[RESILIENCE

Quilt

# Sustainably Scaling Biomanufacturing at Resilience

*Quilt allows us to easily browse through millions of files stemming from our research sites, either programmatically or through the web app. It also allows us to frontend the data to users, without compromising on the key engineering efforts behind the scenes to provide file version control, immutability, and organizational efficiency. Leveraging Quilt Packages, users may also add custom analytics & visualizations and collaborate seamlessly to create well-structured data products shared across the company.*

—Adam Mendez, **Associate Director of Data Engineering at Resilience**

*Quilt provides Resilience with the optimal Scientific Data Management System that enables one-click access to data with a snappy and intuitive GUI. The contents of our data are deep-indexed allowing us to free-text search millions of files, with the results returned instantaneously. The Quilt API allows us to automatically post the raw data links back to our electronic notebook for a given experiment ensuring data traceability and capturing precious intellectual property.*

—Brian McNatt, **Director of Digital R&D at Resilience**

**National Resilience, Inc.** is a first-of-its-kind manufacturing and technology company, building a sustainable network of processes and platforms that allows scientists to make their novel therapies quickly, safely and at scale, so more patients around the world can get the medicines they need.

| Challenge | How Quilt Helps |
|---|---|
| Data siloed on instruments, necessitating sensitive, direct access to machines and instruments<br>• Multiple sites<br>• Over 100+ instruments<br>• NGS runs taking 7-10 weeks | "We are providing easier access to the data generated at our research sites and getting it into the hands of scientists faster."<br>• 200+ scientists onboarded in first month<br>• Instrument to scientist via Quilt is now 5min<br>• With CRO improvement, NGS now < 1 hour |
| Numerous, divergent copies of files and uncertain data lineage hampered finding and filing processes<br>• 10 TB of data<br>• 10 million files per bucket | "We're providing an audit trail and version control for datasets as they're transferred from research and analysis to downstream, GXP and manufacturing and then eventually, hopefully, enter regulatory submission." |
| Commingled raw inputs and final outputs led to uncertainty around the location of the latest and most accurate data | "We're trying to bridge the gap between what lab and data science team so they can safely interoperate on their data in one place." |

Quilt brings seamless collaboration to Amazon S3 by connecting people, pipelines, and machines using visual, verifiable, versioned data packages. Quilt Data is an Amazon Advanced Technology Partner. Amazon Web Services provides secure, cost-effective, and scalable big data services that can help you build a Data Lake to collect, store, and analyze massive volumes of heterogeneous data.

**Visit [quiltdata.com](quiltdata.com) to learn more about the Quilt data mesh for life sciences.**