

Smarter Surveys, Safer Futures

INTRODUCTION In 2022, there were over 300,000 sewage spills in the UK, the majority due to negligence of water companies. This means an astonishing 75% of our rivers now pose a serious health risk, not only to the animals living in these waters, but to humans as well. Currently, it is very difficult for water companies to fix this issue, because they have no good way of analysing quality. The current methods being used by water companies (manual sampling) is expensive, only samples a single point and can take up to 10 days to obtain any results.

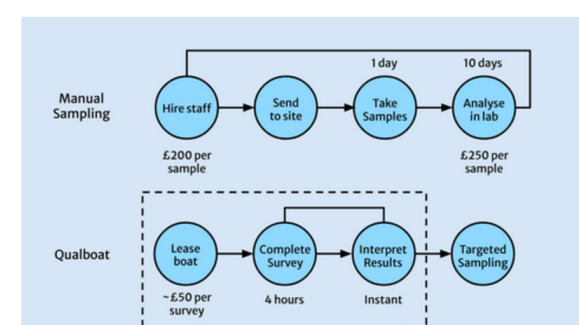


OUR GOAL We aim to provide a solution to water companies that is efficient, inexpensive and usable. Our goal is to decrease the time spent waiting between surveys and results, as well as speed up the surveying process itself. Moreover, we want to make water surveying more affordable to incentivise water companies to meet surveillance requirements on reservoirs, as well as detecting problems at early stages so that it cannot spread further within the body of water. This can all be done through our product, Qualboat.

QUALBOAT Qualboat is an autonomous water quality surveying boat that makes intelligent decisions about data. Clients interact with the boat by either using an app or the control panel of a docking station, allowing them to survey rivers and lakes at the push of a button. Using our proprietary pathfinding algorithm and AI data processing model, the boat can survey a water body, seek out pollution hotspots and feed data into either our app or a database, as requested by clients. In the app or the docking station we can display processed data as heatmaps or any other convenient data forms that the client desires. Qualboat's surveys can also be remotely triggered by connecting to the docking station. Its independence, low production costs, low maintenance costs and high data readability makes it a more attractive alternative compared to manual sampling.

COMPETITIVE ADVANTAGES

- Qualboat can survey in all weather conditions while current solutions can only survey when the weather is clear or lightly rainy.
- Moreover, significant problems can be detected earlier (since it surveys a whole lake, it can detect problems such as algal bloom earlier, saving water companies £10,000s in treatment costs).
- No human interaction necessary (do not need to send employees to sites every day, so it is cheaper and more efficient)
- Using Qualboat results in a 90% decrease in turnaround time, as well as 65% lower costs over 6 months. More importantly, 100% of the water body is surveyed.



MARKET

- Our target customers include water companies within the UK, and government organisations in the EU.
- The initial market will be within the UK, which has a \$8bn market size. We will target water companies first, and establish our brand within this market.
- We will then expand into the EU market, which has a \$125bn market size. The EU has standardised regulations, and are government ran, so it will not be very challenging to integrate.
- Competing products include manual sampling (which has over 90% of the market share), drones (currently prototypes, inefficient), and other autonomous vehicles (however they are early stage, not within Europe, and not used for quality monitoring)

IMPACT

- Once Qualboat is established in the UK and EU, we will work with charities and the UN to support research into tackling water insecurity. Our full remote capability will make research in these environments approachable.
- Qualboat will also reduce exposure to pollutants (decreasing incidents of waterborne illnesses), cost reductions can lead to a decrease in water bill costs, and partaking in community projects will raise awareness and empower people to make a difference.
- Qualboat results in an increase in biodiversity, improves climate resilience and stops flow of contaminants into oceans (reducing marine pollution)

CHARTS

