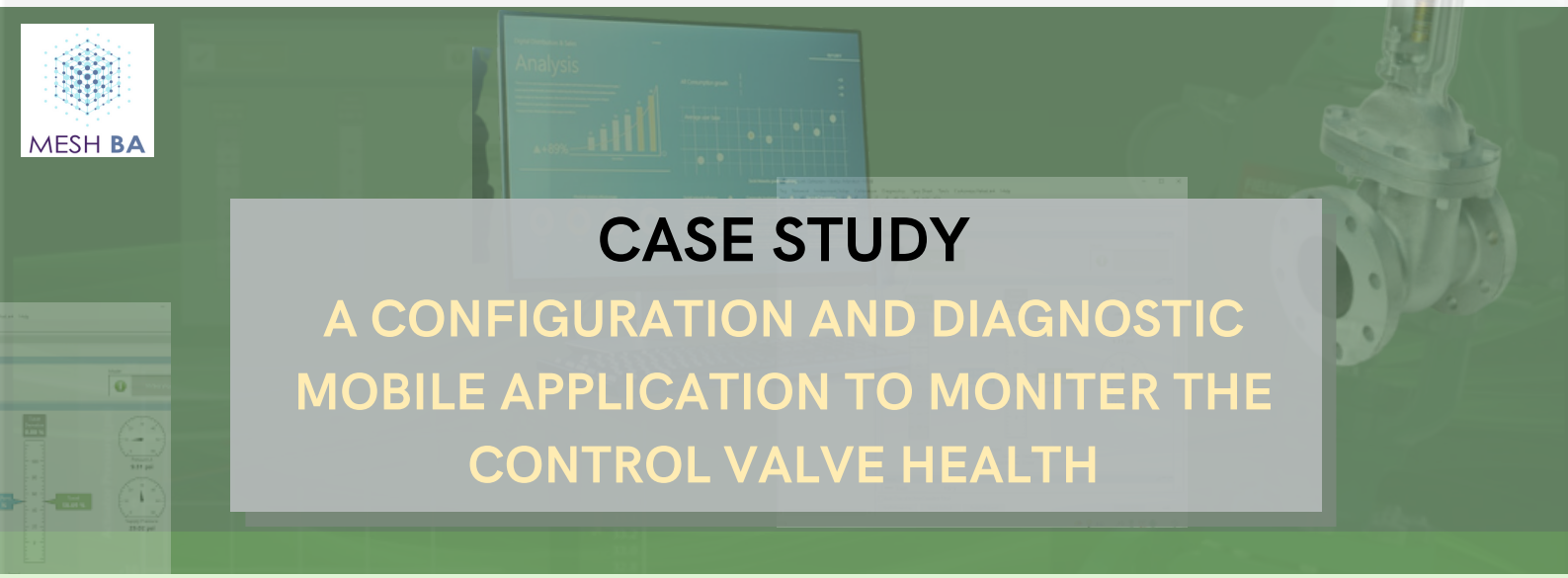

CASE STUDY

A CONFIGURATION AND DIAGNOSTIC MOBILE APPLICATION TO MONITER THE CONTROL VALVE HEALTH

THE CLIENT

The client is a Fortune 500 company that manufactures products and offers engineering services to the industrial, commercial, and consumer markets.
They focus mainly on two business platforms – Automation Solutions and Commercial & Residential Solutions.
They have combined modern technologies, industry-leading experience, and an insatiable curiosity about the world to produce long-term solutions for their customers.

CHALLENGES

The control valve is a critical part of the control loop as it regulates the process variables to compensate for the load disturbance and keeps it regulated within a required operating range to ensure the quality of the end product.
It's important to maintain a huge number of control valves in order to-

- Configure the instrument for best performance and to monitor the health of a valve without disrupting the process while the valve is still in service.
- Communicate remotely with both fieldbus and digital valve controllers from a standard PC platform or field device with a user-friendly interface.
- Provide valuable data to be able avoid costly shutdowns, configure instruments, improve performance, and properly diagnose instrument issues.

SOLUTION

MeshBA developed a Mobile application, which allows user to gather field diagnostics on a portable device and seamlessly integrate that data into the system.
This software gives the user the ability to set up and calibrate valve assembly, monitor status and alerts, stroke the valve, perform a step test, run a valve signature, and view and save previous diagnostic tests.
This application gives performance diagnostics and continuously analyzes the valve assembly. It gathers data without disturbing the control valve while it is in process.

BENEFITS

- Software helps to detect problems with air leakage, valve assembly friction and dead band, instrument air quality, loose connections, supply pressure restriction, and valve assembly calibration.
- When a problem is identified, the diagnostic provides a description and severity of the problem, a probable cause, and recommended action.
- Performance diagnostics tests are available upon user request or a pre-selected daily, weekly, monthly, or yearly schedule.

TECHNOLOGY AND TOOLS

C, C++, Android, Java, Modbus Protocol