

## **Walking the Talk: The Importance of Sustainable Manufacturing Education Course Additional Resource**

Water is a precondition for human existence. Water is critical for socio-economic development, healthy ecosystems and for human survival. According to the United Nations, “Around 2 billion people, or almost one-fifth of the world’s population, live in areas of water scarcity. Water use has been growing globally at more than twice the rate of population increase in the last century, and an increasing number of regions are reaching the limit at which water services can be sustainably delivered. The physical world of water is closely bound up with the socio-political world, with water often a key factor in managing risks such as famine, migration, epidemics, inequalities and political instability.”

A sustainable economy requires us to value wastewater for its potential, rather than discard or ignore it. It is imperative that product manufacturers incorporate water conservation strategies in their manufacturing facilities to ensure a sustainable world for future generations.

There are several steps that building product manufacturers can take to reduce water and energy consumption and improve the material health of their products. We will explore a few methods:

- Incremental steps can help product manufacturers reduce shipping costs, reduce energy costs, and reduce waste disposal.
- Social equity- Providing equal opportunity for all in a safe and healthy working environment inclusive work space for all cultures and backgrounds is crucial.
- LCA’s help manufacturers improve their products, reduce their carbon footprint, water consumption, and energy use.
- Product manufacturers should consider creating plumbing products under the WaterSense standard. The standard is recognized by the LEED rating system and several municipalities.
- Product manufacturers should consider biomimicry when creating new products to better mimic the processes in nature.

- Manufacturers should provide designers with all the tools they need for specification. These tools not only include guide specs but also Health Product Declarations (HPDs), Environmental Product Declarations (EPDs), Declare Labels, and other sustainability related documentation.
- Manufacturers should provide education resources for contractors so they can better understand material choices for LEED, Living Building Challenge, WELL, and CHPS.
- Manufacturers may want to consider megatrends for future design and products. Smart cities can track building occupant's use and improve the design of public restroom facilities. Smart cities can improve the user experience of restrooms.

Overall, sustainable manufacturing is crucial for reducing resources, improving health and performance attributes of products, and helping designers make better informed decisions.