

# Making our rubbish smarter with the Trash Track initiative



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London

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**Smart city technology, for all its potential, is sometimes guilty of being oversimplified by those who are excitedly anticipating its arrival. Making our lives easier is but one small part of the smart city puzzle, with initiatives also in place to help us improve our environment and address issues that go deeper than the ones tackled by a connected fridge.**

One such initiative is [Trash Track](#), a project by the Senseable City Lab, which aims to explore a possible future where every object — thanks to the Internet of Things — will be addressable and trackable. This, as the name of this project suggests, also affects our rubbish.

# Aluminum Can

Disposed at

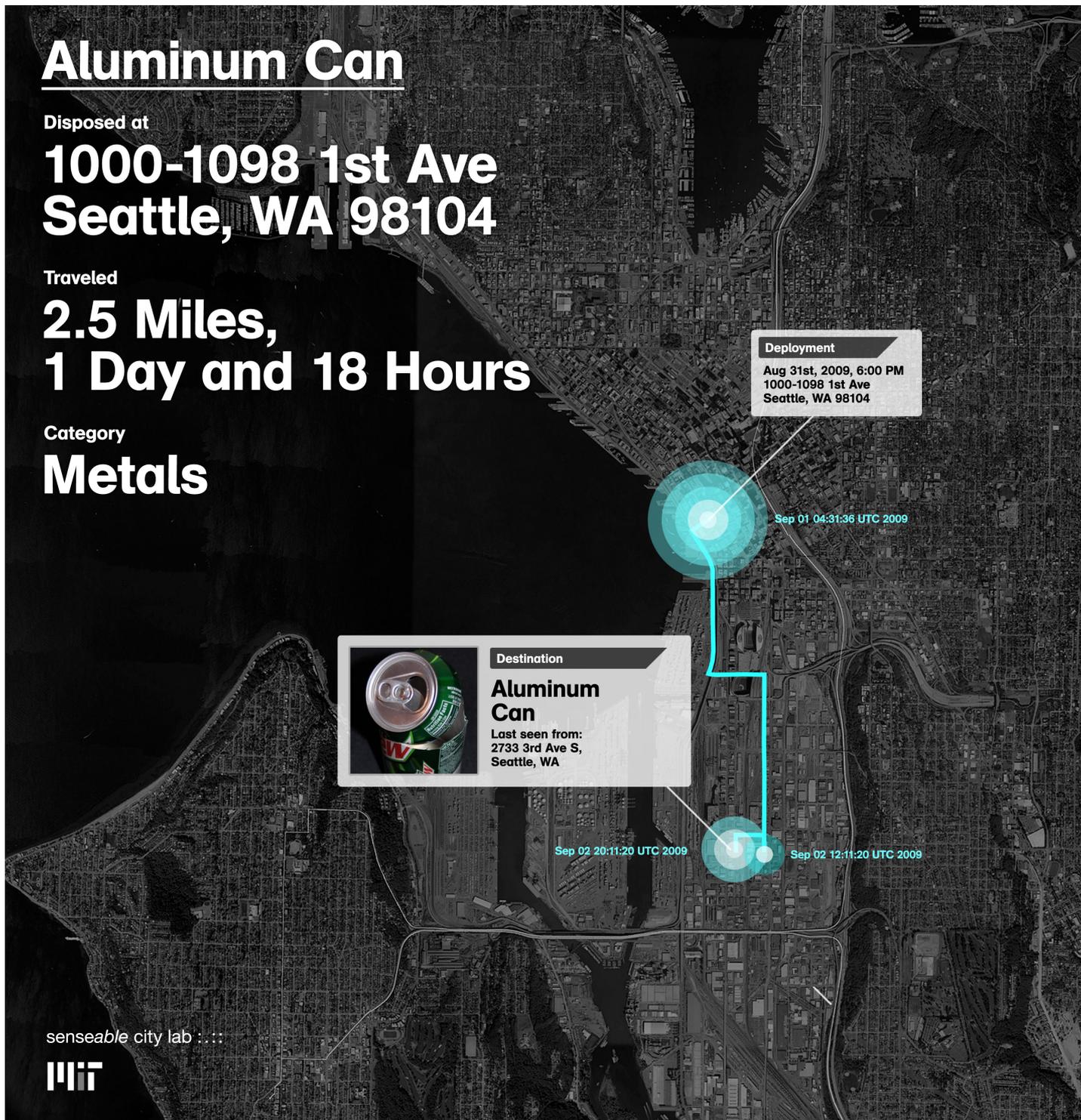
**1000-1098 1st Ave  
Seattle, WA 98104**

Traveled

**2.5 Miles,  
1 Day and 18 Hours**

Category

**Metals**



We spoke with Carlo Ratti, who runs the Senseable City Lab while on the faculty at the Massachusetts Institute of Technology in Boston, to tackle Trash Track and the issues it can help citizens address.

Carlo explains how the project works: “We added digital tags to trash and then followed it as it moved through the city’s sanitation system. The project could be considered the urban equivalent of nuclear medicine — when a tracer is injected and followed through the human body.”

The project is described as the first step towards the deployment of ‘smart-dust’, which may initially sound nightmarish, but in-fact precedes many of our notions of the smart city. Carlo explains:

“The idea of ‘smart dust’ dates back to the 1990s. It stems from a scenario in which technology becomes so small and diffuse as to be almost pulverised. It is similar to the concept put forward by the computer scientist Mark Weiser, whose idea of non-intrusive — or ‘calm’ — technology goes by the label of “ubiquitous computing”.

Ubiquitous computing, then, is the Internet of Things in all but name. So how can the IoT help with our rubbish?



“Results showed how surprisingly far some of the waste travelled, effectively spreading across the entire country. Electronic and household hazardous waste, for example, which was sent to specialised recycling and re-use facility in other states, travelled on average more than 1,500 km (932 miles). A printer cartridge reported the longest track with a length of 6,152 km (3,823 miles), suggesting that, in some cases, the carbon emissions produced in getting waste to a recycling facility negates the expected benefit of recycling.”

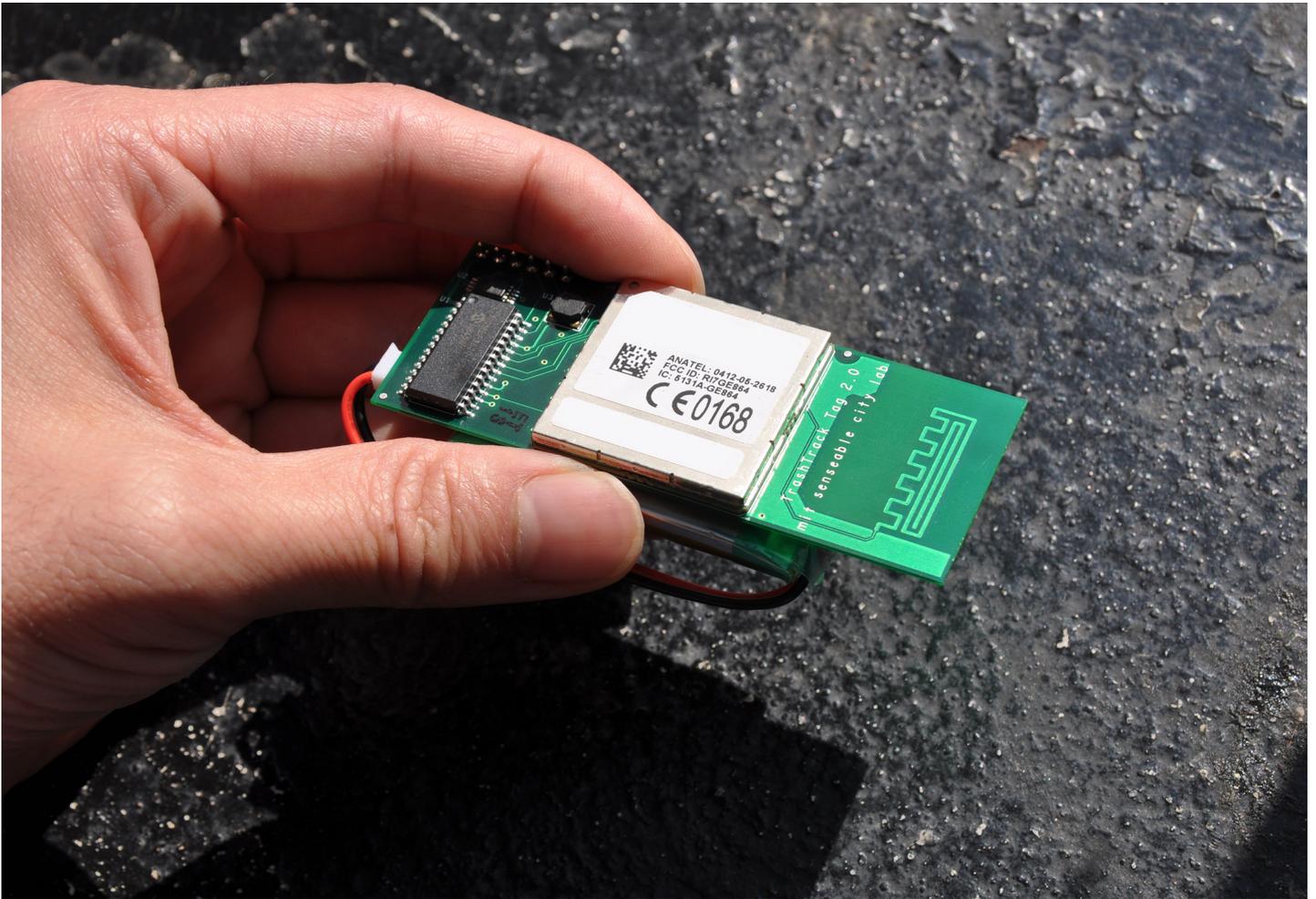


So, your recycling efforts may well end up being in vain. But how can this knowledge be used to improve the situation?

## Talking trash

Carlo explained how the project’s findings were received, stating that the quantitative findings were very interesting and could help improve waste management. He also touched upon how the project could result in behavioural changes. He adds:

“For example, after the deployment, one person told us: ‘I used to drink water in plastic bottles and throw them away and stop thinking about them. However, after the project I know that they just go to a landfill a few miles from me.’”



IoT tag used as part of the project

By inspiring this level of change across a city, Trash Track could have a monumental impact on waste management and, as a result, hugely benefit the environment. This, surely, is part of what a smart city should do — both improve our lives, as well as inspire us to improve them ourselves. Carlo concludes:

“I believe in projects that help us better understand a city — so that we can better transform it.”

What do you think of the Trash Track project? Let us know in the comments below.

All images courtesy of Trash Track, a project by MIT Senseable City Lab: [senseable.mit.edu/trashtrack](https://senseable.mit.edu/trashtrack)