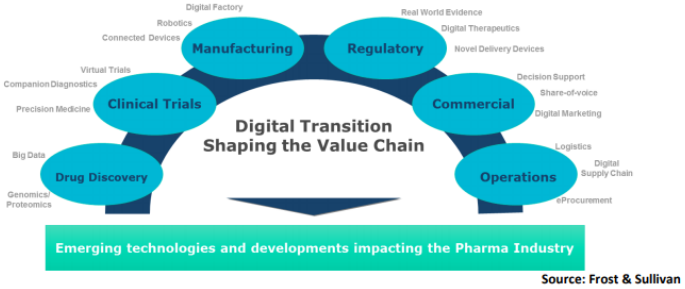
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Digital Transformation in the Pharmaceutical Industry

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The industry needs to weigh the prospects of digital transformation and assimilating the available digital technologies can facilitate a successful transition



Source: Frost & Sullivan

The pharmaceutical industry is under tremendous pressure to reduce the R&D costs, address the unmet needs, conduct the transition from producing medicines to managing outcomes, and serving the emerging markets as well as the growing patient population more effectively. The adoption of digital technologies and business models can assist the industry in addressing these challenges and managing their top-line growth while improving bottom-line efficiency.

Nexus of Transition in the Pharmaceutical Industry

The eruption of digitally enabled diagnosis and treatment, value-based outcomes, increased regulatory collaboration, etc. are all signs of the tremendous changes digital technologies are driving in the pharmaceutical industry. Additionally, the emerging areas such as Precision Medicine, Real World Evidence, Wearables, and Digital Therapeutics are having a direct impact on the value chain. To embrace these opportunities and address the challenges, the industry needs to weigh the prospects of digital transformation and assimilating the available digital technologies can facilitate a successful transition. The early movers, some of the large pharma companies are already focusing on enhancing their internal capabilities, are seeking external collaborations with academia, solution providers, and vendors to realize their goals.

Digital technologies such as Artificial Intelligence (AI), Big Data, Cloud Computing, Industrial Internet of Things (IIoT), Robotics, Blockchain, Cybersecurity, Wearables, etc. will serve as the enablers of the digital transition. The increasing role of data, devices and automation throughput the industry value chain demands timely actions, the winners will be the ones who quickly adapt the emerging technologies and tools and integrate them within the workflow.

Identifying the Opportunities for Digital Transformation and Measuring the Impact

The burgeoning use cases and affirmative business value that is being derived through the implementation of digital technologies and tools provide a good indication of the growing adoption. While other industries such as telecom are far ahead on the digital maturity curve, the pharmaceutical industry still needs to increase its digital intensity and apply a robust transformation framework to improve its competency.

The role of digital technologies can be very subjective to the use case and the end goals could either be validating hypothesis, risk mitigation, improving efficiency, costing saving, or reducing timelines. Each segment of the pharmaceutical drug development value chain might leverage a combination of the enabling technologies as relevant to the use case. It is vital to identify the application areas that are most relevant to the company, build the expertise and collaborations, set attainable

goals, and measure the outcomes and impact.

Emerging Digital Enabled Business Model

The pharmaceutical industry has evolved from a traditional ‘do-it-all’ to a classical vertical model, with selective partnerships and outsourcing on the rise. With digital disruption and blurring lines between organizations, a federated model is set to evolve over the next decade. Developing and managing the transformation implies adopting the right steps throughout the journey, information technology (IT) function and services will assume a greater role within the complete framework, beyond the traditional silos. Other initiatives to be considered include developing Center of Excellence (CoE) enabling digital partnerships across departments and functions, with a common supporting infrastructure and managing Network of Excellence (NoE) with external partners and providers around focused objectives. The federated innovation model can enable companies to reduce control of their capital outlay, efficiently utilize their resources, and become more flexible to expand into new products or service areas without considerable risk.

Successful digital transformation also encompasses certain imperatives to be a part of the robust vision; these include developing the culture and mindset, updating the organizational structure, governance to meet the objectives, attracting and developing talent, and maintaining a growth perspective.

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