"What counts is what is measured." We've all heard this, and however much you may dislike the idea that only the things that can be measured are important, you have to admit that there is a certain amount of truth in the idea that people tend to focus more on areas that are being assessed or measured.

Which is why the recent publication of key performance indicators (KPIs) for sustainable smart cities is important. These KPIs will help cities and external commentators to assess how information and communication technology (ICT) has affected the environmental sustainability of smart cities.

A focus group on sustainable smart cities

The Technical Specifications for KPIs have been published by a focus group on sustainable smart cities. This reports to the International Telecommunications Union, a United Nations specialised agency. The focus group was given the task of producing a series of KPIs that would assess how the use of ICT has an impact on the environmental sustainability of cities.

It has broken this task down into several smaller ones. These include producing detailed specifications for KPIs on usage of ICT, and also on its impact on sustainability in smart cities. The KPIs are also in two parts: descriptions of the KPIs themselves, and then metrics and evaluation, or how they can be measured.

Six dimensions of KPIs

The KPIs are set out across six dimensions, which are:

- Information and communication technology;
- Environmental sustainability;
- Productivity;
- Quality of life;
- Equity and social inclusion; and
- Physical infrastructure.

The idea is that the ICT dimension underpins all the others, since ICT infrastructure is likely to be the basis for all smart sustainable solutions. The focus group document describes ICT as a 'hub' around which the other dimensions revolve.

Each dimension is broken down into a number of sub-dimensions, such as network and access under ICT, and air quality under environmental sustainability. It seems fair to say that these six dimensions probably cover all the elements of living and/or working in a city,

including education, pollution, energy use, employment and safety and security of public places.

Taken together, these six dimensions should allow thorough assessment of the progress of smart cities in harnessing ICT to achieve sustainability. The devil, as always, however, is likely to be in the detail of the KPIs, and how they are used to monitor and capture progress and development.

Who will use the KPIs?

The beauty of KPIs is that anyone who is interested in the performance of smart sustainable cities can use them. For example, city administrations are likely to find them useful both strategically and operationally. KPIs will help them develop future strategies, and also understand their own performance and improve it. They may even wish to benchmark themselves against other smart cities around the world, and a set of KPIs will allow them to do so.

City residents and non-profit organisations may be interested to understand how the city is developing and using ICT, and hold their elected representatives to account for the way the city is run. It also seems likely that evaluators will be interested, whether academic or third party ranking agencies and organisations, and whether engaged by the city itself or not. This kind of external assessment has historically been crucial to making large-scale improvements at municipal government level, because it allows formal measurement against peers and established standards. You might describe that as 'name and shame', or a way of using competition to encourage progress, depending on your perspective.

Should indicators be designed to indicate?

Critics may suggest that these indicators are not really designed to 'indicate', that is, to show draw attention to potential issues and problems. Certainly the six dimensions suggest an approach that is much more a comprehensive performance assessment of the sustainability of smart cities. However, as with any indicators, it is not so much the indicators themselves that are important, but rather how they are used to assess performance and encourage improvements that will count in the long term.

Successful pressure from citizens rather depends on citizens and their representative bodies understanding the detail of the indicators; history suggests that this is less likely to happen. But benchmarking and evaluation and ranking by external bodies are both long-established improvement methods with proven results. While it is up to smart city administrations to

take these indicators and make use of them, it seems likely that the truly smart among them will be making their own comparisons with peers and drawing their own conclusions.

Image credit: [Windmills by Jan](#)