

Case Study



30 alternate indications identified for six shelved compounds

The Purpose

A large pharma company was looking to expand its portfolio for six shelved assets (four failed in clinical development Phase II & III and two at the preclinical stage) using drug repurposing.

About the Client



INDUSTRY
Pharma



LOCATION
Asia



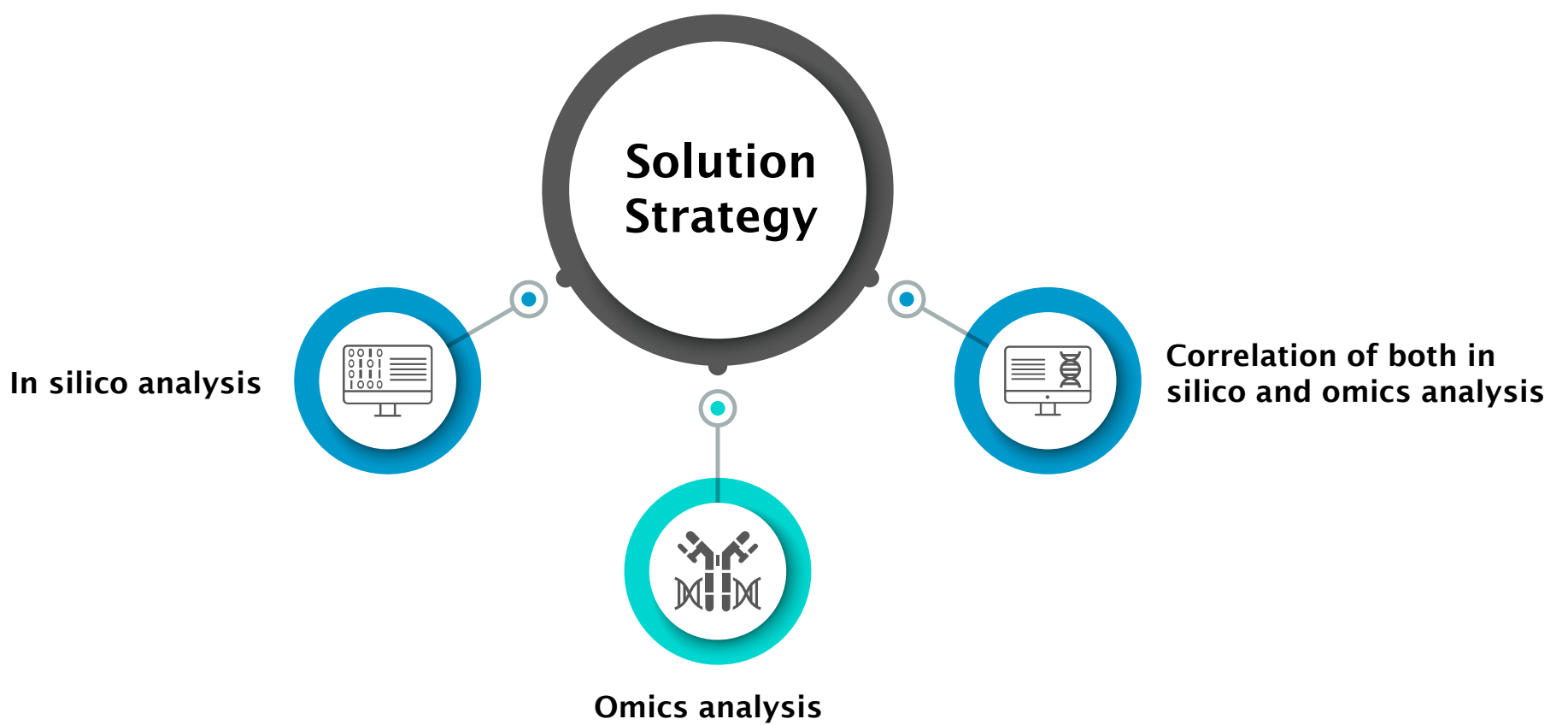
THERAPEUTIC AREA
Multiple

Client Requirement

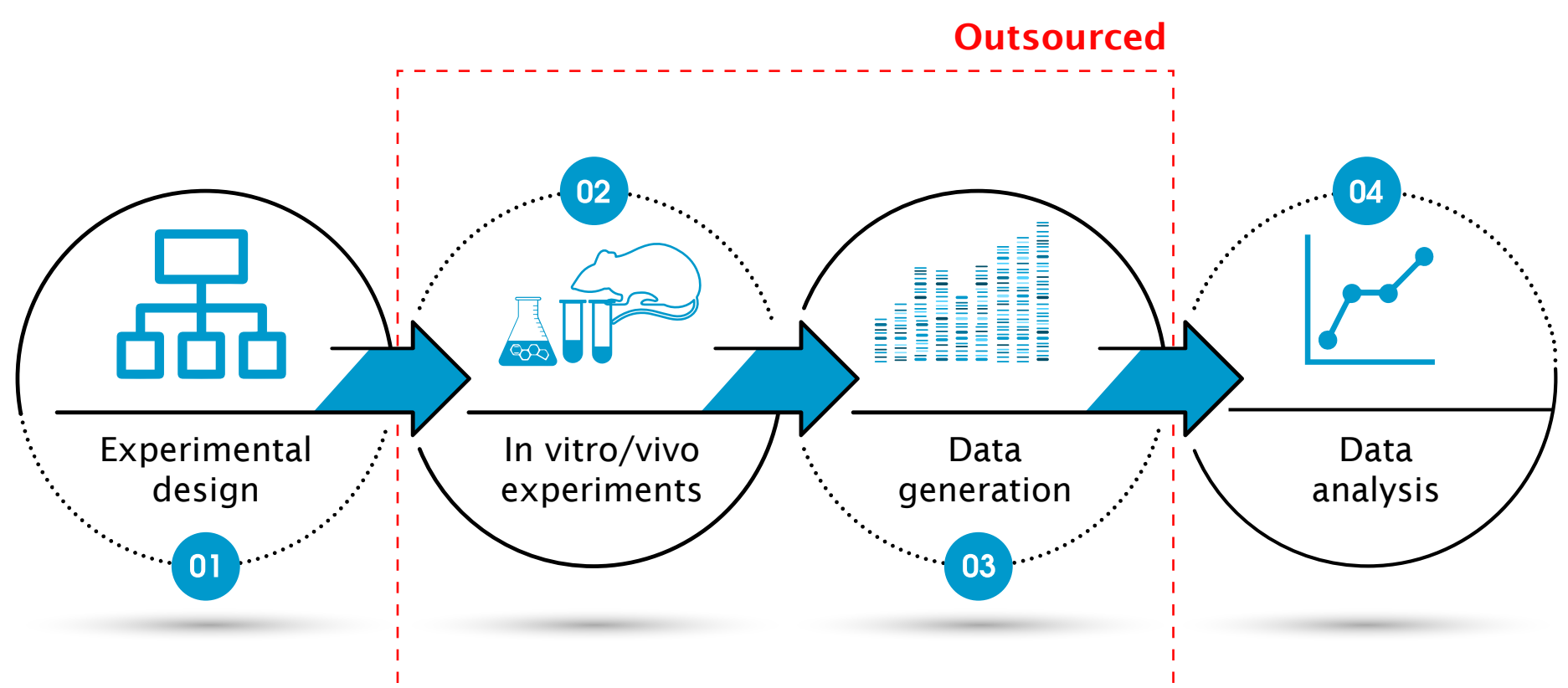
The partner was interested in identifying alternate indications for their assets by an integrated strategy. The objective was to combine in silico analysis through Excelra's proprietary platform with validation through wet lab experiments. Indications corroborated through these two independent workflows would be prioritized.

The Excelra Approach

The six compounds were analyzed with a comprehensive in silico pipeline. This includes Excelra's proprietary repurposing platform, 'GRIP' to generate a biological rationale for its use in new indications. Further, validation was conducted using a Multi-OMICS approach, conducted in a wet lab to provide a final list of indications per compound.



Overview of Omics Analysis



Excelra's Contribution





Alternate indications for the six compounds were identified in silico and validated in vitro/in vivo. One of those compounds progressed to IND filing.

For a compound shelved during preclinical development for the gastrointestinal/autoimmune disorder was repositioned for Alzheimer's disease.

A compound for which the Target/Mechanism of Action was previously unknown, was repurposed for a new indication using lipidomics data.

For a compound discontinued in clinical development due to hepatotoxicity, an alternate use of diseases requiring topical administration was identified.

Excelra's Service Portfolio

	Insights	Data
 Discovery	<ul style="list-style-type: none">• Data Science Driven Drug Discovery• Target Identification• Target Dossier Services	<ul style="list-style-type: none">• Chemistry Curation Services• GOSTAR <i>Structure Activity Relationship database</i>
 Translational	<ul style="list-style-type: none">• Biomarker Discovery• Drug Repositioning• Life Cycle Management• Systems Biology Informatics	<ul style="list-style-type: none">• Biology Curation Services• GOBIOM <i>Biomarker intelligence database</i>
 Clinical	<ul style="list-style-type: none">• Precision Oncology Informatics• Clinical Pharmacology	<ul style="list-style-type: none">• Clinical Trial Outcomes Database
 Value Evidence	<ul style="list-style-type: none">• Outcomes Research• Epidemiology Modelling• Economic Modelling• Value Evidence Communication	<ul style="list-style-type: none">• RWE & Big Data Realization• SLR & Meta-Analysis
 Technology Solutions	<ul style="list-style-type: none">• Enterprise Data Strategy• Enterprise Cloud Ops• Enterprise Digital Transformation	

For more information, visit https://www.excelra.com/translational/#drug_repositioning



About Excelra

Excelra's data and analytics solutions empower innovation in life sciences across the value chain from discovery to market. The Excelra Edge comes from a seamless amalgamation of proprietary curated data assets, deep domain expertise and data science. The company's multifaceted teams harmonize and analyse large volumes of disparate unstructured data using cutting-edge technologies. We galvanize data-driven decisions to unlock operational efficiencies to accelerate drug discovery and development. Over the past 18 years, Excelra has been the preferred data and analytics partner to over 90 global clients, including 15 of the top 20 large Pharma.