Technological Performance Checklist

Your team has been assigned the task of developing technological performance information for a building system whose scope has been defined by a previous team. As part of your assignment, you will need to bring the previous team's work up to a standard acceptable to your team and address any concerns identified by the instructor as part of evaluating the previous team's work.

Note that future teams working on this building system will evaluate the wiki IN ITS ENTIRETY, not just the portions you complete. Therefore, it is important that you critically evaluate the preceding team's work and take the time to correct any errors they have made. You should also improve upon any aspects of the previous team's work that you can contribute to as you complete your analysis. After reviewing the current status of the wiki you've been assigned, click on the link in the left menu to complete the "Inter-team Wiki Evaluation Survey" currently active there.

After updating the previous team's wiki, the following items should be included as part of your analysis of technological performance for your system. Place these elements in the page created by the previous team to contain your analysis, and create links as appropriate to the former content and other portions of the site.

- Performance parameters and properties – describe the parameters that can be used to characterize technological performance of your building systems and compare the functional capabilities of your system with other alternatives. If tests are typically done on the product during or following manufacture or installation to determine its properties, what properties are being tested, and how do they relate to the product's functions? For each of these parameters, include the following information in tabular form:
    - Property – provide the name of the performance parameter
    - Unit(s) – list the units used to measure the parameter, in whatever system(s) are commonly used for measurement
    - Description of property – describe the nature of the property being measured, including what functions of the system it contributes to and why it is important to consider
    - Pertinent test protocols – list the names and numerical designation of any test protocols used to measure the property, including the relevant protocol development or testing agency
    - Typical range of values – list typical values for the property for the system you are analyzing, and identify what it means if values are outside this typical range
    - Codes or regulatory constraints – list any applicable codes, regulations, or other standards that specify constraints on the system in terms of this property. Provide links to these codes, standards, or regulations if available on the web.

  Include specific properties for each of the following technological performance parameters: Structural Performance, Thermal Performance, Permeability Performance, Durability Performance, Fire Performance, and Indoor Air Quality Performance.

- Buyer's Guide – Identify the stakeholder group most likely to make a purchasing decision for your product type. Summarize the detailed technical information in the performance parameters table into a buyer's guide appropriate for a lay audience of the target stakeholder type. Make sure you address each of the six performance parameters for wall systems that you analyzed in the previous section.
- FMEA Analysis for each system by component – include a detailed description of functions and set up an FMEA table that examines each system component in terms of each required function. Provide a narrative with pictures or illustrations of examples of the different types of failure modes in the wiki itself describing your analysis. Follow the example in the Stone Cladding example in Lecture 10 in constructing your FMEA table. Do NOT include values for Severity, Probability of Occurrence, Detectability, Risk Priority, or Criticality, since these values depend on the specific application of the material in a given context and can't be determined in any meaningful way outside that context. If you find information on process-related failures, specifically failures associated with construction, installation, or maintenance, store that information in the Human Performance page for the next team.
- Third Party Evaluation/Information Sources – do a search for third party sources of information (such as government agency technical reports, refereed journal articles, or test agency comparisons) that compare your systems in any way. Also identify any centralized directories of suppliers or manufacturers for your system type. Provide titles, citations and/or links and short summaries of "best of breed" resources in the wiki, and justify your decision to include each source using the CARS Checklist for Source Evaluation covered in lab. The CARS checklist should serve as the basis for determining what constitutes best of breed, and you should explicitly describe how each of your best of breed resources stacks up in terms of the CARS criteria.
- Relevant Trade Associations – identify any relevant trade associations that represent the interests of manufacturers of your product or its components. Include both national trade associations as well as any associations specific to Virginia. For each, include the name of the trade association, a link to its web site, and an overview of its purpose and services it provides. Specifically identify any training or certification programs provided by these trade associations with respect to your products. If your system does not have any trade associations, seek trade associations for the specific materials that comprise your system.
- Lessons Learned Analysis – using the template provided in class or some adaptation thereof, document the lessons learned during execution of this part of the project. Post this analysis to your team page, not the system page you're working on for this module. A template for this analysis is available on Blackboard.