COLLEGE OF THE ENVIRONMENT
UNIVERSITY of WASHINGTON

HUMAN DIMENSIONS OF THE URBAN FOREST & URBAN GREENING
Fact Sheet Number 22

CREATING CHANGE WITH SCIENCE

Urban Forestry as Innovation: Communication & Community Need

SCIENCE & INNOVATION

Research has significantly expanded our knowledge about the benefits and functions of urban forests. The evidence has been translated into an abundance of technology transfer products.

We know little about how technology transfer is used by local elected officials, influential citizens, or staff of municipal government (such as planners or public works professionals).

Everett Rogers expanded the theories of innovation diffusion and adoption. Science facts do contribute to urban forestry policy adoption. Communications planning and placement are important.

INNOVATION DIFFUSION & ADOPTION

Several things are needed for an innovation - or new idea - to be adopted, be it by individuals or local governments.

Communication channels are needed, and are "the means by which messages get from one individual to another."

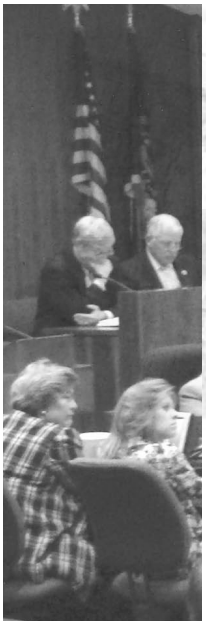
Time is a measure of the "relative speed with which an innovation is adopted by members of a social system" and includes the innovation-decision process.

Innovation: "an idea, practice, or object that is perceived as new by an individual or other unit of adoption"

Everett Rogers

A **social system** is essential to the innovation process, and is defined as a "set of interrelated units that are engaged in joint problem solving to accomplish a common goal."

RESEARCH SUPPORT PROVIDED BY:
USDA Forest Service, Urban & Community Forestry; National Urban and Community Advisory Council



does innovation theory apply to urban forestry adoption in communities?

Rogers, E.M. 2003. Diffusion of Innovations, 5th Edition. NY: Free Press.

Most applications of innovation theory involve behaviors of individuals, such as computer technology adoption or retail purchasing. But the ideas also apply to organizations, such as local governments and the departments within. Communications with local government officials about urban forestry should be strategically planned to include consideration of adoption phasing and the characteristics of innovations.

FIVE PHASES OF ADOPTION

In the **Knowledge** stage the potential user is first exposed to the new idea, but lacks information. A general awareness is the starting point.

In the **Persuasion** phase the potential user is interested and actively seeks additional information.

Science facts can be used at each of the adoption phases to inform about positive characteristics of urban trees

The new idea is getting more attention! In the **Decision** stage the user gathers more information and weighs the advantages and disadvantages of implementing the innovation, then decides to proceed or reject. Research technology transfer can be very useful in this phase.

If a positive decision is reached, **Implementation** proceeds. The user will probably continue to search for more information about the innovation, and weigh its usefulness.

In the **Confirmation** phase the user makes a final commitment to using the innovation, and continues to refine its use to reach full potential.

INNOVATION CHARACTERISTICS

Basic knowledge about an innovation begins the adoption process. Psychological and social dynamics are also important. Users will have perceptions about the value of a new idea or device. Research has shown that ***five perceived characteristics*** are important.

Relative Advantage is the degree to which the new idea is perceived as being better than what supersedes it.

Compatibility is how well the new approach blends with past experiences, current practices, and perceived needs.

The new practice is not as likely to be adopted if perceived as difficult to do or use because of **Complexity.**

Being able to experiment on a small scale, or **Trialability**, to see if the innovation works as expected.

Observability, or the ability to see the new idea in action, leads to greater communication and social reactions - to adopt or improve the idea.

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June 15, 2010