

Human Performance Checklist

This checklist contains information you will be required to submit and present as part of your next team assignment. It also clarifies expectations on what you must do to upgrade the wiki you are inheriting from the last team.

Inheriting a Wiki from Another Team

When you receive your next team rotation assignment, each team member should visit the wiki site for that building system and rate the site in its current form. A link for formally rating the site is available in the left menu of the wiki, entitled “Evaluation of Previous Team: Technological Performance”. Click this link to go to the inter-team survey. Each team member must complete this survey based on his or her personal review of the site.

As each team member reviews the site, it’s advisable to make notes in the comments section of the site or in the narrative itself regarding what needs to be fixed or improved. The entire team should meet together to discuss these opportunities and agree on a plan for remediation if necessary. At a minimum, teams should address serious content deficiencies identified by the instructor in the grade sheet for that wiki. Addressing these deficiencies will bring the wiki up to the minimum standard for the site.

Note that it is recommended but not required to preserve the same formatting style for all parts of the wiki. You should, however, clearly provide links to subsequent modules if the prior team did not do so.

Adding the Human Performance Module

The third part of your team assignment is to add new content pertaining to human performance for your assigned building system. This content should include, but not be limited to, the following. Be sure to look for and exploit opportunities to integrate your content across pages and ensure consistency. Note that you should verify (and repair if necessary) the functional equivalence description for your system type to ensure that you include all necessary system elements in your process map and subsequent analysis.

- Turnover Documentation Checklist – clearly list, describe, and provide/link to representative examples of the information you would provide an owner for your system as part of an O&M Manual or turnover documentation. Include information on warranties, attic stock, operations/maintenance guides, and other information from class as appropriate. If your system is unlikely to require regular operations/maintenance, as an alternative prepare a contractor package that links to information a manufacturer or trade association would provide to contractors beginning installation of your wall system.
- Process Map for Product Installation – this section should contain a process map for the installation of your system. This map should be developed as demonstrated in class, based on a synthesis of information available for different brands of your product type. The map should be presented graphically within the body of the wiki, and should be supported by a narrative description with proper references or citations to describe the

sources of information tapped to create it. Begin the narrative with an explicit description of the scope of your system, including all functional components you are including to achieve functional equivalence and any that you are explicitly scoping out. Clearly describe what has to be in place in order for your installation process to start, e.g., foundations, substructure, etc., and what other activities, e.g., roof structure, painting, etc. can follow the installation of your system. Be sure to mention significant differences among brands associated with each step in your narrative. This narrative description can be enhanced through the use of pictures or images of each step. You can obtain these pictures either from third party sources or by visiting actual installations of your system type in the field. **Clearly indicate process steps with significant safety risks in your narrative, and identify best practice steps that can be taken to mitigate these risks as discussed in class.**

- Resource Allocation Scenarios for Installation Process Map – prepare at least two scenarios for installation of your system using different human and equipment resources (suggested one “high tech” and one “low tech” scenario). Include a narrative describing the pros and cons of each from a time and quality standpoint. Use the table format demonstrated in class. Be sure to highlight key differences between the scenarios, particularly if there are only a few.
- Process-Based FMEA Analysis – using the techniques demonstrated in class, develop a process-based FMEA Analysis that includes all installation tasks from your process map. Be sure to identify and include human-based failure modes, e.g., bad installation practices, etc. Include photos or images of failure modes as available and narrative as appropriate to support your analysis, all with proper citations of sources and reference information.
- Troubleshooting Guide – identify the most likely installation-related failure modes from your FMEA analyses, and develop troubleshooting or error-prevention checklists for at least two of those failure modes that could help a contractor diagnose and/or avoid the problems. Include these checklists within the wiki and support them with properly referenced narrative and photos as appropriate.

Be sure to spell- and grammar-check your work and review for consistency and format. All your sources should be properly cited and referenced using ASCE reference guidelines. Plagiarism will be noted in this assignment and documented as per the syllabus.

Note: you will be asked in class over the next few weeks to sketch (by hand) one or more views of the following interfaces of your wall system with other building systems. Please be prepared to sketch details of the following as if you were explaining the proper way to construct it for a tradesperson:

- 1) Interface between the wall system and the slab foundation
- 2) Interface between the wall system and the roof structure (assume the roof structure is constructed from a dimensional lumber frame with cavity insulation between the roof members; recall that the roof itself must be standing seam metal)
- 3) Interface between the wall system and window or door frames (assume fiberglass window frames and wood door frames)