

THE SUSTAINABLE-DESIGN PARADIGM

Rather than adhering to a linear, problem-solving approach to sustainability, American architects need to adopt an integrated, holistic model that puts sustainability at the core of architectural design *By Stephan Tanner, AIA*

As a Swiss-American architect who practices in both Europe and the United States, and specializes in sustainable design, I'm often asked to describe the differences between "green" architecture in Europe and America. The questions commonly posed are: "Why are Europeans so far ahead when it comes to sustainable design?" and "Are there European sustainable technologies we are not aware of?"

To answer the first question, let's start with the notion that architecture represents the cultural values of those involved in the creation of new buildings, particularly with regards to sustainable or green architecture. In the United States, many architects still cling to a linear mindset. They view buildings as machines built for a particular function or individual user with the least amount of investment and the best return in the current marketplace.

Such basic energy-saving features as passive-solar building orientation, daylighting or renewable-resource mechanical systems are considered add-ons. Little concern is given to the long-term financial savings sustainable technologies can produce, not to mention their ability to help decrease our depletion of natural resources.

In Europe, however, architects do not view green technologies as components to be tacked onto buildings. Their approach is a more holistic, integrated one. In large part, European buildings are conceived as part of a community/urban fabric, as well as the natural environment. Architecture involves an integrated de-

sign perspective that views buildings as part of the holistic workings of a particular place. It is an approach to design that considers all aspects of a place including its economy, ecology and social structure.

This shift in cultural perspective has evolved over the past 20 years. In the 1980s, various environmental, social and economical calamities—including forests dying from acid rain, fallout from the nuclear meltdown in Chernobyl, increased global warming from the use of fossil fuels, collapse of the Iron Curtain and unification of Germany—led to tremendous cultural upheaval. European ground was fertile for change, and experimentation and exploration occurred.

Professionals in the building industry began viewing such disasters or problems as "paradoxes"; as opportunities to more closely examine the intricate play of human behavior and its causes and effects on the natural environment. Through personal experience, Europeans better understood the relationship between their built environment, quality of life and community well-being. Subsequently, their approach to architecture has become one integrated with the principles of energy- and resource-saving sustainable design.

Meanwhile, in the 1970s the United States faced a serious energy crisis. The focus on reducing energy use fostered the development of such alternative power sources as sun and wind, and caused researchers to revisit such ancient technologies as earth-sheltered housing. In fact, the University of Minnesota became a global leader in sustainable-design innovation at that time.