

GSC ENGINEERING, Inc.™ 298 PROSPECT STREET P.O. BOX 269 STOUGHTON, MASSACHUSETTS 02072-0269 TEL: (781)344-0087 FAX: (781)344-2012 WWW.GSCENGINEERING.COM

"We Protect Good Science from Poor the Wrong Automation"

Success requires good science matched with appropriate automation.

Whether you are conducting biotech research, developing a new product, or constructing a new manufacturing plant, computer controls and/or other automation are almost certainly involved.

- If the science is not working, then adding a computer, a fancy graphic user interface, or a web interface won't solve the problem.
- Even if the science is good, the wrong automation can cause it to fail.
- Not that the automation is *poor* or *bad*, but if wrong for the problem it can fail.
- **GSC** can help prevent that from happening.

Automation must match the "physics" of the problem.

Requirements alone cannot guarantee success. A successful solution requires an architectural design that deals with the physics of the issue.

- Systems that pass all of their validation tests sometimes simply fail to work right. Some sources say as many as 60% of computerized systems have this problem.
- Automation must be designed for the problem, the problem won't adapt to the computer.

Automation is <u>not</u> Information Technology (IT).

- Automation is anything done by other than direct human action. It may involve valves, sensors, actuators, mechanical equipment, motors, pumps, piping, wiring ... long before we get to the computers or PLC's. It *ALL* has to work.
- **GSC** is not an IT consulting firm. **GSC** does not provide computers or software.
- GSC can ensure your computers and automation work with the problem at hand.

How GSC can help you:

- **GSC** understands the physics side of the automation.
- **GSC** has experience in construction, hydraulics, pneumatics, mechanics, electric power and controls, manufacturing, fluid power, computers, software, and more.
- **GSC** has decades of experience with biotechnology clients.

For more information contact Thomas Vaughan, P.E. (t.vaughan@gscengineering.com).