

Science at Speed

How Platform-First IT Unlocks AstraZeneca's Digital Ambition

A Riverbed eBook





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1. Introduction: Navigating the Future of Pharmaceutical R&D

The pharmaceutical industry is undergoing a seismic shift, with digital transformation and AI integration at its core. Organizations like AstraZeneca are leading this evolution, reshaping how science meets technology. Their vision is not just about delivering new treatments but transforming the entire drug discovery and development process—from lab to patient.

However, realizing this ambitious future requires more than innovative science. It demands a robust, scalable, and intelligent IT infrastructure—one that integrates AI, automation, and seamless observability to support complex research workflows, ensure compliance, and accelerate breakthroughs. This eBook explores how a **platform-first approach**, enabled by Riverbed, addresses these critical needs.

Evolution



2. AstraZeneca's Ambition 2030: Accelerating Drug Development

AstraZeneca's **Ambition 2030** aims to nearly double revenue to \$80 billion by 2030, launching 20 new medicines, many with the potential to generate over \$5 billion annually. Central to this goal is leveraging AI and data science to compress discovery timelines, improve clinical trial outcomes, and bring life-saving therapies to patients faster.



\$80 BILLION

Targeting \$80 billion
in revenue by 2030

Key initiatives include:

Embedding AI across 85% of R&D programs

to streamline target
identification,
molecule
design, and trial
optimization



Investing \$2.5 billion in a new R&D centre in Beijing

harnessing local
talent and data
science expertise to
drive discovery



Using generative AI platforms

like GLIMPSE,
to accelerate the
design and validation
of novel drug
candidates



But with these
advancements come
complexity, requiring
IT ecosystems that can
scale, adapt, and deliver
insights in real time.

3. The R&D IT Landscape: Challenges and Opportunities

AstraZeneca's digital ambitions are reshaping its IT needs.

Yet, pain points persist:

Data Silos



Disparate systems across CSET platforms, digital labs, and global trial networks hinder seamless data flow and analysis.



Manual Processes



Reliance on manual triage and resolution increases MTTR and diverts valuable IT resources from strategic initiatives.



Performance Gaps



High-performance computing environments supporting AI models and simulations are prone to bottlenecks.



Global Collaboration Complexities:



Distributed research teams need consistent, high-quality digital experiences across geographies.



These challenges risk slowing innovation, extending timelines, and impacting the delivery of new therapies.

4. Embracing a Platform-First Approach

A fragmented, tool-based IT approach no longer meets the demands of AI-driven R&D.

A platform-first strategy offers:

Unified Observability



Complete, real-time visibility across applications, networks, endpoints, and cloud environments.



AI-Driven Automation



Proactively detect, diagnose, and remediate performance issues to keep critical workflows running smoothly.



Scalability and Integration



Flexibility to integrate with AstraZeneca's evolving digital ecosystem, supporting growth and innovation.



This shift transforms IT from reactive support to a proactive, strategic enabler of discovery.

Proactive



5. Riverbed's Unified Observability: Enabling AstraZeneca's Vision

Riverbed's platform is purpose-built for the demands of modern R&D IT:

Unified Agent



A single, lightweight agent that consolidates telemetry from every endpoint, reducing complexity and delivering full-fidelity data for precise observability.

IQ Ops



An AI-powered engine combining causal, predictive, generative, and agentic AI to detect issues, uncover root causes, and trigger automated remediation, dramatically reducing MTTR.

Smart Open Telemetry Integration



Seamlessly connects with AstraZeneca's diverse digital platforms, enabling consistent data ingestion and a unified data fabric.

Security and Compliance



Built-in safeguards to protect sensitive research data and ensure regulatory compliance.






Aternity



Comprehensive digital experience monitoring ensures optimal performance for researchers using CSET platforms, digital labs, and global collaboration tools.

6. Real-World Applications: Enhancing R&D Efficiency and Drug Discovery

AstraZeneca's ambitious goals bring unique challenges that Riverbed's platform addresses directly:

Optimizing Clinical Trial Applications	Enhancing Digital Lab Environments	Enabling Data-Driven Drug Discovery	Facilitating Global Collaboration	Reducing Incident Resolution Time
<p>CHALLENGE: Maintaining uptime and performance for critical trial platforms and data pipelines.</p> <p>SOLUTION: Riverbed's observability and automation ensure system stability and data integrity during crucial phases of drug development.</p> 	<p>CHALLENGE: Virtual experiments, digital twins, and compute-intensive modeling generate massive data loads and potential bottlenecks.</p> <p>SOLUTION: Proactive monitoring and automated resolution ensure uninterrupted workflows and accelerated innovation.</p> 	<p>CHALLENGE: Rapid molecular design and validation require uninterrupted access to AI-driven discovery platforms and vast datasets.</p> <p>SOLUTION: Riverbed's full-fidelity telemetry and proactive resource management minimize bottlenecks, enabling researchers to iterate faster and advance promising drug candidates with confidence.</p> 	<p>CHALLENGE: Distributed teams across geographies—including the new Beijing R&D center—need consistent digital experiences and secure access to shared resources.</p> <p>SOLUTION: Scalable observability and management ensure seamless, resilient collaboration regardless of location.</p> 	<p>CHALLENGE: Delays in resolving IT issues can stall experiments and extend development timelines.</p> <p>SOLUTION: AI-driven diagnostics and automated workflows reduce MTTR by up to 70%, keeping science moving forward.</p> 

7. Quantifiable Benefits: Driving Scientific and Business Impact

Riverbed's platform delivers tangible results:



**Reduction
in MTTR**, minimizing
disruptions



**Faster detection
and resolution of
performance
issues**, accelerating
recovery

Enhanced researcher productivity



Enabling focus on scientific innovation rather than IT bottlenecks.

Significant IT resource savings



Shifting efforts to strategic initiatives.

Robust security and compliance



Ensuring the protection of sensitive research data.

8. Building a Resilient and Scalable R&D Infrastructure

AstraZeneca's vision for a tech-enabled enterprise requires an IT foundation that is:

Proactive



Anticipating issues and addressing them before they impact operations.



Scalable



Accommodating the rapid growth of data, users, and AI models.



Integrated



Connecting diverse systems for seamless data flow and actionable insights.



Intelligent



Harnessing AI and automation to drive continuous improvement and innovation.



Foundation

Riverbed's platform aligns perfectly with this vision, positioning AstraZeneca to deliver exponential value from its digital transformation efforts.



9. Conclusion: Partnering for a Transformative Future

AstraZeneca's journey to revolutionize drug discovery and development demands a technology partner that understands its challenges and shares its vision. Riverbed's platform-first approach delivers the observability, automation, and intelligence needed to support ambitious R&D goals, enabling faster innovation and bringing life-saving treatments to patients worldwide.

Visit riverbed.com/value/astrazeneca learn more and unlock the future of digital discovery

Future

Discover how
Riverbed's
platform
can power your
AI-in-R&D
journey.

