

## Supervisory Control and Data Acquisition Project

### Customer

General Domestic Appliances (GDA) manufactures a wide range of domestic goods with the familiar names of Hotpoint, Creda and Cannon.

### Business Problem

The development of new products means that GDA need to investigate the performance of their innovative designs against key indicators, such as energy, water consumption and reliability. This requires a system that allows the control of test configurations, and results in the collection of significant volumes of data.

In order to monitor the performance of its machines, GDA planned a wet laundry test facility, allowing it to run up to 12 washing machines continuously through specific wash cycles for extended periods of time. For some endurance tests this can mean 600 cycles. GDA already had a prototype test facility but needed to scale this up to perform extended and more varied tests.

For the new laboratory, a LabVIEW system was used to include 5 extra data channels per washing machine bay as well as data channels for water flow rates, water pressure and temperature, energy consumption and factors such as the speed of drum rotation.

### Tessella Solution

Tessella was approached to help manage and undertake the task of converting GDA's plan into reality, working closely with the GDA lab technicians to gauge the extent of the work and available resources. This was followed by careful planning of the dependencies in the work plan, such as the delivery of signal conditioning electronics from third party suppliers.

The next stage was the commissioning, which involved assembling and configuring the diagnostics, advising on the layout and construction of signal conditioning boxes, and the earthing and screening policy.

When each test station was cabled up, there followed a period of exhaustive testing to ensure that each diagnostic had a clear signal end-to-end and that the serial devices used for power analysis could be contacted. Subsequently, the actual data acquisition software was loaded and tested.



Testing of Laundry Machines at GDA

### Results and Benefits

The system requested by GDA was ready and working correctly within their deadline. GDA now has a sophisticated test facility that allows the automatic testing of up to 12 machines at a time, 24 hours a day.

Tessella have a strong background in developing bespoke Supervisory Control and Data Acquisition (SCADA) systems. We can also provide experts in using industry standard solutions such as National Instruments' LabVIEW and LabWindows. Tessella is also familiar with GLP (Good Laboratory Practice), LIMS and general automation requirements.