



LIFE SCIENCES TURN TO NETWORK MODERNIZATION TO STAY COMPETITIVE

In an era of increased global competition, life science companies are challenged to increase productivity, reduce waste, and ensure quality — all while embracing change. Additionally, success most often hinges on efficiently getting products in front of consumers. This is no small task, considering that on average, it costs companies \$648 million to develop a single cancer drug, according to a study published in *JAMA Internal Medicine*.¹ And, companies seeking approval on abbreviated new drug applications waited about 27 months during the third quarter of 2019, according to a Food and Drug Administration report.²

“The life sciences industry is highly competitive. Whether the organization is developing a potential blockbuster drug, a new medical device, or a new mobile or clinical application, speed to market can be the difference between life and death for a company,” said Matt Roberts, Healthcare Practice Leader at Juniper Networks. “Success hinges on driving out inefficiencies and getting more products and services to consumers to propel the business forward.”

To achieve these competitive advantages, leaders need to ensure their organizations are experiencing the digital transformation required to help their companies compete. “Remaining status quo will not do life science companies any favors,” he said. “Doing business the same way you



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As such, life science leaders must create a culture that supports digital transformation. While many organizations already have invested in technologies to pursue such change, some now realize that more-advanced networking technologies must also be part of the mix. “Everything else in the IT stack, such as storage and compute, has already gotten smarter. People, however, have often been afraid to touch the network,” Roberts said.

But to achieve the digital transformation required to truly compete in today’s market, life science companies need to rely on networks that don’t just “keep the lights on,” according to Roberts. “The network is the lifeblood of the organization, so having an agile, automated network that can protect and scale is essential.”

Specifically, life science companies need to rely upon the following:

- **A carrier-grade network that can build a modern digital foundation for mission-critical transactions, applications, and services.**

Network solutions from Juniper, for example, provide the secure, reliable, and highly available services needed. Designed to establish a fault-tolerant network that continually supports organizational computing activities without disruption, Juniper solutions have been implemented in many healthcare organizations where patients' lives literally hinge on the technology's ability to protect and move data.

- **Advanced networking solutions that are capable of handling high volumes of time-sensitive data while also providing visibility and control.**

"You cannot control what you cannot see," Roberts said. "The network should provide proactive troubleshooting and actionable insights so that IT can ensure a great experience, but also predict problems before they arise."

- **A network that offers a single operating system running consistently across all switching, routing, and security solutions.**

This type of network can free IT staff from mundane networking tasks, allowing them to "limit those painful errors that come with doing repetitive chores and instead focus on providing a next-generation IT experience," Roberts said.

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- **Networking solutions that ensure compliance while maintaining a standards-based approach.**

"Previous investments in networking technologies may have locked the organization into a set of functionality and behavior that cannot be changed until either the next refresh or until there is an opportunity to shut things down and perform a major reconfiguration," Roberts said. As such, organization should create an environment that is forward-compatible for what may be required to support the charter of the organization in the future.

- **A network that delivers asset visibility and user engagement for improved collaboration.**

"Skilled engineering, manufacturing, scientific, and sales professionals must work quickly and efficiently together," Roberts said. "Today's network should not only support traditional connectivity, it should also help staff find key assets and resources through indoor location services to better optimize a team's performance and improve productivity."

Organizations can take their performance to even higher levels and meet continually shifting organizational needs by turning to networks that leverage artificial intelligence. "An AI-driven network will self-configure, monitor, manage, correct, and defend with very little human intervention," Roberts said. "It can also predict future needs, making it possible to adapt to the changing environment and allowing IT to fully optimize and personalize the end-user experience."

Finally, implementing network solutions that offer these advanced functions can help organizations ensure they are in a position to "mature digitally," according to Roberts, who concluded, "Network transformation is an essential step to avoid falling behind. Organizations will be in a much better position to have a foundation that can adapt quickly to changing market dynamics, rather than being locked into a specific set of functions. This places the power back in the hands of the organization to stay highly competitive rather than lagging behind."

¹ Prasad V, Mailankody S. "Research and Development Spending to Bring a Single Cancer Drug to Market and Revenues After Approval." JAMA Intern Med. 2017;177(11):1569–1575. doi: <https://doi.org/10.1001/jamainternmed.2017.3601>.

² Activities Report of the Generic Drugs Program (FY 2019) – GDUFA II Quarterly Performance. <https://www.fda.gov/industry/activities-report-generic-drugs-program-fy-2019-gdufa-ii-quarterly-performance>.



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