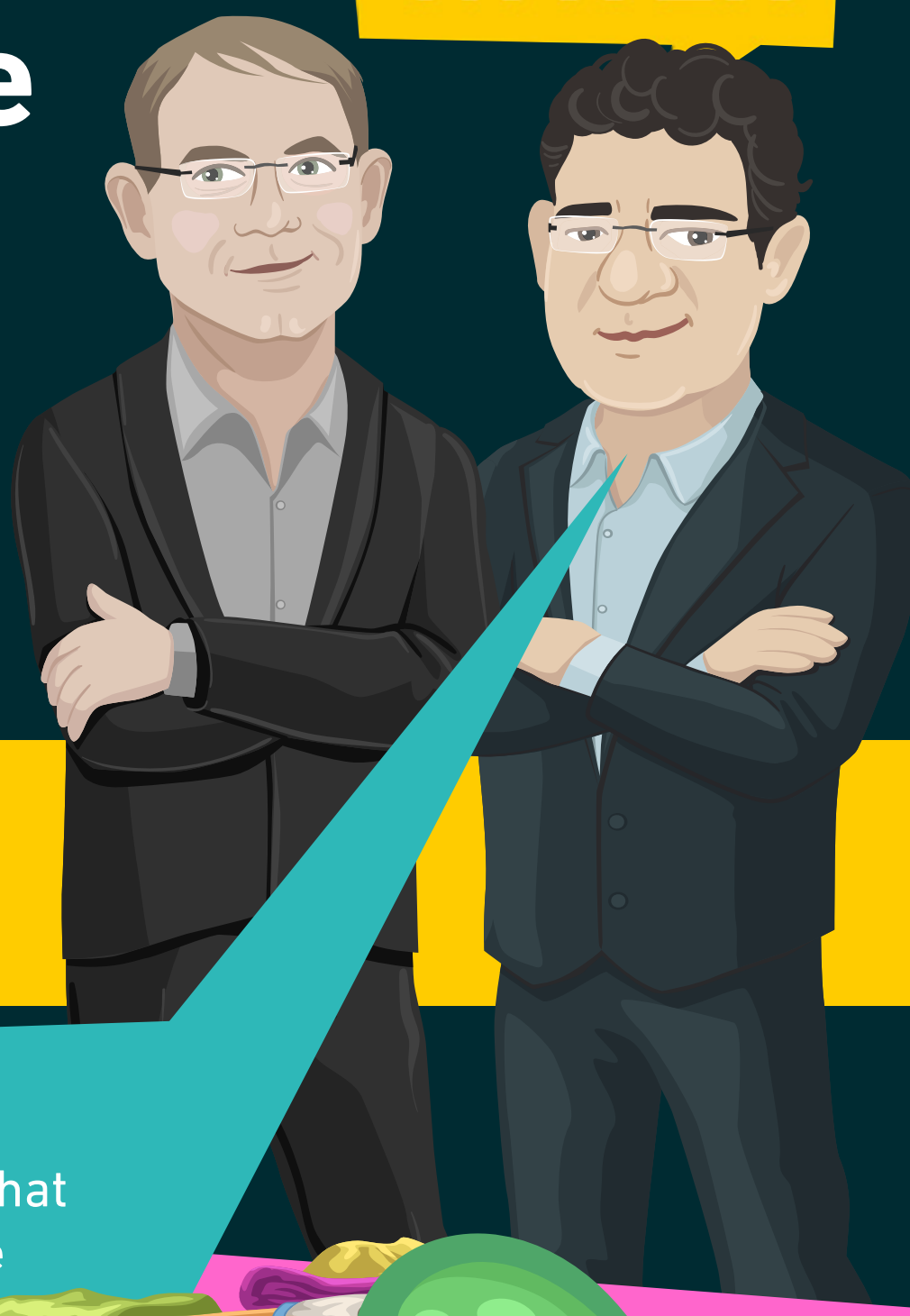
Gabi Wolkinson
and
Ofir Menashe
are respectively CEO
and CTO of

BioCastle
Bio Engineering the Environment

(DON'T!)
WASTE
WATER



Biological wastewater treatments are around for over a century now.

... and when you look at the scientific literature, it tells you that all of it is well known! Yet, in the industrial world, it is a different story.

Let's figure the bacteria as a human. If you want to employ someone, you need to provide him some security. In our WWTPs, we don't offer it!

Hence Biocastle's Idea: building a protective shelf for bacteria made of Cellulose Acetate.

This also enables to fit specific “workers” inside the “castle,” as you can select bacteria that degrade phenols, fat, oils, or any other component and fit them in the shelf with nutrients.

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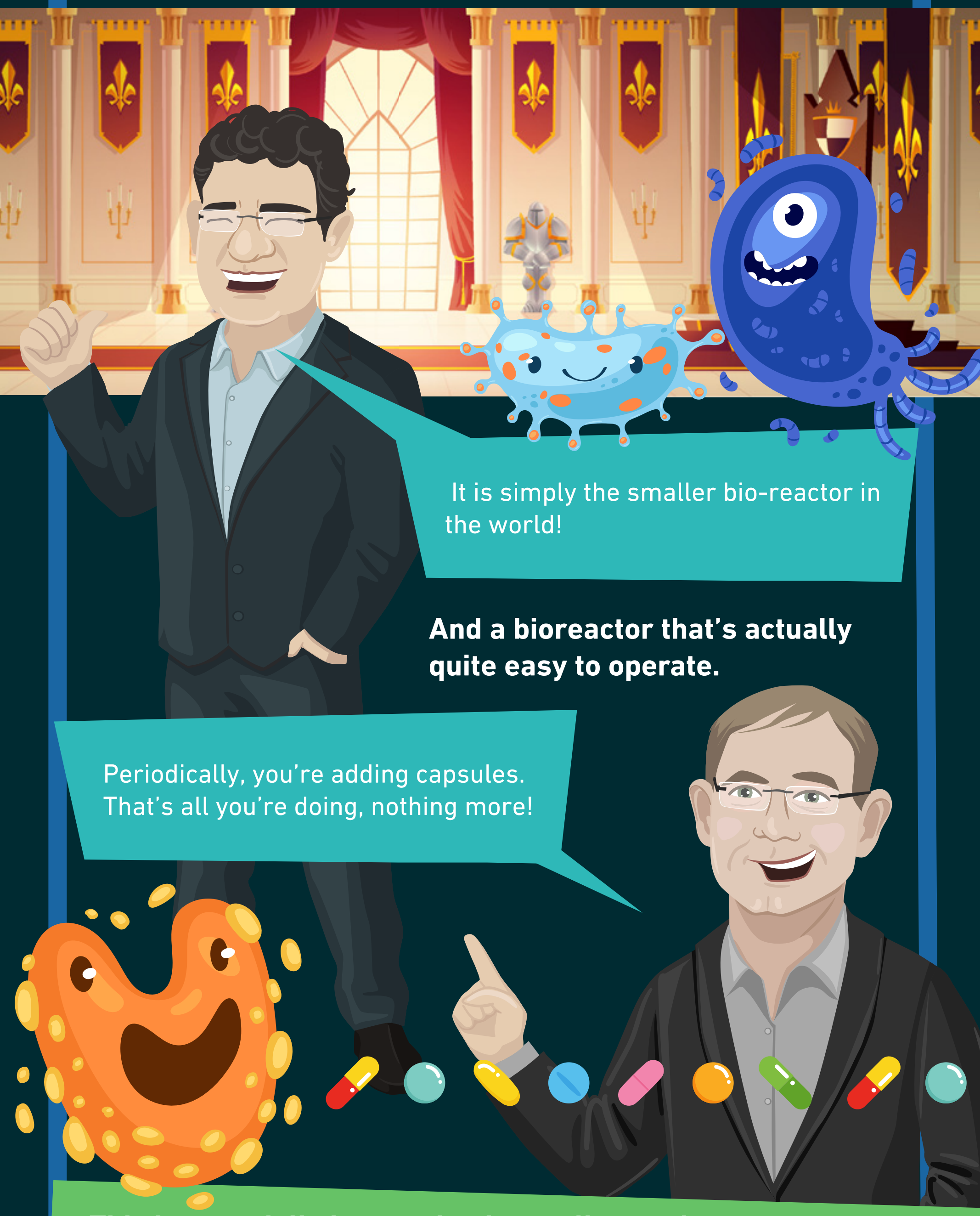

This is especially interesting in smaller-scale applications, especially when water is a by-product and the focus and expertise lies elsewhere.

(But it may also be interesting to enhance a larger scale biological treatment yield.)

As regulations evolve, industrial players have to treat their wastewater better. That's the beauty of our solution: it avoids them crazy investments.

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WASTE WATER

After a couple of months, the acetate cellulose shelf degrades and dissolves into water, and you recharge your reactor with new ones, turning a CAPEX into OPEX.

What do you think of that take at dusting off the century-old activated sludge process?

There's also much more to uncover, for instance:

- How BioCastle might actually be breeding bacteria and training targetted special agents for specific pollutants
- How all this story started with some fishes and puzzling aquaculture challenges
- How biological activity inside a membrane is the complementary approach to a current trend among membrane industrials
- How every water is different and thus prevents from a one-size-fits-all subscription model
- How starting international commercial expansion in the middle of a pandemic does not really provide a tailwind!
- How Biocastle's technology can have synergistic effects with other process steps, especially oxidative ones
- How Bacteria in a shelf can have targetted action on micropollutants through their high affinity with specific carbons and enzymes
- How adoption curve is the principal challenge to overcome as a young water treatment company

Don't miss a single bite; check it out on dww.show!