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Prepared Testimony: The Use of Artificial Intelligence at the Library of Congress, Smithsonian Institution, and Government Publishing Office

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Chairwoman Klobuchar and Ranking Member Fischer thank you for inviting me back to the Committee to offer my perspective on the use of artificial intelligence and machine-learning applications (AI) at the Government Publishing Office (GPO).

I'm grateful to you both for the Committee's support and honored today to appear with two extraordinary public servants, Dr. Carla D. Hayden and Secretary Lonnie G. Bunch, III.

About GPO

GPO differs from my colleagues' institutions in its role and function. While the Library and Smithsonian, at their core, maintain, protect, and preserve essential collections and make them available to the world, GPO produces, publishes, and maintains information on behalf of all three branches of government. It is this production function that makes us different—our more than 1,600 craftspeople and professionals produce publications like the Congressional Record, the Federal Register, and a range of Federal information products including secure credentials and the United States passport, the most secure identification document in the world.

GPO also makes many of its publications available as tangible materials and digitally through its ISO-certified trusted digital repository, GovInfo. Because GPO maintains its unique role in the production process, we supply data to many of our partners, including the Library of Congress and its Congress.gov site. Similarly, we built much of the infrastructure used by the National Archives as it makes the Federal Register and the Code of Federal Regulations available.

A Framework for AI at GPO

No matter what you call it—artificial intelligence, machine learning, or large language models—GPO's current processes are just as susceptible to disruption from AI as those in any other billion-dollar enterprise. There is a role for AI in our manufacturing and production environments as well as our administrative and overhead operations. In general, GPO is looking to use AI as an opportunity to augment our team's capabilities, improve their performance, and allow them to focus on more difficult problems, rather than as an opportunity to reduce headcount.

With that said, one of GPO's critical challenges over the next several years will be the retirement eligibility of our workforce. As you know, nearly half of GPO's team will be eligible to retire by 2027. Through the selective application of these technologies, we can both relieve pressure on our existing team to perform repetitive basic tasks and at the same time make some of these roles more attractive to the next generation of teammates.

Working closely with this committee, the Joint Committee on Printing, and the Committee on House Administration, GPO has taken a deliberate approach to the potential represented by AI and similar technologies.

First, we created a use-case inventory similar in spirit and scope to those required of executive branch agencies and made that inventory public on our website. This provides a level of awareness, accountability, and transparency, ensuring that we fully think through these kinds of technologies before we deploy them.

Second, we developed an AI policy consistent with relevant statute as well as best practices such as those described in the March 2023 NIST AI Risk Management Framework. GPO's AI policy was issued this past October.

The policy stipulates that the use of AI at GPO must comport with our four Agency values—honesty, kindness, effectiveness, and inclusiveness—and enhance efficiency, increase productivity, and promote safety. It also requires that use of AI capabilities be disclosed to GPO employees, contractors, and clients and that requests for the use of new AI applications be submitted for review and approval to GPO's Technical Change Control Board (TCCB), which evaluates any new application or software that GPO teammates seek to use. The policy further clarifies that violations of GPO's AI policy must be reported and could be subject to possible disciplinary action.

The policy also calls for the creation of an AI Governance Committee at GPO comprised of key business unit managers as well as for the training of every GPO employee who may be entrusted with using AI capabilities. We believe this emphasis on training will prove critically important in the years ahead because we need to ensure such tools are used in a responsible and ethical manner.

Our AI Governance Committee is currently under development as is an overall AI Strategy for the Agency. I recently signed the charter for that committee, and it should be up and running within the next few weeks. We hope our overall AI Strategy can be ironed out within the next few months.

Examples of Potential Applications for Artificial Intelligence and Large Language Models at GPO

GPO is first and foremost a manufacturing enterprise. We produce a variety of documents for all three branches of government, including daily publications like the Congressional Record and Federal Register, committee reports, bills, and more specialized documents like White House programs, the Federal Budget, and the House and Senate manuals. We also manufacture the United States passport, the world's most advanced identity document.

Whether it's modernizing our manufacturing operations or automating our back-office functions, there are many applications for AI-enhanced tools to make our craftspeople and professionals more productive. We have a few systems that use rudimentary AI tools currently and can see many more applications as this software matures.

These are a few of the examples that we're considering now.

Administrative Functions

Acquisitions

GPO's Acquisitions Services team procures everything from computers, consulting services, and pens to the specialized papers, inks, and substrates that GPO needs to produce its products. We use Oracle's Public Sector Contract Lifecycle Management (CLM) system to manage the Agency's contracted procurements and are currently evaluating its AI features for a near-term pilot. This will hopefully increase the accuracy of GPO's

procurements and free up the Agency's valuable contract specialists to focus on more complex issues.

Employee Communications

GPO utilizes a newsletter tool developed by Axios known as Axios HQ for many of our routine communications with our teammates, including my weekly message. From the start, this platform included prompts to assist in writing entries in Axios' trademark Smart Brevity® style.

In a recent update, Axios added several AI-powered tools to assist in writing headlines based on the text of an item and automatically converting text to the Smart Brevity® style. I've personally experimented with these tools, particularly with respect to headlines. I've found that currently the tools are effective ways to see alternatives and I've chosen the generated headline on a few occasions. I'm sure that they will get better as the tools mature. However, our initial experience has shown that these AI-powered tools sometimes produce better results than we can come up with ourselves.

Cybersecurity

Many of GPO's cybersecurity tools have either released or are planning to incorporate AI-powered tools to recognize cyberattacks in real time. As talented as our cybersecurity team is, AI-powered tools would have the ability to view massive amounts of data and flag potential attacks to allow our team to proactively repel them while minimizing false alarms. We have already started evaluating many of these offerings to start pilot programs this year.

Process Automation

Robotic process automation (RPA) is a technology that is designed to automate routine, repetitive, and rule-based tasks, often in back-office functions. RPA software often simulates mouse movements and keystrokes to move data between systems or generate reports. The classic example is software that automatically opens a spreadsheet, copies certain data, pastes it into another spreadsheet, and saves that new spreadsheet in a particular location.

In an organization like GPO where we have multiple systems—including some legacy mainframe applications—adaptive RPA software can help us get important information to decision makers in time for it to be actionable.

As RPA tools incorporate AI-powered tools, they will be better able to handle the kinds of minor data differences that would cause errors in earlier generations of this software. Similarly, the use of AI to generate these kinds of processes may allow GPO's teammates to automate tasks themselves without the need for significant IT resources. This helps everyone to be more productive.

GPO

Manufacturing and Production

Quality Assurance Image Analysis

GPO is incredibly proud to produce the U.S. passport as it has since the 1930s. Known as the "Next Generation Passport," the current iteration of that product has been in full production since April of 2022. One of the key improvements to that document is the adoption of the new polycarbonate identity page, a component manufactured by GPO.

As part of the manufacturing process, GPO utilizes technology which optically analyzes each of these identity pages and automatically rejects those that do not meet our quality specifications. Given that we manufactured nearly 22 million passports in FY 2023 and have an order for an additional 22 million in FY 2024, this kind of technology is critical for us to meet our production targets and our quality standards.

Similarly, with GPO's new inkjet presses, we use a similar technology that allows the operator to see prints as they move through the machine. The machines are intelligent enough to easily recover from errors after the operator fixes the problem. We expect that this software will evolve to include even more error checking functions to allow operators to ensure high quality at an elevated production tempo.

This is the kind of traditional pattern matching where current AI technologies excel. As this technology improves, we hope to have even better results in both quality and productivity.

Making Proofreaders More Productive

GPO's dedicated team of proofreaders and keyboard operators are the backbone of GPO's in-plant operations. Without them, we wouldn't be able to deliver final products for Congress or the Federal Register.

They are also difficult to hire. It takes a particular type of person with the dedication to perform this important but exacting, repetitive work, usually at night. In the past we had been able to recruit from the newspaper and publishing industries, but today there are fewer and fewer proofreaders employed by those industries. While GPO is trying to grow the next generation of proofreaders through its apprentice program, it is slow going.

Having more intelligent tools to supplement their work will help to make these teammates more productive and let them focus on more complicated problems.

For instance, currently we use simple "find and replace" scripts to address common capitalization issues. One element of GPO style is capitalizing the word "State" when referring to a political subdivision. However, these scripts can't discern between the "State of Minnesota" and a "New York state of mind." That requires our proofreaders to go back and make sure that the words are capitalized in context.

AI holds the potential of delivering more intelligent tools that would be able to understand that context, learn as our proofreaders correct copy according to natural changes in language, and reduce the routine work our proofreaders need to do to prepare a manuscript. This will free our team to focus on more complex problems, like formatting of bills or making sure that references are correct. That would be a major improvement for our teammates and our workflow.

Making Public Information More Accessible

GPO is proud of its important role in making government information available. Last year, GovInfo had its highest number of retrievals yet—more than 1.1 billion in FY 2023. That's a 32 percent increase from the prior year and a total of 10.8 billion retrievals since GPO started making government information available online in 1994.

That information needs to be more than just available—it needs to be findable and usable. AI technologies hold significant promise in delivering on those requirements.

Cataloging

AI technology and large language models have a demonstrated ability to summarize materials and discover relationships. The library community is already testing some of these tools for cataloging materials. These tools could be used for generating abstracts and other metadata to assist our librarians in cataloging government information materials. Having these tools do the preliminary work, while our librarians review and edit the metadata for quality, will allow us to be more productive with our current headcount.

Screening for PII

Considering the importance of protecting personally identifiable information (PII), we are always looking for new tools that can find this information and prevent its inadvertent disclosure. In the wake of last year's disclosure of PII as part of the January 6th Select Committee's report and related materials, GPO established a contract with a vendor that uses a machine-learning model to scan documents for PII, such as social security numbers. Our initial work with this vendor has been successful and is another important tool to guard against inadvertent disclosure of PII. We hope to adopt other AI-enabled tools to scan and redact PII where appropriate.

Providing Alternative Views of Government Information

GPO recently delivered on its statutory obligation to make congressionally mandated reports available via its GovInfo trusted digital repository. To date, we have more than 176 reports as part of this collection and almost all have been submitted in the PDF file format. While PDFs are an excellent method for document preservation and showing a document as it's intended to appear in print, other machine-readable formats display better on mobile devices and can provide data in formats that can be utilized in new applications.

While GPO will continue to encourage agencies to submit congressionally mandated reports in machine-readable formats in addition to PDF, we also intend to explore AI or machine-learning-enabled tools that may be able to extract the information from a PDF and display it in a more accessible format. This would have application in collections other than congressionally mandated reports as well and would benefit our patrons by providing the information in multiple formats.

Conclusion

Thank you Madam Chairwoman, Ranking Member Fischer, and Members of the Committee for the opportunity to testify about GPO's AI initiatives. We've covered a lot of ground discussing both the tools that are currently in use in our operations as well as some ideas we have for future applications.

GPO is committed to deploying AI applications responsibly and in a way that supports our team, not replaces them. We look forward to continuing our work with the Committee as these efforts continue.

I'm happy to answer any questions you may have.