5 Tips to Kickstart Your Journey to the Future-Proofed R&D Lab

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Despite an increase in digital transformation efforts across all industries, 70% fall short of their objectives. For science-driven organizations whose core innovation center is the R&D lab, success can be even more out of reach. To build the digital lab of the future, a deep understanding of what's possible with technology and the complexities of scientific research is critical. However, often these knowledge sets are siloed or nonexistent internally, compounding the challenges around attaining the digitally transformed and future-proofed lab.

Below are five tips to kickstart the digital transformation journey for your lab.

1. Lead with business-value, not technology.

Often projects that are technology driven are a step removed from real business ROI. It's easy to get excited about the promises of new technologies, such as machine learning or AI, and start implementing them in the lab before understanding what the end value is from the investment. Successful organizations first identify the business goals to be achieved, and then build-out the digital solutions for their unique needs and challenges in R&D.

2. Think bigger than just data management.

Scientific data holds the key to long-lasting innovation, yet most efforts and tools are focused on just collecting and managing it. While there is certainly an important need to have data organized and harmonized, data stored but not used has no value. Purpose-built digital solutions that allow scientists to leverage their data to make new discoveries and accelerate innovation is where the true value lies. Scientists can then work with their analysis-ready data efficiently and more effectively to make better, smarter decisions faster.

3. Assess your current workflows and inefficiencies.

The future-proofed digital lab is optimized for scientific creativity and productivity. When researchers only feel the pain points of complex workflows, they lose not only time but also sight of the scientific possibilities. Lab managers should ask themselves, "What could this process look like without the current constraints, using the latest computational capabilities?" Customized, optimized workflows that continuously adapt as needs change are essential for the innovative lab.

4. Identify the digital skills gaps.

The most effective digital transformations take a holistic approach and include investments in technology, but also in the people around it. But most organizations lack R&D staff with the right combination of domain expertise and the digital skills required to conceive, manage, and implement data-driven projects. By building-up the digital capabilities of researchers, how they think about science and thus what's possible in the lab changes.

5. Start now with a value-driven project.

An automated, optimized lab is imperative for science-driven companies to remain competitive in the marketplace. To get started, select a project based on potential value to the business, with tangible and measurable outcomes. Even a small project will help build capability and buy-in, and when it produces demonstrable value, you can justify continued investment in digital projects.

Enthought has been a digital transformation partner of choice for leading companies in the materials and chemical science, life sciences, semiconductors, and energy industries for over 20 years. Contact us today to discuss how to get started with digitally transforming your R&D lab.

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