



# futurism

## DIGITAL TRANSFORMATION IN HEALTHCARE – FUTURISM ADVISORY

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Expert Advice for Bringing Connected &  
Smart Healthcare to Life



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## Introduction

Digital transformation (DX) in healthcare is mainly about adopting new technologies aimed at delivering the highest quality of healthcare and patient care experiences. There are many opportunities to reduce cost as well as improve the quality of care and the hospital-patient experience.

We recommend to kick start your digital transformation journey in small increments/projects that are prioritized based on business needs and can yield rapid ROI. This stepwise and iterative approach paves way for a digital transformation roadmap that can continually drive efficiency, better care and patient satisfaction leading to advanced DX projects in the long run. The digital transformation roadmap is specific to every hospital. It depends on various pain points such as the ability to provide seamless care/service, high operating costs of certain services, dearth of skills/staffing, etc.

However, when starting your DX initiative, we recommend you asking these questions to yourself:

- **What's the priority of the pain point or challenge that you wish to address with digital transformation?**
- **What would be the business value by overhauling or transforming a business operation/app, etc.?**
- **How quickly would you achieve a return on investment (ROI)?**
- **Improved operational efficiency**
- **Will this improve the hospital-patient experience?**
- **What are the risk factors that you might encounter?**

# Save costs to transform

Whilst budget is concern amid the current economic turmoil, we advise healthcare providers and organizations to actively seek-out areas or cost-cutting measures to pace up their digital transformation initiatives. Reason – cutting costs alone is fast turning out to be an outdated business strategy to thrive. In fact, cutting costs as a part of your digital transformation strategy not only to save money, but also to restructure and evolve much stronger.

Here, we recommend healthcare organizations and providers to start by ascertaining the true costs of running your existing systems by quantifying all software, infrastructure and support related costs.

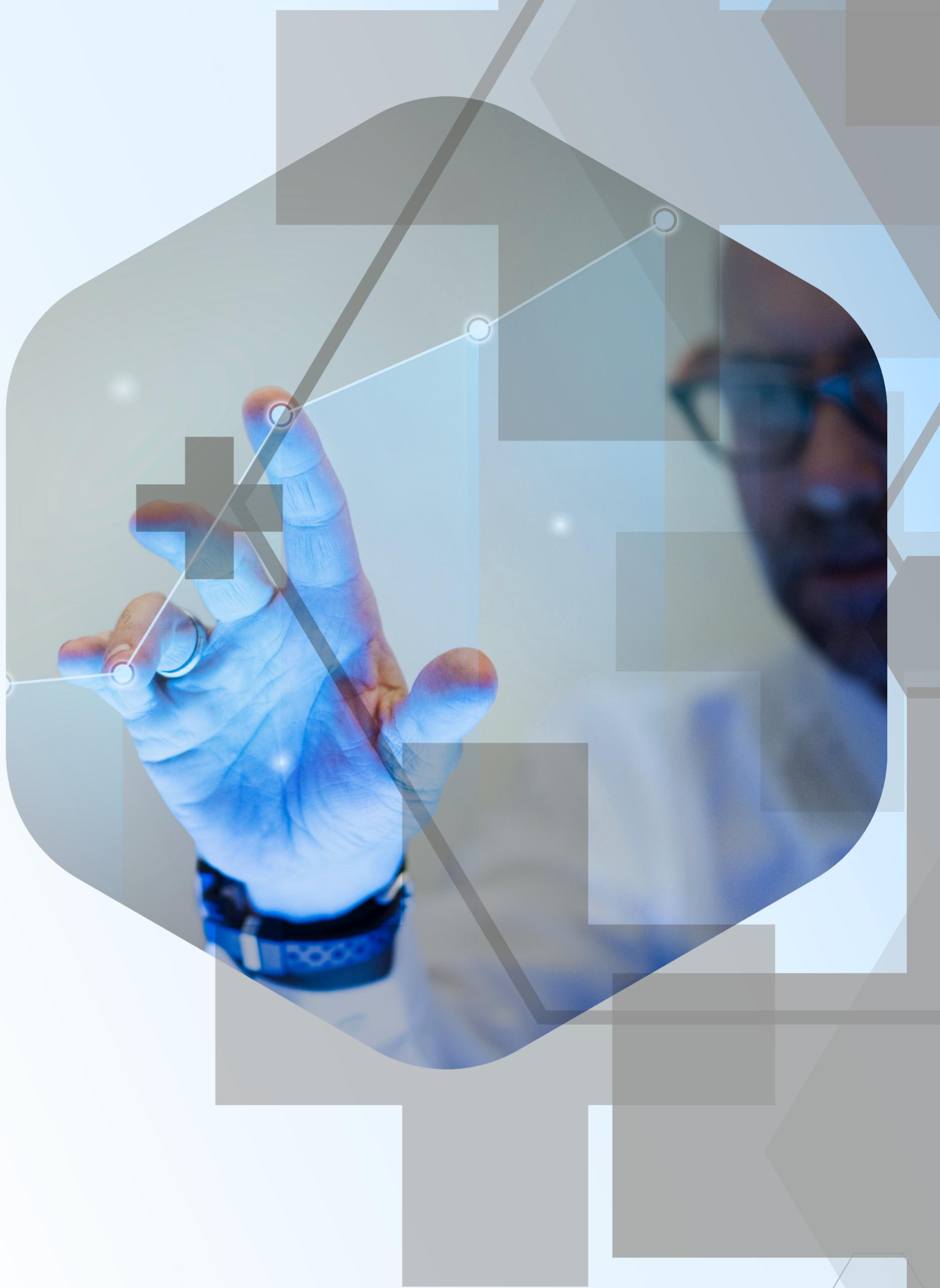
Though cost cutting has evolved as a key step to aid businesses fund necessary growth related initiatives and projects over the years, businesses today are utilizing this practice to fund digital transformation initiatives in an effort to bolster cost-efficiencies and business continuity with a sharp focus on revenue generating projects.

Starting a digital transformation project can be a daunting affair, but having the right and sound initial approach and roadmap will set your journey up for long-term success as well as maximize the ROI and benefits it can deliver to your healthcare organization.

Word of advice: A number of technology services companies are available that can help deliver parts of digital solutions. However, we suggest you to choose a vendor that is willing to listen to your needs and create your DX journey roadmap and strategy using a consultative approach.

## Did you know?

**Telehealth adoption in the US has exploded to around 3,000% since the beginning of the COVID-19 crisis, taking much of primary care to people's homes rather than being tied to a doctor's office or hospital.**



# Building Patient-Centric Healthcare Centers

Here are some example projects that can get you started.

## Business Continuity aka Healthcare Cloud: Connected Care System

A healthcare cloud-managed services suite that is tailored to transform the care models while meeting industry's security standards and compliance requirements. This helps to facilitate value-based care, all through a secure cloud platform. Most importantly, it can help a healthcare business achieve the much-needed flexibility and agility in the **event of a crisis**.



- ✓ **Better collaboration:** On-demand access to all the critical data means access to data anytime from anywhere from any device leading to better hospital-patient experience, improved overall efficiency, better decision-making ability/diagnosis, patient care and efficient remote monitoring for healthcare personnel.
- ✓ **Cost-saving (SaaS):** You pay only for what you use instead of having to physically house servers and perform all the maintenance that goes with owning a server in-house.
- ✓ **Data storage/mobility:** Store and access gigantic volumes of data without spending on physical servers.
- ✓ **Backup/Recovery:** Run automated backups and data recovery thus, saving your IT team a great deal of time and efforts.
- ✓ **Scalability:** Cloud offers healthcare providers with the much-needed flexibility to increase or decrease data storage capacities depending on the needs and demands.



## Web Presence and Mobility

If your Internet presence is not clear and adding value, it is time to upgrade. Having a well-designed and easy to navigate website can reduce the cost and need of patient phone calls and improve overall patient experience. In addition, mobile applications and presence is becoming increasingly important today.

Thus, having a well-designed and user-friendly mobile application can improve your internet presence and also serve as the basis of improved patient processes such as registration, appointment setting, follow-ups and check-ins. Further, the addition of a chat application to your web presence can also help reduce costs and improve customer experience. The chat applications can be monitored by staff, and/or can include a chatbot to automate routine and repetitive questions. Over time, these bots can become intelligent and handle many more questions.

As an extension, you can add a patient portal so that they can access records, schedule appointments, ask questions, pay their bills, update their details, etc. on their own without the need to ring up the hospital. Talk about empowering your patients!

Flexibility and choice. Today, patients expect instant access to care and information, which means that digital interactions and channels would be more essential than before in the healthcare landscape.

**Word of caution:** There are many companies that can help build inexpensive websites and mobile applications. Make sure you choose a vendor that understands how to properly secure the website and mobile applications, both of which are extremely vulnerable to cyber attacks that are after your patients' highly sensitive data.

## MSSP/Cybersecurity:

Mobile devices and connected healthcare devices often lack robust enterprise security and are vulnerable to hacks and attacks. To make it worse, most hospitals lack the security skills and staff to monitor these critical endpoints. This is where a managed security service comes into the picture. That way, security experts are monitoring your IT environment and data round the clock. Top priorities include:

Vulnerability and Penetration testing: did you know the majority of breaches come from unpatched systems, with a patch that was available for months.

Email Security: Did you know that Email is still the number one attack method for breaches?

Web Security: Did you know that just visiting an infected website could be the beginning of a breach?

Endpoint and mobile security: Did you know that downloading a seemingly harmless application from the mobile store can load malware on your device?

Vulnerability management and patching, email security, web security, endpoint management and security are all top priority areas to cover. But there are many more, one of many reasons that having a managed security service makes so much sense.

A trusted managed security services vendor can help you set up a strong line of defense against sophisticated and advanced cyber attacks as well as security vulnerabilities. On the other hand, a comprehensive managed security offering powered by advanced threat detection technology helps healthcare providers to secure electronic health records across all the endpoints including mobile devices, wearables, etc., manage cyber threats, comply with HIPAA, and curb IT workloads and lot more.

## Data-Driven Electronic Health Record (EHR) Systems:

For decades, caregivers and doctors have been struggling to work around with fragmented medical information of patients that is often scattered across multiple platforms. This data can be anything from a patient's diagnoses to treatment plans or medical history/medical reports to social security number/credit card info etc., which makes EHR a hot favorite among hackers and cyber criminals.

We recommend roping in the services of a trusted digital transformation partner that understands the data management and storage pain points for a healthcare organization and comes up with a robust data management solution that is future-proof powered by new-age technology. This will not only help bring patients, caregivers, pharmacists and health insurance companies on the same page, but will also facilitate a cross-platform collaboration in real-time, seamless telehealth and better patient-hospital care experience.

Further, as mentioned above, having a patient portal allows patients to extract, update and check their records on their mobile devices on the go, book appointments, check insurance details, medical reports and lot more without the need to call up the hospital. Talk about a patient-centric healthcare model!

Digital transformation will help bring pharmacists, doctors, patients and health insurers on the same page thus, facilitating a satisfactory care experience.



# Robotics Process Automation (RPA):

RPA has proven a boon when it comes unlocking operational efficiency. RPA helps to automate all those repetitive and time-consuming healthcare tasks with minimum human intervention thus, freeing up your healthcare staff.

- ✓ **Automate appointment scheduling and follow-up:** Get rid of manual forms. Automate appointment and registration/follow-ups to increase patient satisfaction and reduce phone calls and other costs.
- ✓ **Automate paperwork administration:** Reduce paperwork and the need to add administrators. Automating walk-in paperwork and check-in forms would make life easier for both patients as well as healthcare personnel. Eureka! Imagine the amount of money, time and efforts that hospitals can save by automating all those manual paperwork whilst keeping data duplication and data entry errors at bay.
- ✓ **Speed up insurance claims process:** RPA can help speed up the insurance and claims approval process. It can help you process silos of data input thus, saving time and errors. RPA bots can work with relevant information from disparate locations or systems in a much faster way thus, helping speed up the insurance claims approval process.
- ✓ **Single-point of contact:** RPA can provide patients with a single-point access to their data. Patients can access their billing info, appointment details, medical history and much more, all from a unified platform. Further, a custom-built RPA solution can integrate with many systems and analyze collected data to provide valuable insights to help clinical staff make accurate diagnoses and offer tailored treatments to patients.
- ✓ **Inventory:** Hospitals can tame supply chain costs through real-time analytics and reporting. Leverage intelligent insights to set optimal inventory levels on the basis of previous patterns and needs/demands.





## AI for Smart Hospitals:

AI-based solutions would help doctors and medical staff take data-driven decisions. Rather than using the rule-based registries, AI-powered data retrieval method can offer accurate patient information. Further, advanced AI solutions powered by machine learning and deep learning imaging technology can scan tons of MRIs, X-rays and CT scans at lightning speed to check for patterns, and come up with predictive diagnosis.

In addition, RPA enabled by AI would help automate routine and repetitive tasks, which in turn would contribute towards fostering a digital workforce in a hospital that can focus more on value-added tasks.

**According to Gartner, 20% of all patient interactions will include some form of AI tech within nonclinical as well as clinical processes.**

AI-powered virtual assistants and/or chatbots can seamlessly drive most of the patient-hospital interactions. Chatbots can fill in a number of roles from customer service reps to therapists and can even serve as self-diagnostic tool

## IoT:

The influx of healthcare-specific IoT devices and products has opened up immense opportunities. Smart Hospital (IoT) solutions can transform the way a healthcare organization operates. It will help unlock actionable insights for better decision-making, which in turn would help improve treatment outcomes, provide faster diagnosis, efficient drugs/medical equipment management, proactive treatment, better care, improved workflows/processes, reduced costs and better patient experience.

## Redefine patient-hospital experience with IoT.

- ✓ Smart and connected hospital
- ✓ Improved medical asset management and monitoring
- ✓ Better decision making
- ✓ Efficient medical/drug equipment management

- ✓ Proactive treatment
- ✓ Better care and patient experience
- ✓ Improved workflows
- ✓ Reduced costs and errors

Internet of things  
IOT



## **Big Data for Predictive Analytics:**

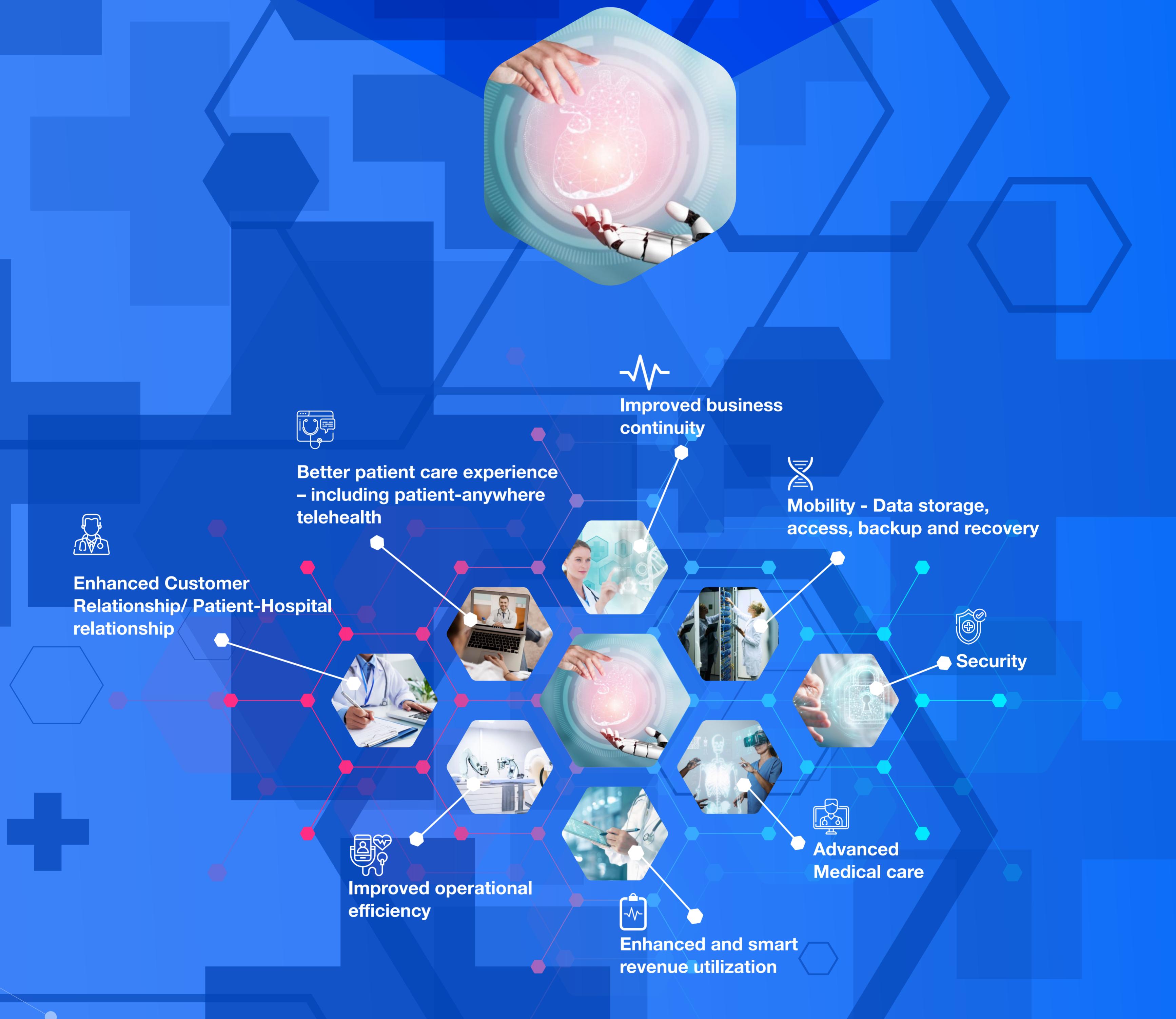
A lot of data is available from multiple devices, including MRIs, CT scans, x-rays, pulse monitors, heart rates, etc. Most oft, such data is unstructured making it a draconian task for doctors and caregivers to decode it. Big data can offer several crucial benefits to your healthcare organization.

- ✓ **Reduced medical errors:** Big data through patient's record analysis can help identify any discrepancies or inconsistencies between a drug prescription and patient's health
- ✓ **Improved preventive care:** Often, patients stepping into emergency rooms are recurring patients. Big data analysis could help identify these patients and come up with personalized preventive plans.
- ✓ **Apt staff allocation:** Big data's predictive analysis ability could help clinics and hospitals estimate future patient admission rates, which would in turn help healthcare institutions allocate apt staff.
- ✓ **Saves money and curbs emergency waiting room time significantly!**

**The future is digital, the future is now and healthcare is no exception!**



## Benefits of Digital Transformation for healthcare industry at a glance:





# Thank You

## USA | New Jersey

**Futurism Technologies, Inc.**  
30 Knightsbridge Road, Suite  
525, Piscataway, New Jersey  
08854, United States of  
America.

**Tel:** +1 (732) 790-2938  
**Fax:** +1 (302) 351-8845

## USA | Washington

**Futurism Technologies, Inc.**  
Ridgewood Corporate Square  
11900 N.E. 1st Street, Suite 300,  
Building G Bellevue, Washington  
98005, United States of America.

**Tel:** +1 (732) 790-2938  
**Fax:** +1 (302) 351-8845

## USA | Austin

**Futurism Technologies, Inc.**  
100 Congress Avenue,  
Austin, Texas 78701, United  
States of America.

**Tel:** +1 (732) 790-2938  
**Fax:** +1 (302) 351-8845

## Germany | Frankfurt Futurism Technologies

Mainzer Landstrasse 49,  
Frankfurt, Hessen, 60329,  
Germany  
**Tel:** +49 61 8170 79058

**Fax:** +49 61 8170 79058

## UK | London Futurism Infotech Ltd.

37th Floor, 1 Canada Square,  
Canary Wharf, London  
E145AA, United Kingdom.  
**Tel:** +44 20 3006 3131  
**Fax:** +44 19 2282 1205

## UAE | Dubai Futurism Technologies Consulting LLC.

Office No. 32, B Entrance, 1st  
Floor, Al Fajer Complex,  
Supreme Arch Business  
Center, Oud Metha, Bur Dubai,  
UAE.  
**Tel:** +1 (732) 790-2938  
**Fax:** +1 (302) 351-8845

## INDIA | Pune Futurism Technologies Pvt. Ltd.

Futurism House, Survey No.  
105, Mumbai-Bengaluru  
Bypass Highway, Baner, Pune  
– 411045  
**Tel:** +1 (732) 790-2938  
**Fax:** +1 (302) 351-8845

## Australia | Melbourne Futurism Technologies Australia Pty. Ltd.

Level 32 367 Collins Street  
Melbourne VIC 3000, Australia  
**Tel:** +61 7 3911 1001  
**Fax:** +61 7 3036 6855