



Healthcare Business Insights™

2022 Fall member retreat

Fireside chat:

Automation, AI and analytics as a means for
strategic resource allocation

Justin Roepe

Solution Strategist and Revenue Cycle Expert
Waystar





< San Diego

 Moderate

 Visual settings

 Edit

 When poll is active, respond at **Pollev.com/jericahopkins145**

 Text **JERICA HOPKINS145** to **22333** once to join

What is the most recent function to which your organization has attempted AI? (Respond with one-word answers).

 No responses received yet. They will appear here...

Join me in a conversation:



Justin Roepe

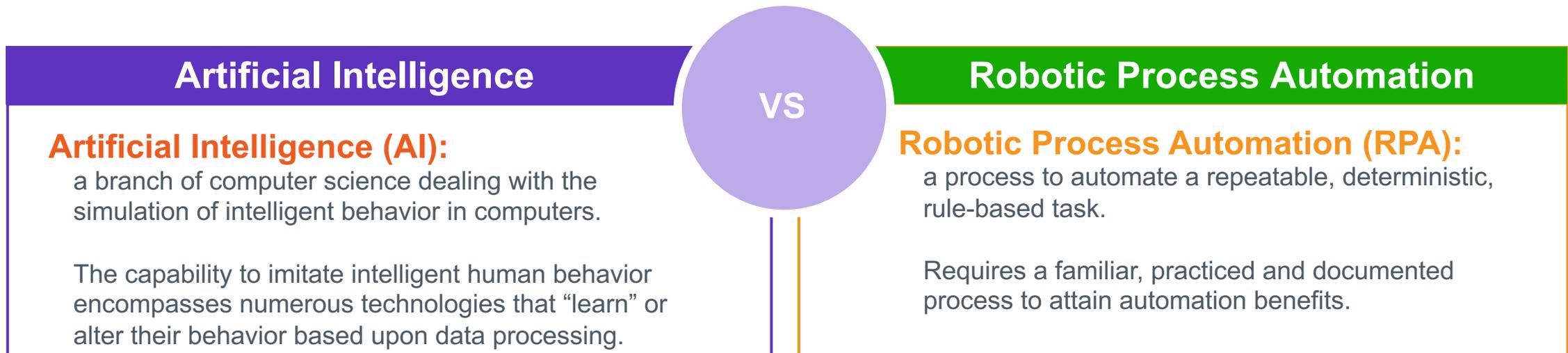
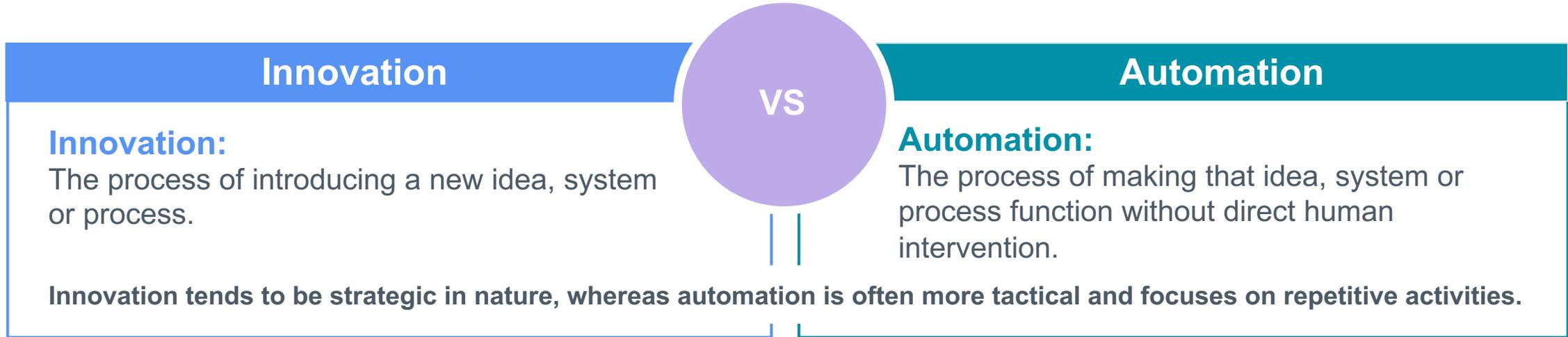
Solution Strategist and
Revenue Cycle Expert

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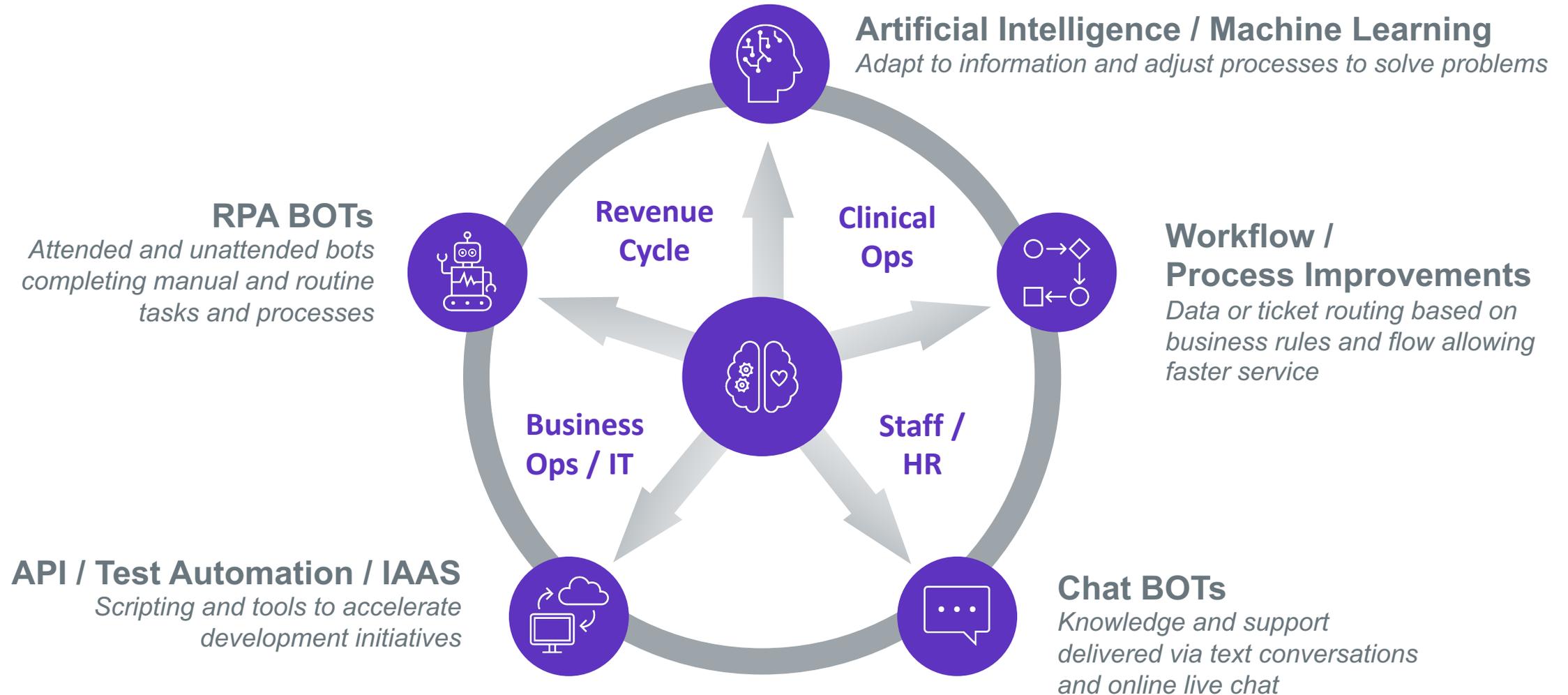
- With nearly 21 years of healthcare experience, Justin has spent most of his time in revenue cycle.
- As a subject matter expertise for front and back-end solutions that are part of the Waystar unified platform, Justin has extensive experience on solutions that leverage Artificial Intelligence, Robotic Process Automation, Crowd Sourcing and Rules Engine technologies that generate increased productivity, accuracy and cost reductions.
- Prior to Waystar, Mr. Roepe worked for a premier healthcare consulting firm with an emphasis on data intelligence, analytics, revenue cycle, performance improvement and RCM optimization.
- Justin is an active member of the Georgia HFMA chapter and has served in various roles for more than 16 years along with being a board member for two local non-profits.
- He holds a bachelor's and master's degree in Healthcare Administration and is a graduate of Harvard Business Analytics Program, part of Harvard Business School.

What is automation and AI?

Clarifying the terminology



A holistic view of intelligent automation in healthcare



What does automation look like?



- Look up records
- Copy/paste values
- Data entry/form filling



- If this then that
- Where [these] criteria are present, do...
- When [this] happens, do...



- Dozens of items added to a work queue/worklist each day
- Work is actively prioritized because it can't all get touched

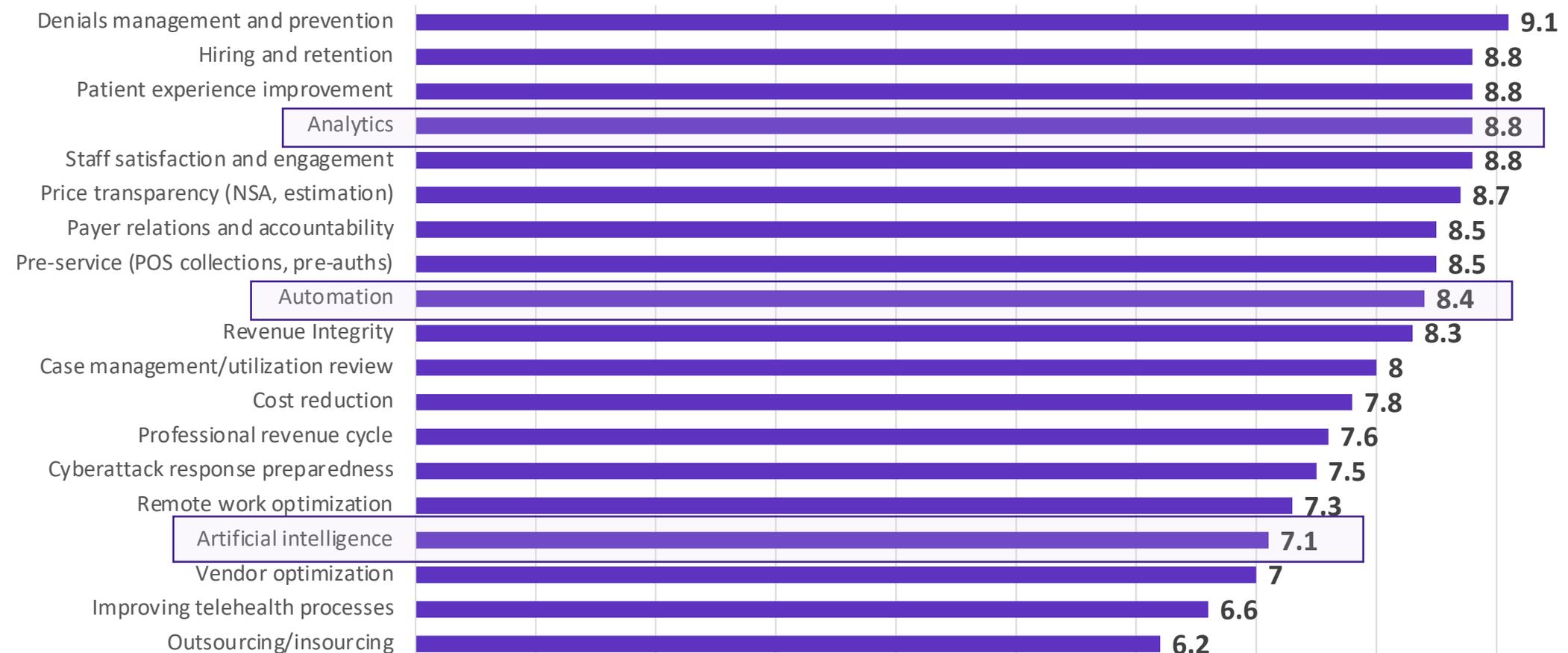


- Tiny details matter
- Long/complex processes
- Difficult to fix or must start all over when errors happen

The state of automation and AI in revenue cycle

Average importance of revenue cycle initiatives in 2022 (1-10 scale)

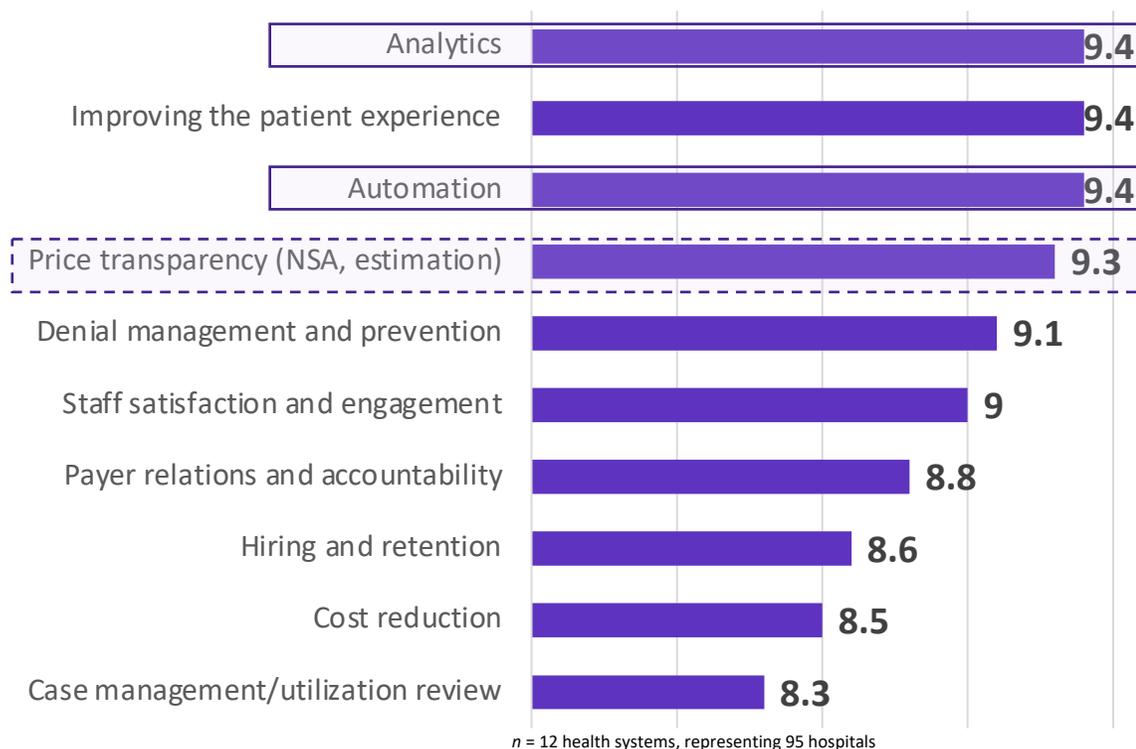
Healthcare Business Insights Annual Study
(10 as most important)



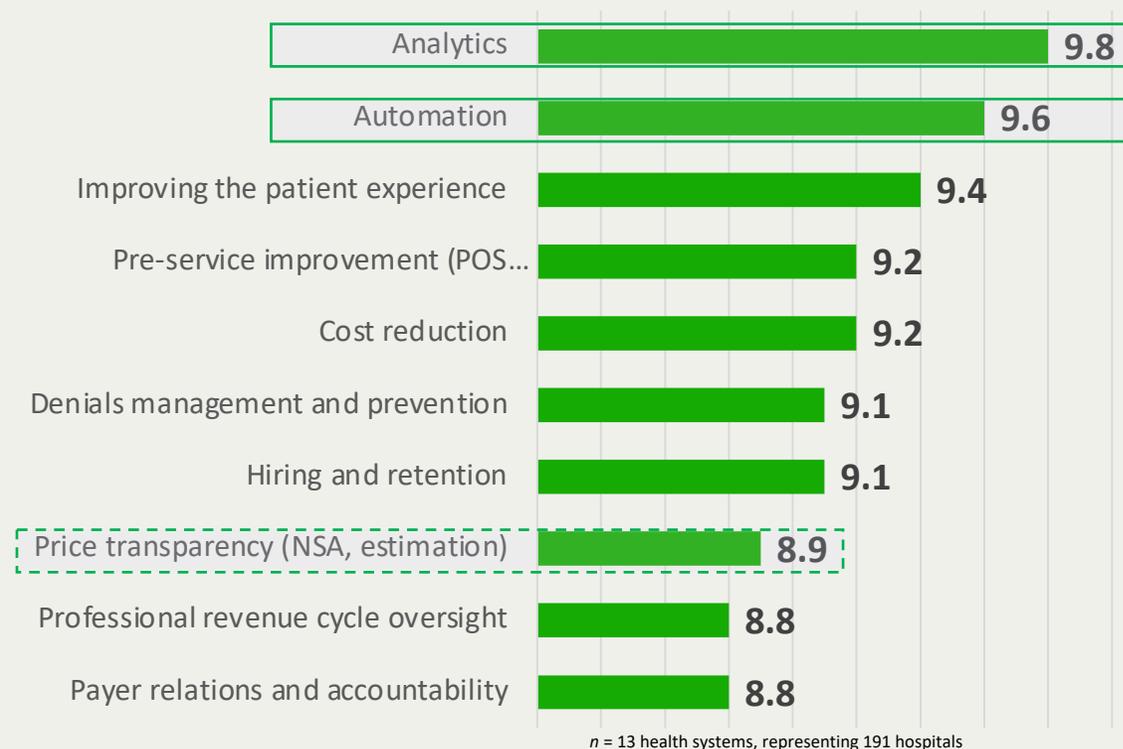
n = 61 health systems, representing 371 hospitals

These same priorities shift as net revenue grows

Organizations with \$1 billion > \$2.5 billion net revenue



Organizations with > \$2.5 billion net revenue



Conclusions:

*The **importance** placed on **AI and automation** has gone **down** from last year.*

*The **cost** of these technologies and the **expertise** needed to ensure they are successful may have hindered their use in times of **razor thin margins** and decreased staff.*

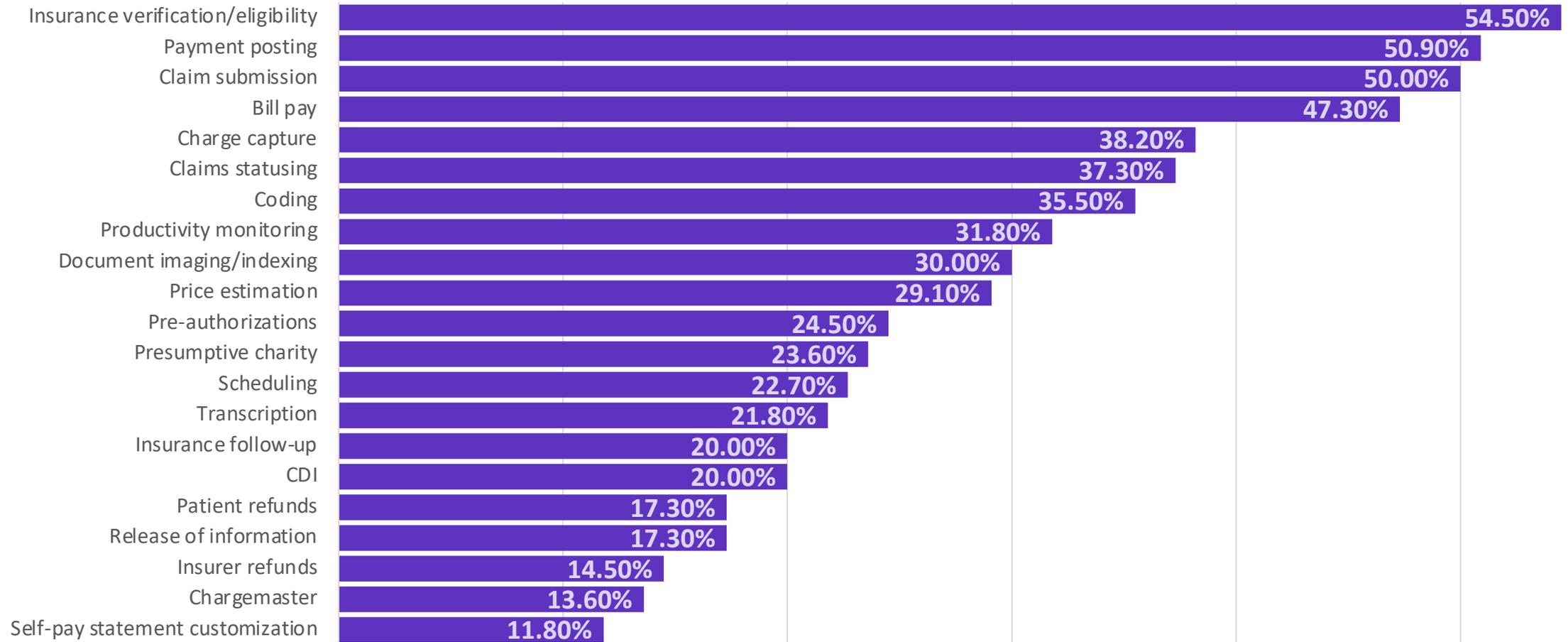
*However, we do see a lot of organizations using this time strategically for these implementations **as** a measure in retaining, upskilling, and supporting your core staff in place today.*

*The truth is: AI/automation is **one solution** that can either apply to or affect **every challenge** on this list.*

	Application/Impacted
Denials management and prevention	✓
Hiring and retention	✓
Patient experience improvement	✓
Analytics	✓
Staff satisfaction and engagement	✓
Price transparency (NSA, estimation)	✓
Payer relations and accountability	✓
Pre-service (POS collections, pre-auths)	✓
Revenue integrity	✓
Case management/utilization review	✓
Cost reduction	✓
Professional revenue cycle	✓
Cyberattack response preparedness	✓
Remote work optimization	✓
Vendor optimization	✓
Improving telehealth processes	✓
Outsourcing/insourcing	✓

Organizations automating revenue cycle functions (2020)

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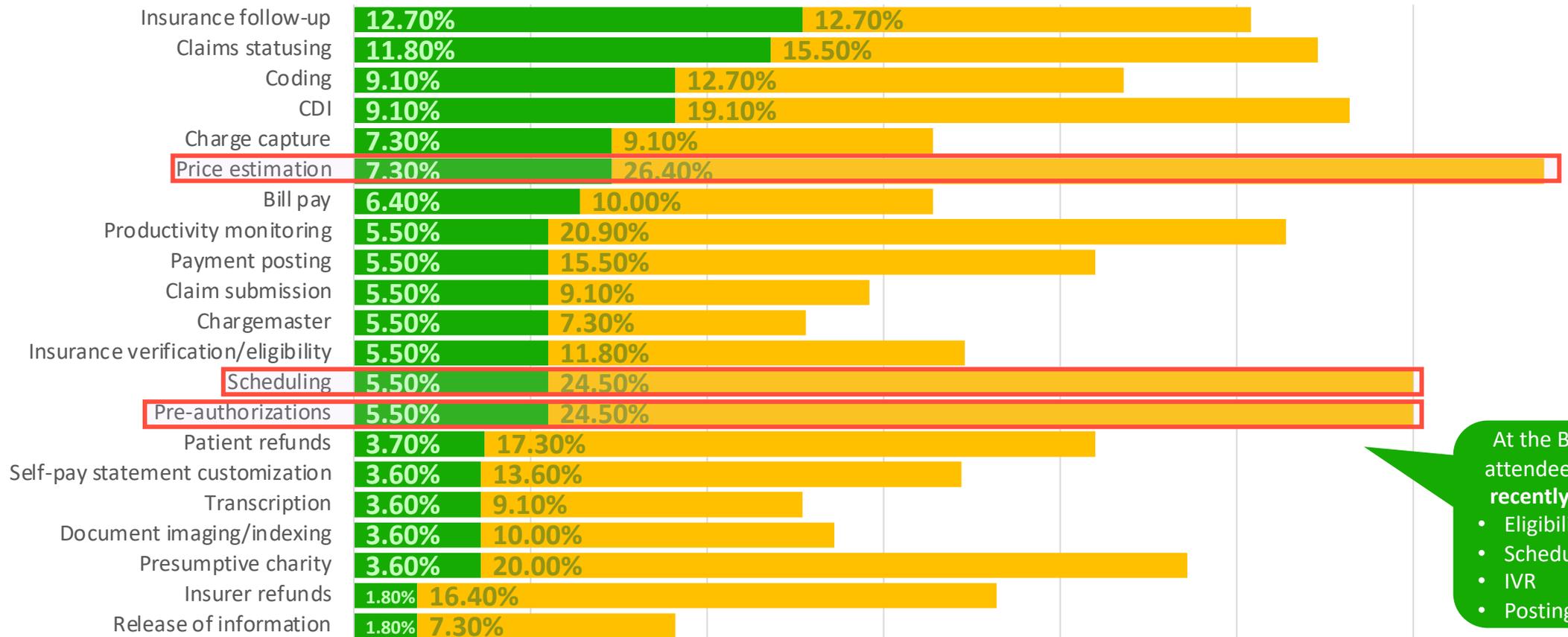


n = 55 health systems, representing 200 hospitals

Organizations **using AI** for revenue cycle functions (2020)

Healthcare Business Insights Annual Study

■ AI implemented ■ Was being considered for 2020-21



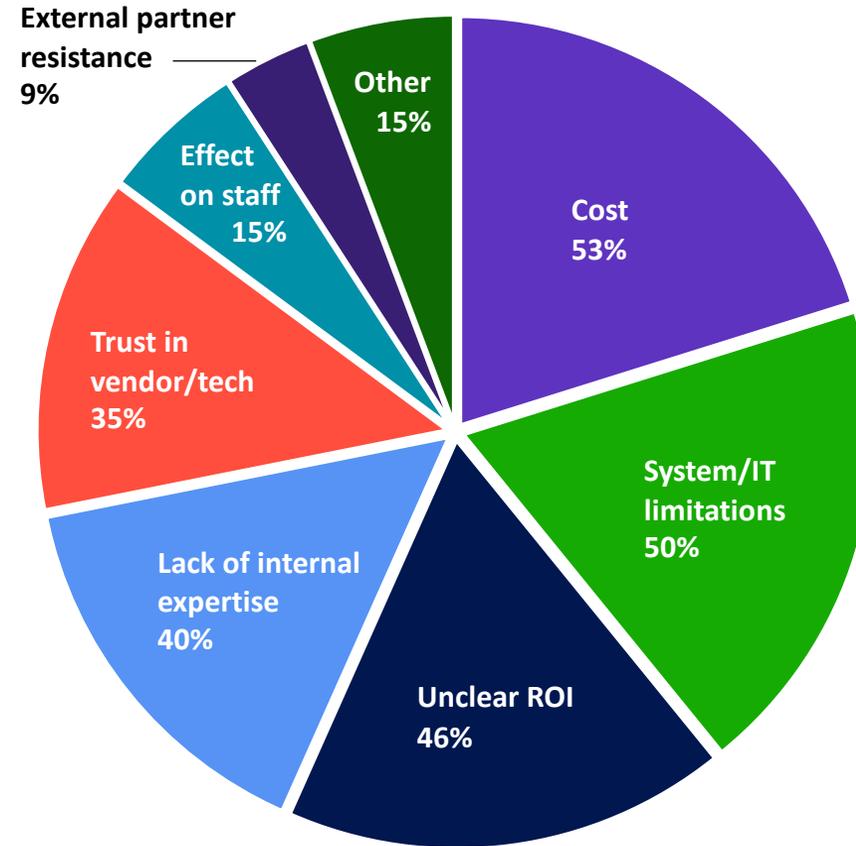
n = 55 health systems, representing 200 hospitals

At the Boston event, attendees noted **most recently using AI** for:

- Eligibility
- Scheduling
- IVR
- Posting

Barriers to automation

Healthcare Business Insights Poll (2020)



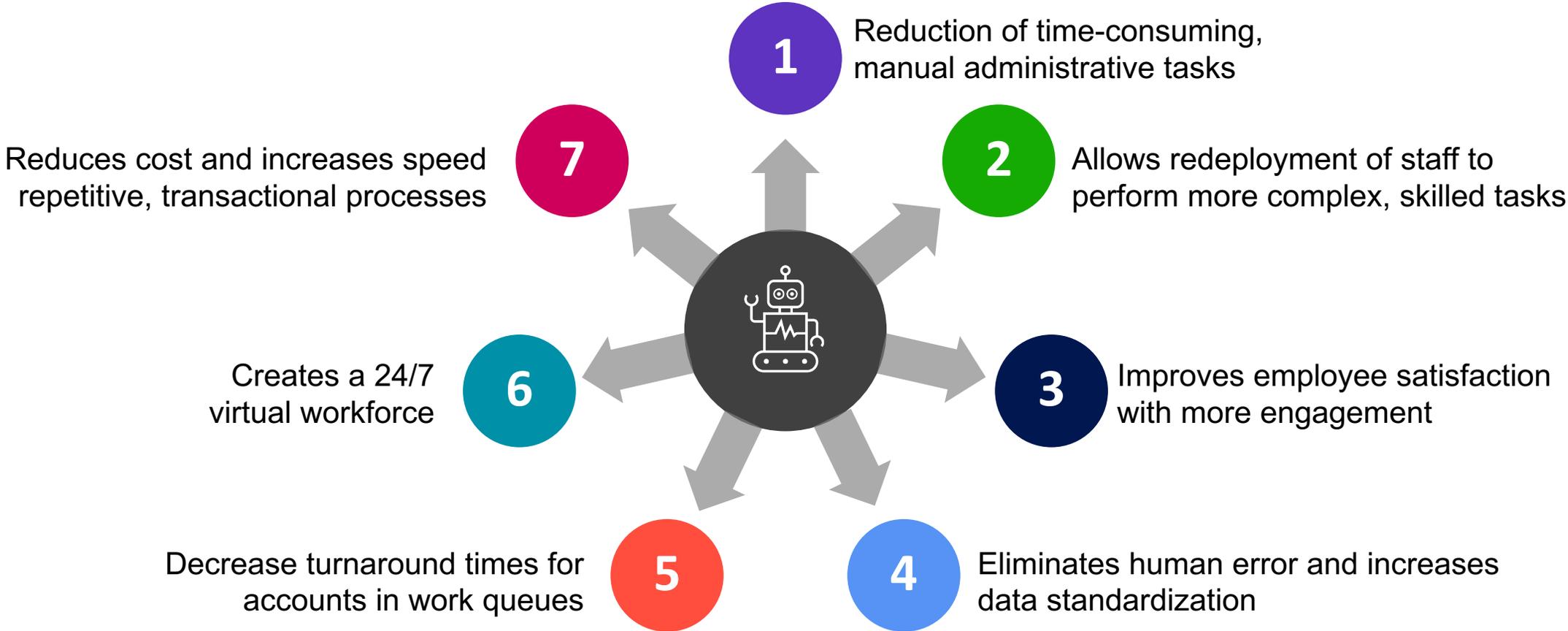
Sample information unavailable

The value of moving away from manual efforts

Type of effort	Cost of manual effort	Cost of electronic effort	Cost savings per effort	Time savings per effort
Eligibility + benefit verification	\$11.52	\$0.95	\$10.57	21 minutes
Prior authorization	\$10.95	\$3.43	\$7.52	16 minutes
Claim submission	\$3.96	\$1.04	\$2.92	6 minutes
Claim attachments	\$4.43	\$1.33	\$3.10	6 minutes
Claim status inquiries	\$13.66	\$1.54	\$12.12	22 minutes
Claim payments	\$3.64	\$1.68	\$1.96	4 minutes

! Not all electronic transactions are “automated”—values listed above only increase by leveraging purpose-built automation to further simplify efforts, saving even more time and money.

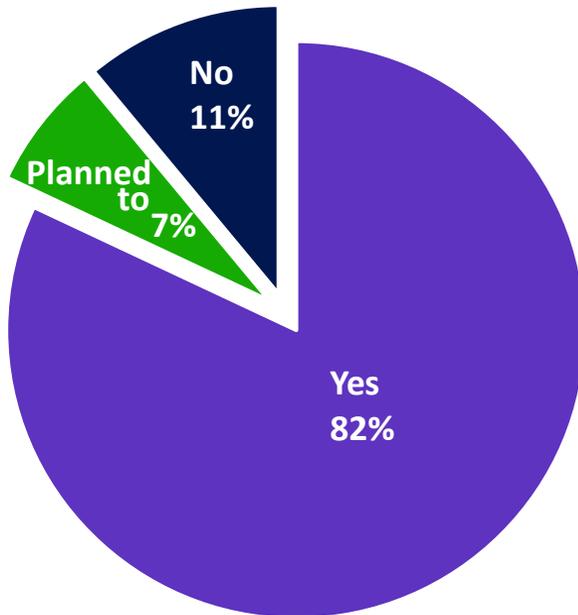
Expected benefits of automation



Barriers to automation – *Cont.*

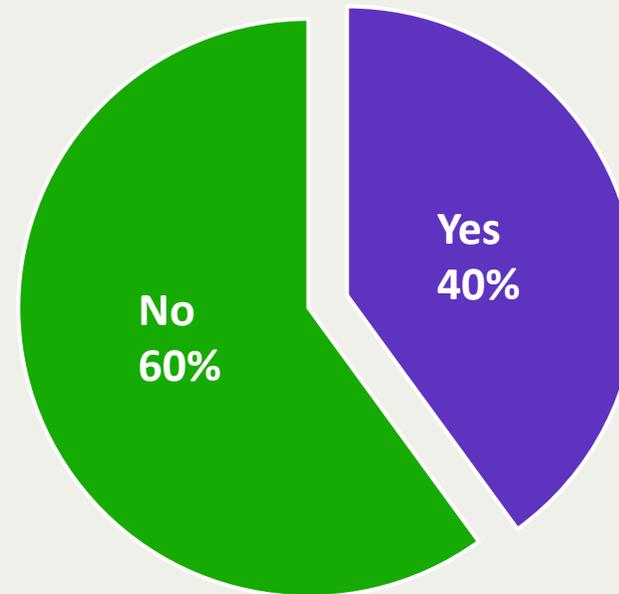
Healthcare Business Insights Poll (2021)

Did COVID-19 cause you to reprioritize processes to be automated?



n = 28 health systems, representing 128 hospitals

Error rates or implementation challenges caused a discontinuation in automation or AI applications



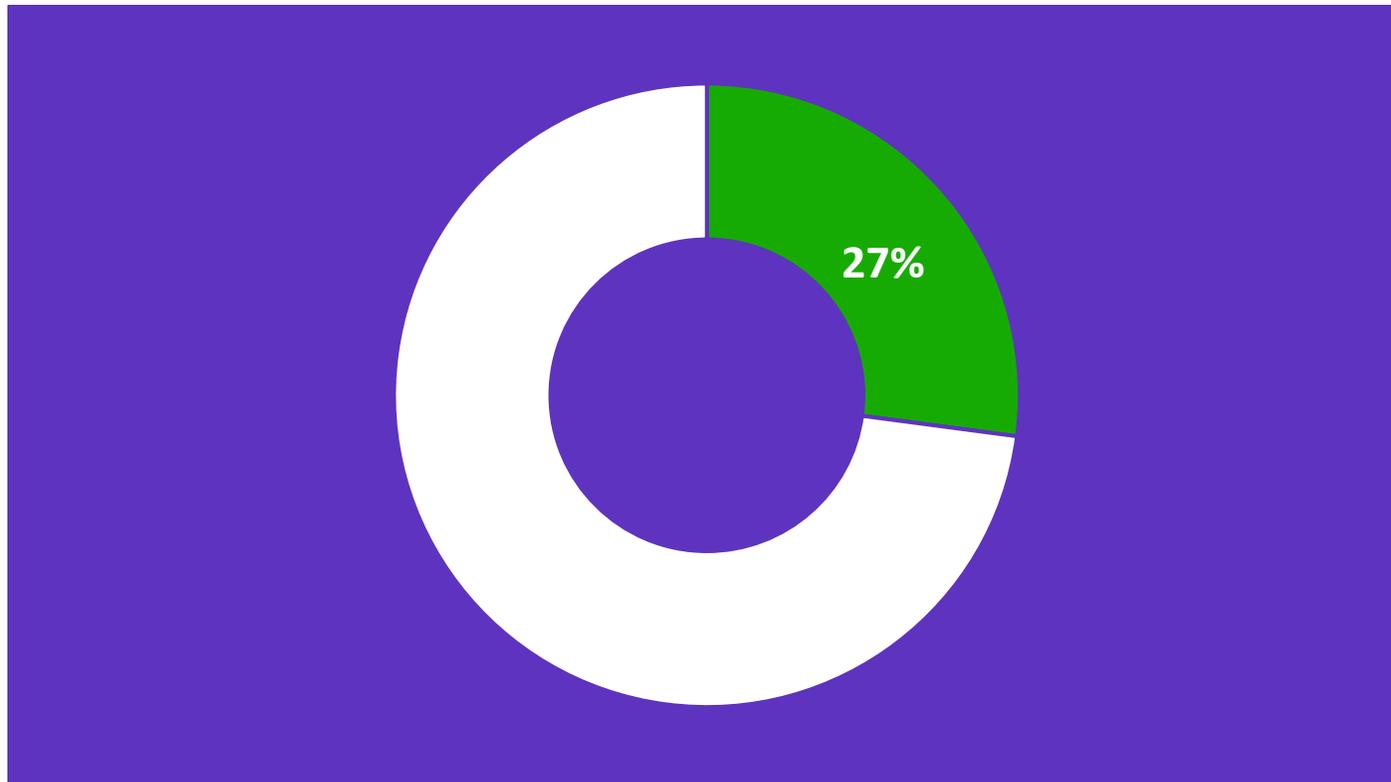
n = 15 health systems, representing 99 hospitals

**Effective automation relies on
structured and defined governance**

This is why setting up a governance structure becomes so valuable

Organizations including AI/automation governance within revenue cycle

Healthcare Business Insights survey data (2022)



n = 59 health systems, representing 272 hospitals

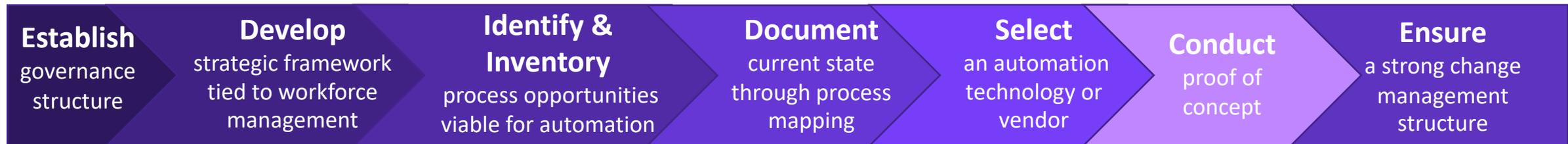
More of your revenue cycles govern AI/automation applications than it does:

- Utilization management/review
- The patient experience
- IT specialists/system development
- Home health, hospice or SNFs
- Case management

First comes automation selection:



Then comes development:



How to move forward

However, not all automation is the same

General purpose automation



- Basic data movement
- Define + maintain “bots”
- High-volume, low-value tasks

Purpose-built automation



- Augmented intelligence
- Designed for specific use case
- High-volume, high-value tasks

Factors for AI + automation success



Technology

Data + model

democratization has made building technology incorporating **AI much more accessible**



Data quantity

Performance of **ML + deep learning** models are proportional to the **size of the dataset used to train the model**



Knowledge

Models cannot be trained on data alone ... **accurate** interpretation of process variations requires **deep subject matter expertise**

Evaluating processes for RPA and/or AI

- Meet with department directors to explain RPA or AI, example use cases, and ask them to brainstorm applicable tasks
 - Give feedback on feasibility, objectives, etc. AND narrow down based on ease of implementation, cost/savings, etc.
- Visually document the process steps
- Communicate early with staff, even as these technologies are first being explored to stave rumors/concern
 - Also, ask them to think about every task they do – can they contribute to the conversation?
- Think simple: “if X, then Y,” “If not X, then Z” scenarios
 - Chart out all the “exceptions” – are there too many or are they too situational?
- What is the root cause of the current inefficiency?

- Is it a highly manual, repetitive task?
- Does it represent significant volume that is hard to manage?
- Will it reduce staff work queues or hours spent? Or is it a source of staff frustration?
- Will it eliminate account or work “touches”?
- Is it measurable?
- Will it reduce the work conducted by a vendor or contracted staff?

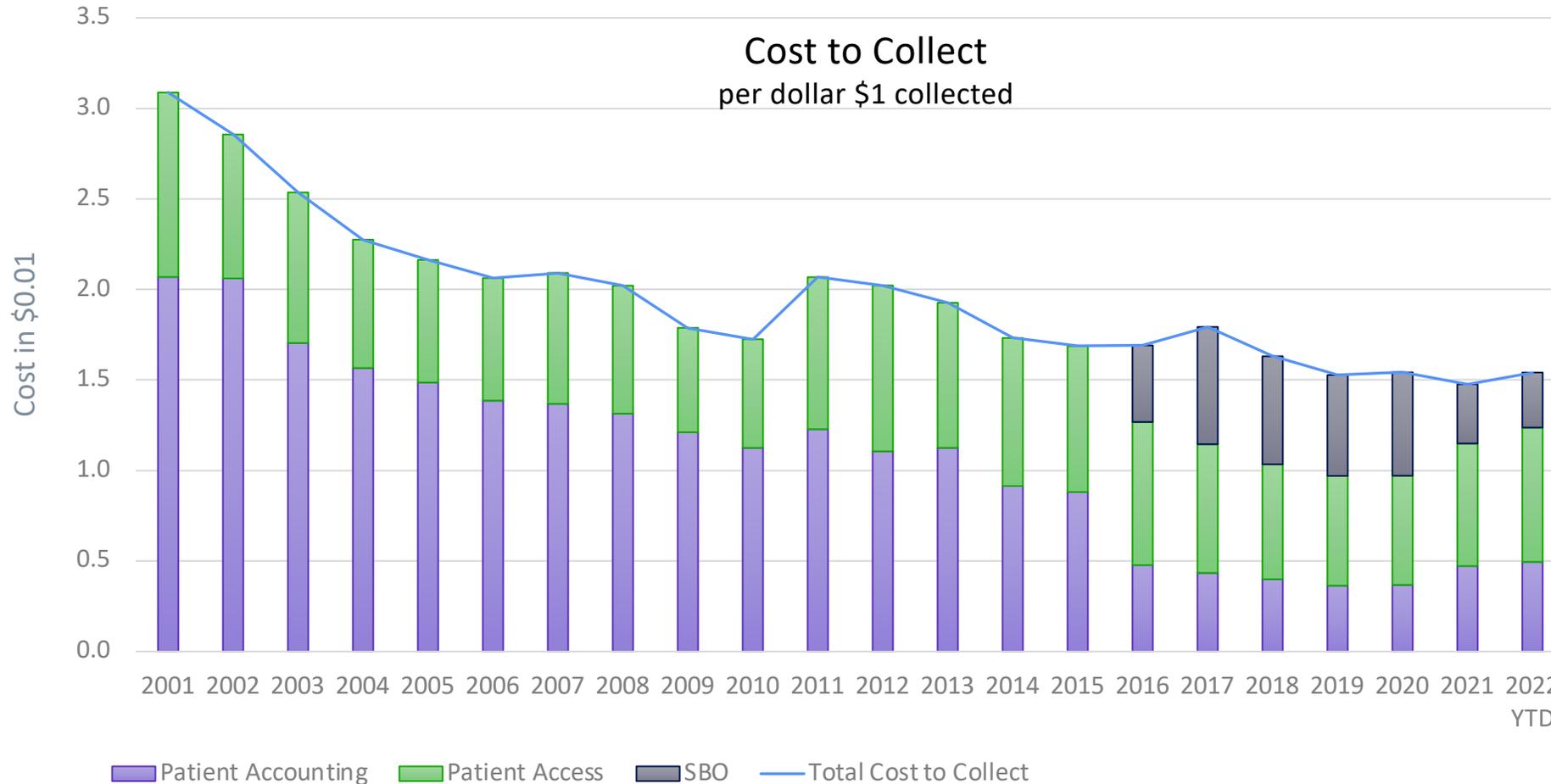
Use cases and case study examples

Use cases for AI + automation in the revenue cycle

Use cases for AI and machine learning in the revenue cycle today are prevalent and continue to grow ...

- | | | | |
|---|---|---|--|
| 1 | Eligibility Verification
Use of RPA to augment missing data from X12 in order to return richer, more accurate benefit information as well as identify potentially missing insurance coverage | 5 | Revenue Integrity
Use of machine learning to identify accounts with a high probability of missing charges and DRG anomalies to maximize revenue opportunities |
| 2 | Estimation of Patient Responsibility
Use of machine learning to identify payer adjudication rules and RPA to retrieve real-time updates on patient financial responsibility and deliver truly accurate patient estimates | 6 | Claim Status Checks
Predictive analytics to optimize when to check status of claims , use of RPA to retrieve updated claims status information, and AI to normalize each payer's unique remark codes and auto-assign disposition codes |
| 3 | Prior Authorizations
Use of machine learning to identify upcoming services requiring authorization + RPA to initiate and follow up on authorization requests | 7 | Denial Management
Predictive analytics to identify those denials most likely to be successfully appealed in order to guide workflow |
| 4 | Patient Payment Optimization
Use of predictive analytics to provide tailored payment options and automated identification of charity determination while delivering personalized communications to drive self-service payments | 8 | Payment Posting/Reconciliation
Automated matching of claims to remits, posting of payer and patient payments , including remit splitting and identification of missing payments as well as reconciliation of all payments |

Case study: driving down cost to collect by 50%



Results:
Cost to collect reduction
 50% reduction over time
 14% reduction in past 5 years

Integrated, non-profit health system with more than 35 hospitals and 1,200 care locations

Case study: cost benefit of automation



Integrated, non-profit health system with more than 35 hospitals and 1,200 care locations

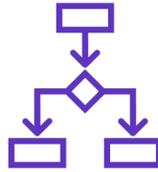
Parting thoughts

Trending adoption of automation



68%

of health system executives believe that further investment is needed in intelligent automation (IA) programs to advance their overall enterprise goals.



75%

of organizations intend to restructure their revenue cycle operations in response to shifting business dynamics caused by the pandemic.



30%

lower operational costs by end of 2024, according to Gartner estimate.

Parting advice and key takeaways

It's not about FTE reduction

- While RPA may help to pick up monotonous tasks from live staff members, this has not resulted in the elimination of positions
 - Thus far, solutions are allowing leadership to reallocate staff hours from "mindless" tasks to focus on more meaningful work
 - So, have a reallocation plan in place!

AI should not be the immediate answer

- First identify the root cause – is there a different staff, workflow, or technological error that needs to be fixed or optimized first?
- It's also possible your EHR may be able to help automate certain elements of a process as well—supplement with AI from there

Ease into it if you or your organization needs to

- Approach methodically: evaluate how to automate with existing systems first, then venture into a use case for RPA, then add machine learning to that process, and so on

Get all the right people in the same room, and on the same page

- Revenue cycle, IT, accounting, security—but also subject matters expert on both process and technology

Further standardization may need to occur as preparation

- You may be aligned in systems utilized, but do you have similar workflows? Are you operating as a whole or as separate silos?



Thank you

Justin Roepe
Justin.roepe@waystar.com
678.643.7830

