Highway Division
Capital Delivery Program

Using Agile Methods to Improve Capital Delivery Processes

MASSDOT INNOVATION CONFERENCE
October 14, 2020
Process Improvement Results so far in Highway

1. Progress on cutting the time from Project Advertisement to Construction NTP from 222 days in 2018 to around 120 days in some months of 2020.

2. Developed more balanced Advertising Program in FFY2020.

3. Standardizing some maintenance contracts
Quarterly Distribution of Federal Aid Advertisements 2018-2020
What is Agile?

• Originally developed in the software industry; many other sectors are now adapting agile to fit operations

• An iterative approach to managing projects
  - focus is on working on manageable sized items

• Frontline workers are empowered to develop and implement solutions

• Transparent and collaborative working with the project sponsor

• Getting feedback as fast as possible
Modified Agile Structure

Executive Steering Committee

Ad to Bid within 120 days

Project Leadership Team

Project Management Office

Project Development

Bid Documents Before Advertising

Bid to NTP

Maintenance Standardization

Balanced Advertising Program

CDSP Before Advertising before December 1

Bid to NTP in 60 days

Standardize Maintenance Contracts

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Massachusetts Department of Transportation
Highway Division
Highway Division
Agile Approach

1. SMART Goals (Specific, Measurable, Achievable, Relevant and Time-Bound)
2. Cross-Departmental Workstreams
3. Work Is Divided into Manageable, Visible Pieces (2 weeks of work)
4. Frequent, Quick Check-Ins
Workstreams

• MassDOT employees whose daily job responsibilities involve the processes being improved
• Highway Division and MassDOT Shared Services
• Mutual Accountability and Frequent Feedback at daily or weekly scrum meetings
Manageable, Visible Work
# Data Driven Conversations

## Post Process Improvements 11/1/2019 to ...

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<tr>
<th>Task Category</th>
<th>2019</th>
<th>2020</th>
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<tr>
<td></td>
<td>Nov</td>
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<td>Construction Bid Eval</td>
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| al                                   | 69.95  | 56.63  | 68.58  | 65.77  | 56.32  | 91.87  | 75.39  | 74.90  | 62.83  | 51.78  | 58.58  |

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Frequent Feedback

• Scrum of Scrums – Weekly with the Chief Engineer and Highway Administrator
• ESC – Monthly (Chief Engineer, Administrator, Secretary)
• Key questions:
  – Is the workstream on track to complete the work you had set out to complete in this cycle?
  – Do you have any impediments?
Panelist Questions

1. Was it easy/challenging to adopt new Agile practices and thinking and has it been helpful in your everyday work?

2. What do you know now that you wish you knew about Agile before? / Lessons learned

3. How did the Agile framework/structure enable you to establish changes that you wanted to implement in the construction department?

4. As a member of the ESC, what has been your experience with adopting agile and in which ways do you think it can be improved to better suit the organization?

5. Has Agile enabled better collaboration across departments within MASSDOT, and can you give an example of such a case?