STATE OF NEVADA
DEPARTMENT OF TAXATION
Web Site: https://tax.nv.gov
Call Center: (866) 962-3707

LAS VEGAS OFFICE
700 E. Warm Springs Rd, Suite 200
Las Vegas, Nevada 89119
Phone (702) 486-2300
Fax (702) 486-2373

JOE LOMBARDO
Governor
GEORGE KELESIS
Chair, Nevada Tax Commission
SHELLIE HUGHES
Executive Director

CARSON CITY OFFICE
3850 Arrowhead Dr., 2nd Floor
Carson City, Nevada 89706
Phone: (775) 684-2000
Fax: (775) 684-2020

RENO OFFICE
4600 Kietzke Lane, Suite L235
Reno, NV 89502
Phone: (775) 687-9999
Fax: (775) 688-1303

MEMORANDUM

Date: August 27, 2024

To: Joint Interim Standing Committee on Revenue ("JISCR")
            Assemblywoman Shea Backus, Chair

From: Nevada Department of Taxation
            Shellie Hughes, Executive Director

Subject: JISCR Meeting (August 27, 2024)
            Agenda Item VII(C)
            Use of Artificial Intelligence by the Department of Taxation

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Chair Backus,

I understand that the Committee intends to hold a Work Session at its meeting today regarding the Department of Taxation's Use of Artificial Intelligence ("AI").

To better inform the Committee, this memo serves to provide additional information regarding the scope and parameters exercised by the Department regarding its limited use of AI. As you may recall, the Department presented an overview to the Committee during its June 20, 2024, meeting regarding the Department's ongoing modernization project (Project MYNT – "Modernize Your Nevada Tax") to implement a new integrated tax system for the State. In modernizing, the Department leveraged an opportunity to utilize AI in a very limited and secure manner.

A detailed timeline of the Department's considerations and procedures for the use of AI is as follows:

On March 28, 2024, the Department's Enterprise Project Management Office ("EPMO") inquired of the Department's Information Security Office ("ISO") regarding the use of CoPilot's (a Microsoft product, now part of Office 365) generative AI engine ("CoPilot gen-AI") to assist in:
- Summarizing meeting minutes
- Plain language initiative

- Improving SOPs and other Tax documentation

The ISO explained that additional licensing was needed in order to break out intermingled AI training between the different departments on the State tenant. Accordingly, the ISO directed the Department not to utilize generative AI except for use on information that is publicly available like tax forms and letters that already exist in the public domain.

Given this guidance, the EPMO has only authorized the utilization of CoPilot's gen-AI to advance a Plain Language Initiative with outgoing correspondence templates that exist in the public domain.

In April 2024, the EPMO presented a concept to the Department's Executive leadership where CoPilot's gen-AI engine could be leveraged for the Plain Language Initiative. This concept answered two Project MYNT issues that needed a solution at the time.
1) The Department had to review all of its forms inventory to ensure that all required data was being captured in the modernized system.
2) In an effort to be more taxpayer friendly, the forms would require a Plain Language review effort and rewrite into language that the average Nevada taxpayer would understand. (The Department learned about the necessity for this Plain Language Initiative for the success of its modernization project during its discovery phase in meeting with other jurisdictions which had recently undergone or were undergoing similar modernization efforts. Each jurisdiction insisted that a best practice and acceptance of the modernization would necessitate a plain language process in respect to taxpayer correspondence.)

The EPMO conceptualized the Plain Language Initiative with one glaring problem. The Department had undertaken a Forms Inventory process, did not have the staff resources to support an initiative where a full rewrite of all Departmental forms was feasible. Without the resources, but recognizing the necessity, the EPMO pursued the initiative through the CoPilot gen-AI program.

The EPMO vetted the idea through the Department's Information Technology ("IT") Division, with the continued support of the ISO (to ensure security protocols were satisfied). To further delve into the security protocols, the Department's Deputy Director of IT is also part of a State governance committee over AI with the Office of Chief Information Officer ("OCIO") and became part of the Plain Language Initiative to ensure security and technical oversight.

The Department's Executive Steering Committee approved the Initiative, which was initiated through the launch of a proof of concept using a few public facing forms. These forms were controlled and put through the process with CoPilot.

On July 31, 2024, the Department submitted its FY24, Q4 IFC report on the status of Project MYNT, in which the Department disclosed the following:

> In QTR 3, FY24, the project team performed a Plain Language proof of concept that demonstrated an opportunity to significantly improve the overall readability of standard notifications and correspondence issued by the Department. This proof of concept leveraged CoPilot AI against public domain Tax correspondence. On

average, once the model was trained with the desired prompts, a first version plain language draft could be created in less than one minute. Without any additional intervention, the project team experienced improvements that reduced the Flesch-Kincaid grade level from a collegiate reading level down to a 12th grade level.

The project team plans to capitalize on these encouraging results by implementing a work stream to update these documents in mass during the next quarter.

To do so, the team has designed an integrated workflow to ensure that system generated correspondence first go through at least one iteration where generative AI attempts to improve readability. Readability is quantified based upon two objective measures:

1. **Flesch Reading Ease Score (FRES)**:
   - Ranges from 1 to 100
   - Higher scores indicate easier readability
   - A score between 70 and 80 corresponds to an average adult reading level (equivalent to grade 8)
   - The formula considers sentence length and word complexity
   - Shorter sentences and simpler words lead to higher scores

2. **Flesch-Kincaid Grade Level**:
   - Assesses the approximate reading grade level of a text
   - Based on average sentence length and word complexity
   - Scores correspond to US grade levels (e.g., 8 for middle school, 12 for high school)
   - If a text has a Flesch-Kincaid level of 8, readers need at least an 8th-grade reading level to understand it

Within the Department, the Forms Committee, [Subject Matter Experts], and [vendor] developers all play a role in the development and approval process of each letter. The progress of each piece of work is being tracked in two distinct methods. FCR delivery workbench (a workstream tracking mechanism built into the [new integrated tax] system, which is part of the Department modernization efforts) tracks the progress of each letter through the workstream, and the Forms Committee meets weekly to review proposed Plain Language versions.

Notably, the way prompts are written for CoPilot helps to not only re-engineer the correspondence in a way that's easier for the Taxpayer to consume but also preserves references to Nevada Revised Statutes (NRS) or other sited sources.

So far, the Department has run 10 percent through the process and that population has realized an improved readability score of 36 percent. Improvements to this first tranche of letters reduced the equivalent reading level by 2 ½ grade levels. The biggest improvement to date is seen on "Other Tobacco Product Wholesaler Approval" where ease of reading improved 67 percent and the grade level improvement was more than 7 full grade levels, from over grade 15 to under grade 8.

Not only has the Department used AI for this limited Plain Language Initiative in a secure means, it has become more efficient in its use. The Department has savings through manpower and efficiency gains that can only contribute to fiscal responsibilities.

Since the Department has launched this Plain Language Initiative, it has been asked to speak at multiple national conferences on the matter. Many jurisdictions in the United States and abroad have been asking the same question the State of Nevada was asking, "How can we use AI safely and securely, and incorporate it into our workstreams? And should AI be used?" The Department has reflected less on the question about whether AI should be used and more on the question of how it can be used securely. What guardrails should be applied through its use so that it becomes an effective tool? The Department believes its current use of AI has been fiscally responsible and secure.

The Department is happy to address any future questions or concerns the Committee may have as it relates to this limited use of AI.

Sincerely,

Shellie Hughes
Executive Director