Web Applications for the Healthcare Industry

a case study

Overview:

Healthcare industry can benefit a lot from the solutions offered by modern technology.

During the past few years we designed and developed over a dozen applications used by both doctors and healthcare professionals.

ExtraCare.pl is a site for multiple sclerosis patients that enables them to communicate with MDs through a completely secure chat, serves as a knowledge resource and a smart logbook to note down all your examination results. The logbook can also remind the user about the upcoming examinations via email and SMS.

TumorTx is an application deployed in a Clinic in Gdańsk, Poland used by the Transplantology Department to track graft histories and calculate statistics based on the encountered complications and transplant lifetime. This enables them to find statistically significant correlations between the treatments or drugs used and the medical outcome, to prolong and enhance future patients life.

Side Effects Reporting Tool is used by a major pharmaceutical company to collect reports about side effects caused by their drugs during clinical tests. We achieved full FDA compliance.

All these applications run on a remote server and interact with the user through the most familiar, no-hassle interface they know from their day-to-day activities: a web browser.

Challenges:

Healthcare is a major industry that deals with the most valuable and precious thing: human life and well-being. To make sure it uses the highest possible standards, complex policies and regulations were formed along the years.

This was the one of the reasons why a few years back only the biggest corporations provided software for the healthcare industry. As expected, solutions provided by those companies were always outdated (due to a very long production process), bloated, had hideous, unergonomic and unintuitive user interfaces and required the user to attend one-week long

training before he was able to even start using the program. Because the main goal of the hospital staff is to save lives, and not to use software – implemented solutions were often abandoned very quickly.

Our challenge was to change that situation completely. We wanted to offer affordable, simple solutions to specific problems. They needed to be a pleasure to use for doctors and other healthcare professionals, whose computer familiarity is nowhere near being a computer geek.

Solutions:

Our solutions consisted of software running on the central server, with a web browser interface. This has two major advantages: there was no software installed on users' computers (all are equipped with a web browser) and the browser is a familiar environment in which users already spend a lot of their time.

Leveraging modern technologies enabled us to prepare browser-based interfaces to be as useful and ergonomic for the MD's as possible. We worked closely with the healthcare professionals, listening carefully as they described their every day use-cases. After applying our knowledge about interface design and human-computer interaction the result was a set of applications which are a pleasure to work with, that help, not stand in a way of reaching their goals – so much different from what our users where accustomed to.

Well done interface is not the whole story, though. For TumorTx (digital patient records) we did a very thorough and meticulous research about various regulations in the healthcare industry and build proprietary solutions to comply with them and cut costs of development over 30 times from traditional approach.

Our system got a favourable opinion from the leading law firms and was implemented in a Gdańsk hospital. For the Side Effects Reporting Tool we build a full audit-trail solution, where the app automatically generates reports about who and when changed what in the database. For ExtraCare we build a moderated, secure

chat for the doctors to remotely give advice to their patients.

We believe all of this matters.