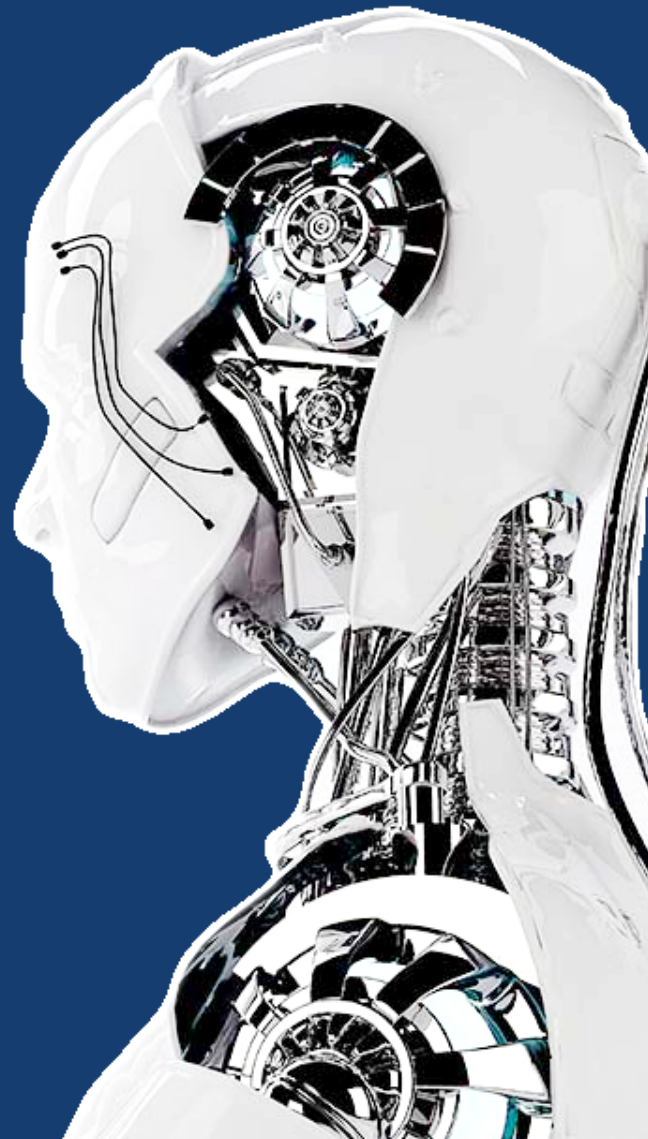
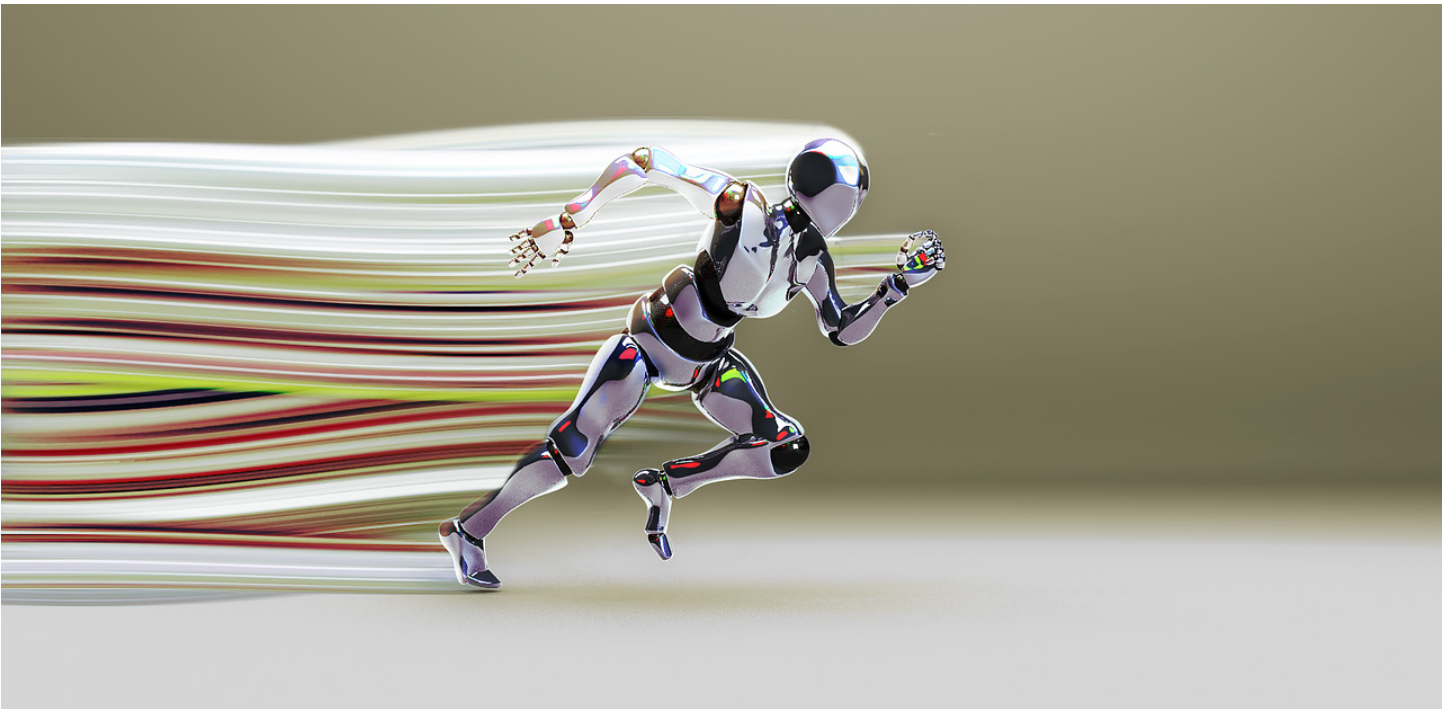


Automating the Revenue Cycle: 10 things to consider before you invest in process automation





Executive Summary

The buzz around process automation in the revenue cycle industry is gaining rapid attention. Third party automation solutions, as well as revenue cycle services providers, are aggressively making claims about how their solutions bring about pervasive automation. Before you make a significant investment in automation, recognize that revenue cycle process automation should be more about achieving business outcomes and less about applying technology for technology sake. In this paper, we discuss several elements to be considered while embarking on an endeavor to automate business processes.

1 Break down the processes to the most granular level to discover automation opportunities.

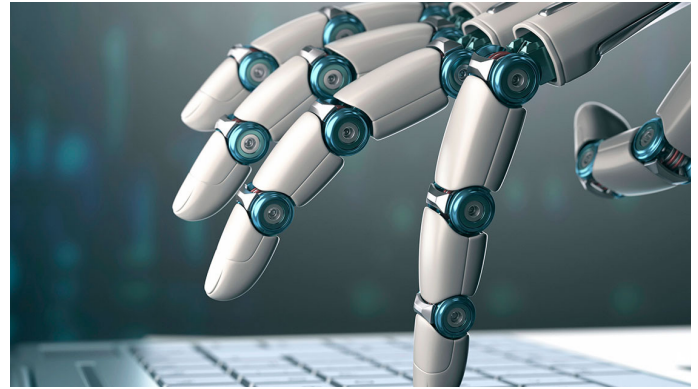
Process automation can take two primary formats - 1) a completely automated process and 2) a process where only certain steps are performed through intelligent software applications known popularly as bots, while other steps are performed by a human agent. Regardless of the format it takes, it is imperative that a deep understanding of the complete business process is obtained to perform a creative deconstruction of the processes, understanding the different work types, and equally important knowing the desired production performance metrics. It is only when such a granular understanding of the process is available that automation experts can apply a set of process automation tools to create a sustainable automation model.



2

Revenue cycle process nuances determine the choice of the automation platform.

Each process in the complex chain of revenue cycle processes has different requirements – EDI, voice/web, medical language processing, optical character recognition, rules-based processing – to name a few. The complex world of revenue cycle potentially has many areas that can be automated. Let's take a look at how each set of work processes has different requirements for your automation team.



Front-end processes

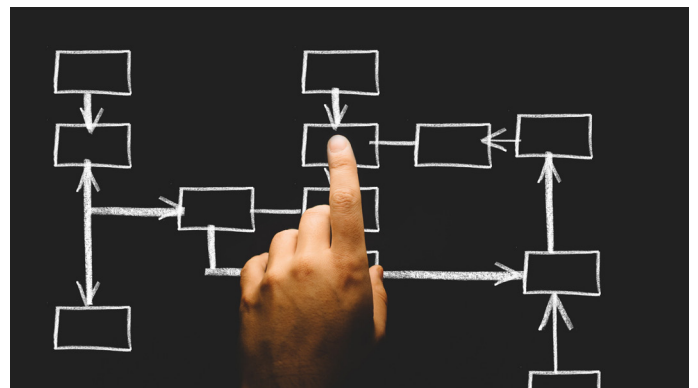
From prior authorizations to patient scheduling to registration, each process step has different requirements – inbound/outbound calling, EDI transactions or just paper or image-based processing. The complex set of interactions across multiple channels creates unique process automation channels. As your patients interact with you through different channels, you should evaluate automation technologies that do not merely address sub-processes within one of these channels but have a comprehensive end-to-end human and bot enabled strategy that enables you to respond at the speed of the customer.

Medical coding services

By definition, medical coding processes require the knowledge of medical terminology and the ability to apply ICD (International Classification of Diseases) and CPT (Current Procedure Terminology) beside HCPCS (Healthcare Common Procedure Coding System) and modifiers. Also, each coding system and provider organization provide medical charts in a different manner. From super-bills to handwritten paper notes to HL7 based medical records, there are inherent differences in the nature and form of the information is available to your coders.

Accounts receivable and denial management

With over 3,000 healthcare payers in the United States, EDI and portal-based information exchange is not applied consistently across organizations – partly as a result of the underlying platforms being on antiquated technologies. While this unlocks a significant opportunity to automate processes, it also means that AI/machine learning methods have to be applied to achieve a healthy percentage of automated transactions. Multiple automation providers have popped-up within the last few years, each of them claiming to create a fully automated accounts receivable and denial management process. However, such claims should be evaluated in terms of the workflow effectiveness and quality of the automation processes, and more importantly, the ability to make a real impact on business outcomes.



3 Be judicious in choosing the automation platform.

In the world of automation, the half-life of technologies is very short. While evaluating revenue cycle automation tools, you should keep the following aspects in mind.

Choice of platform

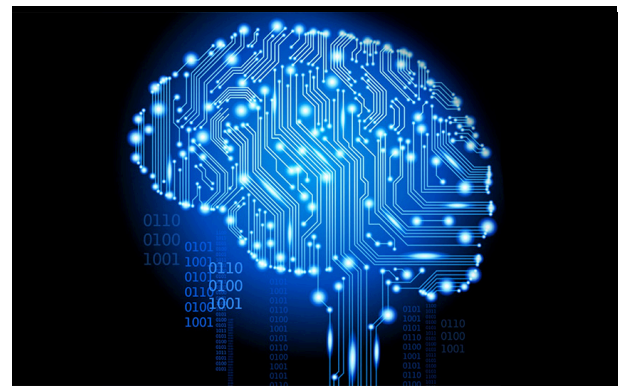
The architecture of the platform and the underlying technology framework determines how deep automation can be taken within your process ecosystem.



- **Industry Specific Frameworks.** Processes such as medical coding require specific underlying data sets and medical dictionaries to function effectively. Choose tools that have robust underlying industry-leading frameworks, that are being actively invested in and are evolving rapidly.
- **Intelligent Bots.** We believe that the word bot itself is a misnomer and undermines the capabilities of emerging technologies. Machine learning and artificial intelligence technologies are having a significant impact on the healthcare industry. With a large number of datasets and training on different use cases, machine learning technologies can mimic human actions and behaviors. Also, the term, Artificial Intelligence, is an overarching term Deep learning, Machine learning and Cognitive intelligence, which are complex technologies. Further, when used in combination with tools such as optical character recognition, or business rules, machine learning and artificial intelligence can give results of a different magnitude altogether.
- **Do your research, choose the automation platform wisely.** With thousands of start-ups in the world of automation, each of them trying to address a set of processes or business problems, choosing the right technology becomes difficult. Choosing an automation technology that has the backing of a large corporation with a significant investment in R&D, could be one way to ensure that the solution you deploy today continues to be relevant even with the evolution of technology. Further, relying on technologies that use industry leading process frameworks also offers some cushion from the threat of obsolescence.

4 Insights from workflow and knowledge management systems are key to discovering automation opportunities.

Operations reports from a mature workflow application can provide significant insights into each granular process step, identify repetitive tasks, and eliminate non-value activities performed. Furthermore, the workflow application can provide insights into the types of errors committed by human agents and allow for stratification of these errors. Armed with this intelligence along with the knowledge of the business rules of the process, the insights from the workflow reports, and a library of Microbots, automation deployment can be accelerated and yield a new level of business value.



5 Involving practitioners accelerates opportunity discovery and improves adoption.

Quite clearly, no one understands revenue cycle business processes better than your operations team performing them every day. A key point to acknowledge is that identifying automation opportunities is not a one-time effort but an iterative, ongoing exercise. Anyone believing this is a one-time endeavor will be highly disappointed in the long term. Involving practitioners in the process of identifying automation opportunities will not only drive better results and better adoption but will also create a healthy partnership with the automation team.

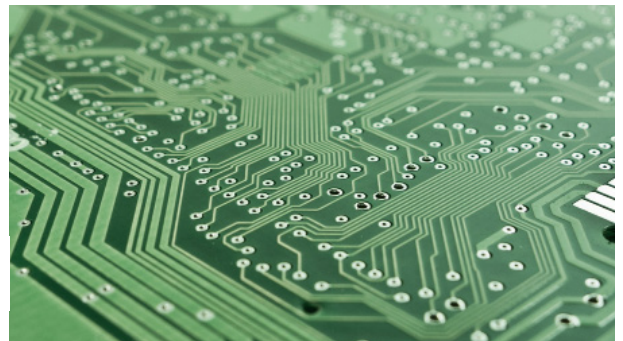


Some of the best practices are:

- Create a **program management office** for the automation implementation program
- Identify a pool of **subject matter experts (SMEs)** to design the process to the most granular level of detail
- Host discovery opportunity meetings to understand the extent of success that is possible with the automation initiatives
- Aggregate the opportunities discovered across processes and work queues to **estimate the return on investment** on automation
- Develop **automation champions** within your process teams.

6 Creating a repetitive and scalable deployment model has a dependency on the architecture of the automation tools.

Scalable deployment architectures require bots that can work with each other. Furthermore, if your service provider has a pre-built stack of industry-specific automation tools, you will find this extremely helpful and a key to your ultimate success.



Microbots and micro-services - Infusing scalability

Welcome to the world of Microbots and micro-services. When bots get designed for a single purpose, have the ability to hand-off from one bot to another bot for the next sub-process with a seamless transfer of data. Once you have a library of such bots, it will become easier to create process specific automation tools more rapidly.

Process design and redesign is key

Break down the process to be automated to a granular level to identify process steps or whole work queues that can be automated. It is imperative that your automation team has the capability to breakdown and reconstruct the work processes, with extensive utilization of the Microbots and micro-services architecture.

7 Managing the automated environment – a robust governance framework is needed.

As more and more bots get deployed, the quality and throughput of the automated processes require a similar management model as you would with human agents.

Quality assurance

The quality assurance process needs to mimic, if not be better than what is being done for human agents. Not only would it provide governance and control, but also give you insights to further your automation agenda.



Managing bots by the bots

With higher speeds of processing of the bots, you need solid checks and balances in place not just for quality but also real-time monitoring of the performance of the bots deployed. Consider using a solution with a control towers that includes real-time monitoring, bot initiation (start/stop), and scheduling functionality, along with dashboard-based reporting. This will enable you to identify areas where the bots are successful, understand the reasons why they fail with some transaction types, and enable a deeper penetration of the bots. Further, we recommend using a solution that synchronizes with the workflow applications to give you powerful views on the automation solution's quality and throughput vis-à-vis human agents.

8 Automation is a marathon, not a sprint.

As bots become smarter, you will be surprised how closely they begin to mimic human behavior. This happens for two primary reasons – 1) the processes being automated are designed by humans and 2) as with all processes, they continually evolve. This, in turn, leads to changes in the success rate of the automated solution. Therefore, the smarter your bots become, the smarter you need to be to properly manage them.

Automation is indeed a marathon. Many automation solution providers talk about their solution is a quick fix solution – perhaps, some solutions are, but the reality is that most solutions are not. The automated solution needs to respond in line with process changes. Furthermore, successful process automation is about cultural change as well as how deep it permeates into your process environment and organization. Sustainable benefits will accrue to those who have an ongoing approach to identify opportunities, implement automation solutions and methodology, develop monitoring processes, and adopt a change management model.



Driving adoption

Driving adoption of automated solutions is not as easy as it sounds. Here are a few suggestions to improve adoption rate:

- Executive buy-in and support is critical and leads to the faster adoption of the solution

- Create a core group of process automation specialists, subject matter experts, and operations leaders for each automated solution
- The role of the implementation team does not end with the deployment of the automated solution. The implementation team should manage the change and enable the creation of a scalable, repeatable architecture
- Automation necessitates retraining your workforce

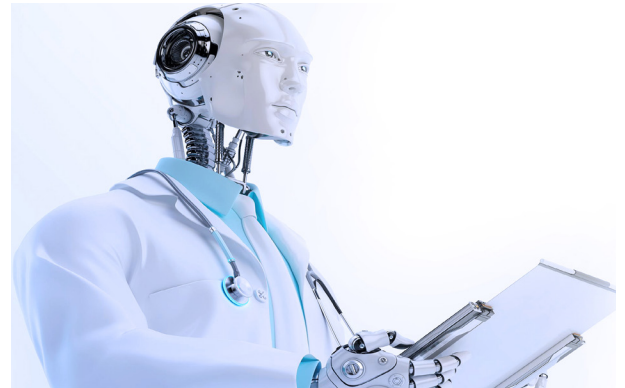
9 Nothing succeeds like success. Write the story. Tell the story. Repeat.

Create a measurement model

As you achieve success on the automation agenda, create a mechanism to measure the success. Create dashboards that tell your story effectively with quantifiable results.

Collaborate and share with other teams

Sharing process implementation success stories along with business outcomes achieved, challenges encountered, and the learning from the implementation efforts in one process area or vertical with process leaders in another area or vertical will lead to the identification of replication opportunities.



10 Trust a process automation service provider that knows your industry.

Every industry has its process complexities. Healthcare revenue cycle business processes, in particular, are extremely complex. Revenue cycle system nuances, specialty specifics, healthcare provider business rules, inconsistently deployed information interchange standards, and the variability of operating policies and procedures, all create unique challenges that can only be understood by an experienced practitioner. Trust a process automation service provider that knows your industry.



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