Case Study

Bolt Threads Accelerates the Development of Sustainable Materials with Benchling

Bolt Threads

"Bolt Threads is a material solutions company that invents cutting-edge biomaterials that put us on a path towards a more sustainable future. Companies like adidas, Lululemon and Stella McCartney are using our biomaterials to create eco-friendly shoes, bags and clothes. At the core of our innovation is R&D, and Benchling is our R&D foundation. Benchling helps us accelerate our innovation so we can deliver high quality biomaterials to vendors and customers faster."

David Breslauer
Co-Founder & Chief Science Officer

BOLT THREADS

BOLT THREADS + Benchling

Bolt Threads Accelerates the Development of Sustainable Materials with Benchling

Bolt Threads, a material solutions company, is building better materials for a better world. Their products range from Mylo ™material, a mycelium-based alternative to leather, to b-silk™ protein, a proprietary clean beauty breakthrough inspired by the silk spun by spiders. In partnership with brand customers like adidas, Kering, lululemon, and Stella McCartney, Bolt Threads is putting the fashion and apparel industry on a path to a more sustainable future, and making fungus the hottest fashion trend.

Business goal with Benchling

Develop and bring new, high-quality biomaterials to market faster by centralizing and standardizing all R&D data and processes, leading to more efficient workflows and improved collaboration to drive more informed scientific and operational decision making.

Company Profile

Sector
Industrial goods

Subsectors
Consumer Packaged Goods, Materials

Location
Headquarters, CA

Number of Employees
> 100

Bolt Threads reported:

~25%
shortened cycle time for select scientific workflows

150%
increase in speed to aggregate and visualize data across experiments and teams

~4 hrs/wk
saved by each individual scientist on data, search, compilation, and sharing with colleagues

Challenges addressed

Siloed project data created information bottlenecks

Project data was spread across 10+ systems, making it time-consuming and difficult to find and aggregate data from upstream experiments to inform downstream production processes.

Evolving workflows outgrew existing information systems

Prior information management system was not flexible enough to adapt to Bolt's ever-changing, materials-specific workflows.

Difficulty collaborating using non-standardized data capture

Legacy tools required time-intensive, manual data capture, and made collaboration logistically challenging – all of which slowed progress and hindered speed of innovation.

Outcomes delivered

A single source of truth

Bolt's data, which was previously spread across systems, is now centralized and standardized. With experimental data across their R&D teams available in a single place, there's no debate about which data source should be used to make business decisions, and end-to-end sample visibility gives scientists and decision makers deeper insights that accelerate development.

End-to-end sample management to empower innovation

Bolt's Mylo™ material starts as a handful of mycelium cells, which multiply and form the basis for Mylo material. Bolt's scientists use Benchling to track and manage the end-to-end process from the first stages of mycelium growth cultivated in the lab all the way to the fiber all the way to the fiber they put into a finished product. Ultimately, standardizing their workflows in Benchling helps Bolt get new sustainable products into the hands of consumers faster.

Streamlined program oversight

Bolt's team of 60+ scientists across the U.S. and Europe can now collaboratively track and manage both individual tasks and overarching projects to simplify handoffs, scale up output, and streamline multi-step development processes. Equipped with better technology, Bolt went from running 6 biomaterial programs to 15 programs over the past 2+ years, increasing the number of products that can be discovered and developed simultaneously.