Nationwide Upgrade of Critical Medical Devices for Enhanced Hospital Operations

Medical device manufacturers know how rapidly technologies can change in the field. Ensuring you provide hospitals with innovative tools that meet regulatory requirements is vital. When a leading medical device manufacturer needed help upgrading software and hardware for nearly 100 key customers, SPK's experts stepped in to help. This manufacturer offered a media management solution allowing surgeons to record and store videos of their operations in a library. These videos can then be shared with the patient or other doctors as learning material. However, their version of this system was outdated and posed security and scalability risks. Let's explore how they utilized SPK engineers to complete their update services.

CHALLENGE

At the time, each hospital had a legacy storage system and version 1 of the media management software. The main issue many hospitals had was capacity issues. The hardware and software versions had trouble scaling, and they were running out of storage for their recordings. In addition to storage challenges, some hospitals had struggles accessing the library once the recordings were submitted. Version 1 of the software was developed in the 2010s. As technologies advance, so do security threats. Many hospitals did not feel confident that the data stored in the recording library was secure with this version. Larger hospitals also ran into authentication issues when trying to access the recordings. Oftentimes, these hospitals had more complex authentication requirements than their smaller counterparts. Due to the wide range of hospitals, this manufacturer did not have the system experience or the number of personnel to resolve these issues for their key customers.

SOLUTION

Because of a long standing relationship, SPK's experts stepped in, working directly with hospital IT on the equipment, as well as guiding them remotely. Our team provided the medical device manufacturer with diverse knowledge and manpower from multiple engineers. Much of the work was migrating the case data from the legacy system to a new storage system. We ensured the systems had enough capacity and no case data was lost during the migration.

⚙ **0 INSTANCES OF FAILED RENDERING**

⚙ **DECREASED EXPORT TIMES**

⚙ **COMPLETED 100% OF THE DESIRED GOAL**

RESULTS

Due to our help, this medical device manufacturer upgraded 90% of the technology across their desired hospitals and SPK is finalizing the upgrades for the remaining clients in 2025. Currently, SPK is completing the final 16 client upgrades, which will include additional hospitals outside of the original key client list. In 2024, we completed 21 projects, which was 100% of our goal. Clients have reported 0 instances of failed rendering and significantly decreased export times due to the upgraded software. In addition to this, they can now share cases securely outside of the network while protecting PHI. Surgeons can share their procedures within HIPAA compliance.

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> **When I first began working here, version 1 posed several challenges that made it difficult to use efficiently. Issues such as rendering failures, limited data storage, extended exporttimes, and restricted browser access were common. The recent upgrade, however, has addressed all these issues. Since the update, we have had zero instances of failed rendering, and it can now be accessed on any web browser. Export times have significantly decreased. Cases that previously took days to render are now ready for viewing on the same day they are exported. This upgrade has not only streamlined my workflow but has also positively impacted my interactions with customers.**
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> *- Onsite Specialist at a large EP facility*