DELL Technologies

OEM Solutions

Helping to save lives using technology.

"We developed Kinosis for the early detection and treatment of lung diseases. With Dell Technologies OEM Solutions, we have a global partner to help us improve the fight against disease of this kind worldwide."

Shunichi Koizumi
Assistant Manager, Manufacturing and Procurement HQ, Production Technology Operations, Product Design Division 5, HC Product Department 2, Konica Minolta

Situation Analysis

Enabling early detection of patients with lung disease.

Japanese multinational Konica Minolta has brought its expertise in digital technology and optics to healthcare. The company is leveraging 150 years of experience in imaging technology plus expertise in machine learning (ML) and artificial intelligence (AI) to transform healthcare practices and potentially save lives.

Konica Minolta understood that early detection of lung disease was vital to patient survival. What's more, spotting chest abnormalities as quickly as possible enabled clinicians to begin life-saving treatments sooner and reduce patients' medical expenses. It was key, however, to see the lungs expanding and contracting with each breath and the blood circulating to spot the signs of disease early. Yet, this wasn't possible with conventional, static X-ray technology.

Transforming healthcare with X-ray video.

The company developed a digital X-ray video recording software system, powered by AI, that modernized traditional methods. Known as Kinosis, the system generates video by continuously time-lapsing X-rays of patient lungs, enabling clinicians to check the movement of lung tissue and to confirm physiological information associated with breathing. With this information, clinicians can diagnose diseases more easily—ensuring faster treatment and better outcomes.

Increased patient care without any IT burden.

Thanks to the groundbreaking technology, the Konica Minolta system could support the diagnosis of healthcare professionals around the world. However, to launch Kinosis, the company needed a platform for its software. The platform would have to meet high healthcare standards—providing the reliability hospitals depend on. In addition, the platform would need to connect seamlessly to legacy X-ray systems and picture archiving and communications systems (PACS).

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Design Partnership

Konica Minolta works with OEM Solutions to empower primary care worldwide.

Konica Minolta has a long-standing relationship with Dell Technologies, using a wide range of its solutions including client devices. "It was through our work together that we learned of Dell Technologies OEM Solutions," says Abror Salomov, senior manager, indirect goods & services procurement division, procurement operations, manufacturing and procurement headquarters, Konica Minolta.

Abror adds, "OEM Solutions lead the market by combining best-in-class technology and global capabilities. With Dell Technologies, there are no surprises."

Setting the standard in global healthcare with OEM Solutions.

Konica Minolta found that it could leverage OEM Solutions' products and services to bring Kinosis to the global market. This resulted in the following:

- Running Kinosis on Dell Precision workstations gives customers confidence in its performance.
- Choosing a stable OEM XL workstation configuration minimizes change and provides longer product transitions and in-advance visibility to key component changes, if they occur, for the most reliable software performance.
- Offloading the management of software updates to OEM Solutions avoids disruption to customers in the event of workstation changes.
- Adopting standards-based technology integrates easily with legacy X-ray and backend PACS.
- Having OEM Solutions load the OS image and BIOS software ensures consistent software installation and faster delivery times.
- Working with OEM Solutions avoids possible delays in meeting compliance and regulatory needs worldwide.
- Accessing global OEM support optimizes the performance of Kinosis for customers.

Outcome

Making the invisible, visible.

Kinosis is helping tackle one of the leading causes of death around the world. By helping diagnose lung diseases such as Chronic Obstructive Pulmonary Disease (COPD) that were previously invisible in traditional X-rays, the technology can be a major benefit to global healthcare.

"The kinds of abnormalities that used to require advanced diagnostic equipment can now be identified using conventional radiography. Additionally, the ability to provide new information based on the movement of lung tissue is revolutionary and saves valuable time," says Hiroshi Miyatani, manager, X-ray planning division, healthcare business, Konica Minolta.

While emitting the same level of radiation as just two normal X-ray examinations, Kinosis can generate 300 high-quality images in 15 seconds to show the lung movements and physiological information associated with a patient's breathing. As such, there is no room for error. Hospitals using Kinosis are also highly satisfied with the performance on Dell Precision workstations. "There haven't been any surprises, and the feedback on performance from all our customers has been excellent," comments Miyatani.

Kinosis is cost-effective, integrating seamlessly with existing X-ray systems and PACS, so hospitals can implement the technology at a relatively low cost. "It's proving to be a game changer, enabling hospitals of all sizes to deliver highly effective diagnoses without significant outlays," comments Miyatani. "Kinosis is significantly providing a higher quality of care to more patients than what was possible in the past."

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