Appropriate Technology Movement

**Appropriate technology (AT)** **is**[**technology**](http://en.wikipedia.org/wiki/Technology)**that is designed with special consideration to the environmental, ethical, cultural, social, political, and economical aspects of the community it is intended for.** With these goals in mind, AT proponents claim their methods require fewer resources, **are easier to maintain, and have less of an impact on the environment** compared to techniques from mainstream technology, which they contend is wasteful and environmentally polluting.

**The term is usually used to describe simple technologies proponents consider suitable for use in**[**developing nations**](http://en.wikipedia.org/wiki/Developing_nation)**or less developed**[**rural**](http://en.wikipedia.org/wiki/Rural)**areas of industrialized nations**.This form of "appropriate technology" usually prefers [**labor-intensive**](http://en.wikipedia.org/wiki/Labor_intensity)**solutions** over [capital-intensive](http://en.wikipedia.org/wiki/Capital_intensity) ones, although labor-saving devices are also used where this does not mean high capital or maintenance cost. In practice, **appropriate technology is often something described as using the simplest level of technology that can effectively achieve the intended purpose in a particular location**. In [industrialized nations](http://en.wikipedia.org/wiki/Developed_country), the term *appropriate technology* takes a different meaning, often referring to engineering that takes special consideration of its social and environmental ramifications

**Overview**

In the 1960s the assumption that societies should continually strive for economic growth and increasing industrialization began to be questioned. The environmental effects of unbridled consumption in the developed world had become apparent, and the impact of materialism on modern culture was of concern as well. E**.F. Schumacher's book *Small is Beautiful*** was among the influential works that inspired the appropriate technology movement, advocating small-scale, decentralized, environmentally sustainable enterprises.

**Background**

**In 1955 the British economist E.F. Schumacher (1911-1977) visited Burma (now Myanmar) on a United Nations assignment. There he became acquainted with the pitfalls of introducing advanced technology to developing nations.** This introduction of technology was presumed to be progress and would increase productivity. It would more than likely, however, put many laborers and artisans out of business. Schumacher viewed the dignity of work as essential to the character of individuals and the community.

Schumacher was also conscious that Earth's resources were limited. In the 1960s the deterioration of air and water quality, along with the difficulties in disposing of increasing quantities of domestic and industrial waste, were becoming all too apparent. Schumacher began to question the assumption—central to the capitalist economic system—that growth was always good. Instead, he believed, **technologies that were small scale, decentralized, and not energy intensive could be used to improve a community's standard of living. At the same time, technologies should be environmentally sustainable, that is, based primarily upon renewable resources, such as growing plants and taking energy from the sun, water, and wind as opposed to such non-renewable resources as fossil fuels.**

**Schumacher called technologies that met his criteria "intermediate technologies"** and in 1966 founded the **Intermediate Technology Development Group (ITDG) in London** to put his ideas into practice. Since such solutions must be tailored to the particular society in which they are applied, they are now often called "appropriate technologies."

When Schumacher published his book ***Small is Beautiful: Economics as if People Mattered***in 1973, it was immediately adopted by political progressives. The book advocated production from local resources to fill local needs. Production, it argued, should be a means to an end, that of increasing wellbeing. Therefore, the **goal should be to achieve that end with a minimum of resource consumption and the resultant environmental degradation.** **Schumacher also assumed that full employment, whether in the home or in an outside setting, was necessary for a healthy society**. This philosophy runs counter to measuring wellbeing by the amount of production or consumption as is commonly done in capitalist economic analysis.

**Impact**

**Schumacher's work was named by the *Times Literary Supplement*(London) as one of the most influential books written since World War II.** It was published in more than 20 languages and gave people in the Western world a new way to think about economics. One of the most famous essays in *Small is Beautiful* is entitled "Buddhist Economics." In it Schumacher described blending spiritual values with economic progress to achieve a "Right Livelihood" that valued people over tools and production, preserved the environment, and fostered simplicity and nonviolence.

ITDG began by publishing a buyer's guide to equipment for farmers and crafts workers. Small-scale enterprises, the group maintained, should not imply isolation; in fact, the wide dissemination of information helps to avoid "reinventing the wheel." Schumacher was the movement's global ambassador, advocating production without exploitation. By encouraging local development, communities could avoid the trap of bringing in large corporations for the jobs they promise only to be left adrift when the corporations relocate again.

**ITDG and other like-minded organizations continue to work on a number of projects in rural and developing areas to foster sustainable improvements.** These projects often involve renewable energy but many other types of projects are possible as well. For example, ITDG—with offices in Bangladesh, Kenya, Nepal, Peru, Sri Lanka, Sudan, and Zimbabwe as well as the United Kingdom—works in the areas of energy, transportation, manufacturing, water and sanitation, construction, mining, and food production. The Development Center for Appropriate Technology (DCAT), founded in 1991, focuses on sustainable construction and restoration techniques. Of all the materials coming into the global economy each year, buildings consume about 40%. DCAT projects include building houses from straw bales and lobbying for changes in building codes that would encourage sustainable construction. The National Center for Appropriate Technology (NCAT) was established as a non-profit corporation in 1976. NCAT is involved in a number of projects, including developing environmentally safe integrated pest management (IPM) plans for agriculture as well as energy conservation in public housing.

When Schumacher was asked what individuals could do to make **his vision** a reality, he suggested they begin by putting their own houses in order. **"Think globally, act locally"** became the slogan of a worldwide movement. Many rural homesteaders and others interested in self-reliance began experimenting with living "off the grid"—growing their own food and generating their own power.

Urban and suburban dwellers could also take part by patronizing local businesses, conserving energy, recycling their garbage, and forming economic cooperatives for buying food and other products. Today, these choices have become standard habits of the socially conscious. Community-supported agriculture is another movement that grew up in response to Schumacher's ideas. In this model, individuals purchase "shares" of a local farm's produce ahead of time, receiving a portion regularly during the harvest season. The seed money and guaranteed sales help the farm, which may be struggling to compete with large agribusinesses.

**Two decades after the publication of *Small is Beautiful,* the Internet allowed for the creation of a whole new category of "cottage industries." Now, workers of the Information Age could free themselves from large institutions and sell their skills and wares on an individual basis.** This development is certainly decentralized and often quite energy efficient. "Community" has been redefined to include those with whom one interacts regularly, even if those people are hundreds or thousands of miles away. Critics, however, warn of a chasm between Internet "haves" and "have nots" and remind "wired" workers not to forget the community in which they actually live.