

GOOD REASON FOR A BIO-RESEARCH FIRM TO INVEST IN DATA ANALYTICS

Harvest the Harder to Reach Reductions in Costs and Error Rates

Most every bioscience firm has already done the obvious things to minimize error rates in their processes and drive down costs and it's likely that yours is no different. Standard industry quality practices for laboratory and manufacturing are well understood, are generally in place, and delivering the easy gains.

The question is, are more gains in efficiency and accuracy still available? With the proper application of advanced data analytics techniques, the answer is a resounding "Yes."

Advanced data analytics can be instrumental in reducing errors, material waste and rework through analytically driven process improvement. Methodologies like Six Sigma, TQM (Total Quality Management), and Lean Manufacturing are increasingly relying on more sophisticated multivariate statistical analysis to drive improvements in both laboratories and the manufacturing plant environment.

IN THE RESEARCH LAB

Data analysis is being used in laboratory settings to identify bottlenecks in workflow and redesign processes resulting in more efficient workflows. These save time and money while also preserving the quality of biological samples that degrade with elapsed time from collection to testing. The widespread application of quality control methodologies leads to reduced waste and rework in nearly every process to which they are applied. Better control of lab processes means a smoother road for certifications and regulatory compliance audits. Some larger labs extend the use of advanced data analysis to optimize the allocation of expensive staff and lab equipment to projects, maximize productive lab use and minimize downtime.

opportunity

- *More efficient workflows, saving time and money*
- *Reduce waste and rework*
- *Smoother road for certification and compliance*
- *Maximize productivity while minimizing downtime*

IN THE MANUFACTURING PLANT

In the manufacturing plant, advanced data analytics are taking equipment maintenance beyond fixed schedule preventive maintenance into the realm of predictive maintenance. Cheaper sensors provided cost-effective data and advanced analytics enables prediction of just when a particular piece of plant equipment will need maintenance to prevent unscheduled downtime. Also, anomaly detection algorithms working off streaming data from process sensors alert plant personnel to the rise of unusual conditions and trigger early intervention to bring processes back into control. Faster response to out-of-bound conditions reduces production waste or even more dramatically could prevent a product error from making it to market and eventually triggering a recall. Univariate process control analysis is now table stakes. The analytically savvy are using multivariate statistical process control to maintain better overall control and deliver the next round of cost savings.

opportunity

- *Predictive maintenance*
- *Prevent unscheduled downtime*
- *Reduction of production waste and error*
- *Maintain better overall control*
- *Realize cost savings*

Regardless of where you are on the spectrum of advanced data analytics LifeScale Analytics can assist. Our services range from strategic and architectural consulting to determine the ways an investment in advanced analytics can help your business, to implementing and training your staff on the right solutions. We can even deploy an outsourced analytic toolbox tailored to your specific data analytic requirements. Whatever the analytics related need is in your organization LifeScale Analytics can help.