LOGIC INSIGHTS

ISSUE # 5

Featured Article

New Waves of Change in the Pharmaceutical Industry

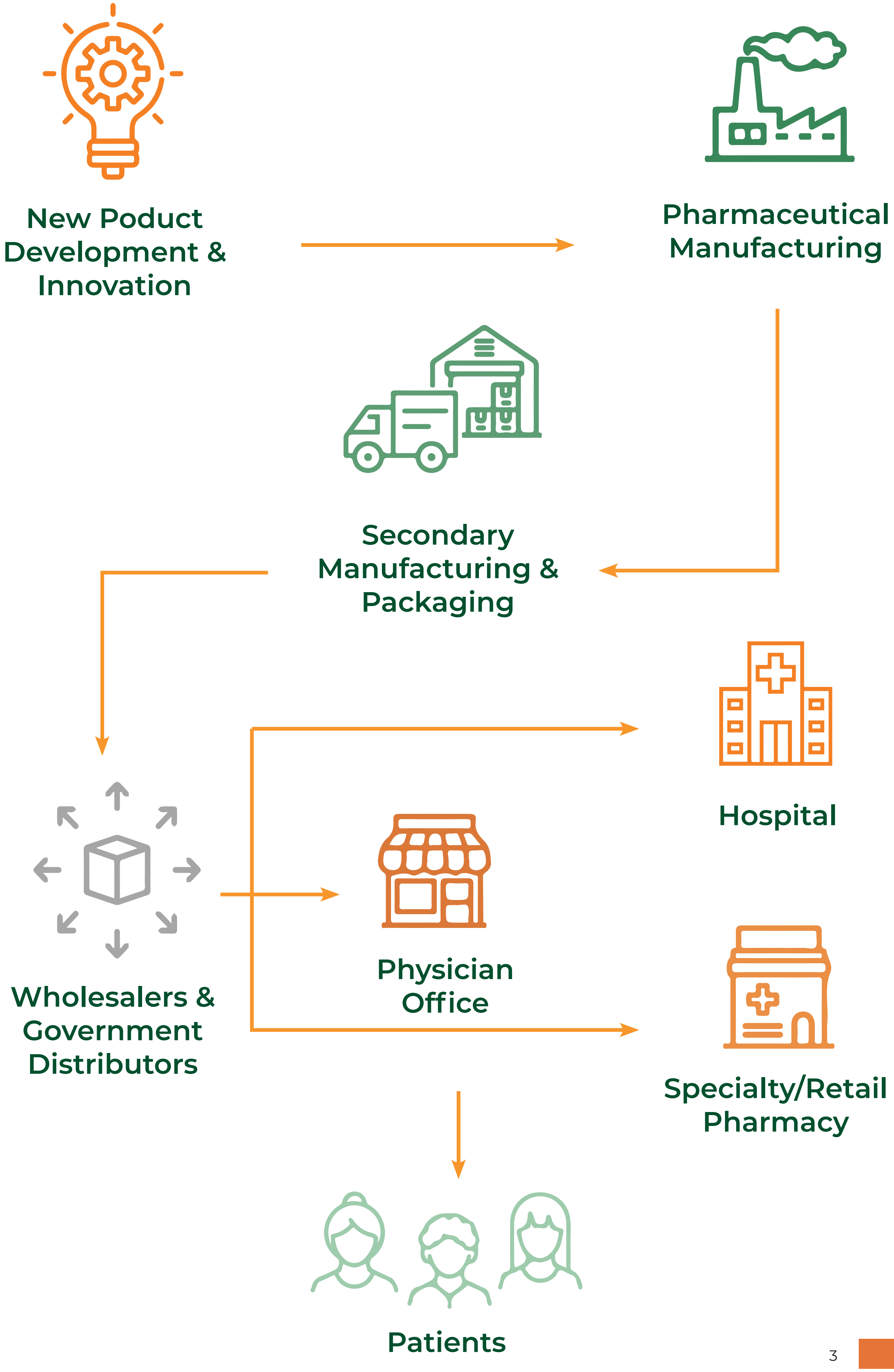
Future-Proofing Strategies For Pharma Companies

LOGIC CONSULTING

NEW WAVES OF CHANGE IN THE PHARMACEUTICAL INDUSTRY

The Pharma market dynamics have been subtly changing over the past few years and we've been spectating on the impact it has on the market players across the industry value chain. This sector is past the slowdown with recovery signs across retail and non-Retail channels. Also, there is an acceleration of change and innovation, many of which were simmering in the background before the pandemic.While the global spread of Covid-19 has placed exceptional strain on the country's health systems and infrastructure, the pandemic provided Egypt with an opportunity to prioritize reforms, engage in discussions on how to streamline efforts between the private and public sectors that would strengthen weak spots in its health system. In the coming 5-6 years, we will see a recovered and growing Pharma market that will cater to a wider base of patients who will be gaining gradual access to healthcare services, but it is expected to have different dynamics than what we see today. **In this article of LOGIC Insights, we will be examining the new waves of change in the pharma industry and its implications on the value chain to draw an integrated picture of how the entire healthcare ecosystem is being disrupted. Also, we will be listing some future-proofing strategies that companies can undertake to adapt to those market changes on the short and long term.**

PHARMA VALUE CHAIN



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Universal Inclusion with New Universal Health Insurance

The current dominant underlying force of change in the Pharma industry is the "Universal Healthcare Act" roll-out. This new insurance mandate commits Egypt to enhance the quality of its healthcare services and close the gap between its level of access. Accordingly, the demand on public hospitals is foreseen to increase gradually. In preparation for that, all public sector sourcing and dispensing have been consolidated under the UPA*, streamlining the process and creating an opportunity to analyze and identify areas of cost optimization and reduction through economies of scale. **On the other side, the "General Authority for Healthcare (GAH)" entity is mandated to transform the public hospitals into profit centers or covering their cost at the very least.** The GAH along with Ministry of Health (MOH) created the onboarding system whereby the public healthcare entities register to become certified by the GAH, hence allowed to offer the (UHI) services. After accreditation, the Healthcare facilities are transferred under The General Authority for Healthcare, and the government will rely on the private sector for infrastructure investment, as well as training for doctors and other health professionals.

Further, the patient records are currently being populated and aggregated in one repository, enabling more advanced and accurate reporting on disease prevalence per governorate and town. This data will serve as a guide for pharma manufacturers to better optimize their current portfolio and new product pipeline.

* The Egyptian Authority for Unified Procurement

1

Government Expenditures will be redirected to the Insurance System sustainability as public hospitals transform to independent P&L accounts.

2

Egypt will turn into a regional hub as UPA establishes new warehouses for medicine and medical supplies. This will unlock an attractive opportunity of export across Middle East and Africa region.

3

Pharmacy controls will be deployed so that each patient receive their exact dose of prescribed medicine. This will optimize costs associated with medicine dispensing by controlling waste and expiry.

Average Egyptian families spend

21%

of their income on healthcare.

4

As the scheme is digitized, doctors and pharmacies will be connected to a database of available medicines and their alternatives. This will allow a streamlined and optimized flow of goods from manufacturers to distributors to pharmacies.

/02 Financial Challenges and Liquidity

The pharmaceutical market prices are highly regulated, which puts a great pressure on the margins across the value chain. **Also, with the UPA consolidating all government sourcing activities, and private hospital groups and chain pharmacies shrinking, the market is facing huge liquidity and cash flow challenges.** This has forced all players in the industry to revisit their cost structures, optimize their costs and make tough choices about where to focus their resources. **In parallel, all pharmacies are now mandated to report their revenues and are subject to the VAT registration and invoicing the VAT for each invoice electronically if the total annual turnover exceeds the amount of EGP 500,000, and hence paying higher taxes***. Though such impact is felt across the different pharmacy segments, small pharmacies (neighborhood pharmacies) will be hit the hardest.

1. New opportunities are emerging to resolve these issues:
   - **Supply chain integration and optimization to enhance visibility over the supply chain and enable higher return decisions.**
   - **Manufacturing APIs locally and potentially exporting.**
   - **Penetration of fin-tech start-ups offering pharmacy management, supply chain and financial solutions.**

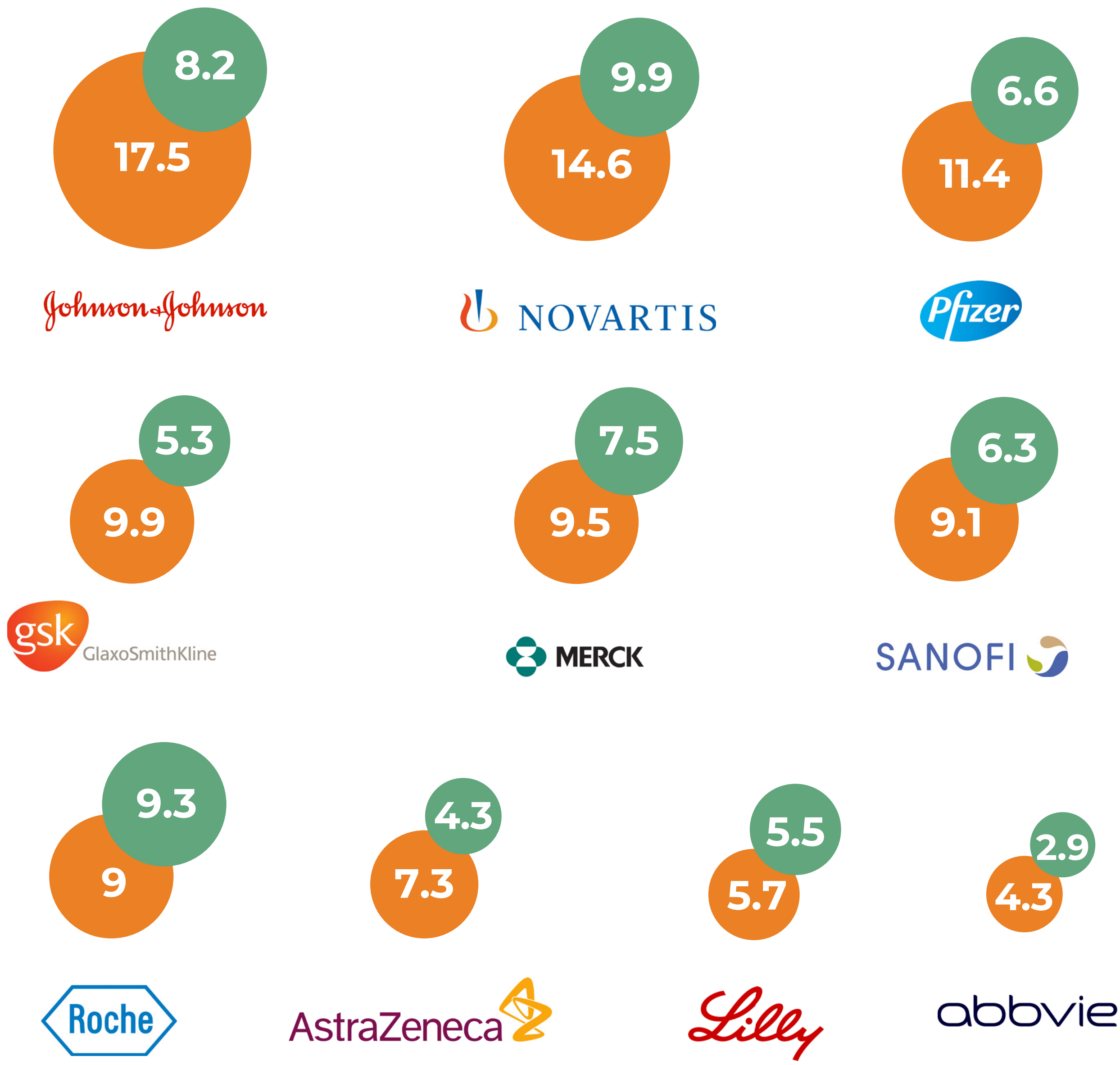
2. Cost containment initiatives are directing manufacturers to revisit and optimize their portfolio and optimize their sales and marketing spending.

3. Pharmacies are undertaking strategies to control their operating costs and leveraging COVID-19 accelerated trend of shifting from brick-and-mortar retail to e-commerce

* AlMal News

Nine out of 10 major pharmaceutical companies spent more on sales marketing than researching new drugs:*

SALES MARKETING
vs.
RESEARCH & DEVELOPMENT



In US $ Billion. for 2013.

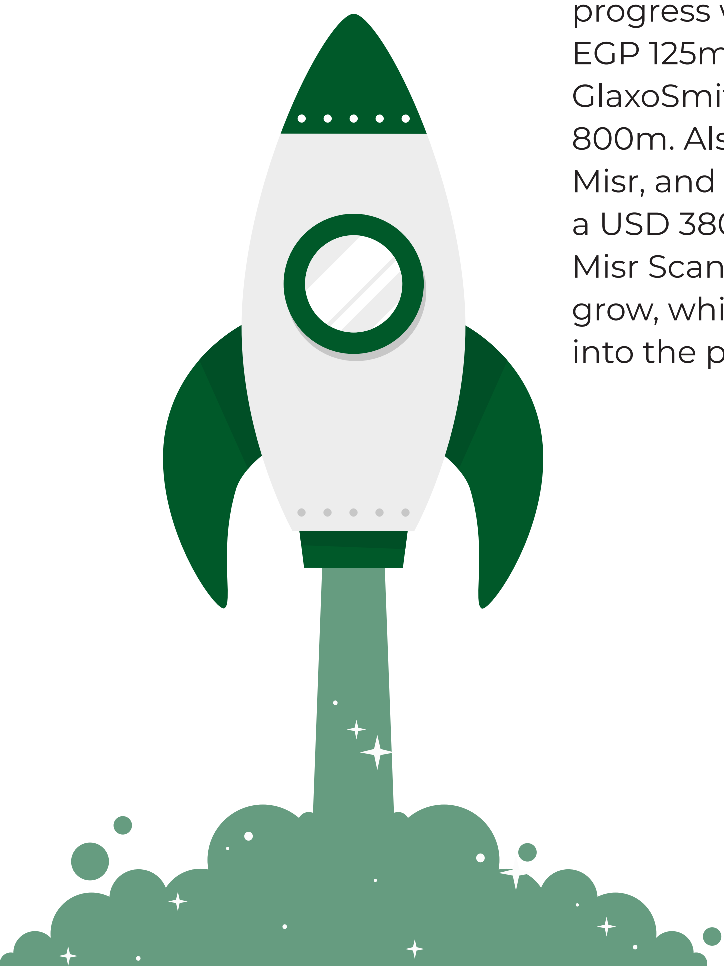
* BBC

/03

As a result of the above,

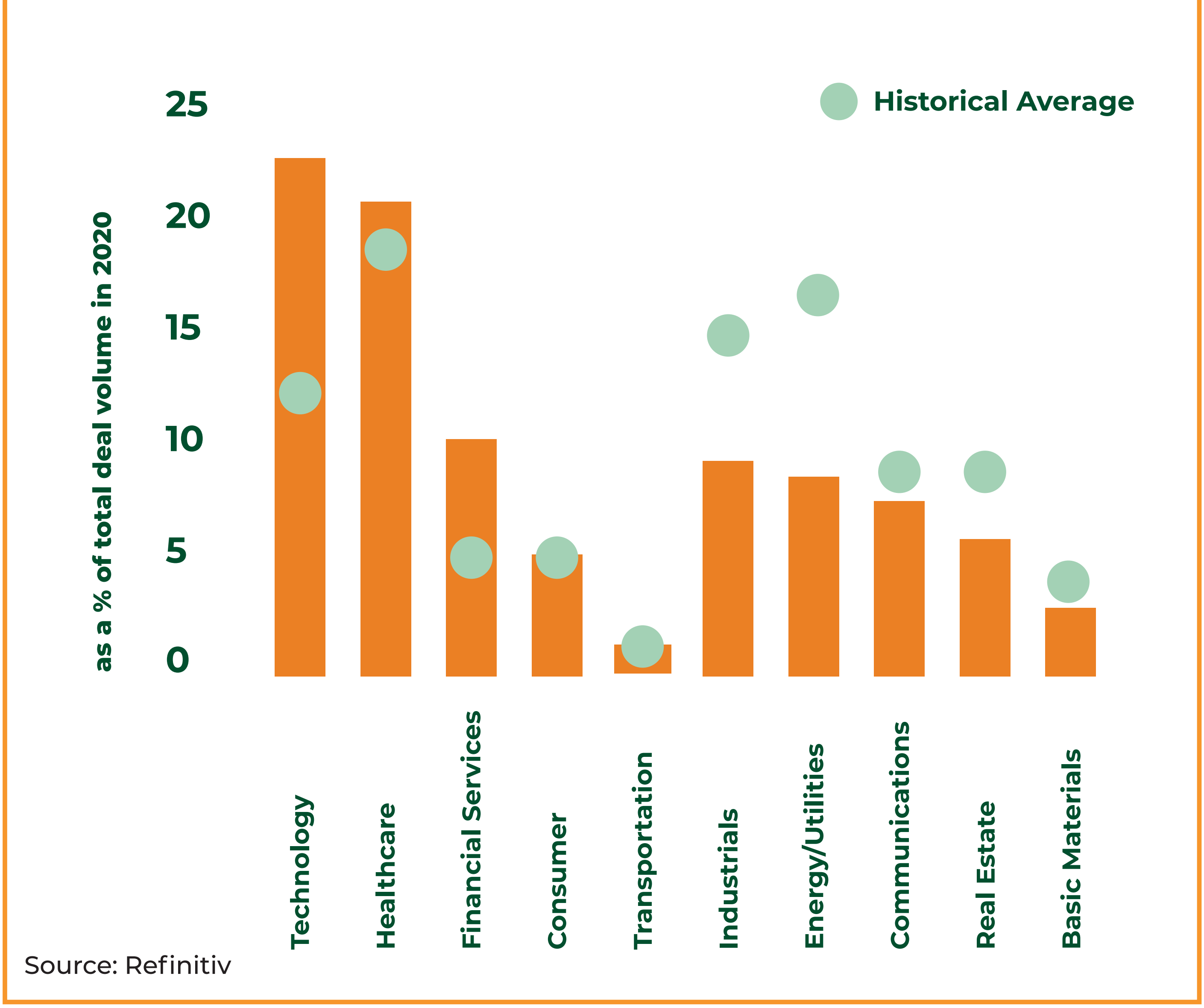
Now is a Boom time for Pharma start-ups, M&A Deals and Investment

Given Pharmaceutical industry growth, it has been attracting investors for the past few years, however throughout the pandemic, the number of deals/ transactions have significantly increased. **What we're clearly seeing post COVID-19 is investors interested in backing start-ups creating new services that could become acquisition targets for big pharmaceutical groups, for example Telehealth startups.** Also, some game-changing forces are now reshaping the Pharma landscape; from the increased government interest in developing the sector in partnership with the private sector to the new health insurance law and the establishment of the Egyptian Authority for Unified Procurement. Together, all these factors have put the sector as a defensive refuge for investors during difficult economic times. For example, Pioneers Holding Company for Financial Investment has made its first investment in the pharmaceutical sector through the establishment of "Al Nour Pharma" for manufacturing and distribution of medicine. The industry already made progress with US-based Johnson & Johnson investing EGP 125m in the country in 2019, and UK's GlaxoSmithKline announcing a total investment of EGP 800m. Also, Misr Capital, the investment arm of Banque Misr, and Elevate Private Equity, announced the launch of a USD 380 million healthcare investment platform, "Nile Misr Scan & Labs". Still, there is room for the industry to grow, which paves the way for more investment inflows into the pharmaceuticals industry.



During the first quarter of 2020, Egypt marked the top regional target market for inbound M&A at

$2.4 billion



During the first quarter of 2020, Egypt marked the top regional target market for inbound M&A at $2.4 billion, reflecting an active market despite the pandemic repercussions. The combination of high investor appetite, economic downturn and ample financial capacity is a recipe for high valuations and high-speed deal-making. In light of this, Pharma companies are now haunting for other firms that focus on innovation to add to their pipeline and development capabilities rather than risk the staggering and ever-growing cost of internal R&D investment. With business model disruption and many companies / startups leveraging digital solutions to modernize their business models, big Pharma companies are triggered to gain new platform technologies or digital talent through acquiring other firms. **Historically, pharmaceutical companies have been motivated to pursue M&A for three core reasons: innovation, economies of scale and portfolio realignment and market penetration.** Yet, M&As is now a big part of pharmaceutical companies' strategies post-pandemic as only companies with scale can seemingly afford to take larger risks.

*Baker McKenzie

This activity is expected to drive growth and increase the economic activity within this market:

1

Cash injections and investments will resolve some of the liquidity issues that the market is currently experiencing.

2

Investments in manufacturing will introduce a pipeline of new products, increases supply and closes gaps within the existing pharma portfolio.

3

Producing locally potentially means reducing the importation of finished products and improving Egypt's self-sufficiency.

4

The start-up scene signals that the market in Egypt is catching up to global trends and other industries.

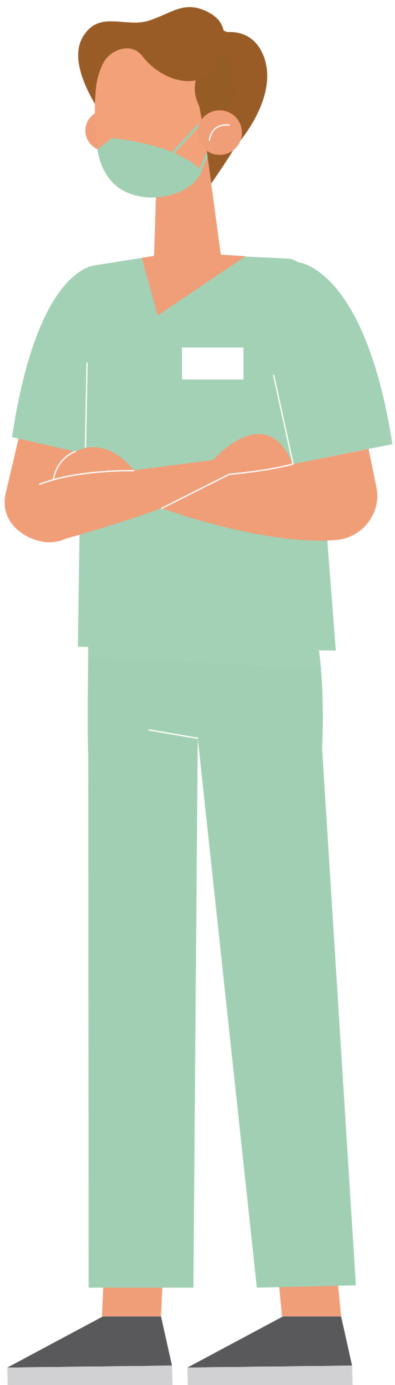
5

The rise in ecommerce activities and the changing market behaviors from how medicine is prescribed (electronically), how is it ordered (online) will drive regulatory changes to accommodate for those trends.

How Can Pharma Companies Chart A Path Forward?

Company leaders can leverage the above trends (investments, fin-tech interest, etc...) to develop strategies to cope with current changes and take advantage of the short- and long-term opportunities that emerge in such dynamic environment.

FUTURE-PROOFING STRATEGIES FOR PHARMA COMPANIES



1 Patient-Centric Planning and Data-driven Insights

The pharmacy business has traditionally lagged other parts of the healthcare industry in the adoption of consumer insights and approaches. But now For Pharma companies to continue to have a seat at the table, they need to capitalize on digital's potential for real-time data generation and create patient-oriented value. They also need to be razor-focused on improving their R&D and speed-to-market by understanding actual patient consumption rather than building all their planning on in-market sales that don't reflect the shelf-offtake.

Data-driven insights could help Pharma firms;

a. Understand what upcoming health challenges people may have to deal with, keep up with the latest trends and consequently generate predictive models to predict supply chain disruptions more accurately.

b. Utilize predictive quality management through recognizing patterns linked to quality problems in production, packaging and logistics. This can help companies react faster and avoid defects.

c. Improve demand planning and management, reduce inventory buffer and streamline long-term production plans and short-term schedules. Thus, they can produce what consumers want and dispense it to them when needed, resolving the low prescription fulfilment that has been a growing issue.

Patient centricity is needed in the value chain, and data analytics can accelerate the path to it. Patient data should make it possible to address dynamic demand. **Yet, still firms can't make sufficient use of the data available with less than 0.5% of all data generated today is actually used.*** The bottleneck is not the information, but how it is documented. For that reason, it is necessary to integrate cloud-based data systems, and make it available in real-time to those who need it. **Thus, a digital tracking system to follow-up treatments and create the history of each patient will be an essential piece of the puzzle for many of the pharmaceutical companies.**

*Forbes

2 Digital Adoption To Enhance Agility And Responsiveness

Despite being an information-intensive industry, the pace of Pharma's digital technology adoption remained slow until recently. **This is mainly because of the conservative nature of the pharmaceutical industry that is accustomed to a tight regulatory grip and has strong intellectual property constraints.** Yet, the COVID-19 crisis has abruptly moved many of the industry's core activities into the virtual sphere. **Pharma can no longer be "The reluctant digital convert"; they need to take advantage of this momentum to incorporate digital technologies into their value chain from real-time supply chain monitoring to customer engagement.**

The digital maturity of the pharmaceutical and medtech sectors, gauged by measuring a range of capabilities to provide a score between 0-28 was

24

compared with an average of

34

across all industries.

- McKinsey & Co.

Adoption of technology is now reflected in three moves that some companies are already taking;

a. Patients' Applications

In Egypt, E-Pharma is quickly shifting from a previously slow adoption path to a pace of uptake, with many companies stepping up their game to fill existing gaps and venturing into some of the most innovative digital solutions ranging from telemedicine, diagnostics, and health insurance. Chefaa, Yodawy & Vezeeta are among the leading health-tech startups revolutionizing the industry on multiples levels. For example, Chefaa, allows patients to order, refill or schedule prescribed medicine for pickup or delivery with the use of AI and GPS technology, and they have actually witnessed an increase by 300% during pandemic. **In steering patients through the healthcare system, telemedicine is improving patient outcomes, while alleviating the burden of overcrowded hospitals, leading to a more efficient healthcare system.**

Yet, although new players are emerging and telemedicine platforms are becoming the first touchpoint on the patient journey, there are hurdles that need to be tackled. Eying what is happening globally where digitals leaders such as amazon, google and IBM are venturing into virtual personalized platforms for patient communication, industry leaders in Egypt need to incorporate telemedicine services into their core offerings to enhance the patient experience.

To incorporate tele-medicine services into core offerings, industry leaders need to:

1

Develop partnerships with telemedicine providers to support the deployment of digital technology to help deliver a more patient-centric experience.

2

Engage directly with regulatory authorities to provide the regulatory framework and clarify compliance requirements to keep pace with and preempt change in health-care.

3

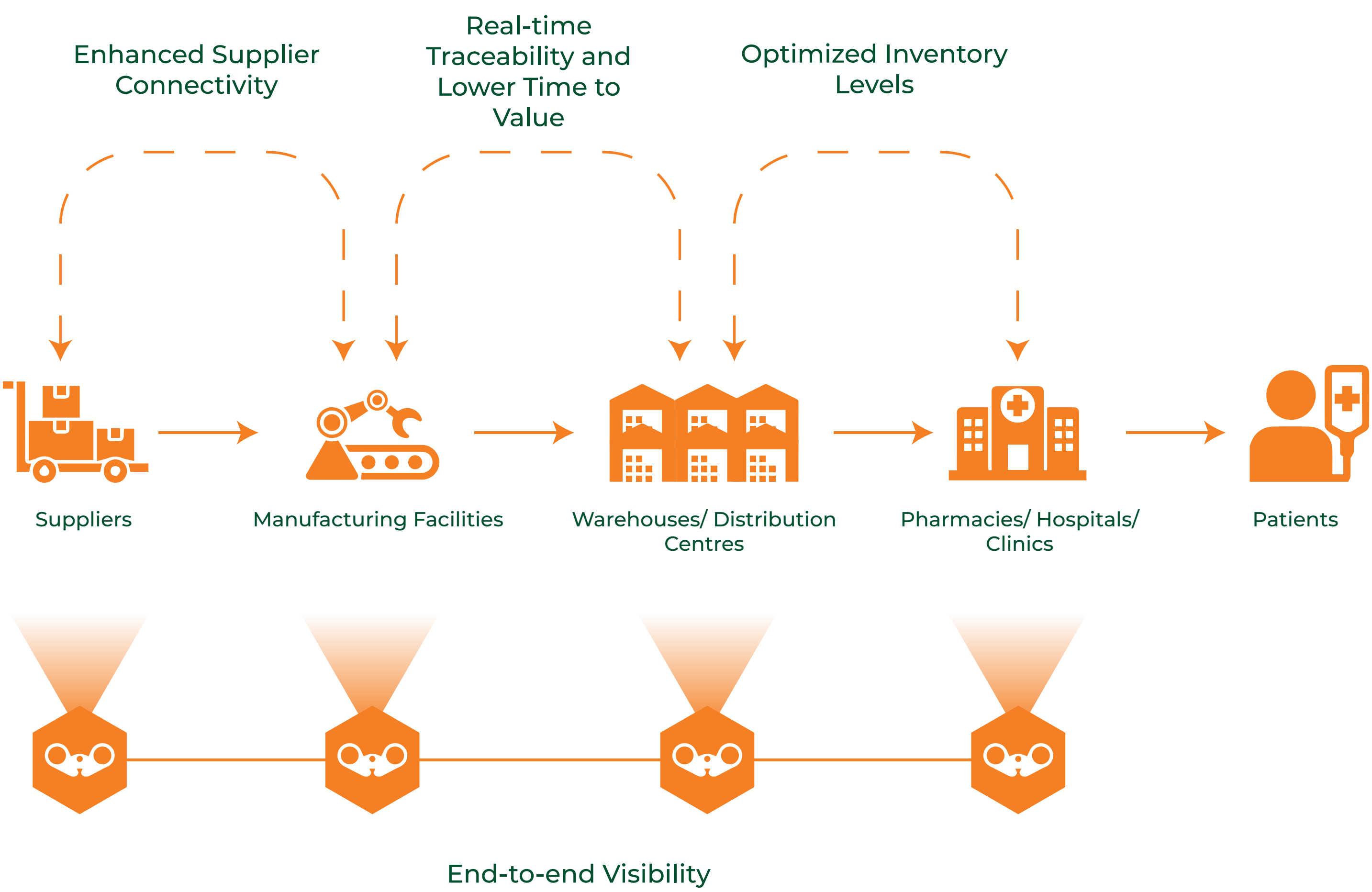
Develop a thorough cybersecurity strategy to be part of digital value chain to reduce the risk of cybercrime as processes are going digital.

b. Supply Chain Visibility

The Pharma supply chain is one of the most complex but least-connected industry supply chains in the world. Lack of visibility in the many-tiered pharmaceutical supply chain could actually have multiple repercussions. Yet, serialization is becoming a global requirement, and the desire to roll out traceability systems in Pharma industry has increased significantly in recent years. Over the next five years the Pharma track & trace solutions market is expected to surpass $2.38 billion*. Governments worldwide believe that drug counterfeiting can be reduced significantly by implementing product serialization, and a significant number of countries are making progress in this regard, including Egypt.

The Ministry of Health, in cooperation with pharmaceutical companies, launched “Egyptian Pharmaceutical Track & Trace System” to track the drug supply chain from its production at factories, all the way through to its distribution into pharmacies and finally its delivery to customers. EIPICO was one of the first companies to implement a Track and Trace Program with its various stages on 47 production lines with a cost of EGP 80m to ensure patient safety, enhance supply chain efficiency and prevent commercial fraud.

END-TO-END VISIBILITY OF PHARMA SUPPLY CHAIN



* Dataversity

HAVING COMPLETE VISIBILITY OVER SUPPLY CHAIN CAN RESULT IN MANY FAVORABLE OUTCOMES INCLUDING;

1. End-to-end traceability of prescription pharmaceuticals through electronic systems, which can mitigate risk of either significant build-up or shortage of inventory.

2. Elimination of unregulated transactions by requiring the authorization of all trading partners, and thus protecting patients by preventing falsified medicines from entering the supply chain.

3. Real-time insights can be provided across the value chain, enabling sales and operations leaders to make dynamic decisions in response to changing conditions. This will allow significantly shorter lead times, faster decision-making, seamless data sharing and better planning accuracy. It would thus create efficiencies while also enhancing resilience.

4. Pharma companies have extremely complex supply chains, from suppliers, wholesalers, and distributors to hospitals, pharmacies, dispensing doctors, and patients. Through such systems, an integrated supply chain networks can be developed, linking all players through a single integrated network.

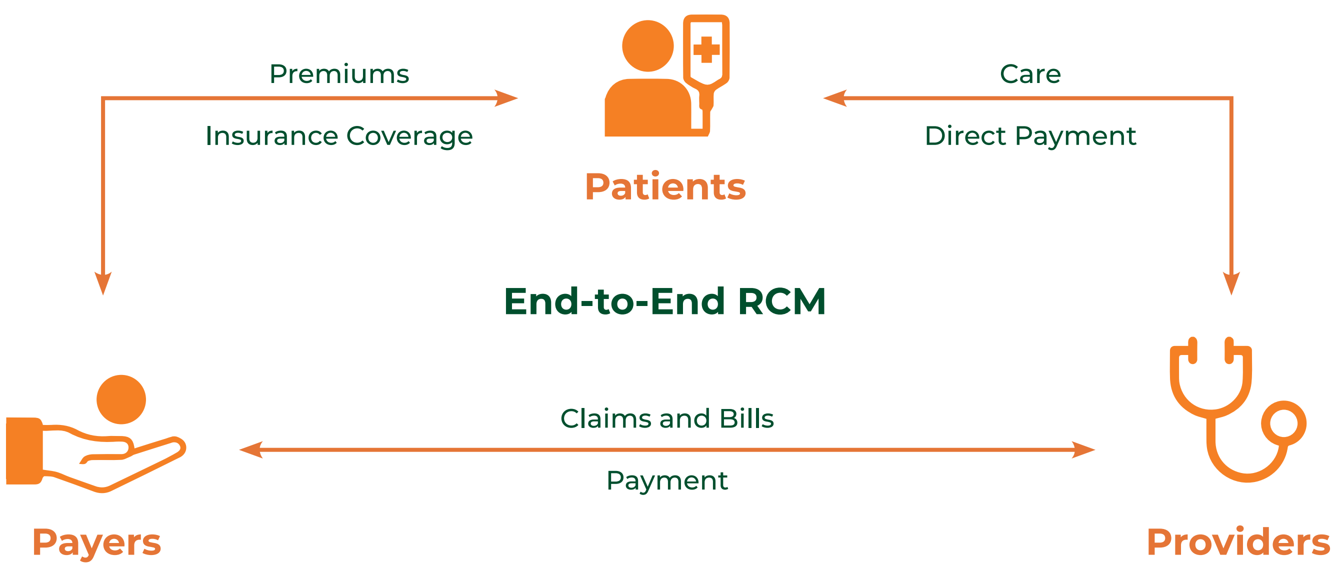
In an average pharmacy, cost of goods sold account for approximately 68% of total expenditures.* Thus, they need to have complete visibility into existing inventory levels in real time, so that they can optimize their costs and improve their overall operational efficiency, rather than having working capital sitting on a shelf in the form of a medication that may not be prescribed for a few months. Slow-moving inventory, or medications that can sit on the shelves until they expire, can end up costing significantly more than their retail value. Thus, pharmacies need to have an automated inventory systems to evaluate inventory movement, and accordingly make data-driven purchasing and inventory control decisions. **Also, it gives you the data you need to answer on some key questions; Are we holding enough inventory in our fastest-moving drugs? Are we still stocking drugs with little or no movement?** Thus, by adopting such technology, pharmacies can have better stock visibility, and thus can periodically adjust their spending on certain drugs to take advantage of changes in quantity, availability, demand and market price.

* LinkedIn

C. Fintech Innovations

There has been a considerable rise of Fintech start-ups rolling out solutions and services to the healthcare industry, through leveraging powerful technologies like blockchain, artificial intelligence, and machine learning to eliminate the inefficiencies and knowledge gaps in the industry. As health services are becoming increasingly digital, more opportunities have opened up for companies to connect the already fragmented pharma supply chain. This complexity, together with weak infrastructure, resulted in major financial and operational problems ranging from overstocking and expired medicines to understocking and lost customers. For the financial problems, pharmacies & hospitals are spending considerable amount of time managing revenue cycles and collections, along with having high administrative costs that is expected to continue increasing without reforms to reduce administrative complexity. **That's why we're seeing some Fintech firms stepping in to offer the right digital financial management systems that would cut some portion of pharmacies' overhead costs spent on payment processing, claims submission, reconciliation, etc.** Fintech solutions are simplifying payment processes for patients as well as providers by processing enormous quantities of healthcare data at faster speeds. For example, Cedar is a US-based fintech company that provides smart ways for health systems and pharmacies to manage the patient payment ecosystem. It works on alleviating collections challenges, improving billing operations, and ensuring a personalized billing experience for patients. **We're also seeing some pharmacies integrating fintech into their own supply chains to improve operational efficiency, with many are offering services in inventory management and distribution services.** And we're already witnessing some players making moves in Egypt; Ibnsina Pharma that has set up a new EGP 300 mn company to invest in fintech firms focused on the healthcare sector.

FINTECH HEALTHCARE LANDSCAPE



3 Infrastructure/ Capability Sharing

For pharma companies, the battle to cut costs is getting even more intense with their revenue growth and profits being squeezed. **If they are to prosper, they need to look closely at their cost strategies and recognize how essential these are to maintaining a viable enterprise.**

It is no longer viable for pharmaceutical companies to depend on complete in-house utilization of its resources. **They need to consider collaborating with other entities and outsourcing some of their operations like R&D and promotional activities, and act more as a management hub.** Having different partners, from hospitals and clinics to technology suppliers, as your vendors are more like having a network of separate entities with a common supporting infrastructure and a mutual goal. **Having such network will not only allow pharma companies to optimize costs and convert some of their fixed costs into variable costs, but will also allow sharing funding, data and access to patients and back-office services.** According to one study, a company that performs certain pre-clinical development activities in-house can expect to pay more than double what it would pay if it completely outsourced these activities to a third party*. Equally important, it might help the industry leaders to focus on the value adding functions and expand into new product/service areas or geographic markets. Most large pharmaceutical companies are using external contractors to supplement their in-house resources, but very few firms have gone any further.

> **On average, Pharma underperforms on working capital management. The average PharmaCo holds 180 days of finished goods inventory on hand. Their peers in the consumer goods industry hold only 60 days' inventory.****
>
> **McKinsey & Co.

*Pharma 2020: Challenging business models, PwC, 2020

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