

EXECUTIVE SURVEY SERIES: Intelligent Automation



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The good news is federal employees have little concern that “robots” will take their jobs as agencies move toward automation.

They also believe automation would help their agency, particularly in moving away from “low-value” tasks and around improving the consistency and reducing errors in mission outcomes.

A new online survey of Federal News Network readers found a strong majority of respondents see the benefits and potential of intelligent automation tools like artificial intelligence, machine learning and robotics process automation. At the same time, federal employees have concerns about budget, training and legacy technology impacting the effectiveness of these capabilities.

For much of the past two years, agencies have been dipping their individual toes into the automation waters. The CFO community seems to be the most excited about these tools that can get them away from the boredom of spread sheets and mundane tasks. Respondents seem to support those initial efforts, saying mission systems and cybersecurity tools could benefit the most from automation with financial management coming in a close third.

But interestingly enough, the majority of respondents say an office to oversee the implementation of intelligent automation tools likely belongs in the office of the chief information officer with the mission area being the second choice.

The survey seems to show employees are excited to take advantage of automation tools, but there still is plenty of changes needed to the underlying infrastructure—both technology and culture.

“AI would promote higher value work for personnel. The conversations on AI are in their infancy,” wrote one respondent.

Another said, “The systems are only as good as the folks running them and the government isn’t appealing to many IT people that have grown up with this automation as second nature.”

While each agency is at different points with their move toward automation, it’s clear federal employees recognize that tools like artificial intelligence, machine learning and robotics process automation are more than just another shiny object, but are another key piece to the mission success puzzle.

Jason Miller
Executive Editor
Federal News Network

I am a:



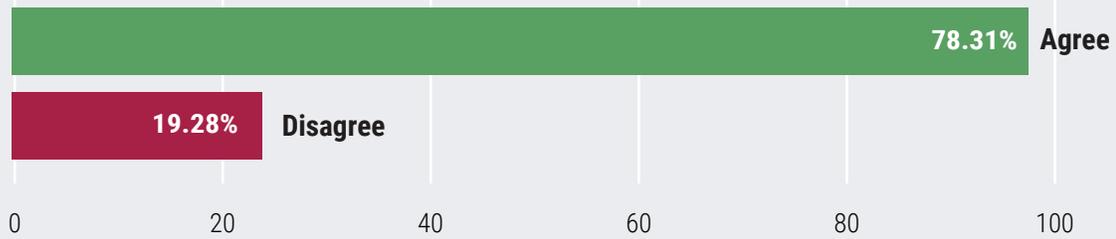
OTHER:

- State worker
- State employee
- Municipal employee

I work for:



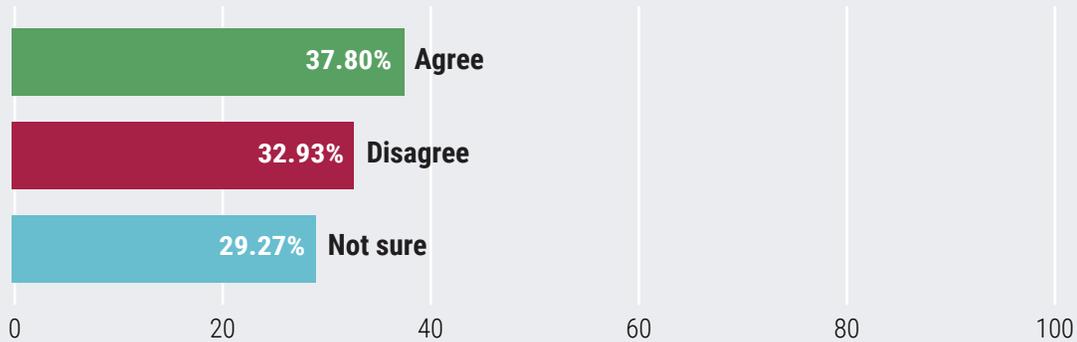
I'm familiar with the concept of intelligent automation.



COMMENTS:

- Some software tools are automated, i.e. create a standard letter. And linked to data in our database. Only a few people understand how it all works. And in some cases the links are tied together and you can't go forward (create a standard letter) without other items in the database.
- I'm guessing that this is "automation" of systems, the process of which I am totally against. I cannot stand how so much of our world is becoming automatic. Much of the time, this 'automation' does not make the choice that I want. I have many more grievances for automation which I don't care to continue here. Even this "system," surveymonkey, did not open properly on my IE browser. It did open on Chrome.
- I was a program manager for an AI/ML program.
- Somewhat, but not at the 'journeyman' level by any means!
- I served as the program official responsible (with the help of a consultant) for putting together a contract of Intelligent Automation/Artificial Intelligence (IAAI). which was awarded in May of 2019.

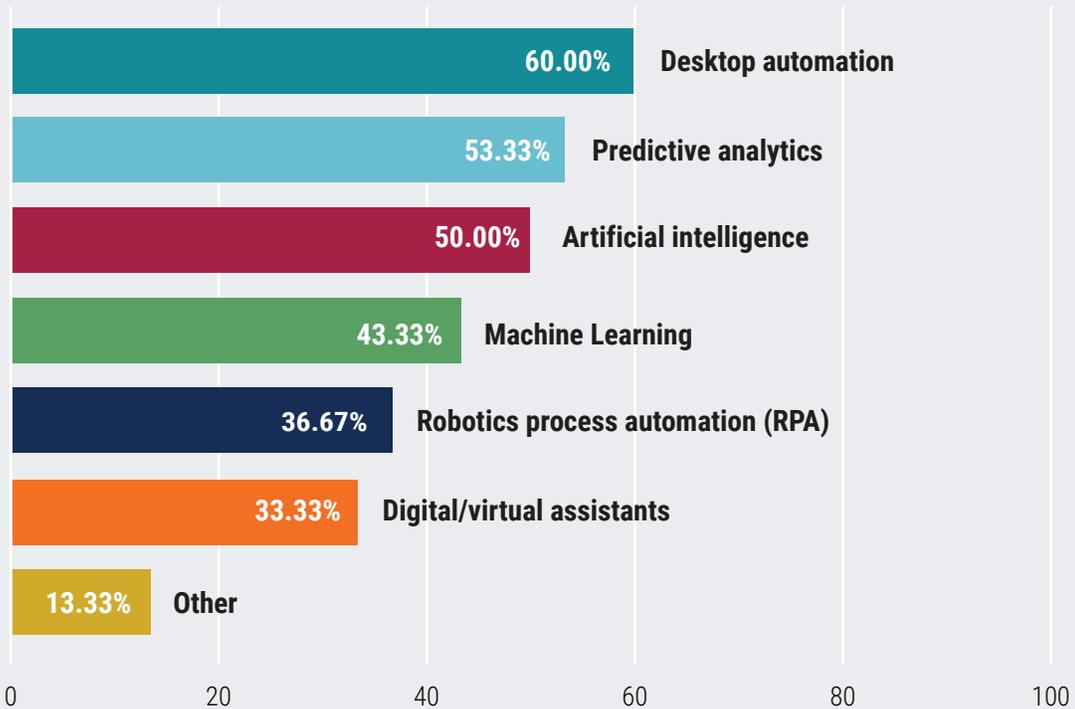
My agency already is using intelligent automation tools such as robotics process automation, artificial intelligence and machine learning tools.



COMMENTS:

- Nope not automated, not even email or telephone contact is auto, and the staff are not intelligent, all they can do is open and close tickets as their contract is cost plus award fee which leads to questionable practices.
- My agency is still transitioning to paperless files.
- One that comes to mind is elms, electronic learning, courses online.
- It has been talked about but I'm not sure if the agency has started using it.
- While many say we have AI and/or ML, the lack of knowledge and drive for funding have labeled many concepts.
- AI/ML when they have none inherently in the system.
- Limited so far, mostly around automated helpdesk chatbots.
- Investigating other uses that are more mission focused.
- Quite likely in some areas.
- HHS is still in the production phase for an AI tool specifically for use by procurement offices. Unfortunately, our agency (PSC) had undergone significant changes and management. has done everything possible to push back on use of the IAAI contract which was a perfect fit for dealing with the COVID-19 outbreak.

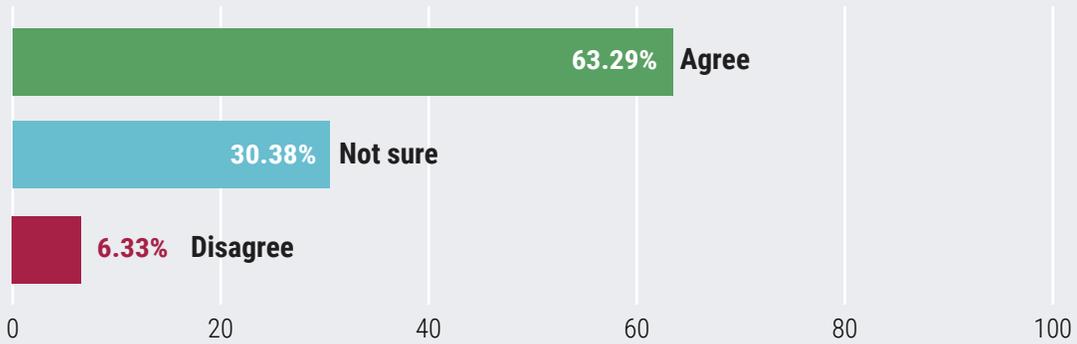
**If you agreed with the previous question, what tools are your agency using?
(Check all that apply)**



OTHER:

- Incident and event management; security; threat monitoring, detection and response; automated server provisioning.
- Computer programs have automation which are annoying - i.e. autocorrect for spelling on Word and on cell phones.
- Engineering has many words and acronyms which I do not want to be automatically changed.
- Have no idea what tools - I think programmers wrote the program themselves.
- Helpdesk chat bots and mobile phone virtual assistants.

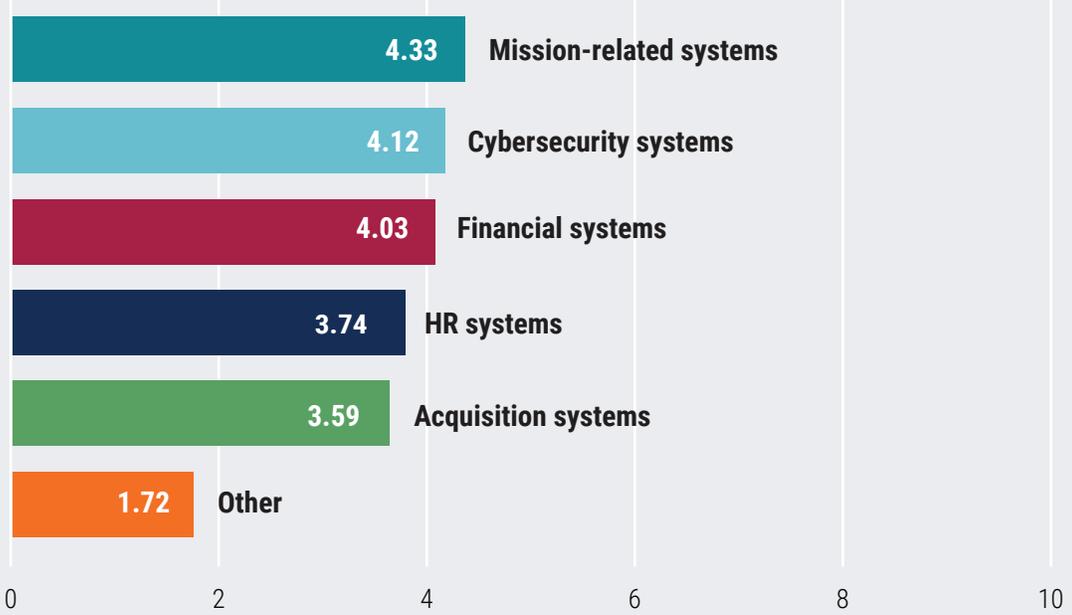
My agency could benefit from the use of intelligent automation tools such as robotics process automation, artificial intelligence and machine learning tools.



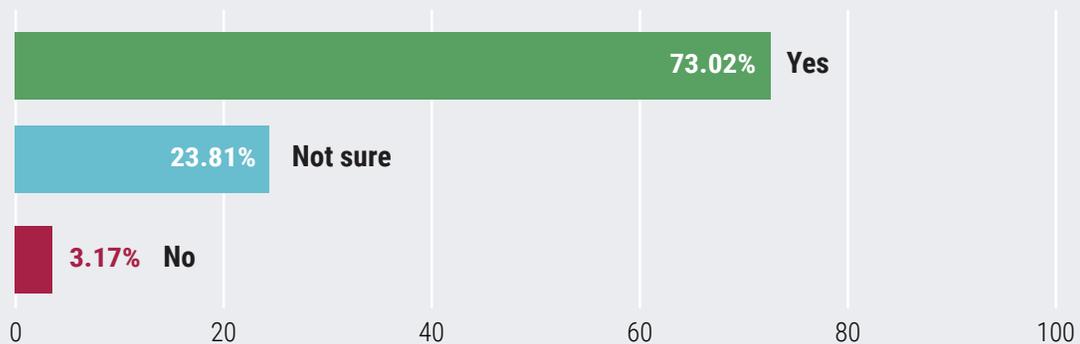
COMMENTS:

- In some areas, they could automate the routine.
- Has not been launched with a plan or strategy.
- The general amount of data being analyzed and/or not being looked at could be crucial in an effort to optimize my new agency.
- Better/more training would benefit the agency better.
- Would imagine safety inspector and controller training might be forthcoming, if not done already.
- We are using it now.
- Again it is a shame that our management does not understand the tremendous benefit that the IAAI contract could provide HHS. In fact, some of the awardees have reached out to me with the benefits available which I have shared with our acting HCA.
- Robotics would help in some instances, but not in others

**Where could your agency benefit the most from intelligent automation tools?
(Rate in order of most benefits to least benefits)**



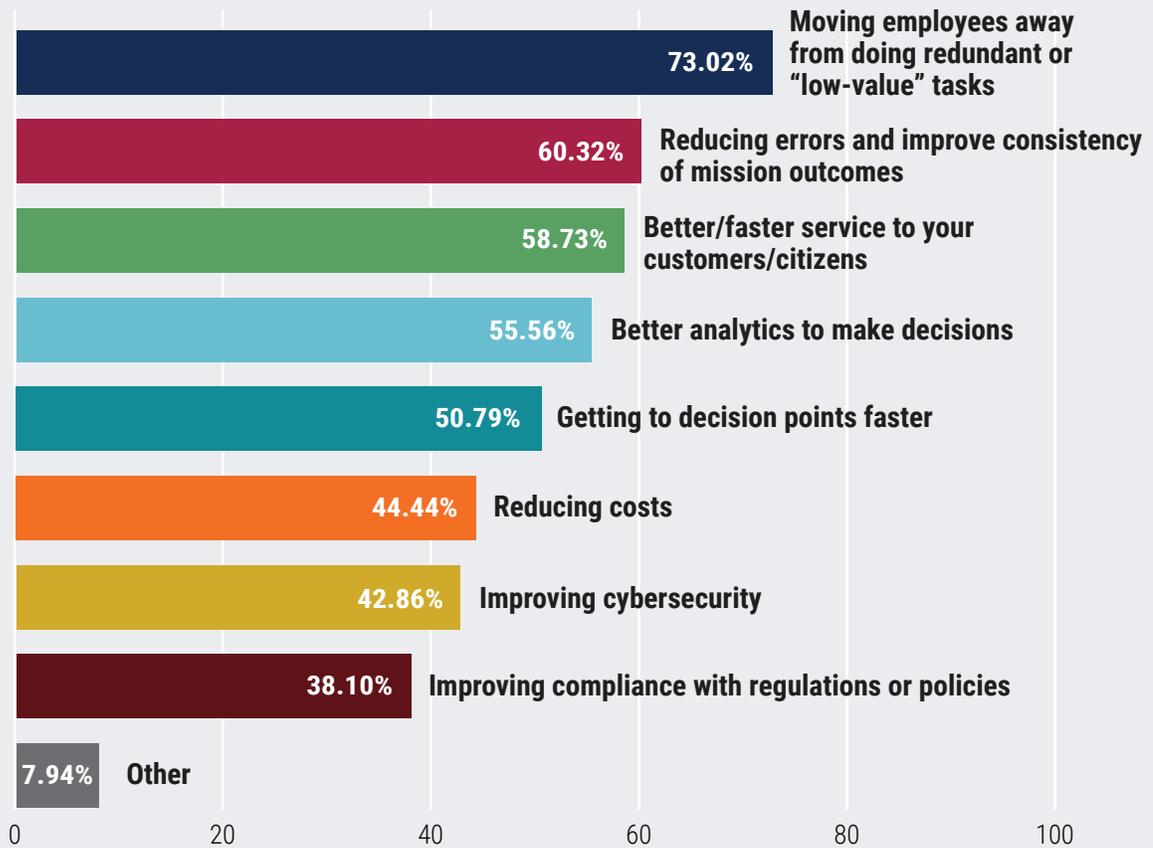
Whether or not your agency could benefit from the use of intelligent automation tools such as robotics process automation, artificial intelligence and machine learning tools, do you think the government, more generally, could benefit from these tools



COMMENTS:

- The cheapest bids are often the poorest buy for the money so I'm not sure it would be done intelligently.
- "If you want to do more with less, automate the routine tasks." ~Gerald T. Smith
- Government tends to simply automate BAD processes and declare advancement.
- Implementation of any automation should only be completed after process improvement is conducted. However, there should be a way that all information has been captured.
- It couldn't get much worse than presently.
- Many areas of government endeavor would certainly find these tools helpful, if not indispensable!
- At a minimum, these technologies could assist in tracking and analyzing COVID-19 cases, deaths, etc. as well as assist in obtaining resources as the best prices for all agencies responding to the virus.

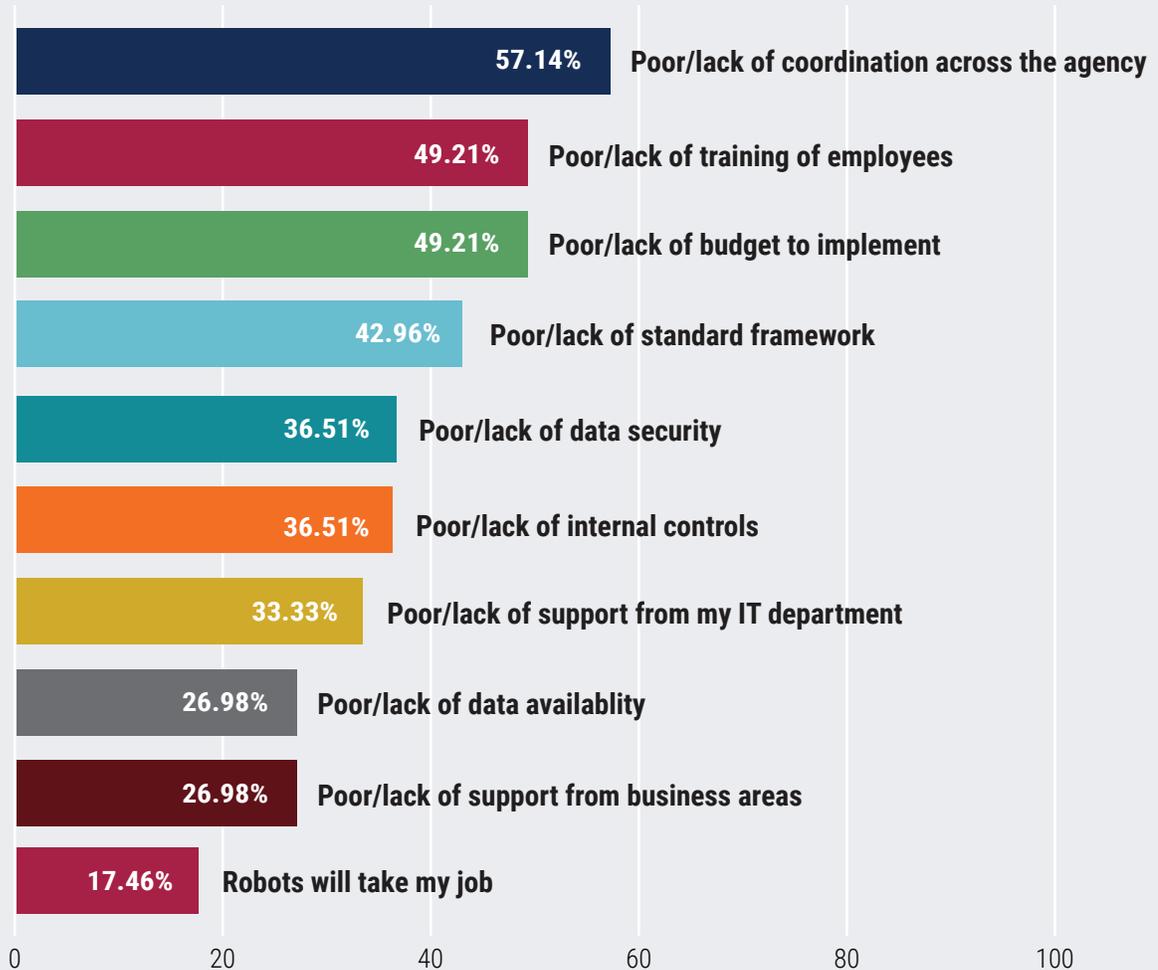
What are the greatest benefits of intelligent automation? (Check all that apply)



OTHER:

- Maybe analytics support if it were truly intelligent, maybe compliance if properly designed but getting to incorrect decisions or ones driven by political pressure faster isn't a benefit.
- Having an employee able to turn on automation if he wants it, instead of it being "automatic." I have a brain which I like to use.
- Training!

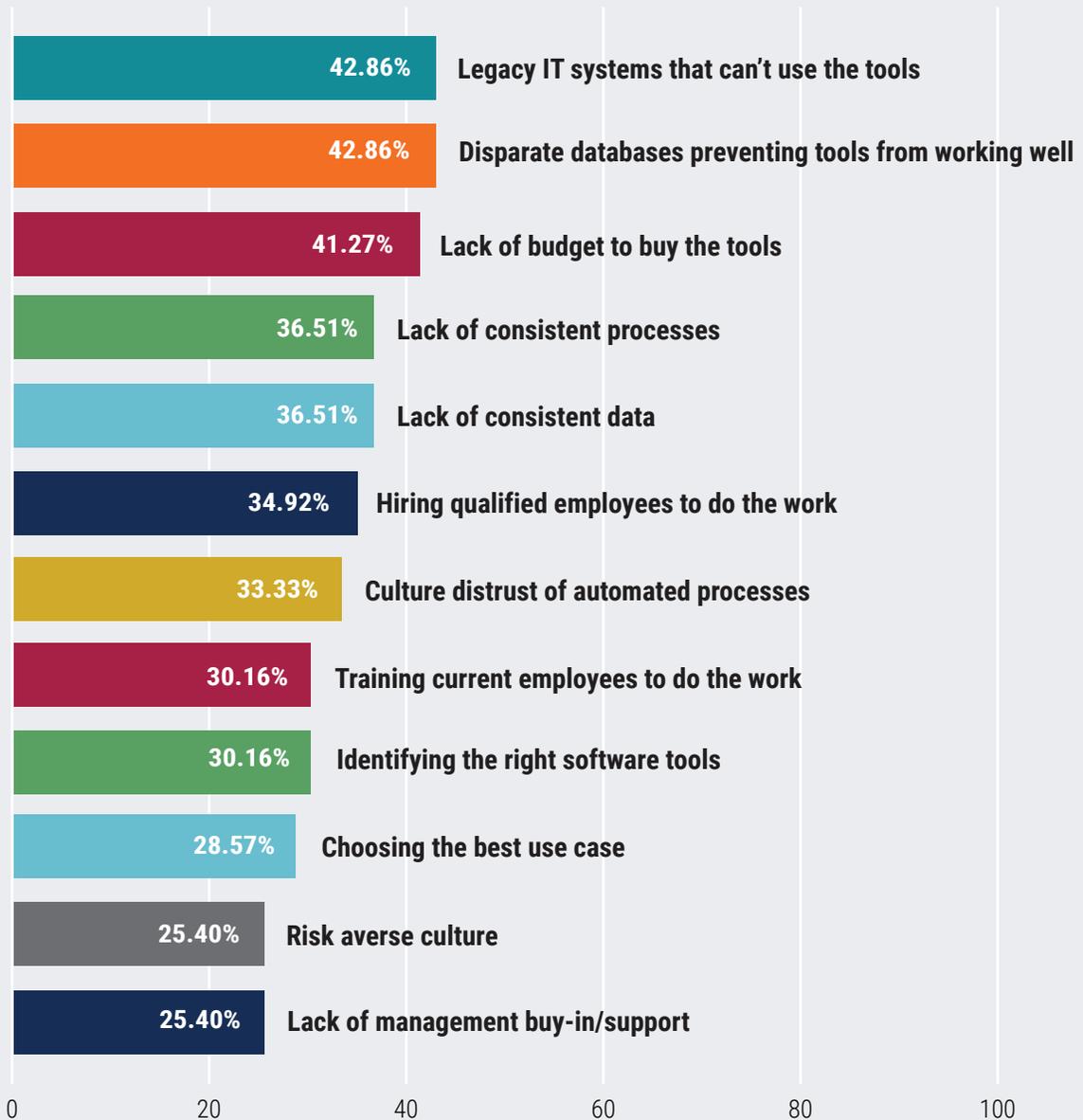
**What concerns do you have about the use of intelligent automation tools such as robotics process automation, artificial intelligence and machine learning tools?
(Check all that apply)**



OTHER:

- Automation of poor processes that only accelerate time to failure.
- Creation of new types of technical debt. If we saw desktop automation as a point on the journey, fine, but it is a poor long term solution.
- If you have a great system that feeds on [bad]...unplanned...repositories of information...it will be another waste of taxpayers money.
- Not really much negative to say about more productivity and less waste of time and funding.
- Lack of resources to implement.
- Robotics only helps if providing the right information needed.

What do you think are your agency's biggest challenges to using intelligent automation tools such as robotics process automation, artificial intelligence and machine learning tools? (Check all that apply)



OTHER:

- Pressure from robotics companies to sell their product.
- The agency has failed numerous times in the IT realm along with many IT folks just plain have too much time in the government and need to take a private sector job for a while... to see what happens to smoke blowing "managers."
- Policies, culture and leaders that allow for resistance to automation initiatives.

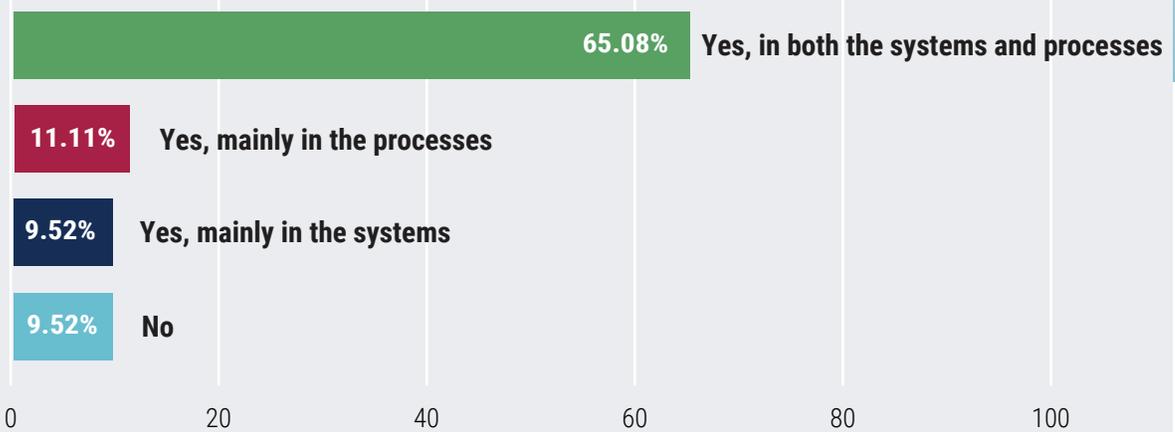
Do you currently have an enterprise data strategy?



COMMENTS:

- Tried centralized systems a few times but they weren't effective, not willing to put in the time to input and the systems cumbersome or underutilized due to lack of stuff to input.
- Only in the area of geospatial.
- If not, we should and most likely will in the near future!

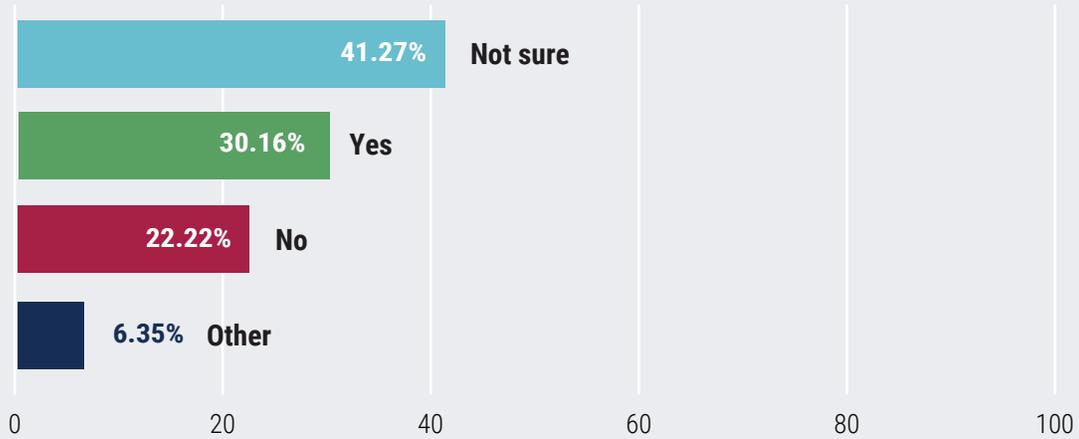
Do you encounter data inconsistencies within your current systems and/or processes?



COMMENTS:

- Inputting the same data too many times and not capturing at the beginning. "fat fingering."
- The systems work well - it's when employees get involved in the process (willingly or not) that the system falters.

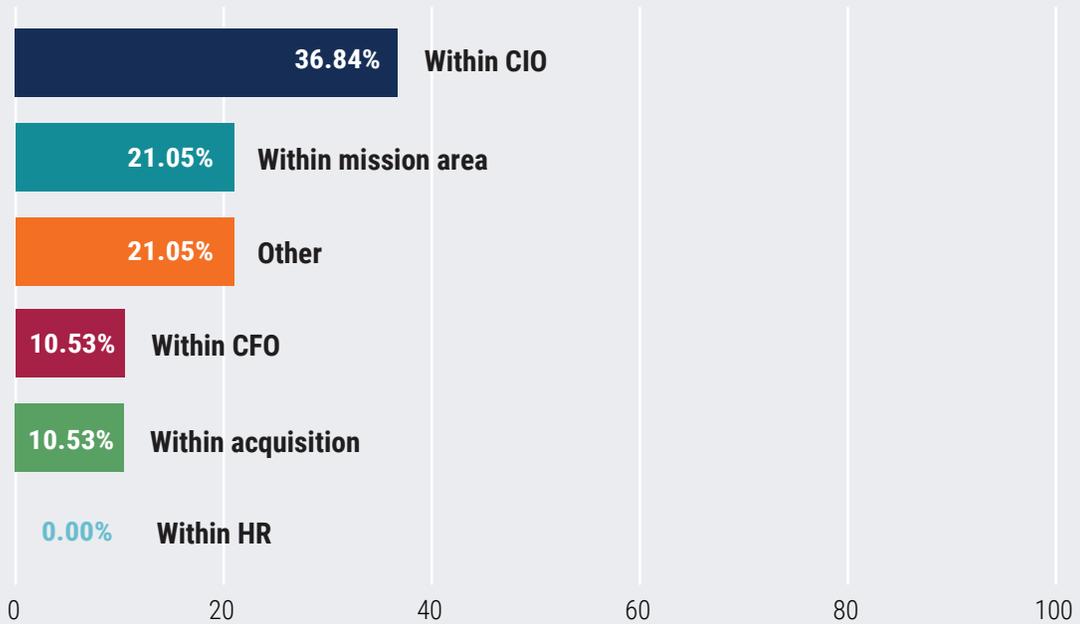
Does your agency have an office or part of an office leading the move to intelligent automation?



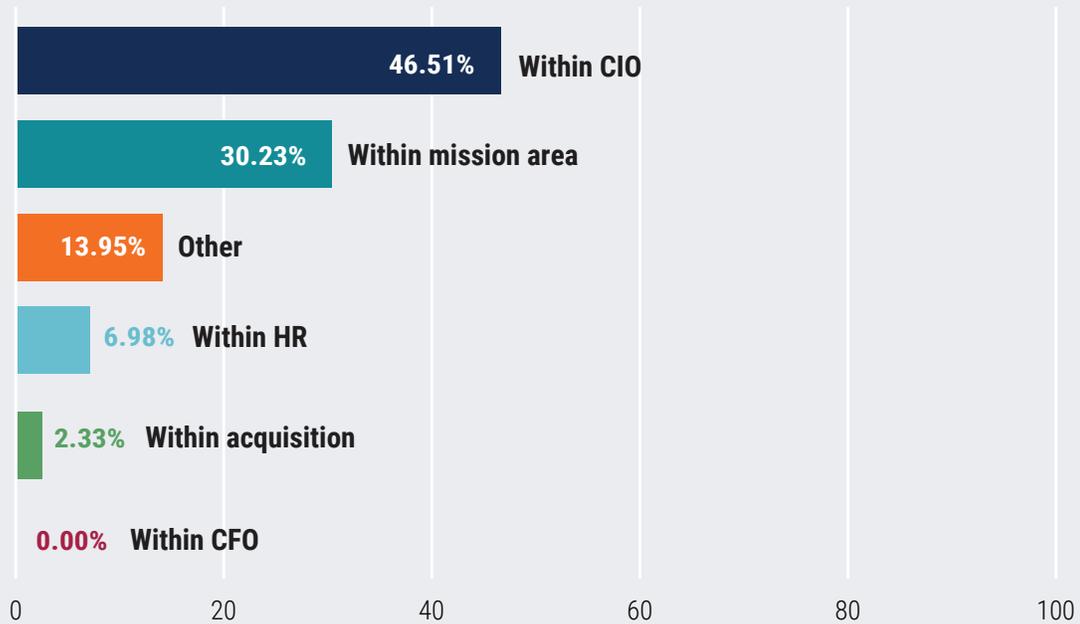
OTHER:

- I think the agency does have a team, but we are so far down the food chain it will be implemented and we will limp along with it until either HQ decides to update our training or to accept it does not work as they hoped.
- Yes, but they are not empowered and really can't do it agency-wide.
- We have a SMO but it does not appear to be dedicated.
- Not sure as to PSC. Across HHS, there seems to be no coordinated effort rather lots of disparate parts doing their own thing.

If you answered yes, where is that office located?



If no, where do you think that office should be located?



Any other thoughts or comments on intelligence automation in the federal government?

RESPONSES

- Regarding the previous question, intelligent automation has arrived at the CIO, CFO and mission-related offices.
- Intelligence is running out the door as soon as we are allowed outside again. Not much hope.
- Even just automating processes could result in less mistakes and more efficiency.
- It would mean the loss of jobs for older employees and provide jobs for younger employees.
- Our IA program is written so strictly that it keeps failing to process some entries.
- AI would promote higher value work for personnel. The conversations on AI are in their infancy.
- High end decision makers are not keeping up -- by ability NOT training, which is massive and high costing to make them sound better.
- The systems are only as good as the folks running them and the government isn't appealing to many IT people that have grown up with this automation as second nature
- The federal government is way behind the civilian sector in utilizing intelligent automation. Buy-in varies throughout many agencies from management.
- There will be so much union push-back that it will take decades to get any sort of IA approved.
- Most of the older demographics in the workforce do not adjust well to change or automated anything ...and will blackball you if you try to implement change.
- I'm not certain that this agency has the right people (or enough money) to implement intelligent automation.



Driving Value from Intelligent Automation: The Critical Path to Ensuring Process Transformation

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Federal government agencies can gain significant efficiencies when applying intelligent automation to routine and everyday processes; although this is quickly becoming a widely held belief, it is also commonly misunderstood and as a practice, routinely implemented ineffectively.

While it is true that intelligent automation includes a wide spectrum of technologies such as, basic robotic process automation (RPA), machine learning (ML), advanced analytics and artificial intelligence (AI) that can produce immediate results; without an enterprise data strategy underpinning, most intelligent automation projects will prove to be siloed and ineffective with lingering data gaps and inconsistencies.

To avoid the effects of GIGO: “Garbage In, Garbage Out”, which is automating broken workflows with inconsistent, biased or otherwise compromised data; in an ideal world, intelligent automation projects, from the

outset, would begin with an enterprise data strategy, verified workflows and clean data sources.

“If you don’t have a good enterprise data strategy, where you have common understanding of data elements, what’s required to gather, how you want to organize your data, clean your data, and get it ready for analysis, then you can’t get to machine learning, you can’t get to AI,” said Ernie Stevens, Director of Services for Copper River.

The problem is, most federal agencies lack a comprehensive enterprise data strategy, according to a recent survey of federal IT professionals conducted by Copper River. Less than 15% of respondents said they had a “mature and implemented” data strategy, and another 15% said theirs was “just getting implemented.” The other 70% said their agency’s data strategy is currently in development, missing in action, or that they aren’t sure.

And just over 65% of respondents said they encounter inconsistencies in both their current systems and processes. Less than 10% said they don’t encounter inconsistencies in either.

And that’s got some federal IT personnel worried. When asked about challenges their agencies face in implementing AI, machine learning and other forms of automation, the same number of respondents – 36.51% – said “lack of consistent data” or “lack of consistent processes” were a concern.

As one respondent phrased it in a comment, automating poor data or poor processes “only accelerates time to failure.”

“You have to get a standard, reliable, repeatable process before you can ever do anything scalable with your data,” Stevens said. “That goes back to whether it’s robotic process automation, and you’re designing bots or you’re creating a data lake where you can start to use the data to model and build algorithms

that are that are predictable and usable."

That's why the preparation that occurs before the development actually even begins is some of the most important for an agency that's testing the waters of automation. And that's largely what Copper River's survey suggested is lacking.

Stevens broke that preparation down into four major categories: leadership, technology, talent, and strategic alignment.

"Applications that get the biggest return on investment, you've really got to focus on what that could be and whether you're strategically aligned, whether you've identified a process that you want to apply machine learning or AI into, that have a link back to where you're going to get the biggest bang for your buck," Stevens said. "You've got to have all those things, and a balance of all those things. In the perfect world, you have all of that. In the real world, you don't really have all of that. So how much can you get? How much can you make sure that you're heading down the right path?"

And while most agencies tend to go first for the mission-oriented applications when experimenting with automation, many are finding that back office automation is where the real return on investment lies. Financial forecasting, streamlining human resources, predictive modeling for workforce gaps and retirement are all areas where agencies might see more savings from automation.

This is where many federal IT professionals see significant value: 73% of those who responded to the survey said moving employees away from

doing redundant or "low-value" tasks is the greatest benefit of automation.

The final step is to take these automated processes in conjunction with analytics applied to clean, consistent data to enable intelligent automation, which can assist humans in making more important decisions that require value judgements or problem solving.

However, to get to that point, agencies need to ensure some fundamentals are achieved. First and foremost, agencies need to determine the correct processes for improvement. Tying the processes to the business outcomes that need to be achieved are critical for success of the ML / AI project. Before any automation, processes should be streamlined for business value add and reduce wasteful steps that are not necessary. Then, once those processes are consistent, agencies can apply different workflow automation tools to mimic human interactions and take out process variations. The newly automated process is now enabling consistent data collection to based analytical decision making and modeling.

Harkening survey respondent feedback: "Government tends to simply automate BAD processes and declare advancement. Implementation of any automation should only be completed after process improvement is conducted."

"It's not too late to get started with AI, machine learning, analytics, modeling," Stevens said. "I think that you can go back and help create those foundations if you want to enhance how much benefit you're getting out of the

investment that you're making." Although process improvement is an iterative process, setting out on the journey with the correct processes tied to the target business outcomes results in the most likely success horizon and avoidance of GIGO.

No matter where you are in the process, Copper River can arm your agency with a proven approach that iteratively enhances your current intelligent automation projects, while continually defending against the ill-fated GIGO effect. Contact **Copper River** today to learn more.



About Ernie Stevens:
As an Intelligent Automation technology veteran, Mr. Ernie Stevens

holds over 19 years' experience focusing on the critical requirements needed for process transformation. As a Master Black Belt (MBB) and Project Management Professional (PMP), Mr. Stevens has enabled a variety of clients within the Federal, Enterprise, Financial, Aerospace, and Product Manufacturing industries transform their overall business performance through advanced process improvement, analytics, machine learning, and AI. Recently joining Copper River Technologies, Mr. Stevens serves as their Director of Services where he leads their consultative and managed services practice. Here, Mr. Stevens lends his consultative expertise and innovative process transformation methodologies to help Federal agencies transform how they operate - from strategy to implementation.

Ernie Stevens, Director of Services
Copper River Tech
Ernie.Stevens@CopperRiverTech.com