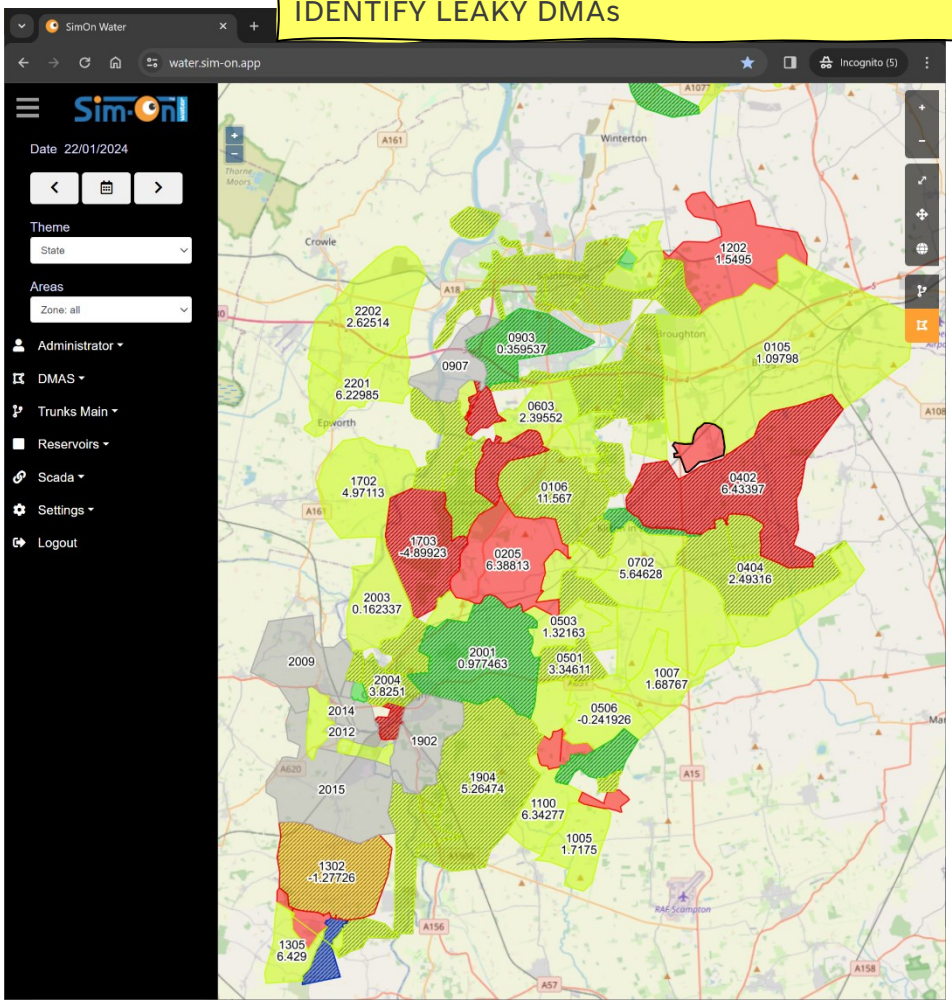
hrwallingford

A perfect day at the leakage centre with SimOn

Another day in the office
trying to find leaks…
It's going to be tough!

Look at that map!
How many alarmed DMAs today?!

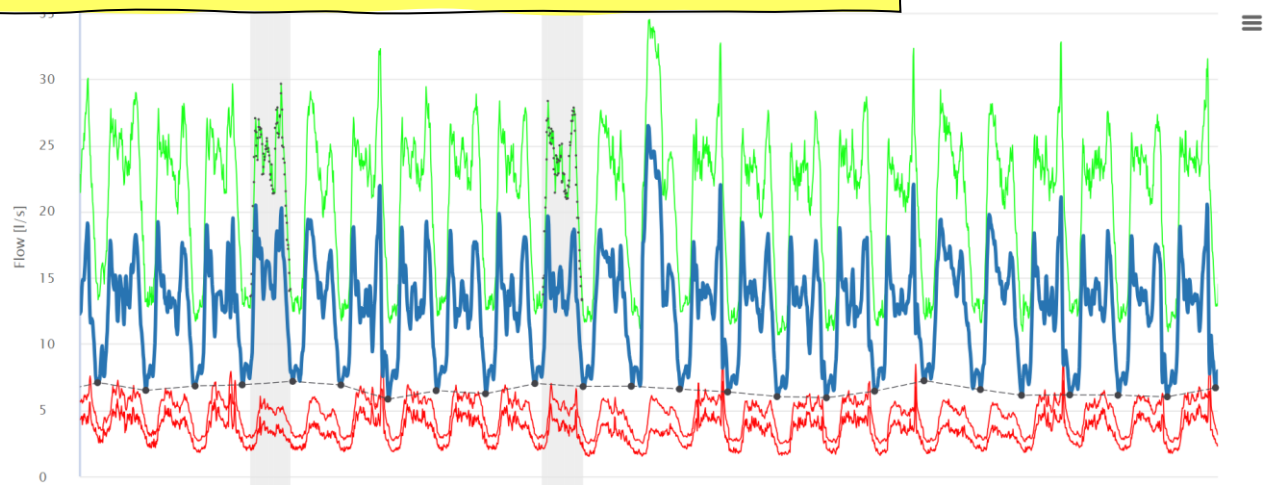
IDENTIFY LEAKY DMAs



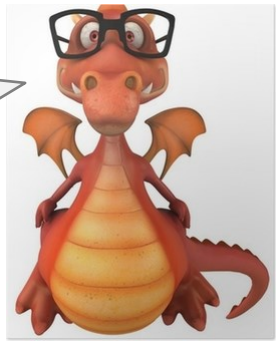
At least I have a great tool to quickly **identify the most likely DMAs to have new leaks**, so I can plan a strategy and **give good guidance to the repair team**!
Hello SimOn!

SimOn Water
IS A REAL TIME
WEB BASED PLATFORM
EXPECIALLY DESIGNED
FOR LEAKAGE DETECTION

ANALYSE DISTRICT METER FLOWS AND DMA NET FLOW



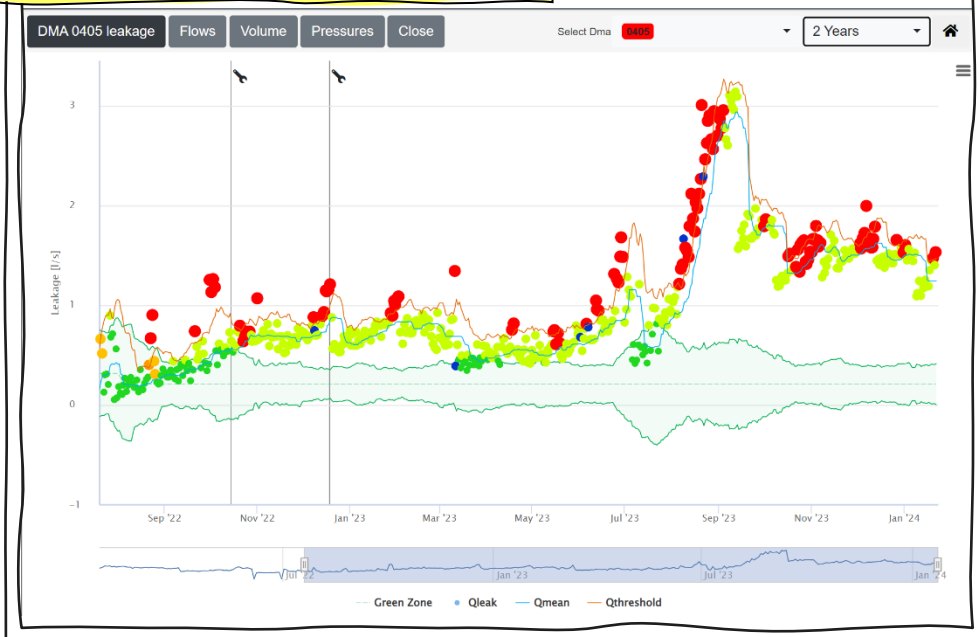
Let me check the flows for each alarmed DMA: every **district meter flow** is shown, inflows are green, outflows are red and the **calculated net balance** is blue. Missing data are interpolated from the past and the minimum night flow is identified.



IF YOU HAVE SMART METERS, A SPECIFIC TOOL TO ESTIMATE LEGITIMATE NIGHT FLOW IS EMBEDDED! EVEN IF THE COVERAGE IS PARTIAL!

STATISTICAL ANALYSES TO DETERMINE THE CRITICALITY LEVEL

Let's look at the trend of leakage over time.
Every day, sophisticated **statistical processes**, made both on the short and long term, are able to assign to each DMA a level of alert.



A TRACK RECORD OF REPAIRS CAN ALSO APPEAR ON THE GRAPH.
THAT'S VERY USEFUL TO EVALUATE THE IMPACT OF EACH LEAK AND REPAIR!

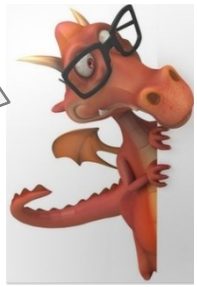
Ok, it's all very nice, but **WHERE** am I sending the repair team?!

LOOK!
Now comes the best part!

THE LEAKAGE LOCATOR MODULE, TO PINPOINT WHERE THE LEAK IS

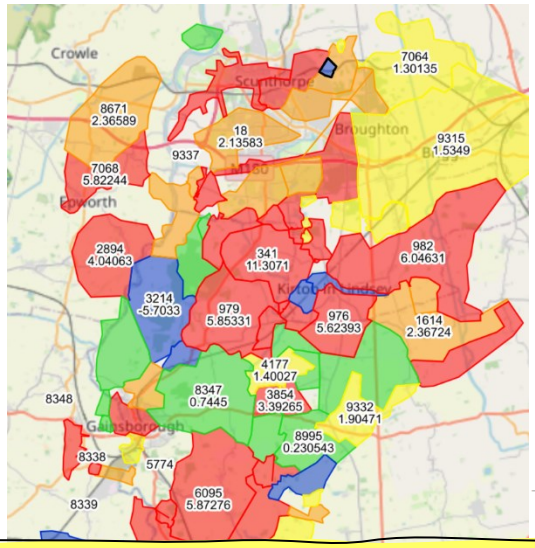
When a DMAs is suspected to leak, an **automated algorithm** is triggered to run multiple **hydraulic simulations** on the DMA model.

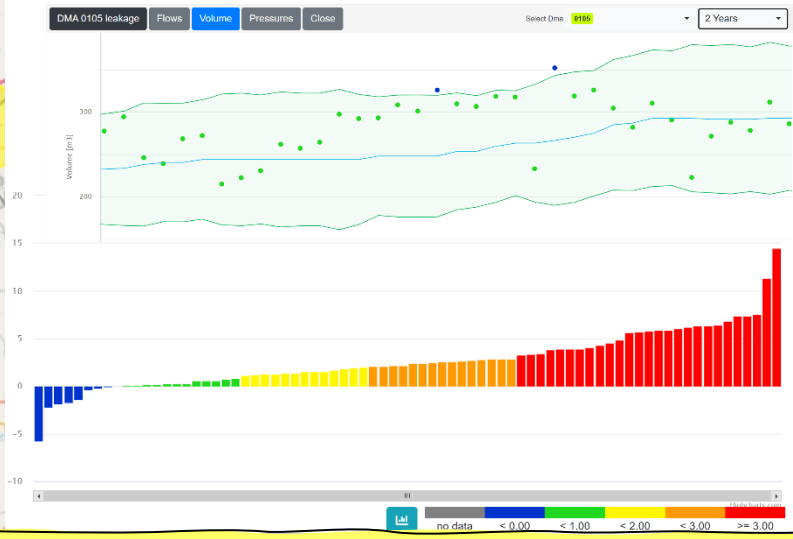
A **heat map** highlights with an intuitive colour ramp the **pipes with the highest probability** of that leak.



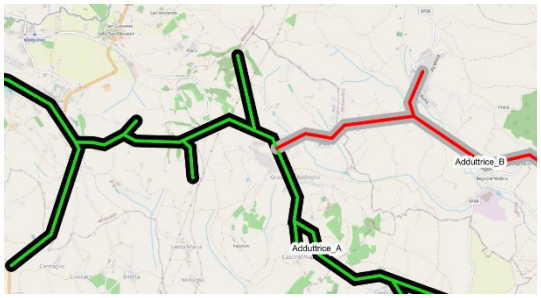
The purple dot indicates the **most likely point** identified by SimOn. Also, grey scale dots of decreasing size show the predicted location for the same leak over the previous days.
In this case they are all around the same area, that confirms something is going on there, right?

Pressure sensors (blue dots) are needed in order to run the hydraulic simulations. Thanks to the automatic algorithm, it's possible to significantly **reduce the area of inspection**, thus the **time, costs and water lost**. The use of hydraulic modelling can dramatically **limit the number of pressure measures** needed, but you **don't need to be an expert modeller** to use SimOn, quite the opposite! Worth noting as well that **SimOn helps locating small leakages** and not just pipe bursts… large leakages are much easier to spot but these guy seems to be able to detect very tiny losses too.





THEMATIC MAPS, VOLUME ANALYSIS, COMPARATIVE GRAPHS, TRENDS OVER TIME...



I would love to show the many **other tools** developed in SimOn Water to **avoid false alarms** and help **prioritise interventions**, even in trunk mains or reservoir systems...

... but I need to send the repair team in Fifth Street immediately!

Thanks to pre-location they will be able to repair it in just one day!

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Sim-On water

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Yet another leak has been resolved!
Thanks SimOn, you made my job much easier!

See you tomorrow morning with brand new calculations!

TO BE CONTINUED...