

Integrating Pollution Prevention Into New Product Development



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Developing a new product is all about meeting customers' needs, such as performing a particular function and doing it better, faster, or less expensively than a competitor's product. For durable goods, a product is often judged effective only if it lasts for years under heavy use. For other goods such as cleaners, the product must perform the task it was designed to do without harming those who use it. Both of these situations are examples of pollution prevention in product design and development. Product design and development can incorporate pollution prevention in a number of ways.

Design for prolonged use.

Products that are designed to be used by the consumer for years before needing replacement reduce the need to produce new raw materials to replace worn-out equipment.

Design for eventual breakdown into benign products.

For soft goods and some durable goods, designing products to break down through natural processes after their useful life can help reduce pollution. One example is cleaners that degrade into nontoxic byproducts that do not persist in the environment.

Design for ease of maintenance.

For durable goods, designing a product to be easily maintained and upgraded by a user to extend useable life is one aspect of design that can achieve pollution prevention benefits by reducing the need to replace items with new ones.

Design to be recycled at the end of life.

For all goods, including the packaging they come in, designing to promote recyclability can enhance pollution prevention benefits. Making recoverable material such as paper or metal easy to separate from other materials can help reduce the burden on landfills and encourage recycling.

Design to be nontoxic.

In addition to designing products that will degrade easily into nontoxic components at the end of their useful life, designing products to be nontoxic when they are used is another way to reduce pollution. Evaluating chemicals for their human health and environmental impacts prior to incorporating them into products can help eliminate toxic constituents prior to moving on to efficacy evaluations.

DEQ's Pollution Prevention Program can provide resources for incorporating pollution prevention into product design. If you would like to know more about pollution prevention and product design, contact Ben Jarvis, pollution prevention projects coordinator, at ben.jarvis@deq.idaho.gov or (208) 373-0146.