HEXAWARE

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Catalyzing Competitive Advantage in Healthcare with Robotic Process Automation

Contents

Introduction

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In the healthcare industry, humongous amounts of data and information is processed every day. From managing massive volumes of patient-related data with information flowing across multiple channels to ensuring compliance and secure data sharing, healthcare providers have a lot on their plate curtailing their focus on patient experience. Unfortunately, most of the tedious and labor-intensive tasks, including billing and claims management, patient onboarding, delegating medical professionals, collecting patient reports and data, and providing prescriptions are managed or monitored manually. Needless to say, this approach is extremely time-consuming and error prone. Furthermore, Covid-19 has exposed the shortcomings of these manually executed workflows to such an extent that healthcare providers have been coaxed into re-thinking their business strategies to improve operational efficiency.

Operational efficiency in healthcare providers space undoubtedly is a lever that provides unparalleled competitive edge. But how should the healthcare players go about it? Well, the answer certainly lies in industry 4.0 technology solutions, specifically automation which has the potential to transform the entire provider value chain through faster and error-free data processing, thereby reducing the administrative burden to a great extent. Robotic Process Automation (RPA) can significantly decrease operational costs by automating repetitive and manual tasks, subsequently facilitating the healthcare resources to focus on issues that require a high level of care, intelligence, creativity and a human touch.

RPA (Robotic Process Automation) Future trends

> Given that the available headroom for improvement in healthcare is more than $500 billion, the future growth potential of the healthcare services and technology market is substantial.

[i]One of the most efficient technology solutions that could help create frictionless experience for healthcare providers is RPA.

RPA has re-shaped various industry sectors, including manufacturing, construction and telecommunication. Likewise, the application of RPA in the healthcare industry has the potential to save billions over the coming decade. Even though the use of RPA isn't as prevalent in healthcare settings today, it is emerging and the future of the same seems promising because of its ability to automate tedious tasks, paving the way for healthcare workers to focus on high-value work and better-decision making. The application of RPA in the healthcare industry has the potential to save billions over the coming decade.

Let's have a look at a few statistics

- [ii]Half of the US healthcare providers will invest in RPA in the next three years, up from 5% today. The major driver behind it being cost optimization while streamlining operations and improving healthcare delivery.
- [iii]Robotic process automation in healthcare will generate $350 billion and $410 billion in annual value by 2025.
- [iv]With responses from over 400 individuals across many industries, 53% of respondents have already started their RPA journey. This is expected to increase to 72% in the next two years. If this continues at its current level, RPA will have achieved near-universal adoption within the next five years. RPA continues to meet and exceed expectations across multiple dimensions, including improved compliance (92%), improved quality / accuracy (90%), improved productivity (86%), cost reduction (59%).

Automation opportunities across a healthcare organization's value chain

02

Operations

- Admission and discharge procedures
- Referral Management
- Patient appointment scheduling
- Eligibility/Benefit Verification
- CACDI/CAC Medical Coding
- Case Management

Finance

- Point of service collection
- Billing/Telemedicine Billing
- Claims Generation/ Submission
- Denial Management
- Appeal Management
- Remittance Processing
- Audit Management
- Reporting
- Contract Modelling Simulation

Supply Chain

- Order processing
- Sourcing and Procurement
- Inventory management

HR

- Staff recruitment
- Onboarding and training
- Benefits management
- Payroll

A few RPA use cases to consider

03

Appointment Scheduling

The efficiency of the services of any healthcare provider primarily depends upon its ability to schedule and manage patient-doctor appointment in a seamless manner. Appointment scheduling entails ensuring the availability of the doctor according to the patient's requirements, proactively informing the patients on appointment cancellations and collecting and managing patients' personal information and details on chief complaints. The process is terribly tedious if done manually and could potentially result in long waiting time for patients, peak workflows for counter personnel and overtime for doctors and nurses during clinic sessions. However, RPA provides a time efficient procedure with the use of robots that can analyze the most convenient time, cost, location, doctor availability and other issues when booking appointments for patients. Such automated systems in healthcare can send instant notifications to the patients when their appointment is canceled or when doctors are away performing surgery. Chatbots can be leveraged to offer a personalized experience to patients by recommending physicians based on their symptoms and providing instant automated healthcare solutions to their queries. The bot can also send timely appointment reminders to ensure there are no or least patient no-shows.

The beginning of Covid-19 vaccination drive necessitates the need for easy online scheduling, contactless check-in and efficient patient flow management. RPA in healthcare can be leveraged to mitigate these challenges to a great extent.

Automating Discharge Procedures

Patient discharge post treatment involves a lot of manual rule-based administrative tasks and assurance of post hospitalization medication adherence to reduce readmission rates. On maintaining a patient management system (PMS), the patient database can be used to deploy bots that can automate the entire discharge cycle, starting from getting administrative staff's approval to automating post-discharge instructions such as prescription, follow-up appointments, recommendations. On the other hand, RPA bots can alert healthcare providers if any patient needs further assistance with their condition. Such an automated discharge procedure would not only minimize manual errors and reduce time an efforts but also ensure compliance of post discharge guidelines and healthcare regimes.

Insurance Claims Management

According to the United States census bureau, almost 91.2% or 294.6 million Americans have health insurance coverage. [v]The fact itself underscores the humungous amount of data that needs to be evaluated and processed for claims management.

50-70% of the tasks involved in an insurance claim settlement are repetitive and rule directed. The claims management process involving data input, data evaluation, dealing with appeals and denials in a manual mode leads to human errors and inefficiencies. Ensuring insurance claims adherence to regulatory compliance is yet another complicated task, since over 30-40% of health insurance claims can be denied[vi] due to non-compliance of regulations. According to a survey by Change Healthcare[vii] , the administrative effort to recover one claim is approximately $118 per item, or as much as $8.6 billion for various costs incurred. These statistics highlight the inefficiencies of outdated insurance claims procedures that are not only prone to errors but can also significantly impact the cash flow.

An automated claims processing system can validate claims through configurable rules and determine patient's eligibility. The approvals or denials can be conveyed electronically to the providers as well as members while processing the payments digitally. RPA is also capable of addressing recovery of revenue that might have been written off. In addition to minimizing the number of days a claim remains unresolved, RPA can facilitate better data quality and compliance with federal regulations governing Medicare claims filings.[viii]

Automated Account Settlements

Owing to the evaluation of numerous bills, including doctor's fees, test costs and room costs incurred during hospital admission, account settlement is a highly time-consuming and error prone task if done manually. Manual data processing can also lead to payment delays and miscalculated bills. However, through automated account settlements, providers can avoid inaccuracies associated with billing calculation. By automating accounts payable and receivable processes healthcare facilities can systematically inform patients on what they owe, procure patient payment, and settle accounts in a timely manner. This technology would not only boost the financial performance of

healthcare providers but could also minimize and eventually eliminate manual errors, payment delays and denials.

Inventory Management

According to Cardinal Health's hospital supply chain survey [ix], forty percent of all surgical staff and hospital supply chain decision-makers had cancelled a surgical case due to missing supplies and 27 percent knew of a patient being harmed due to supply chain problems. This statistic underscores the necessity of having an efficient supply chain.

Demand forecasting requires data gathering from sources like inventory levels, sales history, current market trends, pricing structure, etc. RPA can ensure data management and optimization without error-prone human intervention. Also, RPA can provide quick updates about inventory levels in real time. Thus, by leveraging RPA, organizations can set automatic triggers at thresholds when inventory levels are low so that low stock items are ordered automatically.

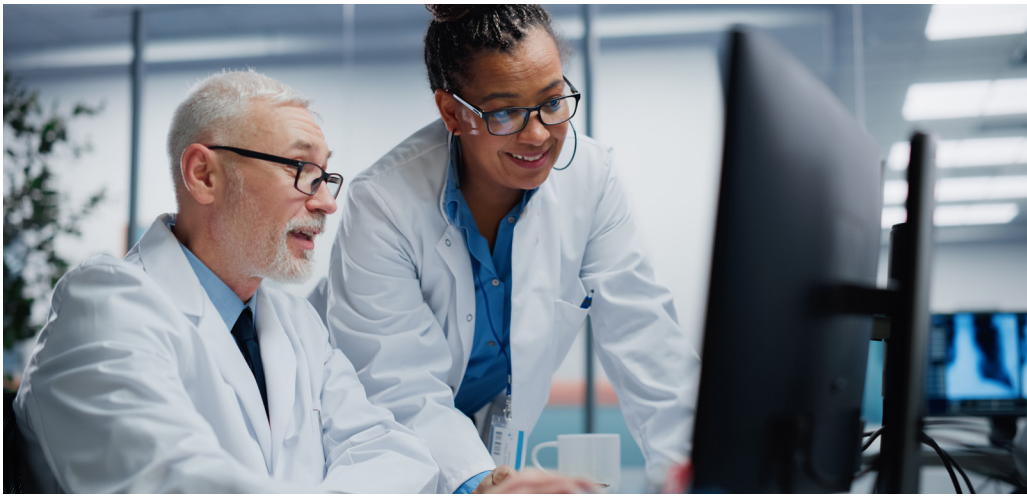
Recruitment and Onboarding

Human resource departments are plagued with rule-based repetitive administrative tasks. RPA when deployed strategically has the potential to carry out repetitive task efficiently while optimizing operational costs. From sourcing candidates through a wide variety of advertising channels to scheduling interviews and sending automated replies, RPA can reshape the entire recruitment process. With its ability to automatically complete data entry for new hire onboarding, gather and move new hire information across various systems, and generate necessary paperwork without human intervention, RPA can also significantly reduce time and errors during the onboarding process.

Recording Audit Procedures

Healthcare providers are frequently visited for audit checks to assure service quality, patient safety and regulatory compliance. These visits require processing of large volumes of data, generate and verify reports with the greatest possible accuracy to avoid potential errors and misinterpretation. By automating audit procedures which requires inputs from multiple stakeholders, managing data at scale and generating reports instantly, leveraging RPA would ensure utmost accuracy and help determine the source

of non-compliance within minutes. With the automated detection of non-compliance at every step, the concerned authorities can make necessary amendments without delay.



Intelligent automation Combining RPA with AI

Although RPA is the first imperative to enhance operational efficiency, it can only process structured data and carry out rule-based tasks. Here comes the need to explore intelligent automation which combines RPA with cognitive technologies, including machine learning, natural language processing and speech recognition to carry out higher-skill tasks like analyzing data and making contextual decisions on both structured and unstructured sets of data. According to Deloitte, organizations combining RPA and AI also report higher increases in revenue as a result of their automations to date, compared to those using RPA alone (8.5 percent versus 2.9 percent). They also achieve greater gains in workforce capacity both in the back office and their core business operations. This clearly indicates that enterprises can derive more economic benefit and competitive edge by integrating AI and RPA rather than using both in isolation.

Ultimate benefits of Automation in Healthcare Organization

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Labour savings

Improved compliance

Increased appointment turnout

Elimintion of human error

Redefined patient care cycle

Better employee satisfaction and morale

Improved cost management

Increased process efficiences

Improved safety and quality

Roadmap for effective RPA implementation

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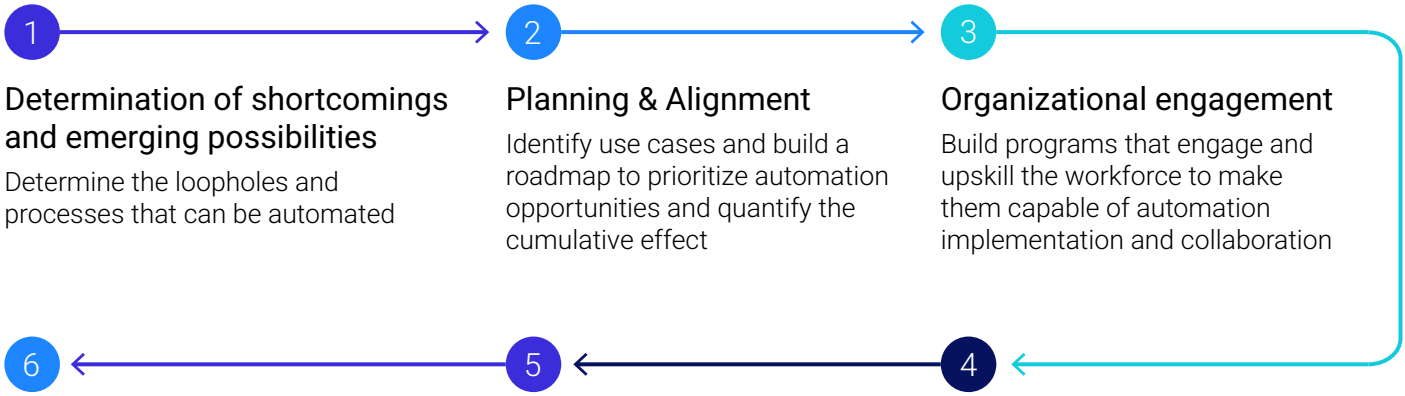
To overcome the implementation challenges of RPA, it is imperative for healthcare providers to take into consideration the below mentioned phases:



Conclusion

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With a glimpse of use cases of RPA in healthcare, its potential to automate and transform routine task can't be doubted. Needless to say, RPA helps organizations balance time and resources by automating repetitive processes, thereby making them faster, error free and more streamlined. Consequently, the employees can focus more on higher order tasks and deliver high quality patient experience. Its time healthcare organizations embark on the journey of automation to accomplish cost advantage and better patient engagement.

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Hexaware is a global technology and business process services company. Our 27,000 Hexawarians wake up every day with a singular purpose; to create smiles through great people and technology. With this purpose gaining momentum, we are well on our way to realizing our vision of being the most loved digital transformation partner in the world. We also seek to protect the planet and build a better tomorrow for our customers, employees, partners, investors, and the communities in which we operate.

With 40+ offices in 19 countries, we empower enterprises worldwide to realize digital transformation at scale and speed by partnering with them to build, transform, run, and optimize their technology and business processes.

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