

## Driving innovation in genomics and shaping the future of bioeconomy

Fujitsu leverages various business-specific AI technologies, including generative AI, action recognition AI, and demand forecasting, to support the creation of new services and businesses that improve daily convenience and enhance people's abilities and knowledge.

This solution represents a significant breakthrough in the field of genomics by accelerating research, improving diagnostics and improving patient care. It enables researchers and healthcare professionals to unlock the potential of genomic data and advance the understanding of genetic factors in health and disease.

### To improve efficiency and accuracy in genetic processes and reduce response times in the field of health

In the field of clinical genomics, a key challenge is that researchers and data analysts cannot fully analyze research data. This challenge is one factor that makes it difficult to promote the adoption of biotechnology. This inability to analyze research data stems from several factors.



**Workflow Complexity**



**Underutilization of Research Datetime Prolongated from Analysis**



**Sample Management Errors**



**Lack of Interoperability Between Systems**

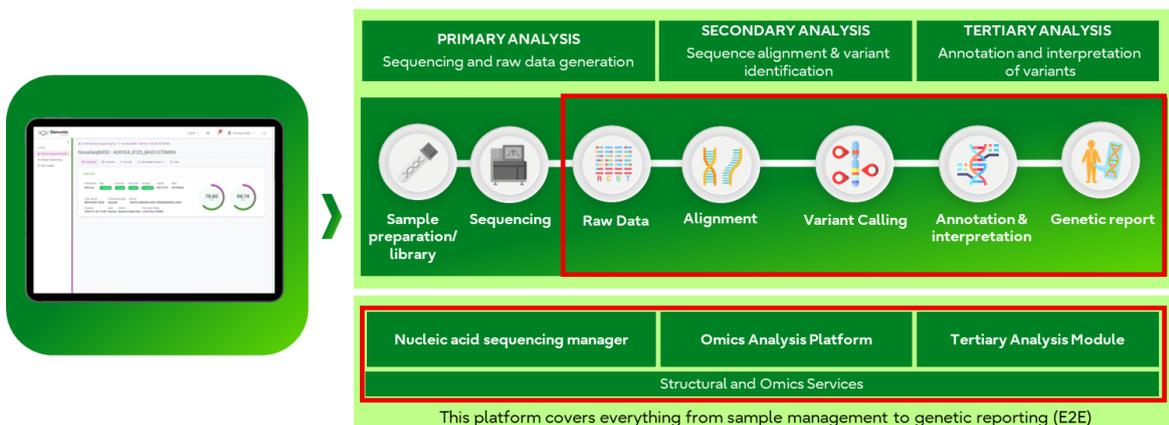


**Difficulties in Annotation and Interpretation**



**Underutilization of Research Data**

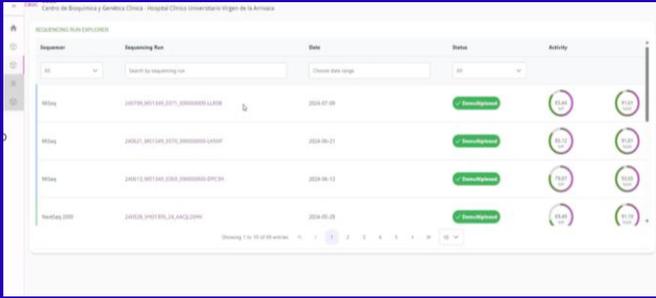
This solution addresses these challenges in clinical genomics. It uses a modular and interoperable design to achieve information processing, process optimization, and automation at each stage of genetic analysis. This approach improves the efficiency and accuracy of the genetic analysis process. Furthermore, the solution aims to reduce the time required for researchers to obtain analysis results and to generate reports.



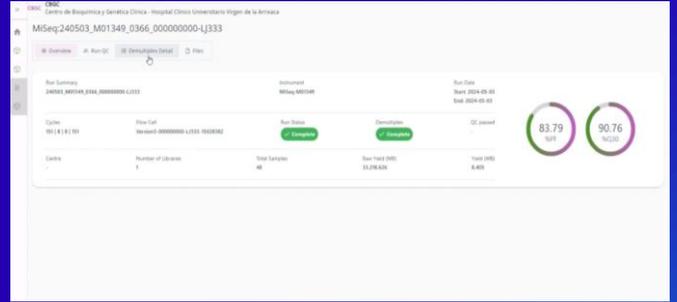
# Features

This solution covers everything from sample management to genetic reporting.

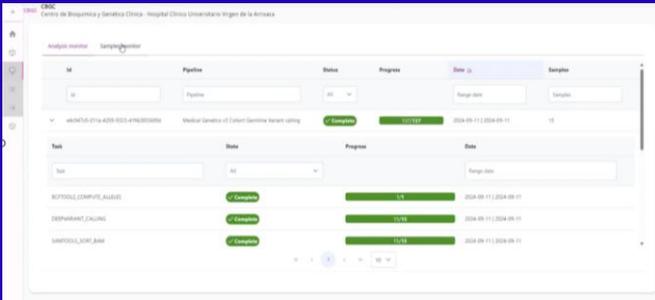
## Run Explorer



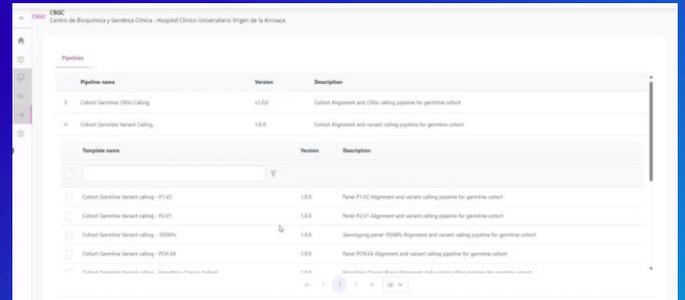
## Quality Control of a Run



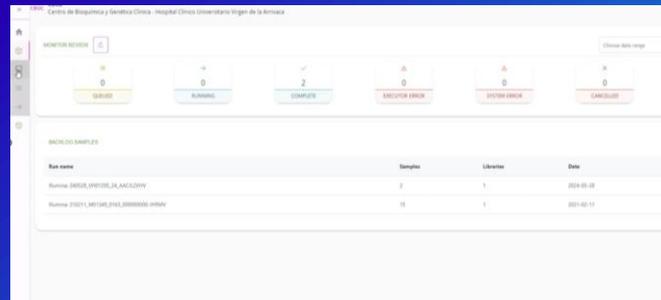
## Monitor pipeline analysis



## Launching the pipelines



## KPIs of the pipelines



# Key Benefits

This solution seeks to improve the efficiency, accuracy and accessibility of genetic processes, delivering substantial benefits in terms of response times, error prevention and research support.



Facilitate the diagnostic process for geneticists



Streamline genetic analysis, reducing waiting times



Identify common errors in the handling of biological samples



Centralization and interoperability



Complete digitization of the genomic process and improve decision-making



Research facilitation

## Centralized storage for genomic data



### Challenge

- Needed a centralized storage solution for the genomic data generated in the company health system
- This solution had to be a complete genomic data analysis, from secondary analysis (alignment and variant calling) to the annotation and implementation of a prioritization and reporting tool.

### Solution

- Fujitsu provided a centralized, automated, and secure storage solution for genomic data with secure access and backup.
- This solution led to an improvement in the automation of genomic analysis processes by integrating with laboratory management systems, avoiding manual processes and speeding up diagnosis.
- It also allowed for greater control of genomic data, avoiding duplicate testing and maintaining a traceability record of the entire bioinformatics process and associated data.

### Results

- It provides a unified and scalable storage of available genomic data.
- Improve automation of genomic analysis processes
- It makes it possible to quantify and predict analysis times, allowing costs to be reduced.
- The platform can be customized or customized, providing new functionalities and pipelines for genomic analysis and including new relevant use cases in clinical genetics.



### Contact

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