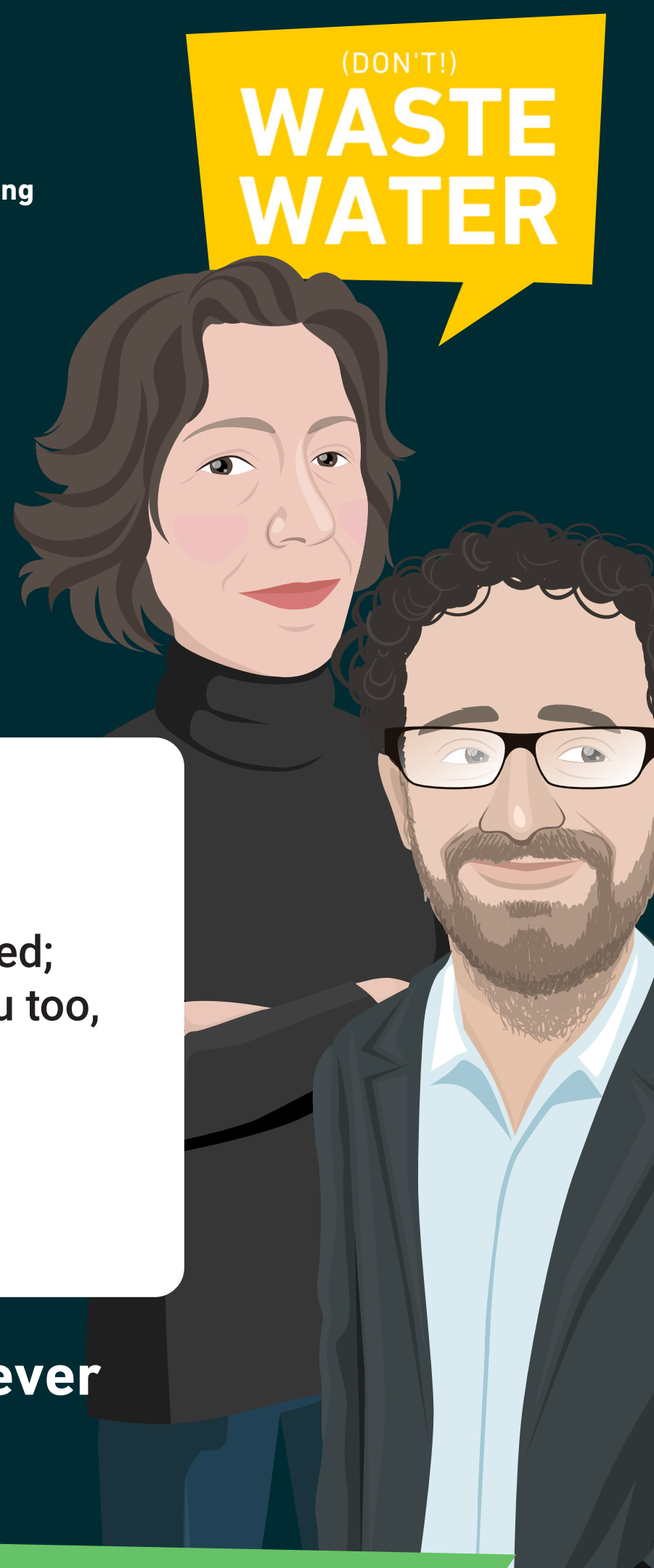
Carol Maxwell

is CEO & Director of MICROrganic Technologies and a Founding Member of ENYA Funds 1, 2, & 3.

Brent Solina

is CTO of MICROrganic Technologies

MICROrganic technologies



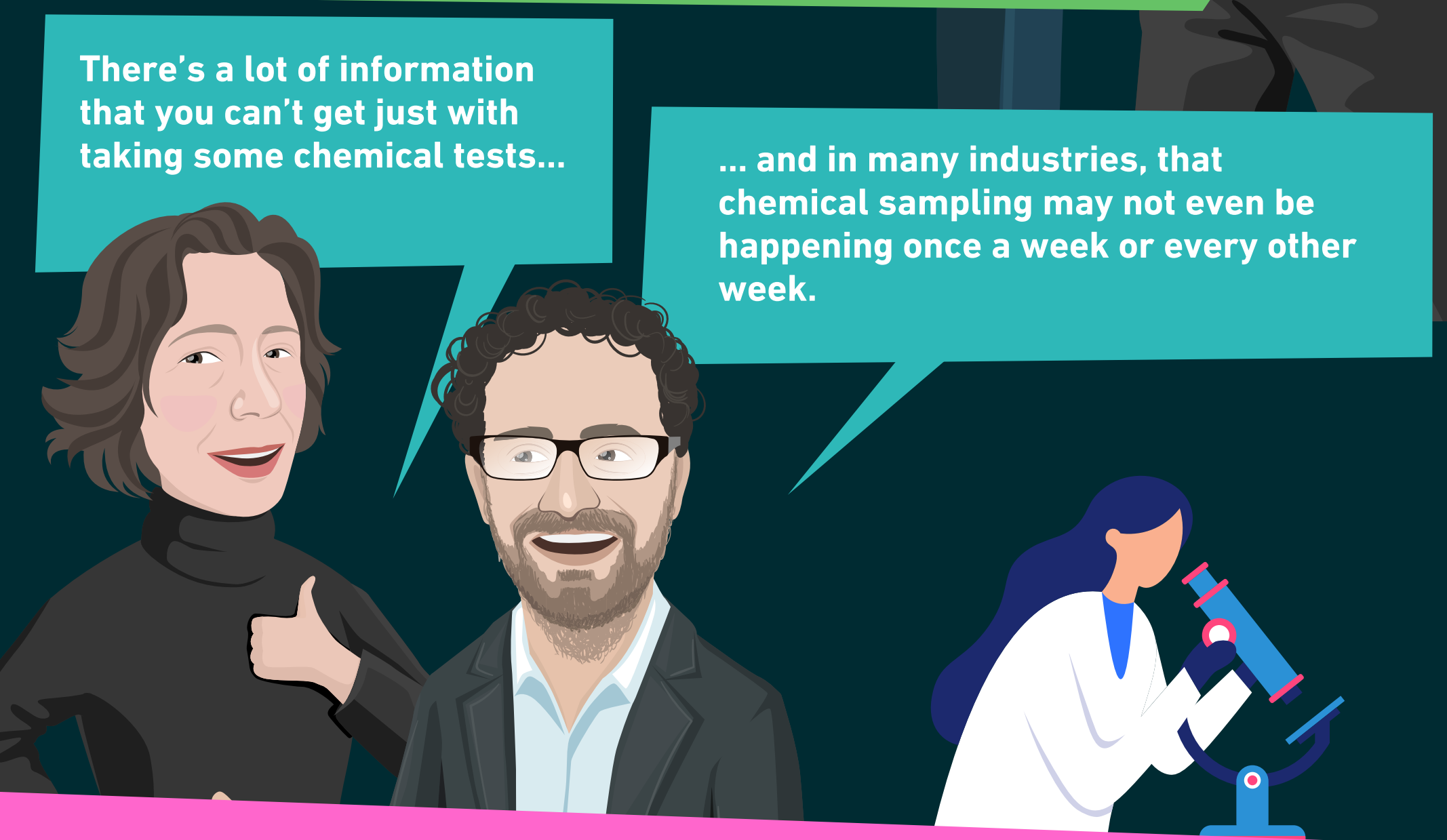
Wastewater Microorganism
@IEatSludge

Hey, I think the #WaterQuality just shifted;
I predict I'm going to be very upset - you too,
@AnaerobicBacteria67?

11:11 PM • Jul 13, 2022

... tweeted no microorganism ever (for obvious reasons).

So how do you know if your wastewater treatment is efficient in real-time?



Ever felt that struggle of noticing a drop in water quality without knowing what caused it and if it is a temporary situation or a hardware issue?

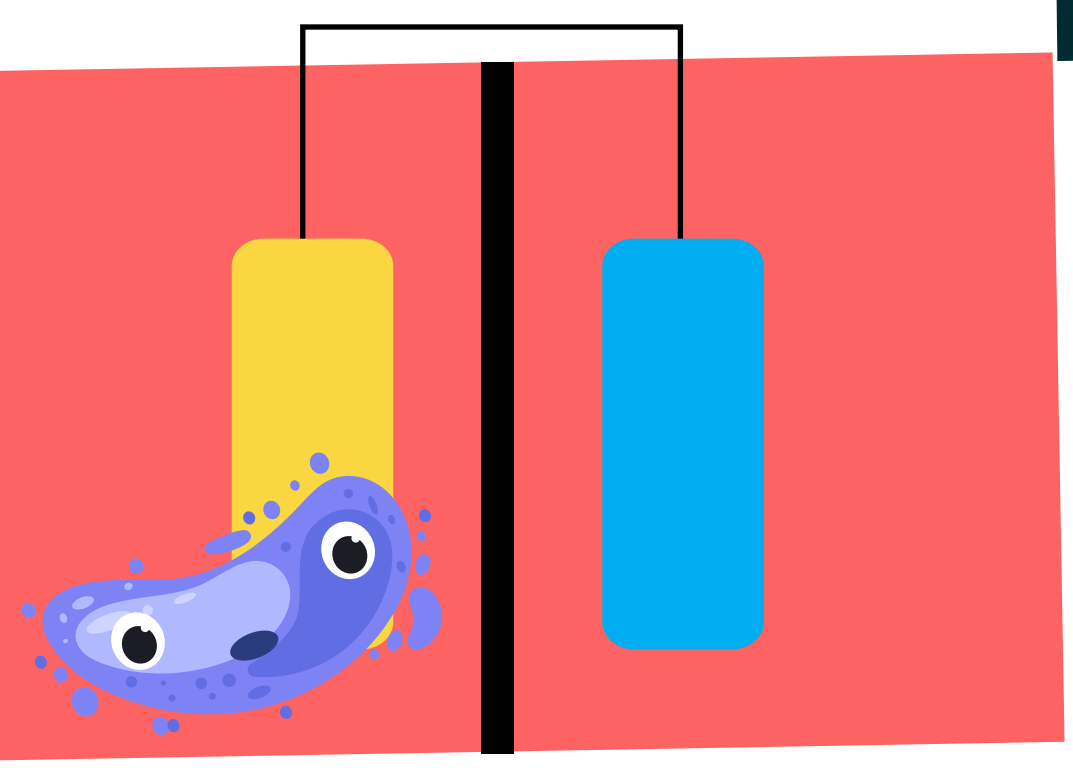
Well, that could be history:

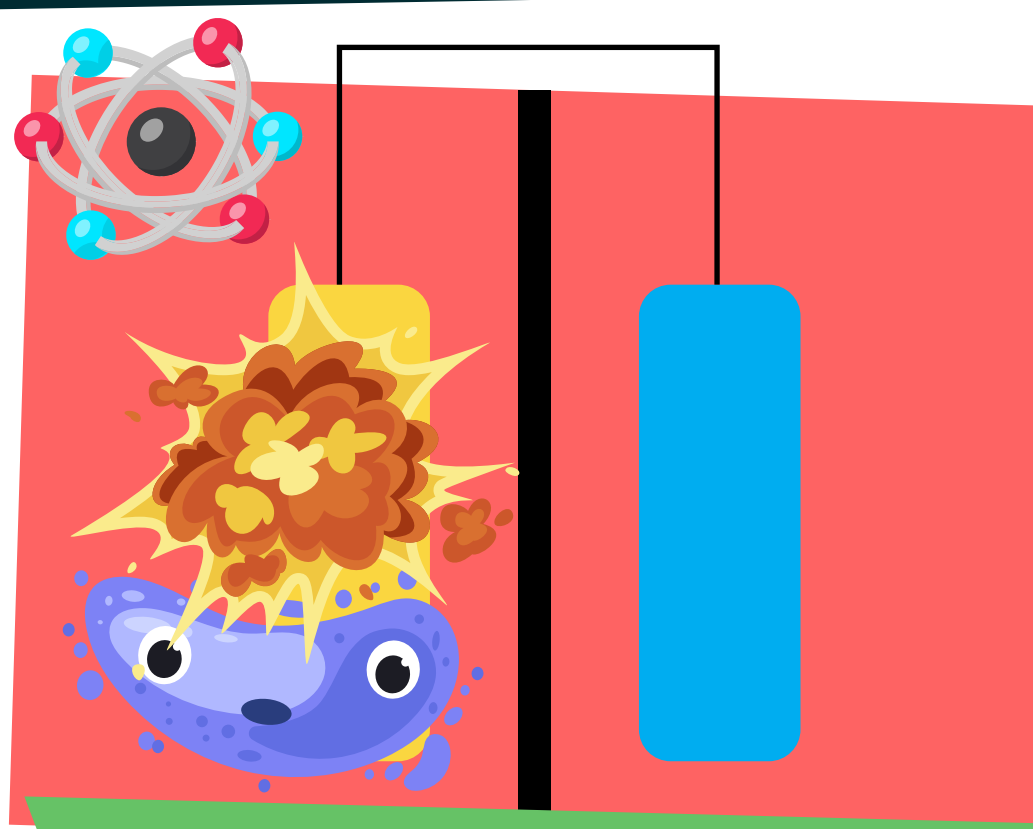
(DON'T!)
WASTE WATER

With our software, the bugs can not only let you know they need some help, but they can also contact your operator and set up a calendar invite for you!

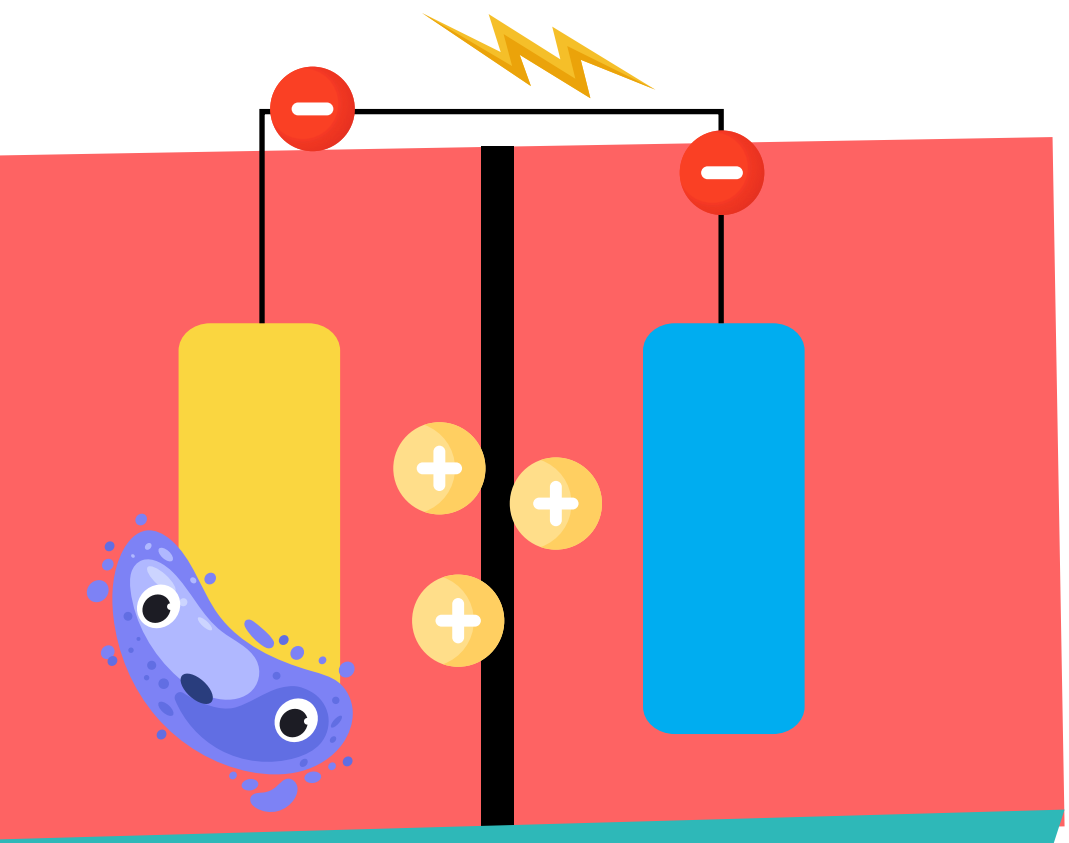
Microorganisms filling your Google Calendar? Let me take a step back to explain how.

MFCs feature a cathode (+) and an anode (-) Microorganisms live on the anode.

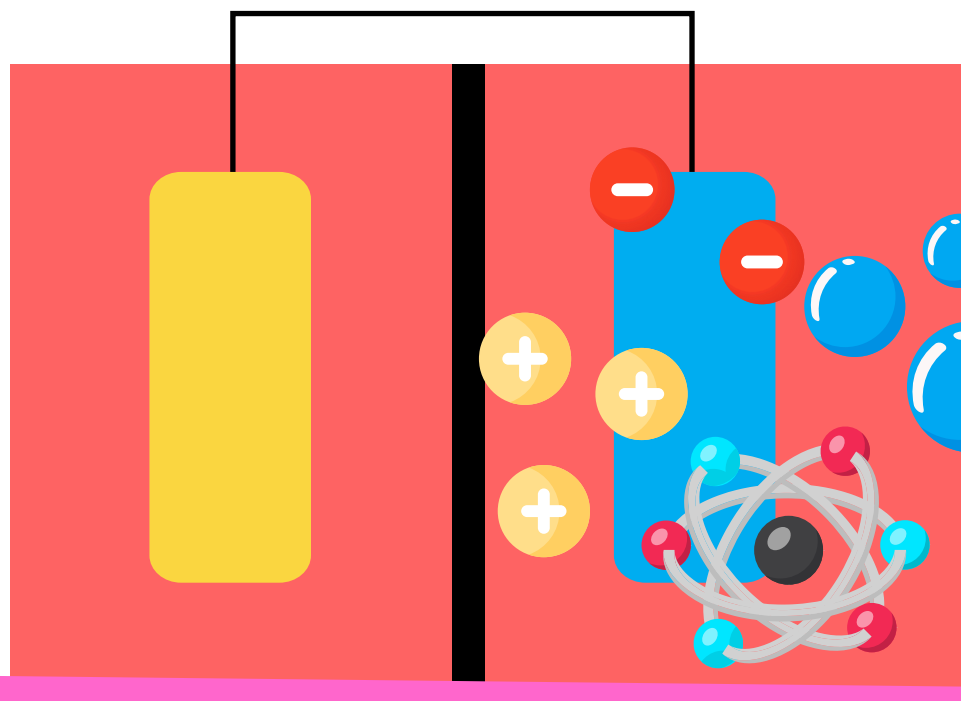




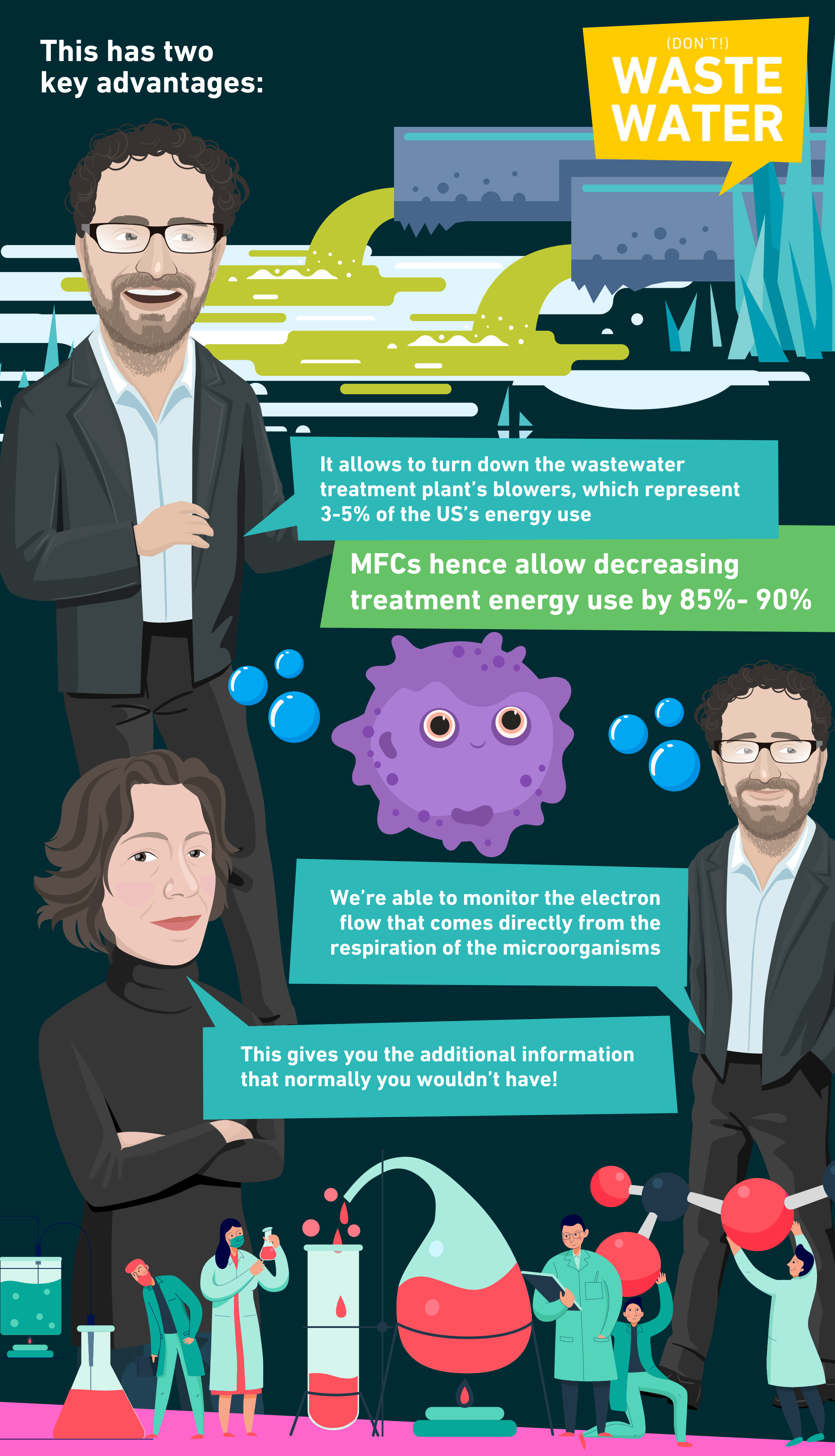
When organic pollution comes their way, they break it down to release electrons and protons.



Like in a battery, electrons travel from the anode to the cathode through a wire generating a current



The cathode side attracts oxygen from the outside to recombine with the protons and the electrons and form water.



... and that's also how MICROrganic Technologies' software can sneak into your calendar to deliver this insight.

Actually, that's not the end of MFCs potential to transform the way we treat and produce our water:

(DON'T!)
WASTE WATER

Microbial Fuel Cell's electron flow and separation also allow us to deliver positive desalination

Powering this and all the other possible applications of MFCs is MICROrganic's ambition: they see their VIVA product as the fundamental brick and platform for others to build on.

If we zoom out, what this may enable is straightforward:

Our technology has that massive ability to decarbonize: that's the benefit of what we do.

... no wonder it convinced Xylem to enroll the company in the first cohort of its Innovation Labs (see S5E15)!

We also covered:

- How anybody can take off a start-up, assuming you're creative enough and push hard enough.
- How you can learn sales and marketing the hard way, and how that's beneficial to aspiring entrepreneurs.
- How the bottleneck to turn MFCs into a large-scale solution lies on the cathode's hardware - and how MICROrganic strives to solve it.
- How building an MFC is very close to making a battery - just with additional constraints, using wastewater as a fuel
- How large and small plants have different challenges and how that reflects in their KPIs.
- How MICROrganic's product works yet isn't fully ready for commercialization - and what the next steps are.
- Wastewater being liquid composting, wastewater containing 7x the energy needed to treat it, VIVA being the size of a refrigerator, MFCs powering predictive maintenance and potentially decentralized systems, VIVA being a kind of biosensor... and much more!

Don't miss a single bite: head over to dww.show