Cesar Narvaez

is the CEO and Founder of

NXO engineering

If you've ever operated a wastewater treatment plant, you probably know Algae as your enemy, responsible for Activated Sludge bulking.

(DON'T!)
WASTE WATER

But what if this preconception was wrong?

Algae consume nitrogen and phosphorus. It becomes a powerful eutrophication device that can treat nitrogen, phosphorus, and chemical oxygen demand if you control it!

Of course, operated right, activated sludge processes can do that too. But they consume much more energy!

Algae is very difficult to remove from water, and you need an energy-efficient technology to extract it with the least energy amount possible.

(DON'T!)
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... a challenge NXO solves with a specifically designed Dissolved Air Flotation (DAF).

But the benefits don't stop there. Yes, a green algae plant treats the holy trinity of wastewater: C, N, and P. But it also has welcome side effects.

We don't release CO2 with our technology: we capture CO2

Actually, the Water Industry also will have to reach carbon neutrality somewhere down the road.

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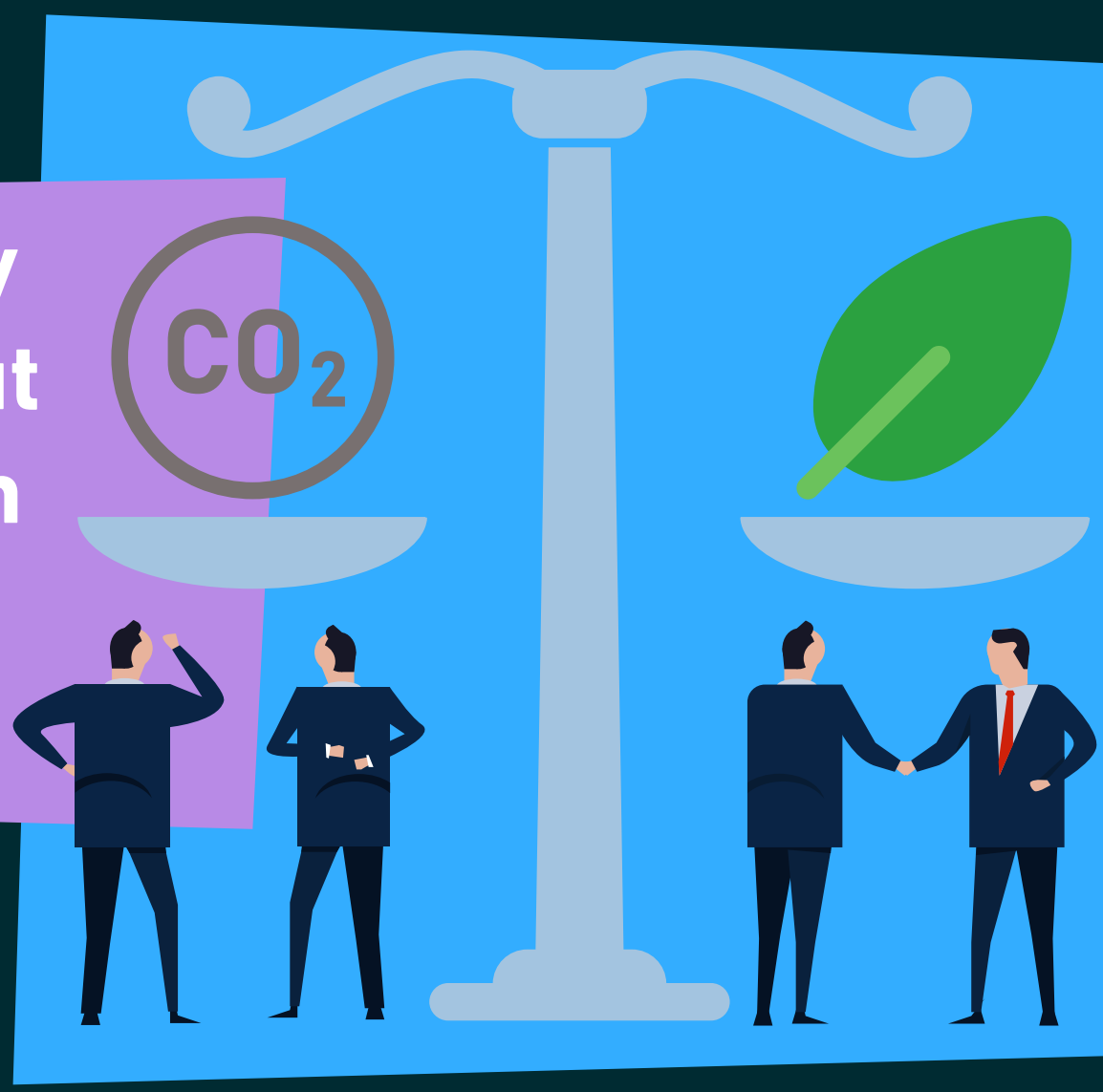

Today, it directly represents about 2% of the carbon emissions and indirectly 5%.

So switching gears and moving to carbon-neutral treatment plants might be of interest!

To that extent, what you do of your green algae once extracted is another key:

We were told that an anaerobic digester would not work and be profitable at the scale of our pilot plant. But there again, we proved them wrong!

... and as a result, the plant produces biogas that can be leveraged onsite in cogeneration.

So far, NxSTEP is still a (promising!) small-scale experiment. But think of it that way:

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When you have a eutrophication problem in a river, is it simple to eradicate? For sure, no! That's the same here.

See, the robustness of your former "enemy" may now be an asset!

We also covered:

- How the attention of decision-makers swiftly shifts from pure CAPEX control to global impact
- How the next step will be to turn the process totally chemical-free by leveraging cacti slime
- How NXO managed to successfully downsize equipment to support their Proof of Concept
- How they turn out to build an EPC (almost) from scratch, and how challenging that may be
- How the concept might be adapted for industrial applications and the company's overall outlook for growth
- Algae as a deep tech, getting support from the largest french research institutes but also getting their pilot plant degraded 8 (!) times, grit, passion... and much more!

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