MANUFACTURER HOW-TO GUIDE

The Manufacturer How-to Guide is intended to help small or medium-sized manufacturers navigate the assessment process. While this guide gives a general overview of what a manufacturer can expect, an assessment team can completely customize the process to meet individual manufacturers' needs.

Step 1. Prepare for an Assessment

Once you have agreed to participate in an assessment, you can begin to form a relationship with the local assessment team. The assessment team will help you prepare for your assessment. It is customary for manufacturers to participate in an introductory phone call to discuss what to expect during the assessment process. The assessment team will likely send you a contract or scope of work agreement to sign before your first meeting.

Step 2: Choose the Appropriate Team Members

You will need to select members of your staff to participate during the entirety of the assessment. Typically you should include managers, personnel from your engineering, environmental health and safety, and purchasing departments, and operational personnel and decision-makers from your headquarters. The makeup of every assessment team varies—your team should represent the objectives and goals of your assessment. Your assessment team can help you select the appropriate personnel members to participate.

Step 3: Collect Necessary Data to Conduct Assessment

The assessment team will work with you to determine which data sources are required for the assessment. Below is a list of possible sources the assessment team may ask you to provide. Many assessments only require some of these records.

- Annualized electricity data or, at a minimum, a copy of two invoices—ideally, one for winter and one for summer—for electricity purchased.
- Quarterly water data or, at a minimum, the annual cost of water and sewer purchased for the last full year of records and a copy of two quarterly invoices—ideally, one for winter and one for summer.
- Listing of all air, water, liquid, or hazardous waste permits and environmental reports submitted to environmental regulatory agencies.
- Annual cost of hazardous waste disposal services for the last full year of records and one invoice from each vendor you contract with for hazardous waste management.
- Annual cost of solid waste disposal services (and/or residual wastes) for the last full year of records and one full copy of an invoice.
- Purchasing records for your major raw material inputs for the process or product line being reviewed.
- Listing of any liquids that require special handling, including solvents, solvent-based cleaning solutions or degreasers, hydraulic oils, cutting/quenching oils, lubricating oils and biocides, and the amounts in gallons purchased over the last full year.
- Listing of all materials recycled and the monthly volume and any revenue generated as a result of the recycling.

Step 4: Host Assessment Team

On the first day, the assessment team begins the process with a brief introduction and overview of lean manufacturing and the sustainability strategies that they promote and employ. The assessment team may also provide training on value stream mapping (VSM) and process mapping techniques and lead a collaborative effort to create a "current state" VSM or process map of the identified product/process line.

On the subsequent days, the assessment team leads a collaborative effort to create a "future state" map of the identified product/process line that could include lean, sustainability, and energy improvement recommendations made by the group.

At the end of the assessment, you prioritize the list of recommended improvement opportunities. You can also identify additional product or process lines where you can apply the lean and green techniques that you just learned.

Tools

- Primer on Value Stream Mapping Techniques (PDF) (11 pp, 179K)
- Lean and Environment Website
- Lean and Environment Toolkit (PDF) (96 pp, 2.9 MB)

Step 5: Implement Recommendations

The final report provides a summary of assessment findings, presents current and future state process maps, identifies lean and green opportunities, calculates cost-savings potential, and recommends next steps for implementing lean and green improvements.

Once you receive your final report, your local assessment team will conduct a follow-up call to answer any questions you might have about the report and clarify findings and recommendations. The assessment team also will discuss any need you might have for additional technical assistance and implementation support. You determine which recommendations to implement and when.

It is typical that a manufacturer will execute a number of the easier-to-implement improvements right away and start to see immediate savings. Doing so allows for savings to accumulate and can help implement future projects that require more planning, research, or capital investment.

Tools

- Green Suppliers Network Calculator (XLS) (1.3 MB)
  (We recommend viewing the instructions (PDF) (1 pp, 54K) before opening and downloading. We also recommend that you save the file to your desktop before opening the file.)
- Follow-up Survey (DOC) (8 pp, 103K)

Step 6: Share Results

After implementation, an assessment team member will regularly check in with you and help gather metrics data to measure the outcome and effectiveness of the assessment. As part of the check-ins, the team member will inquire about your sustainability journey and offer additional assistance if needed. These check-in calls provide you with a good opportunity to ask questions about new or existing implementation projects or new technologies. The assessment team is there to help you every step of the way.

Within one year of completing your assessment, the National Institute of Standards and Technology (NIST) will contact you to complete a follow-up survey that measures your progress in implementing recommended improvements. The survey also tracks cost savings, which are kept completely confidential, as well as reductions in your environmental footprint.

All data collected will be held strictly confidential and will be aggregated in the final analyses before being shared among others.