# (Your) Data Is The Fuel Of Smart Cities

Smart City engineers pretending to be urban planners see data as the essential life-blood of Smart City technology, which technology has absolutely no value or efficacy without the data. This is why 5G is being railroaded across America.  TN Editor

Hudson Yards in New York and Sidewalk Labs' project in Toronto are test cases that will radically change the way our cities work through the use of data and the Internet of Things.

As I discussed in a previous post, the Internet of Things has evolved to encompass a range of devices, from the smallest household appliance to self-driving cars. On a larger scale, smart city developments compound the benefits of IoT by collecting and analyzing data on usage patterns to create a reciprocal relationship between residents and their communities.

These projects are not only helping to implement existing technology in more sustainable ways but, by collecting and analyzing data on daily usage patterns, will also help us to optimize future sustainable energy solutions.

**A Microcity in New York**

Hudson Yards in New York has played a significant role in helping the public understand the potential that IoT plays in developing a more efficient community.

The project features a microgrid that consolidates the power and heat demands of the project and "connects the buildings in a thermal loop." While powered by two cogeneration plants, rather than sustainable wind or solar power, the small plant that powers Hudson Yards is twice as efficient due to its repurposing of the hot water used in the generation of electricity for heating purposes. The immediacy of the utility plant also reduces the losses associated with transmission. All told, the project is estimated to save 24,000 MT of greenhouse gasses from entering the atmosphere each year.

In order to reduce costs, the microgrid is connected to the City's larger grid and contributes excess power. In the event of a power outage, the likes of which have roiled New York City every few years, Hudson Yards' microgrid can be isolated to maintain power for the buildings within the project's perimeter.

Moreover, the project constantly collects data on the usage patterns of inhabitants in order to model future energy needs and optimize existing processes. Not only can a better understanding of system-wide energy usage help future adoption of renewable energy by helping to predict needs, but it can also help to optimize conditions in commercial workspaces to lower power usage over time.

**Data as a Resource**

Sidewalk Labs' Quayside project in Toronto offers similar lessons for how smart technology is changing residents' relationships with their communities. Quayside, a former industrial area, is being developed as a

mixed-use area that aims to cut carbon emissions by 89 percent from today's average use.

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