Accelerating the Shift to Digital in Life Sciences

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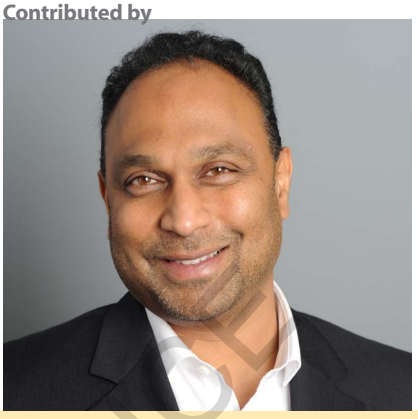

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An unprecedented wave of value is about to explode for pharmaceuticals companies and medical device makers that embrace digital approaches to doing business. Digital mastery will result in renewed opportunities for life sciences companies to forge deeper connections in the currently fragmented industry, collaborate more fully with value chain participants and drive better health outcomes for patients.

Executives hungry for growth see discovery, patient-centricity, and improved health outcomes as paramount to their future, and they know digital — and more specifically, data — is needed to get there. In our recent study, in which we surveyed 2,000 business leaders from around the world, including 154 executives at leading life-science companies, the majority (64%) of life-sciences execs see digital transformation as a priority of the highest importance.

In fact, respondents see digital driving value on both sides of the balance sheet. Life-sciences executives estimate that digital will drive over 8% of revenues by 2018, up from 5.5% today, and will cut costs by nearly 3% (see Figure 1). In our analysis, the impact of digital transformation on not just revenue but also cost savings could add up to $595 billion in value to the global sector by 2018.

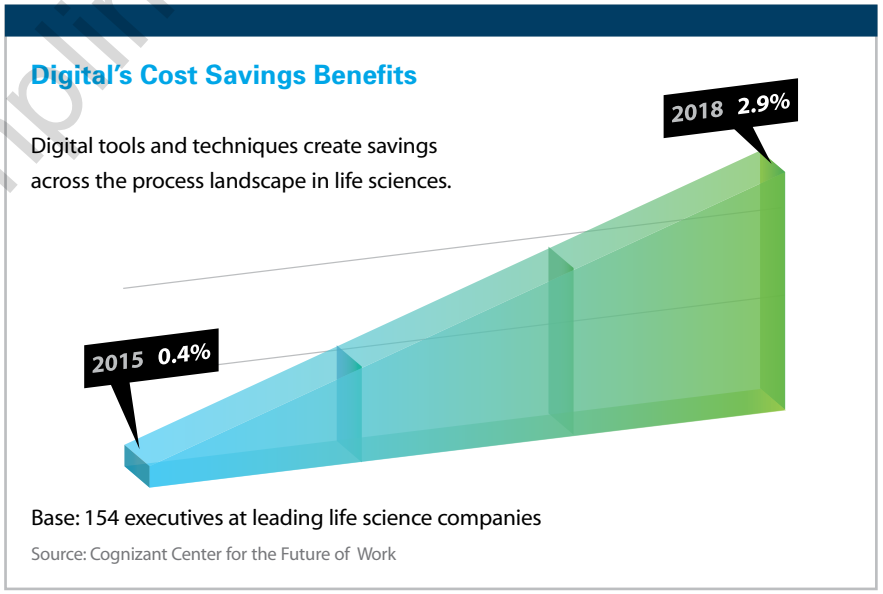
Platforms: The Key to Unlocking New Value

To unlock digital's business value, however, new interplays are needed among the life-sciences ecosystem — sponsors, CROs, investigators, healthcare payers, providers, and patients — to more effectively mine and apply meaning from data flows, and optimize processes long overdue for a digital refresh. Analyzable data, rich with meaning, is driving a connected future for healthcare, and life-sciences companies have an important role to play as orchestrators of value.

We see platforms as playing a key role in forging these new connections. In fact, forward-thinking life-sciences businesses are already beginning to index, experiment, and collaborate with data around a platform. These platforms (i.e., layers of interconnected software) are forming around clinical and R&D processes and stakeholder needs, providing an open data exchange to enhance performance, innovation, and insights to improve health outcomes.

For example, digital platforms can enable collaboration, centralized data access, and standardized processes for clinical trial researchers, investigators, patients, and sponsors. Digital technologies can also ensure better adherence to treatment protocols among study subjects, as well as improved data quality. For example, monitoring — the single largest cost item in a clinical trial — can be greatly streamlined with a digital platform by centralizing high-quality data about operations, patients, safety, and clinical research. This can enable companies to make the right decisions, whether for first-case monitoring or remote monitoring.

Sensors, smart processes and smart drugs will impact how life-sciences companies collaborate to create value. Clinicians and data scientists, using digital tools and approaches, can already orchestrate tasks, merging and analyzing data sets from drug trials and direct observations from other physicians, electronic medical records, online patient networks, or genomics research. New, simpler data visualization tools will help ensure that doctors and scientists can visualize data without technical assistance and interpret what they see on their screens.



A Platform for Clinical Trial Investigators

With life-sciences companies under continual pressure to reduce clinical trial costs, speed time-to-market, reduce risk, and ensure quality, we've developed two platforms to help pharmaceuticals businesses and medical device makers work more effectively and efficiently.

In partnership with TransCelerate BioPharma, Inc., we've built the Shared Investigator Platform (SIP). Owned, hosted, and supported by Cognizant, SIP provides a common workspace to simplify the clinical trial process, enable sponsors to collaborate more effectively with sites, and share data and clinical trial information between a sponsor and its clinical sites.

The goal of SIP is to provide a faster, more cost-effective approach to managing clinical trials. It does this in two ways. First, it helps to streamline the administrative work involved with starting up and managing clinical trials, which represent 30% of the activities required for any given study. Second, it's designed to enable more dynamic relationships among sponsor companies, investigators, and ultimately with regulators. By enabling a true working partnership among clinical trial participants and aligning them around a common goal, the platform fosters a community for support and mentoring, and promotes frequent and just-in-time communication for investigative sites and their staff.

SIP will continually evolve as technology advances to support the best

practices for streamlining clinical trials. The shared vision: By optimizing clinical trials, the industry can meet the demand for less expensive, more effective therapies, in a timely manner.

Optimizing Clinical Trial Performance

To optimize clinical trial performance, we've developed Cognizant SmartTrials, our risk-based clinical performance management solution, which includes both a data platform and an analytics platform.

The data platform continuously acquires data in real time from a variety of source systems (electronic data capture, clinical trial management systems, interactive voice response systems, labs, etc.), and allows stakeholders (IT, clinical data management, statistical programming) to administer security, apply data blinding rules, convert data into a standardized format (CDISC SDTM) and make data available for consumption by the analytics platform.

Using the analytics platform, stakeholders (CROs, sponsors, investigators, and patients) are armed with the most up-to-date insights, assembled in an intuitive, end-user friendly presentation format that ensures they see the critical elements within the realm of their responsibility.

With these insights, organizations can be alerted to critical risks and issues that arise during a study, guided by predefined threshold boundaries. Sources of risk can stem from the supply chain, enrollment, personnel, safety, etc.

Beyond identifying risks, the platform also suggests actions to be taken, documents the results of the action, captures details on timeliness and who was involved, and ensures that all activities are fully auditable and traceable. In this way, stakeholders develop a culture of continuous learning, and organizations can apply the new insights to other studies.

In addition to minimizing risk, SmartTrials also enables organizations to improve trial effectiveness, conduct cross-trial analysis and ongoing safety reviews, and make adaptive design modifications without undermining study validity.

Using the clinical data repository, life-sciences businesses can also improve their patient recruitment techniques, monitor patient populations for capacity and speed of enrollment, ensure availability of equipment and facilities to successfully conduct the trial, and ensure alignment of study procedures with the requisite standard of care.

The Digital Future for Life Sciences

Life-sciences organizations will increasingly turn to digital technologies in order to meet industry goals of delivering promising new therapeutics and personalized medicine, and deliver the higher quality patient experiences and health outcomes required in a value-driven industry.

By effectively harnessing the wealth of data they generate — and collaborating with ecosystem stakeholders — pharma and medical device manufacturers can transform the clinical trials experience, empower patients with data-driven processes and platforms, and achieve operational excellence. PV

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