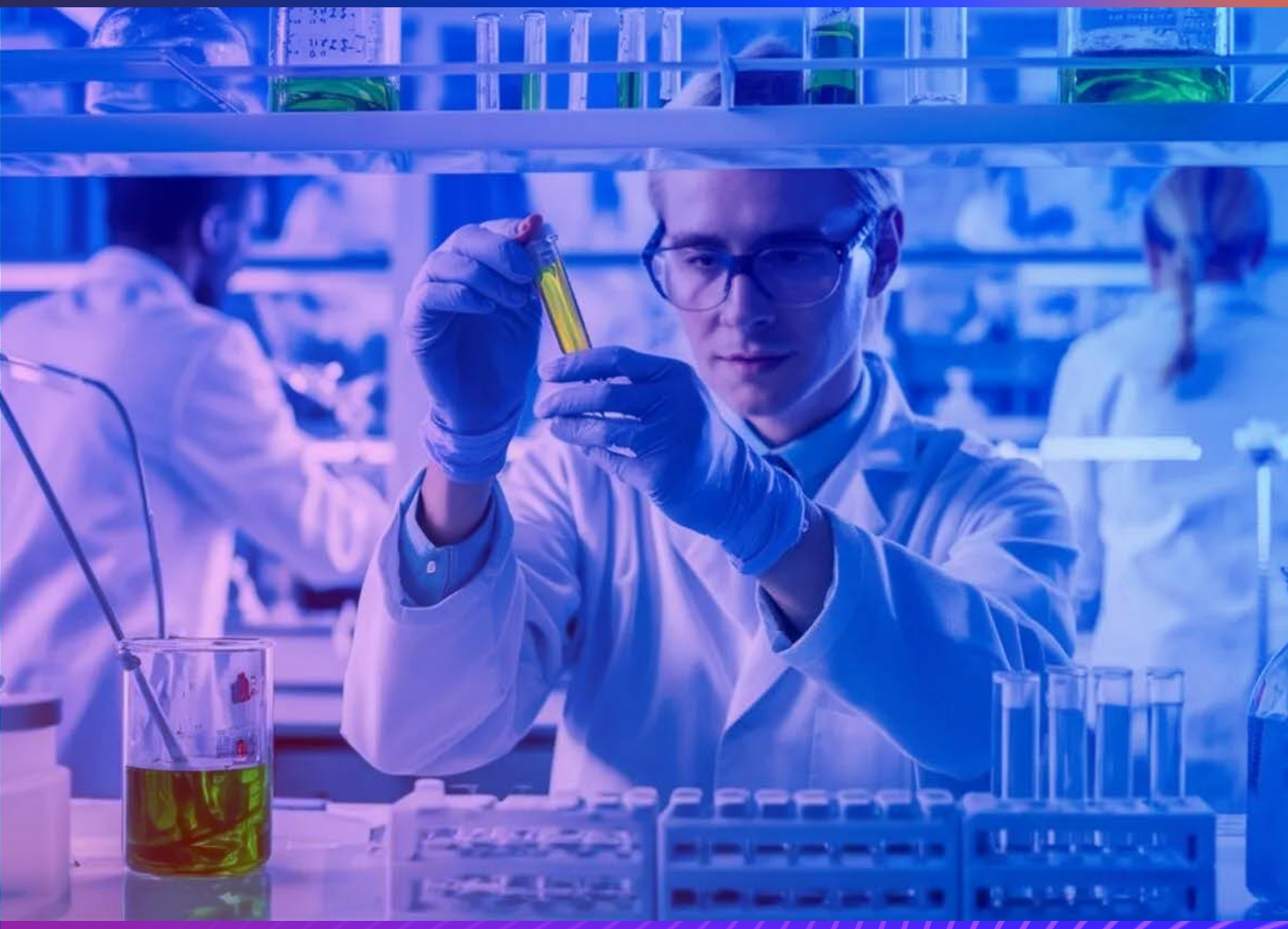
QUALITEST™

Biosciences Innovator Slashes Deployment Time from 12 Hours to 30 Minutes

How Qualitest's automation expertise helped a pioneer in immune-driven medicine upgrade from a legacy lab information system to a new off-the-shelf solution.



Challenge

The Client upgraded to a new system for managing post-treatment cancer cell blood testing that required mandatory biweekly updates.
These updates needed rapid, unique deployments across all environments, straining resources and slowing the process.

Solution

Qualitest automated the deployment process, reducing overhead and ensuring error-free results.
We developed a Python script to bundle builds and created a custom dashboard for single-click deployments.

Results

Our transformation slashed deployment time by 96%, reducing the workload from 12 hours to a super-swift 30 min.
Qualitest turbo-charged operational efficiency by delivering seamless, error-free deployments.

Client overview

Our Client, a leader in immune-driven medicine, leverages insights from the immune system to improve lives. Its proprietary immune profiling platform decodes immune system data at scale and with precision.

Collaborating with drug developers, clinicians, and researchers, this US-based biosciences enterprise aims to revolutionize the diagnosis and treatment of diseases such as cancer, autoimmune conditions, and infectious diseases.

Lab system upgrade strains resources and slows deployment

The client upgraded its laboratory information management system to manage blood testing for cancer cells post-treatment. This system was Java-based and connected by API/REST. Its key role was to assess ongoing treatment efficacy and detect relapses.

However, mandatory biweekly updates posed challenges, requiring swift deployment across testing to production environments. Each deployment was unique and executed via command line with Linux commands. This laborious process took four people up to three hours per deployment cycle, covering staging, testing and incremental environment deployment.

Automated deployments reduce time and overhead

We tackled the automation of the deployment process to reduce overhead and time while ensuring error-free deployments. Given the variations in each build, traditional automation solutions had failed.

- **Step 1: Pattern recognition**

  Analyzed historical builds to identify deployment patterns.

- **Step 2: Python automation**

  Developed a Python script to bundle and integrate new builds into a master build

- **Step 3: Selenium script**

  Used Selenium to automate the deployment of the master build across environments.

- **Step 4: Custom dashboard**

  Created a dashboard to streamline the deployment process, allowing single-person operation and drastically reducing deployment time

By analyzing over 20 historical builds to identify patterns and scenarios, we developed a Python script to bundle all builds. When a new build arrived, we added it to this master build and deployed it across all environments using a Selenium script.
Finally, we created a custom dashboard that allowed for rapid, efficient deployments with just the click of a button. This meant one person alone could achieve complete environment setup in less than 30 minutes.

Key benefits

Qualitest's innovative and customized solutions delivered measurable improvements to the Client's deployment processes. The transformation led to a significant reduction in effort and time.

- **Time efficiency:** We slashed deployment effort from 12 hours to an astonishing 30 minutes, achieving a 96% reduction.
- **Operational efficiency:** Qualitest enhanced operational efficiency with seamless and error-free deployments.
- **Resource optimization:** We cut the manpower required for deployment from 4 people to just 1 person pushing a button.

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