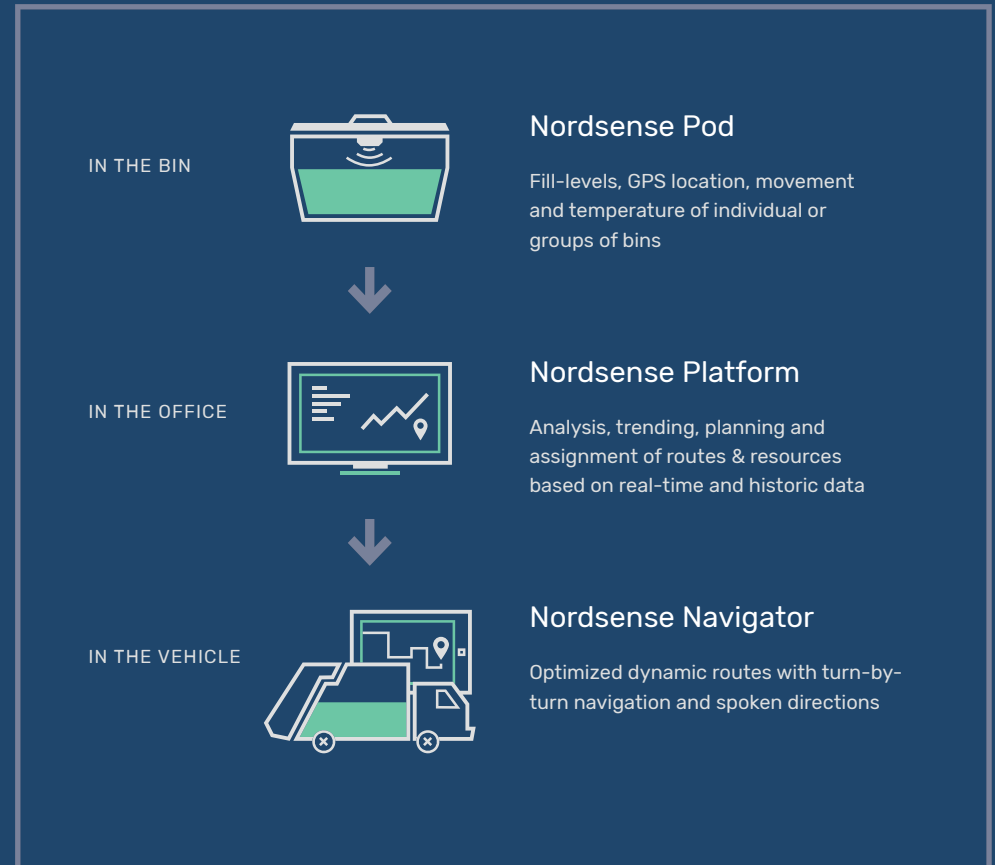


TURN DATA INTO VALUE

Redefining waste management with IoT



San Francisco



Nordsense is part of the Startup in Residence (STiR) program with San Francisco Public Works. Today, we have 50 Nordsense Pods installed throughout San Francisco. To create the most value from the data collected in this program, we have built a specialized interface using the Open311 API with the city's call center system.

San Francisco has outsourced the servicing of the bins to Recology, that provides the city with a service level commitment of 2 hours. Through the use of the Nordsense system and the Open311 infrastructure; The City and Recology can jointly monitor and enforce the service level to ensure a cleaner city experience for the citizens of San Francisco.

The project is now expanding to 1.000 bins.

PROJECT FINDINGS

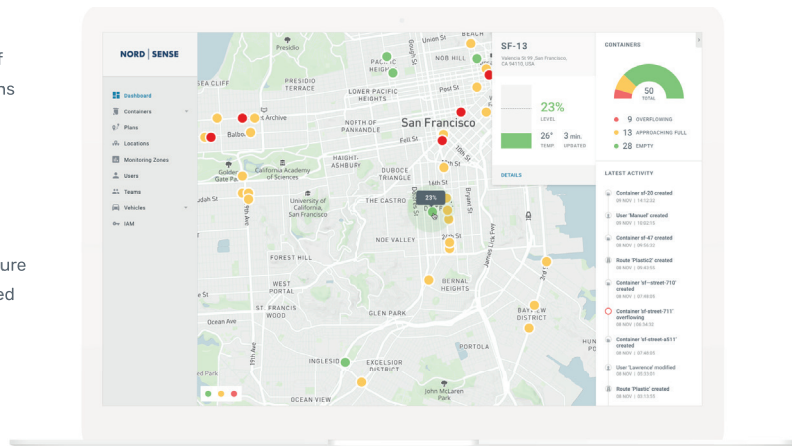
- 80% decrease in overflowing waste bins
- 64% decrease in illegal dumping
- 66% decrease in street cleaning service requests

Source: The San Francisco Examiner. www.sfxaminer.com



NordSense has developed one of the best Industrial IoT applications we have seen thus far. They are systematically instrumenting infrastructure with high quality sensors which can serve as the foundation for completely reimagining how that infrastructure (in this case trash bins) is serviced and maintained.

Greg Papadopoulos
New Enterprise Associates



Copenhagen



Copenhagen has been voted one of the most livable cities in the world several times. The municipality has an ambitious development strategy. They want 2 out of 3 citizens in Copenhagen to perceive the city as cleaner before 2025.

In the beginning of 2016, the first 100 Nordsense Pods were installed in street bins in different areas of the city with varying activity levels. The installation was done to build a baseline on the waste service optimization potential.

It quickly became evident that in order to achieve the waste collection efficiency for the city, the drivers needed to empty bins based on demand, with dynamic addition of the bins to the collection schedules.

In 2018, 1000 additional pods are being installed. Simply removing the servicing of bins that are below a 25% fill-threshold will save €1 million annually.

1 million inhabitants
6000 street bins serviced by municipality

Operational expenses associated with emptying 6000 bins: **€5 million**

- 50% related to parking and emptying bins
- 50% related to driving between bins

Empirical study shows that

- 40% of emptied bins contain less than 25% of waste capacity
- 90% of bins are not full, when they are emptied

Source: Smarte investeringer i kernevelværdien. www.kk.dk

