

# Paul O'Callaghan

is the Founder & CEO of

## BlueTech Research

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**WASTE  
WATER**

He's also the executive producer & co-director of Netflix's

**BRAVE BLUE WORLD**

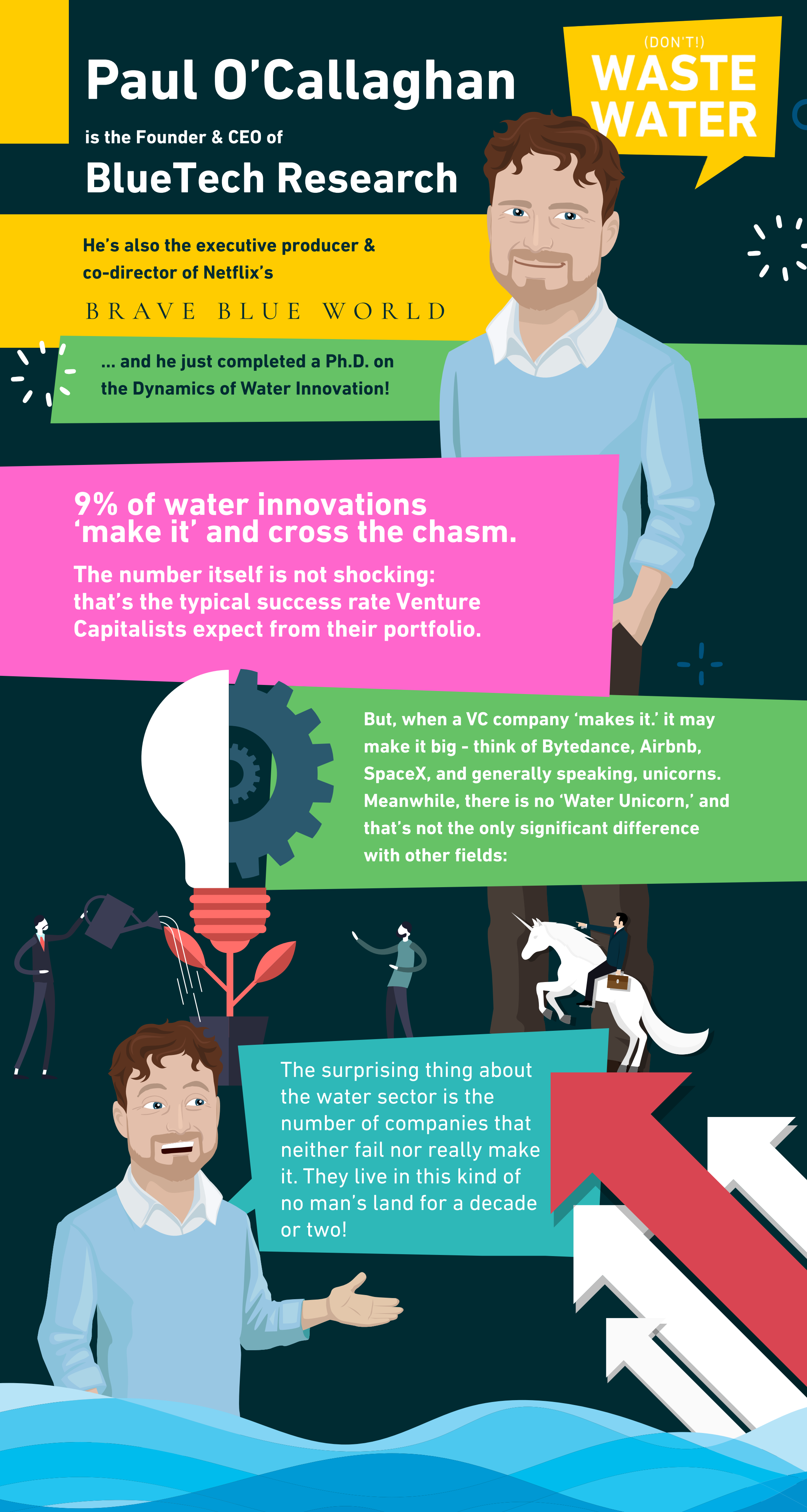
... and he just completed a Ph.D. on the Dynamics of Water Innovation!

**9% of water innovations 'make it' and cross the chasm.**

The number itself is not shocking: that's the typical success rate Venture Capitalists expect from their portfolio.

But, when a VC company 'makes it,' it may make it big - think of Bytedance, Airbnb, SpaceX, and generally speaking, unicorns. Meanwhile, there is no 'Water Unicorn,' and that's not the only significant difference with other fields:

The surprising thing about the water sector is the number of companies that neither fail nor really make it. They live in this kind of no man's land for a decade or two!



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# Does innovation tick at a different pace in the Water Industry?

Well, R&D investments may, with an average of 2-4% of revenue invested back in innovation. But that's not yet the proper focus, according to Paul:



How much of that 2-4% results in growth to the business or competitive advantage or value creation? If companies see that return on 2-4%, they may invest 5,6,7, or 8%!



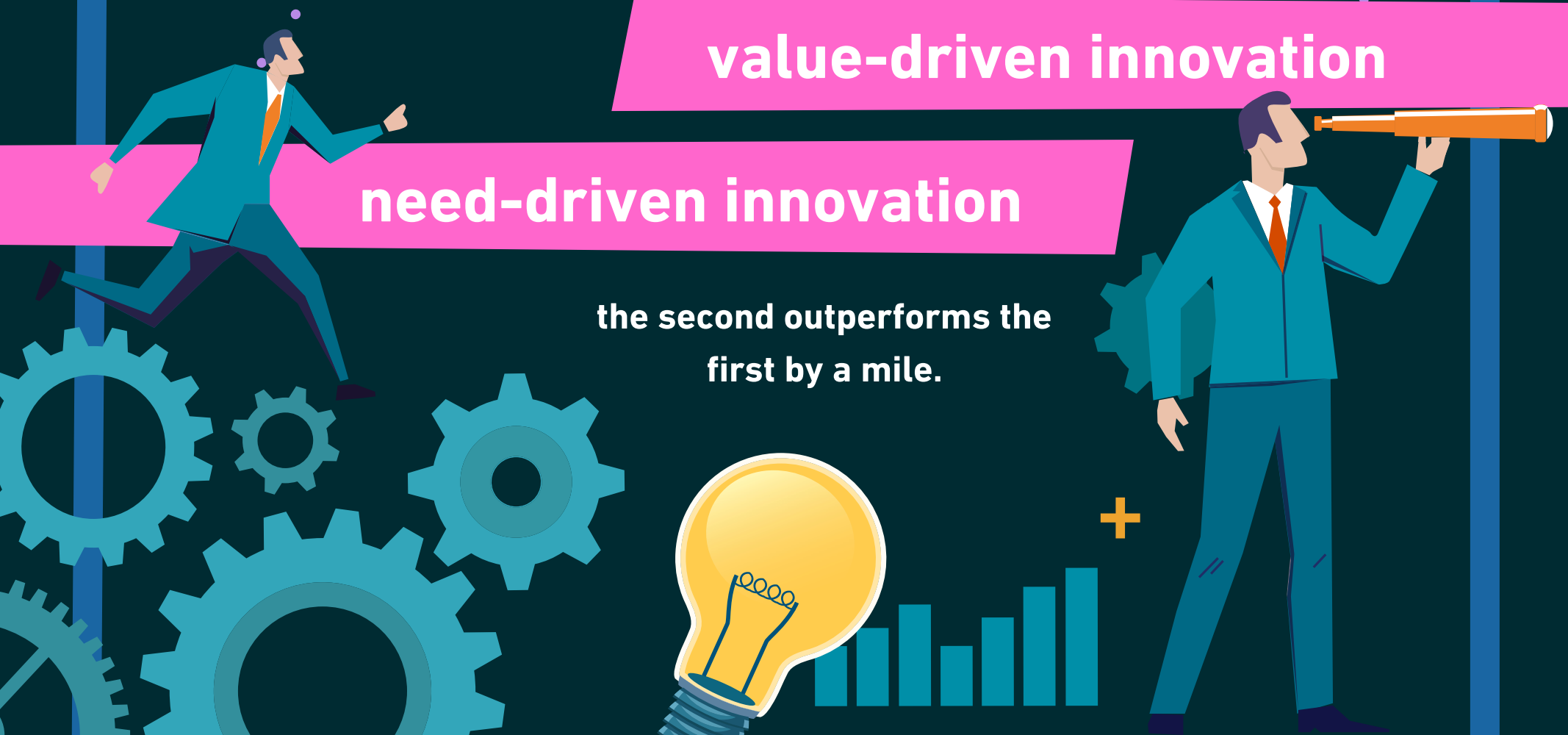
So what matters is the success rate, the time to adoption, and a clear sight of what you're currently developing.

Because not all water innovations are born equal.  
Out of the two main types

**value-driven innovation**

**need-driven innovation**

the second outperforms the first by a mile.



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It moves at literally twice the speed that the value-driven innovation does through the adoption cycle!



**Paul revisited the Moore curve to create the Water Technology Adoption model (WaTA) to depict this cycle:**

**1**

## **Innovators**

(2.5% of the Market - typically lasts 5-8 years)

A technology completes its pilot testing and gets **THREE FULL-SCALE demonstration facilities** up and running.

**2**

## **Early Adopters**

(13.5% - 6-8 years)

The technology gets installed in **25 TO 30 REFERENCE PLANTS**. It's not yet specified, but 2-3 companies can offer the technology.

**3**

## **Early (then late) Majority**

(68% - 12-16 years)

The technology is **CALLED FOR IN TENDERS**, presented at trade shows and conferences. It 'made it!'

If you're a startup company today, and you just did your first pilot, you would expect that maybe in 12 to 16 years, this would be a mainstream market opportunity.



4

## Laggards

the last 16%

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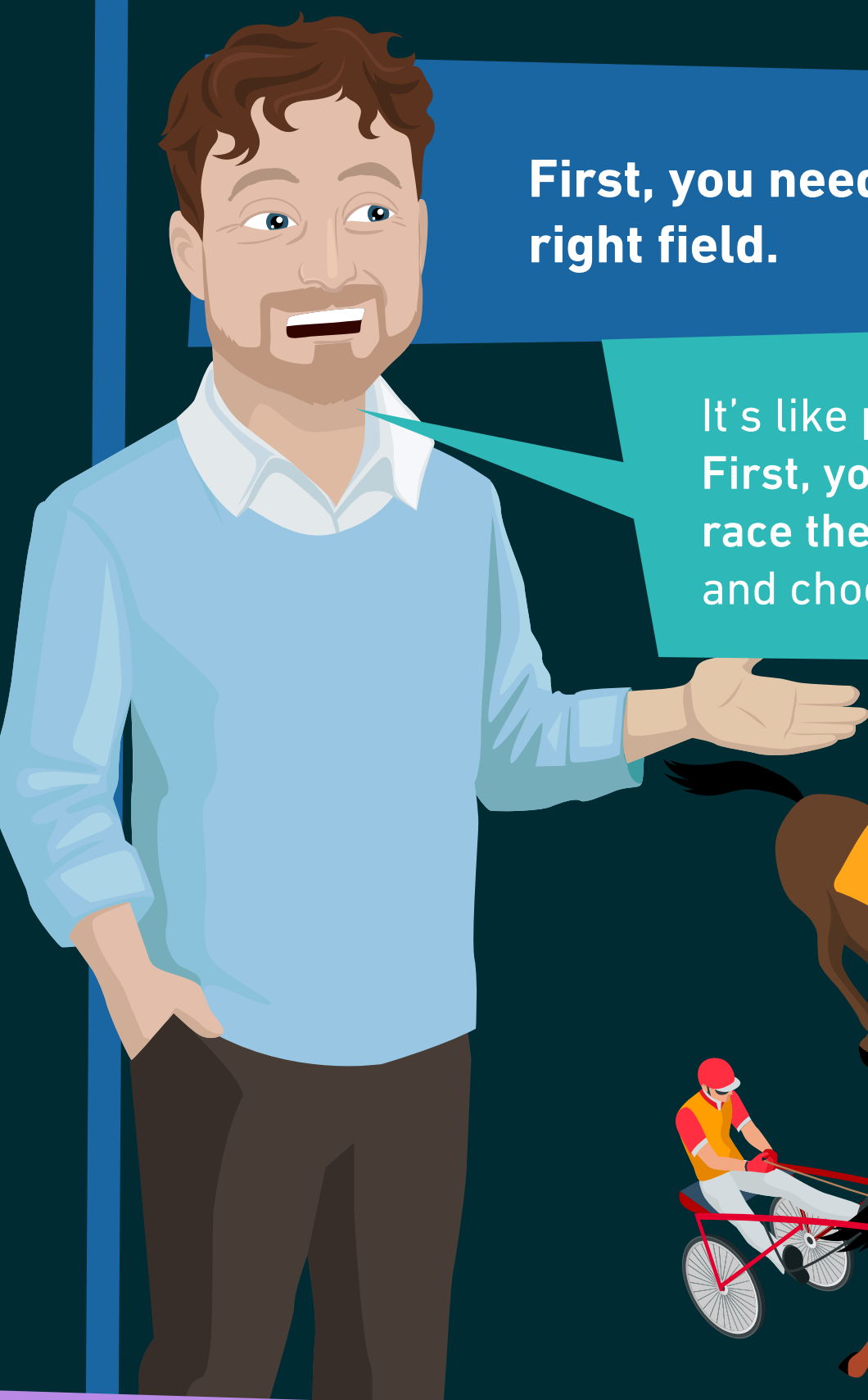
The technology development race is over; knowledge is widely spread across the engineering community. The technology enters books and university courses.



Putting all of that knowledge into practice, how do you build up the next big thing in the Water Industry?

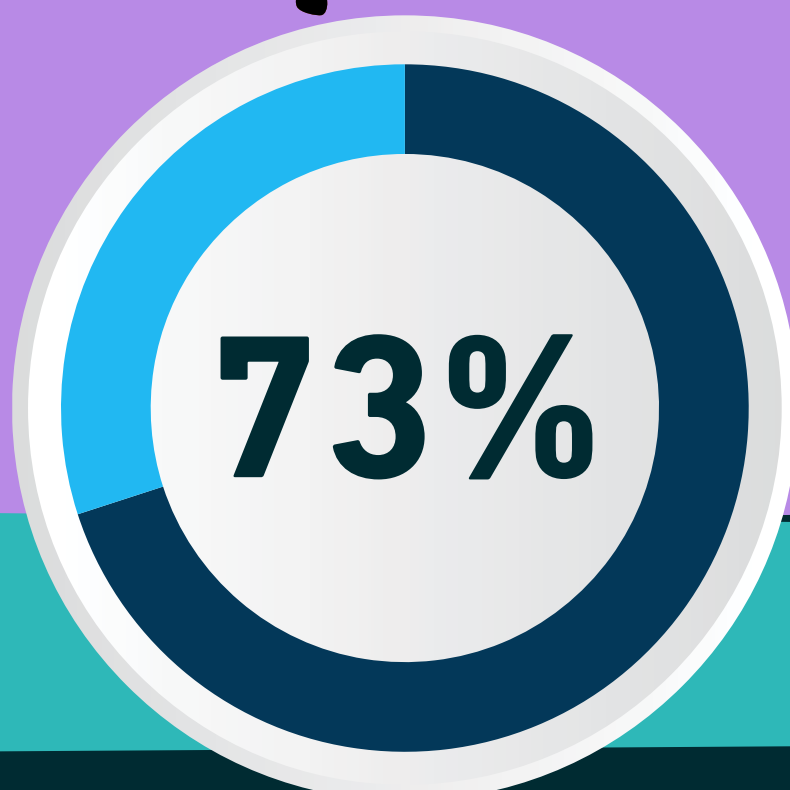
First, you need to ensure that you're in the right field.

It's like putting a bet on a horse. First, you need to decide in what race the horse is in. And then you try and choose the right horse!



BlueTech identified that 73% of water investments could be traced back to three key themes: **digital, decentralized, and circular.**

**That's your race**



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Then, **your horse** needs to have radical functionality or a discontinuous type of innovation.

And finally, the **person** riding the horse needs to have the right skills.

It's people who are in there for the right reasons and are committed to it that can lead the transformative changes!

Then, you'll need to find early adopters.

Those are not a utility or a corporation. It's an individual within that group; it's a person. They are often the people that speak and present at conferences.

**And Boom, here you go, on the track to a Moonshot!**

**Here are additional bits of what we covered:**

- How you get Netflix, Matt Damon, Liam Neeson, and Jayden Smith to root for a Water Project - and how a sequel is already in the pipe!
- How bringing innovation to life is as broad as saying you want to get a gold medal in the Olympics. You need to know first in which event you're competing.
- How done is better than perfect, and how 'good enough' approaches may solve big hurdles in the water sector.
- How and why there's more money spent in California every year on bottled water than on utility water.
- How everything looks like a nail if you only have a hammer - aka we might need new paradigms to solve the upcoming water challenges.

... and much more!

**Check it out for yourself on [dww.show!](http://dww.show!)**

