

## Case study – Mobile Water Testing & Analysis Platform



*“Biz4Solutions allowed us to shorten our billing cycle and save money. Prior to using this app, we were finding it difficult to manage information between our field and office staff. This app has added a level of professionalism we didn’t think was possible at this cost. It’s definitely a big bang for a little buck.”*

**- Andrew Smith**

**Biz4Solutions**  
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# Mobile Water Testing & Analysis Platform



## Overview

The aim of the application is to provide clients with the best water testing analytics mobile Software as a Service (SaaS) product which is compatible with IoT and hosted on a cloud, and to deliver benefits to clients by combining this product with client's other products (test kits and Bluetooth Meter) to deliver an all-in-one solution for water testing and analysis in water treatment related applications. A further aim is to reduce client effort and offer reassurance that processes are in control. Our client, in return, plans to benefit from a dramatic increase in software user uptake which as a result will provide data to analyze and to use to develop global control guidance. Specifically, our client aims to revolutionize the water testing industry by offering various features like a selection of methods for input of test kit results or supplemental data, GPS-based tracking of readings locations, measurement collection workflows, etc.

## Issue/Problem

Absence of the app made it difficult to capture readings in the field in digital form. Absence of app also prevented users from quick access to results and analysis of results including real time warnings etc.

## Challenges

- Integration with water testing meter over Bluetooth
- Rendering large complex graphical analysis on mobile device screens
- Handling large amount of complex data on mobile device while at the same time offering high performance
- Map based analytics

# Mobile Water Testing & Analysis Platform

## Solution

This application is a Cross-platform application developed using Ionic Framework along with Apache Cordova. This is a measuring and monitoring app for data capture and real time analysis of water testing in industries like manufacturing, energy and also for public utility companies in the field. This mobile app interfaces with water testing meter over Bluetooth and collects the readings from these meters to provide results to end users. End user can get the information like Total Dissolved Solids (TDS), Bacteria, Chlorine, Electrical conductivity, etc. within the water. Measurements can be associated with sites and locations within those sites. Collected data is stored in cloud and is used to provide real time, highly configurable graphical and tabular reports. This app offers real-time, accurate quantification of results and provides ability to pinpoint the problem areas.

## Technologies

- Ionic Framework
- Camera
- Google Maps
- Android, iOS
- REST APIs in JAVA

## Benefits

- Automatic data capture and eliminate manual data entry and errors
- Transmit data to stakeholders : fast, efficient and reliable
- Identify data anomalies on the spot and prompt technician on the spot to check calibration/data errors
- Help create trend analysis and compare with other data factors
- Connect to existing organization data stores
- Cloud storage helps to retain data for a much longer time and easily accessible remotely.
- Reduce time to market as no major setup or infrastructure required
- Lower on going costs and upgrade costs
- Scalable to demand

