

How Medicine And Technology Change (And Save) Lives

By [Sergey Kizyan](#), [Intetics](#)

"The only thing that stays the same is change."

When the Greek philosopher Heraclitus made that famous statement centuries ago, he couldn't have possibly imagined the changed world we are living in today. This has happened as a result of technological advancements, and no one industry has seen such transformational and constant changes as healthcare.



By 2025, the global healthcare IT market is expected to surpass \$441 billion dollars. That's according to a [new report from Global Market Insights](#). New technology and software solutions are thrusting the medical industry forward at lightning speed. These state-of-the-art applications and advancements are not only saving lives but are helping people live healthier, happier and longer than at any time in history.

Let's take a look at how technology is changing the healthcare industry, and in return, how the healthcare industry itself is changing technology.

How Technology Is Changing Healthcare

To say that technology has disrupted the medical industry would be quite the understatement. Recent advancements have actually transformed and

democratized healthcare, making it more accessible, more affordable, and easier than ever for people to take control of their own health.

Here are just a few examples of the hottest health tech trends happening right now and how they are changing – and in some cases – saving people’s lives.

IoT: Measuring Wounds And Automating Joint Replacement – There’s An App For That!

The Internet of Things has brought us many modern-day conveniences, with the mobile phone being the main impetus to our obsession with apps. According to a recent study published by the [HealthWorks Collective](#), there are over 97,000 total health and fitness apps currently available.

In addition to your average FitBit or smartwatch, mobile applications can now track all kinds of health-related activities and patients can share this information as they conduct video-chat “appointments” with their doctors from the comfort of their own homes. Thanks to the latest apps, diabetics can now monitor their blood sugar without having to prick their fingers and patients recovering from or at high risk of a heart attack can get peace of mind by using “pocket EKGs” on their mobile devices. There are even apps that can assist doctors before, during, and after complicated medical procedures like surgeries and transplants.

Doctors are now using a mobile app that allows them to measure patient wounds – both acute and chronic – and monitor them over time. Thanks to a database of wound images, a single scan of a wound can help physicians make faster diagnoses or prepare for surgery before the patient even arrives to the emergency room.

The app can study different types of wounds based on size, shape, edging and color differentiation, etc. A predetermined algorithm is used to identify wound scans and deliver the resulting analysis to the medical staff in record time. After any initial procedure, the patient can take “follow-up” photos of the healing process to send to the doctor, saving them trips to the office and cutting down on overall medical and procedure costs.

Orthopedic surgeons around the world are now using an iPad and desktop application that helps them select the perfect joint replacement product simply by looking at a patient’s X-rays prior to surgery.

The app was developed by working directly with the surgeons and the joint replacement manufacturers to address their specific needs. By automating the entire process, the application has revolutionized the pre-op selection and ordering process for orthopedic surgery.

Integration with the radiology systems in the hospitals was key. The application features multi-user access through a secure cloud solution that allows for real-time syncing. The application is FDA-approved and saves both the patient and the hospital valuable time and money.

In addition to convenience and increased awareness of health issues, the Internet of Things is also helping to save lives through other measures, like improving the response time of first responders through technology such as geo-location tracking and allowing medical providers to safely share patient information across devices and networks.

Robotic Process Automation: Saving The Most Valuable Thing In The Medical Industry – Time



There is probably no other industry that generates as much paperwork (and all the headaches that go along with it) as the healthcare sector. Add to that the challenges that come along with [HIPAA compliance](#) and security issues and you start to understand why automation is so important when it comes to medical records.

Robotic process automation helps doctor's offices, hospitals, and other medical facilities save enormous amounts of time and money by eliminating daily repetitive and time-consuming tasks such as data input, patient chart updates, scanning, and processing of insurance claims.

Doctors and nurses can now use IoT devices to improve patient care and safety by scanning medical ID bracelets and getting up-to-the-minute medical record information that can be shared securely across a network of medical providers.

Machine Learning: Early Diagnoses + Higher Level Of Accuracy = Lives Saved

Everyone knows that when it comes to deadly diseases, early diagnoses save lives. With advancements in machine learning, doctors are able to discover diseases sooner and achieve a higher level of accuracy in their determinations.

The technology and healthcare industries have been toying with the idea of artificial intelligence and machine learning for quite some time. IBM's AI-enhanced "Watson" has been used for medical research since 2013. The following year, Google acquired DeepMind, a London-based startup focused on deep learning and AI processes. And just last year, Google introduced a [machine learning program to detect breast cancer](#).

As more and more big names in both medicine and IT continue to invest in research and solutions utilizing AI and machine learning technology, a new trend is emerging. In much the same way that life imitates art, healthcare is changing technology.

How Healthcare Is Changing Technology

The current state of healthcare has led to a new "niche" in the technology industry: the health tech startup environment.

There is so much demand for new medical applications and solutions that healthcare IT departments themselves can't keep up. Savvy tech entrepreneurs have paid attention to this trend and are launching next-generation startups to capitalize on this emerging trend.

The Medical Startup Revolutionizing The Insurance Industry

[Sensely](#) is a medical startup that provides state-of-the-art solutions for healthcare insurance vertical. It is used by insurance providers to offer their members tailored advice and services in the most convenient and effective manner.

The mobile application features “Molly” – a virtual assistant that uses voice recognition and text-to-speech capabilities to provide users with a lifelike virtual consultation.

Other benefits include a “Symptom Triage” option that uses algorithms to help with self-diagnosis and a Service Locator to find the closest medical professionals within a customer’s network.

Another trend brought about by changes in the healthcare industry is staff augmentation. Companies – both enterprise and startups alike – are turning to offshore outsourcing agencies to beef up their own IT teams or to find developers with particular skills. This allows medical professionals the ability to focus on medicine while someone else handles the tech side of things.

Conclusion

As we learned earlier from Heraclitus’ quote, changes in technology (and change in general) will continue to be a constant throughout our lives. And our lives are getting longer as a result of these changes.

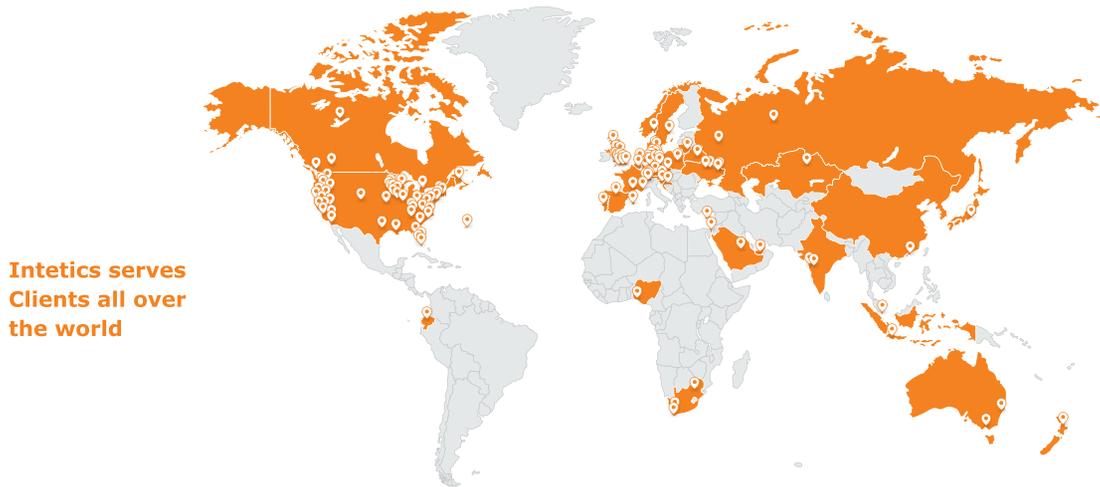
All of the latest and continuing advancements in medicine translate to a win-win for both the tech industry and the healthcare industry alike. But of course, the biggest winners of all are the people who are having their lives saved and their health improved thanks to the synergy between technology and medicine.

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[Sergey Kizyan](#) is the CTO at [Intetics](#). He is an advocate of tech innovations and dives into all details of tech trends. Mr. Kizyan is the author of the “People oriented management” book. He’s listed among top authors on CodeProject.

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