

The water industry does not need more models. It needs more application.



Monthly Opinion Piece

APR '26

About this article:

This article is a monthly op-ed from Dr. Wim Audenaert, CEO & Co-founder of AM-Team, in which he reflects on the gap between the technical maturity of models and their practical adoption in the water industry. Wim argues that the priority is no longer more model development for its own sake, but better application so water companies can make better decisions and achieve real value.

AM-Team delivers modelling and data services and digital twin solutions for water utilities, industrial end users and technology providers. We tackle planning, design, operational and digitalisation challenges by combining deep process and industry knowledge with modelling and digital expertise—ensuring models and digital twins that create real value.

AM-Team takes a unique vertical market positioning that is based on a combination of process & industry knowledge with modelling & digital expertise. Visit <https://am-team.com> to consult educational content and sign up to AM-Team's newsletter and upcoming webinars.

On the value of models in the water industry

I started my water industry career in modelling and I can still vividly remember how long it took me to understand the value and capabilities of models. I was developing them but wondering why. While being a treatment plant modelling researcher, myself and everyone around me was focusing on the models, but few were focusing on their applications. I only realised later that there's a big difference between developing models and applying those models to solve actual problems. If you read the conclusions of my PhD dissertation, you'll notice that I was listing down a couple of application opportunities. Yes indeed, at the very end of my PhD I started understanding the real potential of models. While my research project ended and it was too late to make it happen, we could still turn the theory into practice a few years later in our business.

While the technical/scientific focus on the models has made them truly remarkable, it hasn't developed that much of a market around them. This has led to an asymmetry between the maturity of the models and the maturity of the adopting market. A gap between the experts understanding the models and the problem owners seeking for practical solutions.

Within AM-Team, we often refer to it as the TRL-MRL connection: technology readiness level (TRL) defines the maturity and capabilities of a technology. Market readiness level (MRL) defines the readiness of a market to adopt that technology. When it comes to models, I believe the TRL has been disproportionately high compared to the MRL. Lots of fantastic models, but too little application in the last couple of decades.

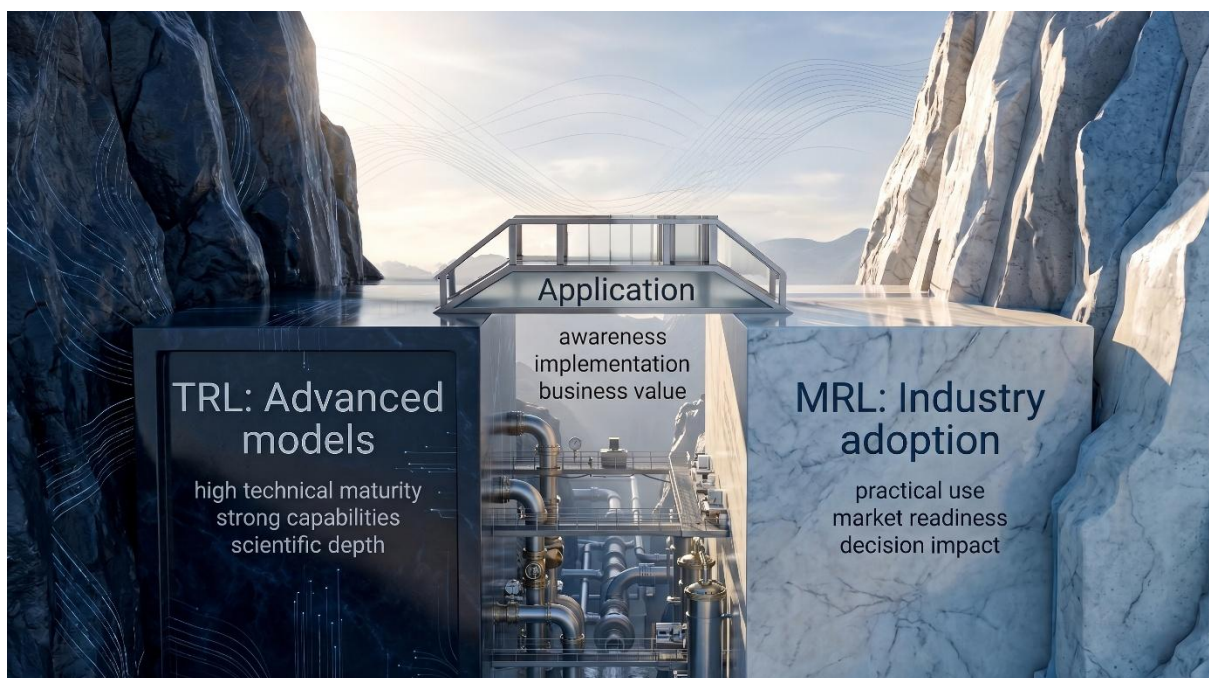


Figure 1. The gap between advanced models and the industry adoption needs to be bridged.

What resonates with academics does not resonate with practitioners

We started our business 9 years ago to change exactly that. To make sure the water industry can benefit from the superpowers models can provide. To get there, two ingredients are crucial:

1. Awareness around model applications: the water industry understands what models can do and how they can solve their problems.
2. Actual application of models: there should be companies pushing for the application of models and making sure the value gets delivered.

If you go visiting our LinkedIn page, blogs or webinar recordings, you'll notice that even though we are a tech business centred around models, we will structurally communicate around the application and adoption. We will avoid at all cost to talk about complex equations, which is relieving for practitioners. I still remember how proud I was during my PhD to present complex formula. Today I am proud when customers experience value.

This focus on awareness and application has gradually transformed non-believers into users and even fans of models. Today, we are working with water companies that were not ready to be a customer 9 years ago.

It is time to prioritize model application

I have explained in an [earlier blog](#) how certain pressures on the water industry very well connect with capabilities of models, shaping an unprecedented business case. The need for and value of model application has never been higher than in this digital era. We have seen MRL growing and it has gotten a significant boost due to the recent AI revolution, stimulating water utilities to go faster and take more bold steps.

The key priority for the coming years will be in connecting the high TRL with the emerging MRL: the application of models at scale. We really need to satisfy that long-awaited MRL by prioritizing model application over model development¹. Whoever will be able to connect tools with needs beyond the hype will be succeeding. To select the right tools, one needs technical depth and a practical mindset. To identify the needs, one needs customer and industry understanding. And the successful connection happens through a good business model.

It is interesting how in the last 2 years hype has been transforming into a mature discussion around digital water. The market landscape is shaping up. With AM-Team we certainly want to continue playing our role in translating models into true societal and business value.

¹ Don't get me wrong. With prioritizing, I do not at all mean we should stop developing models. We just can't postpone any longer large scale deployment. We have to escape the paralysis by overanalysis.