

IBM Institute for Business Value



Reinventing life sciences

How emerging ecosystems fuel innovation

Overview

Persistent disruptive forces in life sciences now threaten traditional business models over the medium to long term. While high rates of return and strong performance may have masked these forces in the past, today they must be recognized and addressed. Organizations need new ways to continue to thrive despite such hurdles.

But alarmingly, just 25 percent of life sciences executives told us their organizations are effective at innovation – so where is the spark they need? Our recent research led to a target innovation model that can guide organizations to discover operational efficiencies, nurture new growth and get positioned more strategically in the emerging life sciences and healthcare ecosystem.

The global life sciences industry has faced a series of wake-up calls over the past decade. Despite volatility, it has generally continued to deliver successful returns to shareholders. Even so, old and new challenges continue, including untamable cost growth in traditional research and development, slow time-to-market and ever-growing expectations for value and effectiveness from increasingly empowered consumers. The net impact: life sciences companies need to re-evaluate the very nature of their traditional business models, processes and operations.

In fact, the industry is rapidly evolving into a new type of ecosystem that requires levels of inter- and intra-collaboration that organizations have not engaged in before. While there are many potential benefits from participating in the emerging ecosystem, most companies struggle to understand the full impact of these changes and take the necessary steps to benefit fully.

To help organizations navigate the uncertainty, the IBM Institute for Business Value, in collaboration with the University of California, San Diego and Oxford Economics, surveyed 750 executives in seven countries and nine life sciences-related areas. We discovered that while most executives acknowledge the needs and benefits of the changing business environment, many report being dramatically unprepared to prioritize new ways of working that can better leverage the expanding life sciences and healthcare ecosystem.



Our research suggests that adopting a target innovation model can help organizations reap greater benefits through a more deliberate approach to innovation throughout the enterprise. Using this model to encourage and enact innovation can provide cost-sharing opportunities, expanded capabilities through learning and partnerships, extended reach across industries and markets, and shared risk on product development and distribution.

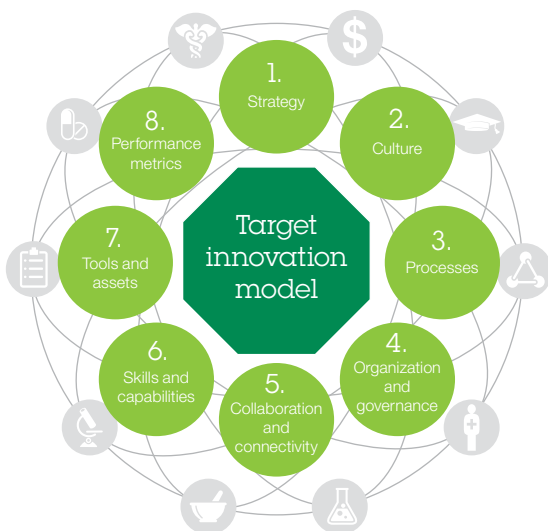
Emerging ecosystems

New technologies are driving radical disruption – value chains are fragmenting, industries are converging and ecosystems are emerging. New entrants from other industries, such as Apple and Google, are blurring the traditional definition of life sciences.

As ecosystems continue to evolve, companies have to decide the level and nature of their participation. Ecosystems can provide numerous opportunities for its participants and our study shows that many life science executives understand this. Life sciences ecosystems possess three major characteristics:

1. *Boundary transcendence*: Ecosystems transcend traditional boundaries – by geography, product/service and industry – helping participants to break down barriers that separate silos.
2. *Openness*: Ecosystems provide a free flow of ideas, knowledge and resources between participants across the system. Open innovation, the integration of knowledge and expertise from multiple sources to aid in developing new technologies, products and processes, is a defining feature of the life science ecosystem.
3. *Collaboration*: The emerging life sciences ecosystem is profoundly collaborative allowing organizations to communicate, act and work in new ways. These fluid, ongoing relationships are built over time through partnering on new drugs and other projects with mutual value.

Figure 1
Target innovation model within the life sciences ecosystem



Taking charge of innovation

So, what can an organization do to gain these benefits? By using the target innovation model to improve how they operate – starting down the path of strategic and systematic innovation. The model consists of eight elements: strategy, culture, processes, organization and governance, collaboration and connectivity, skills and capabilities, tools and assets, and performance metrics (see Figure 1).

Using this model, organizations can take an integrated approach to innovation:

1. *Strategy: Align innovation business plans and policies.* For example, appoint a C-suite level executive to head an innovation board and perform annual reviews of the innovation portfolio to improve alignment between business strategy and innovation activities.
2. *Culture: Create an environment that fosters innovation.* For example, build innovation into day-to-day activities. Encourage employees to “reach outside their four walls” to experience other innovative cultures and bring the best parts back into the organization.

Key contacts

Sandip Patel
Global Industry Leader,
Insurance, Healthcare and
Life Sciences
sandip.patel@us.ibm.com

Lauren O'Donnell
Global General Manager and
Vice President, Life Sciences
lhodonne@us.ibm.com

Timothy Dietlin
Partner, Strategy and
Transformation, Life Sciences
tdietlin@us.ibm.com

Authors

Heather Fraser
HFRASER@uk.ibm.com

Anthony Marshall
Anthony2@us.ibm.com

Teri Melese

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3. *Processes: Create structure around innovation.* For example, provide structure around innovation to direct and facilitate development of ideas without stifling creativity.
4. *Organization and governance: Facilitate and manage innovative projects.* For example, create a dedicated innovation team to manage, guide and support cross-organization innovation.
5. *Collaboration and connectivity: Build new relationships.* For example, get to know how new players in the ecosystem work, initiate innovation advisory groups and confirm that goals of new projects are shared and understood.
6. *Skills and capabilities: Connect the right people with the right skills.* For example, find and nurture individuals with the necessary capabilities to conceive and develop ideas.
7. *Tools and assets: Provide the right material.* For example, develop tools that capture and share data across the entire innovation portfolio and beyond, looking for best practices and common insights.
8. *Performance metrics: Monitor innovation projects.* For example, evaluate innovation across various stages with a shared set of financial and qualitative metrics that is acceptable and achievable by all ecosystem partners.

Life sciences has been one of the most successful industries over a generation. But many incumbent organizations have succeeded so well in the traditional life sciences model that, unless they change, they may either be subsumed by new and more dynamic players, or simply cease to be. In the new ecosystem, organizations need to focus on their strengths and prepare for new and different roles as they aim to reinvent – and even surpass – the industry’s innovation heritage.

How can IBM help?

IBM Life Sciences can help you to innovate and explore new partnerships to become active players in driving a more sustainable health system and providing better accessibility to treatment for the patient. Our solutions enable accelerated product innovation and drive both commercial effectiveness and care management through analytic insights.



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Route 100
Somers, NY 10589
U.S.A.

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