

Adding Context to Bioprocessing Data— What Really Matters

By creating a complete solution, more information can be collected, analyzed, and used to control a development or manufacturing process

Reviewing the data captured from bioreactor processes can be overwhelming. What do you look at first? How do you determine what data is the most impactful to your research? What really matters? “It’s like driving down a highway in a car with the windows painted black, and you just get to scratch a little pinhole to look through,” says Joe Jirka, engagement manager at KYNOTA in Cambridge, MA. Jirka and his colleagues can give a scientist a better “view” of a process and make use of the resulting information. KYNOTA brings new capabilities and power to bioprocessing through enhanced data collection and powerful analysis, notes Jirka.

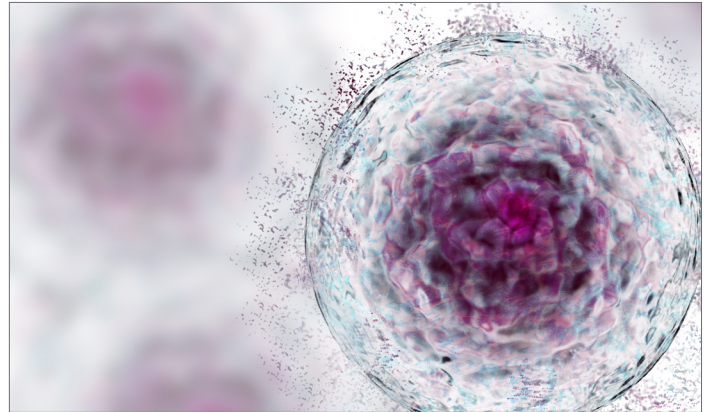
Creating such a data-analysis system, however, depends on understanding the process as well as the history behind its development. Based on training in biotechnology and first-hand experience in the pharmaceutical industry, Jirka notes: “Lots of times, there’s a huge disconnect between the users and the people building the systems.” He and his colleagues can build a bridge between a bioprocess and a user to optimize the system.

The data challenge

To track a bioprocess, scientists employ various approaches. “There are in-process sensors in the vessel, at-line methods where a sample comes out of the vessel and gets analyzed right there, and offline approaches that transport a sample to another system for analysis,” Jirka explains. “There’s a lot of contextual data and information from all of these systems.”

Without optimized connections between these systems, much of that information is lost. Worse still, a user might not even know what is being missed. With offline analysis, for example, Jirka calls it “the Wild West, where you’ve cut off a lot of things the user could use to make cell-culture decisions, but most systems start getting a little shaky on that.”

To make all this information useful in controlling a bioprocess, a computer needs to collect contextual information: the



vessel that a sample comes from, the conditions in that vessel, the time when a sample was collected, and much more. A KYNOTA solution captures that information and makes it readily available to a user. “You can just click in context information like the media, the volume, and where the cells come from,” Jirka explains. Plus, the KYNOTA solution retrieves data from years past for comparisons when needed. As Jirka says, “You have all the data because we’ve collected and contextualized it, and we add visualization.”

A solution by partnership

For a bioprocessor, many people—from systems designers to programmers—must be involved in the collection and analysis of data. “We’re one entity,” Jirka says. “We can take them from sensor data through analysis.”

For every customer, KYNOTA assigns a solution architect to the project. Plus, every solution includes a subscription—that continually provides support. “We know the entire system,” Jirka says. “We can help with all of it.” The KYNOTA team includes engineers who have worked on vessels, knowledgeable bioprocessing programmers, experts like Jirka with pharmaceutical experience, and more.

KYNOTA

Interested in speaking with Joe? [Click here](#) to submit your information and KYNOTA will contact you to schedule a time to meet.

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