Gartner Research

Life Science Manufacturer CIO Top Actions for 2022

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Life science organizations are embracing digitalization to accelerate medical innovation and achieve added value from technology. CIOs can use this research to prioritize digital initiatives that improve operational efficiency, unlock value and deliver personalized experiences in 2022.

Quick Answer

What top-priority actions should life science organizations CIOs take in 2022?

- Lead differently by introducing the composable organization vision to your executive peers, and by connecting business priorities with the need for more organizational agility and adaptability to thrive amid market changes.

- Progress the organization toward unlocking real-world data (RWD) and real-world evidence (RWE) insights. Do so by implementing the next generation of composable technology and analytics platforms that will house RWD, provide RWD analytics and ultimately put new RWE conclusions within reach.

- Build a total experience (TX) strategy that integrates patient, provider and employee experience initiatives across the organization by engaging a diverse set of stakeholders in formulating the TX vision. This includes empowering customers and employees by using TX technologies to enable seamless end-to-end interactions.

More Detail

This research is part of a series describing the top actions for healthcare and life science CIOs to take in 2022.
Focus 2022 IT Efforts on Purposeful Transformation

As 2022 unfolds, life science (LS) leaders continue to face evolving challenges brought about by the COVID-19 pandemic, including a sudden shift to digital and virtual capabilities to maintain operations. The industry’s accelerated digital trajectory has brought about a new imperative — to drive business improvement through digital innovation and make it stick. Extend digital transformation in a proactive and purposeful way by putting the following three actions at the top of your list of must-accomplish IT actions this year.

Prioritize Business Agility and Adaptability to Thrive Amid Disruption

Composable business is a framework for maximizing your organization’s ability to build, assemble and reassemble business elements so you can rapidly seize market opportunities and respond to disruption and threats while maintaining resilience and business agility. It helps you identify and implement the changes required to make the most of what digital acceleration brings, and it acts as a guide to achieving these changes through technology investments and business initiatives. CIOs that adopt composable business architecture and emphasize modularity will be able to deliver resilient business operations and accelerate business value from digitalization.

You can advance composability by:

- Adopting a “digital-first” approach by developing a digital research strategy and by deploying a reference architecture that enables the use of data across a fabric and exposed through research-oriented user experience (UX) (see Innovation Insight for Digital Life Science Platforms).

- Prioritizing clinical solutions that include interoperability as a core feature, including APIs that facilitate transfer of content and data between clinical sites, sponsors, clinical research organizations, and other ecosystem participants (see Industry Vision: Life Science CIOs Must Transform Clinical Development With Digital Trials).

- Challenging your organization’s disconnected healthcare provider (HCP) engagement strategies, and determining your future vision by collaborating with executive peers to identify and prioritize the most important capabilities for cross-channel journey orchestration (see Life Science CIOs: Shape Your HCP Engagement Strategy Using Composable Business Architecture).
Unlock Health Value Using Real-World Data and Real-World Evidence

Usage of RWD and the RWE insights generated from it continue to expand, generating value at every stage of the drug development and commercialization pipeline. In past years, LS organizations utilized RWD and RWE primarily for commercial purposes, including use cases such as patient identification, health journey mapping and demonstrating value to gain market access. More recently, RWD has shown increasing promise in new use cases, prompting life science organizations (LSOs) to increase investments.

Examples of RWD usage include supporting market authorization, providing real-world perspectives on patients with comorbidities who may have been excluded from a clinical trial, and biomarker identification and value-based contracting. Furthermore, RWD generation is primarily important as precision medicine (rare-disease and specialty drugs) becomes increasingly relevant to LSOs.

Move the organization progressively toward RWD insights by developing a comprehensive RWD strategy that supports data acquisition and analytics that ultimately put new RWD conclusions within reach (Life Science CIOs Must Deliver High-Value Analytics Solutions Using Real-World Data).

Deliver Seamless Customer and Employee Experiences Through a Total Experience Strategy

Omnichannel engagement has long been a focus of customer experience strategy for LS organizations, but it doesn't go far enough. Multiexperience (MX) engagement personalizes interactions spanning digital touchpoints and other modalities while ensuring a consistent UX. However, it is siloed to an individual’s experience. TX is a strategy that connects MX with consumer experience (CX), employee experience (EX) and UX disciplines to create superior experiences and deliver business outcomes mutually beneficial to all stakeholders. These stakeholders include patients, providers, partners and LSO employees (see Top Strategic Technology Trends for 2022: Total Experience).

TX is not about making just one experience better. It is about creating a frictionless user experience across multiple platforms, channels and technologies for patients, providers and employees, such as field representatives and site investigators. For example, a TX approach to remote clinical trial subject monitoring involves providing subjects with the right channels to enable seamless collection of relevant clinical data and uncovering timely, relevant, data insights for investigators and trial sponsors.
You can progress a TX approach across your digital initiatives by engaging relevant business stakeholders to develop an organizational TX strategy. Focus on building seamless experiences by cultivating empathy to build stakeholder understanding of the preferences, behaviors, attitudes, wants, and needs of customers and employees, and by leveraging MX to build and deploy improved digital and nondigital products and services.

**Recommended by the Authors**

2022 CIO and Technology Executive Agenda: A Life Science Perspective

Innovation Insight for Digital Life Science Platforms

Infographic: Life Science Postpandemic Digital Innovation Update

Predicts 2022: Connections Drive Healthcare and Life Science Business Model Change

Hype Cycle for Life Science Research and Development, 2021

Hype Cycle for Life Science Commercial Operations, 2021

Hype Cycle for Life Science Manufacturing, Quality and Supply Chain, 2021

Infographic: Artificial Intelligence Use-Case Prism for Life Science Manufacturers

Life Science CIOs: Shape Your HCP Engagement Strategy Using Composable Business Architecture

Life Science CIOs: Map Your Pathway to Digital Trials

Quick Answer: How Do You Know That You’re Building a Truly Digital Life Science Lab of the Future?

**Evidence**

Gartner interacts regularly with life science clients and industry leaders. Their observations, challenges and successes form the primary source data for this research. Additional evidence was obtained from vendors in this space, industry inquiries, previous Gartner research, public sources and direct experience.
Position your IT organization for success. Explore these additional complimentary resources and tools for Healthcare CIOs:

**Resource Center**
Healthcare Digital Transformation
Lead digital transformation initiatives for maximum impact.

**eBook**
3 Must-Haves in Your Cybersecurity Incident Response Plan
Improve your ability to be prepared for a cybersecurity incident.

**Resource Center**
Digitalization Strategy for Business Transformation
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