

AT HUMANSCALE, WE DESIGN AND PRODUCE ALL OUR PRODUCTS.

This gives us a great opportunity to make sure our environmental philosophy is deeply embedded in the design process, and not an afterthought. Our environmental policy helps guide our market strategy, design, engineering and manufacturing decisions. When evaluating which products to make, we choose only products that bring real value. We evaluate the best materials and processes for their environmental impacts. We consider the end of our products' lifespan and design for disassembly for recycling. At regular intervals throughout our design process, we check the design against our sustainability principles to be sure they are being upheld.

In our product design, we aim for high efficiency in materials and energy. Our products are robust enough to last, and we provide upgrades and replacement components to increase the life of the products so they will last even longer. We design our products to be both beautiful and useful. Integrating timeless designs with ease of use ensures a longer product lifespan. While an alternative product may be replaced several times over the lifespan of our products, the longer lifespan of our products greatly reduces their impact on the environment.

Our products also use less energy in their operation than comparable products. Our LED lighting products and air purifiers are among the leading products in their categories for energy efficiency in the industry.

Whenever possible, we use materials that have recycled content and that are readily recyclable. We are always looking for ways to incorporate rapidly renewable and biodegradable materials. We choose efficient manufacturing processes that use little or no Process Water. We consider the ease of disassembly of our products to facilitate recycling at the end of the products' lifespan. In this way we can further reduce the impact of our manufacturing on the environment.

Our Design Studio has integrated sustainability in its design process by adopting a "Life Cycle" thinking approach. The Life Cycle approach considers the impact on the environment from the extraction of raw materials, through manufacturing, use and disposal. By adopting a Life Cycle thinking approach, Humanscale's Design Studio can make better design and production decisions for sustainable products.

Sustainability can be a complicated topic. The U.N. World Commission on Environment and Development described it as "use and development that meets today's needs without preventing those needs from being met by future generations," Brundtland Commission, 1987.

At Humanscale, sustainability is more (meaning and value) for less (material and energy).

HUMANSCALE'S DESIGN FOR ENVIRONMENT IN PRACTICE:

Humanscale's Design Studio uses a stage-gate system in the design process. Sustainability is incorporated into each phase, with a systematic check at each gate.

Stage 0—Research and Development

This stage defines the subject and scope of the project. Exploration is done to generate loosely defined concepts and confirm a business case for the project. Here we do thorough research to be sure we understand the users and all stakeholders who might be affected by our products. This is an opportunity to find simple, elegant solutions, reduce or consolidate features and pursue development only of products that show significant value for the user. By the end of this stage, expectations of the product are set, including the sustainability goals.

Stage 1—Design

In this stage, exploration is done to generate well-defined concepts. Innovative solutions are explored using prototypes and mock-ups. Concepts are refined to consolidate parts and features, to optimize material and energy used, and to meet the product's functional requirements efficiently. The entire life cycle is considered (from material extraction to end of product lifespan). The final concept is chosen and given form. Preliminary material, process and assembly choices are made. The process of disassembly for recycling is suggested. By the end of this stage, an initial, simplified Life Cycle Assessment is done to identify where the impact is most significant.

Stage 2—Engineering

This stage prepares the product for mass production. Material, process and assembly choices for the entire product are made. Disassembly method and recyclability is confirmed. By the end of this stage, a more accurate Life Cycle Assessment is done to identify where the impact is most significant, and the project is evaluated against the sustainability goals set in Stage 0.

Stage 3—Pre-production

This stage works through the production phases to make a consistently acceptable product that meets all functional requirements. Final material, process and assembly choices for the product are confirmed. Packaging is specified and transportation methods chosen. It is confirmed that the product meets any applicable standards and durability requirements. A final, simplified Life Cycle Assessment is done to identify where the impact is most significant. The project is evaluated against the sustainability goals set in Stage 0.

Stage 4—Mass Production

This stage is ongoing mass production. We have chosen to evaluate the product within the first year of production. If we find that a new material or vendor has been beneficial, we capture their information in a centralized library, so that it can be useful in other projects. All the documentation is reviewed to show which aspects were more effective and which were less successful. This leads to continual improvement for sustainability in future projects.

All projects, from Humanscale Design Studio's internal team and external partners, go through the same stage-gate process and are held to the same requirements for sustainability.

The tasks required through each stage are outlined on a checklist, which is completed at each gate. Overall sustainability guidelines apply to all product categories.

Working documents are updated through each stage to capture sustainability goals, monitor progress toward those goals and validate that they have been met.

Specific materials, process and vendor information learned through each project is captured in a central location and serve as a resource for future projects.