Regional Guide to Visual Management Board Roll Out

(aka "How to set up and use Visual Management Boards")

"Lean is about the process. EPA employees are our most valuable resources."

Table of Contents:

Section 1 - Overview:

Use of This Guide: This guide shows how to set up boards, run a huddle, and use the boards.

Purpose:

This guide is intended to be used as a tool for regional and headquarters offices for the national pilot for the SIP lean visual management implementation pilot.[1] For the purposes of this national pilot, SIP visual management will be comprised of a flow board, portions of a performance board, and routine huddles.[2] The overall purpose of SIP visual management is (1) to quickly show where SIP actions are at in the process; (2) to quickly identify actions where SIP revisions are experiencing problems and/or may miss deadlines; and (3) to demonstrate progress towards strategic and process goals.

Materials: The materials required for this project are at the region and headquarters' discretion. A board can be put up using only tape, post-it notes, and a pen or the board could necessitate additional materials including color tabs and other customizable materials that meet your office's needs. The following list is a starting point for materials to consider obtaining or purchasing to set-up a visual management board:

- A large display area (i.e. wall space, etc.)
- Post-it notes or card stock
- Colored tabs
- Printer (and potentially a plotter printer)
- Pens
- Strong Tape (or other method to adhere board to wall)

Definitions:

- Behind Scheduled/Needs Management Attention– This is used to identify SIPs that need additional attention because they have either deviated from the standard process timeline or need additional management attention. This highlight of SIP actions that are behind schedule or need management attention may also be called "Andon" which is a Japanese term for "Lantern" and is used to alert the team to issues
- Flow Board – A visual "map" used to track the movement of SIP activities through the process of EPA's work with the states on SIP development through EPA's final action on the SIP and to identify problems as soon as possible
- Huddle – Short, routine meetings held around the SIP flow board and, if applicable, performance board to discuss successes, problems, and solutions
- Huddle Board – A board (i.e., flow board or performance board) that a group routinely meets at to discuss successes, problems, and solutions

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[1] Feedback from the national pilot will be collected and this guide will be updated and revised for future use as a tool within a region's ongoing management of the SIP visual management boards when a region/office undertakes full EPA Lean Management System implementation.

[2] Flow Board, Performance Board and Huddle are defined within the definitions section of section 1 and further elaborated upon in sections 2 of 3 of this document.

- Kaizen Newspaper (i.e. To Do List or Action Items) - A frequently updated chart listing ideas (in certain instances to address problems that have arisen) and the progress towards their development
- Performance Board – A visual representation of an organizational group (e.g., team, office, branch, division, etc.) that is comprised of multiple elements, including people, metrics, and celebrations that can be used to assess the organization or process.
- Proxy – Card or sticky note on a Flow Board representing a SIP action
- SIPOC = Supplies, Inputs, Process, Outputs, and Customers – A high level way to look at a process
- Tic(k) Sheet – A chart placed next to the flow board that captures (at a high-level) the problems that are delaying action on a SIP
- Visual Management Board – A board (flow or performance) that shows the flow of a process and allows problems to be identified through observation

Section 2 - How To Put Together Visual Management Boards:

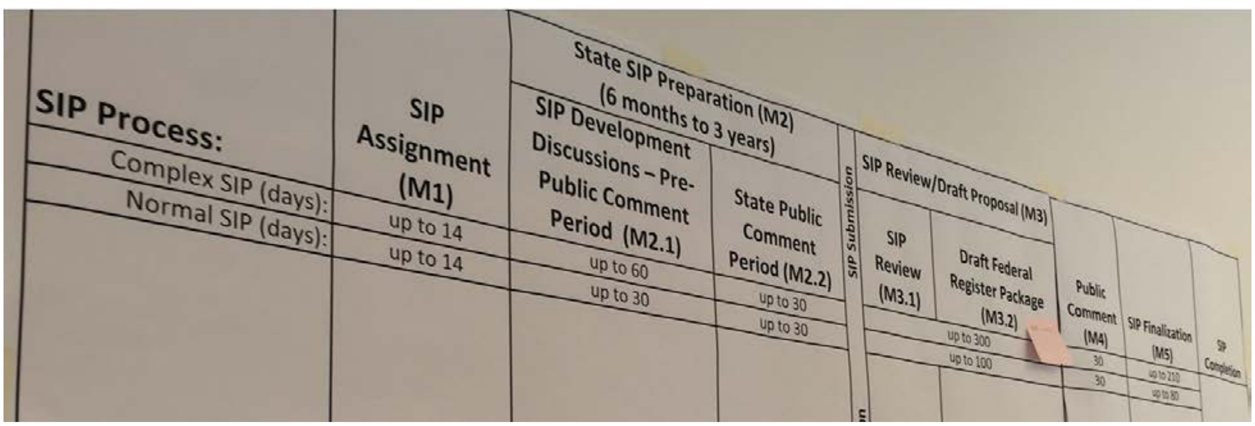
Flow Boards:

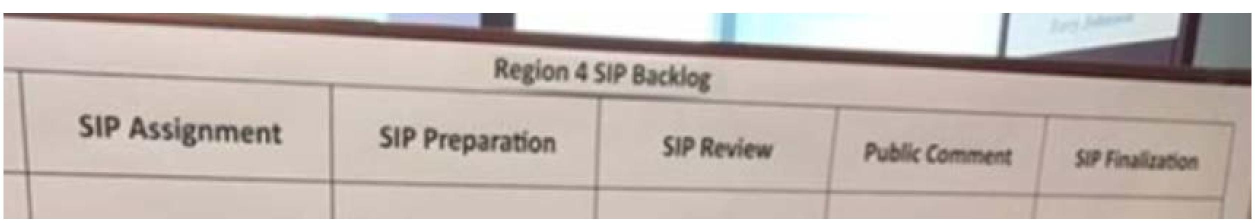
Goal: Demonstrate how SIP actions are moving through the process and show where SIP actions are getting stuck

Minimum Elements:

Flow Board: The workgroup has elected not to set a required national format for the flow boards. Rather, the workgroup identified key minimum elements for all boards. As long as a board has the minimum elements, the board can be arranged as needed to fit spacing considerations and regional informational needs. The minimum elements are: (1) high-level steps, (2) timeframes, (3) individuals involved, (4) behind schedule/needs management attention, (5) proxies, (6) metric collection, (7) a key/legend, (8) standard work, and (9) a tick sheet. To aid in board development, examples of the minimum elements are included throughout this document and in Attachment 1. Customizable templates are included in Attachment 2.

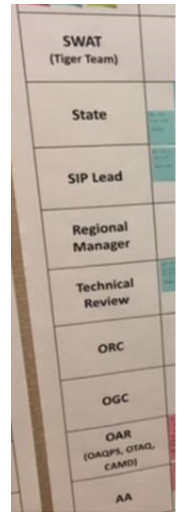
1. High-Level Steps: As part of the new process, **five high-level steps** have been identified: (1) SIP Assignment, (2) State SIP Preparation, (3) EPA's SIP Review, (4) Public Comment, and (5) SIP Finalization. These high-level steps need to be represented on the board. A few examples are below:



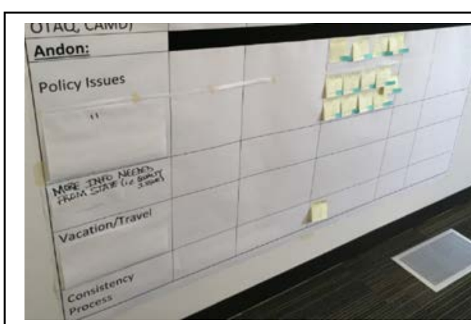


2. Timeframes: High level timeframes for 5 high-level steps established during lean event (see Attachment 5). The timeframes indicate the length of time the SIP is expected to remain in each step and shows how long it has been in the step. The remainder of the timeframes (i.e. for the sub-steps) are to be determined by the Regions (and in consultation with other appropriate Regional and Headquarter's offices).

3. Individuals Involved: In order to demonstrate the various hand offs within the larger identified process steps, Regions (and, as appropriate, Headquarters) are encouraged to review the list below and include the appropriate individuals involved in the SIP process. It is not expected that all individuals named on the flow board will review all SIPs.
   - Examples of who to include in the process:
     - State
     - State Implementation Plan (SIP) Lead or Rule Writer
     - State Manager
     - Technical Reviewer
     - Federal Register Preparer
     - E-Concur
     - Regional Manager
     - Regional Division Director (DD)
     - Regional Administrator (RA)
     - Office of Regional Counsel (ORC)
     - Office of General Counsel (OGC)
     - Office of Air and Radiation (OAR):
       - Office of Air Quality Planning and Standards (OAQPS)
         - Air Quality Assessment Division (AQAD)
         - Air Quality Policy Division (AQPD)
       - Office of Transportation and Air Quality (OTAQ)
       - Office of Atmospheric Programs (OAP)
         - Clean Air Markets Division (CAMD)
     - Assistant Administrator (AA)
     - Office of Federal Register/Pending Publication
     - Backlog/SWAT/Tiger Team

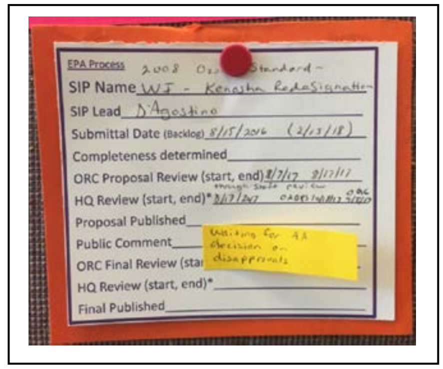


4. Behind Schedule/Needs Management Attention (aka Andon): A section or method to show when a SIP either (1) has deviated from the defined timeline and may need attention or (2) is still with the defined timeframe, but needs management attention. At a minimum, SIP actions that are behind defined timeframes should be highlighted through the region or headquarter's defined method, but it is at a region or headquarter's discretion, if this same method is used to highlight actions that need management's attention but are still within defined timeframes.
   - Potential Display Methods:
     - Can use one line at the bottom of the flow board to capture all andons
     - Can use multiple lines at the bottom of the flow board to further brake down the reason the action is behind schedule or needs management attention. Examples include (use as needed):
       - More Information Needed from State (i.e. policy or quality issue)
       - Policy Issue (national or regional)

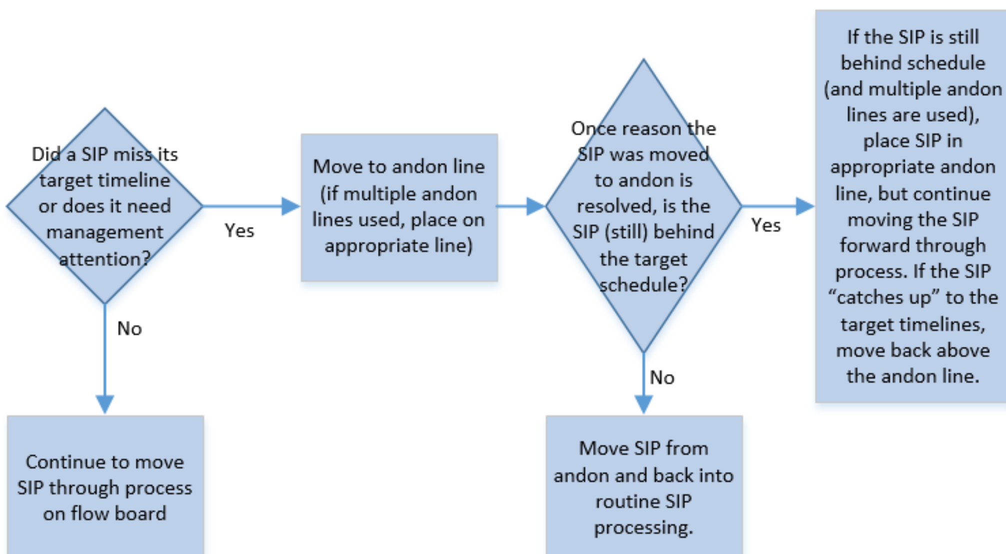


- Vacation/Travel (i.e. senior employees needing to concur on packages)
- Consistency Process
- Missed Timelines (i.e. issue resolved, but as a result of issue SIP is behind timeline)
- Other

▪ If wall space is limited such that an additional line cannot be added, other methods can be used to highlight SIPs that need management attention or are behind schedule.



o If a region chooses to use this section for both missing timeframes and needing management attention, the following outlines the triggering questions and appropriate responses for a flow board that uses an andon line. (If another method is used to highlight these actions, a similar process would be followed. If a region chooses to use this section solely for SIP actions that missed timeframes, a similar set of triggering questions are used, but the references to moving actions based on needing management attention can be ignored.) (Figure 1):



5. <u>Proxies:</u> A proxy is a representation of a SIP action. As the SIP moves through the process, the proxy moves across the board.
   - The proxy will have a regionally defined level of detail (i.e. sub-steps) within the larger high-level steps to show that SIPs are moving through the process. The level of detail will vary,

but should be at a level where it would be updated weekly (either by moving the proxy card or providing a date complete).[3]

- For each regionally defined sub-step identified on the proxy, the region will identify a target timeline. For example, when EPA receives the SIP submission, the Region would estimate the target dates from SIP submission through the publication in the Federal Register for the sub-steps on the Proxy.
- In addition to the target date, the actual date that the sub-step occurs will also be tracked on the proxy.
- Example of sub-steps (See Attachment 3 for example proxy cards)
- *Suggestion – While putting up the board, for existing SIPs in house, only complete the actual dates for where the SIPs currently are in the process and provide target dates going forward. If time permits and the information is easily available, a region may back populate key dates; however, it is not required at this time.*

6. Metrics: Metrics will aid in telling us whether we are making progress towards our national (strategic) goals as well as if the SIP development and review process is improving. The goal of metrics is to collect useful information for the team and their management to address small problems before they become larger problems. Metric data will be collected from the flow board and eventually displayed on performance board.
   - For the purposes of this national pilot, the national metrics of backlogged SIPs and the number of nonattainment areas will continue to be tracked and reported on appropriate bowling charts. Additionally, graphical representations of the national metrics should be displayed by the flow board or on a performance board.
   - Additionally, for the national pilot, Regions and Headquarter's Offices are strongly encouraged to experiment with collection of 2-3 locally useful metrics from their flow board, and to graphically the outcomes of the metrics either by the flow board or on a performance board. A few potential process metrics include: (1) the effectiveness of early engagement with States in the development of SIP submittals, (2) if we are meeting our statutory timelines, (3) how long it is taking us to take action on SIPs, (4) the effectiveness of our early engagement at identifying approvability issues, (5) the number of SIP actions held up by issues identified in the SIP issues database, and (6) how long key steps in the SIP development and review process are taking. Further detail on how the above metric data could be defined and collected is included in Attachments 3 and 4.
   - Metrics will be generated from the flow board through collection of data on the proxies. The data from the proxies will be compiled to generate charts to assess the process and progress towards agency priorities. These charts will be placed next to the flow boards during the pilot and on the performance boards once full ELMS deployment occurs. An example proxy with suggested questions to gather the metrics is included in Attachment 3. An example of how this data will be represented on the performance board is outlined in Section 4.

[3] Proxy cards can include all details on the card placed on the flow board. As a secondary option, based on space, a simple proxy card (with minimal information) can be placed and moved on the board with a secondary, more detailed proxy card placed next to the board. One Region has placed the print outs of the more detailed proxies on a clip board next to the flow board.

7. Key/Legend: The key and legend are by the board to provide additional information for those that may need additional orientation to understanding the board or proxies (see Attachment 3).

8. Standard Work: Each Region will develop standard work for their visual management boards. Standard work outlines uniform expectations for the Visual Management Boards. At a minimum, standard work will include (1) the date, time, and length (15 minutes) of the huddle, (2) when the board needs to be updated – including moving proxies and updating the to do list, and (3) a standard agenda. If a region wishes, standard work may also include (4) who runs huddle, takes notes, and updates the metrics and (5) capturing key decisions made in the notes of the huddle.

9. Tic Sheet: The tic sheet is a paper placed by the board (see examples in Attachment 6) that can serve two purposes:
   - Andon – A tic sheet can be used to document the reasons that SIP proxies were moved to the andon portion of the board
   - Stalled Submissions (likely in andon) – A tic sheet could be used to mark where in the process the SIP is stalled (i.e., ORC, OAQPS, Management Review) and could be the basis for a larger problem-solving event (i.e. a Kaizen event) on the stalled portion of the process

Self-Check: A standard checklist is included as Attachment 7 as a self-check to ensure the created flow boards have all the necessary elements.

Optional Items: As the need arises, a region or headquarters can customize their board. A few examples are discussed within this document.

- Color coding of proxies or use of flag on proxies – can use different proxy colors or flags to show indicate:
  - management attention needed (if a region chooses to highlight a SIP action needing management attention in a method different that SIP actions that are behind schedule);
  - that a specific SIP is a high priority SIP action (i.e., a Key Performance Indicator); or
  - that a SIP is nearing the end of a timeframe.

  (See Attachment 8 for additional details)

- “Back-and-Forth” Board – Ideally, when there is back and forth discussion (i.e., comments on a document) between various individuals or offices, the transitions will be captured on a proxy card. However, when inadequate space is available on a proxy card, a region or office may create a separate flow board to track the movement back and forth of a discussion/document between individuals or offices while in an overall “step” or “sub-step” of the process.

<u>Performance Boards[4]:</u>

<u>Goals:</u>

- Celebrate successes
- Show progress towards goals
- Problem Solve

<u>Minimum Elements (Version 1.0 Requirements) of Performance Boards:</u> Items marked with an asterisks (*) are part of the national SIP pilot

- People
- Celebrations – This is for highlights of work completed and good things that individuals in the branch, team, etc. want to share. Celebrations do not have to be SIP related.
- Metrics (Service and Quality)*[5]
- SIPOC
- Action Items (Kaizen Newspaper)*
- Standard Work*
- Huddle Agenda*
- Title*
- Attendance Sheet - Identifies who was present for the huddle This is printed out and placed near the performance boards. Attendance it taken to identify if individuals need to be updated following the huddle.

Self-Check: A standard checklist is included as Attachment 7 as a self-check to ensure the created performance boards have all the necessary elements.

[4] For purposes of the national pilot, only flow boards and certain elements of the performance boards will be deployed. The remainder of the performance board information is for future use when a region is doing full ELMS deployment.

[5] Metrics for the performance boards will be generated from flow board data.

Section 3 - Huddles:

Goal: Quick, routine meeting to discuss forward progress of SIPs and to share challenges being faced so they can be expeditiously identified for resolution.

Details: The who's and how's of a huddle

- How often should a team/branch/section huddle?
  - Initially weekly, then can assess and move to a greater or lesser frequent huddle as is determined to be appropriate.
- Who attends the huddle?
  - Attendance is at the manager's discretion. However, it is encouraged that everyone involved in the SIP process attend, although some (i.e., ORCs and Technical Staff) may attend less frequently (i.e. once or twice a month rather than weekly).
- How can remote participants be incorporated into a huddle?
  - Have huddles on a day that all members of a team/branch/section are requested to be in the office, if applicable.
  - Incorporate remote participants:
    - Using Skype; or
    - Sending a photo of the board and a conference line prior to the huddle. If a proxy needs to be moved have an employee in the office move the proxy for the remote participant.
- Who runs the huddle?
  - There is no requirement for who runs the huddle. This is left to regional discretion and it could be a manager or a staff member that leads the huddle.
- Who takes notes?
  - This is left to regional discretion. However, notes are encouraged for those that are not able to attend the huddle.
- Who makes decisions on follow-up activities?
  - Assignment of work is left to the manager's discretion.
- Who ensures the huddle ends promptly?
  - Designation of a timekeeper is encouraged.

Ground Rules: Can be customized

- Lean does not seek to blame – simply to understand
- No blame associated with being in the "andon" line
- Respect
- One person talking at a time
- Stay on task
- Follow Standard Work
- Huddles are 15 minutes

Agenda: Posted as part of Visual Management Boards

- Attendance
- (If applicable) Move any proxies that need to be moved

- Flow Boards - behind schedule or needs management attention
  - If behind schedule, discuss why (if previously discussed and nothing changed, no need to discuss)
  - Do any proxies need to be drawn to management attention?
- Performance Boards:
  - Actions Items/Kaizen Newspaper Section – This section of a performance board captures ideas for problem solving and potential new efficiencies as well as progress toward implementing the ideas. An example is included:

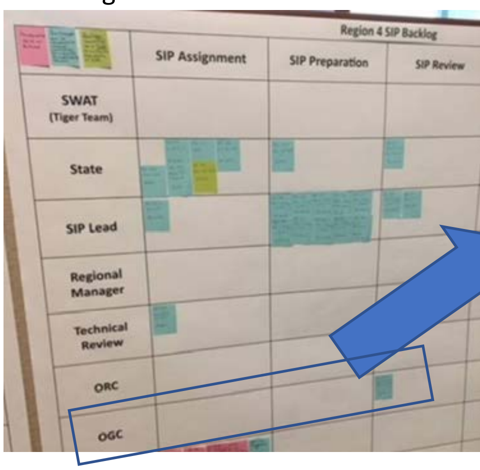
Improvement Actions									
#	Assigned Date	Action to be Taken	Action Owner	Due Date	Percent Complete				Date Complete
1					25	50	75	100	
2					25	50	75	100	
3					25	50	75	100	
4					25	50	75	100	
5					25	50	75	100	
6					25	50	75	100	

  - Metrics (progress?)
- Celebrations
- End Huddle

Section 4 - Interaction between boards:

Regional Board with Headquarter's Boards: Once regions and headquarters have deployed their visual management boards, when a region updates their regional flow board to indicate that the next person responsible for reviewing the SIP action is located in headquarters, the following two steps will occur: (1) the region will notify the appropriate headquarters office/division (i.e. OGC, OAQPS, etc.) through the agreed upon method (i.e., bi-weekly calls, e-mailed spreadsheet, etc.); and (2) the designated employee in the receiving office will update the appropriate headquarters division/office to reflect the updated information. As part of the notification, conversations are expectations are encouraged to discuss timelines and individuals involved in the review process. (Figure 2)

Draft Regional Board:



Initially, means of communication between Regions and will continue as currently completed (Sharepoint folders, spreadsheet, incorporate into standing bi-weekly calls, e-mails, etc.). As part of communication, expectations on timelines and individuals involved will be discussed.

Draft HQ Board (OGC):

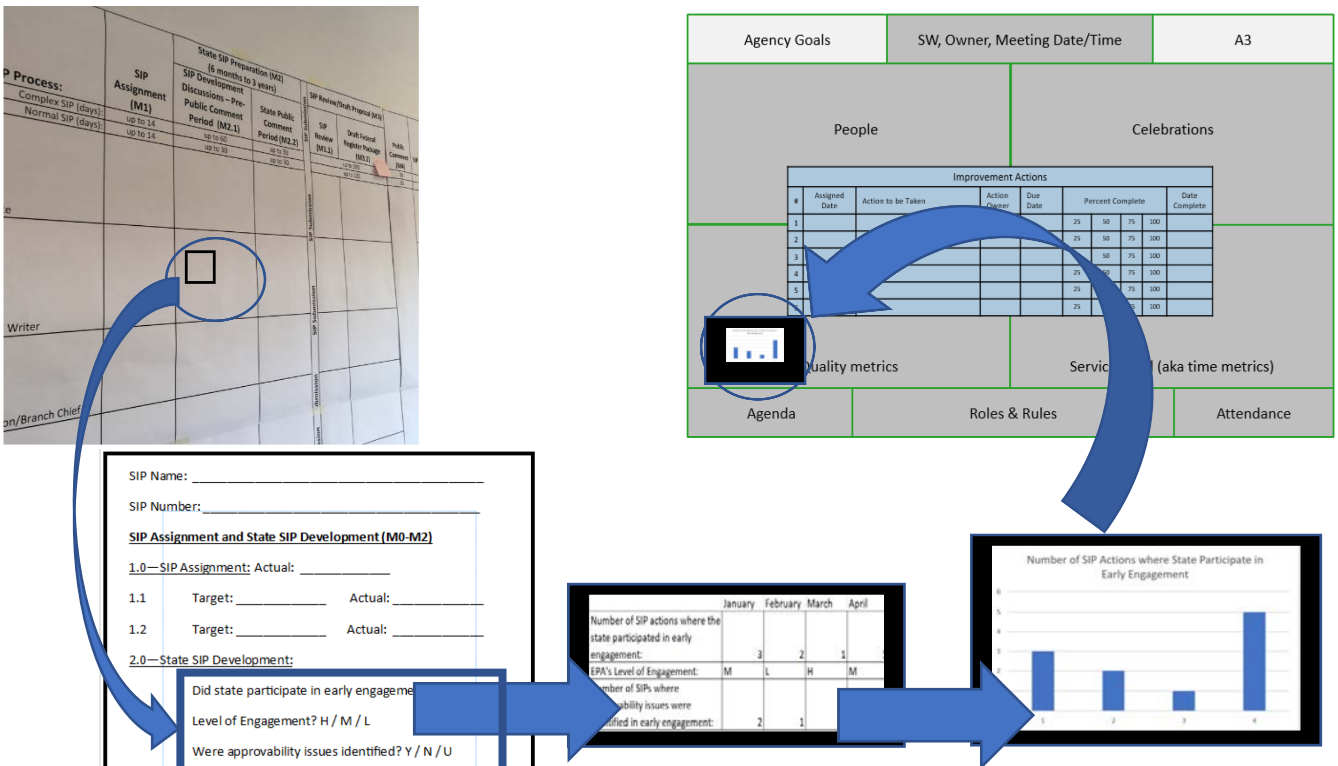
Type of SIP-related Action	Pre-Submittal (Working w/state)	Proposed Package (Reviewing submittal)	Final Package (Reviewing comments)
iSIP (non-transport)			
Interstate Transport			
Ozone attainment plans			
PM attainment plans			
SO2 attainment plans			
Misc. (lead plans, reclassifications, etc.)			
Other (Haze & NSR/PSD)			

Connections Between Flow Boards and Performance Boards[6]:

How do Flow Boards and Performance Boards Work Together? This guide provides two examples of interactions between the flow boards and the performance boards: (1) an example on metrics displays and (2) an example on problem solving.

1. Metrics Example: Figure 3

Flow Board: Performance Board:



Metrics Spreadsheet:

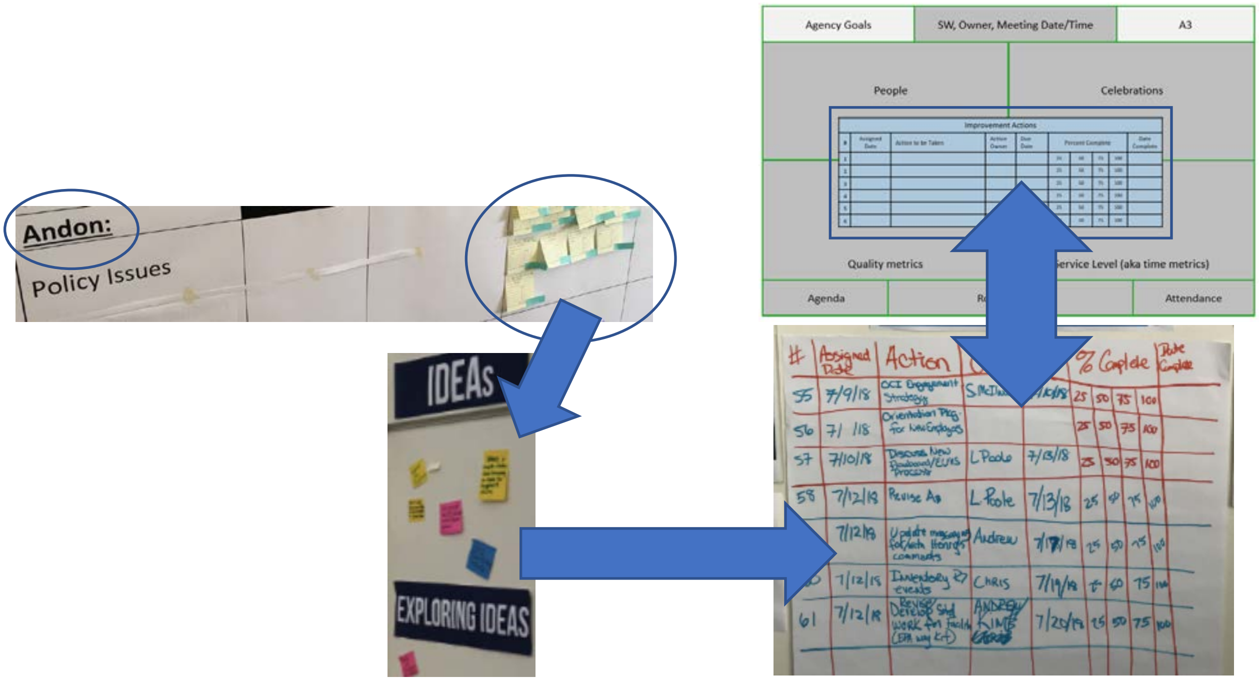
Example Proxy with Metric Related Questions:

Example Chart (Generated from Collected Metrics): Show progress towards strategic and process goals

[6] Full performance boards are not required during the national pilot for the SIP visual management boards. This information is included for when a region enters full ELMS deployment.

2. Problem Solving: When a SIP is moved to the behind schedule/need management attention portion of the board, a mark is placed on the tic sheet and ideas are generated on how to address the problem. The generated those ideas are placed on the Action Items portion of the Performance Board. (Figure 4)

When a Proxy is Moved to Andon portion of the Flow Board: Performance Board:



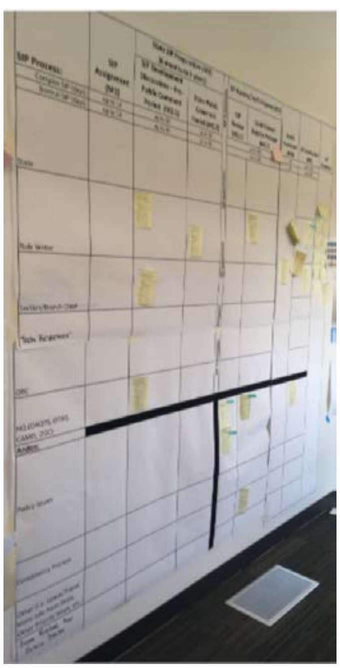
Section 5 - FAQs:

- Question 1: Can individual’s names be placed on proxy cards?
- Answer 1:
    - Names may or may not be included on proxy cards, dependent on the region or headquarters’ office.
    - If your region or office does not wish to include individual’s names on the proxy cards, the names can simply be left off the proxy card or a surrogate item may be used in place of an individual’s name.

- Question 2: All boards have to be exactly the same
- Answer 2: Boards do not have to be exactly the same. They should be similar (i.e. different formats, but with similar information)

- Question 3: How will the data be generated for the performance measures?
- Answer 3: The data for the performance measures is generated from the flow board. Further examples are provided in Attachment 3.

Attachment 1: Flow Board Examples:



Performance Board Example:

Attachment 2:

Board Templates:

Flow Board:

		State SIP Preparation (M2) (6 months to 3 years)			SIP Review/Draft Proposal (M3)				
SIP Process:	**SIP Assignment (M1)**	**SIP Development Discussions – Pre-Public Comment Period (M2.1)**	**State Public Comment Period (M2.2)**	**SIP Submission**	**SIP Review (M3.1)**	**Draft Federal Register Package (M3.2)**	**Public Comment (M4)**	**SIP Finalization (M5)**	**SIP Completion**
Complex SIP (days):	up to 14 days	up to 60 days	up to 30 days		up to 300 days		30 days	up to 210 days	
Normal SIP (days):	up to 14 days	up to 30 days	up to 30 days		up to 100 days		30 days	up to 80 days	
State									
Rule Writer				SIP Submission					
Section/Branch Chief									
Technical Reviewer				SIP Submission					
ORC									
OGC									
OAR				SIP Submission					
AA									
Andon:									
Policy Issues									
Consistency Process									
Other (i.e. Leave/Travel, More Info from State, Other Priority Work, etc.)									
Resolved, but Behind Timelines									

Performance Board Template:

Improvement Actions									
#	Assigned Date	Action to be Taken	Action Owner	Due Date	Percent Complete				Date Complete
1					25	50	75	100	
2					25	50	75	100	
3					25	50	75	100	
4					25	50	75	100	
5					25	50	75	100	
6					25	50	75	100	

Attachment 3:

Example proxy card and legend to aid in completing proxy: (High-Level Steps are highlighted in yellow. Items highlighted or outlined in green are examples of how to collect metric data. The remainder of the information is sub-steps and left to Regional discretion.)

Legend

SIP Name: ______________________

SIP Number: ______________________

SIP Assignment and State SIP Development (M0-M2)

1.0—SIP Assignment: Actual: __________

1.1 Target: __________ Actual: __________

1.2 Target: __________ Actual: __________

2.0—State SIP Development:

Did state participate in early engagement? Y / N

Level of Engagement? H / M / L

Were approvability issues identified? Y / N / U

2.1—Early Engagement:

2.1.1 Target: __________ Actual: __________

2.1.2 Target: __________ Actual: __________

2.1.3 Target: __________ Actual: __________

2.2—State's Public Comment Period:

2.2.1 Target: __________ Actual: __________

2.2.2 Target: __________ Actual: __________

2.2.3 Target: __________ Actual: __________

2.2.4 Target: __________ Actual: __________

SIP Assignment:

1.0 (Start - Day 0) – EPA triggering action (7 days) or State Initiated action (14 days) - State manager review SIP Development Plan and complete SIP Intake Form. Make recommendations for:
- Regional and HQ team
- Standard Processing vs. Parallel Processing (if state requested & willing to participate in early engagement)
- Simple or Complex SIP Action
- Target Dates

1.1 Meet with manager to discuss recommendations

1.2 Manager makes SIP assignment

State SIP Preparation: Overall Timeframe: 6 months to 3 years/EPA review timeframe for draft SIPs – Simple SIPs = 30 days and Complicated SIPs = 60 days

- Did the state engage in pre-public comment period SIP development discussions? (Y/N)
- Review Component: Approvability

2.1 - SIP Development Discussions – Pre-Public Comment Period (May be iterative process)

2.1.1 State submits draft with enough information to provide feedback (including approvability issues) - State Manager sets timeline to gather and compile feedback (engages HQ as needed)

2.1.2 State Manager compiles feedback

2.1.3 (30-60 days) State Manager Provide Feedback to State

2.2 - State's Public Comment Period

2.2.1 EPA receives notice of State public comment period – State Manager sets timeline to gather and compile feedback (engages HQ as needed)

2.2.2 State Manager Compiles Feedback

2.2.3 State Manager drafts comment letter for management review (if needed)

2.2.4 (30 days) Management (APM or higher) completes review of letter and letter is sent (Feedback Provided)

SIP Name: ______________________________

SIP Number: ______________________________

EPA's SIP Review/Drafting of Fed. Register Proposal (M3)

3.1—SIP Review: SIP Submittal Date:__________

3.1.1	Target:	Actual:
	Were new approvability issues identified? Y / N	
3.1.2	Target: __________	Actual:__________

3.2—Draft Federal Register Notice:

3.2.1	Target: __________	Actual:__________
3.2.2	Target: __________	Actual:__________
3.2.3	Target: __________	Actual:__________
3.2.4	Target: __________	Actual:__________
3.2.5	Target:__________	Actual:__________
3.2.6	Target:__________	Actual:__________
3.2.7	Target:__________	Actual:__________
3.2.8	Target:__________	Actual:__________
3.2.9	Target:__________	Actual:__________

Was the proposed action held up by a dashboard issue? Y / N

SIP Name: ______________________________

SIP Number: ______________________________

Public Notice/SIP Finalization (M4-M5)

4.0—Public Notice:

4.1	Target:__________	Actual:__________
4.2	Target:__________	Actual:__________

5.1—SIP Finalization:

5.1	Target:__________	Actual:__________
5.2	Target:__________	Actual:__________
5.3	Target:__________	Actual:__________
5.4	Target:__________	Actual:__________
5.5	Target:__________	Actual:__________
5.6	Target:__________	Actual:__________
5.7	Target:__________	Actual:__________
5.8	Target:__________	Actual:__________
5.9	Target:__________	Actual:__________
5.10	Target:__________	Actual:__________

Was this action held up by a dashboard issue? Y / N

Completed by statutory due date? Y / N

State Submits SIP Revision to EPA

EPA's SIP Submittal Review (and drafting of Proposed Rule Federal Register: Simple SIPs = up to 100 days/Complex SIPs = up to 300 days

3.1 - EPA's SIP Review
- 3.1.1 State submits SIP
- 3.1.2 (14 days) Review SIP submission for approvability issues
  - Where new (not previously discussed with state) approvability issues identified? (Y/N)
- 3.1.3 (60 days) Completeness Review (If needed, draft and send letter)

3.2 - Draft Proposed Rule Federal Register Notice
- 3.2.1 Draft TSD completed
- 3.2.2 Draft Federal Register proposal completed
- 3.2.3 Initial management review completed
- 3.2.4 Initial ORC review completed
- 3.2.5 Headquarter review (if applicable) completed
- 3.2.6 Final ORC review completed
- 3.2.7 Section chief final review completed
- 3.2.8 E-Concur completed
- 3.2.9 RA Signature

Public Notice: 30 days

4.1 FR Publication Date

4.2 Close of Comment Period

SIP Finalization: Simple SIPs = up to 80 days/Complex SIPs = up to 210 days

5.1 Receives and assess comments

5.2 Discussion with Management:
- 5.2.1 Determine if EPA will finalize action as proposed
- 5.2.2 Determine timelines

5.3 Complete response to comments

5.4 ORC initial review completed

5.5 Section chief initial review completed

5.6 HQ review completed (including portal submission and review/integration of HQ's comments)

5.7 ORC final review completed

5.8 Section chief final review completed

5.9 E-Concur completed

5.10 RA Signature

Attachment 4:

National Metrics:

- Number of Backloged SIPS
- Number of Non-Attainment Areas

Potential Process Metrics:[7]

1. Early Engagement:
    a. Number of submitted SIPs where EPA engaged early
    b. Number of submitted SIPs where EPA did not have the opportunity for early engagement and why
2. Number of Days:
    a. Median number of days from submittal to final action on SIPs
    b. Median number of days from submittal for Early Engagement SIPs to final action on SIPs.
    c. Median number of days from submittal to final action for "No Early Engagement" SIPs
3. Percentage of time EPA action on SIP occurs within statutory timeframe
4. Number and percent of Early Engagement SIPs where new approvability issues are raised after the SIP is submitted
5. Number of SIPs held up because of unresolved issues on the SIP Issues Database
6. Number of days it takes to complete key steps in the process
    a. Early Engagement – When a state provides an early draft, is EPA providing feedback (i.e. identifying approvability issues) to the state within the requested time period of between 30-60 days?
    b. Public Comment Period – Is EPA providing feedback (i.e. identifying approvability issues) within the state's public comment period?
    c. The length of time between SIP submission received and proposal published in Federal Register (for simple and complex SIPs)
    d. The length of time between the close of public comment period and the publication of the final rule in the Federal Register (for simple and complex comments)

[7] At a future date, there will be a mechanism (template spreadsheet, Sharepoint Site, and/or SPeCS) created further define national process metrics and to compile the process metrics.

Attachment 5:

High-Level Timelines

From SIP Lean Event Control Plan:

- Total: 540 days
    - Complex SIP: 540 days (after SIP submission)
    - Simple SIP: 210 days (after SIP submission)
- By Step:

SIP Process:	SIP Assignment	State's SIP Preparation (Overall timeline – 6 months to 3 years. Times below for providing feedback to state)	EPA's SIP Review and Drafting of Federal Register	Public Comment	SIP Finalization
Complex SIP:	7 days	60 days	Up to 300 days	30 days	Up to 210 days
Simple SIP:	7 days	30 days	Up to 100 days	30 days	Up to 80 days

Attachment 6:

Tic Sheet Examples

Tick Sheet

Reason for Behind Schedule/Need Management Attention	**September**	**October**	**November**	**December**

Attachment 7:

Office of Continuous Improvement's (OCI) Checklist for Flow Boards and Performance Boards

EPA Lean Management System

Leader Weekly Checklist for Visual Management and Huddles[8]

Performance Boards

Are the elements of the tool in place?

☐ Sections for people, celebrations, service, and quality.

☐ The suppliers, inputs, process, outputs, and customers (SIPOC) are clear.

☐ An action registry with assign date, action to be taken, due date, percent complete, and complete date.

☐ A huddle agenda is posted.

☐ Measures on data charts that move at least weekly.

☐ Data charts that are easy to read and interpret.

☐ Identification of who is responsible for performance board updates.

Is the tool current?

☐ The action registry is up to date (with past, current, and future dates).

☐ Charts contain past, current and future data.

Are the targets clear?

☐ Data charts include clearly identified targets that are both ambitious and achievable.

Is there evidence of action when targets aren't met?

☐ There is at least one entry in the action registry for any target not met.

☐ The action registry includes progress updates for each action.

☐ Each entry on the action registry has an owner and a due date.

[8] For purposes of the national pilot, not all elements of the performance board are required.

Flow Boards

Are the elements of the tool in place?

☐ Clearly identified phases (or steps) for the workflow.

☐ Proxies for the widget (aka SIP action) exist for all work in progress.

☐ A section for items in andon condition (i.e., the work that is behind schedule).

☐ An andon tic sheet to document reasons work got behind schedule.

☐ Identification of who is responsible for flow board updates.

☐ A key or legend.

Is the tool current?

☐ Proxies are in the correct places on the board.

☐ Information on each proxy is current.

☐ New proxies have been added as necessary.

Are the targets clear?

☐ Specific timeframes exist for each phase (or step) of the workflow.

☐ Proxies include target dates and actual dates.

Is there evidence of action when targets aren't met?

☐ There is at least one entry on the andon tic sheet for any work that is behind schedule.

Huddle Meetings

☐ Meetings scheduled on a weekly basis

☐ Meeting began on time

☐ Team members are regularly present at and participate in the huddle

☐ Action registry reviewed for completed/overdue actions at the beginning of the meeting

☐ Team members discussed performance data

☐ Team members discussed process flow

☐ Deviations from performance target discussed and placed on action registry

☐ Deviations from flow discussed and recorded on andon tic sheet

☐ Leader asked for celebrations and process improvement ideas

☐ Huddle ended on time (i.e., lasted less than 15 minutes)

Attachment 8:

Optional Additions to Flow Boards