



Harnessing the Power of Artificial Intelligence in Your Government

Glenn Plunkett

Director of Tech Activation
gaplunkett@cshco.com



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Examining the key components of AI strategy and opportunities for you to utilize them in daily operations.

A photograph of two women in business attire. The woman on the left is wearing a light blue blazer over a white turtleneck and large hoop earrings. She is looking down at a document. The woman on the right is wearing glasses and a dark top, also looking at the document. The background is dark and out of focus. A white rectangular box with a teal vertical bar on its left side is overlaid on the right side of the image.

What is *AI – Really?*

| What is AI?

We hear the term everywhere

- Is everything in tech AI now?
- Is there something we're missing out on?
- Is AI just a large language model (LLM) such as ChatGPT?

In the past few years, the “AI” moniker has been applied to just about anything that resembles digital automation. Some are actually AI, and some are not. For our purposes, let's consider Artificial Intelligence as any tech capability that enables a computer can do which a human was once better at.

| What is AI?

One reason why “everything is AI” now is because at one time, there was no better term for it.

Over time, many AI technologies have been refined into their own “thing”, such as Machine Learning or Robotic Process Automation.

Now they’re beginning to trend back to the catch-all term AI. Perhaps it’s just easier to type and explain.

Regardless, think of in terms of the opportunity: We once looked to computers to just store and format data, essentially using them as an analog to pen and paper. We can now use them to **move data, recognize and interpret it, and take appropriate action.**

Quotes

Automation applied to an inefficient operation will magnify the inefficiency.

- Bill Gates

In other words, automating a poor process just makes it fail faster (as I've said myself many times).

Does it really?

- Even if the process is substandard, it might still be worthwhile if it's automatic, saves time and/or improves accuracy.

A woman and a man are looking at a computer monitor in a modern office setting. The woman is on the left, smiling, and the man is on the right, looking intently. The background shows a large, open-plan office with wooden beams and a large plant. The text "AI Tools and the Opportunities They Create" is overlaid on the right side of the image.

AI Tools and the Opportunities They Create

Document Intelligence

Train the AI to comprehend a document and extract data from it. Also called Document Recognition, or Intelligent Document Processing (IDP).

Characteristics:

- Works well with forms.
- Even works with handwritten data (within reason).
- Relatively easy way to turn paper into digital data.
- Often the first step in data intake.

Specifics

- Define data areas on the form
- Utilizes machine vision to read the form
- Utilizes machine learning to identify variations
- Automatically extract predefined structured data such as “Account Number” or “SSN”
- Data can then be stored in other systems/databases

Document Intelligence

Use Cases:

- Large volumes of preprinted forms: taxes and other filings.
- Repetitive, document-driven financial processes (payables, for instance).
- Contract processing.
- Enabling search of paper documents.

Note

Document Intelligence is most often paired with another technology to enable a complete workflow.

Robotic Process Automation (RPA)

RPA is an offshoot of AI and is often used to automate multi-step processes and apply rules and policies.

Characteristics:

- Supports basic decision-making and predefined rules.
- Can operate very quickly (much higher throughput than a human in most cases).
- Can be trained to operate and interact with other software programs.
- Doesn't deal with ambiguity very well.

Specifics

- RPA “bots” can autonomously run to process data and respond to events
- Requires training, and you must have a highly defined process
- Repeatable, auditable
- Can interface with other systems via direct connection to exchange data
- Can function in place of a human, taking over the computer and operating software the same way

| Robotic Process Automation (RPA)

Use Cases:

- Data entry and extraction.
- Reconciliation.
- Rule-based routing (“all invoices go to Sam”).
- Structured processes (employee onboarding, sending past-due reminders, auditing reports, etc).

AI Decision Processing

Much like RPA, but uses Large Language Models

- Works better with complex decision dynamics
- More effective with ambiguous inputs
- If allowed, will search for the information it needs to complete a task
- Learns from repetition (and usually needs a lot of training data)
- Can make mistakes
- Much harder to develop
- Higher governance concerns, so often better used for *recommendations* as opposed to *decisions*



Large Language Models

Enabling conversational logic and search capabilities along with a creative side – which may or may not be a good thing. There are also small language models – same technologies with a much smaller scope.

Characteristics:

- Language models – large or small – are a combination of technologies like Machine Learning, context recognition, Machine Vision, etc.
- Can be trained to a very specific knowledge domain or be incredibly broad and knowledgeable in most anything.
- Usually resource-intensive and therefore can be expensive.
- Speak authoritatively yet can and do mistakes!

Specifics

- LLMs are interactive and therefore tend to make for a good assistant.
- Less suitable for specific repetitive tasks as they are overkill.
- Higher governance and liability concerns by far compared to other automation tools.

| Language Models

Use Cases:

- Problem-solving (but check their work!)
- Searching, summarizing and explaining.
- Writing copy.
- SLMs are great for specific domain intelligence (knowledge of internal procedures, for instance).

A photograph of a person's hands holding a tablet computer, with another person's hands visible in the background. The scene is set in a meeting or office environment. A white cup and some papers are on the table. The image is partially covered by a dark blue patterned bar on the left and a white text box on the right.

AI Prompting – Quick Guide

| AI Prompting


LLMs work best with strong context. Remember to be wordy and conversational with them.

- Over-explain things.
- Set the background context.
- Use multiple prompts to get to what you're looking for. Remember, it's a conversation and doesn't need to fit into one single instruction or search term.
- Use formal and precise English (or your language of choice).
- Define things for the AI if it is obscure or colloquial.
- Be very specific about what you want the output to be. Provide examples if you can.
- For complex topics, consider breaking the conversation down into components.
- Refine/give feedback if it doesn't give you what you are looking for.

| AI Prompting

Not so helpful:

I can't remember the name of the yellow curved thing.

 Copilot ⓘ

You're trying to remember the name of a **yellow curved thing**, and while that's a bit open-ended, here are some common possibilities that might match what you're thinking of:

Common Yellow Curved Objects

- **Banana** – Probably the most iconic yellow curved item.
- **Boomerang** – Often curved and sometimes painted yellow.
- **Macaroni noodle** – Curved and can appear yellow when cooked.
- **Rubber hose or tubing** – Sometimes yellow and flexible.
- **Yellow crescent moon** – Often depicted as curved and yellow in illustrations.
- **Curved yellow slide** – Found in playgrounds.

| AI Prompting

Better:

I was having lunch with my friend the other day, and for the life of me I couldn't remember the name of the curved thing which people throw and it returns to you. I had a yellow one as a child. Do you know the name of it?

 Copilot ⓘ

Yes! The curved object you're thinking of is called a **boomerang**.

It's traditionally associated with Indigenous Australian culture and is designed to return to the thrower when thrown correctly. Many toy versions — including yellow ones — are made for kids and are often made of plastic or foam.


Let me know if you want to explore how boomerangs work or if you're thinking of something else entirely!

AI Prompting

A more advanced example:

I am in sales. I've been given a target of increasing my sales numbers by 15% percent over the next 18 months. My current annual sales volume is \$2.9 million. Please provide the sales targets I must hit each month. Show the current average monthly sales plus the new monthly target, and present it in a table format.

 Copilot 

Analysis 


Here's a breakdown of your monthly sales targets based on your current annual volume of \$2.9 million and a goal to increase by 15% over the next 18 months:

Metric	Amount (CAD)
Current Monthly Sales	\$241,666.67
Target Monthly Sales	\$277,916.67

Even though I was pretty detailed, it still just gave me overall monthly goals instead of month-by-month details, and it gave it to me in Canadian instead of USD. Let's refine...

AI Prompting

Please give me a month-by-month ramp-up plan, and express the numbers in USD instead of CAD.

 Copilot ⓘ

Analysis ▾

Here's your **month-by-month ramp-up plan** in **USD** to achieve a 15% increase in sales over the next 18 months, starting from an annual volume of \$2.9 million:

Month	Monthly Sales Target (USD)
Current Monthly Average	\$241,666.67
Final Monthly Target	\$277,916.67
Month 1	\$243,680.56
Month 2	\$245,694.44
Month 3	\$247,708.33
Month 4	\$249,722.22
Month 5	\$251,736.11

Notice how I took the existing answer and asked it to modify it based on what I was really after.

Just as if you were talking to a human, you will often need to coach and correct the AI until you get what you want.

| AI Prompting

Be verbose and explicit!

The best results come from the best management of the conversation – just as if you were the team leader of a human team. The AI can deliver great results given great input.

You can ask the AI to check its own work. They can and will correct themselves given additional input.

Or you can ask them to consider multiple sources, or even to work harder at thinking of a solution.

My sales example has room for ambiguity. It gave me a correct answer, but had I expressed it differently, the answer could have been incorrect.

I have seen the tools give the correct answer for how to calculate something but give the wrong answer for the result!

| AI Prompting

Above all, CHECK THEIR WORK before you allow it to represent your own.





AI GRC Topics

| AI Governance

All of the questions, and not so many answers.

Current State:

- In reality this is still a work in progress for most.
- Best practices are still being developed.
- There are some gray areas between AI Governance and Data Governance, for example.
- Internal audit groups are often not equipped.
- However, there are known risks and steps you should be taking.

AI Governance - Purview

Where is your data and how is it being used?

- When using any AI (particularly a LLM), organizational data is potentially leaked. In some cases, this data may be used for retraining the AI and thus may be made public.
- Geographical purview can also be violated (your data may leave the country).
- This is one critical area that must be addressed.
 - Consider limiting access to AI tools to those you can know and control.
 - Stick to government cloud services where possible.
 - Have a vendor-provided solution (avoid the free ones) and understand how they propose to mitigate these risks.
- Do not feed PII to an AI!

Understand the Mechanisms

When you upload a document into an AI for analysis or processing, that data leaves your network, may be stored on the AI server, and may be used for other purposes. AIs pose higher risks because data provided to an AI can be much more significant than a simple search engine activity, and that data may not be transient.

AI Governance - Fairness

How do you ensure that AIs apply the same standards of fairness and impartiality?

- Applies most prominently to AI decision-making (algorithm bias).
- Consider both ethical concerns and your organizational values.
- Institute specific controls and audit procedures against a well-defined matrix of inputs and outputs.
- What are your regulatory compliance imperatives?
- It may not be sufficient to simply tack on a few paragraphs to existing policies and controls – an entirely new, defined policy may be required, including governance structure or even a subject-matter expert.

AI laws are emerging and changing rapidly.

AIs and automation technologies tend to be opaque, obscuring the inner workings of them. It's on you to understand third-party tools and how they work.

The consulting market is beginning to provide solutions – probably a good idea to tap it to help mitigate risk.

| AI Governance - TPRM

Your partners and vendors face the same risks as you do.

- How are they handling them?
- Much like information security questionnaires, third-party AI questionnaires are emerging. Consider using this technique to understand your risk and mitigate.
- Any third party receiving data from you in any form is a candidate.

AI Governance – Org Policy

Addressing end use of AI

- Since anyone with a web browser can access AI tools, a lot can happen when you're not looking.
- Acceptable use policies should extend to using AI (or be completely separate for AI).
- Address what decisions may be made using the help of AI tools or agents.
- As mentioned, consider restricting available tools and providing a mechanism for approval of new tools if/when they provide value.
- Address the intersection of AI and information security specifically.

Train, train, train. Make sure your employees and partners have the tools to make use of AI effectively but also understand and acknowledge your internal use policies.

Consider hard stops at the network edge to help provide some assurance that your restrictions are followed.

And, consider an AI Discovery project to determine what's already in use at your org.

Summary

What Did We Cover?

- Defining “AI”
- High-value AI tools and opportunities
- Prompting a language model to get the best results
- GRC topics in AI





Questions?

Glenn Plunkett

Director of Tech Activation

gaplunkett@cshco.com

513-768-7533