

# Case Study



## **Bringing Mobility to Virtual Simulator Programs across All Digital Devices**

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Recent improvements in digital technology have brought about far-reaching changes in the medical education sector. Physical manikins, classroom demonstrations, and case discussions along with training assessments are rapidly being replaced with virtual simulators and online assessments. However, the true power of such simulator programs can only be realized when a very high number of healthcare professionals start using and benefiting from these. The pre-requisite for this is to make access to such a virtual simulator-based program convenient and platform agnostic and allow medical students to learn even while they move.

## Client Profile

Headquartered in Europe, the client is a globally-recognized institution that offers a comprehensive range of educational, training, and therapy products for life saving and emergency health care. Its educational portfolio comprises medical simulation, resuscitation, and skills training. The client was looking to enhance their educational efficiency and reach so that medical associates are better prepared to deal with unexpected health issues like trauma, sudden illness, and other medical situations.

The organization develops products, programs, and solutions for hospitals, voluntary organizations, educational institutions, and military across the globe to assist healthcare providers improve patient outcomes and survival.

## Requirement

The client had an existing simulation product used in educating and training nurses which allowed them to interact with virtual patients in a safe, realistic environment, available online, and accessible everywhere. They also have a program for healthcare professionals who need to know how to perform CPR, as well as other lifesaving skills. The program uses e-Simulation technology to present realistic patient scenarios as Basic Life Support (BLS) patient cases to students where they assess each patient, formulate a treatment plan based on 2010 BLS guidelines, and provide treatment. It also supports skills practice and testing with a voice-assisted manikin (VAM) system and an online multiple-choice written exam.

However, both these products were available only on desktops restricting the mobility of this solution and the ability of students to learn on the go. What they needed was to provide convenient access and to improve the learning experience for students by bringing these solutions to tablets.

## **Impelsys' Solution**

Impelsys enhanced the educational Simulator platform for nurses so it can be accessed on any modern browser on any modern computing device, including computers, laptops, and tablets, irrespective of the operating system.

For the client's Basic Life Support (BLS) program, Impelsys enhanced its existing product by changing its output from SWF to HTML5, so to make it available on both tablet browsers and desktop browsers, without the need of Flash Player. For this, additional codes were written using Haxe 3 and HTML5 APIs of Haxe language to build an HTML5 user interface.

Impelsys leveraged its best practices and expertise in developing new applications and transforming existing systems and processes. It deployed an Offshore Delivery Center (ODC) based development model to provide clients with benefits like lower cost, wider time zone coverage resulting in faster delivery and better talent onboarding. The prototypes were developed before commencing on actual development. This phase included converting one of the five existing BLS patient cases to HTML5 and onboarding ten new cases. The application was based on the Heartcode framework that it has successfully used for many other products.

## **Benefits**

By making their products accessible to all the browsers, operating systems, and digital devices including PCs, laptops, and tablets, the client made it easier for students to access educational modules using virtual Simulators. This increased the usage of these effective and efficient educational products among nurses and Basic Life Support (BLS) healthcare professionals. Apart from increasing the market share and revenue for clients, it also increased the "HelpingSave Lives" impact of clients by making more healthcare professionals better equipped for nursing, performing CPR, and other lifesaving procedures.



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