Benchling

Life Science R&D Informatics

The importance of adopting a platform approach over point solutions

Large molecule R&D involves complex datasets, a broad range of sample types, and intricate cross-team collaboration. When it comes to streamlining these workflows using third-party informatics systems, there are two basic approaches: the point solution approach, and the platform approach.

In the more traditional point solution approach, R&D organizations work with a number of individual tools. For large molecule R&D in particular, this approach falls short when dealing with complex data types, large datasets, and dynamic workflows. Some companies try to resolve these issues by integrating numerous point solutions, but this does little to address the unreliable data, scattered user experience, and burdensome system administration unavoidable with point solutions.

With the platform approach, an organization purchases a suite of applications built on a common platform to satisfy the majority of the organization's informatics needs. This approach is favored by large molecule R&D organizations due to its ability to unify complex and large datasets, empower collaboration across teams, and centralize system administration.

The Advantages of the Platform Approach

Unified Data Architecture

With all your data readily accessible, you can make **better business decisions.**

Heightened User Adoption

Greater usage leads to **superior data quality and collaboration.**

Easy System Administration and Configuration

With a single central system, you can **iterate on your R&D processes faster and more easily.**

Unified Data Architecture

Better business decisions.

Having your data in one place means you can **extract more meaningful learnings, faster.** For example: Scientists can see the locations of all cell lines that express a given plasmid. Group heads can identify the conditions behind the fermentation runs that generated the most desirable outcomes. Executives can track the progress of each individual antibody program in real-time, from early discovery through development.

Heightened User Adoption

Superior data quality and collaboration.

The inconsistent user experience of siloed systems has severe impact on data quality and productivity. For example, if a scientist has to navigate between multiple tools to design a plasmid, register that plasmid in a completely separate system, and then submit a request via email to a protein purification team, chances are the protein purification team won't get all the information they need. They'll have to search through multiple systems for the right sequences and guess parameters for their calculations. Ultimately, they'll produce a subpar yield. The platform approach increases scientist usage by giving them a unified experience and a single source of truth within which to access all relevant R&D data. Team hand-offs can happen more quickly and be more thorough, since all experimental context is gathered in one place. Scientists can spend the majority of their time working together in a single tool, leading to **superior data quality and collaboration** throughout the entirety of R&D.

Easy System Administration & Configuration

Iterate on your R&D processes faster and more easily.

Large molecule R&D workflows are always evolving. Whether it's adding a new sample type, adjusting a development process, or testing a new method, the changes you make to your organization and to your science need to be reflected in your informatics infrastructure. With a platform approach, **you only have to manage a single solution** – not endless pieces of niche software that regularly break or go out-of-sync.

	The Platform Approach	Point Solutions
Better Business Decisions	Easily query the entirety of the data your R&D teams are producing.	Spend days manually hunting for data across disparate systems.
	Quickly identify promising candidates, superior development processes, and early indicators of success/failure.	Struggle to answer pivotal R&D questions with incomplete data.
	Track R&D in real-time, on one central dashboard.	R&D operates in a black box.
	Trace lineages from physical lots up to digital entities.	Lose track of the lineages of your physical samples.
	File for IND in days, not months.	Spend months searching through disparate systems for the right data.
Superior Data Quality & Collaboration	See the full history of any file, sample, or result.	Always question the source and accuracy of your data.
	Scientists collaborate much more easily with a single, shared source of truth.	Collaboration is much more difficult with data scattered across disparate systems.
	Link results to samples and experimental conditions.	It isn't always clear which results line up with which conditions.
	Give every scientist complete experimental context, so team hand-offs are seamless.	Scientists search for scattered experimental context across emails, personal file-sharing folders, and locally-saved files.
	Experiments are more reproducible, since all data is accurate and interlinked.	Experiment validity is called into question due to incomplete or inaccurate data.
Iterate on R&D Processes Faster and More Easily	Iterate much more rapidly on your R&D processes, since you only have to reconfigure a single, central informatics system.	R&D has to wait for their software to catch up. Process iteration is continuously held back.
	If necessary, integrations are much easier, since you only have to integrate with the single central platform.	Each additional integration creates multiple additional points of failure.
	Manage user permissions from one central location.	Risk data loss and noncompliant activity due to inability to keep track of permissions.
	IT can develop novel extensions that leverage all R&D data.	Novel IT development is constrained by numerous scattered dependencies.