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Leveraging Collaboration Platforms in Pharma/Biotech

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The Expanding Network in Pharma/Biotech— Drivers of Change from Research Through Commercialization

Cloud-based collaboration platforms that facilitate effective information sharing across the value chain have become central to maintaining communication throughout the healthcare ecosystem. Not long ago, even internal collaboration was a challenge within large pharmaceutical (pharma) companies. However, the end of the blockbuster era reduced returns on investment (ROI) in the pharma sector,¹ compelling stakeholder collaboration to improve pipelines, accelerate product development, and leverage partners' varied scientific and technological strengths.

Twenty-first-century pharma/biotech organizations need to share and collaborate both internally and with partnering organizations regarding the large influx of scientific and operational data in the industry. Many larger pharma organizations are working to break down internal silos, especially in research and development (R&D), medical affairs, regulatory and compliance, commercial teams, and patient advocacy.



¹ Schuhmacher, Alexander et al. "Changing R&D models in research-based pharmaceutical companies." Journal of translational medicine vol. 14,1 105. 27 Apr. 2016, doi:10.1186/s12967-016-0838-4

All of the largest pharma/biotech companies have global operations, and even smaller pharma/ biotech organizations commonly collaborate across borders. While the top 10 pharma companies are all based in the United States or major European markets, the fastest-growing exporters of pharma products in 2020 were Slovenia, Ireland, and India.² Globally, cross-border collaborations are increasing across countries in Europe and Asia—skyrocketing in recent years. In 2020, multinational groups, such as Roche, Bayer, and other pharma/biotech companies, forged a record-breaking 271 cross-border licensing partnerships.³ With multinational operations as the norm at every stage—from drug development to manufacturing and sales—it becomes essential to leverage sophisticated communication and collaboration solutions.

In organizations with long product development cycles and activities spread across many divisions and geographies, communications are crucial to maintaining efficient progress in drug development, clinical trials, manufacturing, and sales initiatives. While the cost estimates of delays vary greatly—from \$600,000 to \$13 million per day in lost sales from delays prior to commercialization—the process efficiency of collaborative teams spread across countries and organizations is crucial for success in the pharma/biotech industry.

Leveraging communication and collaboration technologies is central to improving efficiency and processes. McKinsey Global Institute found that implementing these tools while adapting corporate culture into "networked enterprises" can result in productivity gains of 20% to 25%.⁴

Consequently, pharma/biotech organizations are increasingly deploying desktop collaboration tools. As with other industries, utilization of video conferencing solutions has accelerated during the COVID-19 pandemic. In a recent Frost & Sullivan survey, 63% of healthcare industry IT and business leaders reported that their organizations had already deployed desktop video conferencing solutions to both in-office and remote employees, while only 11% of the industry reported no plans to deploy these solutions.

Although many organizations used virtual meeting tools for business continuity during the pandemic, they quickly realized the productivity benefits from these collaboration tools. Pharma/biotech organizations are currently exploring new applications of this technology, seeking to increase their competitive advantage and accelerate the time to market (TTM) in drug development and manufacturing processes.

² Pistilli, Melissa. "Pharmaceutical Industry Overview: Top Regions." Pharmaceutical Investing News. 29 September 2021. <u>https://investingnews.com/daily/life-science-investing/pharmaceutical-investing/top-pharmaceutical-regions/</u>. Accessed 16 November 2021.

³ Ruehl, Mercedes et. al. "Pharma groups spend billions to tap into booming China healthcare" Financial Times. https://www.ft.com/content/c2bec4c8-3345-4792-a915-9e906f6d4d64

^{4 &}quot;The social economy: Unlocking value and productivity through social technologies." McKinsey Global Institute. July 2012.

With more complex therapeutics emerging, such as next-generation cell and gene therapies, the number of partnerships between pharma/biotech organizations and contract development and manufacturing organizations (CDMOs) has increased.

The pandemic drove this much-needed collaboration and helped organizations overcome virtual care and telehealth adoption issues. The race to develop and produce vaccines and therapeutics to combat Sars-COV-2 illustrates pharma/biotech organizations' willingness to accept and benefit from the strength of partnerships. For example, in the development of the Pfizer-BioNTech vaccine, BioNTech led R&D efforts, Pfizer contributed deep clinical trial capabilities, and Sanofi increased manufacturing capacity to supply the European market. These partners had to accelerate communications, information sharing, and strategic planning in a tightly compressed timeline across various channels, interacting at unprecedented levels in the life sciences sector. The COVID-19 pandemic has boosted virtual collaboration platform adoption as an integral part of standard operating procedures. With this experience, the bar has been raised for accelerating processes and leveraging cross-border collaboration between multiple organizations.

66 In response to the COVID-19 pandemic, biotech and pharma organizations had to work together to fast-track vaccine development. This level of collaboration to drive innovation has become expected and helps biotech/pharma companies showcase their agility through adoption of key virtual tools. 99

—Amelia Eudailey, Healthcare Industry Manager at Zoom

Exponential data growth generates a need to extract insights that allow quick and far-reaching dissemination. Organization-wide digital transformation will drive and maintain creative collaboration both internally and externally with market participants. Successful collaboration relies on intuitive platforms that meet diverse organizational needs, such as those of big pharma, smaller start-ups, and research and academic institutions. Collaboration across organizations begins at the R&D phase and extends throughout the entire development and commercialization process. Post-commercialization, the resultant collaborative networks then extend to other key stakeholders, including physicians and patients.

Collaboration Use Cases Throughout the Product Development Life Cycle

Collaboration across a pharma/biotech organization is necessary throughout the therapeutic development pipeline, from drug discovery to commercialization. The average cost of developing a new drug to commercialization is \$2 to \$3 billion and takes 7 to 12 years to reach regulatory approval.⁵ Digital collaboration and virtual meetings streamline communication and provide the ability to support the various counterparts involved in the process. With smaller end markets for each new drug approved and rising development costs, ROI is dropping for pharma R&D. As a result, speed and efficiency in drug development are required elements for success.



⁵ Gooneratne, Nalaka (2019) "Overview of Drug Development," Academic Entrepreneurship for Medical and Health Scientists: Vol. 1: Iss. 3, Article 16.

The everyday workings of any company involve everything from internal meetings, calls, and messaging to internal and external stakeholders, business development outreach, and sharing of files. In the 21st century, these multimodal forms of communication increasingly occur across consolidated communication platforms that support voice, video, file sharing, asynchronous messaging, and various other functionalities that enrich the collaboration experience.

Pharma/biotech companies must continually focus on reducing time to market while accelerating time to vital decision thresholds. Throughout the product life cycle, interdepartmental collaboration helps dismantle silos, thereby improving results. Connecting with pivotal players at each stage, regardless of geographic location, is essential to ensuring steady production and addressing complications swiftly. Collaboration platforms provide virtual and hybrid workspaces that improve organizational efficiency, increase flexibility, and reduce unnecessary delays.

CONSTANT COLLABORATION AND COMMUNICATION IS NECESSARY THROUGHOUT THE PRODUCT LIFE CYCLE

Global research facilities, academic institutions, life science incubators, partner pharma/biotech companies, outsourced product development or analytical testing partners, labs Remote trial sites, contract research organizations, clinical trial service companies, individual patients, data management/ analytics partners Global manufacturing facilities, API manufacturers, contract manufacturing organizations, packaging partners, supply chain/logistics partners Individual clinicians, webinars with clinician groups, internal sales, contract sales organizations, marketing, post-marketing surveillance, regulators





Ongoing Regulatory Filing and Monitoring

Various pharma/biotech company sites/leaders, regulators, consultants, manufacturing sites/partners



Global research facilities, academic institutions, life science incubators, partner pharma/biotech companies, outsourced product development or analytical testing partners, labs

Research & Development

R&D can benefit from cross-functional collaboration and accelerated product development with faster input turnaround times from relevant academic institutions, incubators, and contract research organizations (CROs). For instance, a scientist in the United States can be virtually present in a lab in Japan to quickly resolve any issues or concerns as they arise. Additionally, reliable high-definition (HD) video and audio capabilities allow for multisite research meetings.

Coming out of their experience during the pandemic, the biggest pharma/biotech companies in the world are looking for different ways of doing things, beyond traditional models. The decentralization of pharma/biotech requires new approaches. For example, you may not have to live in the same city as a large drug company to work for it. Now organizations can bring together global participants to collaborate in a drug's development. ΩΩ

-Ron Emerson, Global Healthcare Lead at Zoom Video Communications

The geographic diversification of high-level expertise is a significant challenge in guiding drug candidates through the R&D cycle in systems where partners collaborate at different stages. Therefore, delivery of a consistent video experience is crucial to a collaboration platform, even when participants have lower-bandwidth internet connectivity. This functionality facilitates connecting and sharing information with partners, stakeholders, and key opinion leaders across the globe, no matter their location or work environment. Ideally, the collaboration platform ensures stakeholders can share relevant files to stay informed and updated.

Clinical Trials

Remote trial sites, contract research organizations, clinical trial service companies, individual patients, data management/analytics partners

Clinical Trials

An increasing number of clinical trials include remote and decentralized approaches that leverage the capabilities of digital collaboration platforms. By enabling multiple forms of communication and clarification via video, text, and document exchange, as well as onboarding and training support, digital collaboration platforms enable better communication between the principal investigator and the clinical research site coordinator, which is integral to monitoring progress and training trial site staff on trial protocols, especially in multisite, global clinical studies.

Additionally, regularly updated drug accountability and drug administration logs are necessary to support patient safety and track sufficient stocking of off-site centers. Using a cloud-based collaboration platform, these records can be maintained and updated digitally by sharing files updated in real time. Furthermore, cloud-based phone systems can support consistent and transparent communication over vast geographies, whereas video capabilities enable on-site new employee training, replacing physical site check-ins. Last, electronic review and digital signature capabilities enable timely regulatory compliance.

56 With video collaboration tools, you can perform tailored, specific training on how to administer drugs or identify symptoms of disease patients. \Im

—Amelia Eudailey, Healthcare Industry Manager at Zoom

Remote clinical trial access has enabled the expansion of clinical trial patient pools. Also, remote patient access has simplified and accelerated participant recruitment and enrollment by eliminating the inconvenience of traveling, shortening the time to bring a product to market. For the clinicians' part, they can interact with patients via video consultations to ensure proper medication adherence, address concerns, and improve retention throughout the trial while adhering to tight protocols.



Global manufacturing facilities, API manufacturers, contract manufacturing organizations, packaging partners, supply chain/logistics partners

Drug Manufacturing

Manufacturing processes involve physical facilities and warehouses, which require close monitoring and inspection for regulatory approval. Regular follow-up interactions between pharma/biotech companies and their partner CDMOs, regulators, and others are an integral component of the manufacturing process. Manufacturing sites are typically scattered globally. Video conferencing technology and hardware, such as virtual reality goggles, can streamline the process of remotely training staff or fixing production floor issues in real time. Different team members can execute virtual tours, inspections, and other interactions.

Advanced techniques for developing new therapeutics in cell and gene therapy are highly complex, requiring increased interaction and collaboration with manufacturing partners. Pharma/biotech organizations are relying more often on contract manufacturing partners for these products. Increased collaboration and interaction will be necessary to build and scale stable platforms for these next-generation therapeutics.

56 There has been significant interest in utilizing virtual meetings on the manufacturing side of pharma/biotech. They are looking at how they can reduce downtime by using video meetings to quickly help address problems on the plant floor and keep lines running.

-Ron Emerson, Global Healthcare Lead at Zoom

Organizations can use prerecorded or live video webinars to train manufacturing personnel, while virtual services and support teams can troubleshoot manufacturing facility issues and improve process efficiency. Virtual remote services and maintenance setups can ensure operations remain uninterrupted, reducing downtime and improving productivity.



Individual clinicians, clinician groups, internal sales, contract sales organizations, marketing, post-marketing surveillance, regulators

Commercialization

The rigorous training of sales representatives enables the commercialization and sale of pharma/biotech products.

However, clinicians are increasingly denying sales representatives on-site visitation, and some markets have regulatory limitations for sales and marketing practices that were once standard. In response, pharma sales have shifted to include more digital marketing—which aligns well with collaboration platforms—adding value through knowledge sharing. Content can be shared via collaboration platforms and consumed by clinicians when they have time. Follow ups can be via video or through message exchange, enabling sales representatives to address client specific requests for more information, delivering more value to clinicians based on their specific needs. Pharma/biotech representatives that conduct virtual or video sales calls with individuals or groups of clinicians effectively demonstrate innovative products and deliver a value proposition.

So Pharma reps are doing virtual visits with physicians to increase efficiency: sharing information, sending the medications to their offices, having the doctor sign disclosures, going through all the things that they would normally do in person. Video visits allow providers to accept virtual visits versus in person visits at a higher rate and are offering having more meaningful interactions.

-Ron Emerson, Global Healthcare Lead at Zoom

Collaboration platforms also enable the value-added information delivery that clinicians seek (especially in developing markets) in lieu of participation in large clinical conferences. Educational webinars for clinicians provide detailed information on diagnostic tools, therapeutic areas, and treatments to promote interaction between clinicians and the product's subject-matter experts.

Collaboration facilitates stakeholder interaction to support new solutions paired with therapeutics, such as companion diagnostics, digital therapeutics, and coaching and wellness support. These interactions can bring together physicians, pharmacists, and community organizations to produce synergistic ideas that advocate patient-centered care.

This increased communication and interaction extends to the connected patient who can receive education and counseling regarding their disease, medication administration, and treatment plans to enhance medication compliance. Pharma/biotech companies are increasingly providing online digital tools that help enhance adherence, foster personalized approaches, and improve patient satisfaction, which increases the likelihood of participation in research and real-world data sharing.



Ongoing Regulatory Filing and Monitoring Various pharma/biotech company sites/leaders, regulators,

consultants, manufacturing sites/partners

Regulatory Filing Processes

The regulatory submission process requires the close monitoring of important documentation and necessary applications to track their progress. This process requires many meetings internally, with external consultants, and with regulatory officials. Regulatory interactions will likely be increasingly digital and collaborative, with post-market trials and real-world evidence requirements continuing the data exchange after commercializing a product.

The need for information exchange and discussion of the status of regulatory filings, additional information requirements, etc., make this stage of the drug approval cycle an exercise in efficient and timely communication. Video interactions are ideal for conducting as-needed substantive meetings to overcome hurdles and address requests for clarification or additional information. File-sharing capabilities prevent avoidable delays by streamlining information sharing and expediting communication among pharma/biotech staff, consultants, regulators, and other concerned parties.



Call to Action: Collaboration Tools Needed to Succeed in the Pharma 4.0 Market

Pharma/biotech companies must adopt advanced collaboration tools that enable improved communications and greater productivity to succeed in today's dynamic and highly competitive marketplace. The use of collaboration tools and platforms increases innovation, improves TTM and efficiency, reduces costs, and enriches relationships built through long-term engagement across the value chain. Collaboration-intensive work processes will boost productivity by as much as 30%.⁶

Organizations must consider converged multimodal platforms that support video collaboration, file sharing, and other activities. Organizations that fail to step up and make these tools available to connect their employees, partners, consultants, clinicians, and customers will be at a competitive disadvantage in the race toward increasing productivity, bringing new solutions to market, expanding interactions with clinicians and patients, and, ultimately, improving outcomes.



6 Digital collaboration for manufacturing workforce. McKinsey & Company. <u>https://www.mckinsey.com/</u> business-functions/operations/our-insights/digital-collaboration-for-a-connectedmanufacturing-workforce. Published May 5, 2020.

How digital collaboration helps banks serve customers better. McKinsey & Company. <u>https://www.</u> mckinsey.com/industries/financial-services/our-insights/banking-matters/how-digitalcollaboration-helpsbanks-serve-customers-better. Published May 14, 2020.

"The Social Economy: Unlocking Value and Productivity Through Social Technology". McKinsey & Company. https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/the-socialeconomy. Published July 2012. Cloud solutions provide the flexibility to connect with anyone, anywhere, and at any time. Additionally, everyone involved can have different infrastructure in place to facilitate instant multimodal communications when using a cloud-based collaboration platform.

Video conferencing platforms are essential to many life sciences use cases because of the emergence of more real-world applications across drug development, clinical trial execution, and overall collaboration. These platforms introduce the ability to keep complex multilocation projects moving forward regardless of physical roadblocks. When combined with multichannel communications, such as chat and phone, alongside seamless file sharing and information exchange, the focus shifts to innovation beyond day-to-day operations. With more opportunities for integrating various applications, the possibilities are endless.

When evaluating communication platforms for pharma/biotech industry collaboration, look for the following capabilities:

High-quality voice calling regardless of device used or geographic location
High-quality video conferencing
Screen sharing
Whiteboarding
Whiteboarding
Robust chat functionality
File sharing
Consistent connectivity, even with limited bandwidth
Multilayer security, advanced encryption
Ease of navigation, intuitive to a wide range of users
Ease of access in various workflow environments

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