Connecting Pharma
How today’s pharmaceutical and life science organizations are using technology to improve operations and pioneer life-changing innovations
Digital technology is helping transform the pharma industry

New technology aids the Pharma industry in discovering more effective treatments, conducting more accurate medical trials, and improving manufacturing and distribution techniques. From communication and collaboration tools to Internet of Things and data security solutions, emerging technologies help contribute to more positive outcomes.

This e-Book looks at the challenges and trends in the industry and outlines how AT&T Business can help you digitally transform to overcome obstacles.

Research and development

Plant and distribution

Marketing and sales

COVID-19 vaccine
Pharma industry challenges

- Target identification: Declining R&D returns
- Lead gen and optimization: Delays in clinical trial recruitment
- Pre-clinical & clinical trials: Increasing regulatory hurdles
- Drug approval: Product tracking & authentication
- Manufacturing: Drug counterfeiting
- Supply chain & distribution: Pricing, reimbursement, market access
- Marketing & sales: Patent expiry for biologics & small molecules
- Care: Rising healthcare costs

Source: GlobalData Pharma - Disrupt or Be Disrupted Report - May 2020
Pharma industry trends

**Big Data and Artificial Intelligence (AI)**
- 65% of industry leaders believe Big Data and AI will have the biggest technological impact in 2020.

**Cybersecurity**
- 510 Number of major cybersecurity breaches in the healthcare industry in 2019.

**Cloud**
- 83% of Pharma using cloud technology today. A strong cloud infrastructure offers the opportunity to improve the integrity of data.

**5G, IoT, Collaboration**
- 55% of physicians who expect greater use of remote clinical tools such as wearables, smart sensors and devices post COVID-19.

**Blockchain**
- 71% of Pharma leaders say they are investing in Blockchain as an emerging technology for supply chain automation.

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2. HIPAA Journal
3. i2e Consulting
4. McKinsey

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AT&T Business can help

From networking, connectivity and IoT, to voice & collaboration, mobility, cybersecurity, and remote patient monitoring, AT&T Business supports pharmaceutical and life science organizations with technology designed to improve efficiencies and spur innovation.

4 ways AT&T Business can help your organization improve operations and drive innovation:

- Connecting research and development
- Connecting manufacturing and distribution
- Connecting marketing and sales
- Connecting the COVID-19 vaccine supply chain
1. Connecting research and development

How innovation is transforming research and development

Today’s connected Pharma organizations are taking advantage of digital and network transformation to speed up development of new treatments.

How connectivity fits in

A highly secure ecosystem supports efficient processes—from discovery and virtual clinical trials to the patient experience—with near-real-time insights for R&D opportunities.

How AT&T Business can help

Technology to collect and analyze patient data in near-real time and manage clinical trials—all in a highly secure network environment.
AT&T Business: Connecting research and development

**AT&T NetBond® for Cloud**
Never leave your private network when connecting to cloud-based research data and applications

**Fixed 5G, Mobility, Voice and Collaboration, Webex, IP Flex**
Conduct virtual clinical trials; collaborate internally and externally with research staff, clinicians, patients, and others

**AT&T SD-WAN, Ethernet, AT&T FlexWare℠**
Zero-touch provisioning helps accelerate connecting and managing global operations

**AT&T Virtual Care Solutions, WarnerMedia, and AT&T 5G**
Clinicians need solutions to monitor data on remote-trial patients; use WarnerMedia content to ease discomfort

**AT&T Digital Signage Solutions and AT&T Content Delivery Network**
Use digital signage to bring data to life, helping to keep employees informed and engaged

**Cybersecurity consulting and AT&T Managed Threat Detection and Response**
Defend intellectual property as your ecosystem grows larger and more complex

**AT&T IoT Video Intelligence and AT&T 5G**
Improve facility safety without a massive sensor buildout
2. Connecting manufacturing and distribution

How innovation is transforming manufacturing and distribution

Digital technology and IoT are enabling plants to monitor conditions in near-real time, reduce downtime, alleviate costs, and increase efficiencies for the factory floor and distribution process.

How connectivity fits in

The right connectivity can give you greater insight into delivery statuses, improve plant efficiencies, spot maintenance issues before they hamper production, and help maintain environmental conditions for sensitive materials.

How AT&T Business can help

Our connectivity capabilities—including FirstNet, 5G/LTE-M, Wi-Fi®, In-building solutions—along with Video Intelligence, provide the robust platform needed for digital transformation in Pharma manufacturing.
AT&T Business: Connecting manufacturing and distribution

AT&T Asset Management – Operations Center (AMOC)
Help increase customer satisfaction by providing near-real-time visibility into delivery status of purchases

Fleet Management, Asset management, LTE-M
Monitor material and product conditions using IoT devices for cold chain temperature control and counterfeit prevention

Dedicated cellular, AT&T Multi-Access Edge Computing (MEC), AT&T IoT Video Intelligence
Deliver low latency, highly reliable network performance, and increased privacy and security for asset tracking, robotics, and monitoring mission-critical conditions on the factory floor

AT&T FlexWare, Ethernet, Cybersecurity consulting
Maximize bandwidth for IoT devices while maintaining security and reliability

AMOC, Asset management
Help reduce plant costs and enhance product quality with predictive maintenance

IoT services, Mobility
Improve field efficiency with mobile devices and business applications designed to meet staff needs
3. Connecting marketing and sales

How innovation is transforming marketing and sales

Digital technology is equipping Pharma’s marketing and sales with the tools needed to win in the marketplace.

How connectivity fits in

Upgrade inefficient legacy systems to better manage your network. Cost-effectively expand your reach to non-traditional sites. Seamlessly integrate targeted marketing with front, middle, and back-office insights.

How AT&T Business can help

Connect employees with clinicians and integrate resources with cloud-based applications, AR and VR data visualization, Voice and Collaboration solutions, and remote-access resources to provide greater flexibility and information access.
**AT&T Business: Connecting marketing and sales**

**AT&T Business Wi-Fi, Mobility, 5G AR/VR kits**
Equip field sellers when connecting to cloud-based data and applications to share with clinicians offsite.

**AT&T Business Wi-Fi, Mobility, 5G AR/VR kits**
Macro insights on patient/clinician data enables effective results with analytics-based marketing and sales.

**AT&T FlexWare, Ethernet**
Access and manage network applications more efficiently as you connect previously siloed environments and better manage network applications.

**Voice and Collaboration**
Provide employees the ability to easily engage with clinicians in other locations; enhance the customer experience by reducing the amount of time it takes to respond to customer queries.

**Webex, AT&T Content Delivery Network**
Enable remote employee access over high bandwidth; make it easier for those in the field to get the training they need in a timely manner to keep up with compliance requirements.
4. Connecting the COVID-19 vaccine supply chain

How innovation is transforming the vaccination process

Greater oversight of vaccine production and supply chain metrics can help ensure vaccines safely reach the intended patient population.

How connectivity fits in

Remote monitoring resources can observe patient vital signs and provide data insights from a larger virtual trial participant pool. Location tracking helps keep tabs on vaccinations in transit to distributors & patients.

How AT&T Business can help

Increased monitoring of every stage of production and transportation, from location tracking to temperature & cold storage monitoring for continuous visibility on environmental status of the vaccine.
AT&T Business: Connecting the COVID-19 vaccine supply chain

**Vaccine location tracking**
Tracking solutions allow you to identify the location of the vaccine, at rest or in transit, from production to patient.

**Vaccine temperature monitoring**
IoT solutions assist with ensuring the required temperature of the vaccine is maintained throughout the vaccine's transit.

**Cold storage monitoring**
Maintain virtually continuous visibility by monitoring the environmental status at distribution points to ensure required temperatures are consistent.

**AT&T Virtual Care Solutions**
Monitor patients and their vitals (i.e., temperature/blood pressure) between and after vaccine doses; connect patients to telehealth care, if needed.

**Contact Center Solutions**
Communication platform to provide patient reminders, SMS notices, voice calls, and interactive voice response (IVR) services to manage call volumes; a full spectrum of metrics and analytics.

**Temperature-screening kiosk**
Control access to facilities based on user-defined requirements around temperature screening and questionnaire responses.
AT&T 5G and pharma

5G networks will cover 40% of the world by 2024.* AT&T Business provides 5G connectivity to promote pharmaceutical science research, manufacturing, and supply chain logistics.

AT&T Business 5G use cases include:

- **All departments:** Fixed 5G for virtual connectivity with remote workforce, and transmission of large files and data.

- **IT:** Backup failover to keep critical applications operating and reduce costly downtime.

- **Manufacturing:** Robotics for filling, packaging, quality control, and autonomous vehicles on factory floor.

- **Supply chain:** Collaboration between business units and separate facilities in dispersed supply chains, and asset tracking for cold chain inventory control and counterfeit drug prevention.

- **R&D:** Enable Artificial Intelligence for faster, more accurate research and development, and remote-patient monitoring of virtual clinical patients.

- **R&D, Sales, and HR:** Artificial Intelligence and Virtual Reality for clinical patient comfort, data visualization, and employee and customer training.

*Source: “Five 5G Statistics You Need to Know,” VXCHNGE, April 10, 2020

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## Why AT&T Business

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<td>Data traverses the AT&amp;T network daily, equivalent to streaming 80+ HD movies</td>
<td>People covered by 4GLTE in North America</td>
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<td>Security Operation Centers monitored 24/7/365</td>
<td>Investment to deliver FirstNet</td>
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<td>Vulnerability probes daily</td>
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<td>Public safety agencies across the U.S. using FirstNet services</td>
<td>Nobel Prizes</td>
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### AT&T Business accolades from Frost & Sullivan:

- Company of the Year Award – Global Cellular Internet of Things (IoT) Industry Excellence in Best Practices – November 2020
- 2020 North American Digital Health Company of the Year

*Source: 1Q20 AT&T Superlatives

Source: Frost & Sullivan
Let’s take care of business℠

Technology is complex and changes quickly. It can be difficult to know if you’re making the right communication and connectivity choices. If you want helpful guidance and advice that’s fit to your business, we’re here for you.

Discover
Review AT&T Healthcare solutions online.

Engage
Contact AT&T today to get started.

Call AT&T: 844.972.3578