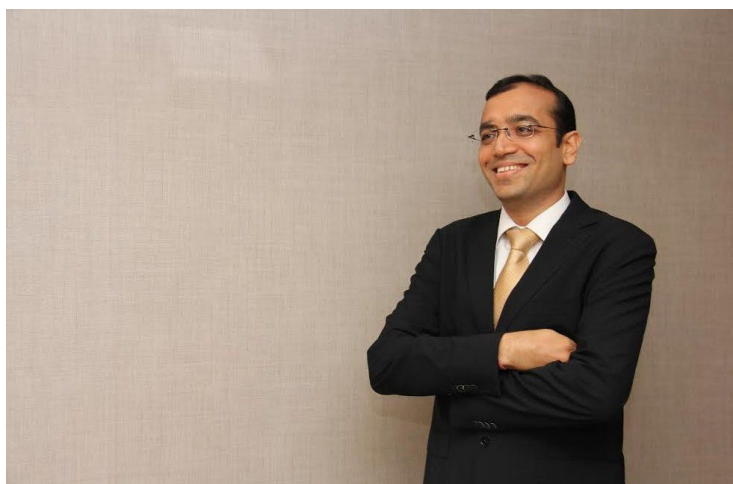


## New Paradigm of PHARMA INDUSTRY

02 June 2017 | Opinion

**Pharmaceutical sector is at a crossroad. In a heavily disrupted marketplace, characterized by shifting payer attitudes and patient empowerment, neither incremental adjustments nor steady evolution are likely to halt the decline of the traditional pharmaceutical business model. KPMG has recently published a report titled 'Pharma outlook 2030: From evolution to revolution' that dwells into the scenario to examine the trends revolutionizing the sector and the trends that are expected to have dramatic impacts. Ajay K Sanganerla, Partner, Life Sciences, KPMG in Singapore, shares his views on the evolving trends in the pharma industry.**



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**With the integration of technology, healthcare ecosystem is under a constant change. How do you see the pharmaceutical industry getting redefined with this trend?**

Catalyzed by an exciting range of new, disruptive technologies, the pharmaceutical industry needs to reimagine its future. By 2030, we envision that practitioners will also be able predict the likelihood of a patient being diagnosed with a disease or health condition, and shift from treatment of symptoms to prevention measures and complete cures, rather than providing temporary respite. In this new world, some conditions may well become a thing of the past. For example, it is now possible to cure hepatitis C, which was previously regarded as incurable and afflicts 180 million people worldwide. This has created a paradigm that has taken healthcare professionals, patients and payers by surprise. The shift is driven by three underlying developments that include ground breaking therapies, advances in technology, and consumerization through increased access to data by patients. The latter enables patients to better understand and get more involved in managing their conditions, which in turn raises expectations. The effects of these changes and the speed with which some historical methods are replaced, will inevitably differ by the therapeutic area.

## **What are the undercurrents that are driving the future of pharma industry? How are the companies gearing up to integrate them in the current flow?**

It is apparent that some pharmaceutical companies are starting to recognize the impact of the two major shifts, which includes downward pressure on pricing, and the move towards prevention, diagnosis and real cures. These changes are upsetting the established order, opening the door to new competition, and forcing companies to rethink where they play and who they play with. It requires a growing emphasis on collaboration and partnership. We see three new 'playing fields' emerging in response to disruption, which among others, includes pharma tech, genetics and immunotherapy. An increasing number of pharmaceutical firms and medical device companies are partnering and integrating with technology businesses, clustered as Pharma tech companies.

According to a Reuters article, in a bid to tackle the huge and rising blight of diabetes, Sanofi and Verily, the life sciences unit of Google parent Alphabet, announced in September 2016 that they would invest approximately US\$500 million in a joint venture to combine devices, software and medicine. We believe medical device companies are leading the cooperation with tech companies. For example, in the diabetes space, one interesting partnership involves device giant Medtronic teaming up with tech firm Qualcomm, to develop a continuous glucose monitoring system that will also provide actionable insights to patients and providers. Genetics has moved forward with real pace in recent years, with gene editing fueling a new wave of potential applications to aid both prevention (via early detection) and real cures.

The leading genomics firms are essentially biotech players, acting either independently or through collaboration. In the coming decades, gene editing could revolutionize the treatment of different diseases such as neurological disorders or cancers. This approach enables healthcare providers to alter/replace the problematic gene, to produce a new therapeutic protein or 'silence' mutant cells. A number of neurological disorders are benefiting from these advances, like Alzheimer's, Parkinson's, Huntington's, Amyotrophic Lateral Sclerosis and strokes. Technology is also boosting another more established field of play, i.e., immunotherapy.

Many companies are focusing on developing immunotherapies, either independently or in collaboration with big pharma players to treat and ultimately prevent diseases. Immunotherapy based drugs are increasingly being used for treatment of various cancers, but companies are also exploring their use in the treatment and prevention of other chronic conditions like diabetes, cardiovascular diseases, Parkinson's and Multiple Sclerosis. For example, CardioVax, a US based biotech company, is developing immunotherapies to treat and prevent cardiovascular diseases such as atherosclerosis.

## **How should pharmaceutical companies adapt themselves to the changing future of technology trends and business?**

Shifts in the business model and a refocus on new fields of play can help pharmaceutical firms to adapt to disruption. But even these changes are unlikely to generate the kinds of growth and revenue that shareholders demand. Only through a complete organizational transformation can today's leading companies maintain influence and earnings. We predict the emergence of three 'archetypes' that we believe will prevail in the future industry. These are:

### **The active portfolio company**

An active portfolio company is typically active in several therapeutic areas within its portfolio. For example, those operating in pharma tech, genetics and immunotherapy are constantly looking for new forms of therapy, while simultaneously reappraising their product mix to match unmet needs. Active product lifecycle management in pharmaceuticals is becoming ever more critical, as the number of blockbuster drugs protected by patents continues to decrease. Asset swaps like those involving GlaxoSmithKline and Novartis on vaccines, oncology and consumer health interests are just one example of active portfolio management; a trend that is likely to accelerate and will therefore require new, internal capabilities.

### **The virtual value chain orchestrator**

Companies offering 'virtual value' do not own anything physical, but create various types of solutions 'virtually' although their final delivered product or service is very real. What they do own is a large amount of data on therapies, patients and research. While data used to be almost exclusively in the hands of the main life sciences companies, it has now been liberated and put to use to drive major change. Think about the opportunity a virtual value chain orchestrator possesses, e.g. guiding patients effectively through a complex healthcare value chain from cradle to grave, supporting healthcare practitioners to provide tailored care each time, or even allowing pharma companies to receive outcomesbased payments.

## **The niche specialist**

These companies tend to be smaller, and are organized in a very different way from traditional players. They are focused on a single therapeutic area or disease, and look at the entire patient pathway from prevention to real cure. A prominent example is a company like Novo Nordisk, which focuses on diabetes with the objective of ridding the world of this disease. These niche players typically specialize in a more complete sense than simply providing a single treatment. For instance, a specialist in arthritis would treat the symptoms, but also provide a range of outcomes that together create a better lifestyle for an arthritis sufferer. This could mean extending the business to include comfortable shoes for painful joints, as part of a one-stop shop for arthritis. A niche specialist may eventually become part of a portfolio company to gain greater access to funding, to enable the provision of combined therapies, and/or to collaborate with a virtual value chain orchestrator to connect with a broader client population.

## **What are the forthcoming challenges for pharmaceutical companies to adapt to this shift?**

For pharmaceutical CEOs, it is not enough to simply recognize the emerging changes facing the industry. Their biggest challenge is to translate the impact of these changes on business and operating models in a holistic way, to adapt swiftly and decisively to disruption. The lesson from other disrupted industries is loud and clear. As the fundamental rules of engagement change dramatically, pharmaceutical companies cannot just partially adjust existing business and operating models. One way CEOs can prepare for the future is to set up fully independent, integrated Pharma 2030 experimental laboratories that report directly to them.

**These labs can:** test new archetypes that align with company's financial ambition and generate more realistic forecasts that take account sector's disruption; evaluate how different archetypes could impact the way the business is organized, and determine which organizational capabilities are needed; and develop balanced transition maps to address the multiple and significant risks faced by the business. Those pharmaceutical companies that manage to embrace the most appropriate archetypes, and master disruption, have the greatest chance to deliver real value to patients, which should in turn drive their success.