

Company: HUNT Biobank, Norway
Application: One of the largest population-based health studies ever performed

Scope:

- Database of 100,000 Norwegians tracked over 25 years
- 5,000 samples per week
- Integration with all Norwegian National registries
- 110,000 new individuals solicited for new study

Background:

HUNT Biobank represents an integrated family and personal database of approximately 100,000 people from Nord-Trøndelag, Norway. Initiated 25 years ago to support epidemiological, clinical and preventative medicine research, HUNT offers valuable insight into disease status and progression, particularly in relation to quality of life measures such as environment, education and occupation. Key areas of research include studies on cardiovascular disease, diabetes and lung disorders, as well as thyroid, muscle skeletal and mental diseases and diseases distinctly occurring in men or women.



Challenges:

- Need to automate the collection, collation, storage and administration of enormous amounts of data from across the biobank's studies prior to a new study beginning
- Need to reduce manual data input and human error for improved security of critical data
- Need to integrate LIMS with existing robotics
- Need to integrate database with participants' personal identity number as well as end-point registries such as Death, Cancer, National Health Insurance, Hospital Registration and Population Census Registry

Solution Components:

Thermo Scientific Nautilus LIMS

- Integrated with instrumentation and robotics
- Links data from HUNT database to each sample ID and outside registries
- Increases automation and throughput of sample analysis
- Provides traceability of donor information and samples

Automated storage and retrieval

- Integrated with the LIMS to facilitate data management, receive and return results quickly and provide complete audit trail for all samples

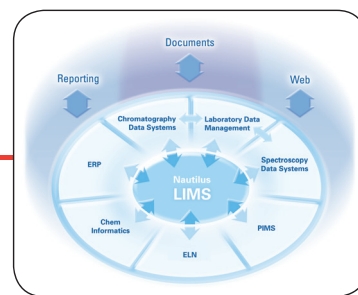
Microsoft SQL Server database, Infopath, Windows, Office and Visual Studio.net

- Industry-standard relational database system

Results:

This integrated deployment of Nautilus LIMS has enabled secure storing, efficient management and real-time reporting of data while also ensuring uninterrupted, dependable transmission of information between HUNT Biobank and the various national health registries. Productivity, throughput and accuracy have increased, while improving data administration, sample traceability and regulatory compliance. This project has enabled HUNT to begin to answer one of the most pressing questions of the 21st century: How can modern medicine improve our daily lives?

CONNECTS Integration



Thermo Scientific Nautilus LIMS



Automated storage and retrieval



Microsoft SQL Server database, Infopath, Windows, Office and Visual Studio.net

About Thermo Scientific CONNECTS

Thermo Scientific CONNECTS is aimed at bridging the gaps between laboratory generated data and the enterprise level information that is required for mission critical management decisions. A broad product offering allows us to help our customers expand the business of science from the laboratory throughout the enterprise, providing both the integration of instruments and systems, and interoperability necessary to transforming data into relevant business drivers for companies across the broadest spectrum of industries.



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