# Technical Assessment – QA Web & Mobile

Thanks for your interest in joining the InformAG team!

This technical assessment is designed to give us insight into your strategic thinking and your approach to getting things done. We're **NOT** looking for a fully-build, production-ready solution. Instead, we want to see an outline of your proposed implementation plan, including your architectural considerations and a conceptual demonstration of your code.

InformAG is based on the beautiful Sunshine Coast, Queensland, and we're excited to collaborate with talented remote developers. We value engineers who are:

1. **Accountable** and take **proactive initiative**, meaning you're happy to own your work and aren't afraid to **ask questions**.
2. Focused on **efficient and timely delivery**, understanding the importance of **rapid project turnaround**. We achieve this through **AI,** **Agile and LEAN principles**, consistently leveraging **modern technologies and development tools**.

# Project Overview

The **Pump Master** application is a Web And Mobile based platform that will empower customers in the agricultural sector, to manage their pump assets. These pumps are typically installed on farms and needs to be managed through an Azure based Infrastructure.

The core functionalities for the PumpMaster application include:

* **Secure Tenancy Login**
* **Pump Overview**
  + **Search & Filtering**
  + **Pump Management**
  + **Read & Write data to and from Pumps (Edge Hardware)**
* **Pump Inspection**

(Please see the mock-ups below for more details.)

# Tech-Stack

Please align your planning with the following technology stack:

* **Backend:** An existing backend (incl. API - to which the pumps are already connected) hosted on **Microsoft Azure** and written in **C#**.
* **Frontend Options:** The Mobile- and Web-app are written in:
  + Web = **REACT + VUE** or **Bootstrap + jQuery**.
  + Mobile = **Flutter**

# Your Deliverables

While a complete application test isn't required, your submission should provide a well-structured plan covering the following essential aspects:

* **Focus:** Based on the Pump Master solution, identify and explain the top five critical areas for focused testing, justifying the prioritization of each area.
* **Sustainable Testing Strategy & Tools:** Propose a testing strategy, incl. tools to ensure the long-term functionality of existing features and seamlessly integrate new functionalities over a one-year horizon.
* **API**: Provide a plan for ensuring robust API functionality, specifying key testing areas.
* **Automated UI Test**: Provide automated UI test using Playwright or detailed pseudo-code to simulate user login and verify the successful creation of a pump within the application.
* **QA Strategy**: Outline your approach for ensuring consistent testing and synchronization between web and mobile applications.
* **Bugs**: Describe your approach and immediate actions when a critical bug is discovered just prior to a scheduled release.

# Mock-ups

## Login Page

A screenshot of a login screen

AI-generated content may be incorrect.

## Pumps (Overview Page)

A screenshot of a computer

AI-generated content may be incorrect.

## Pump Edit Modal

A screenshot of a computer

AI-generated content may be incorrect.

## Pump Page

A screenshot of a map

AI-generated content may be incorrect.