Background

VT PSD initially engaged Navigant Consulting, Inc. (Navigant) in October 2012 to assess administrative efficiency and business process metrics for the two Vermont energy efficiency utilities (EEUs), Efficiency Vermont (EVT) and Burlington Electric Department. Phase II of this project commenced in February, 2014 to further review additional business processes identified and mapped by the two EEUs in Phase II of the Administrative Efficiency Evaluation. Navigant submits this memo as the deliverable for the EVT portion of task 1 of Phase II of the project.

Under task 1 of Phase II, Navigant conducted meetings with key personnel from EVT to review process mapping and process improvement activities performed for three of EVT’s critical business processes. These processes are:

- Engineering Custom Project process (“Custom”) process
- Home Performance with ENERGY STAR® (HPwES) process
- Residential New Construction (RNC) process

EVT’s process owners explained the approach used in the value stream mapping (VSM) sessions, overall importance of these processes, described the process goals and objectives, and presented a detailed overview of the activities documented in the process maps. EVT further described the ongoing process improvement activities that were identified based on the process mapping exercises. Navigant also reviewed process improvement related documents that EVT made available following the meetings.
Executive Summary

Based on our assessment, Navigant concludes that EVT’s key business process improvement efforts meet the requirements outlined by VT Public Service Boards (PSB) Administrative Efficiency Quantifiable Performance Indicator milestone for December 31, 2013. Navigant’s assessment addresses three critical areas based on our understanding of the VT PSB Order and based on our experience with continuous process improvement activities:

Key business process improvement approach – Similar to Phase I, EVT followed the Lean approach to process improvement, which is applied across a multitude of industries and highly respected among practitioners. This approach can be applied quickly and has comparatively low training cost.

Critical business process selection – In 2012, Navigant provided EVT and BED a list of 15 key business processes for the energy efficiency function, based on our experience working with a broad base of energy efficiency utilities. EVT selected a subset of ten key business processes from this list, using the definition for key business processes outlined by the Baldrige Performance Excellence Program. From its list of key business processes, EVT selected the Metering process and the Prescriptive process for the initial process improvement in Phase I. For Phase II, four additional business processes were selected to undergo process mapping in 2013. These processes were:

- Demand Resources Plan Proceeding (DRPP) process
- Engineering Custom Project process (“Custom”) process
- Home Performance with ENERGY STAR® (HPwES) process
- Residential New Construction (RNC) process

All four of these processes are key business processes in the energy efficiency industry. The process selection was based on a decision matrix that EVT developed for the purpose of selecting the most appropriate remaining business processes for improvement.

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2 The Baldrige Performance Excellence Program is a prestigious nationwide quality program that certifies companies meeting stringent criteria of quality and performance.
3 This assessment does not address the process improvement activities associated with the DRPP process, as this multi-stakeholder process is periodic and complex. The VSM activities conducted for the DRPP process served to convene stakeholders and identify improvement actions that can be immediately employed for better communication and interaction during the current DRPP.
4,5 It should be noted that while the HPwES and RNC processes were not explicitly defined on the initial list of 15 key business processes Navigant provided in 2012, these two program-specific processes encompass aspects of 9 of the 15 functionally-defined processes (i.e., applicable to any specific EE program).
Key process improvement activities – EVT conducted a series of steps to improve upon its key business processes. For all three processes Navigant reviewed, EVT determined process improvement target metrics that would go along with the development of process improvements. The team documented the three future-state processes and determined an implementation plan for the identified improvements in the form of an “A3” document. EVT continually measures the progress of these improvements and the process performance of all three processes to track the impact of changes and to identify further opportunities for continuous improvement.

Following our analysis, Navigant developed a set of recommendations that may be valuable to EVT in improving the key business processes.

Introduction

Navigant reviewed the methodology EVT used for developing, maintaining and updating key business processes. Further, we have developed recommendations that EVT may consider to further improve its key business processes. We considered three areas in assessing EVT’s methodology:

1. Key business process improvement approach
2. Critical business process selection
   a) Process identification method for key business processes
   b) Process selection method for processes to be improved
3. Key process improvement activities
   a) Determination of process improvement target metrics
   b) Development of process improvements
   c) Documentation of key business process
   d) Implementation of process improvements
   e) Measurement of process performance on ongoing basis
   f) Continuous key business process improvement

Navigant’s review of EVT’s Custom, HPwES, and RNC key business processes included the following sources of information:

- Discussions with EVT at the February 18, 2014 “kickoff” meeting which initiated this review
- Review of EVT’s “Key Business Process Improvement” reports for each of the 3 key business processes we assessed
- Detailed interviews with the EVT Value Stream Managers and other EVT employees on March 19, 2014
- Review of other documentation (e.g., “A3” documents, baseline metric data) provided at and after the March 19 meetings by the EVT Value Stream Managers
- Follow-up phone discussions with the EVT personnel as needed for further clarification
Key Business Process Improvement Approach

EVT’s Approach

Similar to the first two business processes mapped in Phase I, EVT approached continuous process improvement for Phase II by utilizing Lean tools and methodologies with the aim of achieving greater administrative efficiency. EVT partnered with the Vermont Manufacturers Extension Council (VMEC) to facilitate its Lean-based process improvement activities. The initial Lean tool used by EVT for each key business process was Value Stream Mapping, which was employed for each of the three key business processes in 2-day workshops led by a trained facilitator from VMEC. The Value Stream Manager (VSM) for each key business process was involved, and other participants of the workshop were selected based on their level of engagement with key business processes and with the intent that participants would be involved in implementing solutions to some of the problems identified during the Value Stream Mapping workshop.

Value Stream Mapping identifies each of the major process steps between process inputs and outputs, and estimates lead time and cycle time for each step. Opportunities to reduce waste (and improve lead time and cycle time) are identified at each step in the form of “kaizens”, which then undergo further solution planning by Kaizen Teams following the VSM workshop. Solutions to each Kaizen are documented and their progress managed in an “A3” document, which is an 11”x17” document which includes team members, the problem statement, analysis/root cause, goal/desired future state condition, implementation plan, results, issues, and next steps. As solutions are implemented, the A3 undergoes subsequent revisions to track progress, and the overall progress of all Kaizen teams is monitored by the VSM for each key business process.

In addition to the Value Stream Mapping, EVT also determined baseline metrics for each of the three key business processes Navigant reviewed in Phase II. The Value Stream Mapping and determining the baseline metrics partially fulfill the VT PSB Order referenced above.

Assessment of EVT’s Approach

Lean is a credible approach to continuous improvement. Lean’s strengths are:

- Fast and easy to learn and apply, allowing students to apply their knowledge quickly,
- Concentrates resources in a short timeframe to identify quick, easy and intuitive improvements, and
- Frequently used as a first approach to capture the “low hanging fruit” of process improvement activities.

These aspects of Lean match well with EVT’s requirements for introducing continuous improvement, as outlined in VT PSB’s administrative efficiency order. Navigant believes that Lean is the right approach for EVT at this point in time.

Furthermore, we feel that EVT’s application of Lean for identifying and managing the implementation of process improvements has been productive, specifically for the following reasons:
Process participants (in some cases including organizations outside of EVT) were involved in the Value Stream Mapping workshops, which builds buy-in for the implementation of solutions.

- A trained outside facilitator was used for the VSM workshops, allowing the EVT participants to effectively and efficiently participate.
- Responsibilities for leading and executing the solutions were clearly defined with the Value Stream Managers and Solution Teams.
- A simple, effective tool is in place (the A3 documents) for managing the implementation of solutions.

**Recommendations**

Navigant recommends staying with the Lean approach for the initial process improvement effort for additional business processes as they are identified for improvement. The Lean approach best supports EVT’s task to improve upon its critical business processes, and is a simple and high-value tool to use during initial process improvement activities for a given process. EVT will be able to make significant process improvements for newly-identified or significantly changed business processes using Lean, essentially reaping the “low hanging fruit”.

Following the 2012-2014 evaluation period, and as processes are revisited, Navigant recommends continuing to employ the Lean methodology as the initial business process improvement approach. EVT should also continue to use the essential elements of its current methodology, which includes the following major steps:

1. Define problem
2. Map current state process
3. Identify opportunities for improvement
4. Establish performance metrics
5. Check impact of improvement against performance metrics

As specific process improvement opportunities are identified, EVT may want to expand to additional more sophisticated continuous improvement methodologies depending on the nature of the problems identified.
Critical Business Process Selection

In this assessment area, Navigant assessed EVT’s activities around:

a) Process identification method for key business processes, and
b) Process selection method for processes to be improved.

EVT’s Approach

In 2012, EVT followed the Baldrige National Quality Program guidelines in determining its key business processes. To determine its key business processes, EVT employed a committee (Key Business Process Committee) consisting of four Operations Leaders (Director of Engineering, Director of Operations and Implementations, Director of Strategy, and Director of Finance) which was led by the EVT Resource Manager and supported by the VEIC Quality Manager. The Key Business Process Committee conducted several meetings to identify EVT’s key business processes and concluded the below list:

1. Custom project process
2. Prescriptive project process
3. Metering (FCM and individual project metering)
4. Demand Resource Planning Process (regulatory submissions and reporting)
5. Technical Quality Assurance
6. Project management
7. Managing the partner process: market transformation through support of market players
8. Planning and budgeting process
9. Coordination and management of subcontractors
10. Internal communications

In addition to the ten key business processes listed above, Navigant identified five additional key business processes for consideration by EVT, including:

1. Key Account Management
3. Project Assistance (data entry, incentive check processing, site visits, plan reviews)
4. Marketing and External Communications (includes website maintenance and updating)
5. Customer Service (includes Call Center)

Following the identification of EVT’s key business processes, the Key Business Process Committee prioritized processes for the Phase I business process improvements. An evaluation matrix was developed to compare processes that were nominated. The criteria for evaluation were:

- Suitability of the process for EVT team to apply the fresh learning of Lean methodologies

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• Level of resources utilized to perform the process
• Importance of the process in delivering value to the customer
• Importance of the process in transforming energy efficiency resource acquisition in Vermont
• Number of transactions performed in the process
• Total annual hours of labor for the process

To emphasize the importance of selecting a process that fosters hands-on learning, the Key Business Process Committee applied a higher weight to the first criterion. The processes selected were the Prescriptive process and the Metering processes.

For Phase II (2013), two of the previously identified key processes (Custom and DRPP) were selected for further process mapping, along with two additional processes not specifically identified in Phase I as Key Business Processes (HPwES and RNC). To arrive at this selection, the evaluation criteria identified in 2012 were applied informally, but EVT also developed a matrix (shown in
Figure 1 below), which showed that the HPwES and RNC processes incorporate 9 of the 15 more granular Key Business Processes originally identified by Navigant and EVT. This matrix was shared with the VT PSD at that time.

Ultimately, the DRPP, Custom, HPwES, and RNC processes underwent Value Stream Mapping workshops, and the latter three of these processes continue to undergo process improvement activities which are tracked in the A3 documents. For the DRPP, the Value Stream Mapping workshop served as an opportunity for all stakeholders to come together and determine how to perform this complex, fluid, multi-party process better in the future. Thus, the typical matrix scoring did not apply to the DRPP process. Initial process improvement activities were tracked by several teams using A3 documents. As the second triennial DRPP began in summer of 2013, EVT and DPS transitioned from the A3-based process improvements to DRPP-specific activities founded on revised approaches developed by the VSM teams.

In addition to the prioritization criteria and matrix scoring approach described above, the following factors weighed into the selection of the three Phase II Key Business Processes for EVT:

- **Custom** – Many participants of the Custom process noted that a high number of billing hours are typically involved in Custom projects, and were eager participants who saw opportunity for improvement.
- **HPwES** – Participants in the HPwES process were facing a significant challenge of meeting a new mandated target (80,000 homes by 2020) amidst resource constraints. In addition, a new system for back office processing was being planned, and the team felt the need to have a good understanding of current state processes in order to be able to successfully implement the new software.
- **RNC** – This process accounts for a relatively high amount of staff hours, indicating the magnitude for the potential improvement could be large.
Similar to Phase I, EVT took a strategic approach to identifying its core processes to be mapped in Phase II. By following the Baldrige guidelines for key business process implementation, EVT exposed itself to part of the rigor that top quality organizations apply when seeking Baldrige certification. In addition to this strategic perspective, EVT also carefully selected the key business processes to be mapped in Phase II from a practical perspective by applying the matrix shown in Figure 1.

### Figure 1. EVT Key Business Process Selection Matrix

<table>
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<tr>
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<tbody>
<tr>
<td>Custom Projects</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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<tr>
<td>Navigant List</td>
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<td>Prescriptive Projects</td>
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<tr>
<td>Metering (FCM and project)</td>
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<td>Regulatory Submissions and Reporting</td>
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<tr>
<td>Technical QA</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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<tr>
<td>Key Account Management</td>
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<td>Program Technical Reference Manual</td>
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<td>Y</td>
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<tr>
<td>Development</td>
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<tr>
<td>Project Management</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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<tr>
<td>Project Assistance</td>
<td>Data Entry</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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<td></td>
<td>Incentive check processing</td>
<td>Y</td>
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<td></td>
<td>Site visits</td>
<td>Y</td>
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<td></td>
<td>Plan reviews</td>
<td>Y</td>
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<td>Managing the Partner/Trade Ally Process</td>
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<td>Market transformation through support of</td>
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<tr>
<td>market players</td>
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<tr>
<td>Planning and Budgeting</td>
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<tr>
<td>Coordination and Management of</td>
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<tr>
<td>Subcontractors</td>
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<tr>
<td>Marketing and External Communications</td>
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<td>(Includes website maintenance and</td>
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<td>updating)</td>
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<tr>
<td>Customer Service (Includes Call Center)</td>
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<tr>
<td>Internal Communications</td>
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</tbody>
</table>

**Assessment of EVT’s Approach**

Similar to Phase I, EVT took a strategic approach to identifying its core processes to be mapped in Phase II. By following the Baldrige guidelines for key business process implementation, EVT exposed itself to part of the rigor that top quality organizations apply when seeking Baldrige certification. In addition to this strategic perspective, EVT also carefully selected the key business processes to be mapped in Phase II from a practical perspective by applying the matrix shown in...
Figure 1 above. As a result, the processes selected in Phase II cover the breadth of most of the more granular cross-cutting business processes that exist within EVT. We also feel that the processes selected in Phase II will provide ample opportunities to continue EVT’s goal of advancing the organization’s capabilities in applying the Lean methodology.

**Recommendations**

As noted in our Phase I report, EVT may be able to further streamline and strengthen the identification of its key business processes by engaging in conversation with peer organizations of comparable size and mission. Navigant is currently conducting benchmarking with a number of organizations similar to EVT to identify potential future areas of opportunity for EVT, and will share these recommendations in our final Administrative Efficiency benchmarking report.

For future selection of business processes to undergo Value Stream Mapping and subsequent improvement efforts, we recommend that EVT continue to use the criteria and evaluation matrix described above. EVT should identify 2-5 processes for improvement each year as part of its annual business planning cycle, with the emphasis for process selection based on which processes can best support achievement of EVT’s strategic objectives and key performance indicators for the business. At this point, EVT has undergone detailed Value Stream Mapping for five key business processes, and gained significant learnings through this and the ongoing execution of the Kaizen improvement teams. Going forward, we recommend to not exclude key business processes (either in part or whole) that have already been mapped as potential candidates for Value Stream Mapping in the future, as the potential exists for new issues to have arisen with these processes due to the improvements made and/or as the result of external environment changes. Thus, we recommend not ruling these five processes out as candidates for future process mapping. One or more of the selected processes may be a process that was selected for improvement in the prior year, and for which process improvement activities are currently underway, if significant potential for further improvement exists.

Given that several team members are experienced with the Value Stream Mapping approach, EVT may choose to conduct the Value Stream Mapping using internal resources if sufficient skilled capacity is available within the organization.

**Key Process Improvement Activities**

Under this assessment area, Navigant assessed EVT’s activities around:

a) Determination of process improvement target metrics,
b) Development of process improvements,
c) Documentation of key business process,
d) Implementation of process improvements,
e) Measurement of process performance on ongoing basis, and
f) Continuous key business process improvement.
EVT’s Approach

**Determination of process improvement target metrics** – The process metrics chosen, initial baselines, and improvement targets set by EVT are shown in Table 1 below for each of the three key business processes. Determination of the target metrics goes hand-in-hand with the next step: development of process improvements.

**Table 1: EVT Initial Processes Baseline and Improvement Target Metrics**

<table>
<thead>
<tr>
<th>Process</th>
<th>Metric</th>
<th>Baseline</th>
<th>Improvement Target</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Custom process</strong></td>
<td>Engineering hours per project:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Retrofit (6012)</td>
<td>71</td>
<td>66</td>
<td>-7%</td>
<td></td>
</tr>
<tr>
<td>Business Equipment Replacement (6013)</td>
<td>38</td>
<td>33</td>
<td>-13%</td>
<td></td>
</tr>
<tr>
<td>Business New Construction (6014)</td>
<td>123</td>
<td>118</td>
<td>-4%</td>
<td></td>
</tr>
<tr>
<td><strong>Lead time (avg. days) from project creation to incentive offer to customer:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Retrofit (6012)</td>
<td>186</td>
<td>151</td>
<td>-19%</td>
<td></td>
</tr>
<tr>
<td>Business Equipment Replacement (6013)</td>
<td>233</td>
<td>198</td>
<td>-15%</td>
<td></td>
</tr>
<tr>
<td>Business New Construction (6014)</td>
<td>496</td>
<td>556</td>
<td>+12%</td>
<td></td>
</tr>
<tr>
<td><strong>HPwES process</strong></td>
<td>Completed projects per year</td>
<td>950</td>
<td>1282</td>
<td>+35%</td>
</tr>
<tr>
<td>Turnaround time (TAT) for review of home audits, review of completed job documents, and incentive check requests</td>
<td>20.4</td>
<td>17.3</td>
<td>-15%</td>
<td></td>
</tr>
<tr>
<td><strong>RNC process</strong></td>
<td>Market share</td>
<td>27%</td>
<td>40%</td>
<td>+13%</td>
</tr>
<tr>
<td>Percent enrolled</td>
<td>59%</td>
<td>65%</td>
<td>+6%</td>
<td></td>
</tr>
<tr>
<td>Successful completion rate</td>
<td>51.4%</td>
<td>62%</td>
<td>+10.6%</td>
<td></td>
</tr>
</tbody>
</table>

**Development of process improvements** – The desired process improvement targets influence the process improvements that are required to achieve the targets. Hence, the targets and the improvements are closely intertwined and need to be reviewed in parallel. To align process improvement targets and process improvements, EVT used value stream mapping, a Lean tool that connects process diagrams and process lead times. This makes value stream mapping a useful aid in planning improvement targets.

**Documentation of key business processes** – When identifying process improvements, EVT generated a future-state value stream process map that documented how the improvement team visualized the

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For Business New Construction, the goal is to increase the lead time, since it is advantageous in new construction to begin influencing program and design considerations as soon in the process as possible.

Lead time is the delay between the initiation and execution of a process. For example, the lead time between the placement of an order and delivery of a new car may be two months.
improved process. EVT documented the future-state process map in the Key Business Process Improvement report for each process by taking a picture of the whiteboard drawing created during the Lean event for future reference.

**Implementation of process improvements** – The process improvements that are identified during a Lean event are referred to as “Kaizens” in the Lean methodology. EVT’s process improvement teams assigned each Kaizen to a team leader. The team leaders took ownership for implementation of the Kaizen. Progress towards completion of each Kaizen is tracked in an “A3” document, a standard Lean tool for monitoring and managing improvements. EVT Solution Teams update and monitors A3 reports on a regular basis to monitor and track overall progress.

**Measurement of process performance on ongoing basis** – To measure the impact of process improvements and to continuously monitor process performance, EVT established process performance measures that are tracked on an ongoing basis. For each Key Business Process, a “metrics” solution team is led by the Value Stream Manager.

**Continuous key business process improvement** – To maintain momentum on improving the selected processes, the Operations Leaders that Navigant interviewed voiced a commitment to continuously drive process improvement efforts. However, EVT’s main effort at this point is to complete implementation of the identified improvements. Following implementation of these in 2014, EVT will evaluate remaining key business processes as well as the five key business processes already mapped to determine the next improvement steps.

**Assessment of EVT’s Approach**

**Determination of process improvement target metrics** – The improvement target metrics identified by EVT for each of the three processes relate to increasing market penetration (e.g., completed projects per year, percent enrolled), improving lead time (e.g., turnaround time in responding to customers), and reducing waste (e.g., hours per project, successful completion rate). The metrics chosen are consistent with both Lean principles and with EVT’s overall business goals. Overall, we feel that the metrics chosen are appropriate for improving the overall administrative efficiency at EVT, and that the targets chosen represent reasonable yet challenging levels of improvement. In one case (HPwES), the improvement target of 35% increase in completed projects per year was chosen based on achieving an aggressive State goal to improve the energy efficiency of 80,000 homes by 2020. This is a very aggressive goal that EVT is striving to achieve through its organized process improvement efforts; however, based on the current rate of approximately 1000 – 1200 homes per year, this goal may be unrealistic to achieve in the next six years with current funding levels.

**Development of process improvements** – EVT’s approach to developing process improvements is thoughtful and presents a good balance between cost effectiveness and desired results. The value stream mapping approach chosen has been practiced for many years in the manufacturing industry and also has been slightly modified and successfully employed in office settings. Value stream mapping is an ad-hoc, event based approach to process improvements that measures current process

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performance (lead time and cycle time\textsuperscript{10}) and uses the results to identify and plan improvements. With its focus on the big, overall process picture rather than very detailed sub-processes, value stream mapping provides a good starting point for process improvement. The process improvements selected by EVT address engagement of market participants, data capture and management, process standardization and measurement, and improved documentation/communication to reduce errors, increase market penetration, and speed up the lead time. These improvements represent a straightforward path to gain impactful process improvements.

**Documentation of key business processes** – EVT’s current process documentation fulfills the requirement outlined in the Order from VT PSB. However, Navigant believes that a more comprehensive process documentation method would be appropriate for repeatable, transaction-oriented processes or sub-processes. By creating an electronic process map, the future-state process map can easily be shared as a training tool and a means for process control, and future reviews and updates are easy to document\textsuperscript{11}.

**Implementation of process improvements** – EVT identified and documented the desired process improvements during the Lean event. Each process improvement was assigned to a solution team lead to further investigate and plan, and monitor the implementation using an A3 document. To maintain momentum on the effort, EVT must ensure that team leads follow their assigned tasks through to completion. EVT uses the A3 documents to track implementation towards the requested process improvements. At the time of our visit, the A3 documents were readily available, but it was not clear that all had been recently updated or were being actively monitored on a frequent basis.

**Measurement of process performance on ongoing basis** – The success of process improvements should be measured on an ongoing basis and compared to the goals identified in the improvement target metrics. With its focus on process metrics and assigning the Value Stream Manager as the “metrics” team lead for each process, EVT measures the identified process metrics on an appropriate frequency for each. We did not observe that EVT has a single, overall metric for administrative efficiency in place, the achievement of which would be supported by improvements on the process-level metrics that were defined.

**Continuous key business process improvement** – As EVT is still in the process of implementing its first round of process improvements identified by the Value Stream Mapping, it has not yet reached a stage of continuous process improvement. While EVT does not have a pressing need to implement a continuous business process improvement methodology at this time because all key business processes are undergoing their first round of improvements, it will soon reach a stage when processes already mapped should be re-visited for further improvement efforts.

**Recommendations**

**Determination of process improvement target metrics** – Navigant believes that EVT has set realistic and challenging improvement target metrics for the three selected processes for the current 2012-2014

\textsuperscript{10} Cycle time is the period required to complete one cycle of an operation, or to complete a job or task from start to finish.

\textsuperscript{11} An example of a process mapping application includes Microsoft Visio.
evaluation period. Going forward to the next evaluation period, EVT could benefit from making sure that process metric targets are adjusted appropriately based on EVT’s business goals and the remaining potential for improvement in each metric.

Development of process improvements – EVT’s current approach to develop process improvements is appropriate for its early stage in process improvements. After the initial process improvements have been completed for all key business processes, Navigant recommends shifting the effort of improvements towards more detailed process analysis. For example, a detailed process map that outlines process roles and responsibilities can be helpful to detect process inefficiencies in the repeatable, transaction-oriented processes.

Documentation of key business processes – Along with our recommendation to consider more detailed process analysis for the repeatable, transaction-oriented processes in the future, Navigant recommends documenting those future-state key business processes in electronic format for future reference. Posting a digital version of the future-state process map at a high visibility location in the office boosts team morale and signifies the importance of the improvement effort. Process diagrams serve multiple purposes in an organization. Apart from identifying process improvements, process diagrams also help to clearly align work responsibilities and are an effective training tool for employees new to the team. Also, as some solution teams have identified a written procedure as an improvement, we recommend establishing an EVT-wide procedural hierarchy and standard procedure template. This could be initiated through the development of a “Procedures procedure” for EVT, which would outline the standard numbering scheme, procedure contents, approval process, and ongoing updating frequency for all procedures at EVT.

Implementation of process improvements – EVT uses A3 documents to track implementation towards the requested process improvements. We feel that this is a simple, effective tool for planning and monitoring the identified improvements. We do feel that EVT could improve the formalization of reporting the results of the individual solution teams to the Value Stream Manager for each key business process, as well as the overall monitoring of key process metrics and solution implementation at the EVT program level. We recommend a quarterly reporting process of all solution team key metrics and progress of solutions underway.

Measurement of process performance on ongoing basis – As EVT defines additional process improvement target metrics, Navigant recommends tracking these metrics on an ongoing basis and comparing progress towards the goals identified. EVT may find value in developing a dashboard style report that shows trending of several key business processes on one page. In addition, EVT should consider identifying and implementing an overall program-wide administrative efficiency metric (e.g., total program costs/total kWh saved). This type of overall metric will help ensure that process improvements and process-level metrics are chosen to improve performance on the overall metric.

Continuous key business process improvement – After the key business processes have undergone an initial Lean review and once a target improvement metric has been established, EVT should define a program for continuous key business process improvement that is not solely driven by the Value Stream Mapping event. This approach will ensure that the initial efficiency gains are maintained and further improved upon as opportunities arise.