Harmonizing intelligence to accelerate the discovery and development of new treatments

Date

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The Situation

The APAC division of a top pharma company came to us with the need to streamline their intelligence. With data paucity a challenge across APAC, coupled with the fact that the diseases they operated in were becoming increasingly complex, the team was struggling to determine which market opportunities to prioritize in their regions. Our client's teams were also spending a lot of time finding information from disparate datasets – time that could have been spent on analysis to derive insight from the data. Access to data and its utilization was also siloed and highly variable across functions.

The Requirements

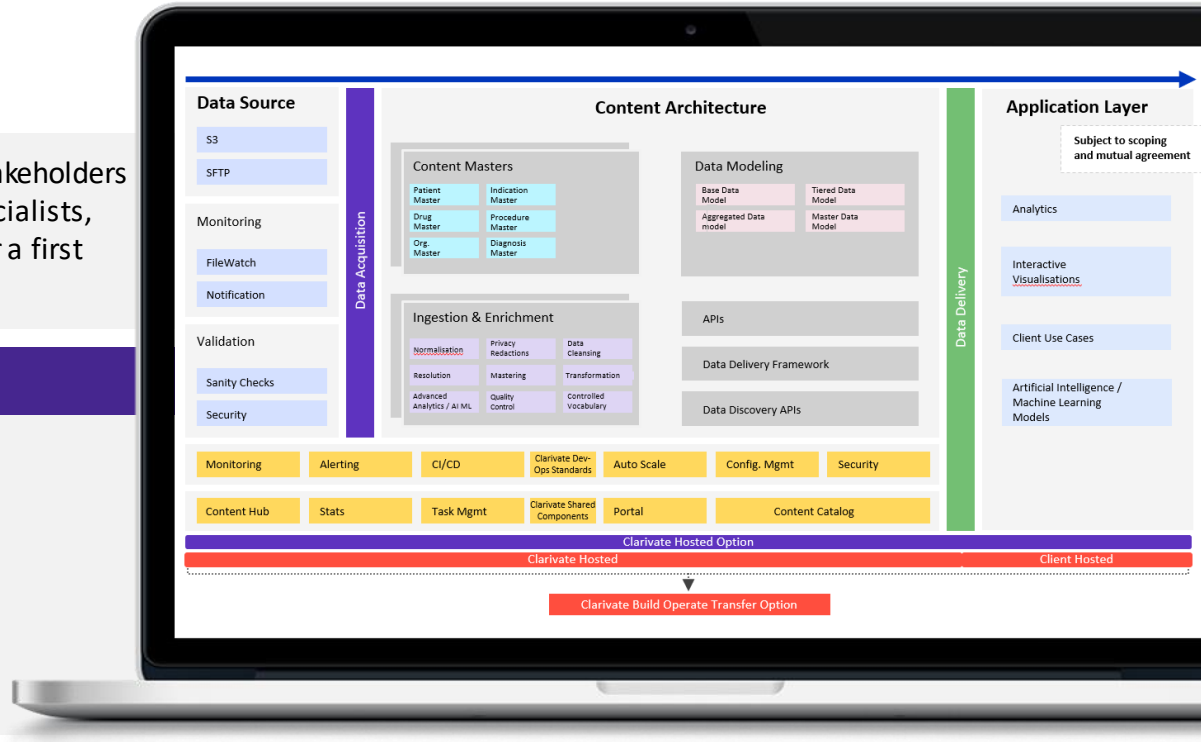
- To build a platform on the client's environment that ingested data from multiple sources to bring their data and intelligence together.
- The basic premise for the environment was to act as a literature search across multiple diseases to provide disease landscape and overview, epidemiology, quality of life, competitive landscape, patient journey, and economic cost of the disease.
- Use AI and ML to enable insight generation to not only provide the client's team with streamlined intelligence but insight to help them solve their big challenges and support their long-term vision.
- The platform needed to be data agnostic, modular, scalable and repeatable. It also needed to use a taxonomy/ontology that was client specific.
- Support a structure that allowed the client to own ongoing operation of the platform.

The Challenges

- Working on remote workstations within the client ecosystem
- Lack of data or availability of data in a timely manner
- The extent of the collaboration was a first for both us and the client
- Working with cross-functional teams in different time zones – AUS/India/Singapore/Canada

The Solution

We took the client's idea and validated the hypothesis, to co-build and co-create a platform. Stakeholders from both sides, including business development, portfolio strategy, procurement, product specialists, information technology, data scientists, disease and market experts, worked together to deliver a first and best in class platform.



Technology, Attributes and Workflow

- Target diseases were APAC led indications
- Platform attributes included; epidemiology data, diseases, drugs, markets and QoL measures
- We worked to get TPAs for 17 vendors
- Built a product using the clients SDLC framework and software
- Designed wireframes as per clients UX framework
- Every sprint was tested for system integration and followed by user acceptance testing
- Layering on a basic visualisation and analytics to enable insight generation

Expertise

Our global team has hundreds of working years of experience of therapy areas, continents, markets and data sets. This allowed us to enrich the data integration with a much-needed layer of insight generation to equip the client with answers rather than just insight.

Data

Clarivate worked to ingest, normalize and harmonize data from multiple sources. Indications and data sets are not distinct, Clarivate experts worked with Clarivate and other data to ensure that they were interoperable and enriched one another to stitch together gaps in indication attributes for patient and disease funnels.

Clarivate sources

- Epidemiology - ~ 175 indications
- Incidence and Prevalence Database - ~ 10 indications – epi lit review data
- Cortellis Drug Timeline and Success Rate-~ 130 indications
- Cortellis Competitive Intelligence - ~ 120 indications
- Cortellis Clinical Trial Intelligence - >100indications

Other sources

- Vendor A- 20 indications' epidemiology data
- Vendor B- competitor shares for >50 indications
- Vendor C – patient journeys for multiple diseases
- Vendor D- drug pricing data for ~50 indications

The Outcome

A powerful data engine enabled by AI and machine learning that allowed teams across the business to access data and insight in a meaningful and holistic way:

- The AI/ML model achieves precision of ~75-76% and can also be scaled
- The depth and breadth of enriched data decreased data paucity challenges substantially
- Teams all have access to one single source of truth
- Teams have more time for analysis and a lot less analysis is needed because of the platform's insight generation function
- The platform is scalable, and plans are underway to bring in more areas of the lifecycle including RWE, registry and HEOR data and intelligence