**Benchling**

# Global Biopharma Leader & Benchling: Increasing scientists' satisfaction with data capture by 3X

**Benchling**

# Increase process efficiency and data integrity in order to shorten development timelines for the treatment of rare genetic diseases

An R&D department at a top-10 global biopharmaceutical company develops life-changing treatments for genetic diseases such as hemophilia and sickle cell anemia. Their work includes screening early-stage candidates, optimizing leads through in vitro and in vivo assays, and conducting IND submissions.

Until recently, the team struggled with the limitations of disparate and highly manual software tools. They had implemented an on-premises electronic lab notebook (ELN) in an attempt to create a central hub connecting these disparate tools, but it didn't integrate well with other software and was slow and clunky to use. Furthermore, the ELN itself was unreliable and cumbersome, causing challenges with data capture, sample tracking, and cross-functional collaboration.

By replacing their complex set of software tools with Benchling's single solution, the company now has a unified, cloud-based platform that standardizes data collection and automatically organizes and interlinks samples and results data. This has dramatically increased data integrity while reducing the time scientists spend searching for information and sharing it with colleagues. This also sets them up to gain more value out of their captured data through analytic and machine learning initiatives.
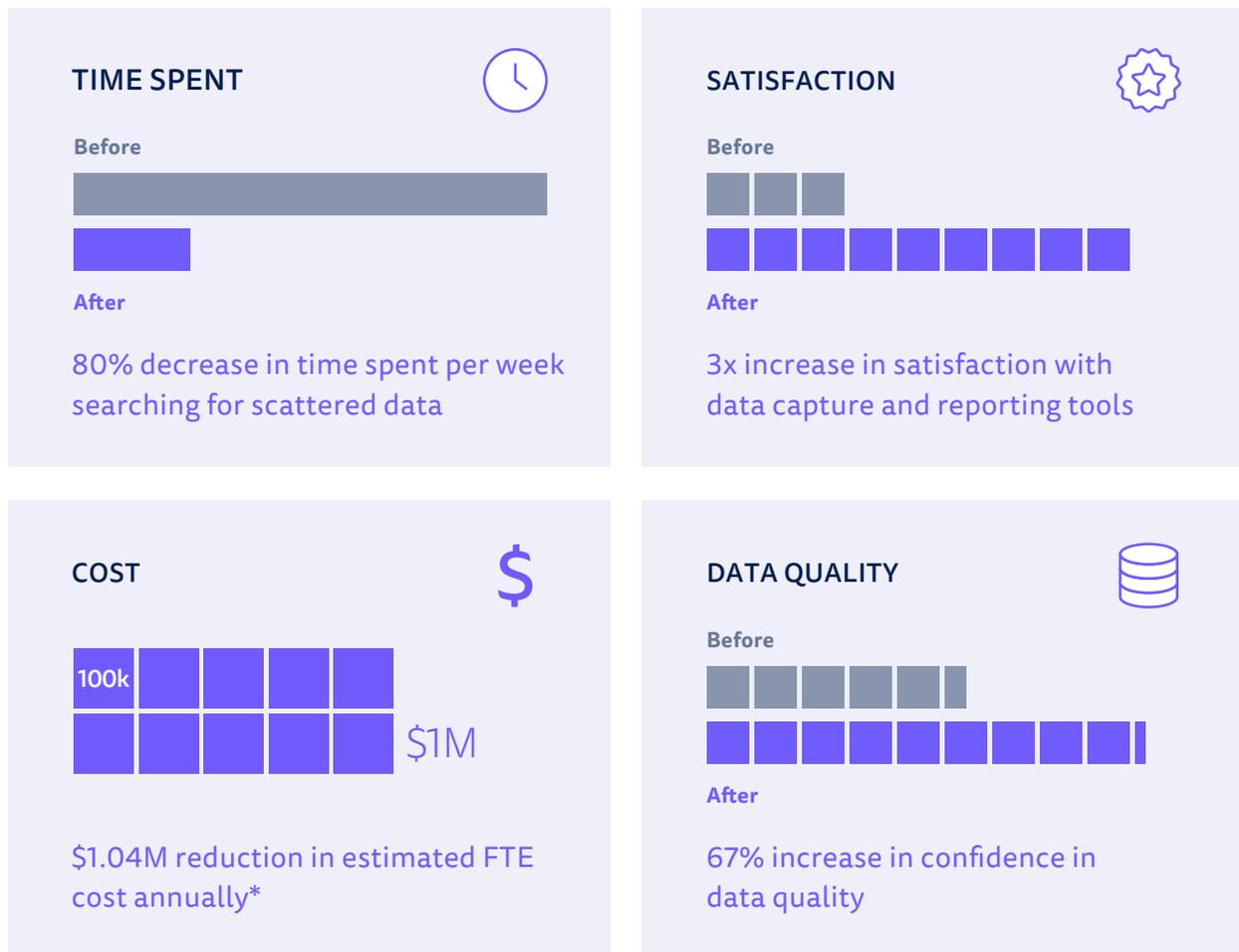
## COMPANY PROFILE

Number of employees: 100,000+     Industry: Biopharmaceutical

## KEY RESULTS

### TIME SPENT

**Before**

**After**

80% decrease in time spent per week searching for scattered data

### SATISFACTION

**Before**

**After**

3x increase in satisfaction with data capture and reporting tools

### COST

$

100k

$1M

$1.04M reduction in estimated FTE cost annually*

### DATA QUALITY

**Before**

**After**

67% increase in confidence in data quality

## CHALLENGES

### Wasted time

Each scientist spent over 11 hours each week on manual and logistical tasks related to data collection, cleanup, and hand-offs, drastically slowing the pace of research.

### Fragmented data capture

Disjointed software tools made it difficult to organize and standardize data collection, hindered scientists' ability to trace samples through their workflows, and impeded their ability to derive insights from their experiments.

### Poor data quality and tracing

A slow, clunky legacy ELN diminished data quality and led to challenges with regulatory compliance. This led to time-consuming reworking of data related to regulatory submissions.

## THE STORY

As one of the largest global pharmaceutical companies in the world, our customer is transforming the lives of people with hemophilia and other genetic disorders through the research, development, and commercialization of innovative therapeutics.

Testing therapy candidates generates a significant amount of data. Scientists need tools to help them harness this complex data, as speed and efficiency are key to identifying treatment options and, in turn, saving lives.

The team initially invested in point solutions, such as a tool for construct design and a separate tool for construct registration, as individual business needs arose. They also had a legacy ELN as a central point for their data management. However, over time, the disparate tools and disconnected ELN introduced data silos and process inefficiencies, slowing down collaboration and experiment progress. They had completely separate technologies for sharing data, tracking inventory, designing constructs, and recording experiments, leading to duplicated or conflicting records in multiple locations.

To achieve their goals, the company needed a solution that would dramatically increase productivity by enabling all of the data-producing tools in their research ecosystem – notebooks, freezers, lab equipment, and more – to communicate with each other. In turn, this would eliminate wasted time and frustration and allow for improved decision-making and overall efficiency.

### An innovative solution unleashes potential and increases productivity

Our customer's productivity was hampered by their disparate toolset and legacy ELN. Countless hours were lost to cumbersome and manual processes such as searching for specific data and handing it off to colleagues. In fact, scientists across the blood disorders team each spent over 25% of every week on such tasks alone. This led to process inefficiencies, avoidable errors, and ongoing frustration.

Scientists at the company slashed the time spent on data capture in half by using Benchling's connected suite of applications. Now, scientists can populate Notebook entries with experimental results and auto-link that data to samples in the Registry. They can also edit file attachments directly within the Benchling interface, build Excel-like tables within Notebook entries, manage tasks through to-do lists, and auto-populate their calendars with the experiments they plan to run each day. These quality-of-work improvements added up to greatly improve the scientists' experience within the lab.

While their legacy ELN was unable to unite the point solutions and had hindered their potential,

speed, and impact, the Benchling Notebook allowed for the opposite. Since the Benchling Notebook sits on the same foundation as Benchling Registry and Molecular Biology, scientists can easily tag entities, expand plasmid sites, and pull up historical results without having to hunt through disparate systems. By replacing their legacy tools with Benchling, our customer experienced an 80% decrease in time spent searching for data and a saw an estimated $1M benefit in scientists productivity annually*.

## Comprehensive data capture enhances collaboration

Prior to Benchling, full context and sample chain of custody were impossible to retrieve, since data was siloed and stored in disparate systems. Just four out of their ten informatics tools supported collaboration within the team, and relying on separate systems for data collection meant an increased chance for error. Sample registration and inventory management were maintained manually by a single resource on various Excel sheets. As a result, scientists on different teams working together often had no visibility into their colleagues' processes and data. This lack of sample traceability hindered scientists' ability to derive cross-experimental insights. Our customer needed a unified, standardized process for capturing and organizing data so that each piece of information could be connected to a broader experimental context.

With Benchling, our customer is now capturing all data *in context*. Not only can they register entities and manage inventory directly from Benchling Notebook entries – they can also update samples with results data automatically populated from instrument runs. Furthermore, all sample data and metadata are bidirectionally linked and easily searchable by any attribute, improving findability across the large, complex datasets that our customer produces. Scientists working cross-functionally now have access to the same data and context thanks to the increased transparency.

By establishing a unified method for capturing and organizing data through Benchling, scientists experienced a 3X increase in satisfaction with data capture and reporting tools, and achieved greater visibility, improved decision-making, and enhanced collaboration.

## A unified platform increases data quality and compliance

Before transitioning to Benchling, the company relied upon a pieced-together suite of applications that weren't intended to work with one another. This disjointed informatics landscape required scientists to collect data in a number of formats and locations, resulting in varying levels of data quality. Their slow legacy ELN software often compelled them to capture experimental results from various tools on individual desktops. This lack of consistency impacted the quality of their data while making regulatory compliance more challenging.

Benchling solved these challenges: As a true integrated informatics platform born in the cloud, it replaced the disjointed software tools the company had relied upon in the past, and led to a smoother, more efficient, more accurate way for scientists to improve data quality, file INDs, and meet regulatory compliance. Standardized Notebook templates provided a uniform way to capture protocols and experiments, leading to decreased human error and surfaced consistent sample context with minimal effort. Prior to using Benchling, scientists reported a 50% level of confidence in the quality of their data. This confidence level leapt to over 90% after transitioning to Benchling.

## Conclusion

Scientists at the global pharmaceutical company were no longer hindered by their tedious and disjointed points solutions loosely tied together by a legacy ELN. Backed by the capabilities of Benchling, scientists experienced a profound improvement in their workflows and productivity, and a simultaneous plummet in their levels of frustration and unnecessarily lost time. Users no longer need to switch between distinct modules, or enter data more than once: Benchling's natively unified platform allows all data to be centralized, bidirectionally linked, and easily searchable.

Scientists can also share data, protocols, and best practices much more easily, thus supporting regulatory compliance. Finally, Benchling's intuitive user interface drives increased adoption and sustained usage of the platform, which, in turn, perpetuates the positive impacts of the platform. Thanks to their usage of Benchling, this company can now more confidently and quickly bring their gene therapies to patients.

\* ROI calculation leverages Benchling's ROI calculator. Assumptions include $150K average FTE scientist cost (payroll costs only) annualized across 42 total scientist users

www.benchling.com