



Building a Digital Foundation for Resiliency in Life Sciences

The life sciences industry, especially pharmaceutical manufacturing, faces massive pressure to increase production despite a number of ongoing challenges. Companies are having to adapt to supply chain issues and worker shortages while also being asked to ramp domestic production and reduce reliance on foreign ingredients.

Challenges for Life Sciences Organizations

Supply Chain Disruptions 74%

of active pharmaceutical ingredients produced outside of the U.S.¹

Worker Shortages 52%

of life sciences leaders said talent scarcity has the biggest impact on their business.²

Re-shoring Production 15-25%

of pharmaceutical producers are expected to move outsourced production back to North America and Europe.³

Increase Agility with Digitization

Whether you're looking to adopt Pharma 4.0 initiatives, become more resilient, or improve quality, digitization can help your business move forward by:

Improving manufacturing efficiency and output

Retaining and engaging employees

Building flexibility to adapt quickly to supply chain issues

Increasing factory uptime and availability

With VMware, you can get the solutions you need to safely accelerate digital transformation for any cloud, any app, and any device.



Centralize Data
with VMware Cloud Foundation

Migrate your data and applications to a secure cloud to eliminate the data silos and manual processes that create inefficiencies. Use AI to make faster, data-driven decisions and respond to changes quickly.



Modernize Applications
with VMware Tanzu

Build easy-to-use applications to reduce error-prone manual processes. Automate repetitive tasks and boost employee engagement to reduce turnover.



Automate Devices
with VMware Tanzu and Edge Compute

Stack Edge Compute networks to scale and automate IoT and OT devices. Increase production and keep equipment up and running with predictive maintenance.

To learn more, visit [vmware.com](https://www.vmware.com).

Sources:

1. U.S. Food and Drug Administration, "[COVID-19 and Beyond: Oversight of the FDA's Foreign Drug Manufacturing Inspection Process](#)," June 2020
2. PharmExec, "[More Jobs and Less Talent Has Created an Imbalance in Pharma](#)," September 2021
3. Forbes, "[What Can We Learn From The Pharma Manufacturers Leaving China?](#)," October 2021