



SYSTEM VALIDATION & PROOF TESTING

Bayer Crop Science Division...One Year Later

Thousands of Pages—Gone! Digital Workflow & Testing With ProofCheck™

Bayer is a leading life and crop sciences company whose 150-year history can be traced through countless innovations in the healthcare and agriculture sectors. With a mission statement centered around “ensuring food security through better farming,” Bayer’s research and development of new formulations continue to deliver significant value to the global economy, facilitating dependable access to nutrition across nearly every world area. The Crop Science plant in Kansas City, Missouri, is central to this enterprise’s operations and manufactures herbicides, fungicides, and insecticides that safeguard our supply chain of high-quality food, feed, and plant-based raw materials.

There are multiple plants within the Kansas City complex, each encompassing a combination of basic process control, safety instrumented systems (SIS), and other islands of automation. One plant alone performs checks on 1160 interlock actions annually in the control system—from 696 sensors and 831 actors. Previously, this was a labor-intensive process consuming significant time, energy, and lost production! Bayer’s operating procedures and work practices required extensive manual documentation and upkeep, often contributing to inefficiencies and human errors. There had to be a better way. That’s when Bayer turned to Experitec and Vantage Point, with the goals of:

- Reducing test time without compromising safety
- Adopting a repeatable, reliable solution
- Automating records
- Digitizing the validation process, wherever possible

Bayer started with a pilot program—trying a few different types of tests—to prototype a digitally transformed means of accomplishing these objectives. Quick results following the successful trial promptly led to leadership expanding the solution as an adopted plant-wide standard across multiple process areas. This is the beginning of Bayer’s story with ProofCheck.



THE RESULTS

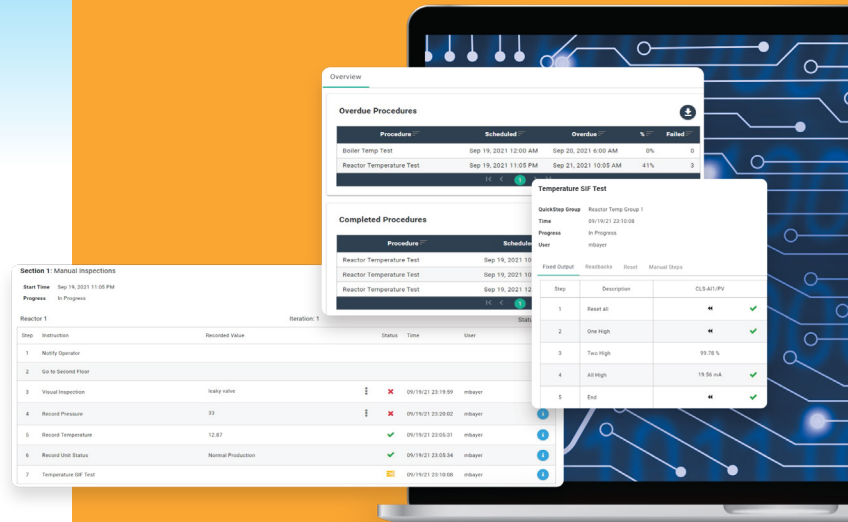
80% reduction in the time needed to perform interlock checks!

600-page individual field device testing document – Gone!

150 multi-tab Excel sheets for SIF/PIF functional testing – Gone!

Thousands of pages—**now electronic**—are available on the tablet when needed for reference, including:

- Instrument specification sheets
- PHA documents
- SIF requirements/SIL certifications
- Device manuals
- Loop sheets



Comprehensive SIS Validation and Proof Test Procedures Made Easy

ProofCheck™ delivers a comprehensive out-of-the-box testing solution for safety instrumented systems (SIS). ProofCheck incorporates all elements of proper SIS testing in a single solution, including field devices, wiring, signal conditioners, safety logic, BPCS logic, final control element response, and manually entered data. The entire procedure is captured electronically and displays pictures, manuals, and any information the user needs to perform the tests. All information is captured in a database and displayed via built-in reports.

One of the added benefits is that ProofCheck enables integration with your current process control system, safety systems, and asset management system. It doesn't just work with Emerson control systems!

Experitec Vantage Point Services

Experitec Vantage Point Services encompass a collection of data management and advanced analytics solutions, spanning the manufacturing floor through the enterprise layer. Our team delivers ROI from the information you already own, augmenting your technology and your experts to unlock your largest improvement potential. Our mission is to connect the right information, to the right people, at the right time. Our experts stand ready to help you generate results through targeted projects and proofs of concept that can be scaled to meet the business challenges of today.

