



STREAMLINING PHARMA DRUG LAUNCHES WITH DATA AND ANALYTICS

Executive Summary

The launch of a new drug is a pivotal moment in that product's life cycle and is a crucial event for a Pharma enterprise. Synchronous alignment of several aspects such as insights into the market, patient access, competitor awareness, go-to-market strategy, and also attributes like current trends make up a successful commercial drug launch. An efficacious launch is a key driver in determining the commercial performance of a drug. The complex regulations, cost, and intense competitive pressure specific to the rise of the speciality therapeutics make launches

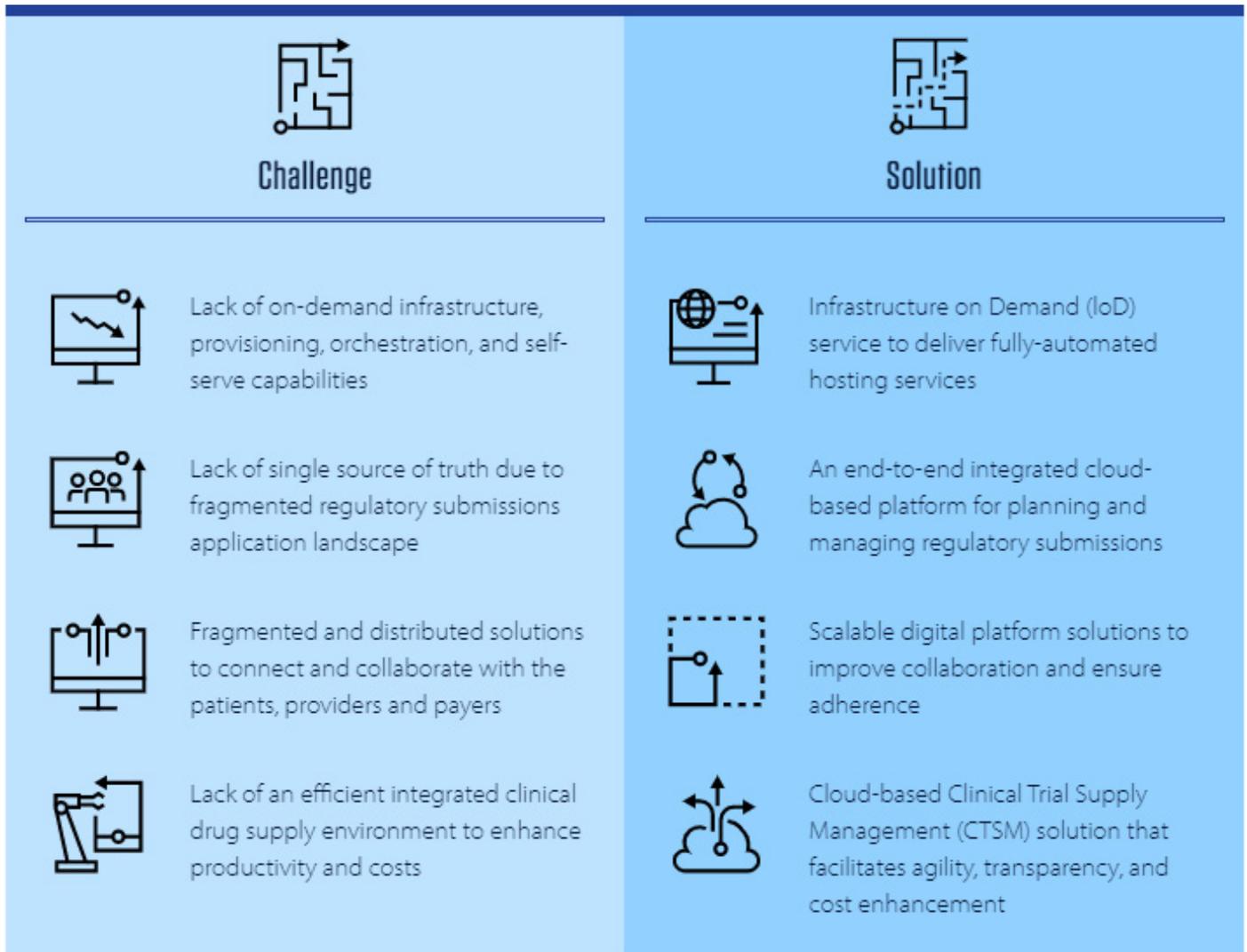
intricate, complex to navigate and, time-consuming. Even after years of research and development, strategizing, and performing market analysis, more than one third of newly launched drugs fail to meet sales performance expectations.

Until a few years ago, the field sales force was the main channel of access to doctors and patients for the pharma enterprises. But now with access to more information like ever before, patients and healthcare professionals have gravitated towards popular conversational arenas like online forums to discuss, gain insights, and support fellow patients and healthcare

members. The advent of digital platforms for specialized disease conversations and the onset of COVID-19 transformed the apprehensions to digitize into new channels of engagement and explore avenues of opportunities, at an accelerated pace.

The industry's outlook has evolved over the recent years from driving business through field forces – pharmaceutical reps relying on their persuasion skills towards a multi-channel and segmented approach to capture market access. The stakeholders in big pharma are now inclining towards innovation and technology as their modus operandi to reach targets.

Redefining Life Sciences



Consider this real world example of a global pharma which aimed at building multi-country cancer drug launch capabilities in support of their vision of bringing their own products to the market.

Key business challenges faced

- Establishing modern commercial and medical data warehouse covering multi-country rollout and configurable current oncology and other BU Brands
- Master data management hub for mastering customer profile
- Field and Home office reporting with self service capabilities for generating commercial insights
- Commercial advanced analytics capabilities to provide predictive insights

In the subsequent sections we will also highlight the solution they implemented to overcome these challenges and the business benefits realized.

Data and its growing relevance

Data is the necessary binding factor for a successful commercial product launch. Data holds the key for all the attributes influencing right from the research stage. Targeting, segmentation, branding, market positioning, distribution, sales insights, patient and payor outreach across channels – need a strong foundation of data from reliable sources. For organizations that depended on personal connections and field agent's skills, getting high quality data in a socially distanced world is a challenge. With an increased need to personalize

more now that the industry is shifting to gene cell, genomics driven-insights and disease evolution patterns are becoming more relevant than ever before which in addition also requires to understand patient insights into their behavior and disease process.

At every stage of the drug launch, there are multiple internal and external stakeholders analyzing the process and outcomes from their perspectives; both clinically as well commercially. Making sense of data collected from different perspectives is becoming a bigger challenge where the landscape is diversifying more and more and new channels and solutions are emerging rapidly.

Different teams within Pharma work in collaboration with widely varying key performance indicators (KPIs) to achieve a common objective – a successful commercial drug launch. Generating useful and tailored insights for different personas from the data compiled is crucial for a smooth workflow which require the necessary E2E insights to take informed decisions.

Personalizing Patient Experience

In the complex and highly competitive specialty therapeutic areas like oncology, cardiology, neurology, etc. one size doesn't fit all. Understanding the patient's unique journey starts with mapping the consumer, i.e., patient journey and the different attributes that determine an impactful outcome of the treatments.

Novel data assets and powerful analytic tools can enable life sciences companies to create richer patient journey analysis with unprecedented speed. The patient journey becomes foundational analysis for engaging stakeholders in common discussion on how to improve individual

and population health, overall quality of care and cost-effectiveness.

Some of the key elements of a patient journey analysis include:

1. Population Health – Starting with identifying and predicting risks in a population helps identify the target market.
2. Disease Diagnosis – Identifying patient cohorts and their potential indicators with a focus on genotypic and phenotypic data to detect undiagnosed, misdiagnosed, or hard to diagnose diseases.
3. Disease Progression – Monitor the disease progression in patients with specific indicators and the escalation to severe from chronic conditions across disease areas.
4. Therapy Transition – Use clinical and real-world data to predict the transition from one drug or therapy class to another.
5. Connected Health – Drive patient outcomes with the right interventions around patient-centric use cases predicted by a digital ecosystem.

For life sciences and pharmaceutical companies, patient journey analysis can help in identifying the most effective drug or treatment pattern based on patient characteristics. But that is just one of the many benefits that can be obtained through the analysis. Insight into how to better connect with patients, understanding the vocabularies utilized by patients and providers, understanding barriers and unmet needs can all be illuminated through patient journey analytics. Above all, it lays the foundation for developing a successful brand strategy and helps drive brand performance.

Technology as a Key Enabler

Earlier in this paper we took the example of a global pharma company and highlighted the key challenges faced during a typical drug launch.

Now, let's discuss the solution they had implemented to address these challenges and the business outcome delivered.

From a launch readiness perspective, the pharma company leveraged enterprise-ready cloud platform-driven capabilities which served as the foundation for supporting sales & marketing and medical functions for data analytics and reporting needs.

- Designed and implemented Scalable & extendable architecture solution using Snowflake, Reltio & Power BI technology stack on AWS cloud.
- Data model designed for US and EU countries separately addressing both global and local data needs.
- Leveraged out of the box platform capabilities such as metadata driven framework, data templates and Data Quality Automation Engine to build reusable pipelines for data ingestion, data quality and standardized data processing
- Customized code to ingest CRM data from RESTful APIs by passing query parameter to DW
- Customized code utilities for data governance tasks like file archival, notification in case of file not received, job failure / success etc. using python
- Developed process for data Migration to Reltio MDM, mastering and mastered data consumption in downstream system.
- Designed & Developed persona based Power BI reports through role level security implementation to provide access to account managers only for their respective territory.
- Designed data publish model to cater multiple downstream business.



Business Benefits:

- Faster data onboarding through metadata quick development cycle
- Improving time to market by up to 40% through reusability and UI based metadata driven framework.
- Flexible, agile & robust framework that can be easily configured for new brands
- New data and analytics platform to create meaningful commercial data insights for medical and commercial purpose
- Simple, Consolidated and modernized platform that supports processing of all internal and external data required to support Oncology business unit. Customizable and can be extended for other business units as well.
- Self Service capability for Account Managers, Brand leaders and Head of Sales & Marketing to get view Brand Sales and HCP engagement for outreach and brand promotions

Digital transformation in healthcare and pharma is hinged on reliable data. Pharma companies can gather real-world data without depending on recollection or paper records. They can do so with the help of smart medical wearables that are compliant and affordable by HCOs/HCPs, research labs, and patients. This also helps in prioritizing patient data over syndicated data to understand patient diagnosis, progression, and overall journey better.

In the paradigm shift enabling innovative technology plays a key role. Cloud-native, artificial intelligence (AI) and machine learning (ML)- powered digital platforms are adept at turning the data collected into actionable insights. Data integration from different internal and external sources and multiple channels can be a mammoth task for legacy software. But new-age commercial insights generating

platforms can template brand personas of each drug. That means, data integration to the platform can be done in pre-built templates. Your data can take a shape that suits different stakeholder personas – complete with factoring in hierarchy and affiliations. The same approach can be replicated to suit your other products and brands.

The insights surfaced by digital platforms can be turned into customized reports and dashboards. The stakeholders have different KPIs to target, which can be pre-built into the platform. Depending on the brand, product, therapeutic area, and persona, the insights generated can be compiled specifically for the KPIs of interest.



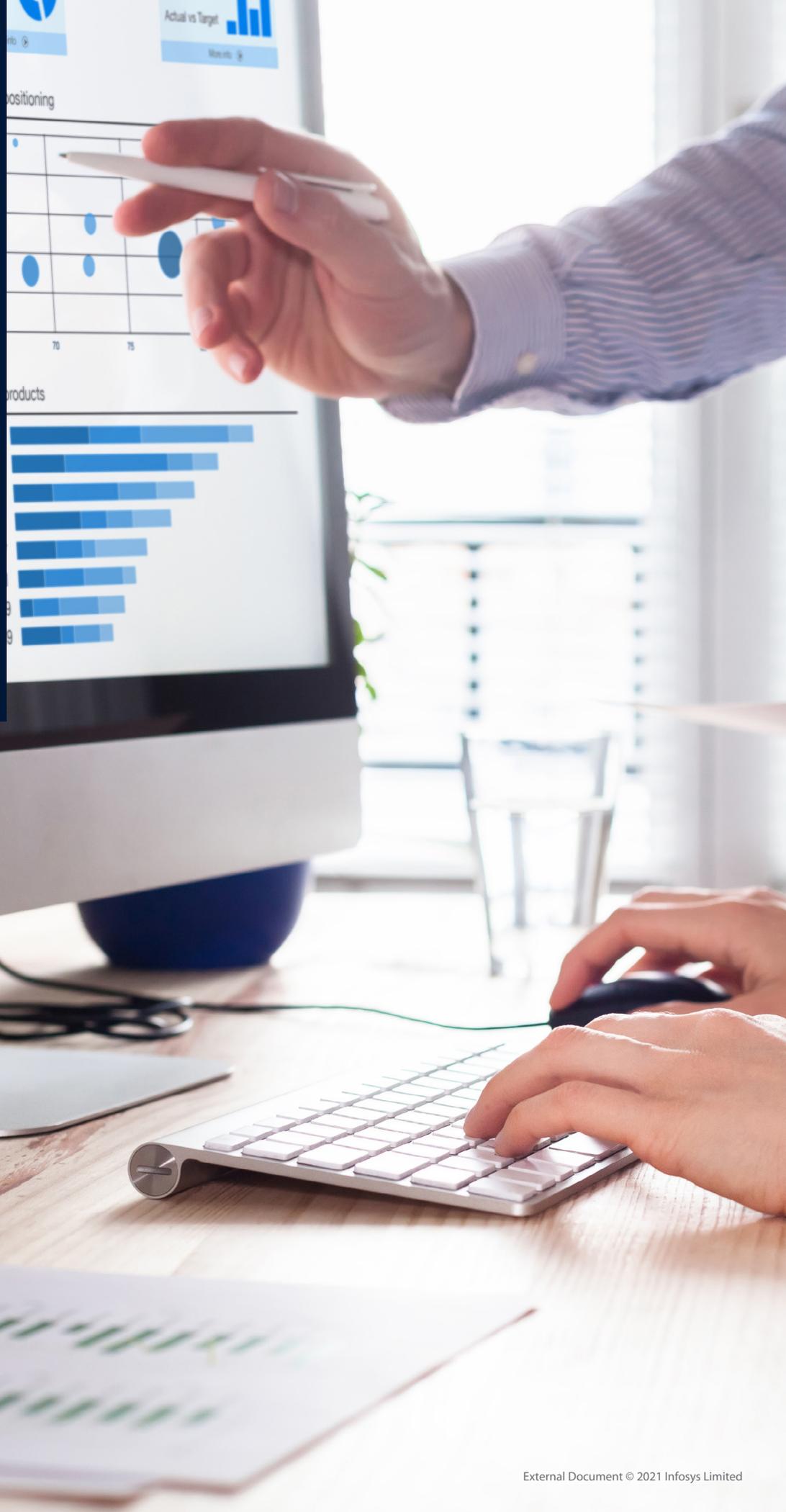
Key Business drivers -

- 1) **Real-time insights** - With integrated data and technology capabilities powered by AI and ML, the platforms can generate real-time insights.
- 2) **Forecasting Patient outcomes** - With accurate and timely analysis of clinical data and biomarkers, the treatment regime, drug prescription, patient's adherence to the regime, the platform can forecast patient outcomes and suggest actionable insights.
- 3) **Disease Detection:** Leverage predictive analytics for disease detection, diagnosis, therapy transition help serving the patients better.
- 4) **Augmenting field force effectiveness:** Real-time data analytics and predictive insights also empower the field sales force with timely information.
- 5) **Flexibility:** The modular nature of digital platforms offers the much needed flexibility to opt for necessary features based on the organization's need to become successful in specialized therapeutic launches.
- 6) **Cost efficient:** The other more commercially viable benefit is that companies can be more cost-efficient pay for the entire platform or customized modules that can also be integrated well into their existing eco-system of capabilities and bring different sources of information together.



Conclusion

A new era of precision medicine is advancing fast supported by more advanced digital enabling technologies and more intelligent insights. Pharma companies – large and small are recognizing the need for focused and better segmented targeting for successful product launches. Building on enterprise-ready cloud platform-driven capabilities means more flexibility, faster deployment, and time to market, and more impactful commercial, healthcare and patient outcomes. Commercial insights platforms will help create a strategy for an entire lifecycle of the specialized pharma products with a data-driven approach. With safety, adaptability, and scalability, digital platforms are empowering pharmaceutical companies with the right information at the right time for the right audience.



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