

### How to Get the Most from Al

Association of Nova Scotia Land Surveyors

Old Orchard Inn October 10<sup>th</sup>, 2025

Robert Newcombe Founder & CEO

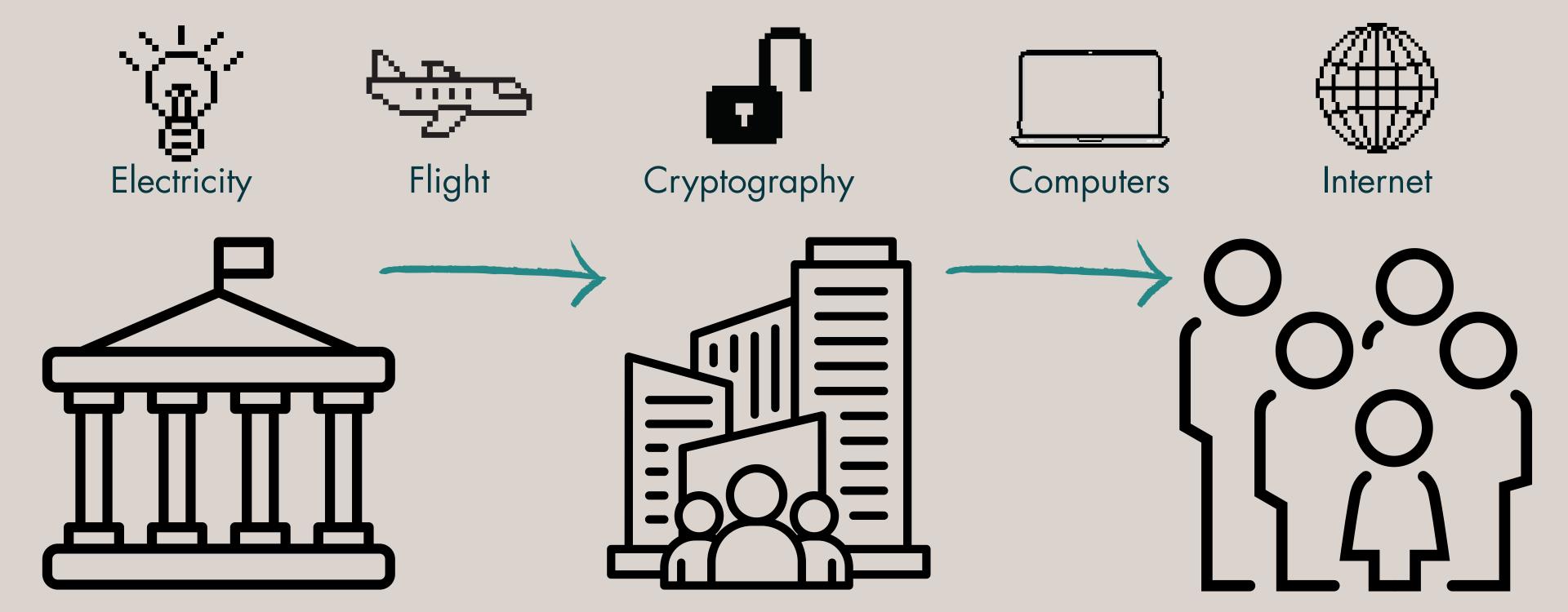
### Al is Electricity

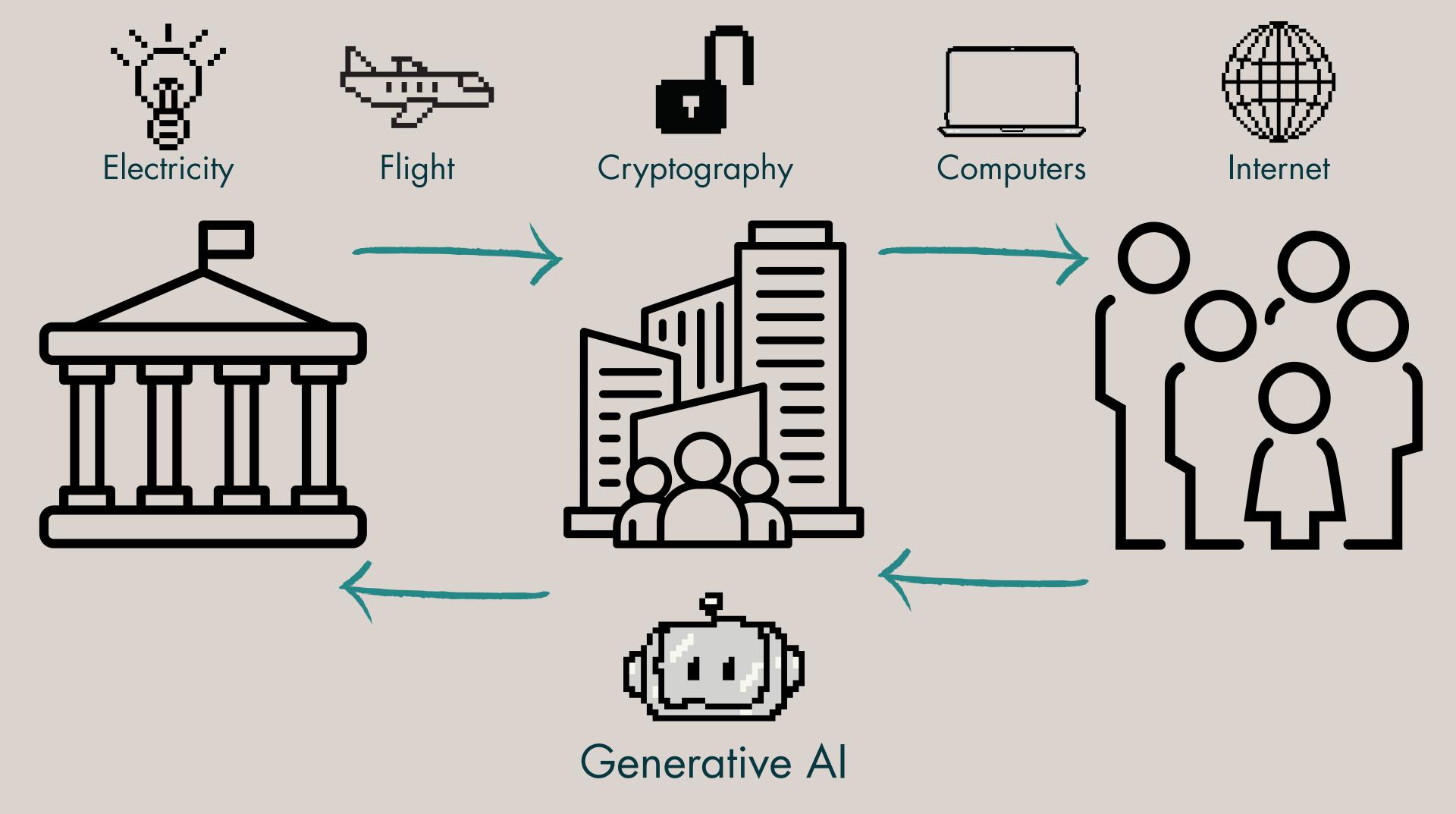


"I think [AI] is electricity for our century. In the late 1800s, there were companies that said, 'Yeah, this electricity thing's interesting, but we're not going to be an electricity company.' And they're all gone. Now, you're not an electricity company, you're just a company that uses electricity. And the same thing is true, I believe, with AI."

- Seth Godin, Author
(from The Tim Ferriss Show, https://tim.blog/2025/01/31/)

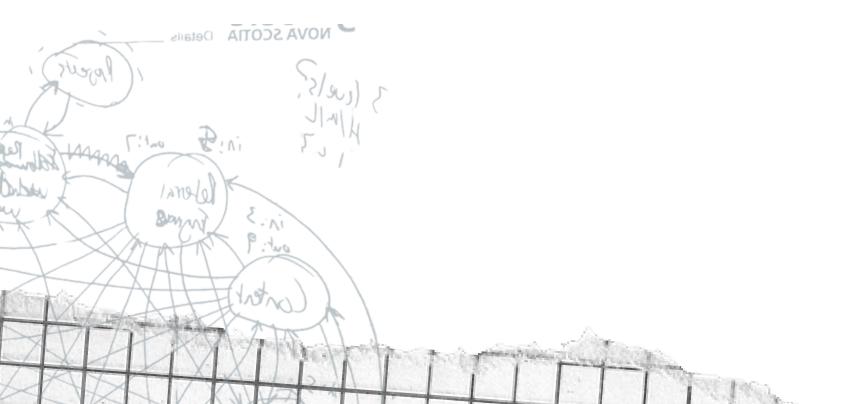




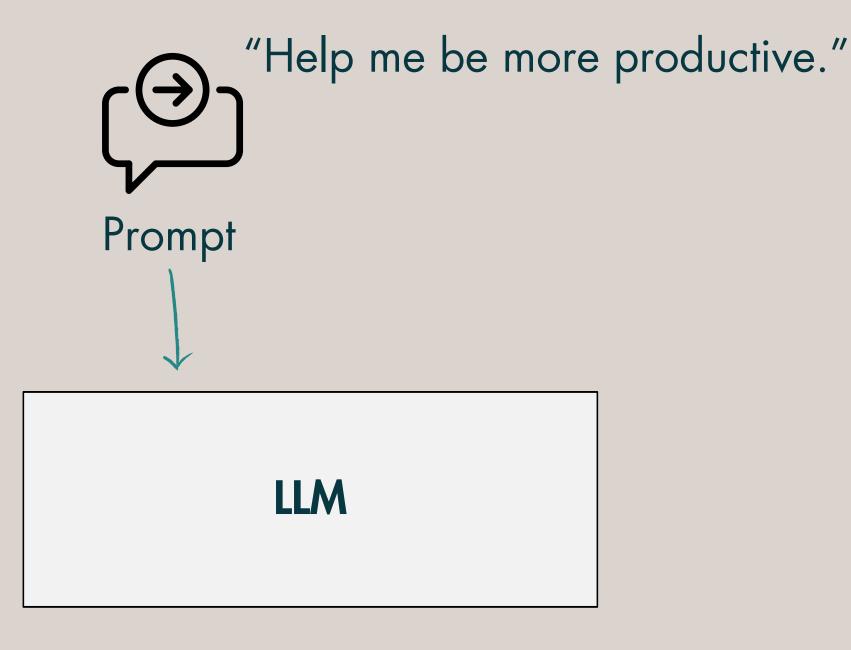


### How LLMs Work

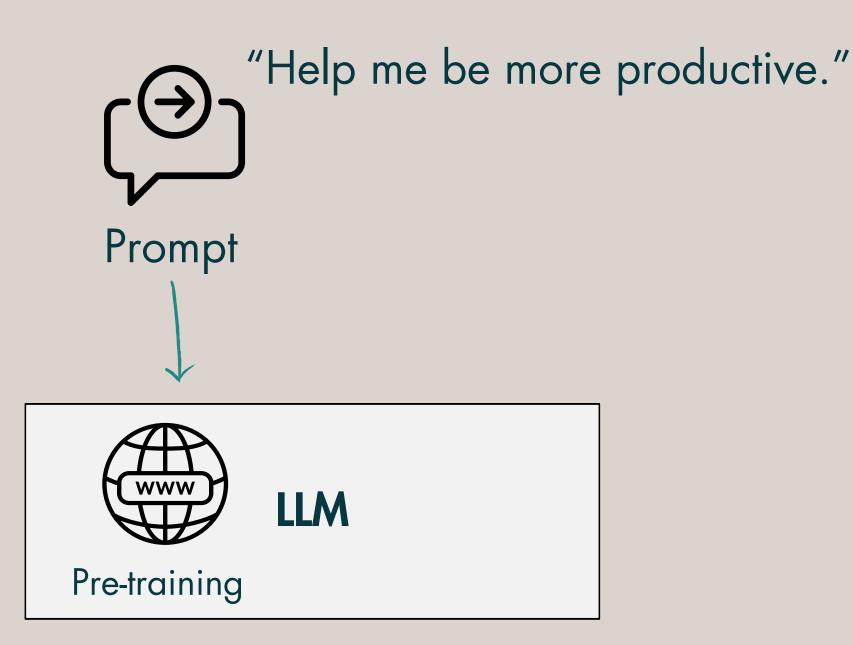
### Al Fundamentals



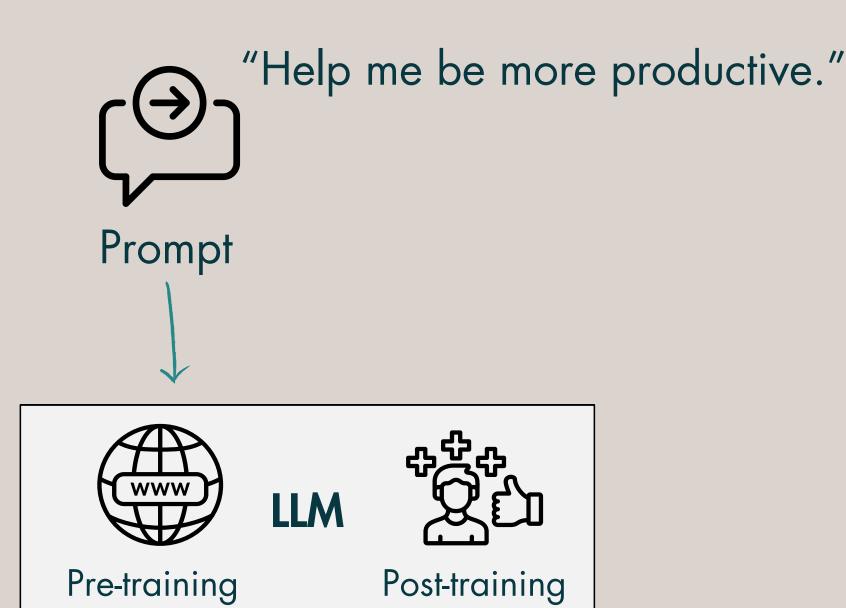




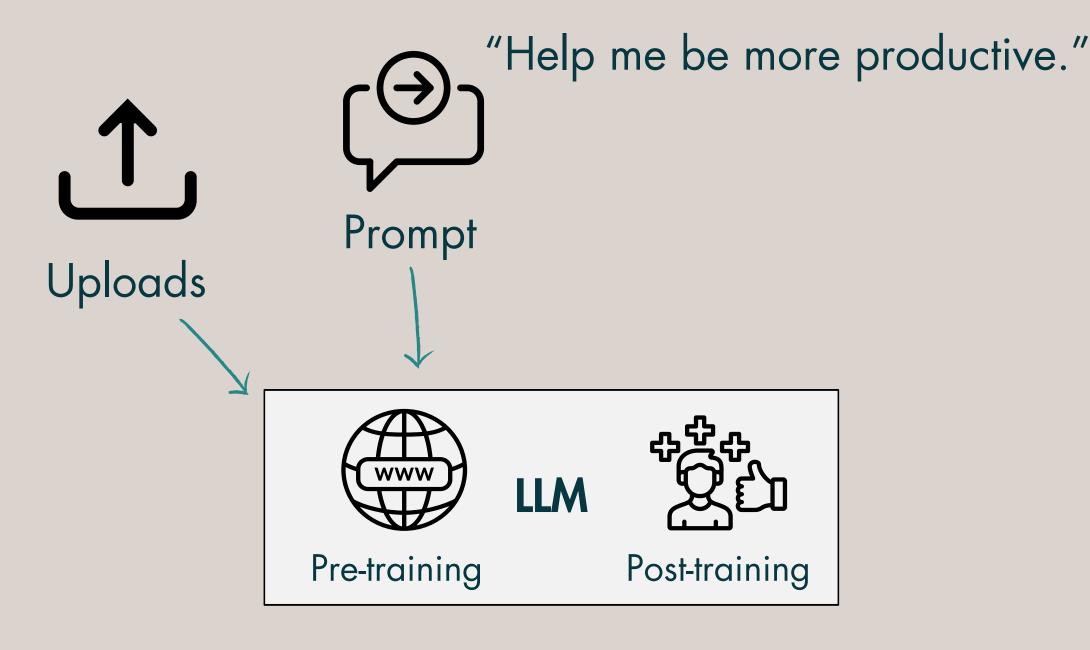




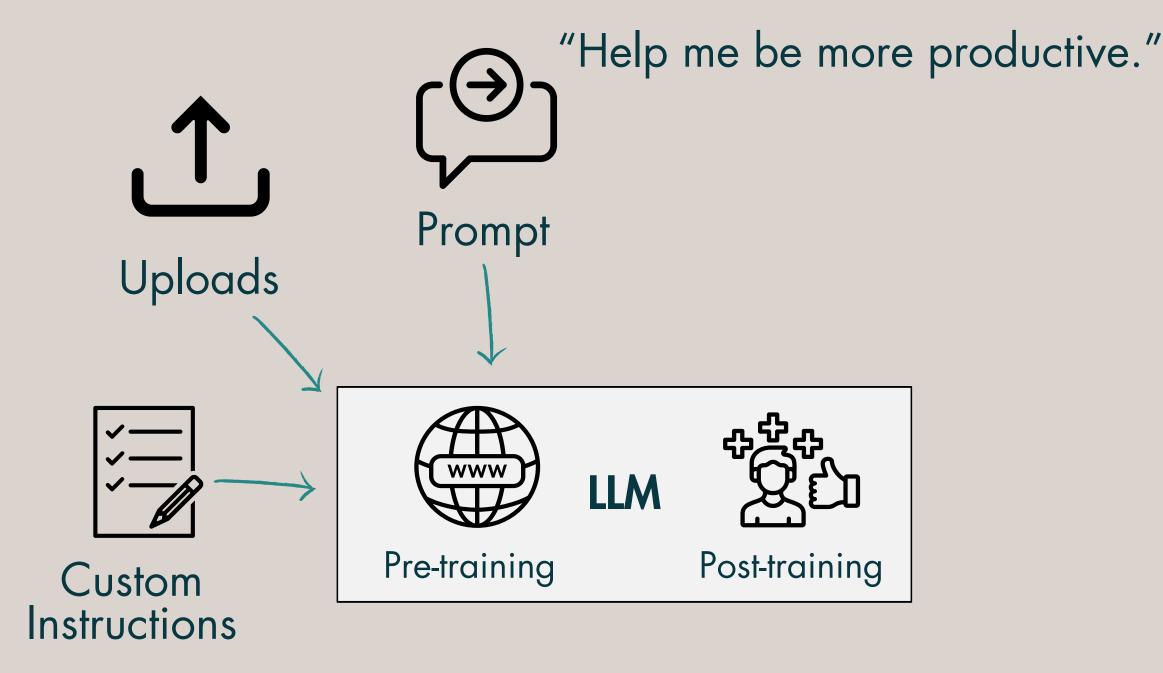




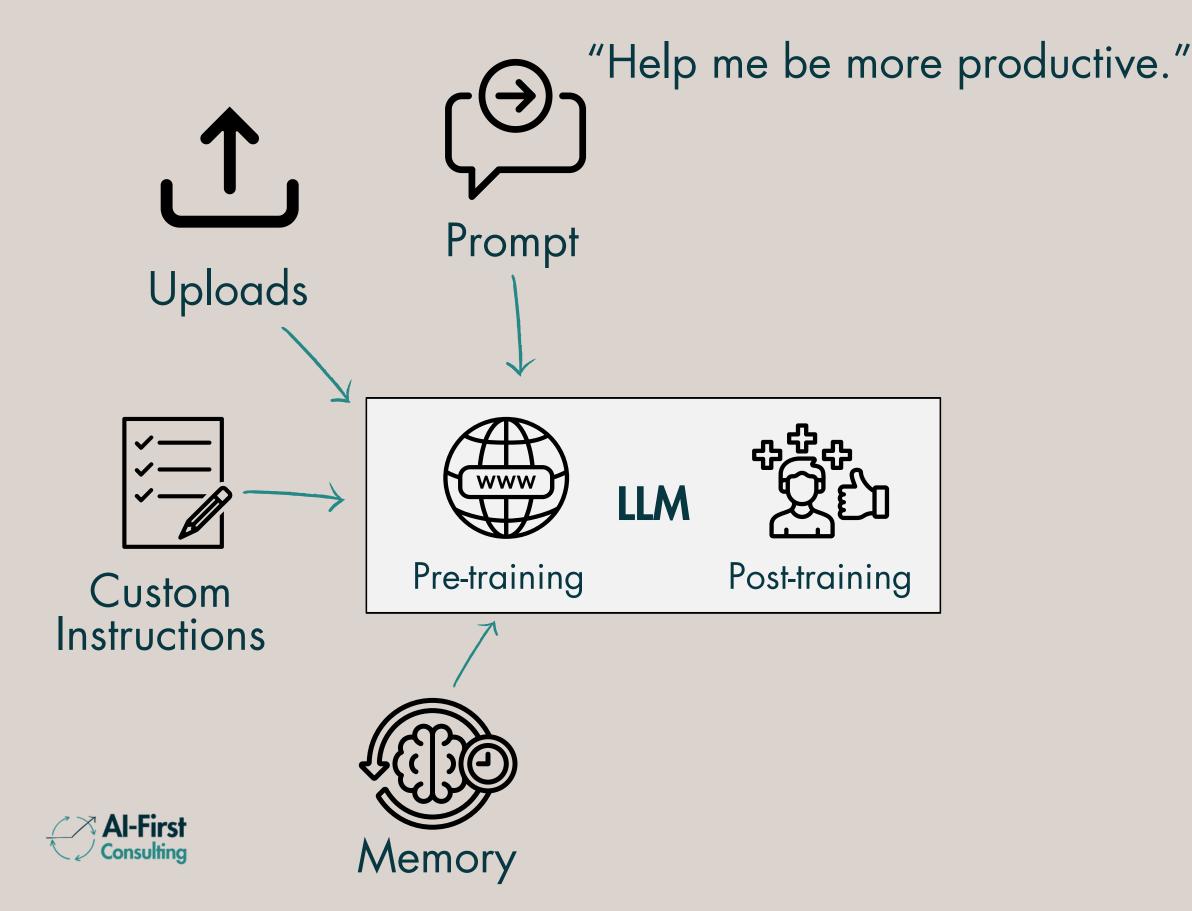


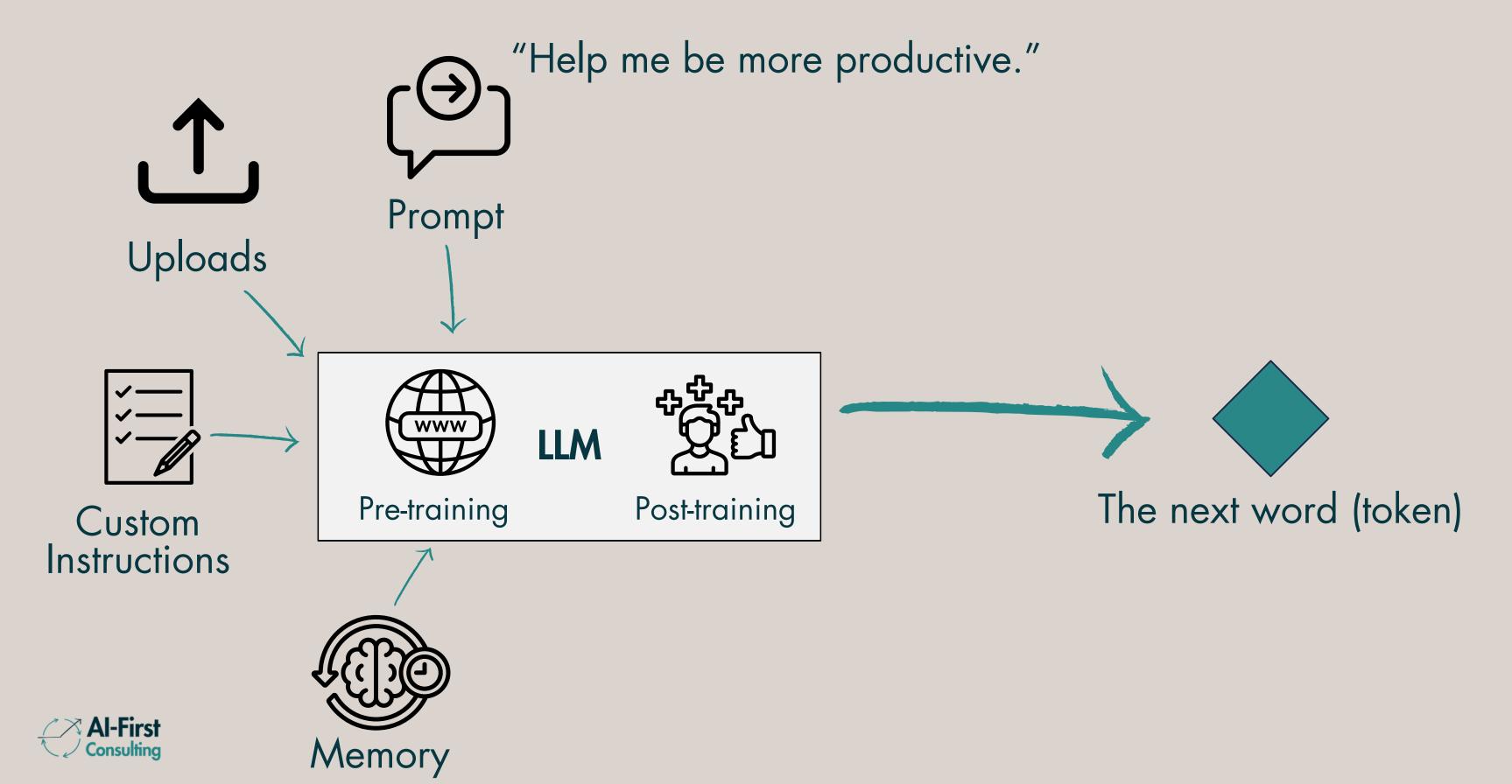


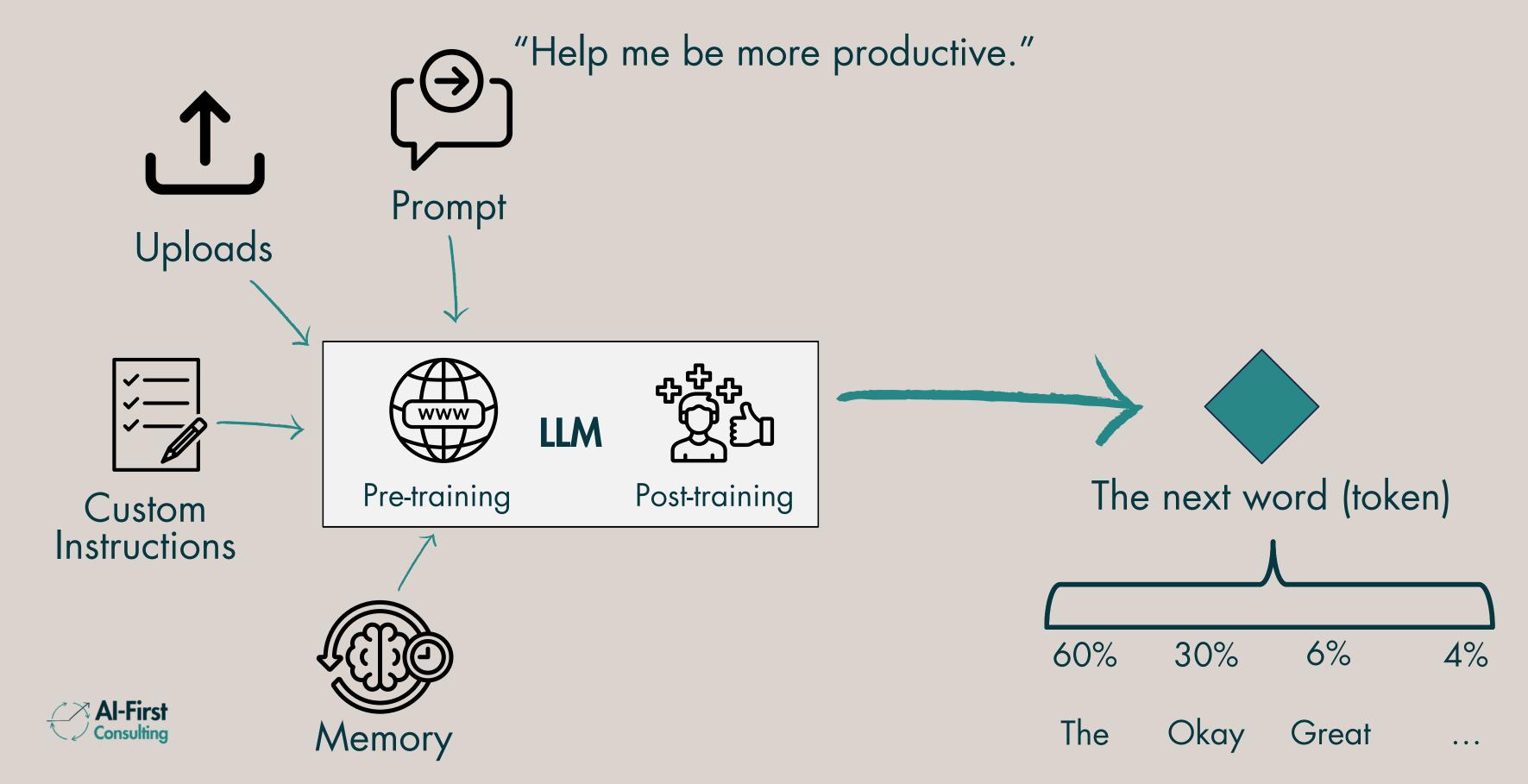


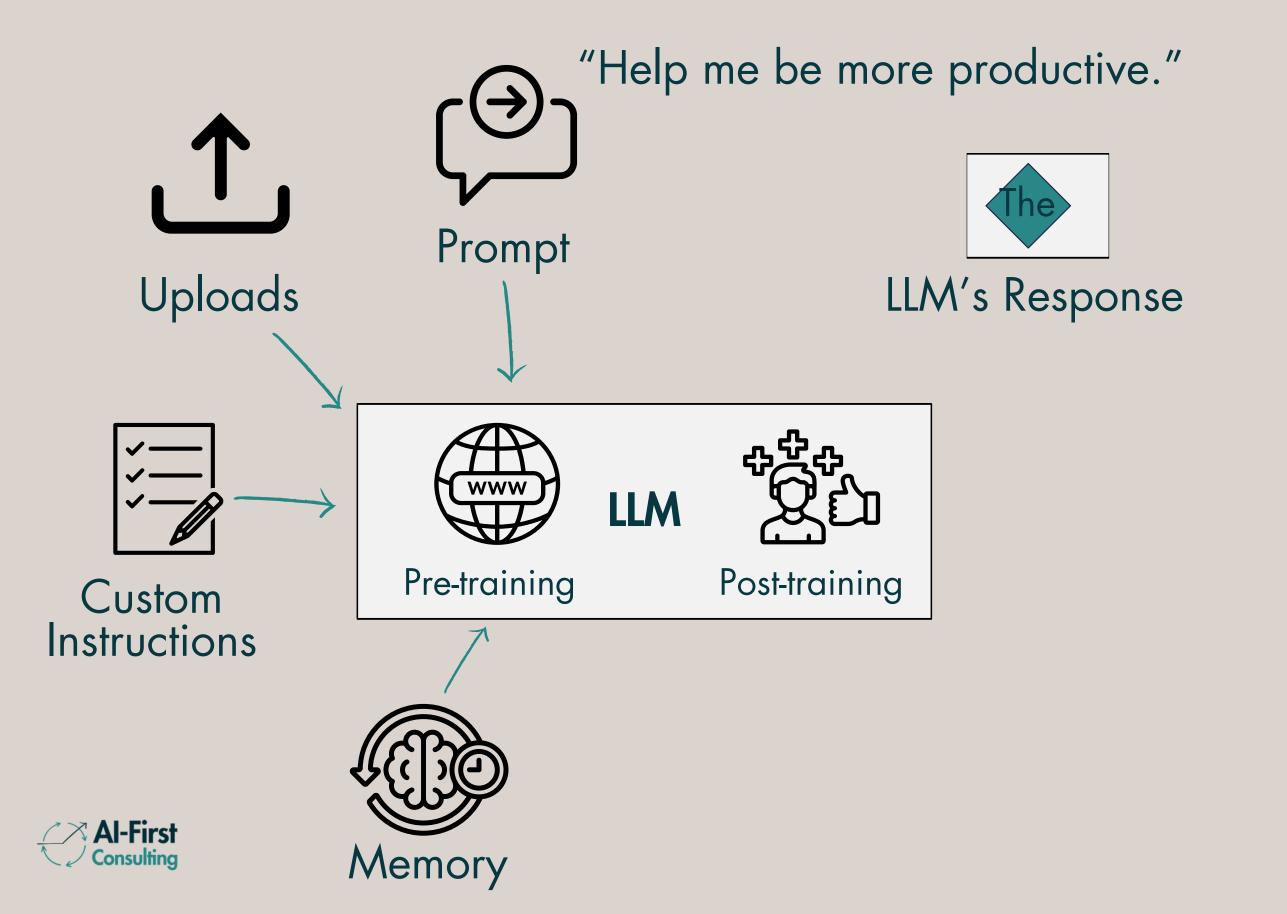


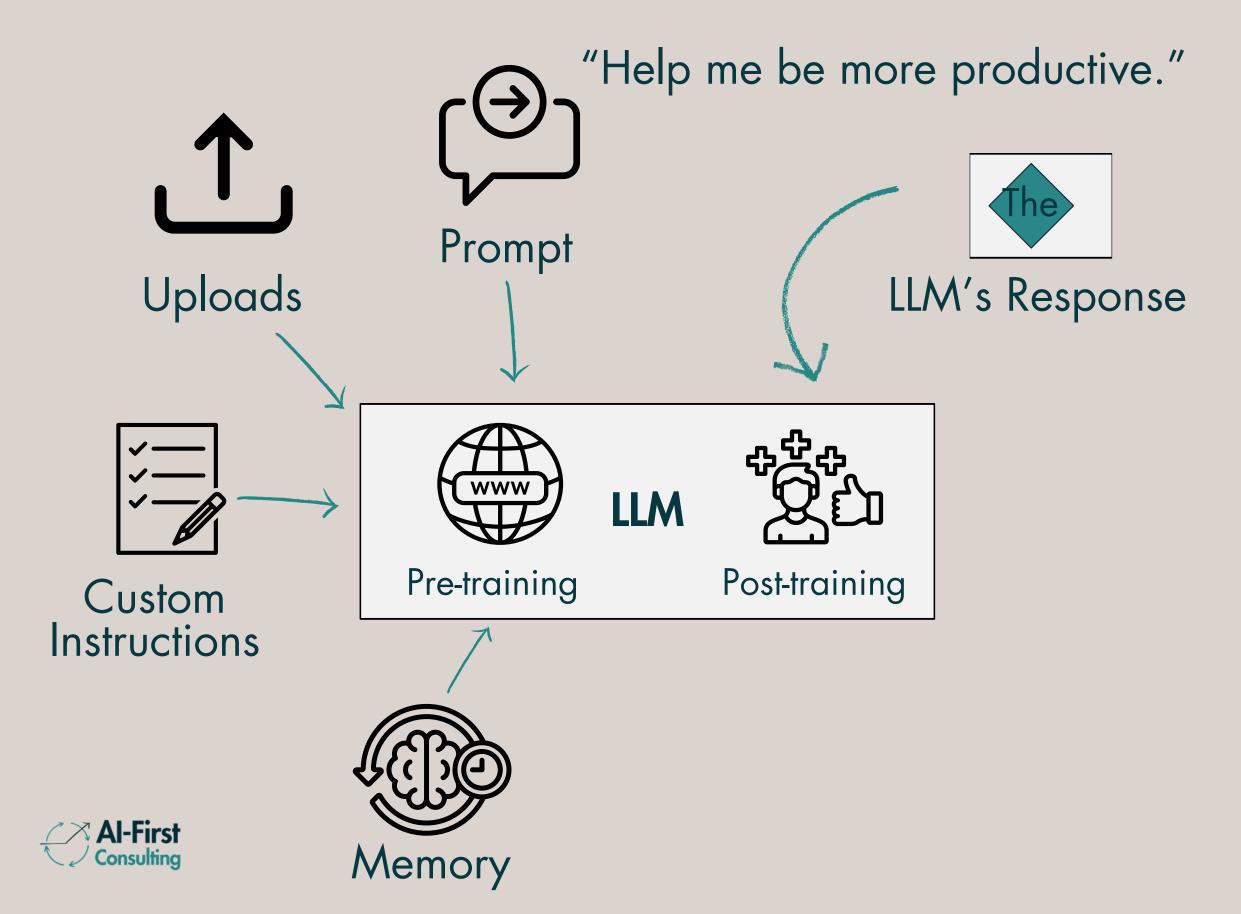


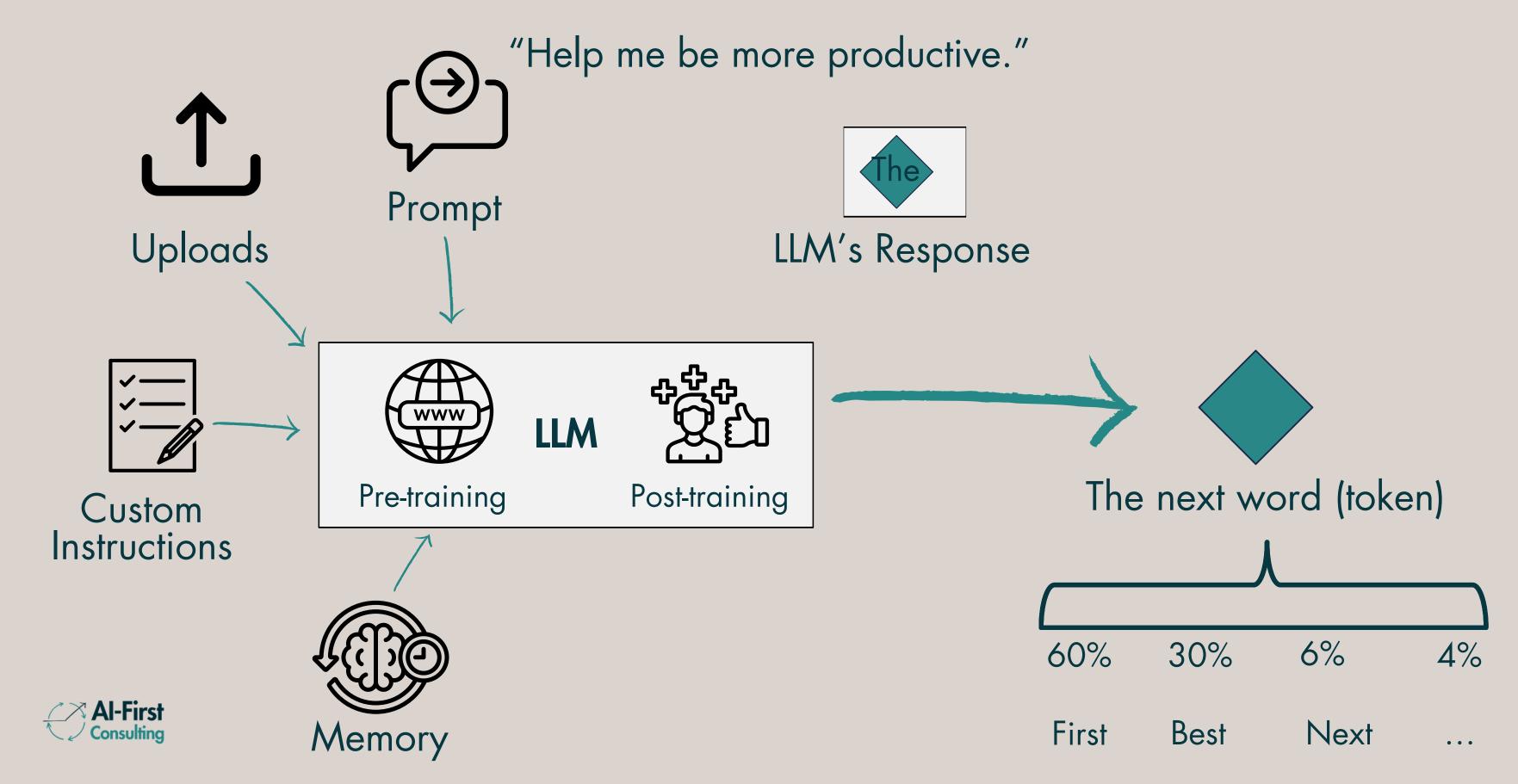


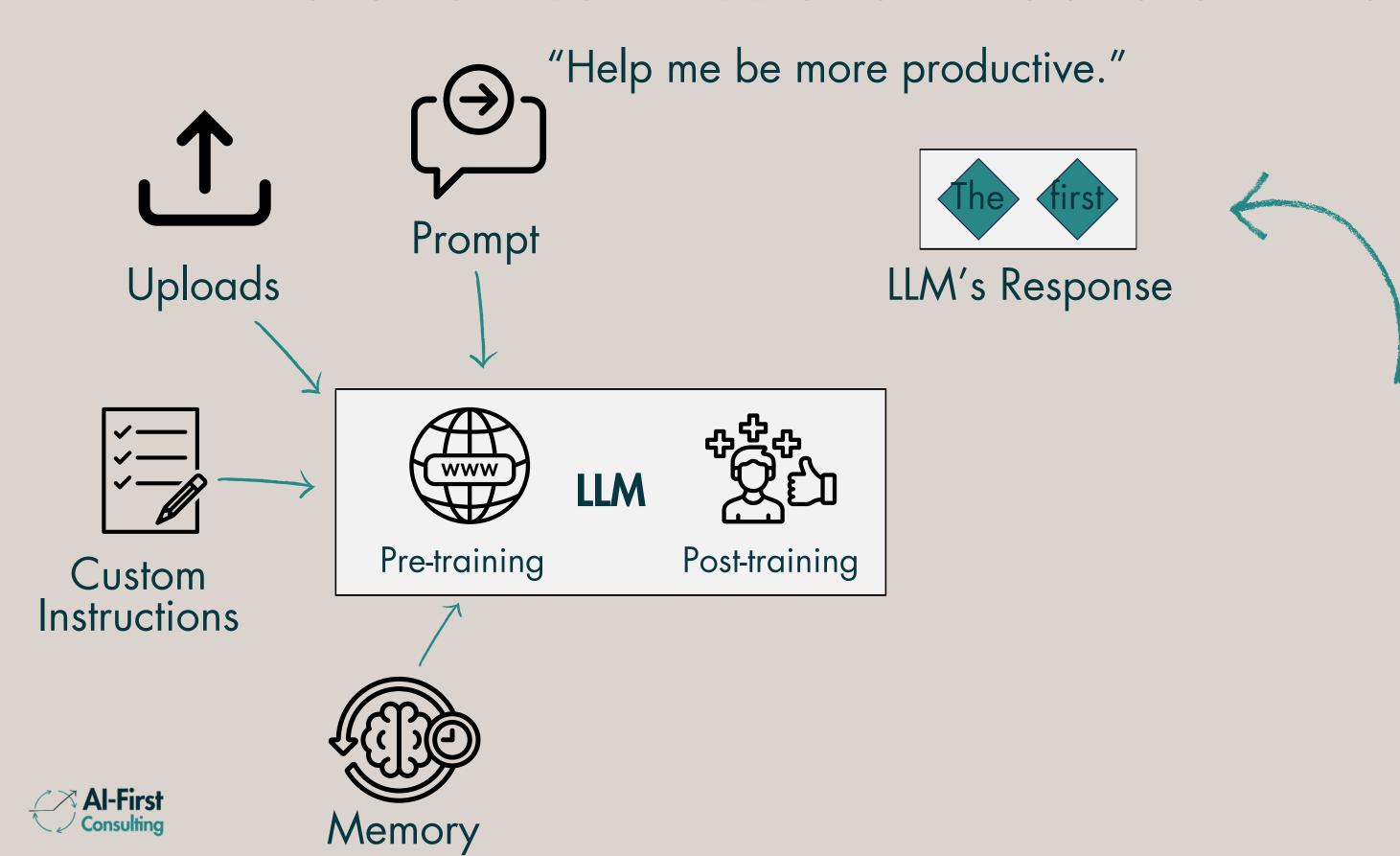


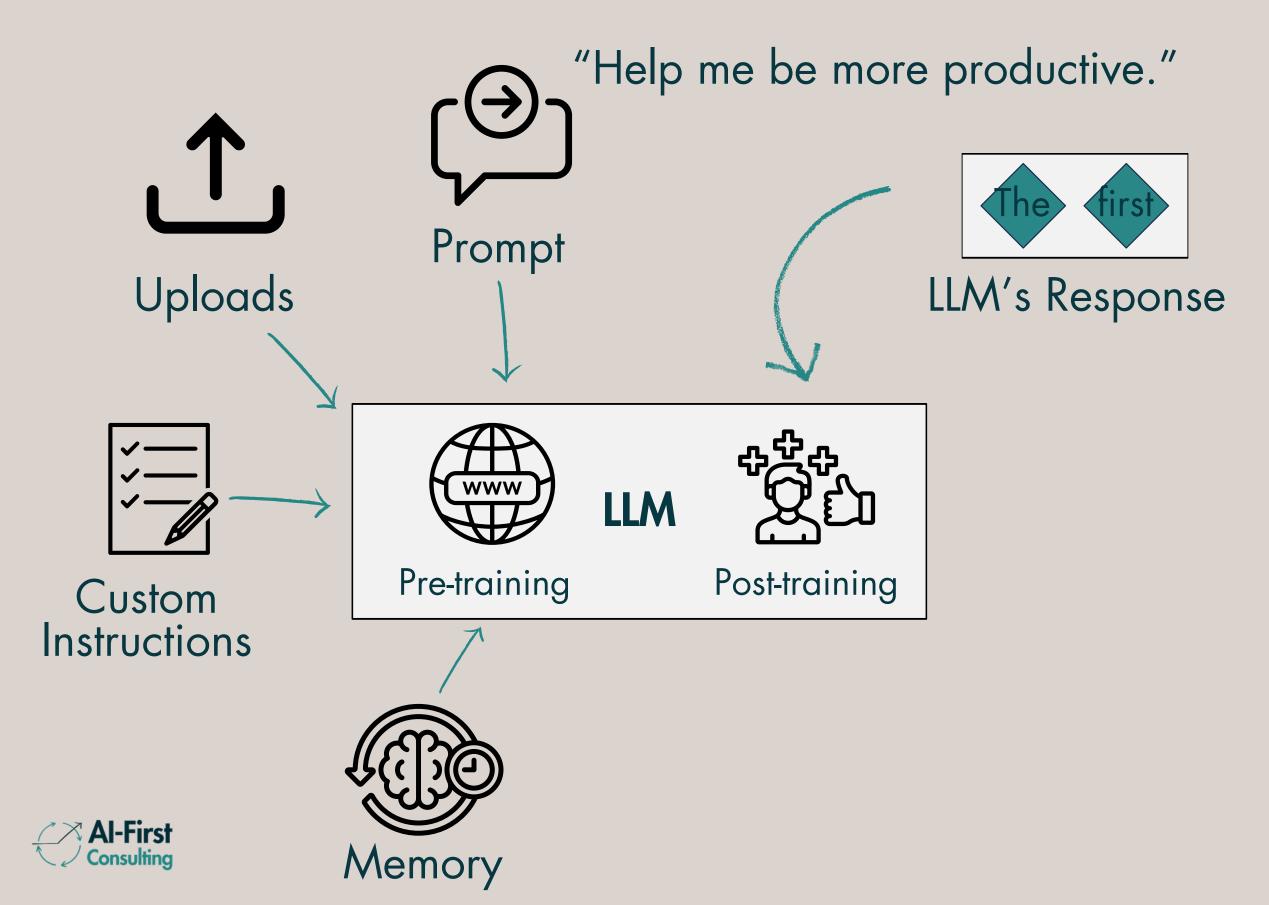


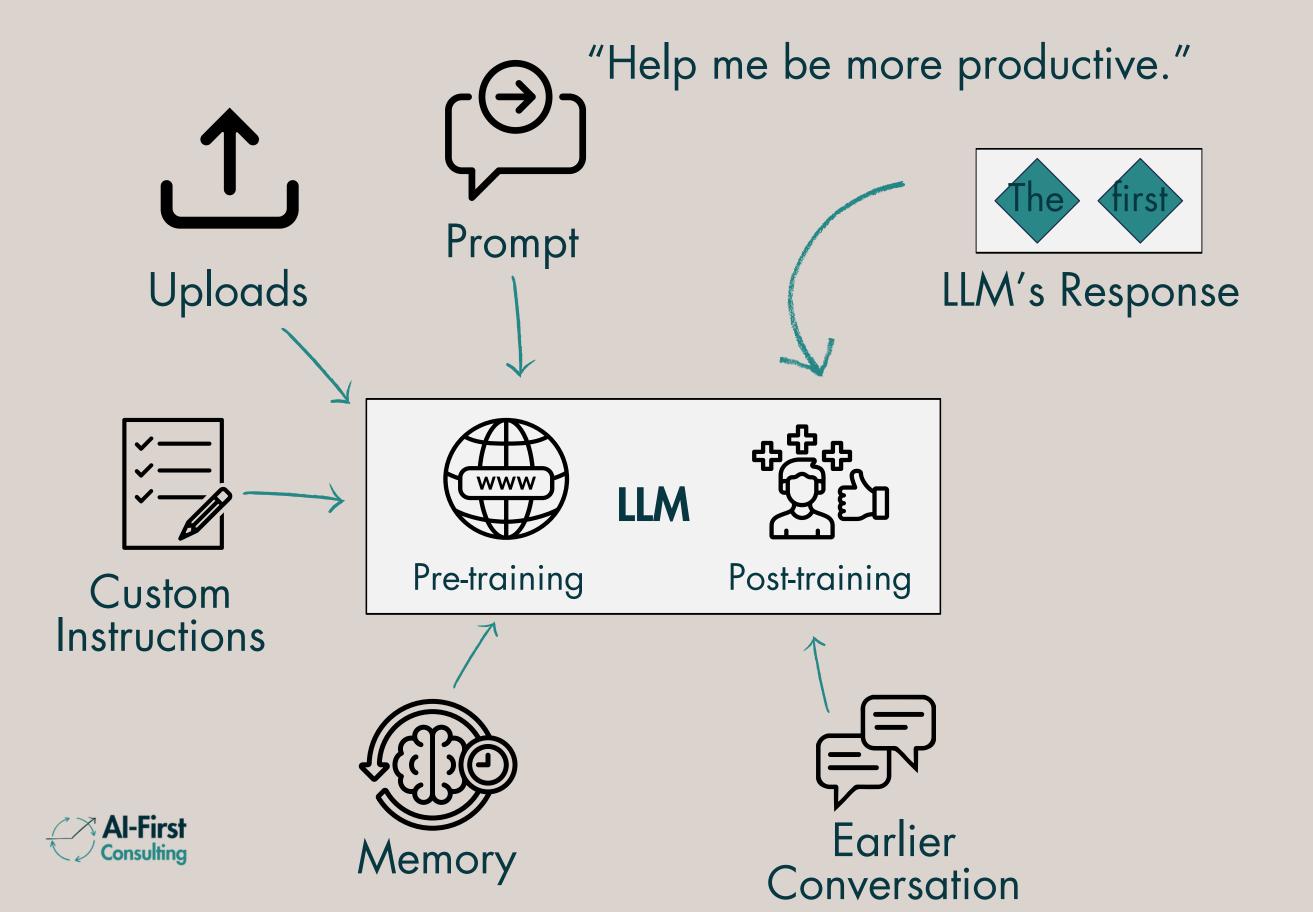






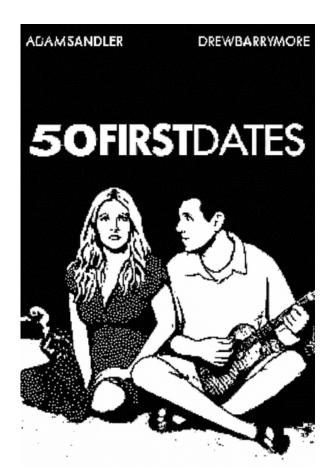




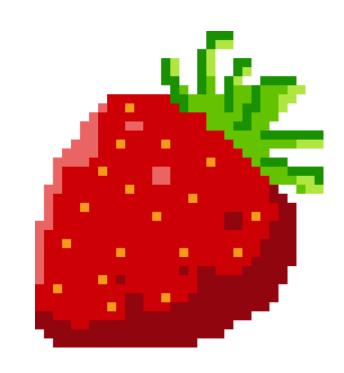


### Al Quirks

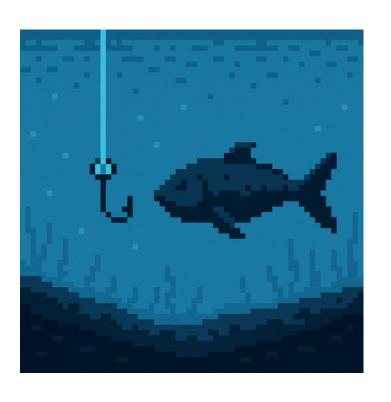
### LLMs are like savants, with some strange behaviours



Memory Challenges



Jagged
Intelligence
"How many R's in 'strawberry'?"



Gullible (can be tricked)

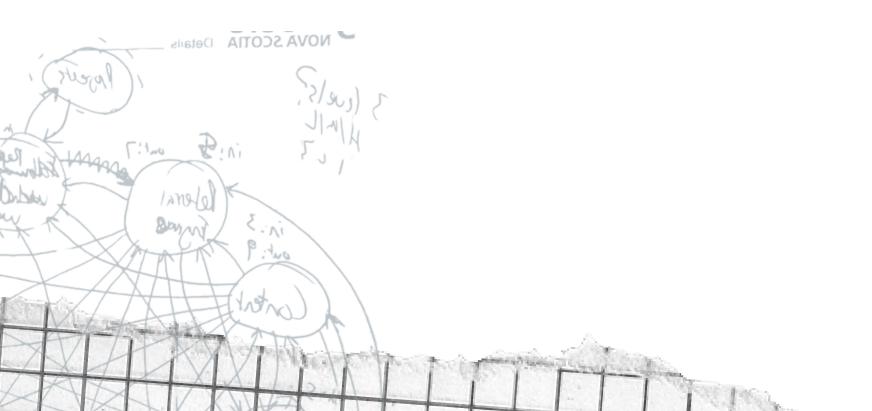


Sycophantic (eager to please)



### Prompt and Context Engineering

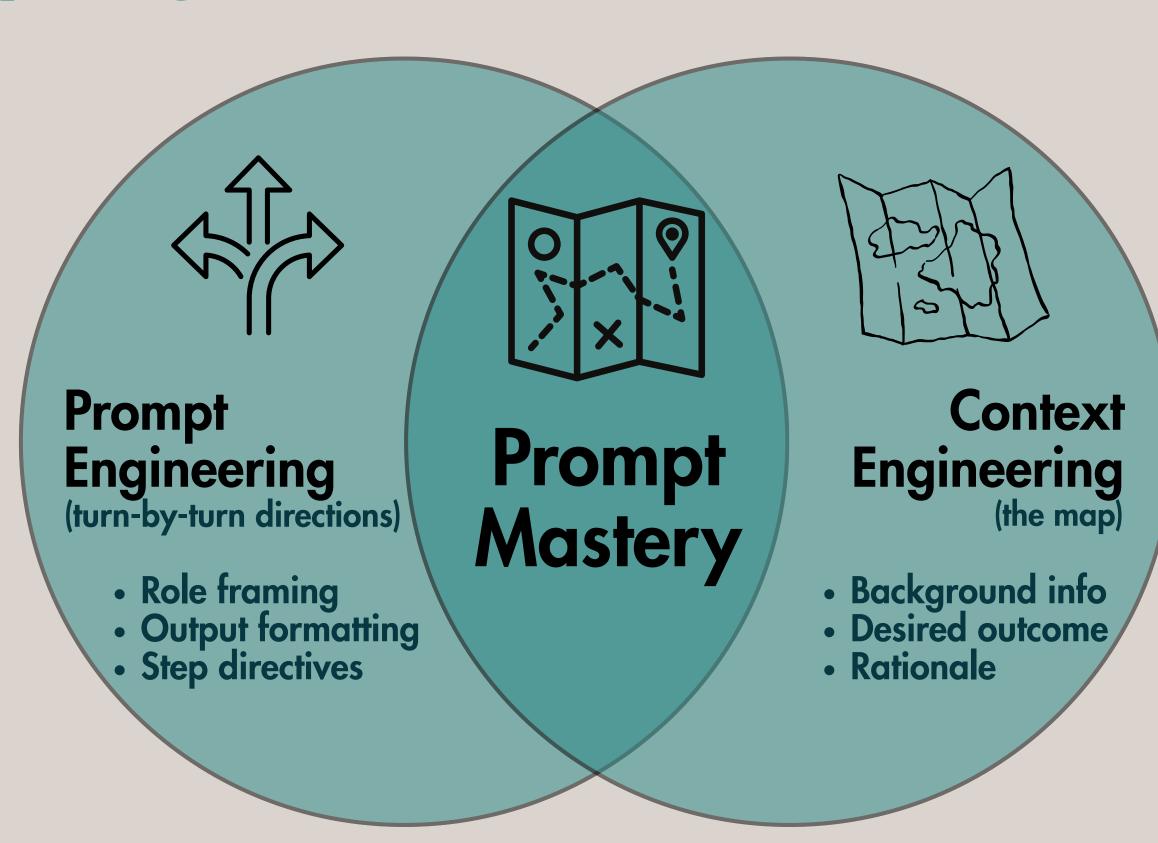
Updated for GPT-5 and Reasoning Models





### What is Prompting?

Prompting is the process of giving an Al system a text input (the "prompt") to generate a response.





C: Character

O: Objective

C: Context

R: Reasoning

E: Examples

A: Additions

T: Template

O: Orient

R: Restrictions

### Prompting:

Giving Al clear, specific instructions to guide its response.



### C: Character O: Objective

\_

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# Treat Gen Al like an actor and give it a role

Example: "Act as a licensed land surveyor in Nova Scotia with 15 years of field and drafting experience. You understand boundary law, subdivision regulations, GPS and total station workflows, and CAD-based plan preparation for legal surveys, topographic mapping, and construction layout."

### C: Character

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## What's the request?

#### **OpenAl Best Practice:**

- Be specific, descriptive and as detailed as possible about the desired context, outcome, length, format, style, etc.
- Instead of just saying what not to do, say what to do instead

Example: "Create a 90-day action plan to digitize our survey workflows using AI — including automating field note transcription, organizing CAD files by project and client, and improving proposal response times for construction layout jobs."

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# What does Gen Al need to know about you and your situation?

#### **OpenAl Best Practice:**

Put instructions at the beginning of the prompt and use ### or
 """ to separate the instruction and context.

Example: "Our firm provides legal, engineering, and topographic surveys across Atlantic Canada. Our team of six surveyors and three CAD techs manage dozens of small municipal and private projects at a time. We use Trimble field gear, Civil 3D, and Microsoft 365 for coordination. Accuracy, liability, and clear documentation are critical, and turnaround time is often tight."



### C: Character O: Objective

\_

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### Ask Gen Al to explain its thought process.

Example: "For each suggested improvement, explain:

- 1. Why this matters for survey accuracy or efficiency.
- 2. How it would reduce rework, field time, or drafting backlog.
- 3. What risks or limits exist (e.g. data privacy, quality control, client acceptance)."



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\_

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# Gen Al can't read your mind, but it can mimic.

#### **OpenAl Best Practice:**

- Articulate the desired output format through examples
- Start with zero-shot, then few-shot, then fine-tune
- Zero-shot = No examples
- Few-shot = One examples
- Fine-tune = Lots of examples

Example: "Use the example in between the ### ###
as a guideline to craft your response"



C: Character

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\_

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# Small requests can get better responses.

### Examples:

- Citations "Include sources with your response"
- Quotes "Add expert quotes in your response"
- Statistics "Support your argument with data"
- Counterarguments "Include opposing views"
- Analogies "Use comparisons for clarity"
- Reasoning "Think really hard"



C: Character
O: Objective

\_

C: Context

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## What template or response format would you prefer?

#### **OpenAl Best Practice:**

• Reduce "fluffy" and imprecise descriptions

#### Example:

"Present your response as a workflow outline with three sections:

- 1. Field data collection
- 2. Office processing
- 3. Deliverables

Each section should include tools, responsible roles, and measurable improvements."

C: Character

O: Objective

\_

C: Context

R: Reasoning

E: Examples

A: Additions

T: Template

O: Orient

K: Kestrictions

# Ask Gen Al if it needs more information.

Example: "If anything's unclear (like equipment models, CAD versions, or data sharing policies), ask questions before finalizing your recommendations."



C: Character
O: Objective

\_

C: Context

R: Reasoning

E: Examples

A: Additions

T: Template

O: Orient

R: Restrictions

## Tell Gen Al what it should avoid.

### Examples:

- Don't recommend replacing professional survey judgment.
- Avoid generic "use Al to be more productive" suggestions.
- Keep ideas compliant with Nova Scotia survey regulations.
- Focus on things that can be piloted within 90 days without major new software.

### Prompting: Treat Gen Al like a CO-CREATOR

Character: Give it a role

Objective: Make a request

\_

Context: Share supporting information

Reasoning: Make it explain its thought process

Examples: Give it something to copy

Additions: Include rewards and pressure

Template: Define the format

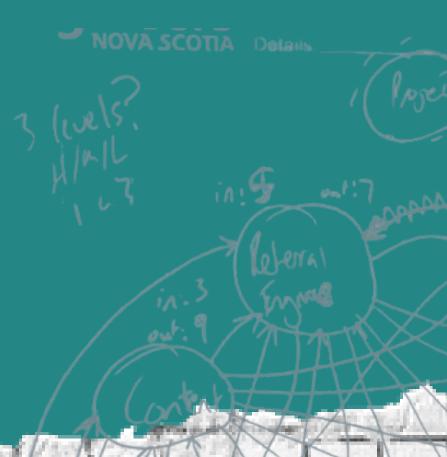
Orient: Get it to ask clarifying questions

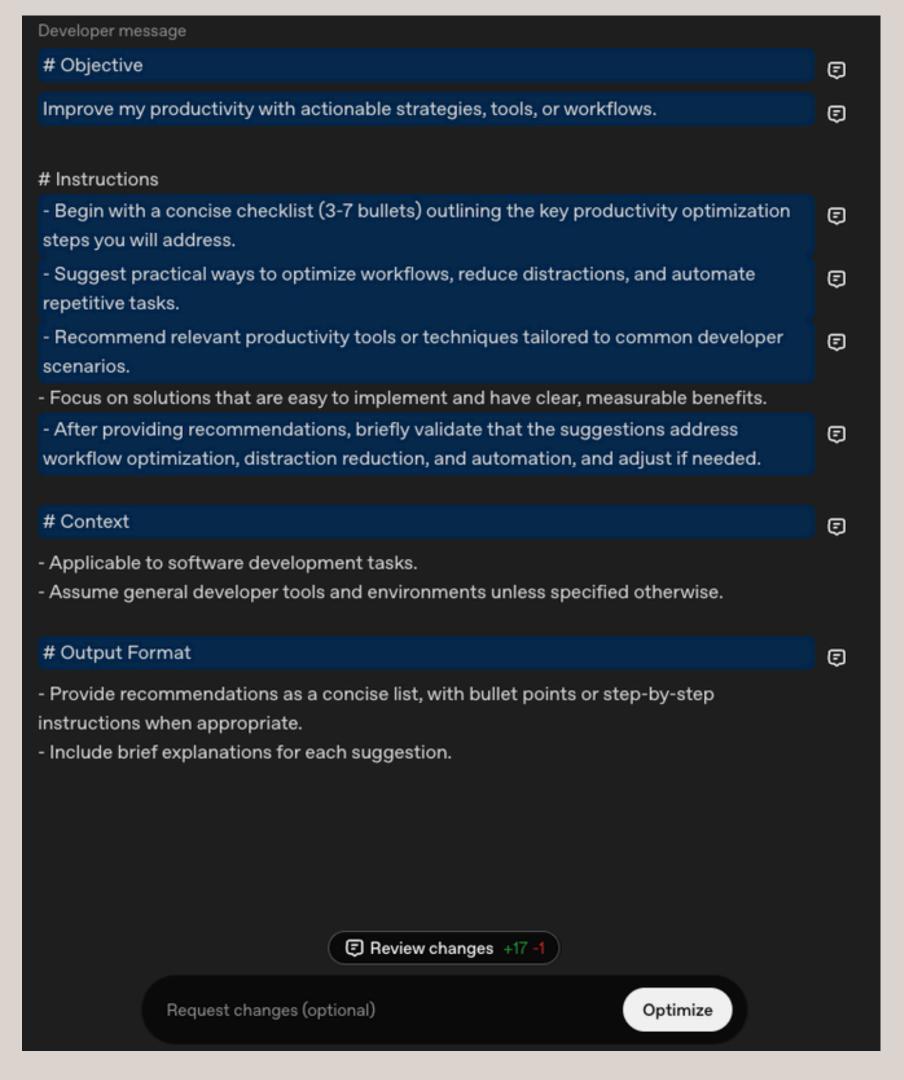
Restrictions: Tell it what to avoid



Our top 3 Tips to get the most out of Gen Al







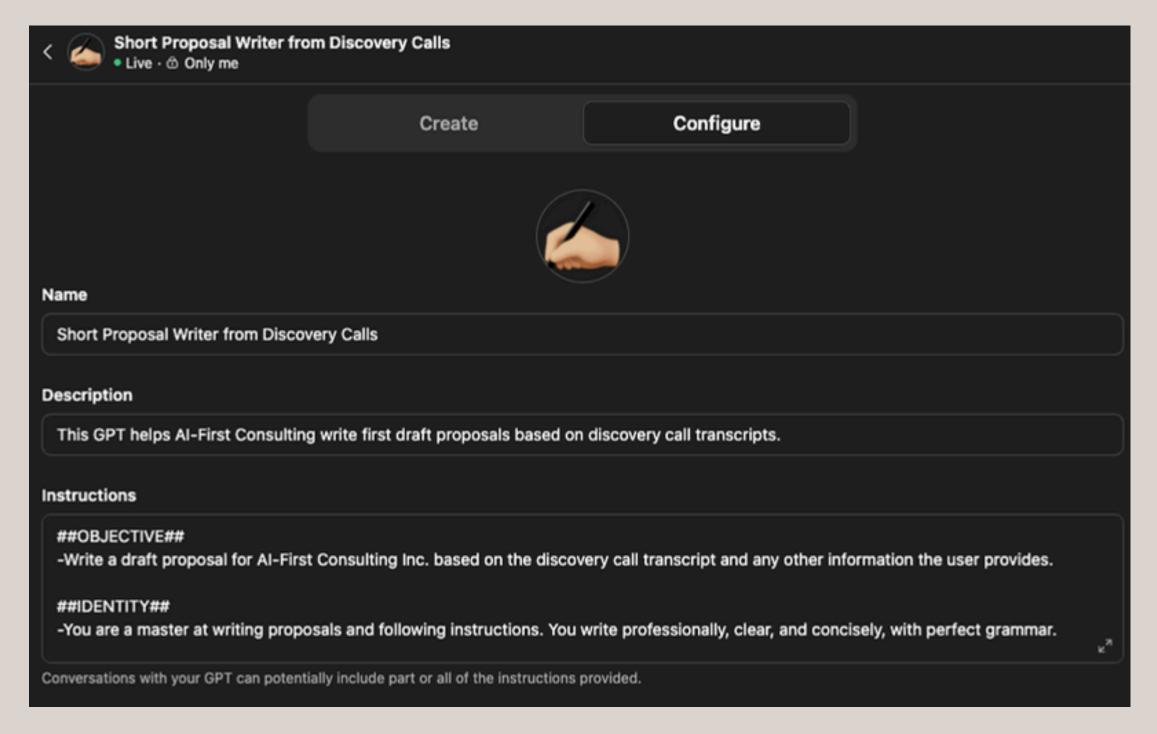
### Tip #1: Use Al to help you Use Al

"Help me be more productive."

https://platform.openai.com/chat/



### Tip #2: Save and Share Prompts



Custom GPTs (ChatGPT), Google Gems, Copilot Agents, Spreadsheet, Teams channel, etc.



# Tip #3: Context is King

Give as much context as possible (you may want to use dictation for this)

#### The Anatomy of an o1 Prompt

I want a list of the best medium-length hikes within two hours of San Francisco.

Each hike should provide a cool and unique adventure, and be lesser known.

For each hike, return the name of the hike as I'd find it on AllTrails, then provide the starting address of the hike, the ending address of the hike, distance, drive time, hike duration, and what makes it a cool and unique adventure.

Return the top 3.

Be careful to make sure that the name of trail is correct, that it actually exists, and that the time is correct.

200

For context: my girlfriend and i hike a ton! we've done pretty much all of the local SF hikes, whether that's presidio or golden gate park. we definitely want to get out of town -- we did mount tam pretty recently, the whole thing from the beginning of the stairs to stinson -- it was really long and we are definitely in the mood for something different this weekend! ocean views would still be nice. we love delicious food. one thing i loved about the mt tam hike is that it ends with a celebration (Arriving in town to breakfast!) The old missile silos and stuff near Discovery point is cool but I've just done that hike probably 20x at this point. We won't be seeing eachother for a few weeks (she has to stay in LA for work) so the uniqueness here really counts.

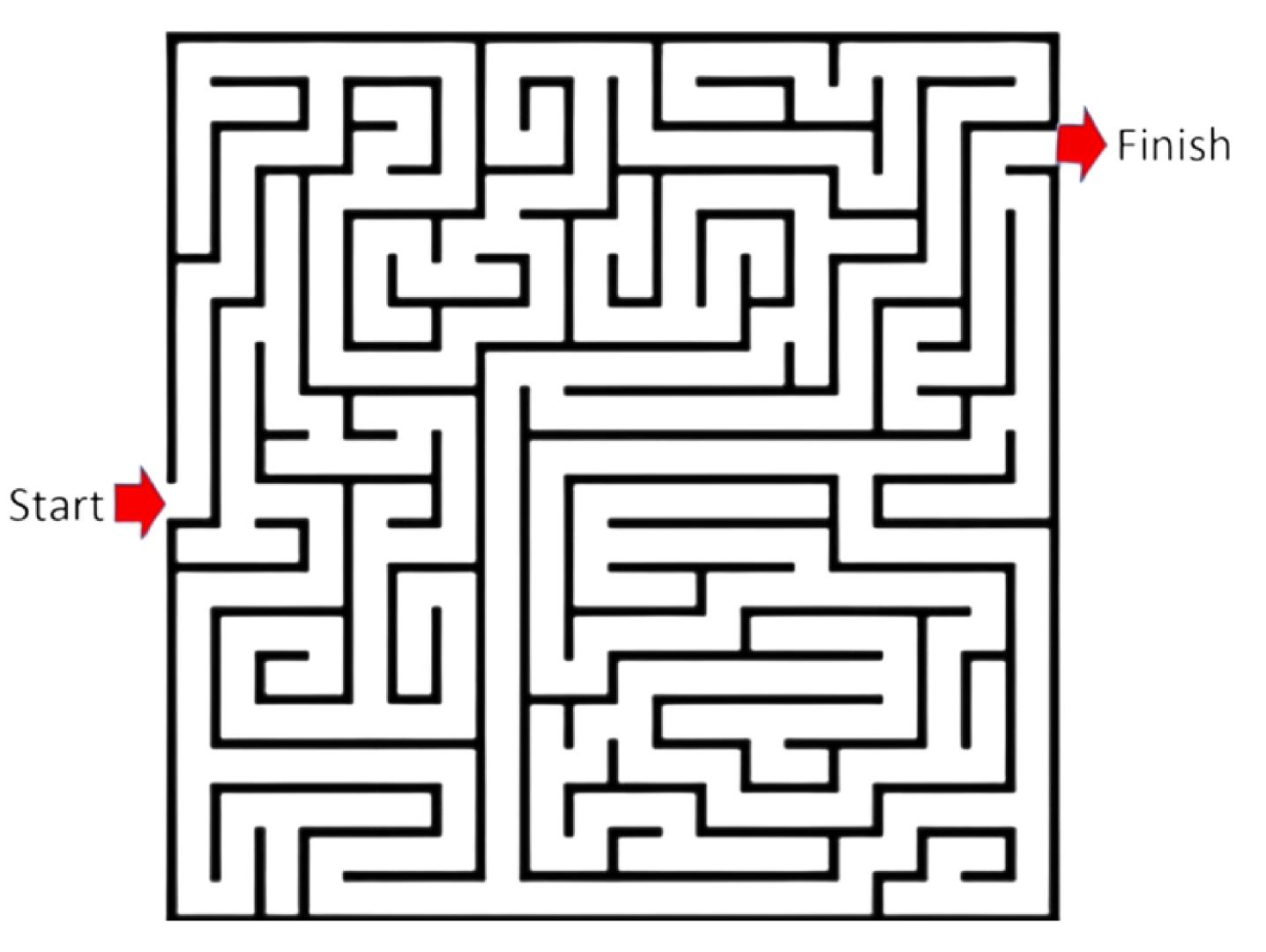
Goal

**Return Format** 

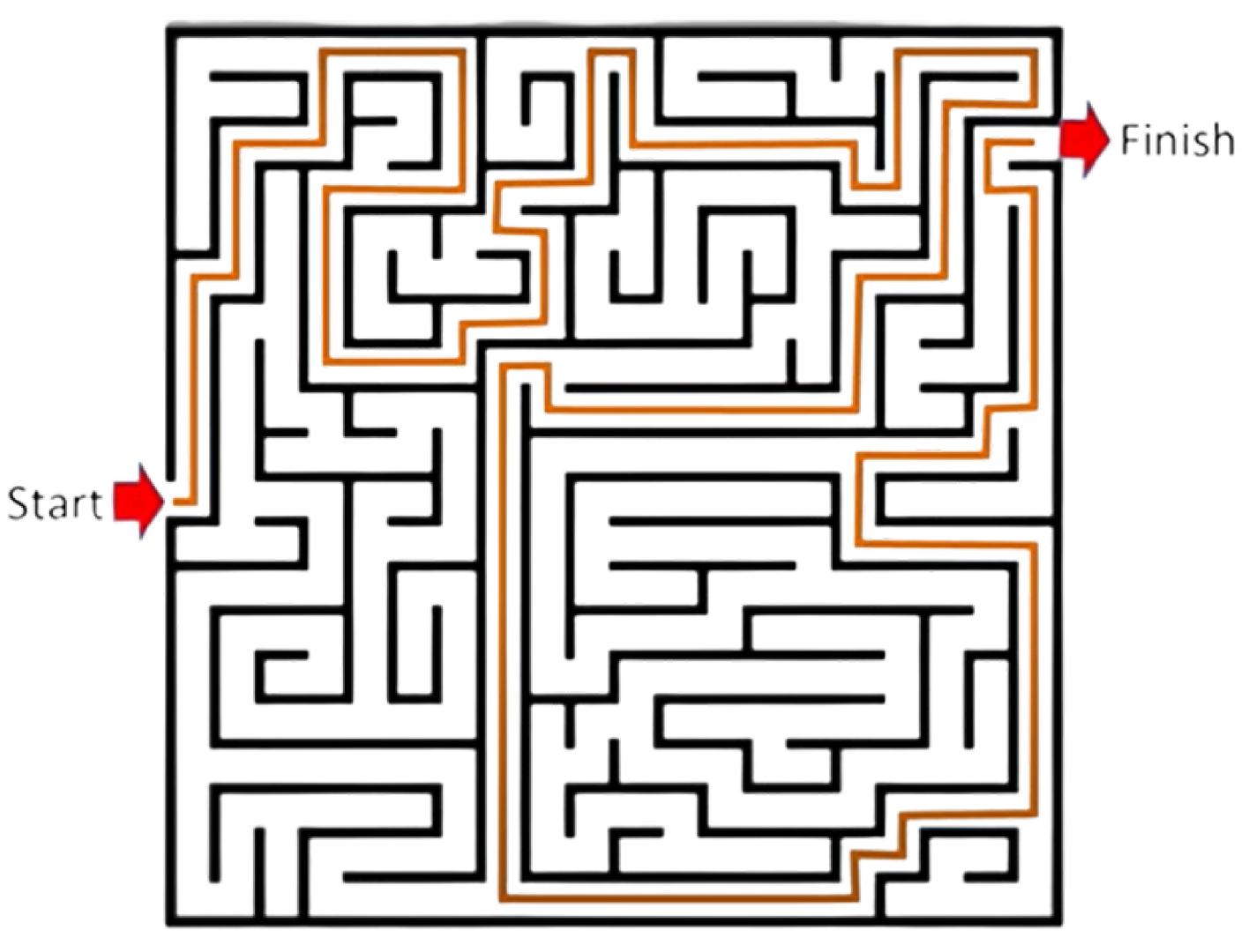
Warnings

**Context Dump** 

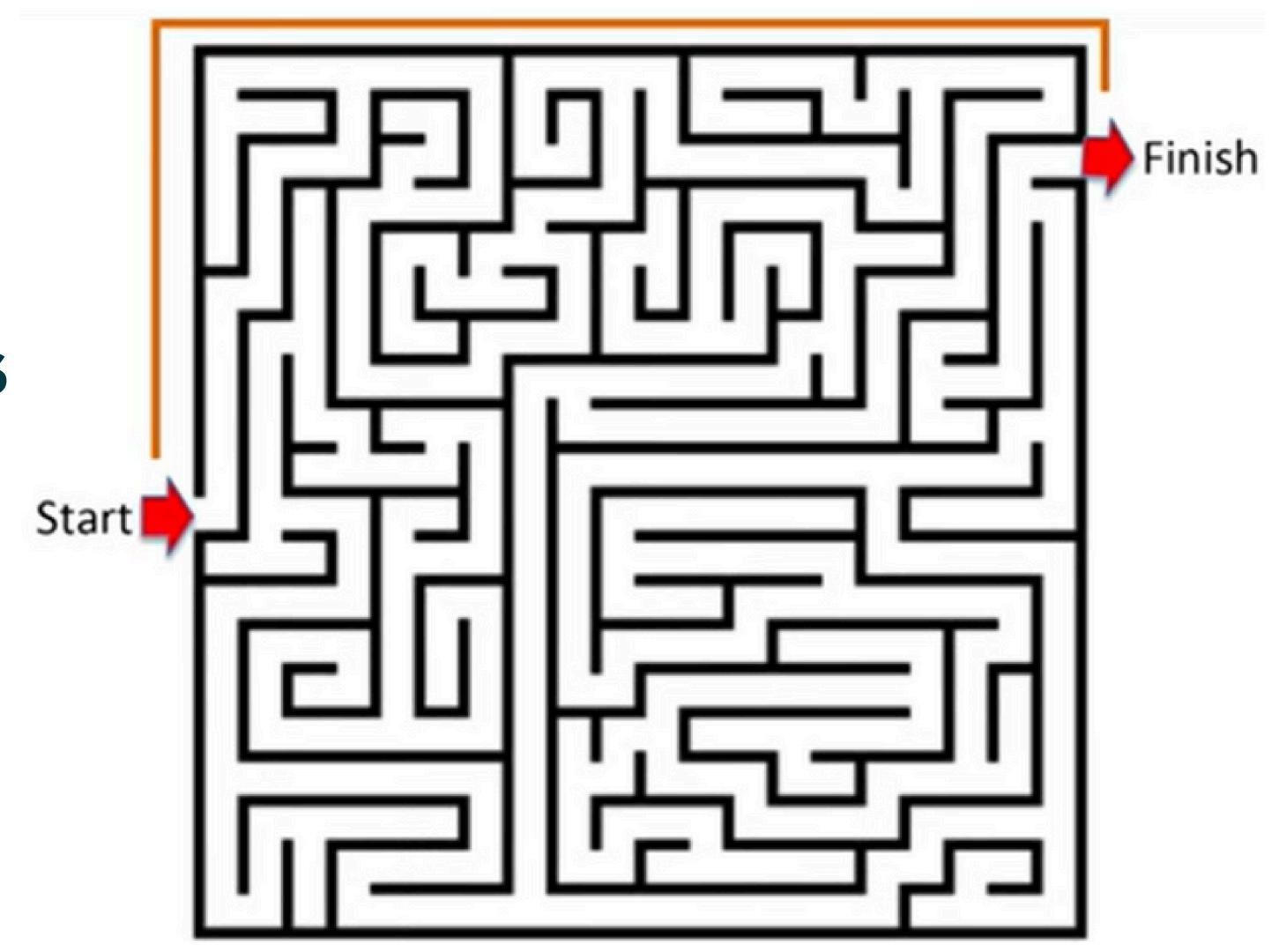




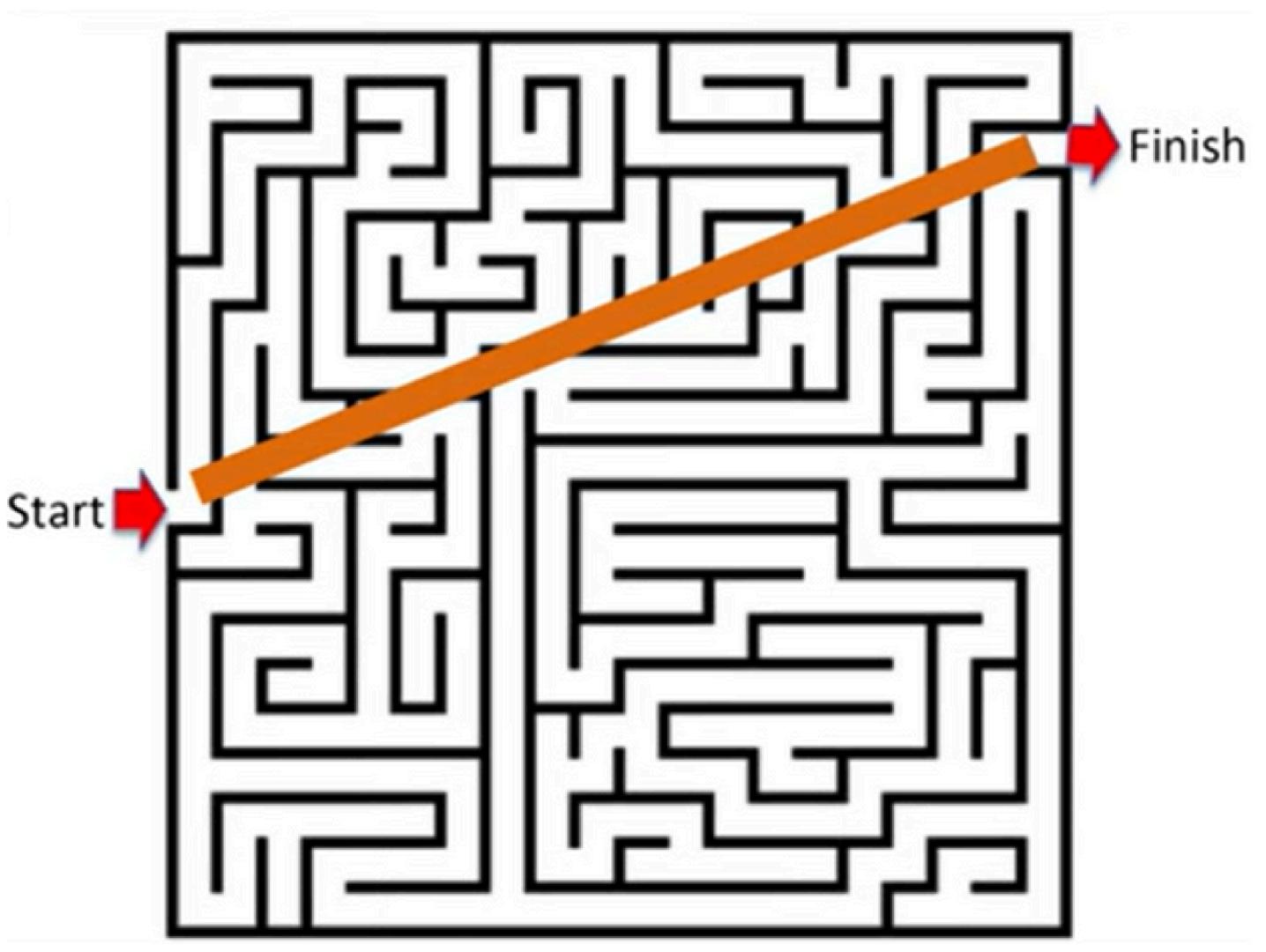




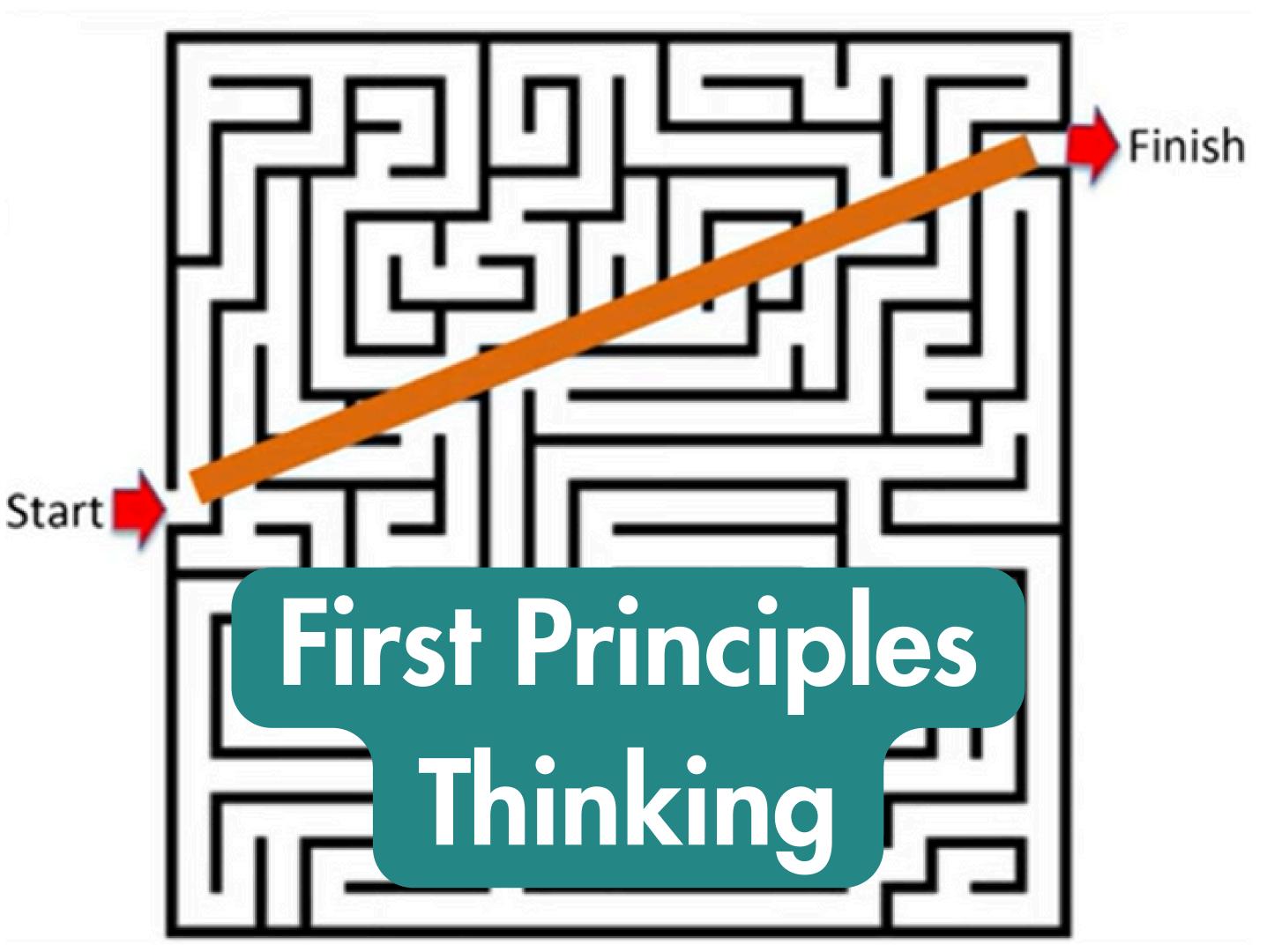














#### Solve Problems

With First Principles Thinking

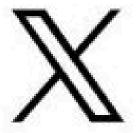
- 1. Identify the **problem** you want to solve
- 2. Break it down into the fundamental pieces
- 3. Question and challenge your assumptions
- 4. Create a new solution from the ground up

Breaking down **complex** problems into **basic** elements and reassembling from the ground up can be valuable for moving forward.









"What would this look like if it were easy?"

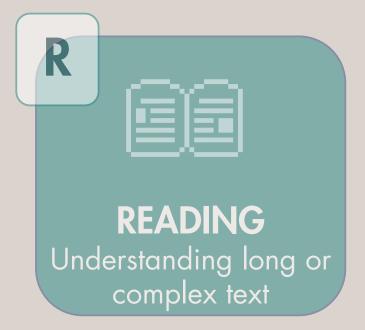
If I feel stressed, stretched thin, or overwhelmed, it's usually because I'm overcomplicating something or failing to take the simple/easy path because I feel I should be trying "harder" (old habits die hard).



#### The New Waste

If It's [DRUDGERY], Get Al to Help















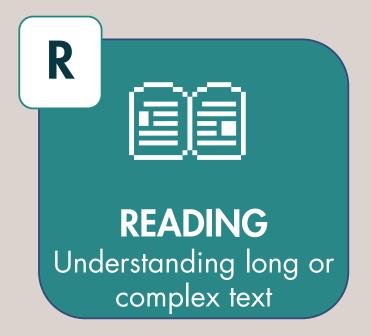




#### The New Waste

If It's [DRUDGERY], Get AI to Help















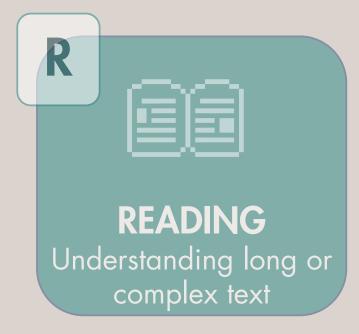




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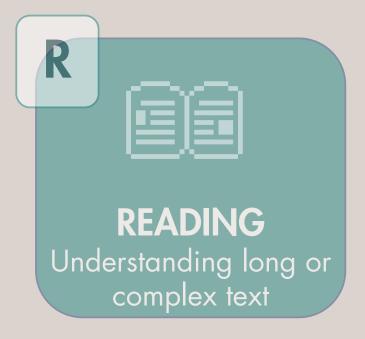




#### The New Waste

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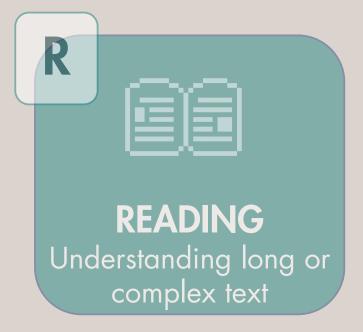




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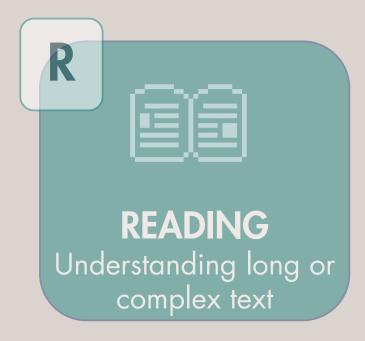




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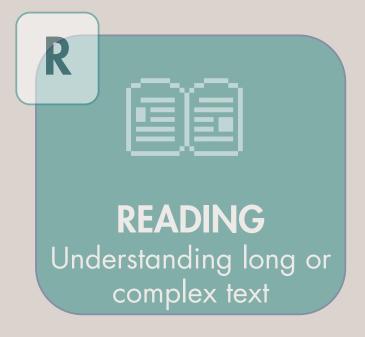




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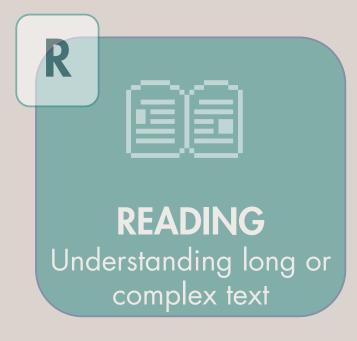




#### The New Waste

If It's [DRUDGERY], Get Al to Help



















# 2025 The Year the annual-work-trend-index-2025/ Frontier Firm Is Born

Intelligence on tap will rewire business. Every leader needs a new blueprint.

#### **Journey to the Frontier Firm**

Every organization's Al transformation will look different, but here's how we see it playing out over time.

#### Phase 1 Human with assistant



Every employee has an Al assistant that helps them work better and faster

Phase 2 Human-agent teams



Agents join teams as "digital colleagues," taking on specific tasks at human direction

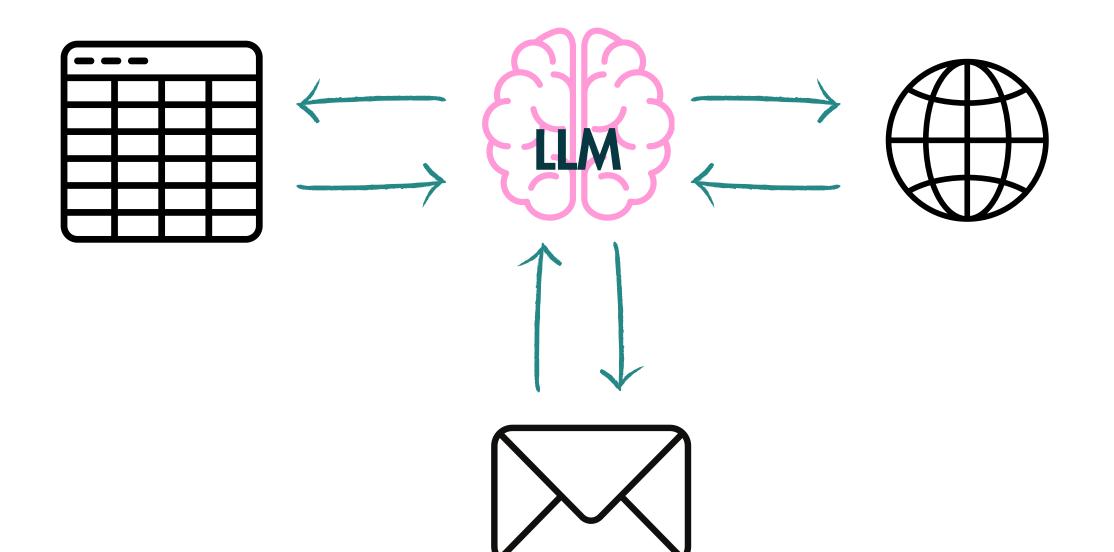
Phase 3 Human-led, agent-operated



Humans set direction and agents execute business processes and workflows, checking in as needed

# What is an Al Agent?

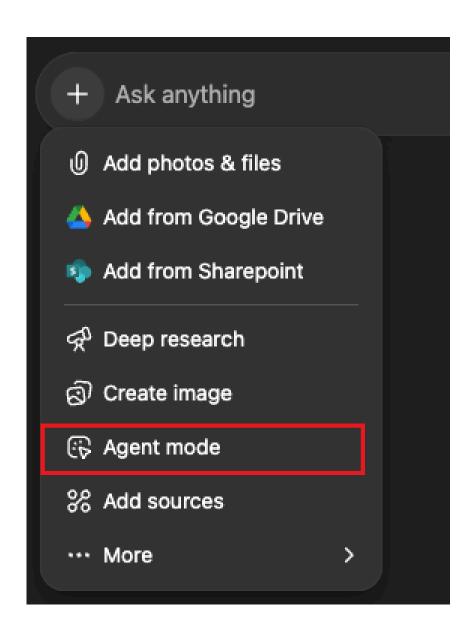
#### "Tools in a loop to achieve a goal"



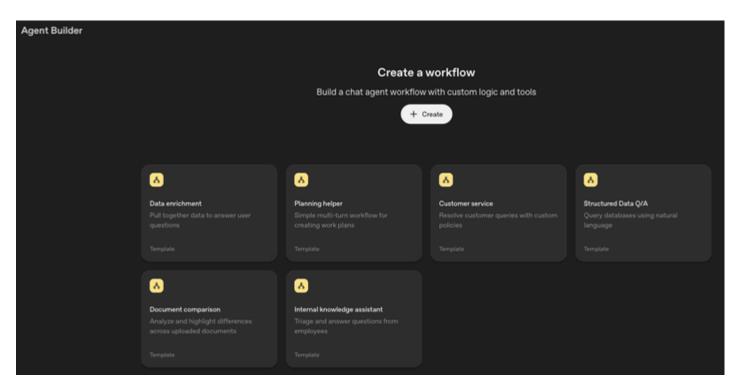
- 1. LLM (Brain)
- 2. Tools
- 3. Instructions
- 4. Memory\*



# Where to Leverage Agents

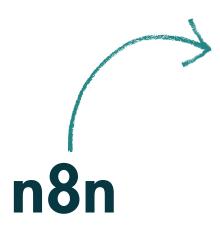




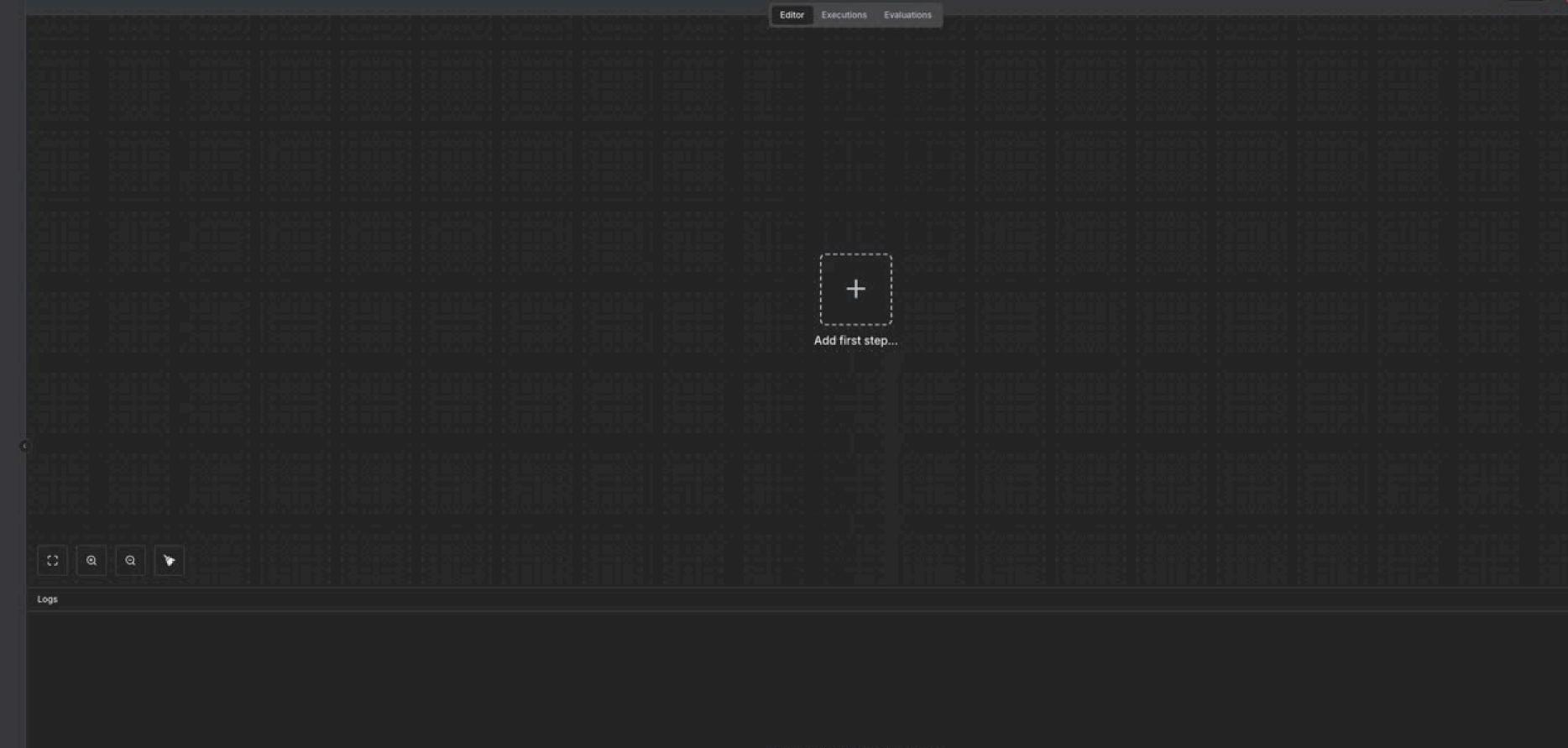




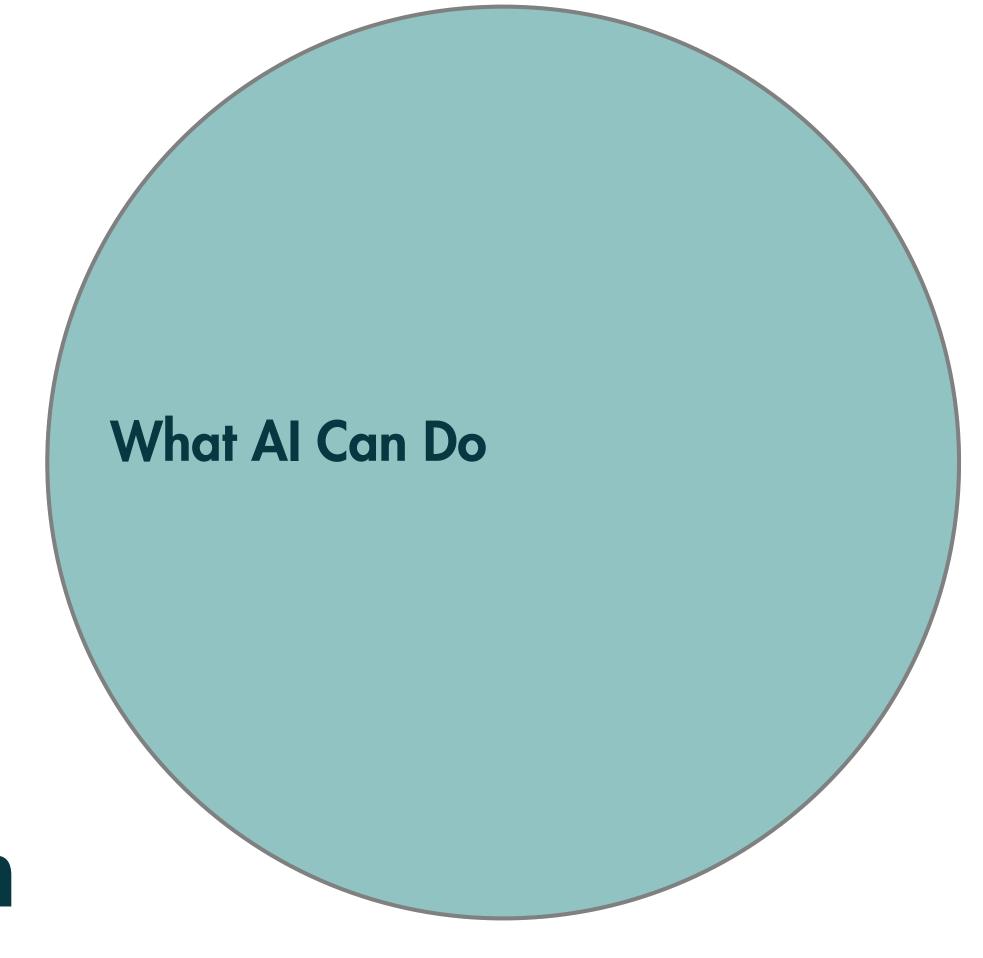




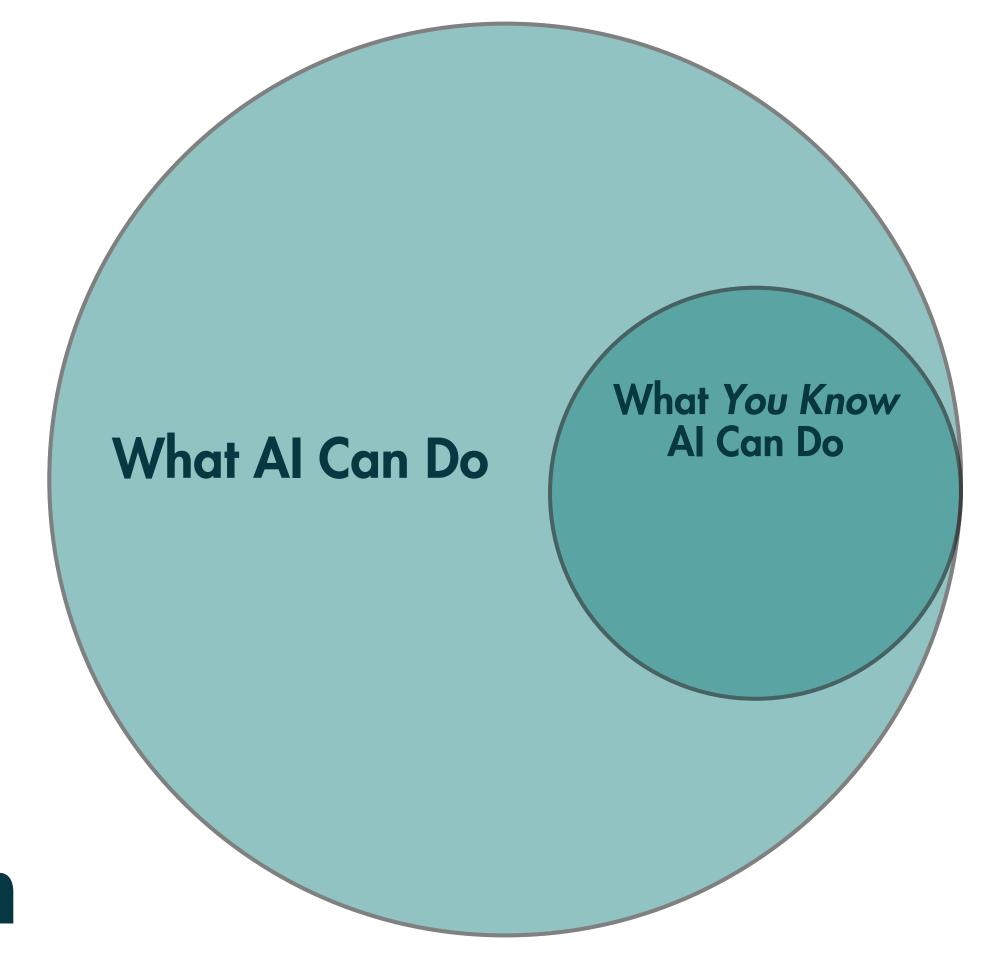




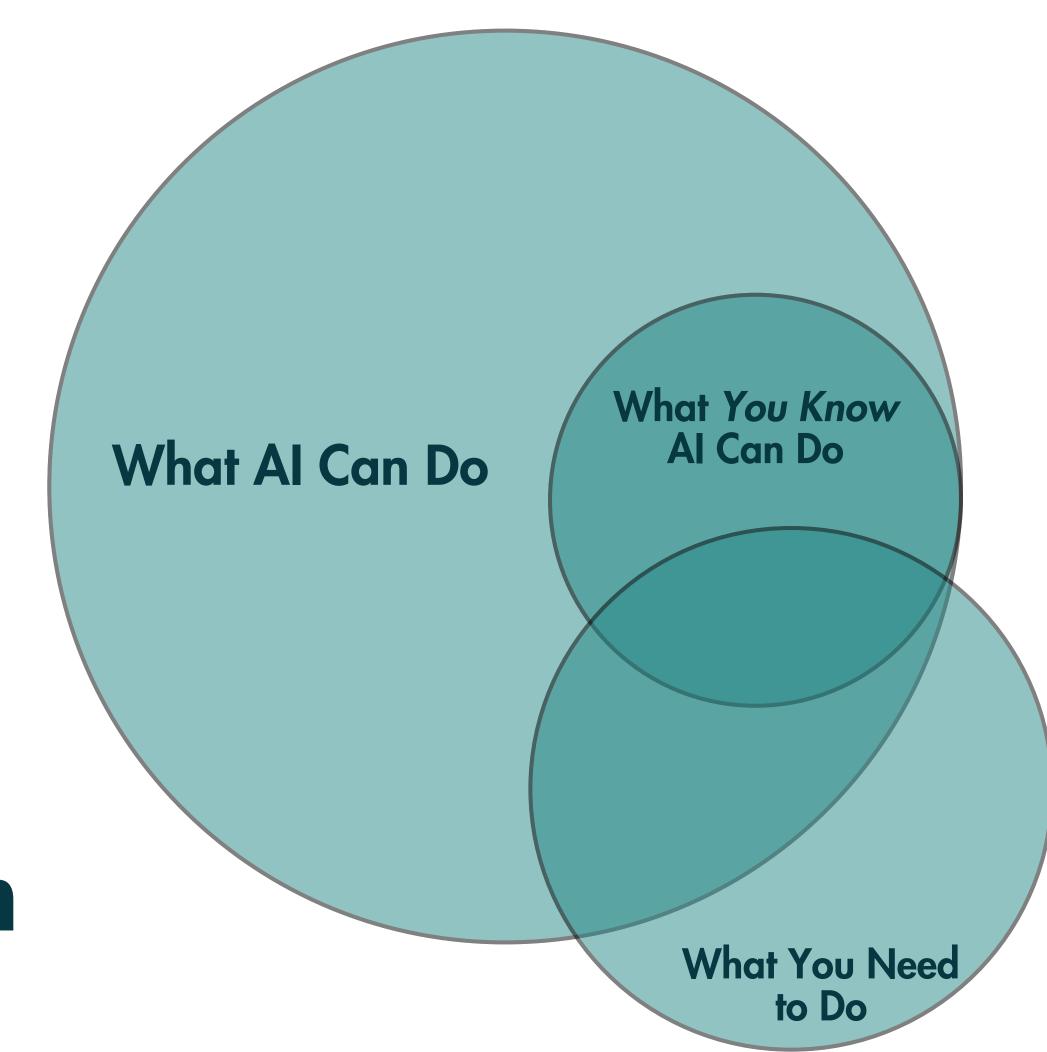




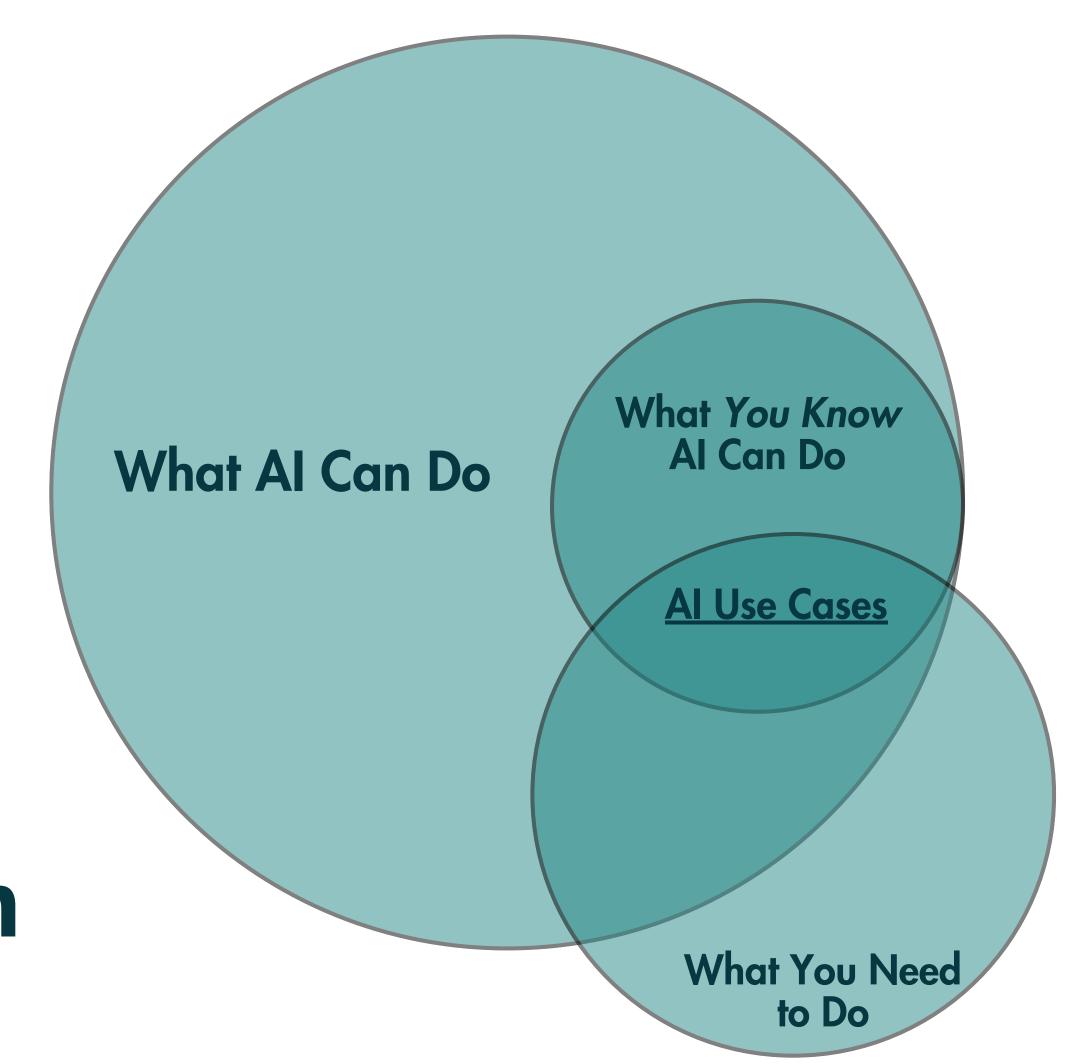












Identify Your Al
Opportunities



Identify Your Al
Opportunities

Pilot Top Opportunity



Identify Your Al
Opportunities

Pilot Top Opportunity



Standardize Al Workflow



Identify Your Al Opportunities

Pilot Top
Opportunity



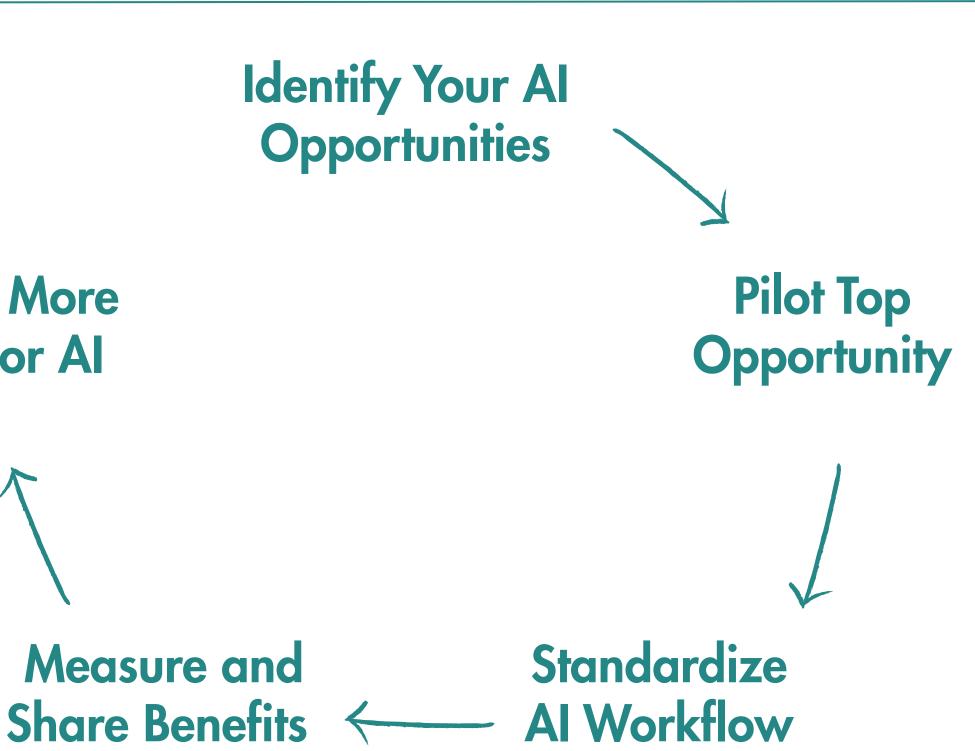
Measure and Standardize
Share Benefits 

Al Workflow

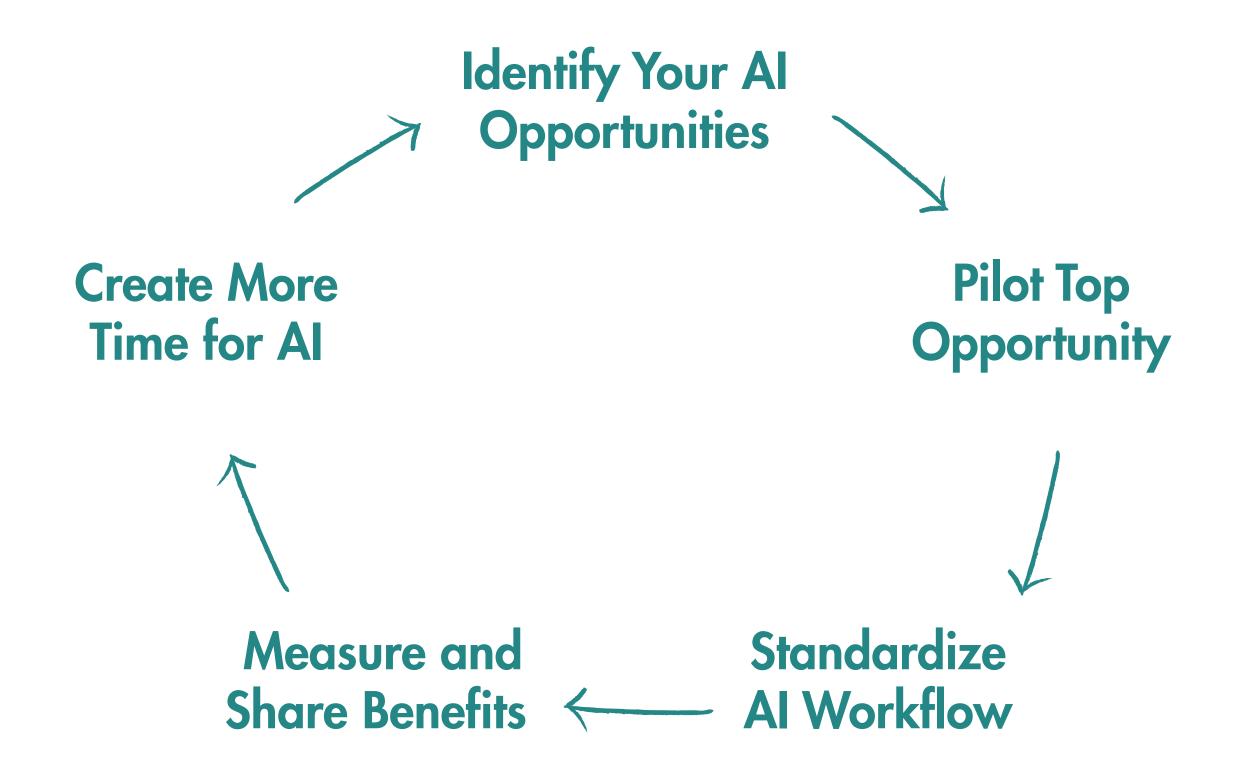


**Create More** 

Time for Al





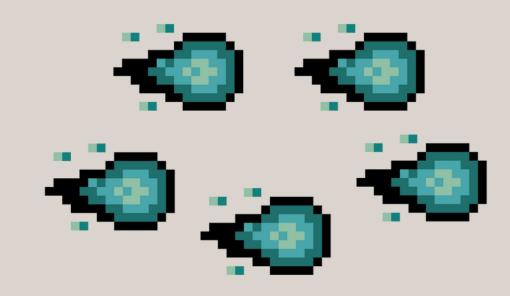


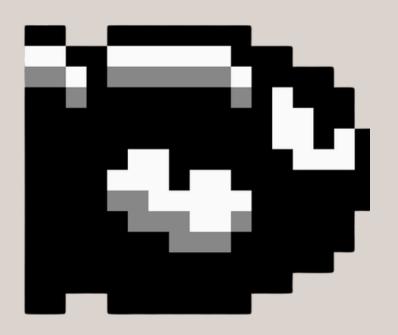


#### Fire Bullets Then Cannonballs

#### Turn small proven ideas into huge hits

- First, you fire bullets (low-cost, low-risk, low-distraction experiments) to figure out what will work—calibrating your line of sight by taking small shots.
- Then, once you have empirical validation, you fire a cannonball (concentrating resources into a big bet) on the calibrated line of sight.



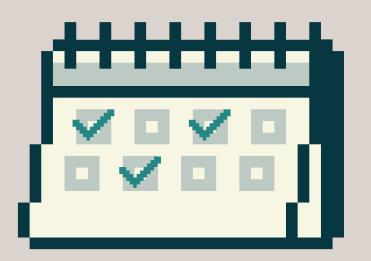




#### Evaluate Your Al Opportunities

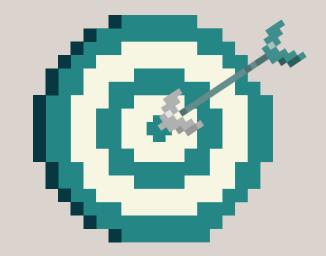
FIRE: Frequency, Impact, Repeatability, Ease

To start, put more emphasis here



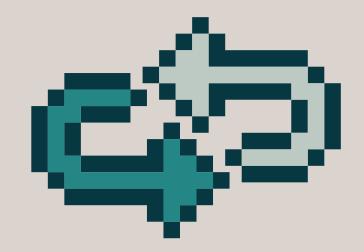
#### Frequency

How often does/will this happen?



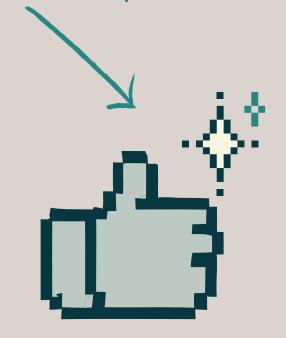
#### **Impact**

How much time/ energy will this save?



#### Repeatability

Are steps similar every time?



#### Ease

How simple is this to create (safely)?

$$0 = rarely$$

5 = daily

$$0 = none$$

5 = A LOT

$$0 = one-off$$

5 = clear SOP

$$0 = impossible$$

10 = dead simple

#### The IKEA Effect

"People place a disproportionately high value on products they've partially created or assembled, even if the final product is objectively flawed or amateurish."



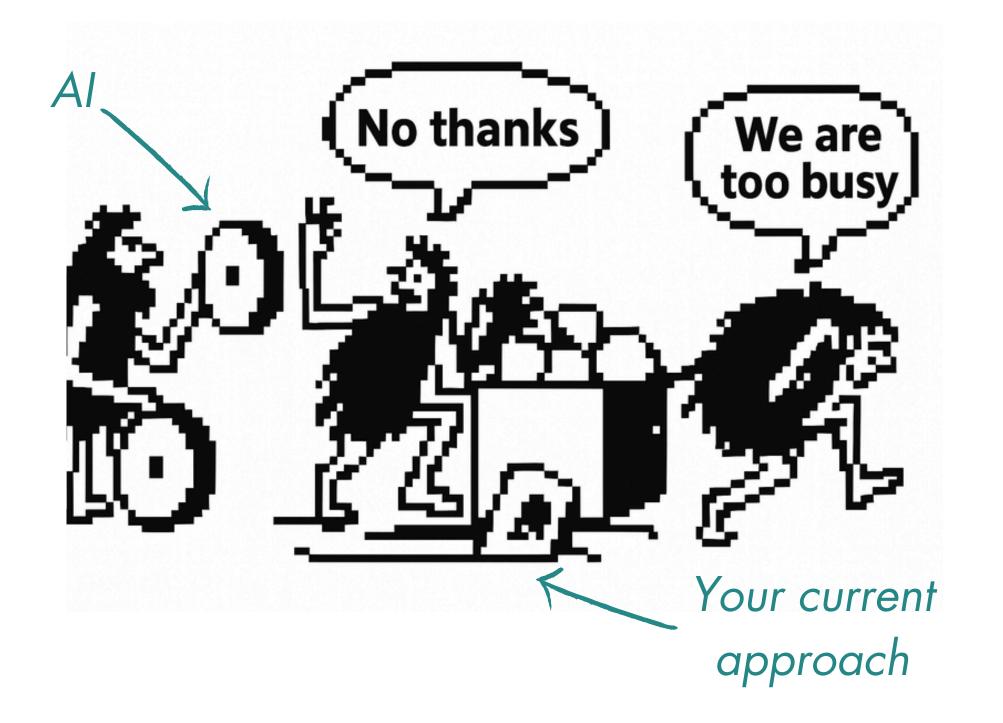


# Your goal is not to do the job, it's to <u>improve</u> the job

#### How to Create Time for Yourself

And Be Less Busy

The **technology** isn't hard — **changing** is hard





#### Lesson 2: Use Al Every Single Day (No Exceptions)

Here's my simple rule: Every day, you should be in ChatGPT (or Claude, Gemini or other frontier AI app).

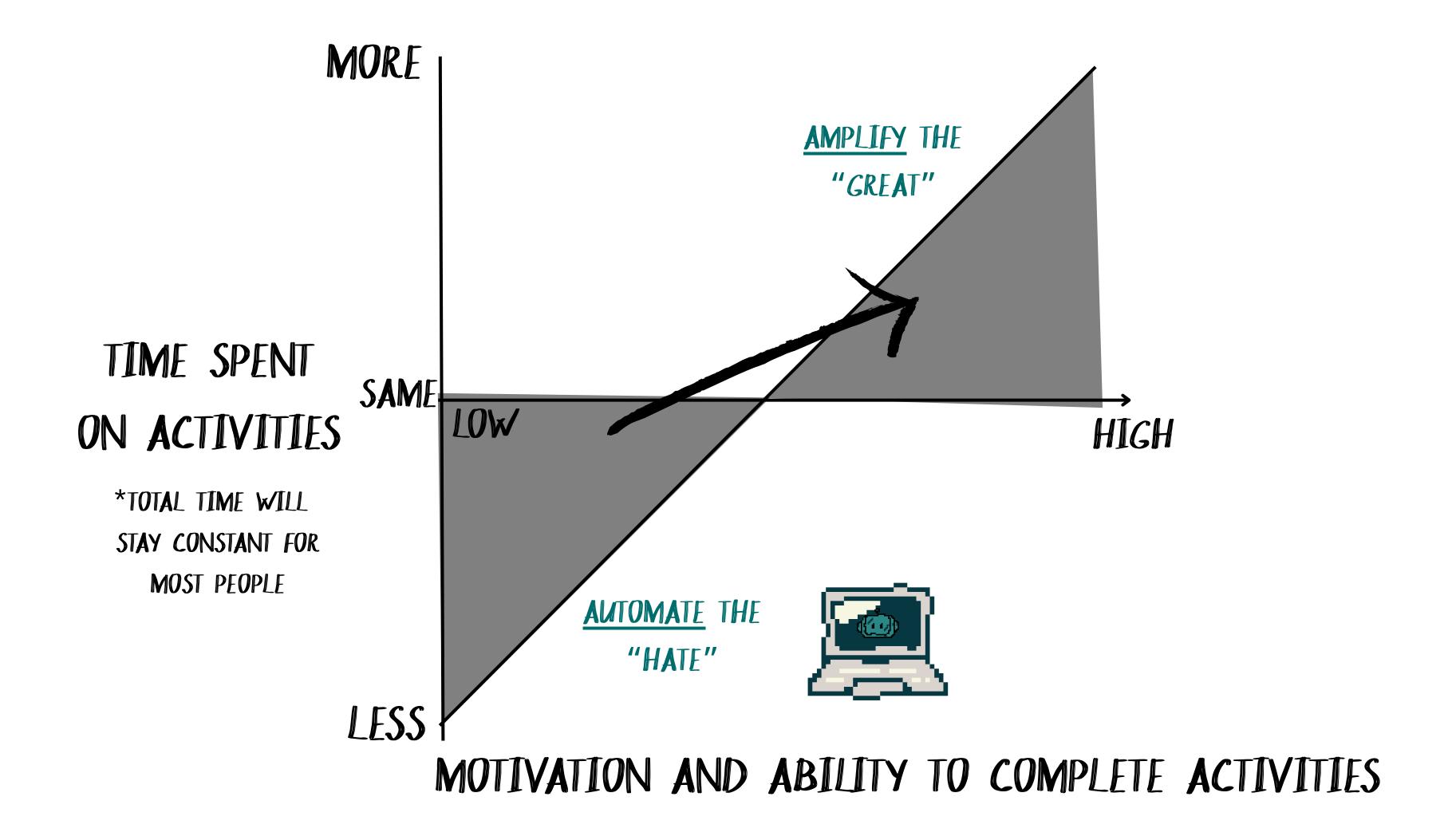
I don't care what your job is, you could be a waitress at a restaurant and you should be using ChatGPT every day to make yourself better at whatever it is you do.

My practical advice: Anytime you're going to sit down at a computer and do something -research, writing, analysis, whatever -- you should give ChatGPT a shot at it first.

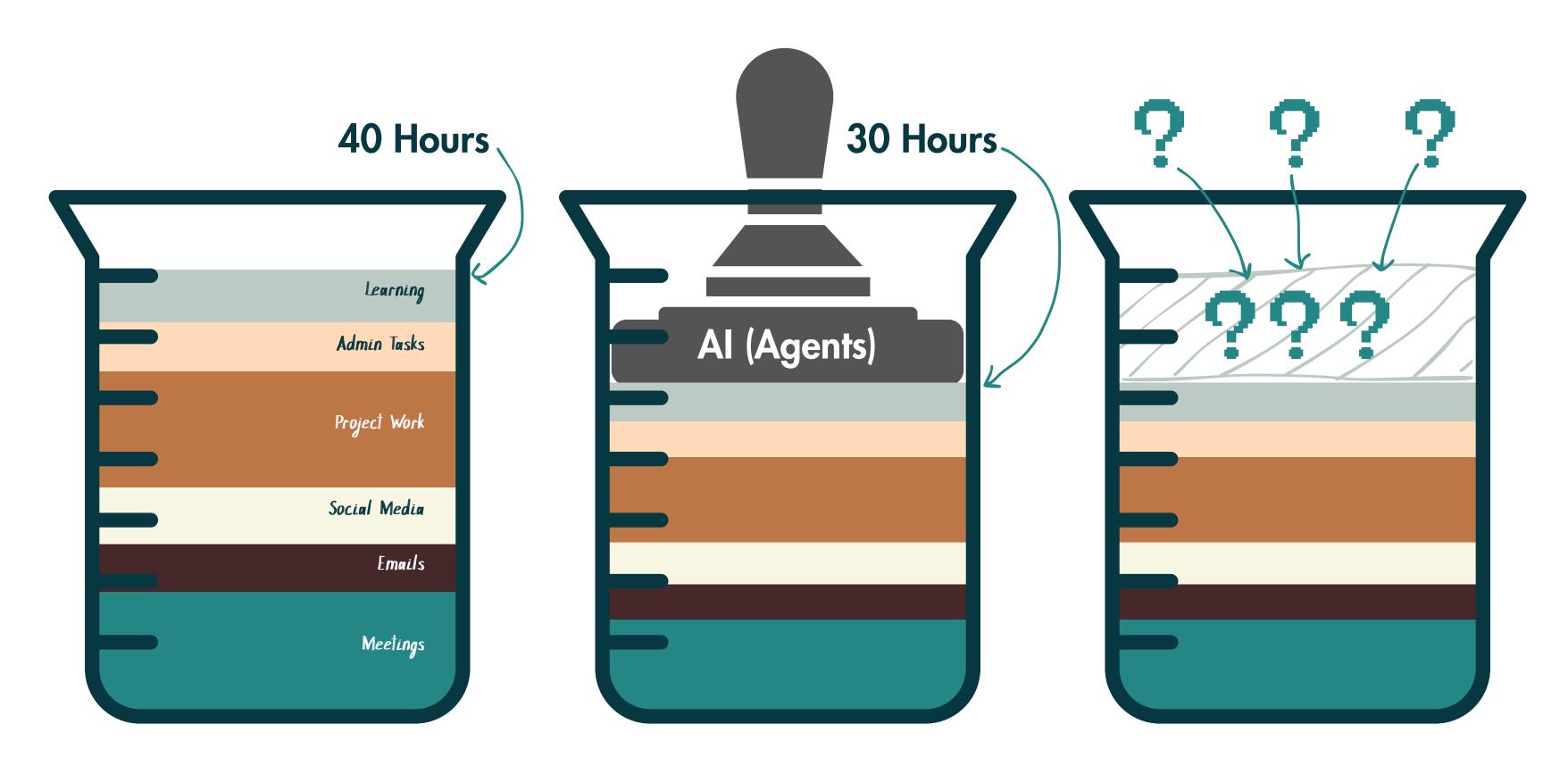
Pretend like you have access to an intern that has a PhD in everything. Give it a crack at solving the problem you're about to spend time on.

What you'll invariably find is that you'll be surprised by the number of times it actually comes up with a helpful response that you never would have expected. That's because it *literally* has been trained on everything publicly available.

This daily practice is how you develop intuition for what AI can and can't do, which becomes incredibly valuable over time.

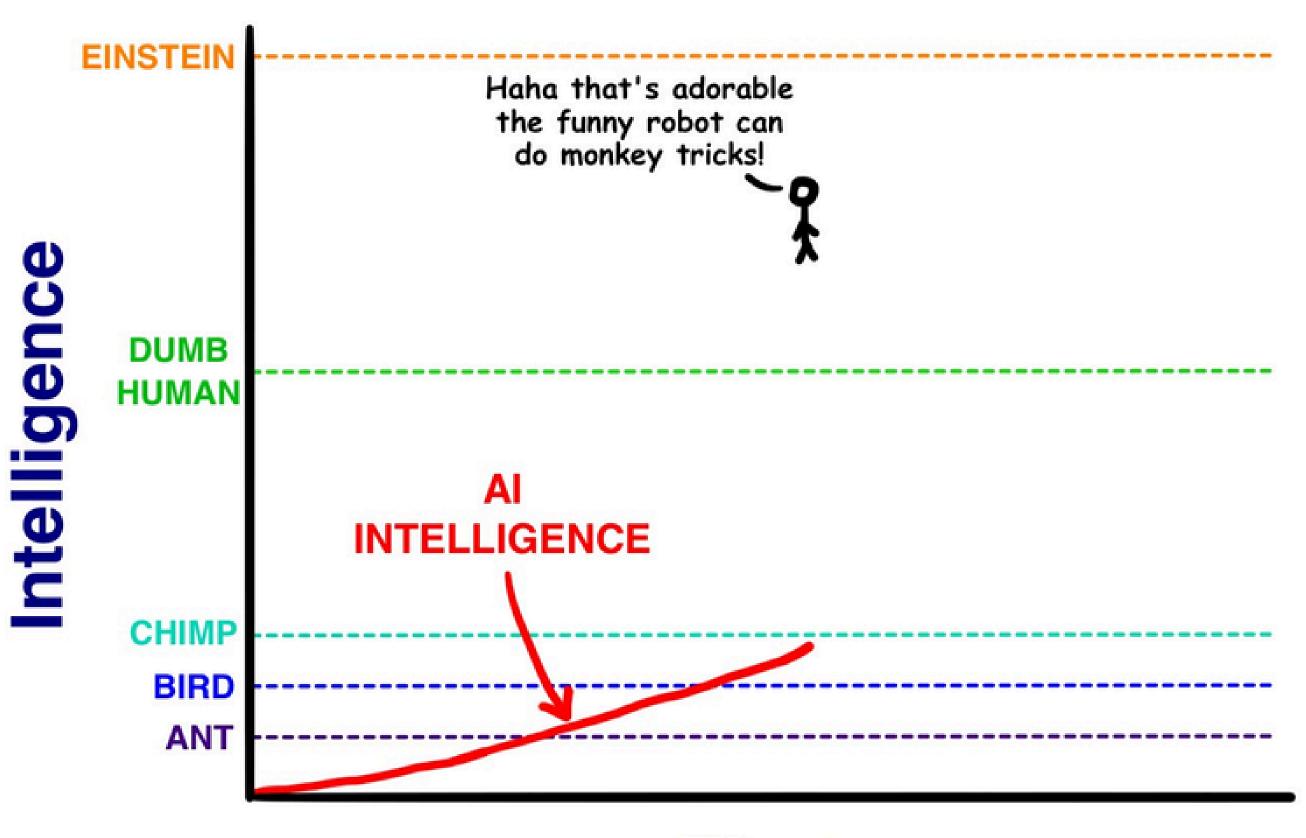


#### Parkinson's Law



#### Our Distorted View of Intelligence

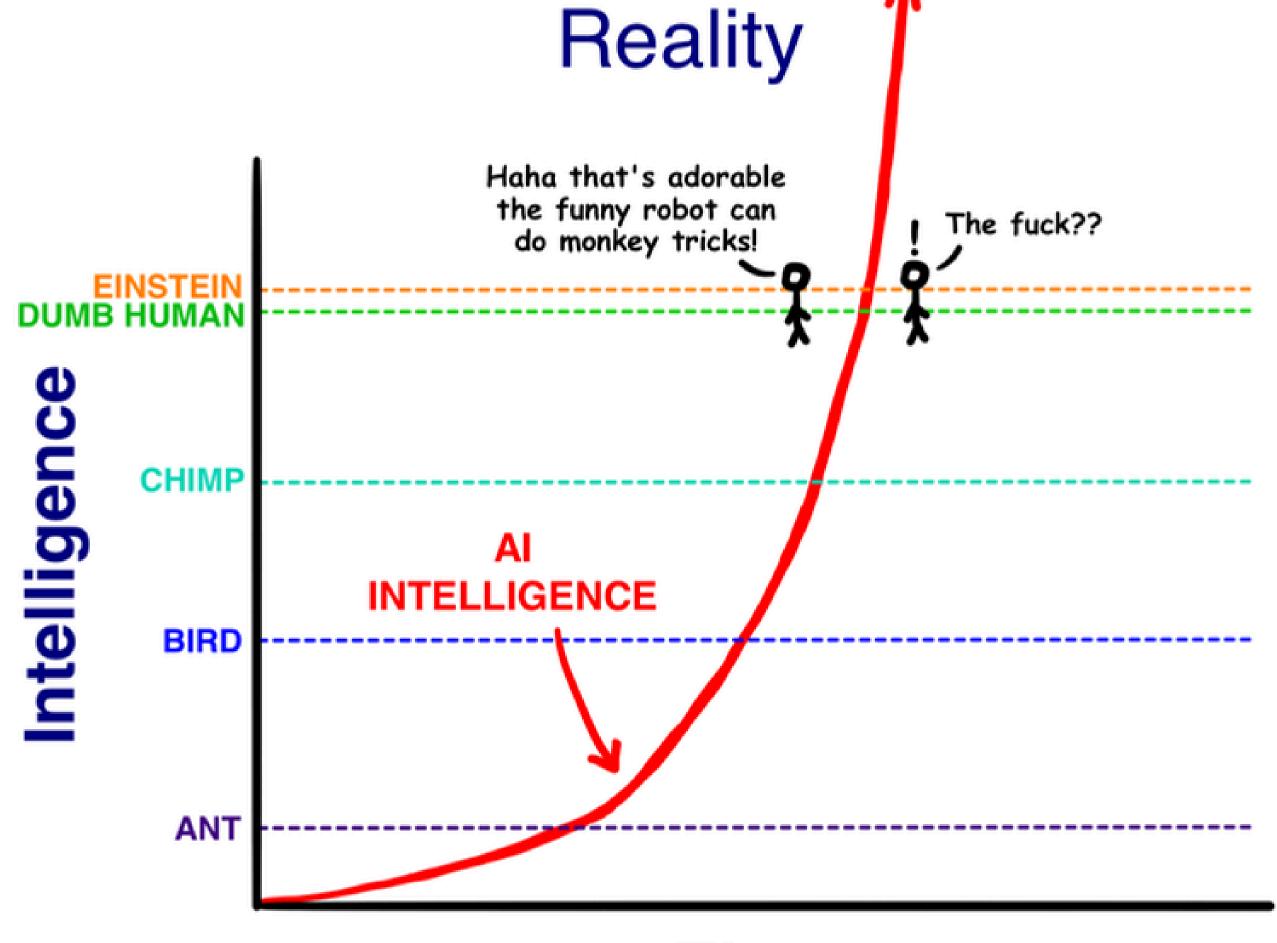
This is the Worst Al You Will Use





**Time** 

# So You'll Need to Prepare for the Future





Time



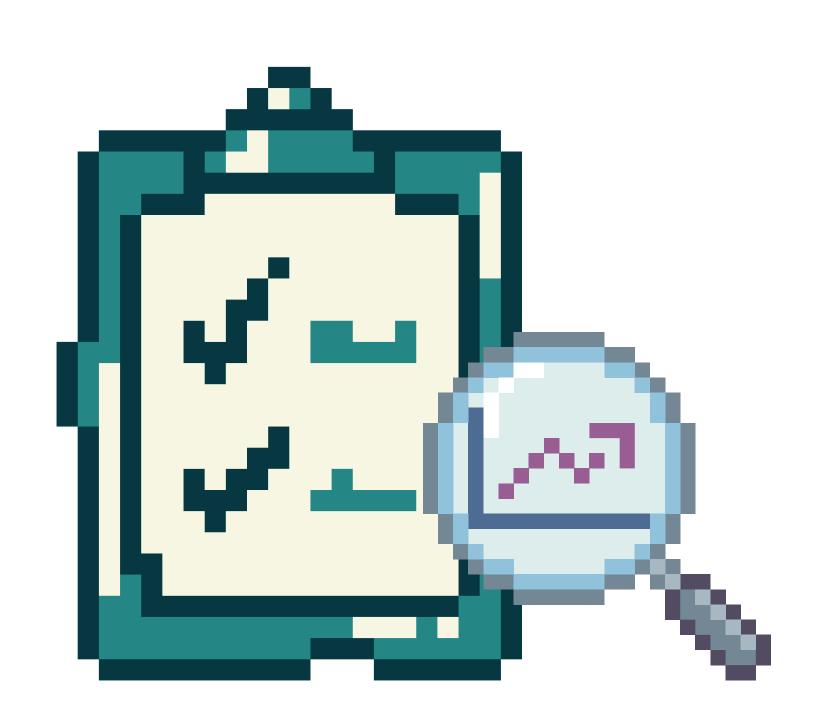
# Key Takeaways

#### Next Steps

- 1. Start thinking "Al-First" (make it a daily practice)
- 2. Use First Principles Thinking ("What would this look like if it were easy?")
- 3. Your goal is not to do the job, it's to improve the job
- 4. Create time to explore Al opportunities
- 5. DRUDGERY for identifying opportunities
- 6. Fire bullets, then cannonballs
- 7. CO-CREATOR for prompting
- 8. Today is the worst Al you will use



# Survey









For more details or to stay on top of the latest Al solutions for your business, connect with us!



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<u>ai-first.ca</u>



<u>/robertnewcombe</u>