



Smart community infrastructures

Lessons learned

Photo credit: Endless city night, ISO

Executive summary

- Community infrastructures such as energy, water, waste, transportation, information and communications technology (ICT), support communities.
- They have a significant impact on economic and social development and are a means of ensuring the delivery of goods and services that promote prosperity and growth.
- More and more, human activity is surpassing the capacity of the Earth.
- Community infrastructures that develop in line with population growth can sometimes have a negative impact on sustainability.
- Smart community infrastructures take into consideration environmental impact, economic efficiency and the quality of life. Many plans and projects to build “smart” cities and communities are currently underway and being realized.
- The demand for smart community infrastructures, as scalable and integrable products, will continue to grow in the decades ahead, driven by major factors of change, such as population growth and urbanization.

ISO/TR 37150:2014

This Technical Report reviews relevant metrics for “smart” community infrastructures and provides direction for further standardization in this area.

It is designed to help promote international trade of community infrastructure products and give information about leading-edge technologies to improve sustainability in communities.



What are smart community infrastructures?

Behind the services provided in any community are its infrastructures: energy supply (electricity, gas), water supply, run-off and sewage pipes, waste management, roads, public transportation, telephone and internet connections, etc.

Smart community infrastructures take into consideration environmental impact, economic efficiency and quality of life by using information and communications technology (ICT) and renewable energies to achieve integrated management and optimized control of infrastructures.

Using smart technology to upgrade power grids with smart meters that allow users to better understand and therefore manage their consumption of electricity is one example.

Integrating smart community infrastructures for a community helps improve the lifestyles of its citizens by, for example: reducing costs, increasing mobility and accessibility, and reducing environmental pollutants.

Why read ISO/TR 37150?

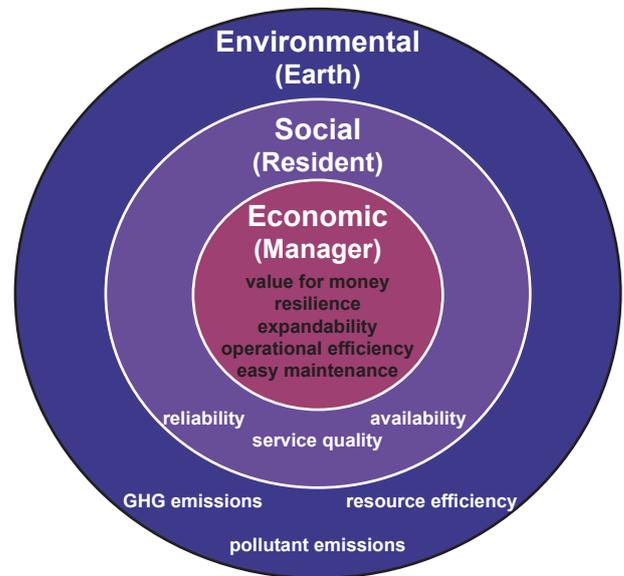
When planning and procuring community infrastructures to contribute to sustainable development, a wide range of evaluation concepts and metrics are available.

Though they are helpful, their complexity, redundancy and lack of transparency make it difficult for individuals (i.e. governments, city planners, investors, operators of community infrastructures) to evaluate multiple proposals or plans.

ISO/TR 37150 reviews relevant metrics for smart community infrastructures and provides stakeholders with a better understanding of the smart community infrastructures available around the world.

ISO/TR 37150 is designed to help promote international trade of community infrastructure products and give information about leading-edge technologies to improve sustainability in communities.

Awareness of existing projects will help communities (from small villages to large cities) avoid “reinventing the wheel” by providing potential solutions that they may not otherwise be made aware of.



Strategic benefits

For buyers and infrastructure managers:

- Easier planning
- Easier infrastructure procurement
- Easier purchasing decisions
- Easier management of multiple providers

For infrastructure providers:

- Better understanding of buyer needs
- Potential increase in global sales
- More efficient and effective research and development

Next steps

The demand for smart community infrastructures, as scalable and integrable products, will continue to grow in the decades ahead, driven by major factors of change, such as population growth and urbanization.

ISO/TS 37151 is currently being developed. It will provide specifications for smart community infrastructure performance and complement the information given in ISO/TR 37150.

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