

Ethical Principles for Tsukuba Smart City

The City of Tsukuba is a science city representing Japan. It has, therefore, a vital role to quickly implement the latest scientific and technological achievements to society. The City is going to vigorously promote the Smart City project.

Information technology is the core of the technology that makes up smart cities. A wide range of data is utilised, ranging from individual attributes to orientation. For this reason, ethical issues such as ensuring data security, system safety and transparency, as well as consensus building among citizens need to be continually discussed and taken care of concurrently with the introduction of such technology. It is not enough to simply taking these issues "into consideration".

We hereby announce the "ethical principles" that must be observed when the City of Tsukuba is moving towards a smart city. Studies related to smart cities are short in history, and there are limited examples of concrete efforts. Thus, these ethical principles have been prepared based on the four principles of "biomedical ethics" (Beauchamp and Childress, 1979), that have been widely discussed and that have commonality in terms of implementing state-of-the-art knowledge.

This principle shall be revised and materialised from time to time in accordance with changes in society, and technical measures to increase its effectiveness shall also be continued to be studied.

- Respect for autonomy

- Provide multiple choices to citizens.
- Transparency is guaranteed, and citizens can make decisions upon understanding the mechanism.

Specific Initiatives: Ensure transparency, clarify accountability, and establish consensus building mechanisms

- Nonmaleficence

- Citizens shall not be exposed to physical, mental or economic harms.

Specific Initiatives: Protecting the privacy of citizens, ensuring data security and system safety

- Beneficence

- Provide benefits to society and citizens. Benefits shall always outweigh unavoidable losses.

Specific measures: Visualization of benefits and unavoidable losses

- Justice

- All residents shall be treated fairly and impartially regardless of their age, gender, race, religion, ideology, economic circumstances, etc.
- Disparity between citizens shall not increase due to smart city development.

Specific measures: Promotion of universalisation, development of effective communication methods, guarantee of fairness, impartiality and equality

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Tsukuba City