DNAnexus®
Titan™

The Trusted Platform for NGS Data Analysis

Powering the future of research and clinical genomics pipelines with high-performance, cloud-based data analysis solutions.

Clinical Diagnostics Industry Overview

Clinical diagnostics companies are rushing to unlock the power of genomics to deliver on the promise of precision medicine. However the volume of genomic data presents scalability, reliability, and compliance challenges for next-generation sequencing data analysis systems. The massive size and scope of data, the effort involved to develop and operate production analysis pipelines at scale, and the need to operate in a clinically compliant environment place a heavy burden on existing IT infrastructure. In a business where turnaround time and consistency mean everything, these challenges can limit future growth.

DNAnexus Titan eliminates bottlenecks in development and production systems with a flexible, cloud-based platform that brings data and pipelines together in one place for streamlined analysis. Titan enables diagnostic testing labs to rapidly scale to meet increasing volume demands, grow their test portfolio, and simplify the complexities of secondary genomic analysis infrastructure, allowing researchers to focus on what's important — accelerating precision medicine.

Empower Your Team

✓ **Quickly expand diagnostic testing services & locations**

✓ **Fuel growth & innovation in genomics**

✓ **Assure reproducibility & compliance without administrative hassle**

CASE STUDY
Leading Molecular Diagnostic Company

THE CHALLENGE

Designing or updating an analysis pipeline is an iterative process involving running and re-running variations of the improved pipeline and validating the output results. To do this, labs need to re-test known samples in the updated pipelines, a time consuming process that delays production deployment and incurs compute expenses.

THE SOLUTION

With DNAnexus Titan, this leading diagnostics company was able to run its newly created R&D pipelines in the same environment as its production data. DNAnexus Titan's Smart Reuse feature leveraged previous outputs for stages that do not have upstream modifications, instead of running from scratch. This resulted in **80% reduction in development time** for **20% less cost**

DNAnexus®

Limitless Test Volume

Increase your capacity to handle new tests and increased volumes with a high-availability, high-performance system that eliminates delays caused by long processing queues, long compute times, and unreliable platform availability. Titan scales automatically and accelerates turnaround time so you can keep costs per sample low.

Develop & Deliver Diagnostic Tests Faster

Accelerate turnaround time for faster delivery of patient care. Researchers can efficiently create and execute research and clinical analysis workflows with both industry-standard and custom-developed bioinformatics tools. **DNAnexus Titan's** efficient Smart Reuse feature eliminates long processing delays when testing new pipeline versions.

Share Data & Tools Globally

DNAnexus Titan powers collaboration by decentralizing sequencing across multiple labs and centralizing analysis in a secure cloud environment. Researchers can share data and tools, access a JupyterLab environment, track data provenance to ensure uniform reproducibility of pipelines, and use access controls to confidently expand their business to multiple locations.

Simplify Security & Compliance Management

DNAnexus Titan is certified compliant with strict security, quality, and regulatory regimes needed for clinical testing, including ISO27001, NIST 800 framework, HIPAA, GDPR, GxP/ICH regulations, and CAP/CLIA, and maintains compliance with global data transfer requirements.

Expert Professional Services

The **DNAnexus xVantage Group** consists of bioinformatics scientists and computational experts ready to help new clients ramp up quickly and get the most out of **DNAnexus Titan**. Their expertise in industry best practices and emerging techniques guide organizations through data and pipeline migration, optimization, and development.

DNAnexus®   THE GLOBAL NETWORK FOR ACCELERATING SCIENCE

DNAnexus has built the world's most secure, trusted cloud platform and global network for scientific collaboration and accelerated discovery. We partner with customers to tackle some of the most exciting opportunities in human health and beyond.

Our powerful platform has helped over 100 customers in pharma & biotech companies, clinical & healthcare organizations, and government agencies push the boundaries of genomic & multi-omics science.