NB-IoT: Where Trash Can Become Treasure

One of the early commercial deployments of narrowband IoT (NB-IoT) in the US is all about trash.

Sensoneo's first commercial NB-IoT deployment in North America uses T-Mobile's nationwide NB-IoT LTE network and Twilio's SIM cards to control monitors called "smart sensors" that sit inside dumpsters in cities across Colorado, Ohio and California.

Michael Basila, CEO and founder of Sensoneo, which has launched the IoT project, says the sensor sends out 53 bytes per data transmission and the low-power system's battery lasts for years. "The monitor has to survive in the dumpster ... You don't want to change the battery every year," says Basila.

Sensoneo's Smart Waste Management solution monitors waste levels, pick-up status of each bin, and the real-time temperature of bins. Sensoneo provides apps for the operators, drivers and citizens to manage the trash and report any garbage-related problems.

Basila says that one of the features of NB-IoT is it has "very good signal coverage." The narrowband signal can handle even underground connections, like those that Sensoneo manages in Prague.

Basila also likes the pricing of NB-IoT. He claims that it is "ten times better" than previous GPRS offerings. Sensoneo won't reveal the exact pricing of the NB-IoT service though.

Basila believes that NB-IoT will form the backbone of Sensoneo's business over the coming years. He also sees opportunities for 5G in IoT, but more in applications like high data-volume video cameras.

Slovakia-based Sensoneo's waste management is deployed in 40 countries around the world. The company supports other low-power connections such as SigFox and 2G.

T-Mobile was the first US carrier to launch its nationwide NB-IoT LTE service in July 2018. This is the first commercial deployment to use Twilio SIM cards.