Enhanced Patient Recruitment System

Objective

With a history of 2 successful accomplishments for the famous pharmaceutical company Sigma received a request to develop Enhanced Patient Recruitment System (EPR).

EPR system is intended for centralized patient database management and analysis in order to define patients suitable and available for clinical studies for Customer researches. The goal of the project was to systemize and enhance the process of COPD patients information gathering and recruiting for RITA studies (mostly PoC and PoP). This brings significant business benefits since Customer is able to speed up clinical studies and be more efficient on the market. The system is centrally hosted web application serving several clinics in Europe and providing analysis interfaces to Customer personnel.

Challenge

Since the application is developed for clinical personnel, the greatest challenge was to create user interfaces fulfilling highest demands on usability. In order to ensure that all expectations of end users are met, the project was performed using several steps of daily clinic processes analysis, prototyping (visual prototypes, clickable prototype), meetings with clinic personnel onsite.

The project was developed offsite within 9 months, with short term visits of Sigma specialists, maintaining high level of internal and external security to meet strict requirements of Customer.

System Description

EPR is a secured web application operating via HTTPS protocol and accessible using on-time-password technologies. The system works as a web application accessed through IE browsers and developed as 3 tier architecture with presentation, business logic and data layers. EPR is clinic context based, so every clinic (entry point) is securely isolated from other clinics data structure and data storage point of view.

The system is built so that all user operations are being tracked and logged and any change in the system is being stored in the history so that any old system state can be restored by demand.

System administrators (system-wide and clinic-wide) are able to configure the data structure for patient database by adding new attributes with various data types, introducing business rules and relations between particular fields in a patient questionnaire. Thanks to high performance real time data synchronization mechanisms (SQL Server based), Customer has up-to-date patient data collected from all worldwide clinics. The system also replaces analysis tools helping Customer and clinic personnel to perform fast look up for the data and detect patients suitable for clinical studies.

Quick Facts

Duration: 9 months
Team: 6 persons
Technologies: .NET, Web Services, AJAX, SQL Server 2005

Result

Today the system is being used by several clinics in Sweden, Denmark, Finland, Holland. Sigma team has finished the data import processes in order to put previously collected patient data into the system for Customer to start working with old and new patient databases using new Patient Recruitment System.