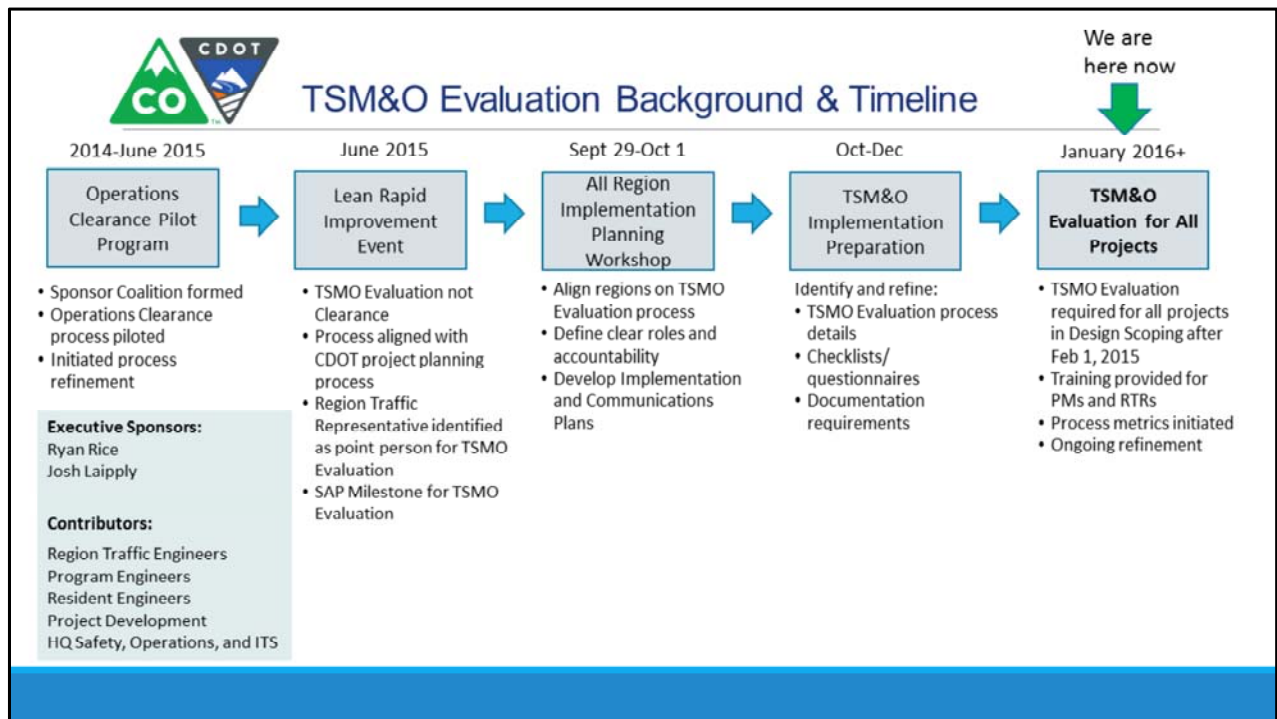- Resources for the PM

Please submit questions via Zoom to be addressed at the end of the session

The TSM&O Evaluation process is at its core about CDOT of the future and being the best DOT and providing the best service possible to our travelling customers. We have been working on it for some time and have engaged many CDOT leaders and subject matter experts in the effort.

This evaluation process is history in the making to change our culture now and long into the future to ensure comprehensive and best service to our citizens.

Today we would like to share with you what this evaluation is all about. Where did it come from, why are we doing it, what is it, what is your role and what resources are available to support you.

So with that, let's get started!

TSM&O Evaluation Background & Timeline

We are here now

2014-June 2015	June 2015	Sept 29-Oct 1	Oct-Dec	January 2016+
Operations Clearance Pilot Program	Lean Rapid Improvement Event	All Region Implementation Planning Workshop	TSM&O Implementation Preparation	TSM&O Evaluation for All Projects

2014-June 2015 — Operations Clearance Pilot Program
- Sponsor Coalition formed
- Operations Clearance process piloted
- Initiated process refinement

Executive Sponsors:
Ryan Rice
Josh Laipply

Contributors:
Region Traffic Engineers
Program Engineers
Resident Engineers
Project Development
HQ Safety, Operations, and ITS

June 2015 — Lean Rapid Improvement Event
- TSMO Evaluation not Clearance
- Process aligned with CDOT project planning process
- Region Traffic Representative identified as point person for TSMO Evaluation
- SAP Milestone for TSMO Evaluation

Sept 29-Oct 1 — All Region Implementation Planning Workshop
- Align regions on TSMO Evaluation process
- Define clear roles and accountability
- Develop Implementation and Communications Plans

Oct-Dec — TSM&O Implementation Preparation
Identify and refine:
- TSMO Evaluation process details
- Checklists/questionnaires
- Documentation requirements

January 2016+ — TSM&O Evaluation for All Projects
- TSMO Evaluation required for all projects in Design Scoping after Feb 1, 2015
- Training provided for PMs and RTRs
- Process metrics initiated
- Ongoing refinement

As we mentioned, the TSM&O Evaluation process has been developed and refined over the past year or so. It was initially piloted over the past year and a half under the sponsorship of CDOT leadership and refined in a Lean Rapid Improvement Event held in June. A broader stakeholder group was engaged in late sept to further refine the process and develop an implementation plan. We have been working on that plan over the past several months and are now ready to move forward with implementation.

Why TSM&O Evaluation?

- CDOT leaders have recognized that we cannot build our way out of future congestion and must employ new innovations, recognized improvement strategies and technology to safely move increased traffic volumes
- The purpose of the TSM&O Evaluation is to evaluate the project area and make recommendations to the project team that improves reliability, safety, quality of life, and traveler information
- Mobility and safety improvement and innovation is a national trend and CDOT is at the forefront of this movement

Colorado's front range population is projected to increase 50% by 2050 while freeways and older streets have little room for expansion.

-Sunday Denver Post, Dec. 20, 2015

TSM&O Video
Let's hear the perspective of CDOT executive sponsors Ryan Rice and Josh Laipply on this important initiative.

Why TSM&O Evaluation? The answer to this question was nicely reported in a front page article in the Dec 20 Sunday Denver Post about population growth in CO and increasing congestion. The bottom line is a real need to improve safety and mobility through innovation, operations improvement strategies, as well as technology. But let's hear from CDOT leaders to gain their perspective on the TSM&O Evaluation…

Video From CDOT Leaders
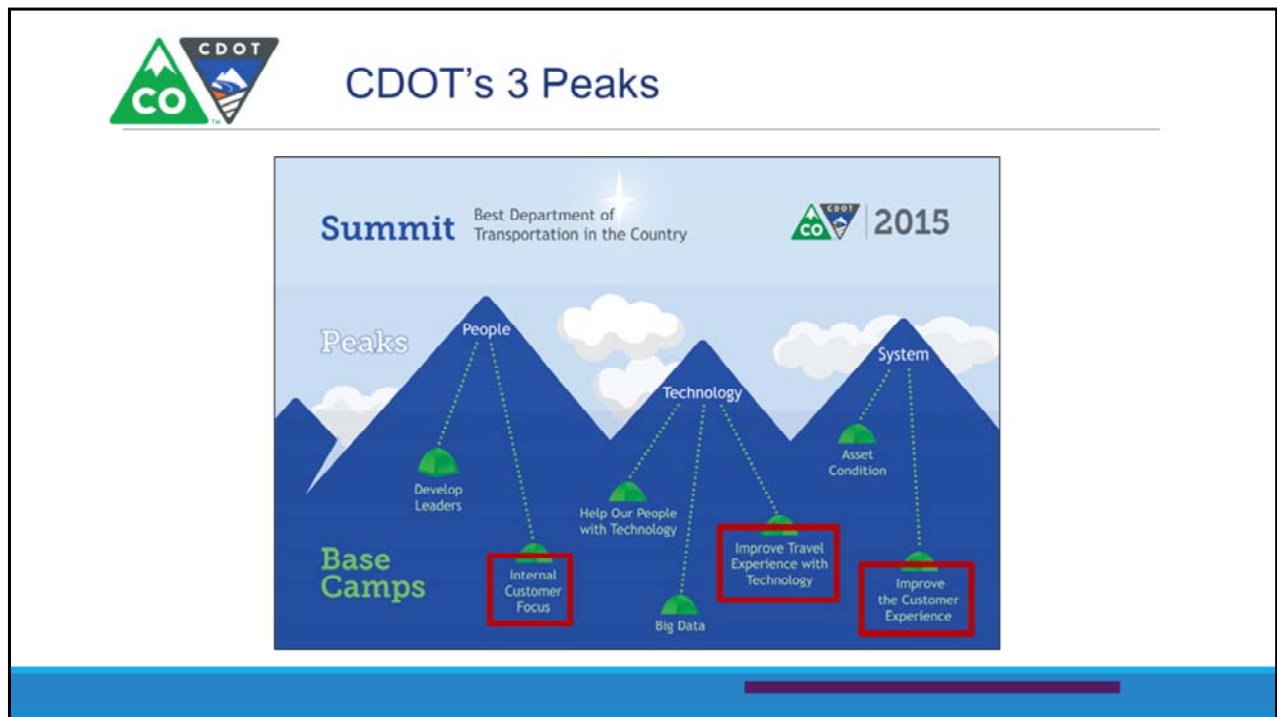
We have all been hearing about CDOT's 3 Peaks.   The TSM&O Evaluation spans across many initiatives and here is how they relate

Under the People Peak, improving upon our internal customer focus will expand the skills of our people by providing an understanding each others roles and responsibilities.

Under the Technology peak, recommendations will move us towards improving the travel experience using technology

Finally, under the System peak, the Evaluations will help improve the customer experience. Examples include better real-time travel information, improved reliability, and moving toward zero deaths

By considering safety, ITS, and operations early and throughout the design process, CDOT will optimize its limited resources to make the right decisions for transportation improvements and deliver the best projects possible for the public.

Let's talk about what the Evaluation is and when it starts.

The TSM&O Evaluation consists of 3 main parts: a Safety analysis, Operations analysis and ITS analysis…

and is now aligned with the Project Development process. The Evaluation results in recommendations for improvements that may be incorporated in the project.

All projects with a Design scoping date after Feb 1 2016 will require a TSM&O Evaluation. Let's talk about how the process works…
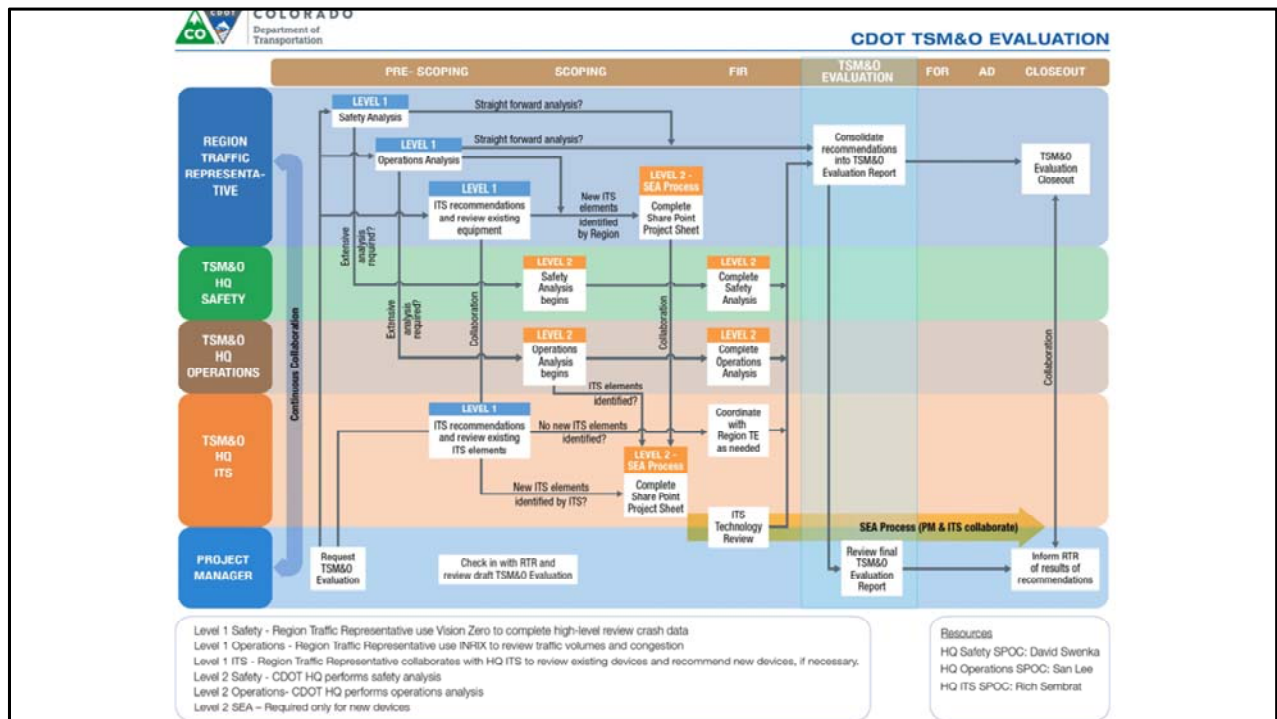
As a reminder, it is important to have a printout of this process for reference. Let's go over it as a high level. The process map shown on this slide provides an overview of the process by area of responsibility. Each CDOT project will have an assigned Region Traffic Representative (or RTR) who will be the point of contact for the PM and responsible for coordinating the Evaluation GRAPHIC.

FOLLOWING THE BOTTOM ROW OF THE GRAPHIC. The process is initiated when the PM prepares a TSM&O Evaluation Request. This step is similar to the current Safety analysis request. Once requested the RTR will complete a Level 1 analysis of the project in each of the areas. If necessary, the RTR will request a Level 2 analysis in one or more areas. The Level 2 analysis will be supported by HQ TSM&O and your Point of contact still is the RTR.

Recommendations will be summarized and provided to the PM who will actively seek to implement them in the project design. Details of the process are described on the following slides.

Who performs a TSM&O Evaluation?
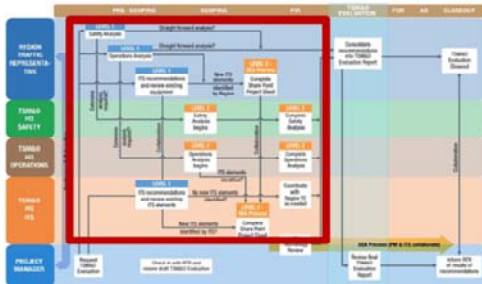
- The Region Traffic Representative (RTR) for a particular project will complete a Level 1 TSM&O Evaluation
- Based upon the Level 1 review, the RTR may initiate a Level 2 analysis from HQ Support Groups
- If new ITS devices are identified, a Level 2 ITS Analysis will be required and may include a Systems Engineering Analysis (SEA), in accordance with FHWA requirements

As mentioned earlier, the RTR is the point person for ensuring the TSM&O Evaluation is completed. The RTR will keep the PM informed as the TSMO Evaluation develops and will provide the consolidated recommendations to the PM. If new or existing ITS devices will be incorporated in the project a Level 2 ITS analysis will be required. A Level 2 ITS analysis may include a Systems Engineering Analysis.

Here are the 4 key PM responsibilities.
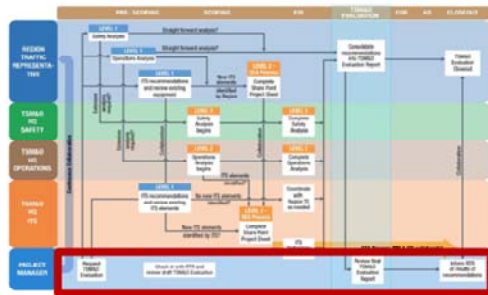
- Establish the Milestone in SAP – Follow the Project Design Bulletin, as this is a evolving process and may change
- Request the TSMO Evaluation - This should be done as early as possible to allow the RTR's to complete the Evaluation
- Collaborate with the RTR throughout the process to incorporate the recommendations that you can within the scope of your project
- Throughout the project cycle, coordinate with the RTR on what recommendations were incorporated. Recommendations that don't get completed will provide justification for future projects and funding.

This is Olivia. Let's further go over the steps in detail.
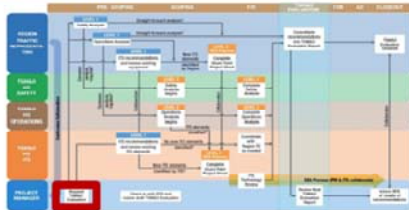
Requesting a TSM&O Evaluation is simple and is just like the current Safety Analysis request. The form can be accessed by clicking on the link above and once opened, the PM will add in the project information. Once complete, email the request to the indicated Region Traffic and ITS contacts.
Next, you'll need to create a TSM&O folder in the ProjectWise Traffic folder in order to file the TSM&O documentation. And that's it!

Review the TSM&O Recommendations and Identify Potential Funding Sources
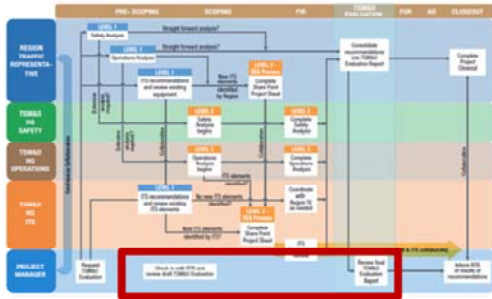
- The PM and RTR will collaborate as the TSM&O Evaluation proceeds
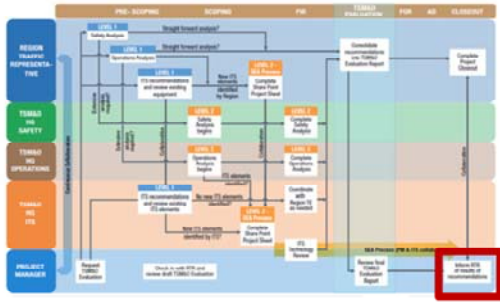 - RTR will complete the TSM&O Evaluation Report and provide it to PM
  - HQ Safety, Operations and ITS will support the Regions
- The PM will incorporate recommendations in the project and actively seek funding to include recommendations in project

As recommendations are made they need to evaluated for inclusion in the project design. There are many funding sources that are utilized for projects, so it is important we consider all our options as early in the project development process as possible. The PM should coordinate with their Resident Engineer to actively seek funding or make arrangements to include as many of the recommendations as possible.   The Regions and TSM&O will also actively work to fund critical needs. It's important to note that all recommendations may not get funded, but will logged for consideration for and on future projects.

Here is a sample report that you, as the PM, will receive from the RTR. It is organized by Highway, MP, and Type of Recommendation. It consolidates the recommendations for Safety, Operations, and ITS. Example recommendations could include Signs for Safety, Geometric Improvements, Striping, and Cameras.

TSM&O Evaluation Closeout

- Prior to project closeout, the PM will notify the RTR of which TSM&O recommendations were incorporated in the project
- The PM will notify ITS to complete the acceptance testing of any ITS devices in the project
- The RTR will complete the TSM&O Evaluation and file it for future use

Here is the FINAL STEP!!

During TSMO Evaluation Closeout, the PM should notify the RTR of which recommendations were implemented.

As a critical piece of all projects, it's important to notify ITS of any devices installed on the project for acceptance testing, and when you are working near ITS infrastructure. Although there is an RTR designated to your project, the PM will need to collaborate directly with TSMO ITS throughout the project.

The RTR will then closeout the evaluation. those recommendations implemented will be recorded in the recommendations report.

Resources to Support the PM

The primary support for TSM&O Evaluation for the PM is the designated RTR

Region Traffic Engineers	Region Traffic Representative POC's	Other Support
R1 - Clark Roberts	R1 – Alazar Tesfaye, Leela Rajasekar	Safety- David Swenka
R2 - Sasan Delshad	R2 – Matt Jagow, Terry Shippy	Operations- San Lee
R3 - Zane Znamenacek	R3 - Sean Yeates	ITS- Rich Sembrat
R4 - Mike Crow	R4 - Long Nguyen	Project Development- Neil Lacey,
R5 - Mike McVaugh	R5 - Rick Routh	Ryan Sorensen

This slide shows the resources to support you the PM
The center column shows your initial points of contact who will receive the initial TSMO Evaluation Request from you, the PM.

They will then act as your RTR or assign another person as your RTR.

Other support includes:

Ofcourse the TE's will always be there to help you with your projects

Next Steps

- Training acknowledgement
- Survey
- Next Steps
  - Consult the January 2016 TSM&O Evaluation Design Bulletin for detailed information
  - Initiate TSM&O Evaluation Request for your projects in design scoping after Feb 1

Note: This training is required for all CDOT Project Managers. We will record the names of participants to add to the CDOT training records following the session. Please make sure that we have your name as a participant.

Here are the next steps we are asking of you….
To take credit for this webinar, please take the survey that will be emailed out soon.
We are also working to incorporate this in CDOT's SAP learning portal.

As your next steps, please print out the workflow for reference, ……

Charles, any final words before me proceed?

Thank you

Thank for your attention and participation in this training on the TSMO Evaluation. And mostly, we thank you for your commitment to making this TSMO Evaluation Process a success at CDOT. This process will ensure that every project is incorporating the latest strategies, best practices, innovations, and technologies in operations and safety on all of our projects … for the benefit of our customers. You are a part of history in making CDOT the best DOT in the country.

Q&A