

LIMS PROJECT RESCUED FOR GENOME SEQUENCING LAB

Agendia, a molecular diagnostics that specializes in cancer diagnosis and treatment planning, is on the forefront of the rapidly evolving field of personalized medicine. Their diagnostic tests use genome sequencing and analysis to determine the likelihood of a cancer reoccurring and to recommend individualized treatment plans for various types of cancer.




The Challenge

In order to commercialize their testing services, Agendia needed a Laboratory Information Management System (LIMS) that could capture, integrate, and analyze the large volume of complex RNA sequencing test data generated by two different laboratories, each operating 24 hours and 3 shifts per day and running three different testing systems.

The testing processes were so complex that two prior attempts to develop a LIMS had failed.

The development process was further complicated by the fact that Agendia's prolific R&D laboratory was constantly expanding the number of diagnostic tests that Agendia could provide and improving the tests that had already been developed. These new tests and improvements needed to be incorporated into the LIMS before Agendia could begin offering them to physicians and patients. It is not uncommon in diagnostic and clinical trials market for the scientific innovations to outpace the ability of IT departments to update laboratory management systems, Agendia's revenue stream depended on rapidly incorporating the testing changes into the new LIMS.

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The Technossus Solution



Agendia turned to Technossus, who had already developed LIMS for over 20 other laboratories and who understood that there was essentially zero margin for error in medical diagnostic applications.

Working 24x7 with development teams on both sides the globe, Technossus developed a highly customized LIMS that automated the capture, analysis, and reporting for all the testing done in both their European and US laboratories. The new system, which received Clinical Laboratory Improvement Amendment (CLIA) certification, featured end-to-end device integration and innovative end-user reporting.

Technossus' expertise in agile software development processes allowed the development teams to rapidly adjust the software design to the new incorporated testing processes, as well as integrate new devices as the LIMS was being developed. In addition, Technossus assigned two teams to work with Agendia after the system went live to ensure a smooth transition to the new LIMS. One team provided 22x7 support for end users, while another team worked on improvements in core features and functionality. This allowed Technossus to introduce new versions of the LIMS with expanded testing capabilities approximately every two weeks, which in turn allowed Agendia to rapidly introduce diagnostic products to the market.

The Result

The LIMS allowed Agendia to increase, more than triple, the number of patient cases processed per day in their existing labs, launch their commercial testing services, and quickly add new testing services as they were developed.

596K

US cancer deaths in 2016

19.3M

Estimated annual global new cancer cases by 2025

39.2%

US resident lifetime probability of developing cancer