By Rick Krohn

Across big pharma, innovation has become a strategic cornerstone of a command-and-control business model that is under attack. It has largely focused on sustaining that model through innovation in research and discovery, manufacturing and distribution of product. And while pharma innovation must translate into commercially viable products, it must also recognise that the sea change towards affordable, accountable and accessible care demands innovation that is not just sustaining but disruptive.

The molecule-centric model of pharma innovation is out of step with the growing trend toward patient-centric care. It relies on the principle that product – blockbuster or incremental – has and will remain the recipe for continued corporate prosperity. It’s a sustaining strategy, and as illustrated below, sustainable innovation is based on the familiar – the steady state of play. It relies on existing technological competencies and conforms to an existing corporate model. Conversely, disruptive innovation describes a new business model but not necessarily a technological breakthrough. It embraces new ideas and new solutions. More importantly, it frees innovators from the rigid adherence to the 'new pill' framework and objective.

Sustaining vs disruptive Innovation

The new reality for the pharma industry is that breakthrough innovations will not principally occur on the product side but also by reconfiguring business models to address connected care, accountable care, value offerings and the customer experience. Business model innovation is the wellspring of a growth strategy and customer relationship building. It’s a radical change from long held strategy: pharma’s next generation innovation is streamlined towards long-term, replicable customer engagement.

Horizontal business collaboration

The headliners for pharma product-related business innovation have circled several key themes, including horizontal collaboration with CROs and other industry actors; open innovation to share knowledge and data; precision medicine that employs data tools sourced both from within and in partnerships; and personalised medicine that bridges the pharma-provider divide. Collaboration can range from the complementary (big pharma-CRO) to the cross-vertical (pharma-enterprise) and innovative crossover based on domain expertise (technology, supply chain, engagement). Examples include Pfizer/Synexus Health (CRO), Merck & Co./Gilead (enterprise) and Teva/IBM (technology).

Business model innovation and the customer experience

Looking beyond pharma’s business preoccupation with product innovation, the green field for innovation is consumer-facing. It’s about empowering patients and solutions that create customer relationships. Those solutions range from information tools that personalise care, to experience tools that engage and modify patient behaviour. Some examples:

- **Information Tools**
  - Digitised medicines: Smart pills with ingestible sensors, smart patches that track and collect patients’ health data, which can be used to intervene and optimise medicine efficacy.
  - Mobile apps: apps enable pharma companies to assist patients in managing their conditions, in adhering to their medications, and in ‘coaching’ healthy behaviour.
  - Cloud-based solutions: Cloud-based databases enable pharma companies to collect data from multiple stakeholders to build a rich, integrated data repository.
  - Artificial intelligence (AI): AI can help pharma companies to identify patterns in structured data and intuitively manage patient health.
  - Big data analytics: Analytics can help pharma companies use the vast amount of digital data available via non-traditional sources like social media and patient forums to supplement traditional data sources such as physician, enterprise and claims data for detection, prevention and intervention.

- **Integrated Devices**
  - Wearables and the IoT: IoT-enabled Wearable technologies offer a huge opportunity for pharma to gather personalized data and to deliver actionable insights at the point of care. Together wearables and the IoT provide a foundation for ‘everywhere care’ consumer engagement that promotes accountable, preventive care.
  - Quantified self: Body sensors – implantables, invisibles, body area networks and nearables – measure health parameters in a passive, comfortable and cheap way to measure, monitor and share actionable clinical data about drug efficacy and promote care coordination.
  - Virtual medicine: Still in its early stages, virtual reality (VR) offers the prospect of supplementing pharma solutions to PTSD, rehabilitation, pain management and behavioural health. Likewise, augmented reality (AR) is in play as an educational and training tool for both patient and provider.

- **Informational Devices**
  - Digital devices: Information tools that aid healthcare professionals in making decisions.

- **Innovative Solutions**
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For the pharma industry, the choice is simple – be disruptive or be disrupted. The industry must look beyond product R&D as the centrepiece of innovation investment. Inserting business model innovation into the DNA of the industry – no mean feat for big pharma, requires careful planning and a clearly defined strategy. It requires dedicating resources whose purpose is to upshift the time-honoured (and outdated) pharma playbook.

For modern pharma business innovation, the choice is march or die.

Rick Krohn is the president of HealthSense. He is the author of more than 100 articles on a wide range of health technology topics and 2 HIMSS books detailing connected health innovation.