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17 Decisive Insights that could Actually Impact the Water Industry

#1 - We're Building New York every month between now and 2050

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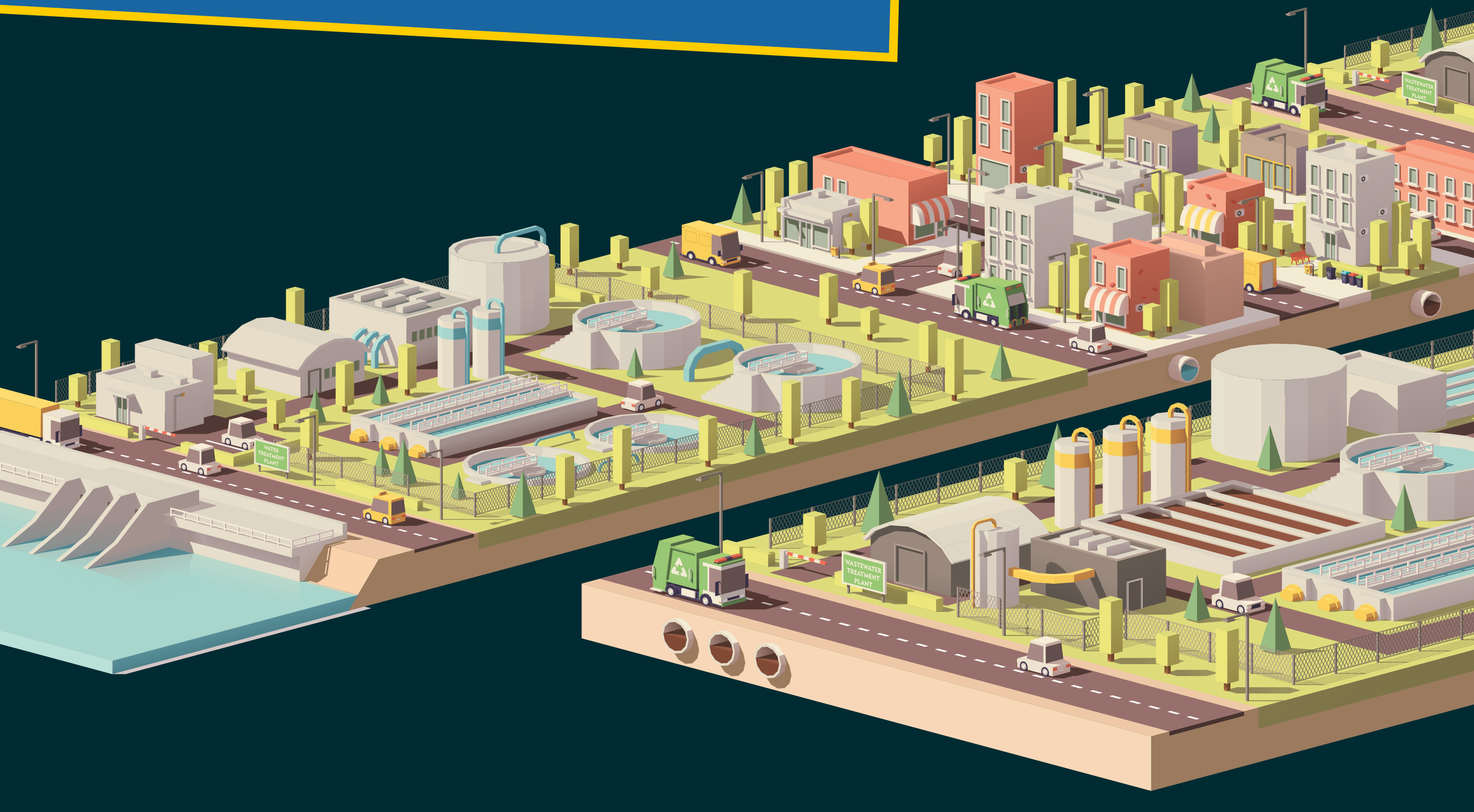

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The rate at which we are adding new building stock to our global supply is like; we're adding a new Manhattan every single month from now until 2060.

Aaron Tartakovsky

CEO @ Epic Cleantec

By 2050, 70% of the world population will live in cities, actually. What's completely mind-blowing is that we are building New York City every single month to reach that figure!

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Ramzi Bouzerda

CEO @ Droople

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So: Manhattan or New York?

Well first, why should the Water Industry care about the pace of urbanization?

Simple: it impacts our Infrastructure.

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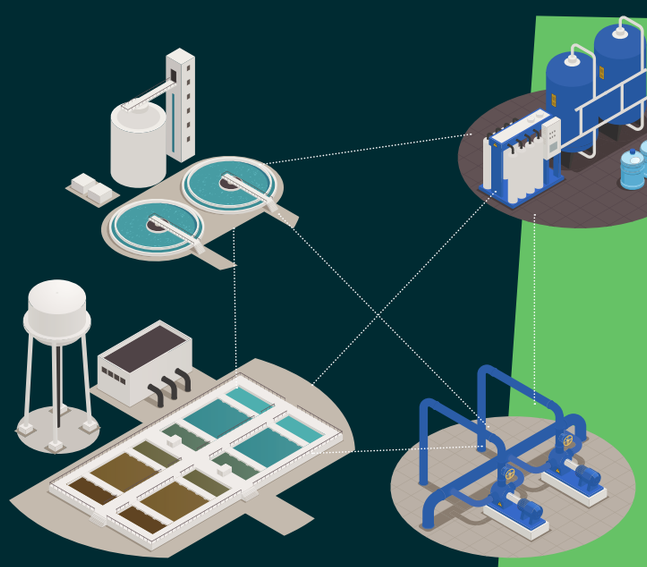
We have two options, to adapt our cities:

1. Rebuild our entire Water System, just larger



2. Supplement & augment the infrastructure with decentralized solutions

... and n°2 is probably a better option!

But: Manhattan or New York?

The United Nations project that urban population will rise from 55 to 68% of humanity by 2050.

This makes for 2.5 more people living in cities, over roughly 350 months.

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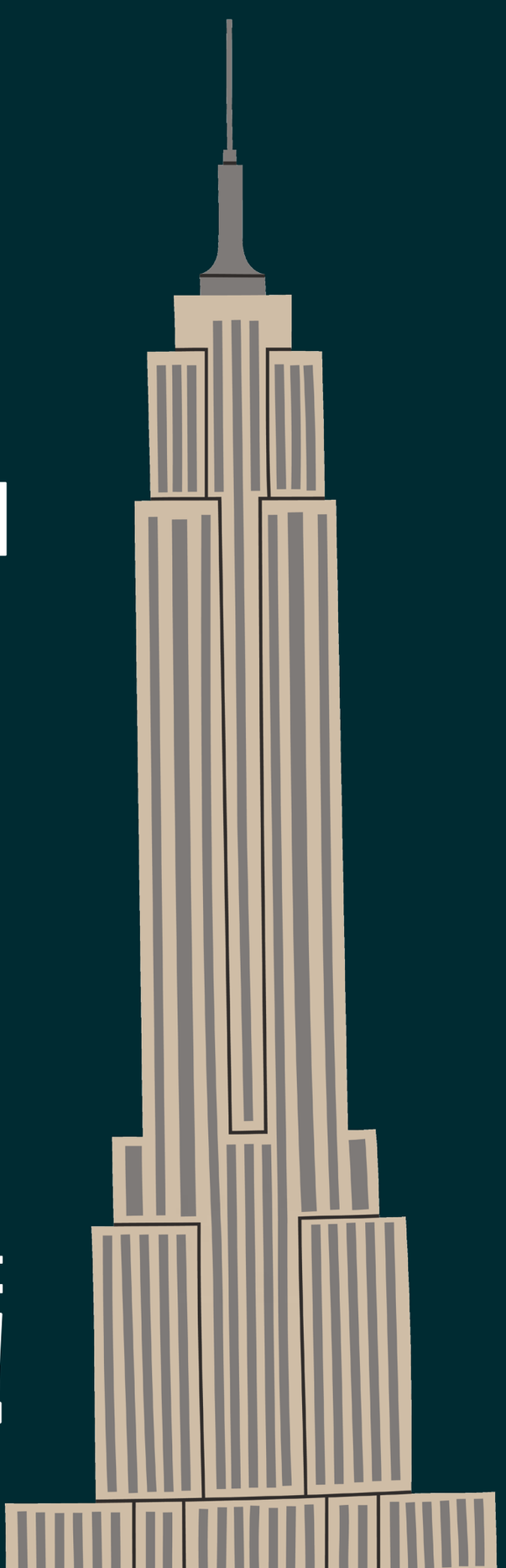
SO:

7 MILLION NEW URBAN CITIZENS EVERY MONTHS



... which makes about

New York!

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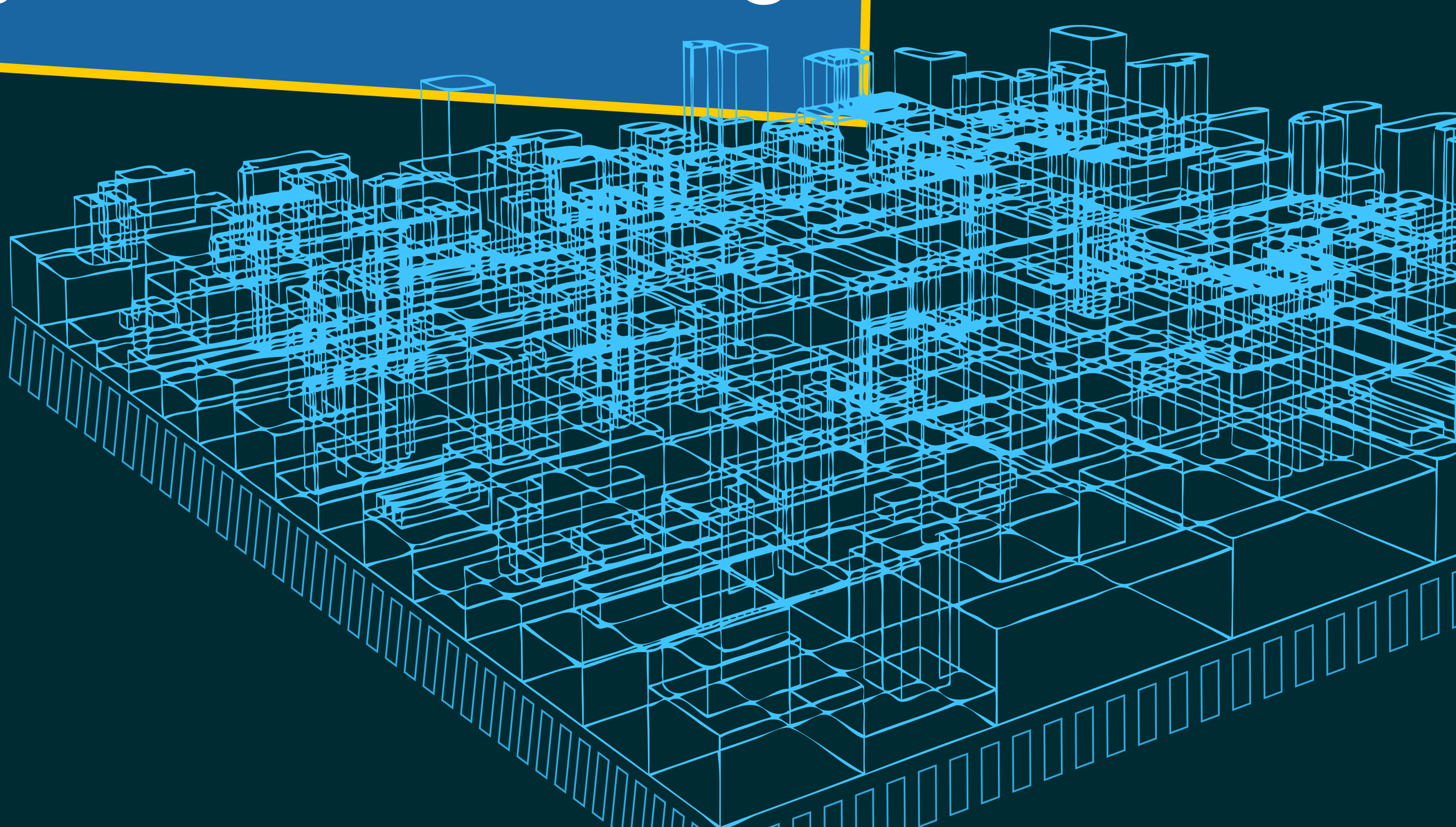
#2 - The Water Industry underuses one of its most powerful tools: Hydraulic Modeling



I see hydraulic models having so much more potential than just being something that's pulled out every five years to write up a big plan!

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Isn't it about time to leverage it, in light of this urbanization wave ahead?

It could unleash:

80%
additional treatment capacity in WWTPs

75%
lower network burst rates

Luke Butler
Director of Innovation @ Qatium

#3 - PFAS are a 110€/Year Health Cost for each Human on Earth

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The nordic council of ministers put a price tag on PFAS chemicals in the blood of Europeans. It's 84 billion in annual health costs. Across 740 million citizens in the EU, it makes for over a hundred dollars spent per inhabitant every year just because of PFAS!

Henrik Hagemann

CEO @ Puraffinity

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in the US, it's estimated to be $37-59 billion

this means that as expensive as it is, PFAS removal is cheaper than the cost of inaction!

... and the societal will keep increasing

Isn't it about time to act?

#4 - There's a 4th phase of Water (and the Water Industry could leverage it)

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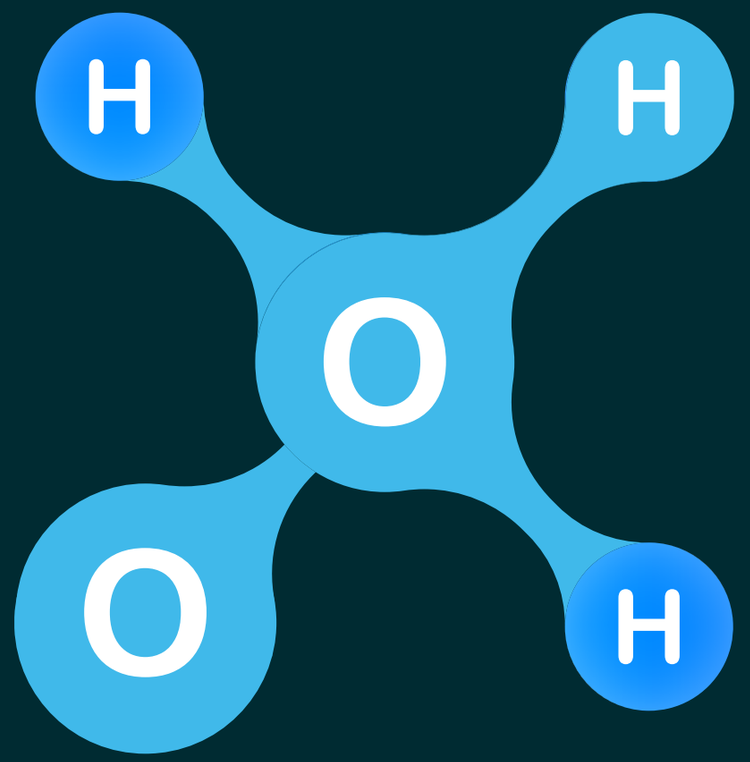

Exclusion zones actually describe the zone containing this 4th phase of Water. It excludes almost everything from it because it's dense and tightly packed, we called it "Exclusion Zone Water" or "EZ Water"

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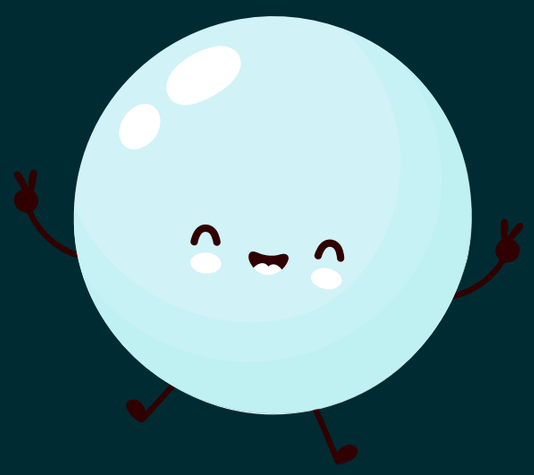

Gerald Pollack

Professor of Bioengineering
@ University of Washington

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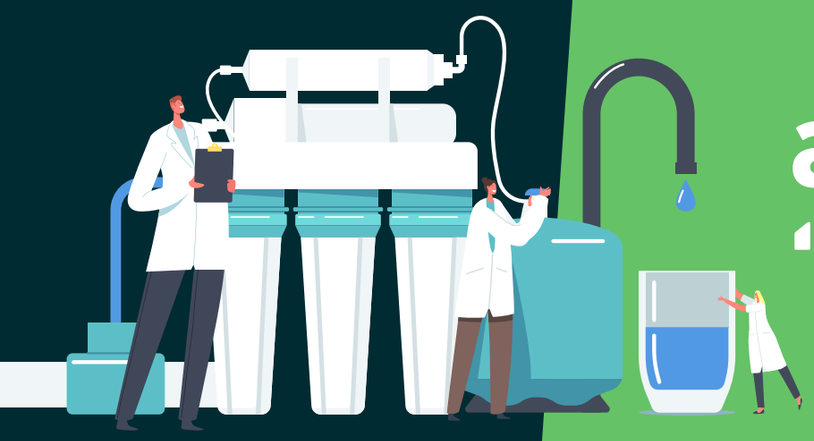
It could be used to power:

a battery, storing electrical energy in water



a desalination apparatus “excluding” salt from water

... It’s also a remarkable lesson on the benefits of staying **open-minded**

#5 - SuperCritical Water Oxidation: the Future of Wastewater Treatment?

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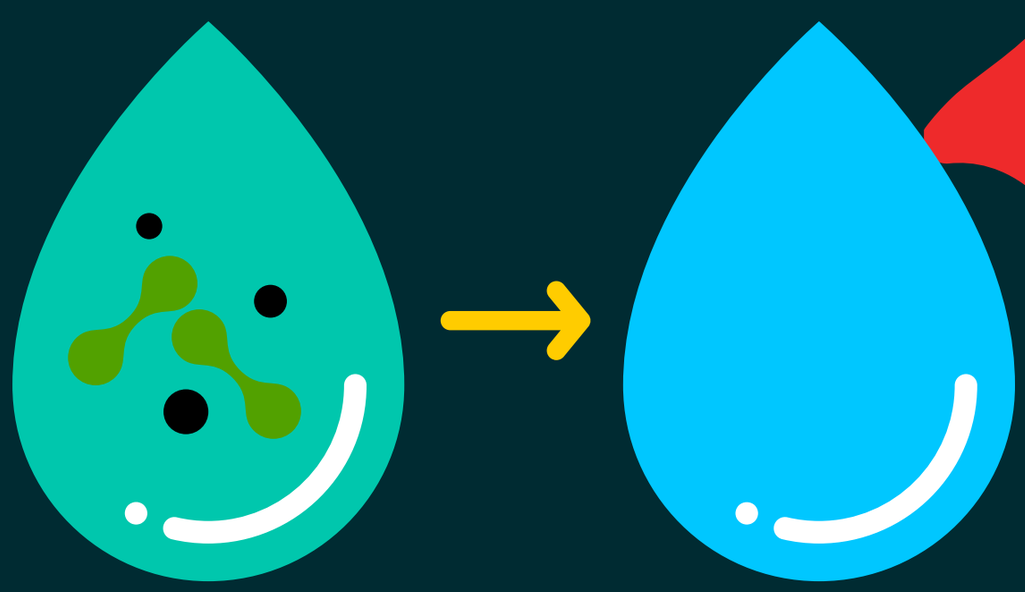

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There's a 5th Phase of Water...

Ok, I know, from a thermodynamics perspective, there are 18 phases of Water

But you get my argument:

Substances have a critical point.

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For water, that critical point is reached at 374°C and 221.1 Bar.

As soon as you go beyond in both dimensions, you enter a new phase: SuperCritical Water.

Kobe Nagar

CEO @ 374Water

That creates very unique properties: instead of water being a good solvent for salts and inorganics, it becomes an excellent solvent for organic molecules!

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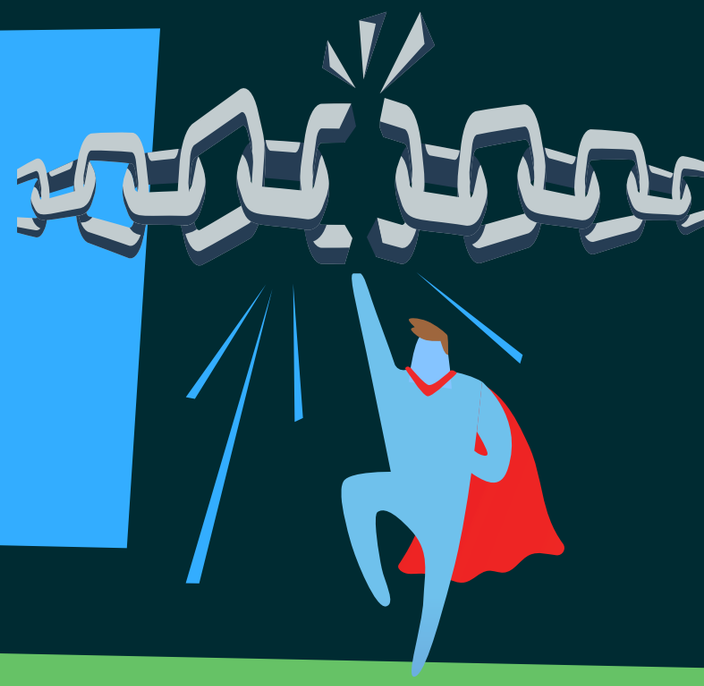
Mixing SuperCritical Water with Oxygen triggers a very powerful oxidizing environment, that can:

remove hard-to-treat pollutants from Water (like PFAS)



transform the chemical energy of wastewater into heat (and electricity)

That chemical energy, worldwide, is the theoretical equivalent of...
320 nuclear power reactors!
How cool would it be to tap into it?

#6 - There are 6 strong drivers for Water Sector growth in Sub-Saharan Africa

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I think there's a lack of understanding, driven by bias based on what you've seen when growing up.

Indeed, there are six pillars to support a rationale for investing in sub-Saharan's development:

1. The low infrastructure level: 42% of the population is served with safely managed water, 23% with safely managed sanitation, and only 7% with at least secondary wastewater treatment

Walid Khoury

General Manager @ Desalytics

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2. The urbanization rate - which keeps feeding the opportunity.

3. Industrialization with localization of production

4. Regulations on water discharge, treatment, and management

5. Demographics - that can same time, be a challenge and a driver...

and 6. Africa is rising in terms of GDP, prosperity, and disposable income!

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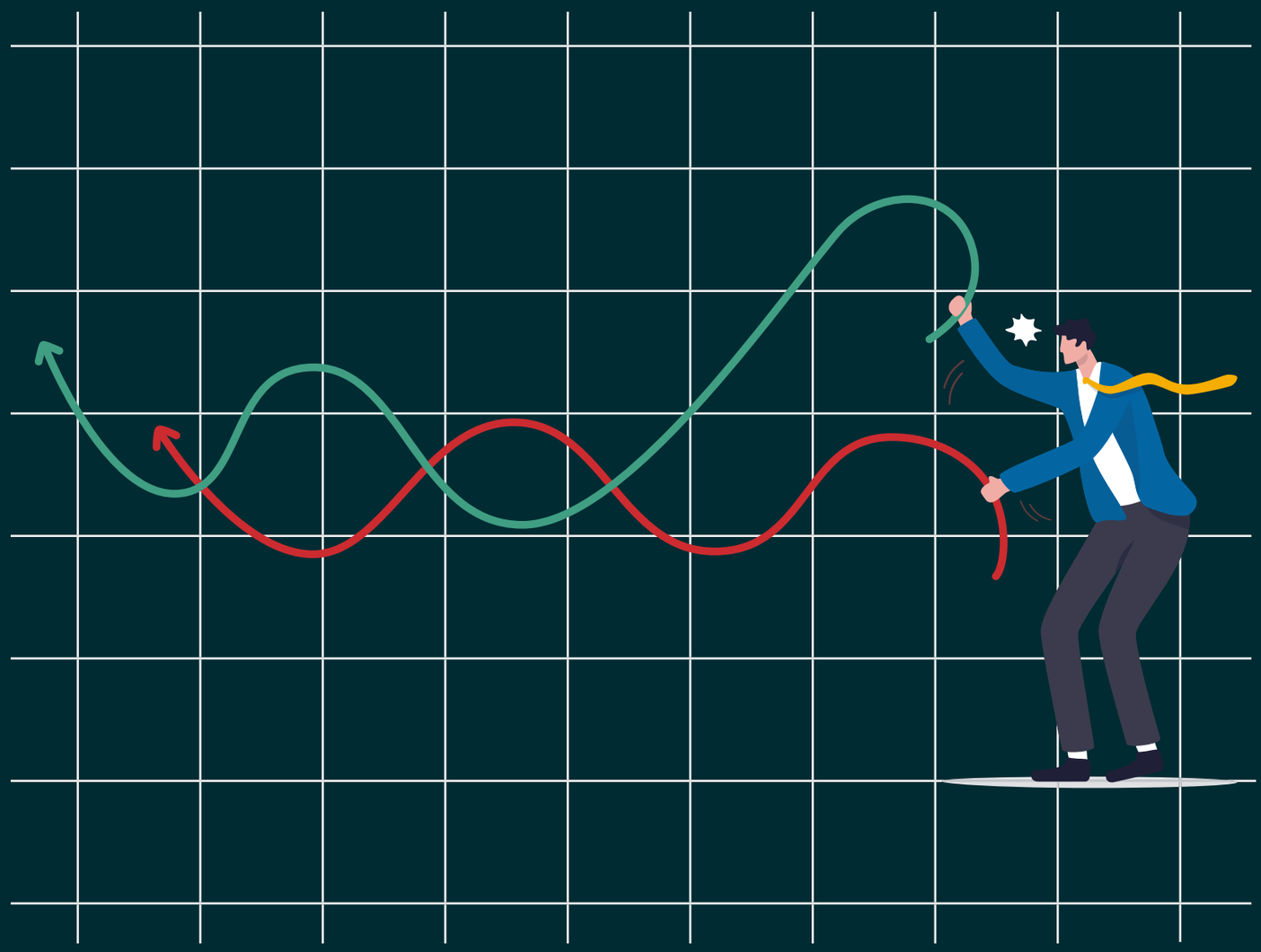
#7 - Water can belong to surprizing market players

The biggest owner of Water in Victoria is a Canadian pension fund, that has a $1 company at the front, which I find quite fascinating...



Scott Hamilton

Researcher, Policy advisor, and author of “Sold Down the River”

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Indeed, PSP Investment owns 200 billion water liters in Australia

... but that case is not isolated.

For instance, the Harvard endowment fund massively invests in California's Wineyards, to leverage their Water Rights.

Does that fully turn Water into a commodity?

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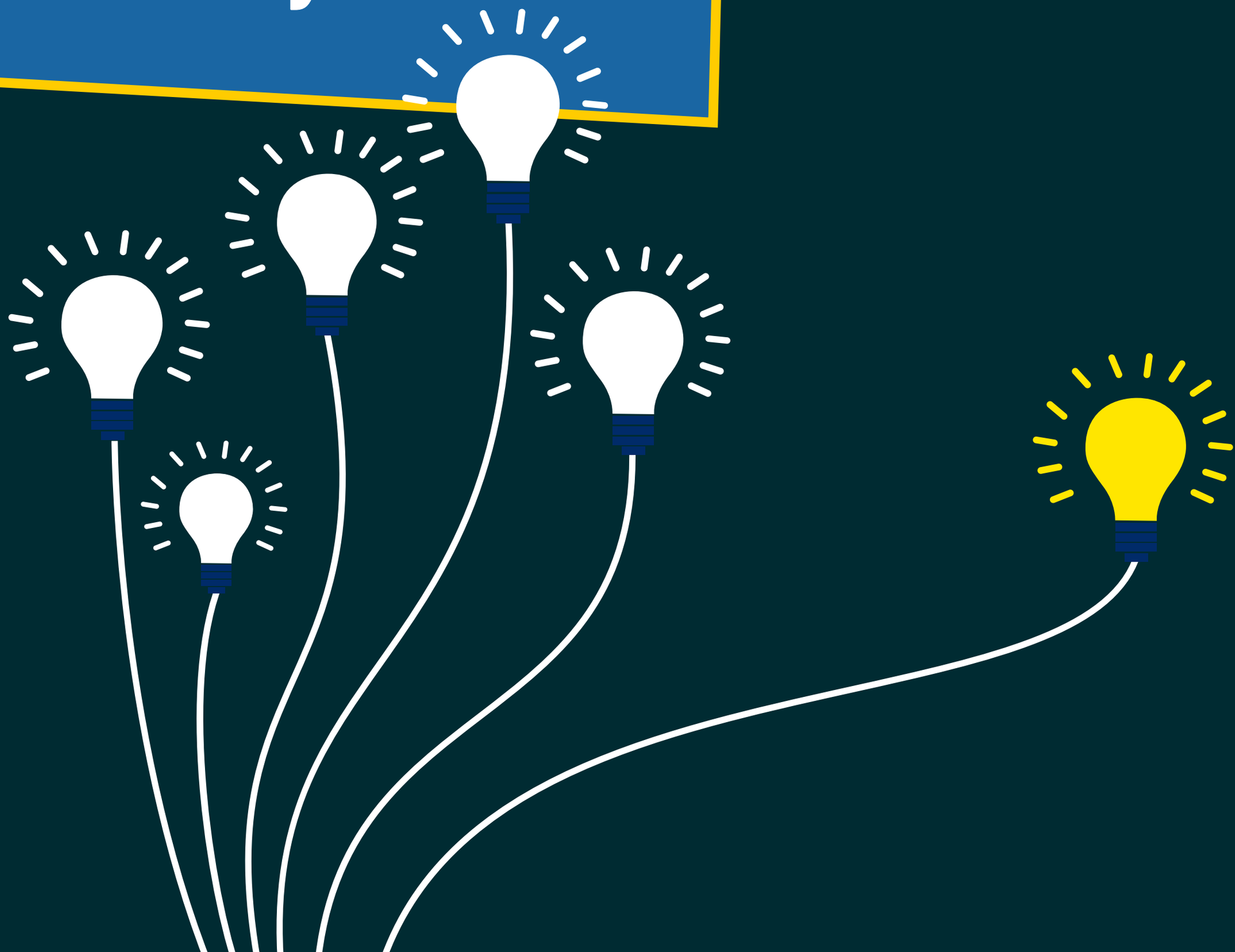
#8 - Are UV Disinfection Systems at Regulatory Risk?



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A $2.6 billion a year water industry segment might well soon be in trouble

Since 2011, the RoHS directive forbids the use of mercury

... so does the UN Minamata Convention as well

The Water Sector benefits from an exemption for its mercury-vapor UV lamps

I don't think anyone would argue against the fact that one day, the market will be dominated by UVC LEDs!

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Haitz's Law states that every decade, the amount of light generated per LED package increases by a factor of 20, and the cost per lumen falls by a factor of 10.

So the question is: when?

Wayne Byrne

Director, Method Capital Limited

It's time for...

the Rapid Fire Learnings!

(yes, I made that one up)

#9 - There are billions of Water Assets that could reveal much about our Water Behavior

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Season 4 - Episode 8

DWW .SHOW

with
Ramzi Bouzerda

Founder &
CEO @ Droople

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#10 - Green Algae could disrupt Activated Sludge Wastewater Treatment (for the better)

Season 4 - Episode 11

DWW .SHOW

with
Cesar Narvaez

Founder & CEO
@ NXO Engineering

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#11 - You can Cut Water Treatment Costs with Expensive Materials

Season 4 - Episode 10

DWW .SHOW

with
Sebastian Andreassen

CCO & Co-Founder
@ Cembrane

cembrane
clean water for life

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#12 - Groundwater Trading could preserve the resource and increase its Yield

Season 4 - Episode 13

DWW
.SHOW

with
Ellen Bruno

Extension
Economist @ Berkeley UNIVERSITY OF CALIFORNIA

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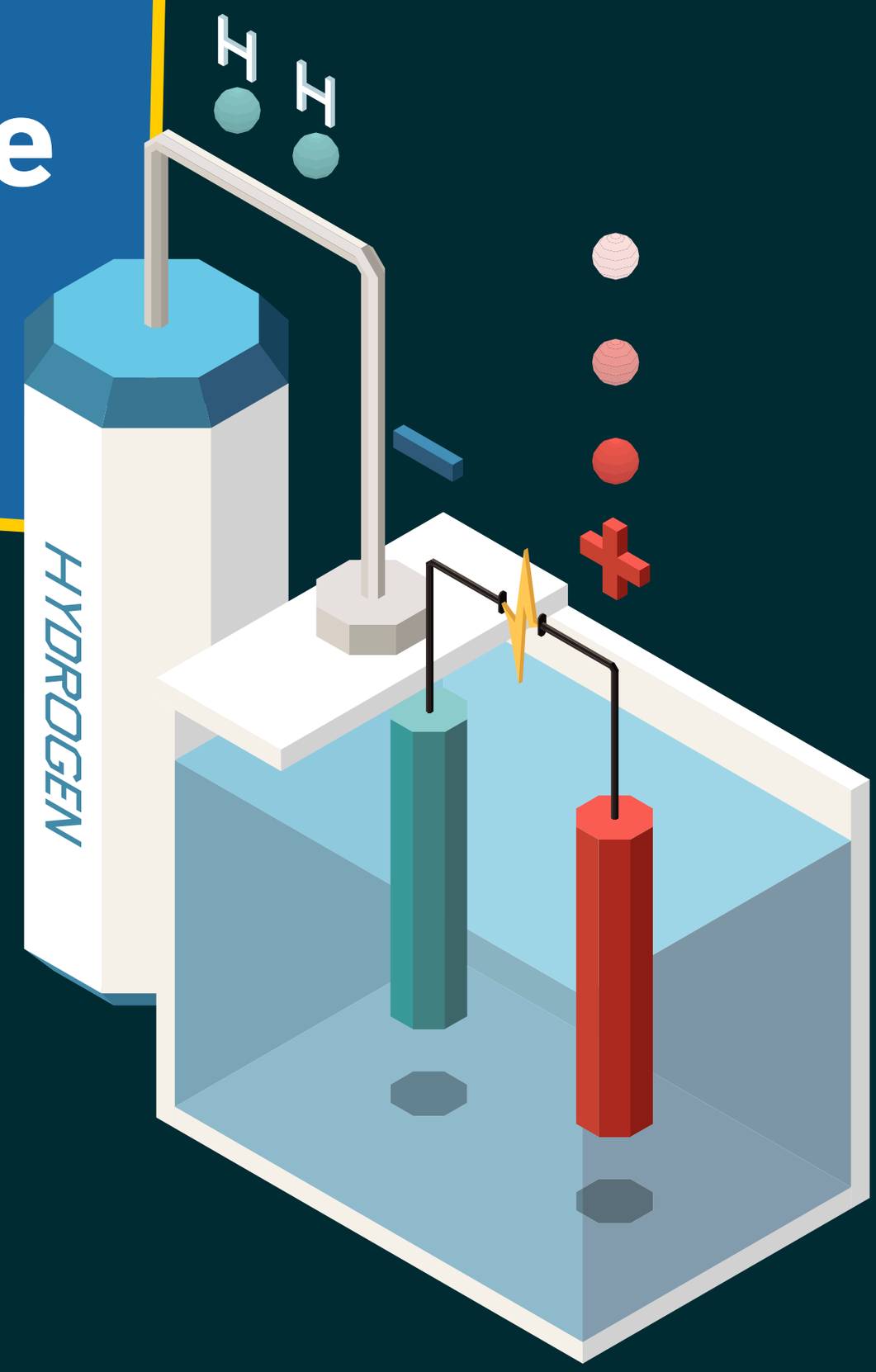
#13 - Green Hydrogen is not a game-changing opportunity for the Water Industry



Season 4 - Episode 17

DWW .SHOW

with
Paul Martin

Founder @
Spitfire Research

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#14 - Industrial Wastewater gets (astoundingly too often) still incinerated!

Season 4 - Episode 12

DWW .SHOW

with
Steven De Laet

Founder & CEO
@ Inopsys

INOPSYS
SIDE STREAM SOLUTIONS

#15 - New Business Models open New Water Opportunities

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Season 4 - Episode 16

DWW .SHOW

with
Jonathan Rhone

CEO &
President @ axine WATER TECHNOLOGIES

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The Water Sector has a rich history of DB (Design-Build), DBO (Design-Build-Operate), and BOT (Build-Operate-Transfer) for a reason:

DB offers a 39% average capital saving over traditional Design-Bid-Build approaches

... and DBO brings 26% additional saving over DB, on a plant's lifetime.

Yet, there are new kids on the block!

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I heard that you like acronyms:

Private-Public-Partnerships (PPP) are the go-to in many countries revamping their infrastructure

... and Design, Build, Finance, Operate & Maintain (DBFOM) approaches rapidly change the industrial water game

Why? Well maybe because you know them under the name of...

Water as a Service (WaaS)

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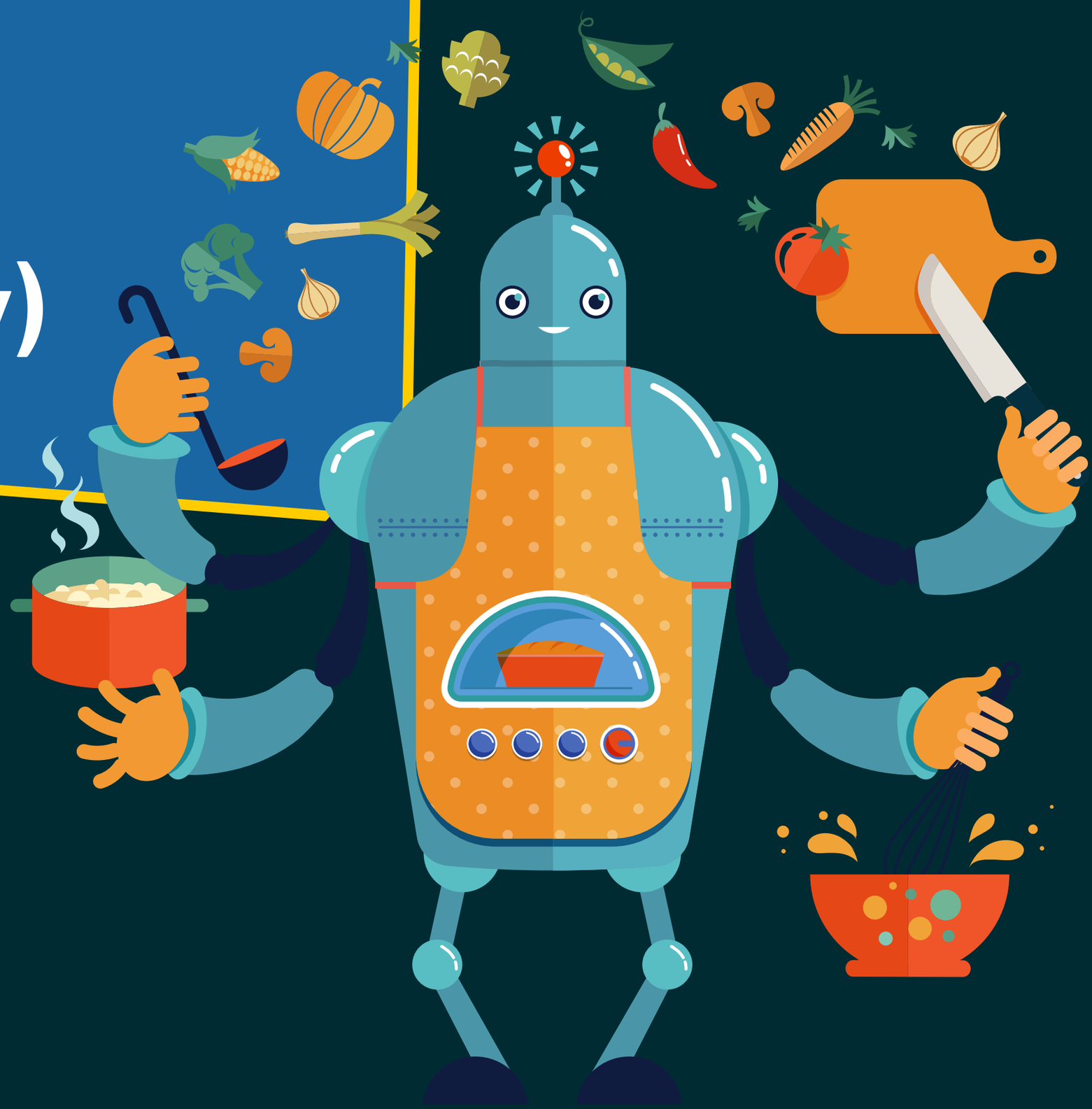
#16 - Specialized Water SaaS can outperform horizontal behemoths (here's why)



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In a World of GAFAM dominance, business suites and Software as a Service companies rapidly become horizontal behemoths that irrigate all industry sectors - water is no exception.

Yet, vertical SaaS companies, specialized in the Water Industry, try to emerge and win the market

Do they stand a chance?

Surprisingly, YES!

Being the OS for Water is about:
I'm coming into work, and I want to do something like monday.com or Asana that just pulls all these dispersed processes, systems and tasks into one place, which is very tightly aligned to the objective and the mission of my business.

David Lynch

CEO @ Klir

Let's review how Water Vertical SaaS companies can compete (and win)

in 3 questions

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1. Why are vertical Water SaaS Superior?

First, they can deliver a better product, tailored to the vertical's specificity

Then, they can build a higher market penetration and become the "Water OS" which in turn enables new business models (e.g. marketplaces...)

... and they can specialize their sales approach to the industry's way, hence bettering their yield

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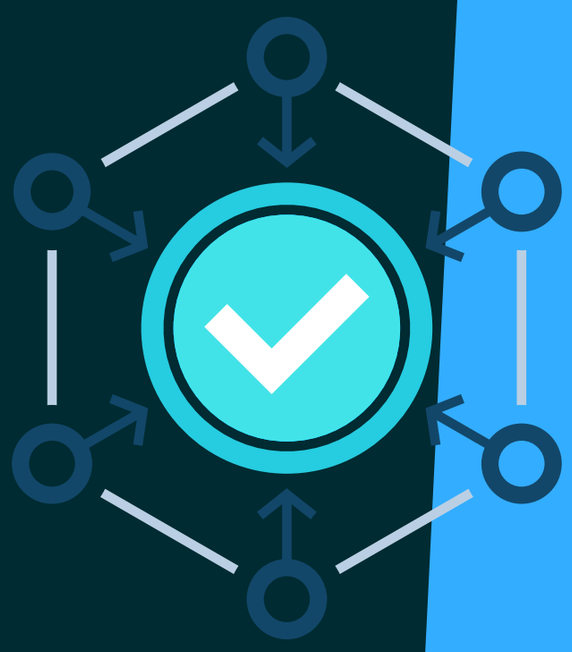
2. Why is “now” the best moment to be in the Water Business?

Straightforward: CoVid just leap-frogged our path towards digital transformation. And the “why now” question rather transforms into “why didn’t we do it before”



Plus, while investors used to be reluctant to fund Water SaaS companies (for Total Addressable Market concerns) this is now history!

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3. What does it take to be successful in building a Water Industry vertical SaaS?

First: target the largest possible total adressable market within your niche. For that, embed yourself on the critical path of your users.

This starts from your positioning: you must build upon a brick that's just too good to be ignored.

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... identify your activation trigger and build a strong answer for the "why now" question

Regarding the ideal founding team profile, I'm still unsure, though:

Some have been very successful, coming from outside the Water Industry

... and others have been, while scratching their own itches!

I'd be curious to hear your thoughts!

#17 - 2023 will be a Crucial Year for Water

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Why so? And why does something happening in 2023 matter right now?

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I think we're at a really unique moment in time, which is that we have an opportunity to move from Water is a major problem to saying, how can we be part of the solution. That unique opportunity is in 2023, when the United Nations hosts their big conference on Water the first in almost 50 years.

Mina Gulli

CEO @ Thirst

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We have an opportunity at that time to say enough talk, now act. And the only way that that will happen is if we spend the next 18 months moving together in a unified way. And to say: by the time we hit the steps of the United nations, there must be no option, but to take meaningful, serious, bold action forward on Water.

I think she said it all, so...
enough talk, now act.

Make sure to
subscribe to get
notified next week...

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...for the first
episode of
Season 5!

with Reinhard Hübner

CEO @ SKion Water