

- The Digital Transformation Within The Healthcare Industry -

The digital transformation in healthcare has the potential to radically improve the ability of doctors, hospitals, and organizations to treat patients and help them live longer, healthier lives.

THE TRENDS

WEARABLES & IOMT

Wearables and IoMT devices provide healthcare professionals with a greater ability to...



collect vital medical data in realtime 24/7.



gain a richer, more accurate assessment of a patient's health.

Wearables and IoMT devices are enabling the healthcare industry and patients themselves to gather data and enhance preventive medical endeavors at both the micro and macro levels.

\$60 billion

The value of the healthcare wearable market by 2023, according to Juniper Research.

\$136.8 billion

The global value of the IoMT market by 2021, according to Allied Market Research.

CASE STUDY: HOW TO TEST IoMT?

[CLICK HERE](#)

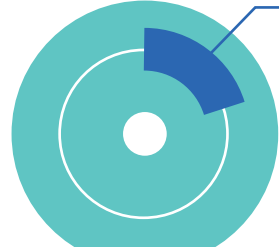
ARTIFICIAL INTELLIGENCE

AI has the potential to help the healthcare industry become more **accessible, affordable, and effective**.

The Potential of AI

AI applications can lower operating costs by completing time-consuming tasks. Greater efficiency through AI will enable medical professionals to concentrate on more complex or patient-centered tasks.

By 2026, AI systems could meet the **20%** of unmet clinical demand, according to a study by Accenture.



By 2026, top AI applications have the potential to save the healthcare industry \$150 billion per year, according to Accenture.

AI systems are being developed allowing healthcare professionals to **analyze vast amounts of data more efficiently**.

AI software can analyze CAT scans in just seconds, decreasing patients' wait times and improving their overall experience.

Investments in AI

40% of healthcare executives are investing in AI, machine learning, and predictive analysis.



According to the PWC Health Research Institute.

\$6.6 billion

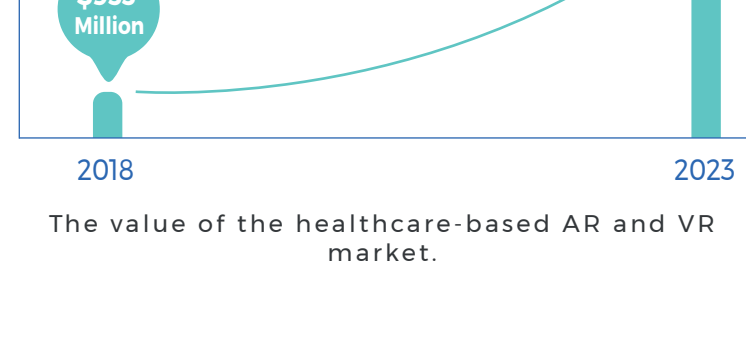
The total public and private sector investments in healthcare-based AI by 2021.

PERSONALIZED SERVICE

AI software can review millions of medical studies to find the most effective treatment plan **based on a patient's condition, age, and other important factors**.

AUGMENTED AND VIRTUAL REALITY

Augmented Reality and Virtual Reality are innovative solutions that are **revolutionizing the healthcare industry**.



The value of the healthcare-based AR and VR market.

THE POTENTIAL OF AR & VR

Help medical professionals learn how to perform complicated and dangerous procedures without placing a patient at risk.

Assist patients in overcoming painful or traumatic experiences that can be difficult to cope with.

Research has shown that burn patients experience between 35% and 50% less pain when engaged in a VR experience.



Guide surgeons during complex operations to reduce the chance of errors.

Create rich educational experiences for medical students.

Recreate experiences that allow patients suffering from dementia or Alzheimer's disease to relive specific memories or happier periods in their life.

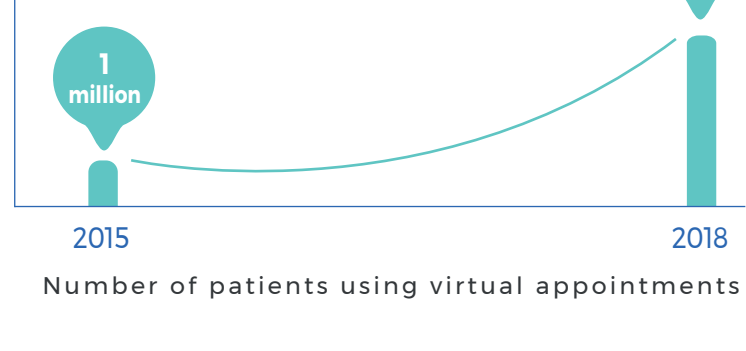
TELEMEDICINE

An innovative solution changing the way patients interact with healthcare professionals. From finding a doctor to attending appointments, telemedicine is **improving people's access to medical professionals**.

THE POTENTIAL OF TELEMEDICINE

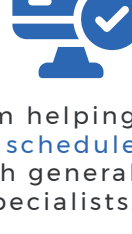
Virtual Appointments

Improving disadvantaged patients' access to healthcare services.



Number of patients using virtual appointments

By 2021, the global telemedicine industry will be worth more than **\$66 billion**.



An online platform helping patients find and schedule appointments with general practitioners and specialists.



Most recently, Doctolib, a major player in the European telemedicine field, raised nearly \$170 million in its latest round of funding.

THE CHALLENGES

DATA

The treatment and analysis of large volumes of data

Due to the sheer amount of data that hospitals, clinics, and healthcare professionals collect.

Collecting and synchronizing data across multiple channels

With the rise of telemedicine, doctor visits are taking place across multiple channels making it difficult to update patients' health records.

Collecting, using, and storing patient data according to GDPR

Under GDPR, fines can be as large as 20 million euros or 4% of a company's annual turnover.

CYBERSECURITY

Eliminating Security Vulnerabilities

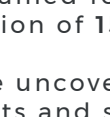
In healthcare, user authentication deficiencies, endpoint leakage, and excessive user permissions are the **three most common vulnerabilities**.

An IBM study revealed that healthcare organizations had the **highest number of breaches with data breaches, which were three times higher than in other industries**.

Securing IoMT

IoMT poses challenges related to their **security-related components**, which vendors can stop supporting after a period of time.

Keep all software systems up-to-date to eliminate security flaws



In 2018, a software coding error was blamed for the erroneous distribution of sensitive and confidential information of **150,000 patients in the U.K.**

It is vital to ensure bugs like this are uncovered before releasing new or updating existing products and software systems.

Design and User Experience

Designing products or digital services that **function perfectly and provide a great user experience**.

The end user must be taken into consideration in order to produce a **product or service that is easy to use**.

THE ROLE OF QA TESTING

QA testing is designed to assess the quality and performance of products or services, which are commonly hindered by software bugs.

Software bugs, regardless of the nature, undermine performance and erode confidence in brands and organizations.

Given the high stakes in the healthcare industry, **QA testing is absolutely vital to the success of any organization or product**.