Ari Goldfarb

is CEO at KANDO. The company provides wastewater network insights to cities by analyzing real-time data that is retrieved from IoT sensors located at strategic points around the network.

70%
of Israel is a desert

80%
of Wastewaters are reused in agriculture

If you eat a watermelon in Israel, you are actually eating wastewater that's been reused!

20+ years experience in the mirror

- "As a process engineer, operating WWTPs, I was frustrated to sometimes discover the bacteria, inactivated by an unexpected pollution when arriving in the morning"

- "When working in Design and Build, I was discontented to see that despite best-in-class technology, reality can disrupt the efficiency of the best designed plant"

- Wastewater treatment is not starting at the treatment plant: the sewage system is a fundamental part of it.
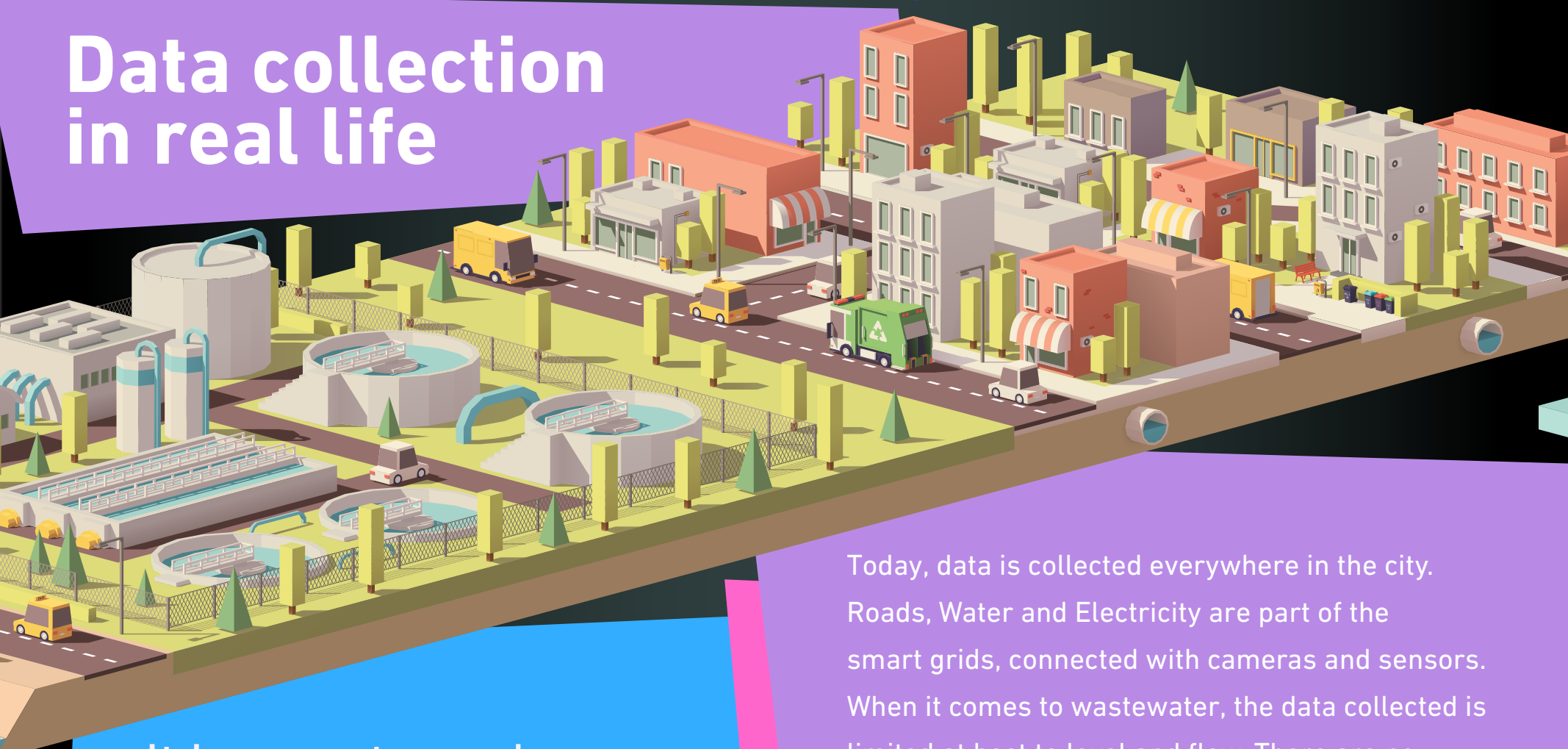
How it works

Improving the wastewater treatment is all about knowledge.
Building this knowledge relies on two legs:

The right to collect and analyze data

The expertise to understand what you see

Data collection in real life

Today, data is collected everywhere in the city. Roads, Water and Electricity are part of the smart grids, connected with cameras and sensors. When it comes to wastewater, the data collected is limited at best to level and flow. There are no records on quality. There are two reasons for that:

It is an extremely challenging environment to collect data (flow, corrosive atmosphere)

Sensors are very sophisticated, thus expensive

Data collection with kando

To bridge this gap, KANDO relies on indicative parameters (pH, Conductivity, Temperature) and sample analysis. Modeling, AI and Machine Learning then enable to interpolate the data to translate it into insights for the clients. The model gets enhanced with 10 years of historical data.

Level 1:
Collect Data

Level 2:
Analyze Data

Level 3:
Create Knowledge

Level 4:
Act and automate based on the Data

KANDO plays on the first 3 levels.
Stepping to level 4 would imply too much safety issues.

Situation today
Unawareness

Industrial operators have a vision on their product, not on the wastewater they produce. Pollution gets generated from this unawareness.

Unawareness also affects WWTP operators. Today they identify on average 1 pollution event per month, when indeed advanced monitoring proves those events to happen 2-4 times per week.
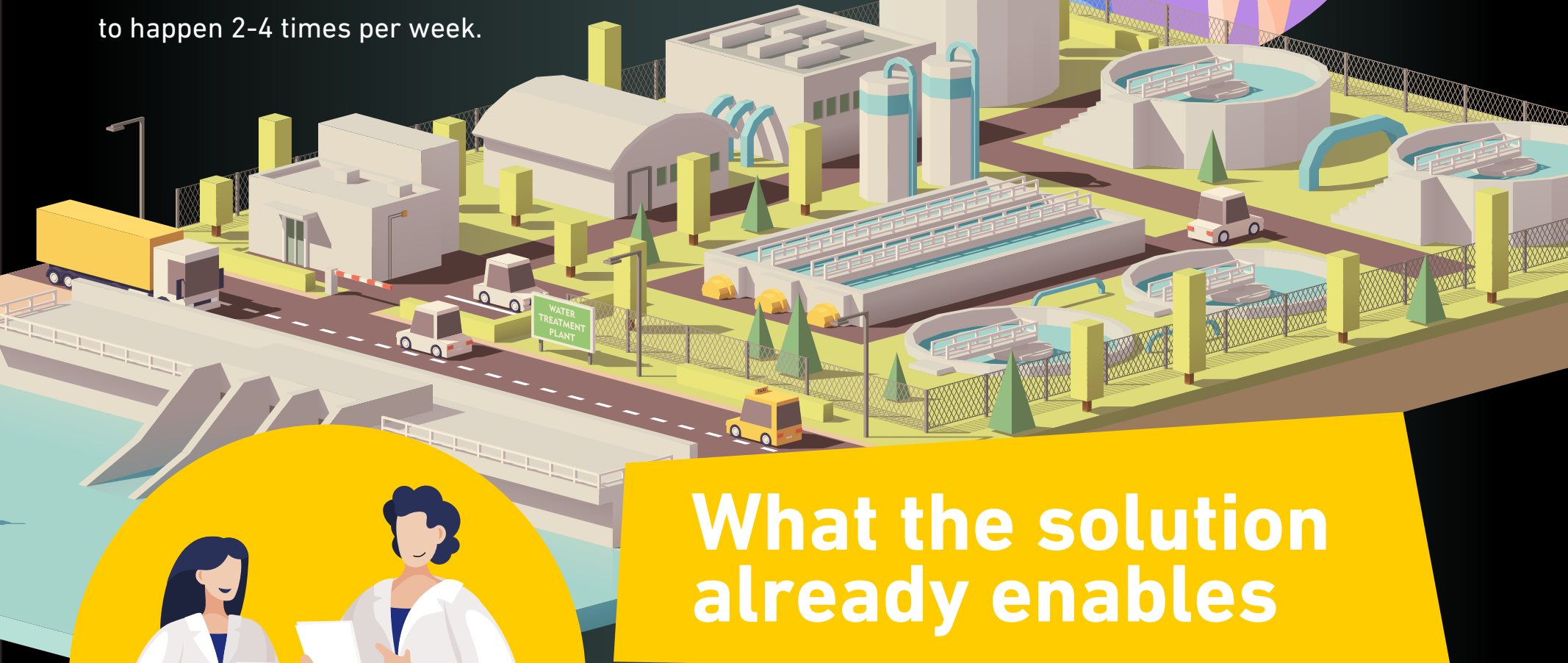
What the solution already enables

KANDO Clear Upstream is a paradigm shift for operators, turning them from passive receivers of pollution to proactive players, able to take corrective measures at the source in real time.

Industrial operators receive warnings from the System per SMS, while WWTP Operators know in advance that a polluting event is flowing down to their plant.

What's next

The next potential to untap, lies in the aggregation of larger datasets. Adding electricity production, water consumption or worker's activity data would enhance the database and thus better feed the AI and Machine Learning.
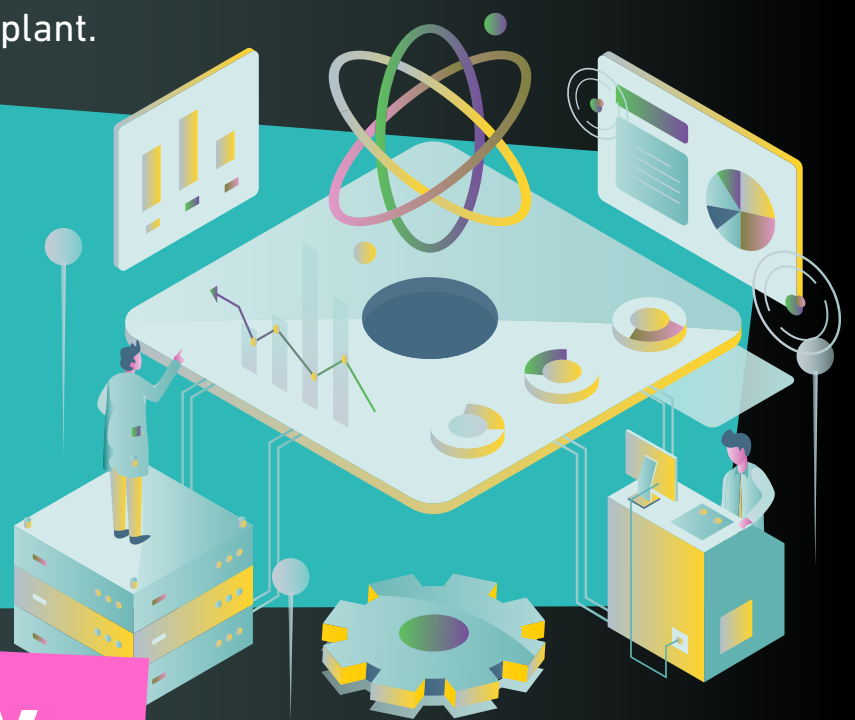
kando applied today
the example of COVID

Digital is here to stay, and we are only scratching the surface of its benefits. The COVID-19 pandemic is a broad example: monitoring sewer networks provides the best insight on the overall health situation. Besides, KANDO is currently running a full-scale project to identify new outbreaks, how many people are sick and where.

Bottom line: you can know everything about a population, its activity, health and habits from its wastewater.

To listen to Ari Goldfarb's full interview, download the latest episode of "(don't) Waste Water"! (link in the comments)

Make sure to subscribe, to not miss any of the next episodes!

(DON'T!)
WASTE
WATER