ACCELERATE SCIENTIFIC DISCOVERY WITH ANZO®

A SEMANTIC LAYER FOR THE SCIENCE-DRIVEN BUSINESS

SUMMARY

Biopharma companies are facing a data deluge, with vast amounts of disparate data in different formats generated along the R&D pipeline. Scientists and business analysts waste time trying to locate and understand the data as they attempt to answer crucial questions and support key decisions. Anzo® automatically creates a Semantic Layer that understands the meaning and relationships of all the data in any format, and enables rapid, on-demand access to answer scientific and business questions and support smarter and faster decisions for better insight and efficient business execution.

THE CHALLENGE

Biopharma companies are expanding their portfolios from small molecules to biologic therapeutic agents, and adopting translational and precision approaches to new medical breakthroughs: and at the same time generating unparalleled volumes of data. Scientific data in biopharma companies is everywhere and in multiple structured and unstructured formats – e.g. research data in ELNs, assay results in Excel spreadsheets, QA/QC runs in LIMS, DMPK data in weekly reports, etc. – so posing a question to support a decision, test a hypothesis or explore a new insight forces a scientist or business user to first locate the right data source, understand its format and terminology and link it with other relevant sources. This delays – or in some cases prevents – getting to a comprehensive answer in a timely way and slows R&D progress. In the push to develop safer medicines sooner, researchers and business users need to be able to exploit the totality of their enterprise data assets, no matter where the data is held, or in what format.
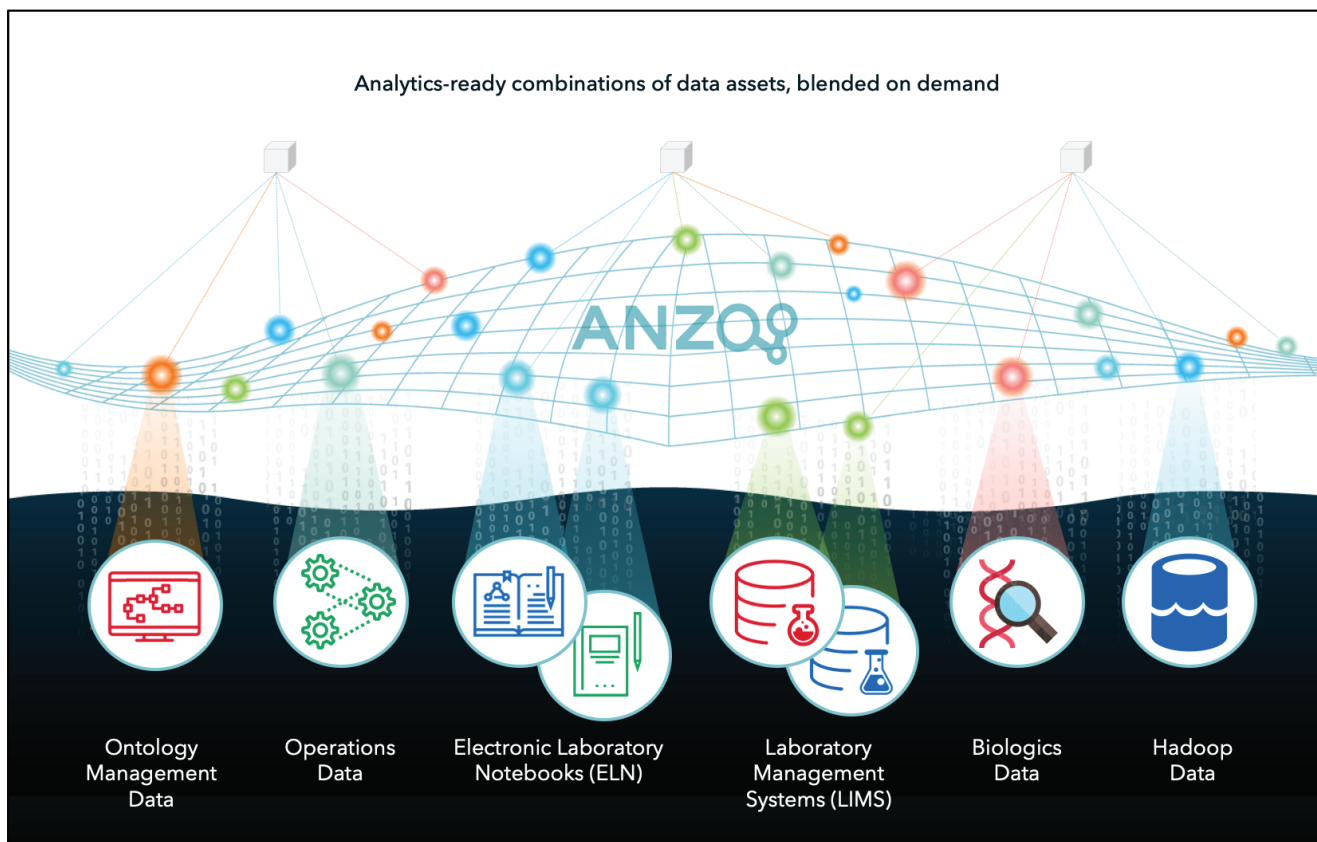
For example, quickly investigating and responding to the detection of a contaminant or a reduction in expected yield in a downstream production run of a pre-clinical biosimilar candidate might require rapid access to analytical data, physical sample provenance and location data, scale-up process documentation, and instrumentation calibration status. Searching across these disparate data silos with traditional tools and then attempting to stitch the answers together is an almost impossible task, and likely to take days and weeks, thereby delaying a crucial next step in the R&D pipeline.

Similar problems beset staff in regulatory affairs who are tasked with locating and accurately reporting required data in submissions to the authorities, such as the extensive information dossier needed by the FDA for an Investigational New Drug Application (IND). Data for an IND will come from departments including chemistry, manufacturing, control, pharmacology and toxicology and will need to be pulled from their multiple disparate sources. With traditional search and reporting tools, this can take months and delay the beginning of Phase I clinical trials.

THE SOLUTION

Anzo® enables scientists to flexibly search, navigate, correlate, and analyze all scientific data assets, including structured and unstructured data locked away in ELNs, LIMS, medical records, clinical trial data, spreadsheets, Word documents, PDF files, and enterprise applications, for faster and more insightful discoveries. Anzo automatically ingests source documents, files and other content, and creates a semantic layer that understands the meaning and relationships of every enterprise information asset from every stage of the R&D pipeline.

Analytics-ready combinations of data assets, blended on demand

| Ontology Management Data | Operations Data | Electronic Laboratory Notebooks (ELN) | Laboratory Management Systems (LIMS) | Biologics Data | Hadoop Data |

Anzo then makes the data readily accessible to researchers, data scientists and business analysts using biopharma-specific language and terminology. The system supports ad hoc and canned queries, and can present key data in dashboards for rapid scanning and assessment, or passing to other analysis and visualization tools. Anzo also supports rapid, accurate, provenance-rich reporting, and flexible execution and integration within an enterprise informatics infrastructure.

Anzo understands science, operates with unmatched speed at big data scale, uses open standards and provides robust security, lineage, governance and provenance. Biopharma companies that use Anzo report substantial time-saving over using traditional searching techniques to locate, analyze, and report disparate data, and the ability to ask previously unanswerable questions, so that researchers can spend more time doing science and the business can gain faster, better insights.