



FIGURE 16-3
Life Cycle Diagram of
Typical Commercial
Chair.

creation. Those gases, once released in a confined space, will have an immediately negative effect on people who are chemically sensitive, as well as unknown longer-term effects on everyone else. If the chair breaks in use, there is a better than even chance that its useful life will end at that point. No matter how long it lasts, it will eventually end up as waste buried in a landfill, because there are no other options for disposing of it. When it goes to the landfill, no one will know exactly what went into the product or what chemicals are being released into the soil, water, and air.

Even a modest building design will have hundreds of products that go into the final project. Each of those products has a similar story. In selecting finish materials, furniture, lighting products, systems, or equipment for a project, it is important to understand as much as possible about the complete life cycle of each item. Many of the concerns about this simple chair are not eas-

ily answered—even, surprisingly, by manufacturers who are deeply committed to improving the environmental performance of their products and their manufacturing operations. Many questions, however, are answerable.

There are many greatly improved products. While we have a long way to go in truly understanding the environmental implications of many of the materials and products that we use, more and more information is becoming available concerning the life cycle of projects and their overall impact on the health of users and on the health of the environment. At the same time, while there are many unsatisfactory products and materials, there are also an increasing number of manufacturers producing environmentally superior products. The key to deciding between competing products is to understand the life cycle of each.

LIFE-CYCLE ISSUES CHECKLIST

- **Raw materials.** *Design professionals should consider the raw materials that go into the product. Where do the raw materials come from? Is the material safe and nontoxic? Can it be produced or harvested without polluting the surrounding area? How much energy is used to produce the material? How many other material resources are depleted in producing the material? Does its production help the surrounding community? Is the raw material a renewable resource, or does it come from a recycled material? Is the raw material a salvaged material (wood flooring), or is it a recycled product (ground-up rubber)? Is it an agricultural or industrial by-product?*

FIGURE 16-4

Compressed fiber panels for interior wall construction are made of an agricultural waste product—straw that is normally burned. It also replaces gypsum wall board, eliminating the pollution stream wall board fabrication produces.

