



# Lunch & Learn

An Introduction To:  
Understanding AI-Assisted Regulatory Workflows

12pm November 20th, 2025

Presenter: Tim Warner  
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# Disclaimer

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# Land Acknowledgement



# Welcome!

## Today's Session:

- What AI is (and what it isn't)
- General vs Specific AI Tools
- Prompting and Evaluating Responses
- Data Privacy, Accuracy and Professional Responsibility
- Trax Codes



PRESENTED BY:  


PARTNERS:  




# AI TRAINING COURSE

UNDERSTANDING AI-ASSISTED  
REGULATORY WORKFLOWS

## WHAT YOU'LL LEARN

- ✓ AI FUNDAMENTALS AND ITS ROLE IN REGULATORY WORK
- ✓ FRAMEWORKS FOR ASSESSING WORTHINESS OF AI TOOLS
- ✓ EXECUTE WORKPLACE TASKS (E.G. PERMIT REVIEWS) ASSISTED BY AI
- ✓ APPROACH AI TOOLS INFORMED, SAFELY, AND RESPONSIBLY
- ✓ BUILD A PERSONALIZED ACTION PLAN FOR INTEGRATION OF AI INTO WORKFLOW

## TAKE THE COURSE FOR FREE!

-  ACCESS THE TRAINING **FREE-OF CHARGE** ON YOUR ASSOCIATION'S LEARNING PORTAL
-  VISIT [WWW.TRAX.CO/AI-TRAINING](http://WWW.TRAX.CO/AI-TRAINING) FOR MORE INFO

\*ASSOCIATION MEMBERS MUST TAKE TRAINING THROUGH THEIR ASSOCIATION'S TRAINING PORTAL TO CLAIM CPDP CREDITS



EARN CPDP  
CREDITS!\*

# Before we begin...

## Suggested

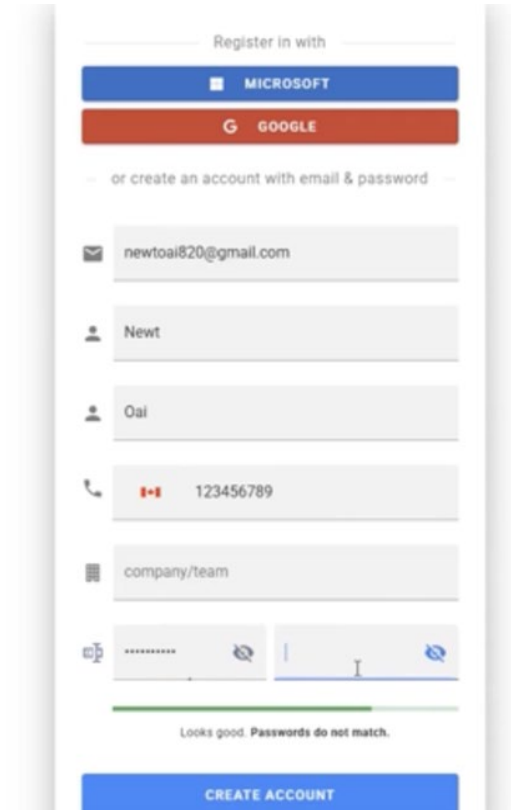
Open Trax Codes on a computer or phone:

<https://app.trax.co/>

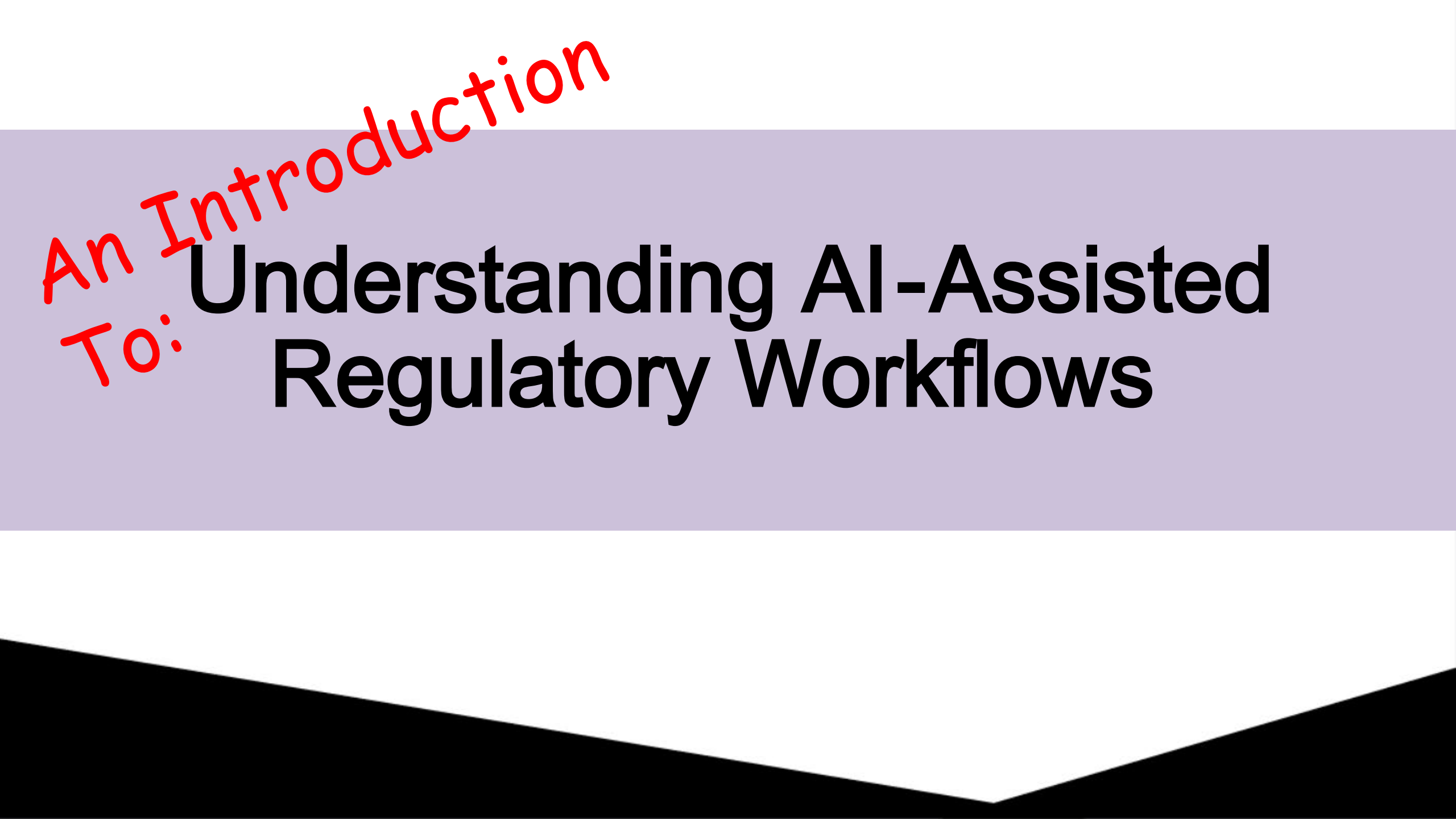
Sign up for a free trial for use in this session.

**trax codes**  
Your Building Codes  
Copilot

Largest collection of up-to-date regulatory information in Canada for the construction industry.



The screenshot shows the registration interface for Trax Codes. At the top, it says "Register in with" followed by two buttons: "MICROSOFT" (blue) and "GOOGLE" (red). Below these is a link: "or create an account with email & password". The form fields include: email (newtoai820@gmail.com), first name (Newt), last name (Oai), phone number (123456789 with a Canadian flag icon), and company/team (company/team). There are two password fields; the second one has a red error message: "Looks good. Passwords do not match." At the bottom is a blue "CREATE ACCOUNT" button.



An Introduction  
To:

# Understanding AI-Assisted Regulatory Workflows

# Introduction



ChatGPT

Gemini

alexa

trax codes



THOMSON REUTERS



Copilot

# Who We Are

trax



SIMON FRASER  
UNIVERSITY



UNIVERSITY OF  
**WATERLOO**  
COMPUTER SCIENCE



ONTARIO BUILDING OFFICIALS ASSOCIATION

**OBOA**



# AI is Already Here



THOMSON REUTERS

trax codes

43%

Using GenAI in Professional  
Work

300

Municipalities in Canada

# Supporting Capacity

**4.5 million**

Permits Needed by 2030

**5000**

Building Officials in Canada



# Your Voice & AI

“It’s the way of the future. We need to be able to understand it and use it wisely.”

“How can AI benefit the inspection process?”

“How can AI accelerate permit review?”



# Your Voice & AI



Have you used a LLM / chat-based AI tool before?

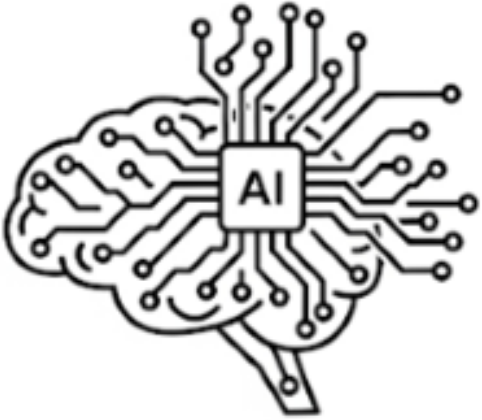


What are you curious or interested about with AI?



What concerns do you have about using AI at work?

# AI Skills Framework



## What is AI (and LLMs)?



**When** to use  
AI tools?



**How** to use AI  
tools?



**Which** AI  
tools to use?

# Current Use of AI

Search results for "british columbia building code".

AI Mode **All** Images News Videos Shopping Short videos More ▾ Tools ▾

 **BC Codes**  
<https://www.bccodes.ca>

**BC Building Code**

The **BC Building Codes 2024 (BCBC)** is the authoritative provincial regulation that governs new construction, building alterations, repairs, and demolitions.

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**British Columbia Codes** >  
The BC Building Code (BCBC) is a provincial regulation that ...

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**City of Vancouver By-laws** >  
The Vancouver Building By-law 2019 is based on the British ...

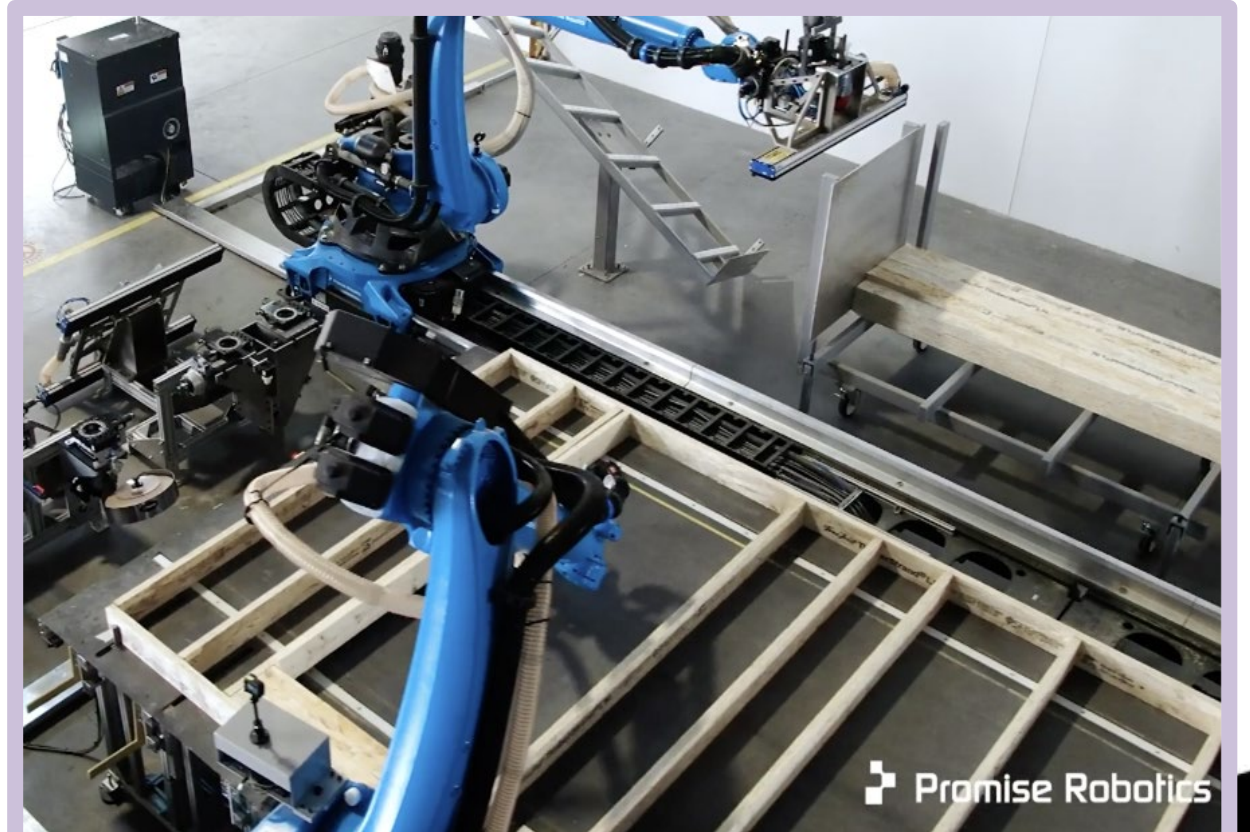
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[More results from bccodes.ca »](#)



# Current Use of AI

dConstruct & Promise Robotics



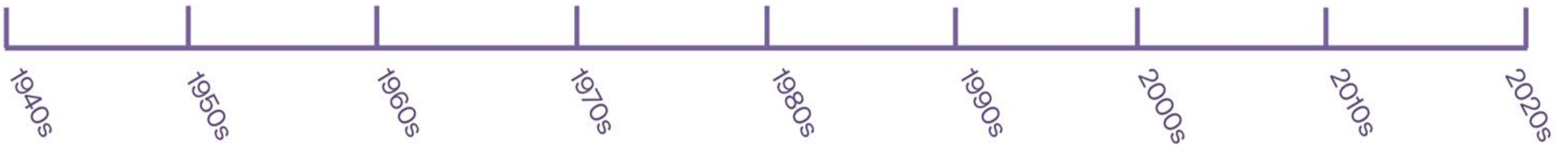
# AI Breakthroughs

**2017**

A technical breakthrough led to the current explosion of AI everywhere.

**2022**

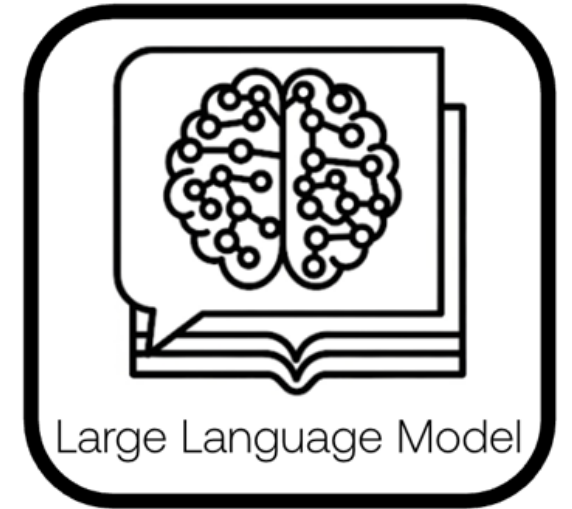
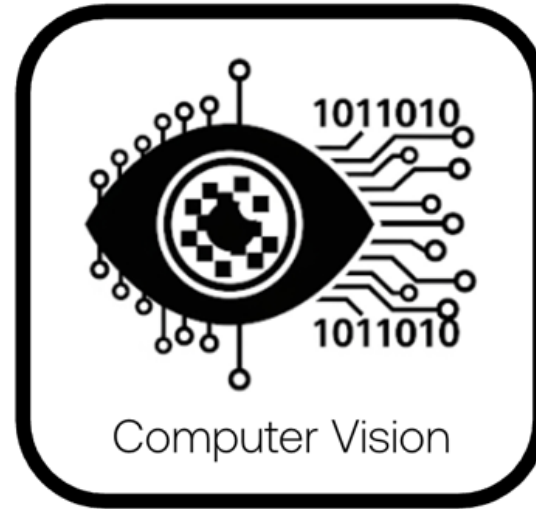
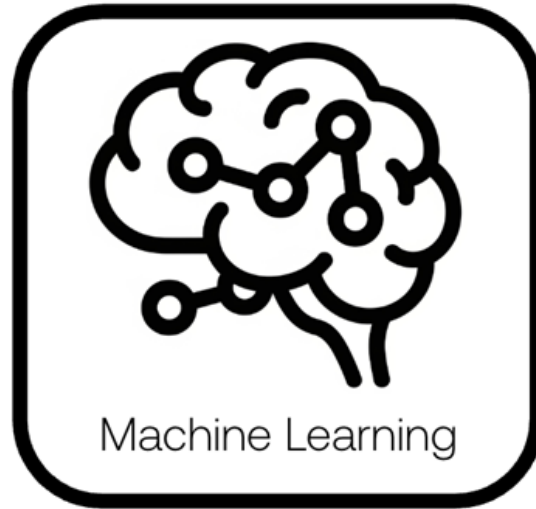
Public launch of ChatGPT. By January 2023 it had 100 million users.



We now have people collaborating with AI tools in their personal and professional life.

# What is AI?

## Artificial Intelligence



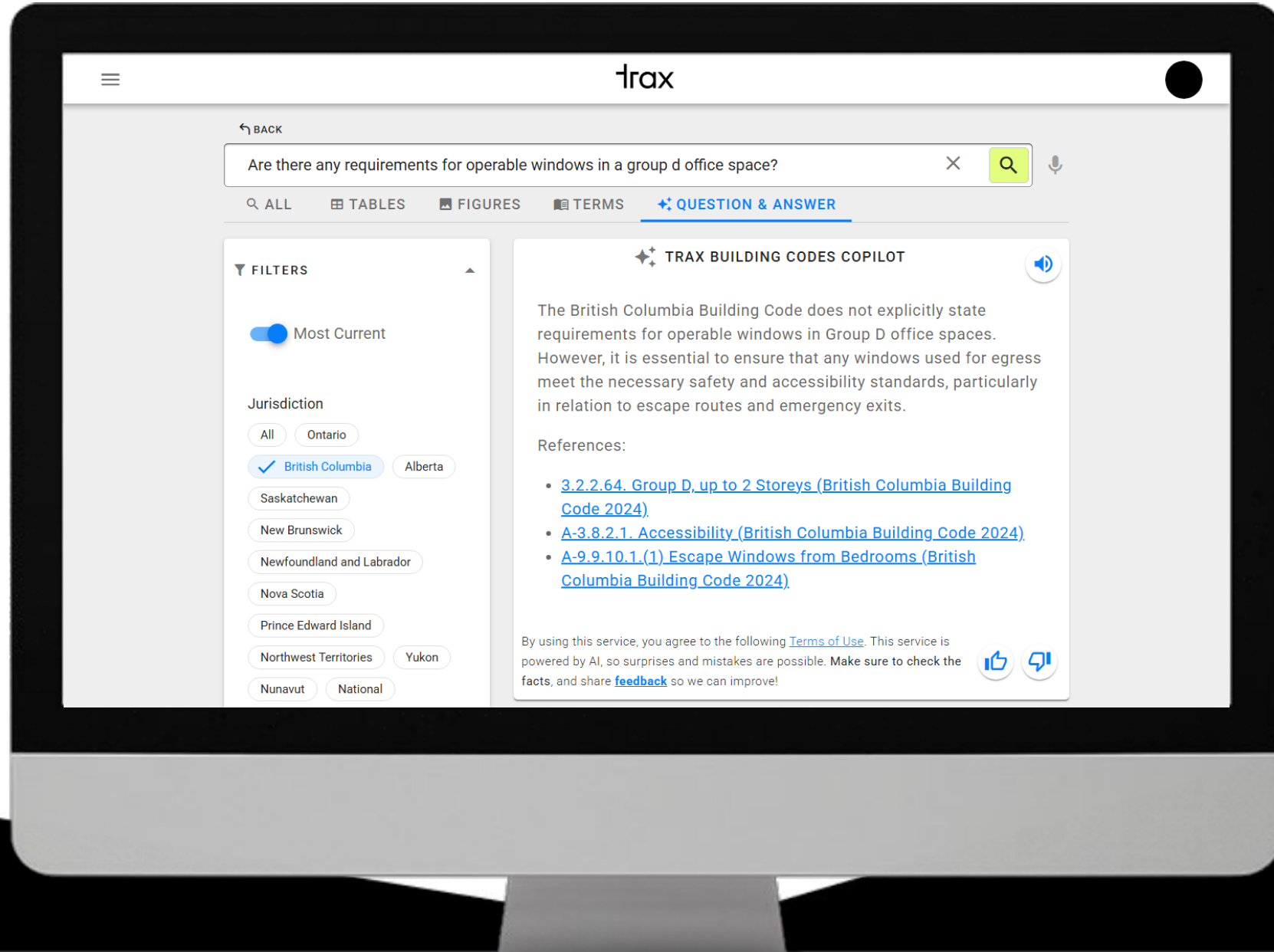
Not AI



AI

# LLMs in Action

Are there any requirements for operable windows in a group D office space?

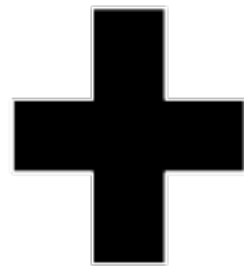


# How do LLMs Work?

## Large Language Models (LLMs)



Training



Dataset



Output

# LLMs: Myths & Reality



# Roles: Humans vs. AI

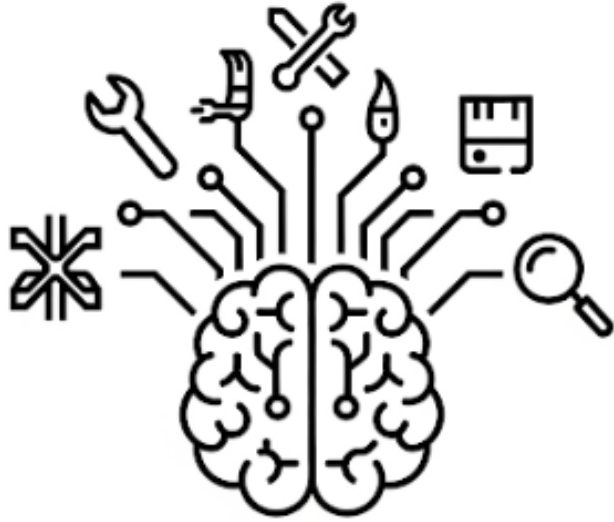
Think of AI as a...

- tool
- assistant
- support

It needs oversight.



# Selecting a Tool

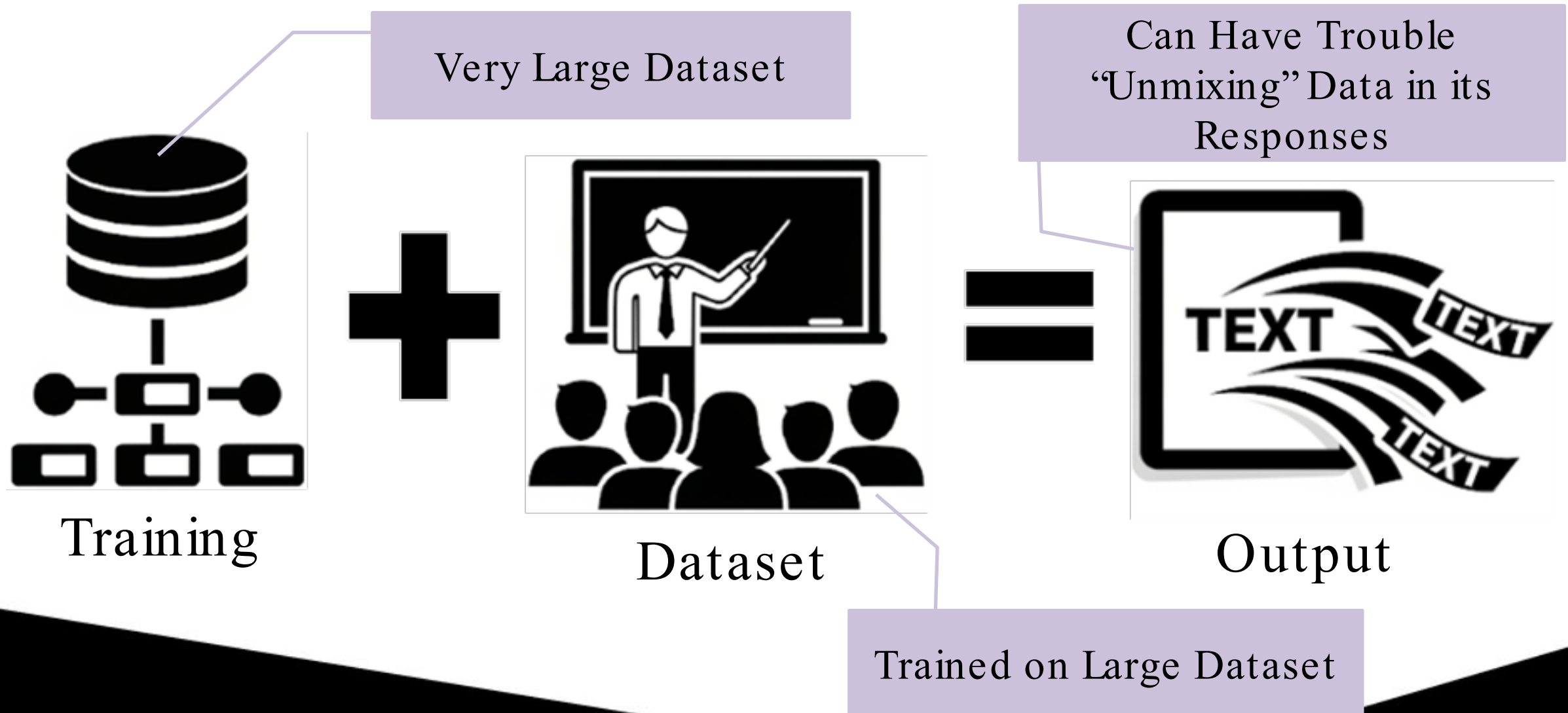


**Which AI tools  
to use?**

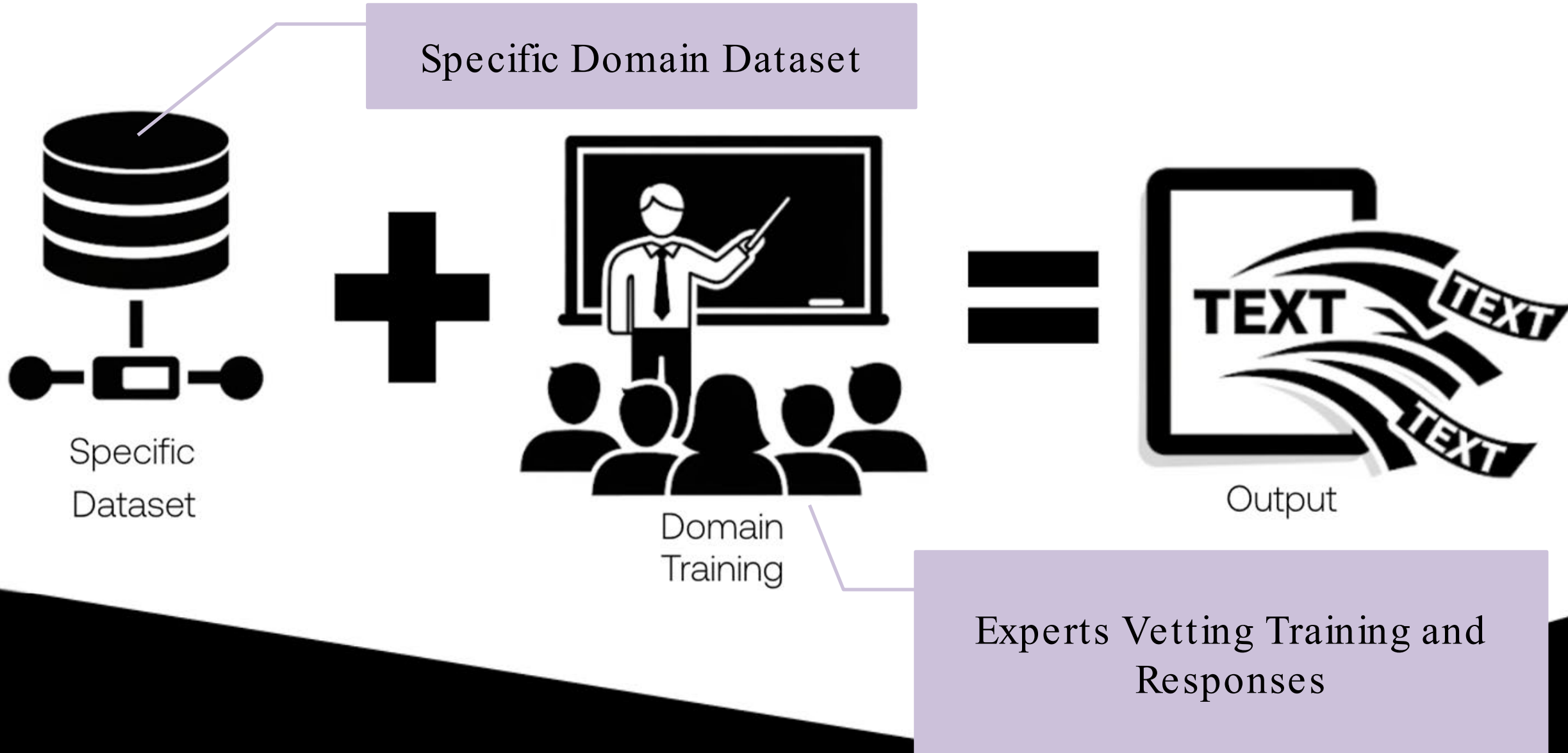
General vs. Specific



# General Use Tools

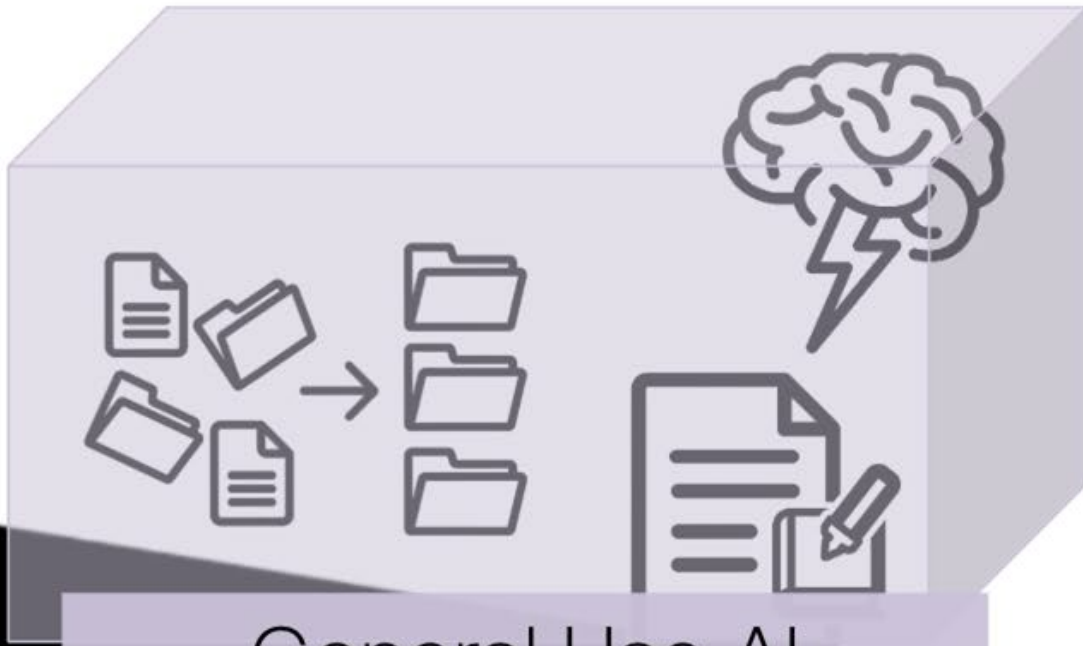


# Specific Use Tools

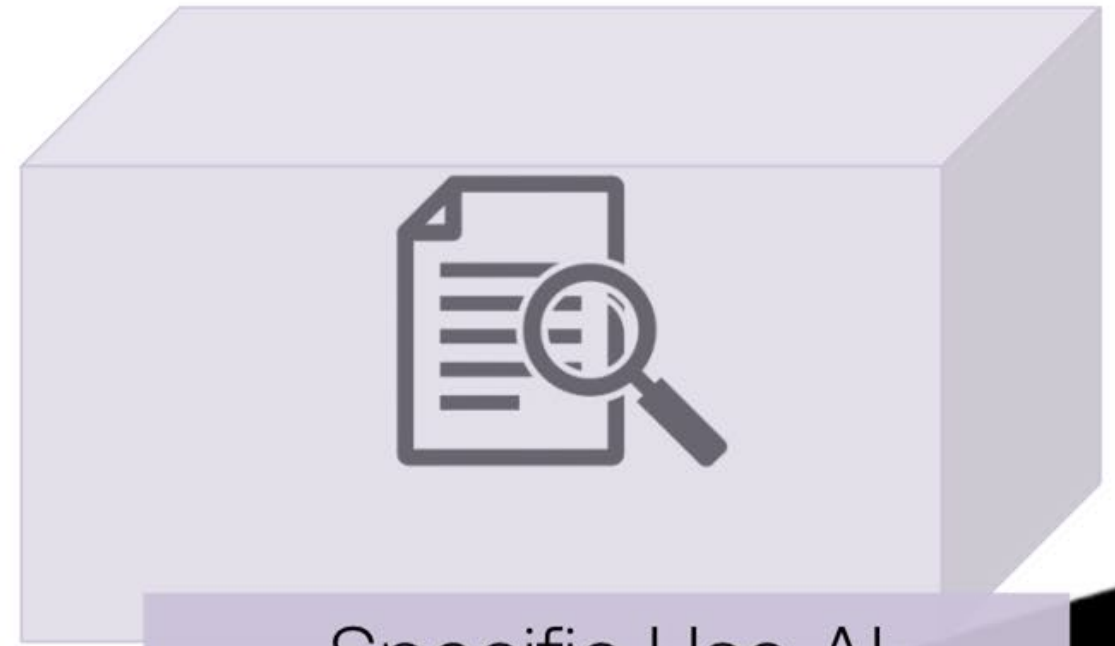


# When to Use AI?

Some common current uses: brainstorming, summarizing, reviewing, (re)organizing—depending on the tool's purpose and design.



General Use AI



Specific Use AI

# Selecting an AI Tool

## Design & Training



Designed for the area of expertise I'm interested in?



Designed by people who are themselves experts in that area?



Designed for people like me who have expertise in that area?

## Dataset



Selective of what information is included in its dataset?



Transparent about what information is included in its dataset?



Constantly updating its dataset with current information?



Able to filter by the date/version/etc. of the information in its dataset?

## Trustworthiness



Making up answers when it doesn't have the correct one?



Showing where it got its information so you can verify?

# Quantity vs. Quality

High Quantity, General  
Purpose Dataset

High Quality, Code-  
Specific Dataset



# Quality of Dataset



**ChatGPT**

General Use LLM that might have regulatory info

Not able to unmix older and newer information

Unable to filter select information, like jurisdiction-specific regulations

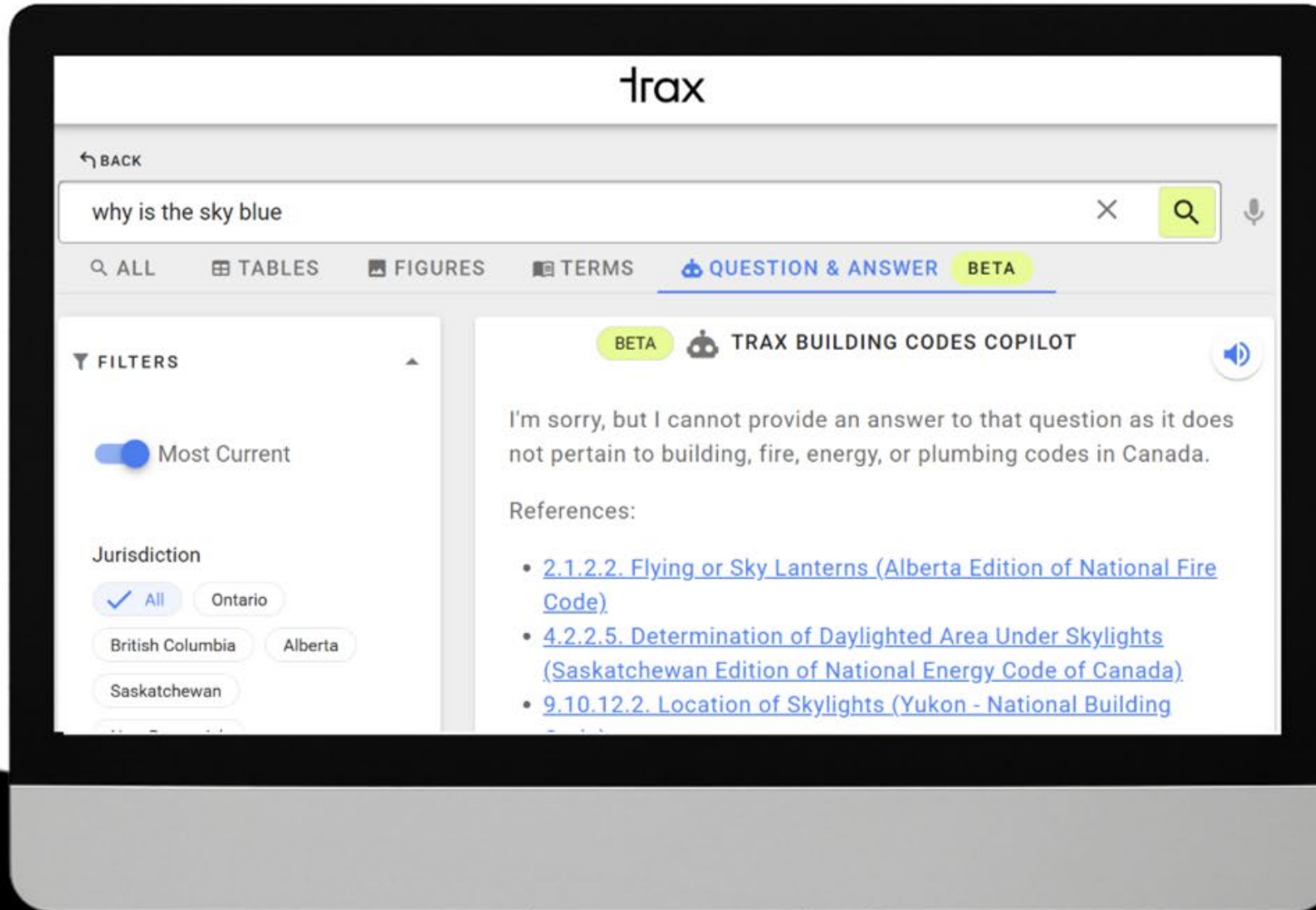
**Trax codes**

Specific Use LLM

Only has information on building codes, fire codes, etc.

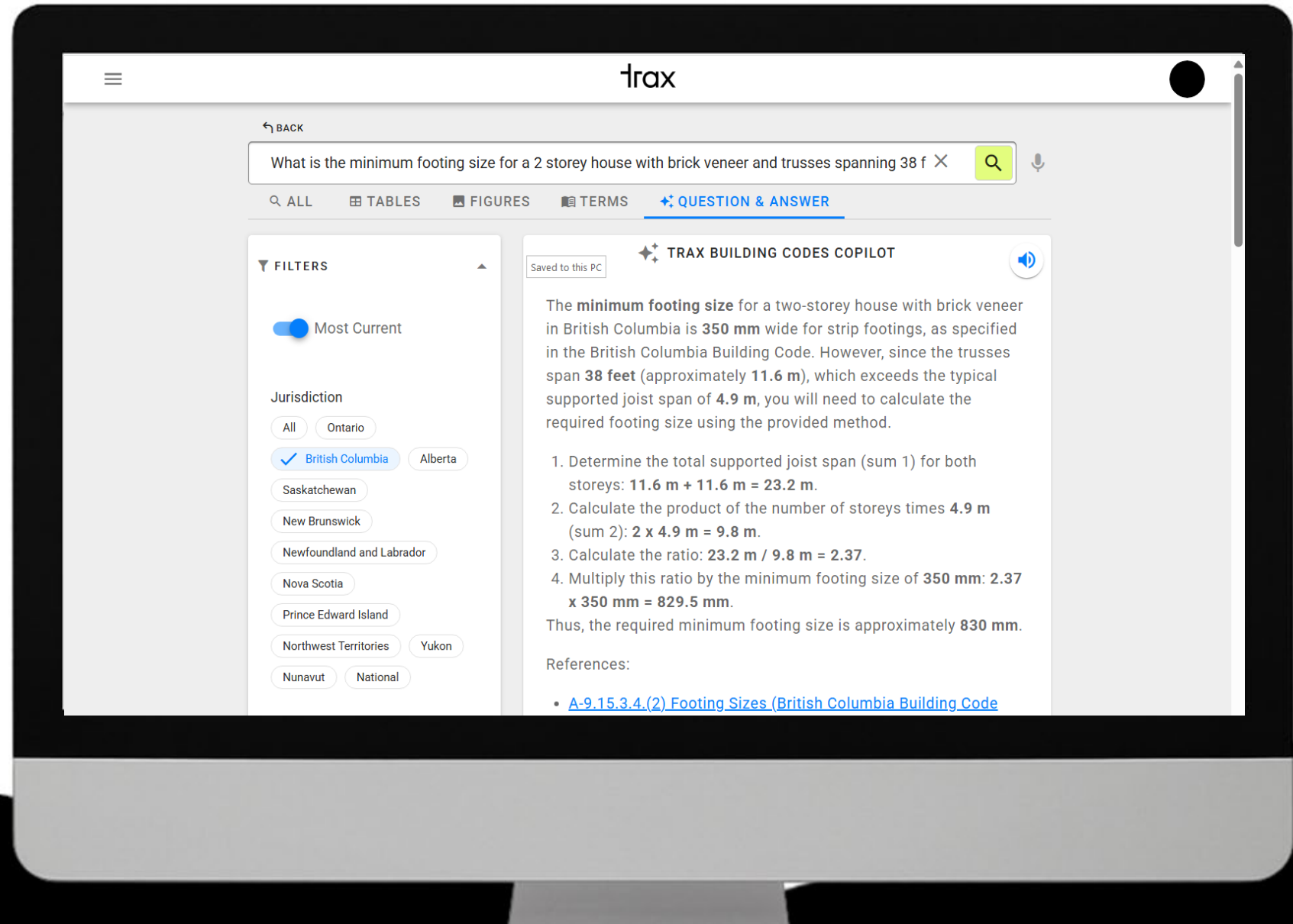
Can set the jurisdiction and versions of the codes with a filter

# Dataset & Hallucinations



# Regulatory Info Example

What is the minimum footing size for a 2 storey house with brick veneer and trusses spanning 38 feet in British Columbia?



# Regulatory Info Example

What is the minimum footing size for a 2 storey house with brick veneer and trusses spanning 38 feet in British Columbia?

What is the minimum footing size for a 2 storey house with brick veneer and trusses spanning 38 feet in British Colombia?

Thought for 54s >

Short answer up front: the BC Building Code's **base** minimum strip footing for a 2-storey house is **350 mm** ( $\approx 13.8$  in.), but **because you have brick veneer and your trusses span 38 ft** ( $\approx 11.6$  m) the code requires you to increase that and — more importantly — to **design the footing for the long span**. The code path and numbers are below so you can see exactly how they were derived. BC Publications +1

## What the BC Building Code says (key points)

- Table 9.15.3.4 gives a **minimum strip footing width of 350 mm** for footings supporting 2 storeys. BC Publications
- **Adjust for masonry veneer:** Article 9.15.3.5 requires adding **65 mm for each storey** of masonry veneer over wood-frame construction. For a 2-storey brick-veneer house that means **+130 mm**. So using the Table alone would give **350 + 130 = 480 mm** ( $\approx 18.9$  in). BC Publications
- **BUT:** Article 9.15.3.3 and 9.15.3.4 state that the table applies **only where the supported joist span does not exceed 4.9 m**. Your trusses span  **$\sim 11.6$  m** (38  $\downarrow$ ), which is well over 4.9 m, so **the table alone does**

# Regulatory Info Example

What is the minimum footing size for a 2 storey house with brick veneer and trusses spanning 38 feet in British Columbia?

What is the minimum footing size for a 2 storey house with brick veneer and trusses spanning 38 feet in British Columbia?

1. **Hire a qualified Structural Engineer.** They will perform detailed calculations based on your specific building design, the actual soil conditions at your site (ideally with a geotechnical report), and the applicable loads (dead, live, snow).
2. **Obtain a Building Permit.** The engineer's stamped drawings and calculations will be a critical part of your building permit application. Your local municipal building department will review these to ensure compliance

Attempting to size the footings yourself for this type of structure would be a violation of the building code and could lead to significant structural failure and safety hazards.

# Responsible AI Use



Ethical



Safe & Secure



Mindful, Diligent &  
Accountable

# Ethical



Transparency



Data  
Sovereignty



Bias &  
Fairness



Accountability

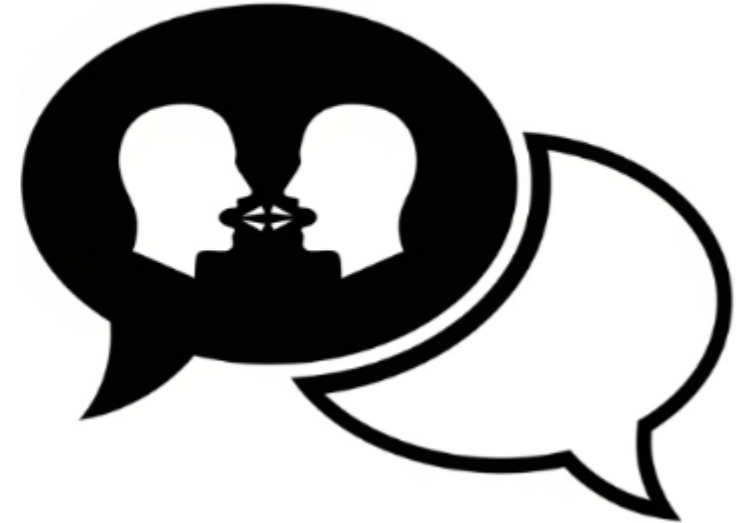
# Transparency



Policy



Disclosure



Conversation

# Bias & Fairness



# Safe & Secure

What policies, training, or guidance do you have access to?



Artificial Intelligence



Cyber Security



Data Privacy

# Data Privacy and AI

## The AI Tool

What does it do with the information / data you input?

Does it train on your data?

Where is your data stored?

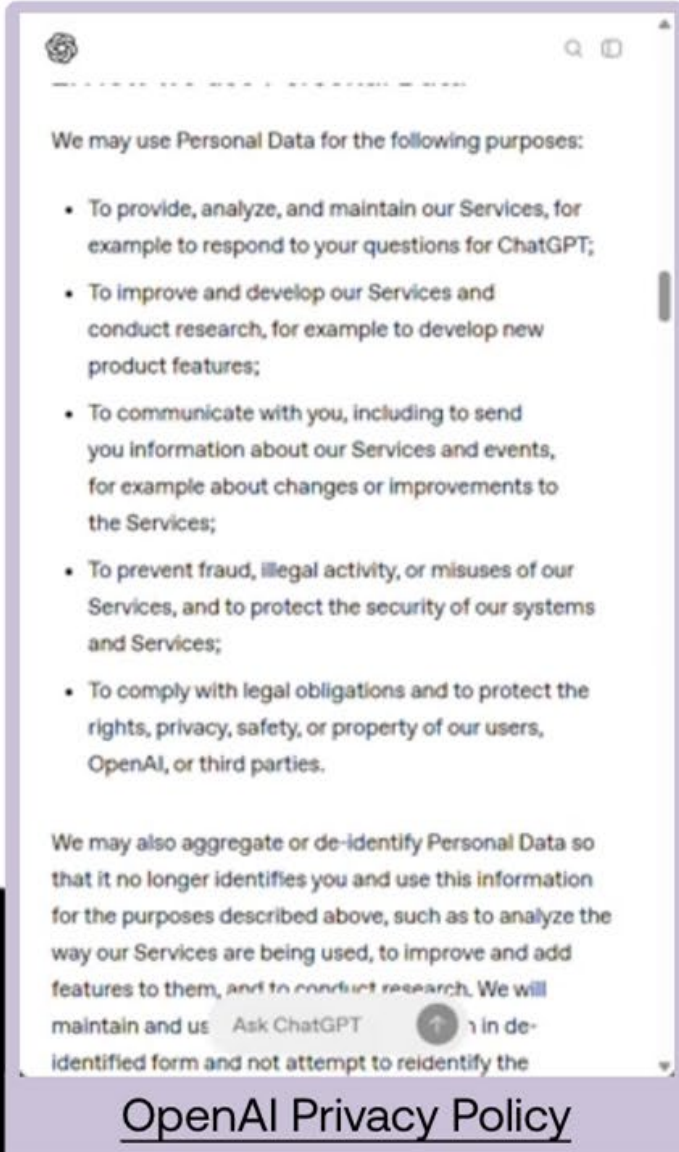
Can it share your data with anyone?

## The User

Are you uploading confidential or sensitive information / data?

Can you generalize, anonymize, or desensitize the information?

# Explore AI Privacy Policies



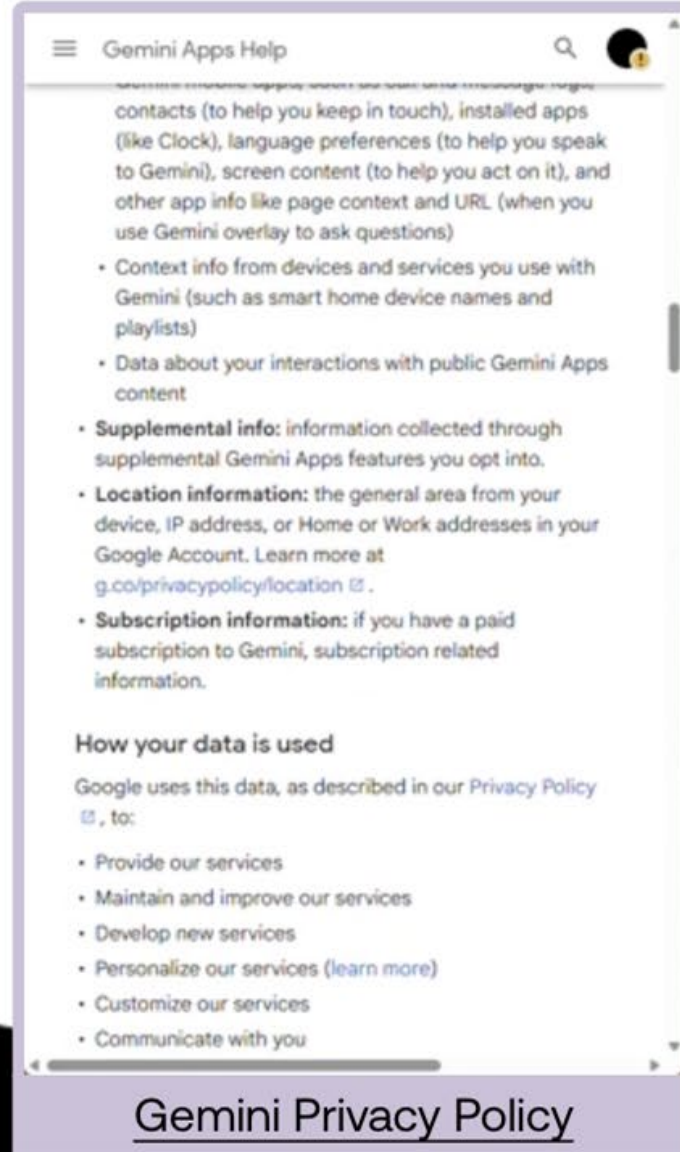
This screenshot shows a mobile interface for the OpenAI Privacy Policy. At the top is the OpenAI logo and a search icon. The main text states: "We may use Personal Data for the following purposes:" followed by a bulleted list of six purposes: providing and maintaining services, improving and developing services, communicating with users, preventing fraud, complying with legal obligations, and protecting rights. Below this, it mentions aggregating or de-identifying personal data. At the bottom, there is a "Ask ChatGPT" button and a small circular icon with an upward arrow.

We may use Personal Data for the following purposes:

- To provide, analyze, and maintain our Services, for example to respond to your questions for ChatGPT;
- To improve and develop our Services and conduct research, for example to develop new product features;
- To communicate with you, including to send you information about our Services and events, for example about changes or improvements to the Services;
- To prevent fraud, illegal activity, or misuses of our Services, and to protect the security of our systems and Services;
- To comply with legal obligations and to protect the rights, privacy, safety, or property of our users, OpenAI, or third parties.

We may also aggregate or de-identify Personal Data so that it no longer identifies you and use this information for the purposes described above, such as to analyze the way our Services are being used, to improve and add features to them, and to conduct research. We will maintain and use this information in de-identified form and not attempt to reidentify the

OpenAI Privacy Policy



This screenshot shows a mobile interface for the Gemini Privacy Policy. At the top is the "Gemini Apps Help" header with a search icon and a profile icon. The text describes data collection for contacts, installed apps, language preferences, screen content, and other app info. It lists three categories of data: Context info, Supplemental info, and Location information. Below this, it explains how the data is used, listing six purposes: providing services, maintaining services, developing new services, personalizing services, customizing services, and communicating with users.

Gemini Apps Help

contacts (to help you keep in touch), installed apps (like Clock), language preferences (to help you speak to Gemini), screen content (to help you act on it), and other app info like page context and URL (when you use Gemini overlay to ask questions)

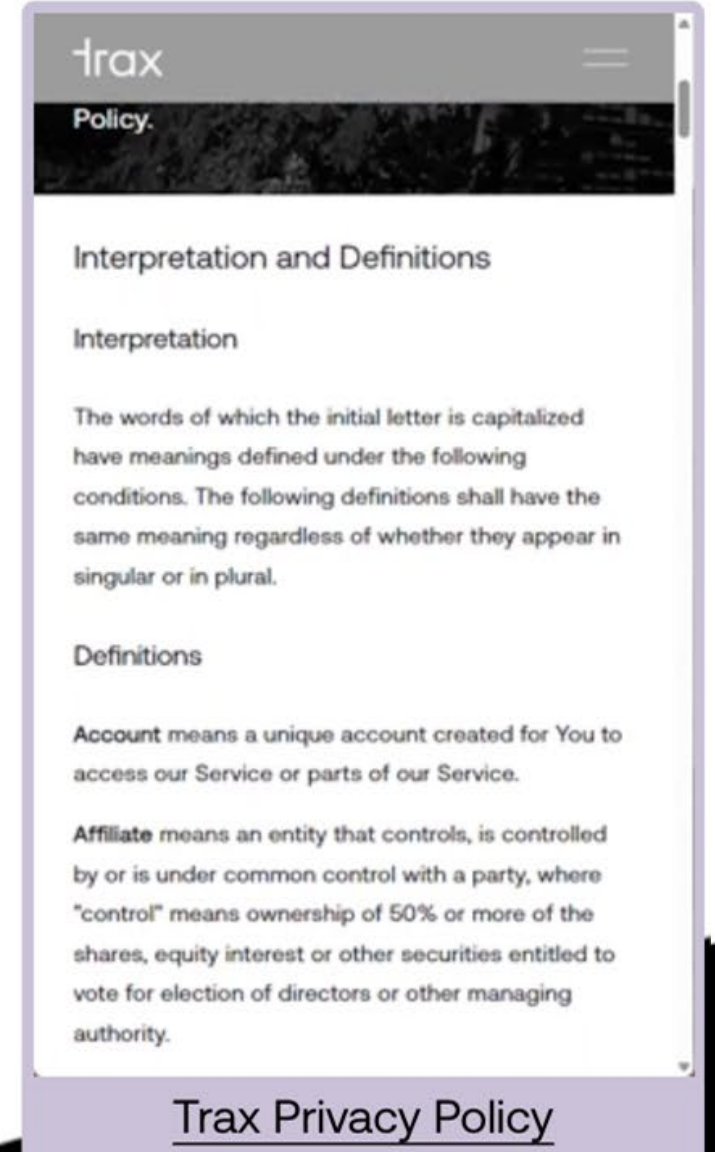
- Context info from devices and services you use with Gemini (such as smart home device names and playlists)
- Data about your interactions with public Gemini Apps content
- **Supplemental info:** information collected through supplemental Gemini Apps features you opt into.
- **Location information:** the general area from your device, IP address, or Home or Work addresses in your Google Account. Learn more at [g.co/privacypolicy/location](https://www.google.com/privacypolicy/location).
- **Subscription information:** if you have a paid subscription to Gemini, subscription related information.

**How your data is used**

Google uses this data, as described in our [Privacy Policy](#), to:

- Provide our services
- Maintain and improve our services
- Develop new services
- Personalize our services ([learn more](#))
- Customize our services
- Communicate with you

Gemini Privacy Policy



This screenshot shows a mobile interface for the Trax Privacy Policy. At the top is the "trax" logo and a search icon. The page title is "Policy." Below this, it has sections for "Interpretation and Definitions" and "Interpretation". The "Interpretation" section explains that capitalized words have meanings defined under the following conditions. Below this is the "Definitions" section, which defines "Account" and "Affiliate".

trax

Policy.

**Interpretation and Definitions**

**Interpretation**

The words of which the initial letter is capitalized have meanings defined under the following conditions. The following definitions shall have the same meaning regardless of whether they appear in singular or in plural.

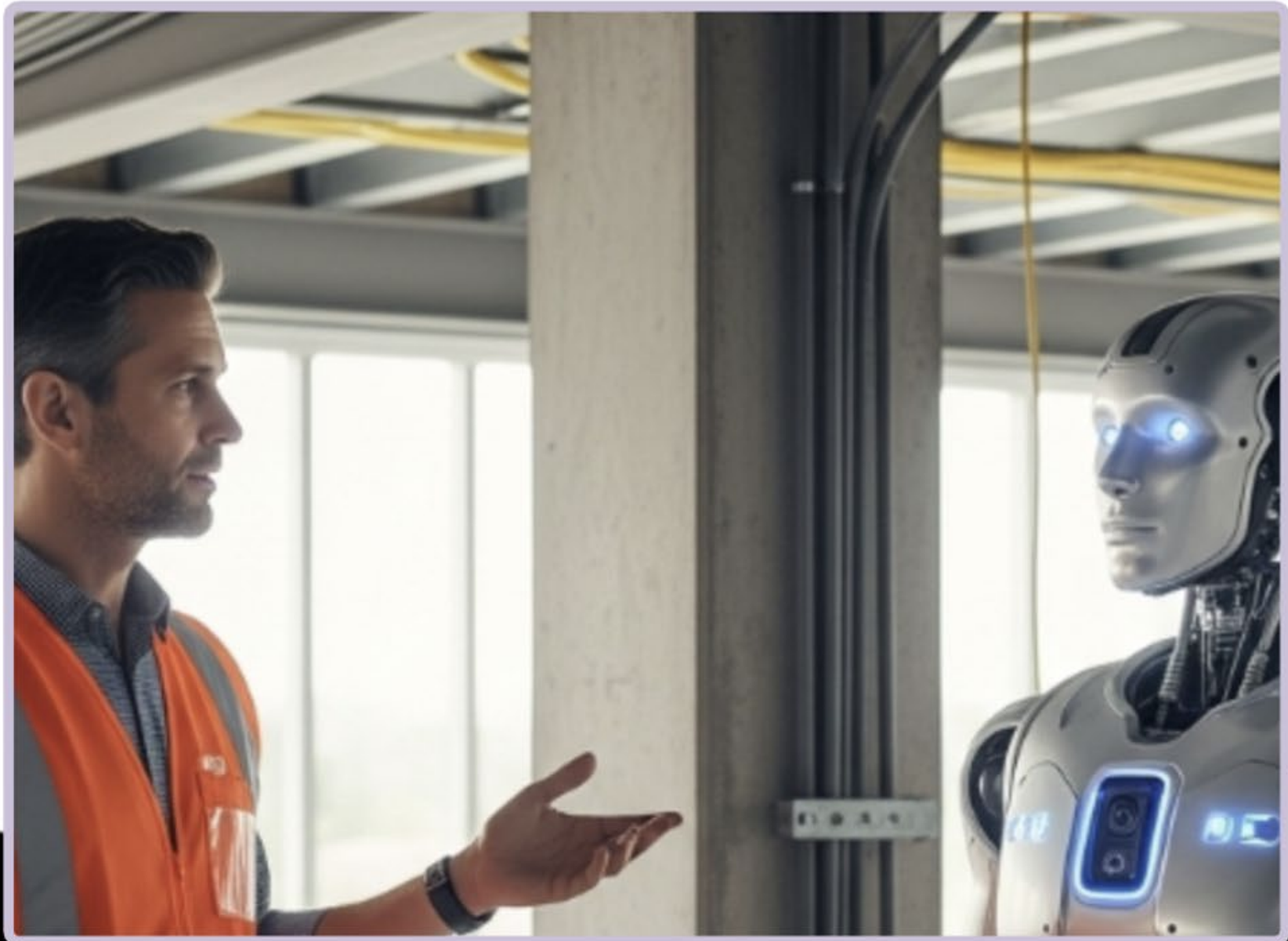
**Definitions**

**Account** means a unique account created for You to access our Service or parts of our Service.

**Affiliate** means an entity that controls, is controlled by or is under common control with a party, where "control" means ownership of 50% or more of the shares, equity interest or other securities entitled to vote for election of directors or other managing authority.

Trax Privacy Policy

# Mindful, Diligent & Accountable



# Responsible Use Checklist

## Responsible Use Checklist

*When looking at an AI tool, I am **generally** considering...*

- ☒ Is this tool trustworthy for my professional use?
- ☒ Is this tool safe and secure?
- ☒ Does this tool's policies align with the policies and requirements I have as a professional?
- ☒ Can I use this tool in a way that protects data privacy?

*When looking at an AI tool, I am **specifically** considering...*

### Storage

- ☒ Does the tool store your data? If so...

# Action Items



What AI tools is your organization using, if any, and why?



Who needs to be a part of selection, approval, and implementation of an AI tool in your work?



Who can you have conversations with about policies, best practices, data privacy and cybersecurity?

# How to Speak to AI

- 1 whole chicken (about 3-4 lbs), spatchcocked (or 4 chicken leg quarters) 
- 1.5 lbs Yukon Gold potatoes, chopped into 1.5-inch pieces
- 1 large onion, cut into wedges
- 2 lemons, one sliced and one halved
- 4-5 cloves garlic, smashed
- 4 sprigs fresh rosemary
- 4 sprigs fresh thyme
- 3-4 tbsp olive oil
- 1 tsp salt
- 1/2 tsp black pepper
- 1/2 tsp paprika (optional, for color)

Create a recipe.



# How to Speak to AI

Simple Tofu and Onion Scramble

This recipe is a great alternative to a traditional egg scramble. The tofu's texture is satisfying and it takes on the flavor of the onions and spices beautifully.

## Ingredients:

- 1 block (14-16 oz) firm or extra-firm tofu
- 1 large onion, chopped
- 1 tablespoon oil (vegetable, canola, or olive oil works well)
- 1/2 teaspoon turmeric (for color, optional)
- Salt and black pepper to taste

## Instructions:

1. **Press the Tofu:** This is a crucial step for a better texture. Wrap the block of tofu in a clean kitchen towel or several layers of paper towels. Place something heavy on top (like a cast-iron

I am a vegan who is bored of what I am eating. Create a recipe using the ingredients I already have in my fridge: tofu and onions.



# AI in Your Workflow

Consider how you are using regulatory information resources. Are they...



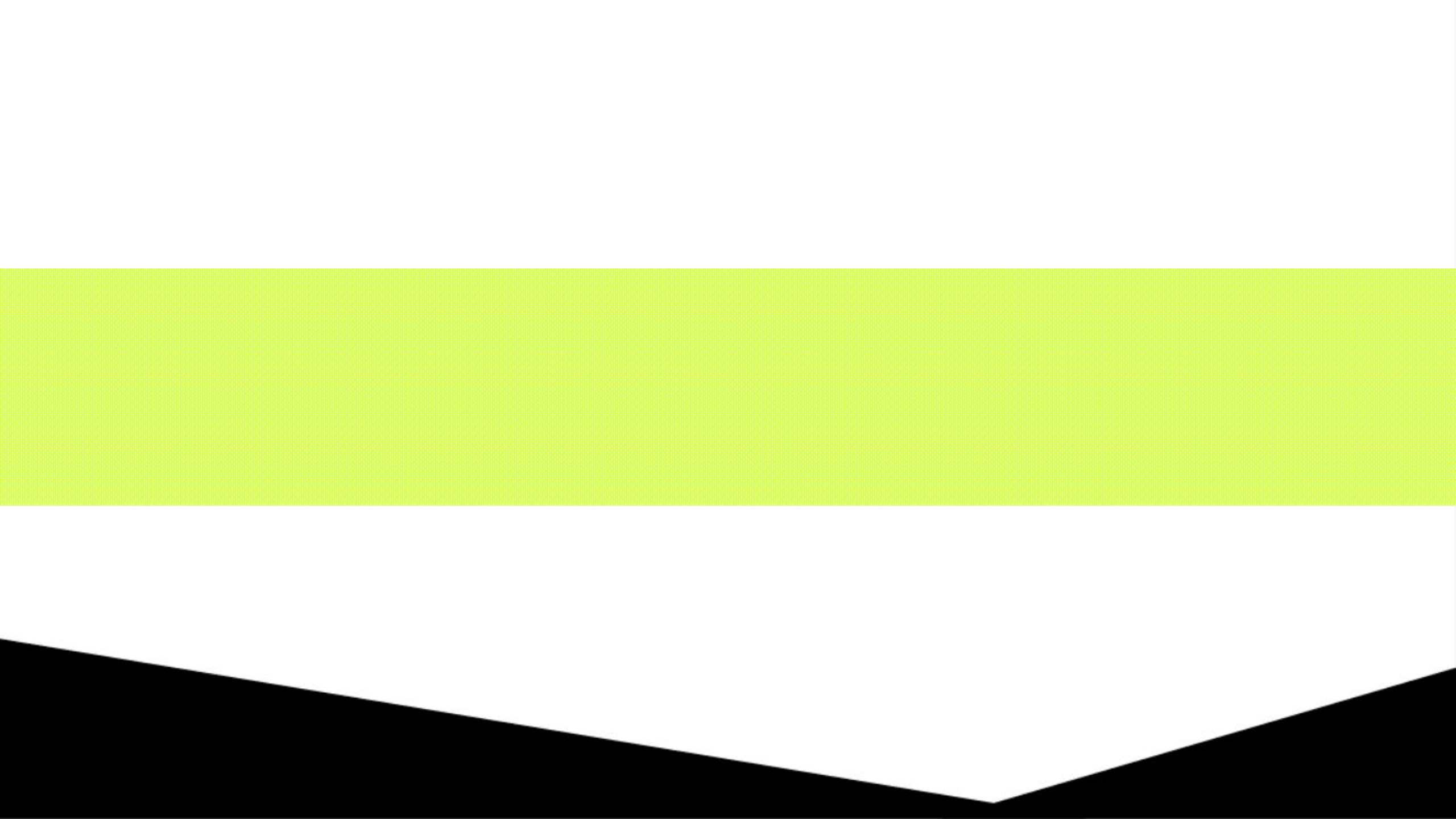
A checklist to work through every day?



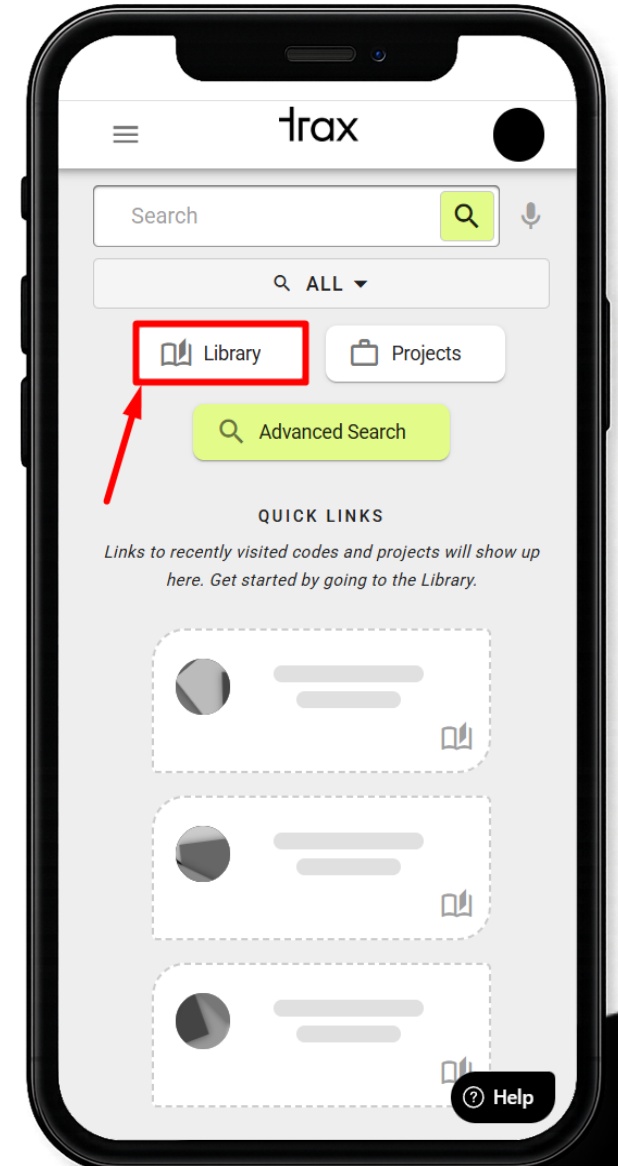
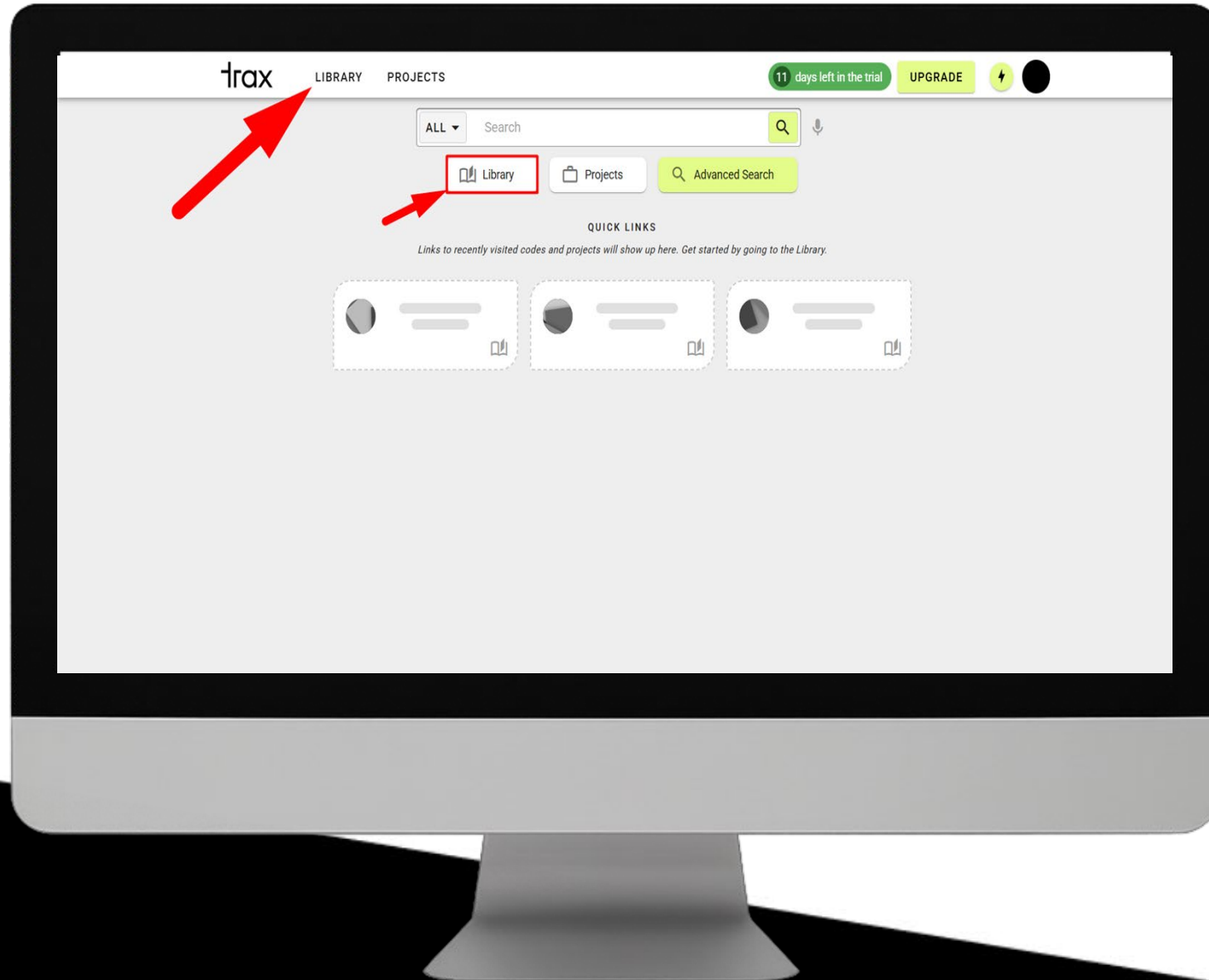
A reference book for something you can't remember?



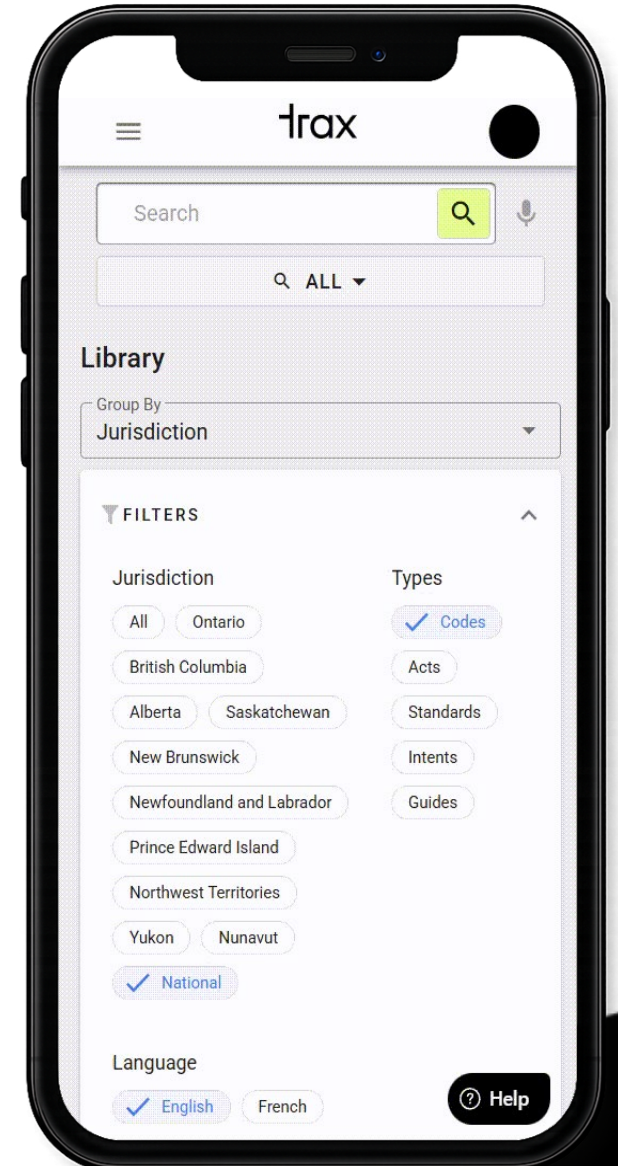
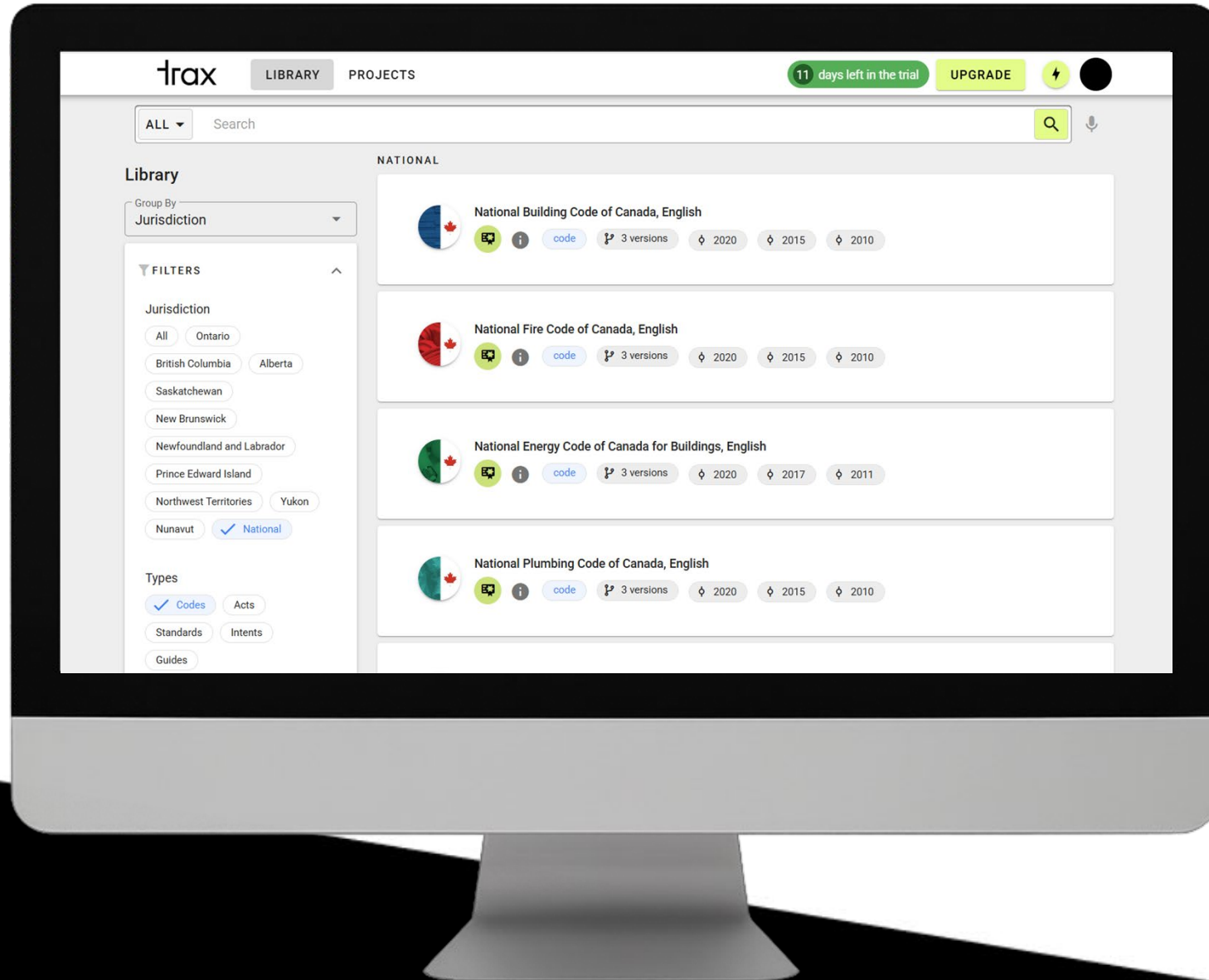
A document to answer a question once in a while?



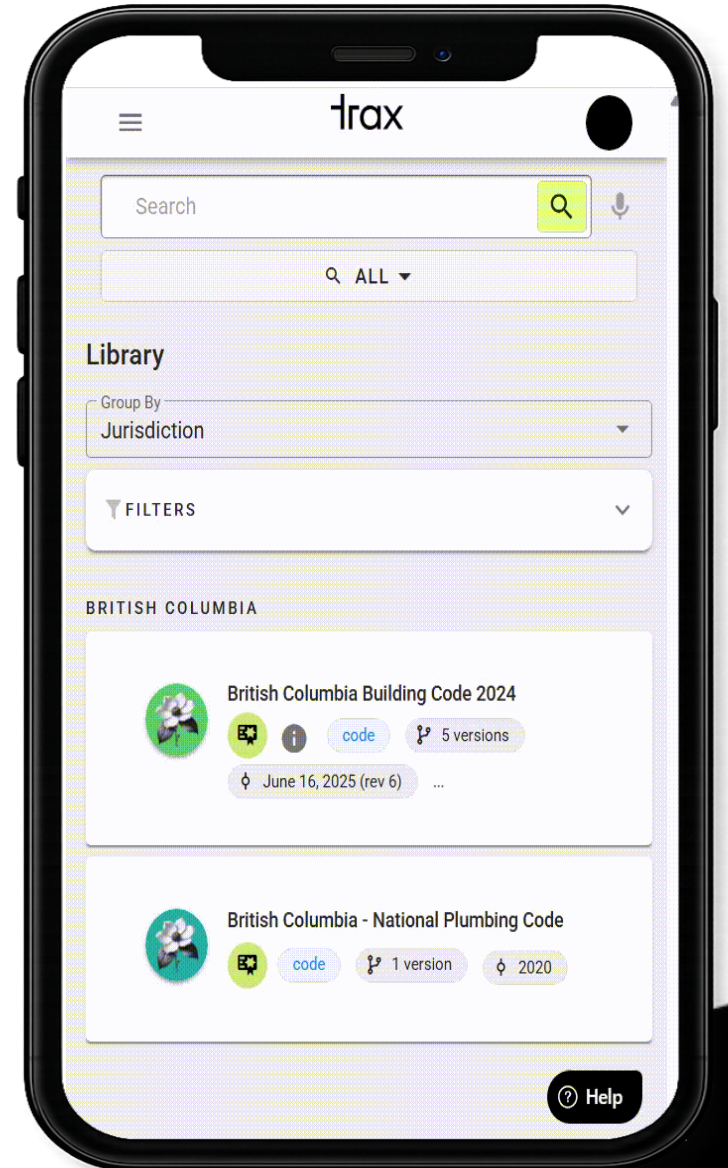
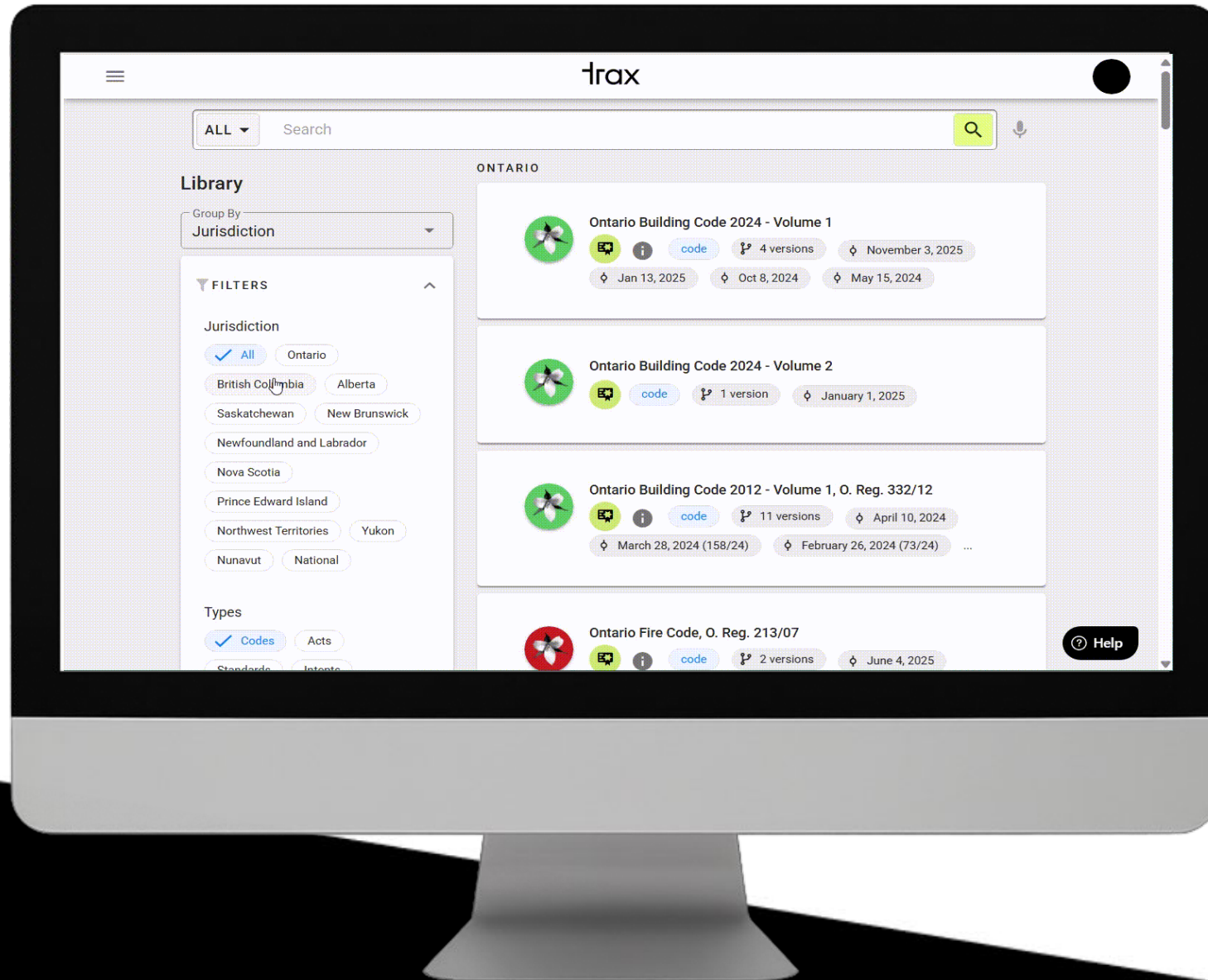
# Trax Codes Library



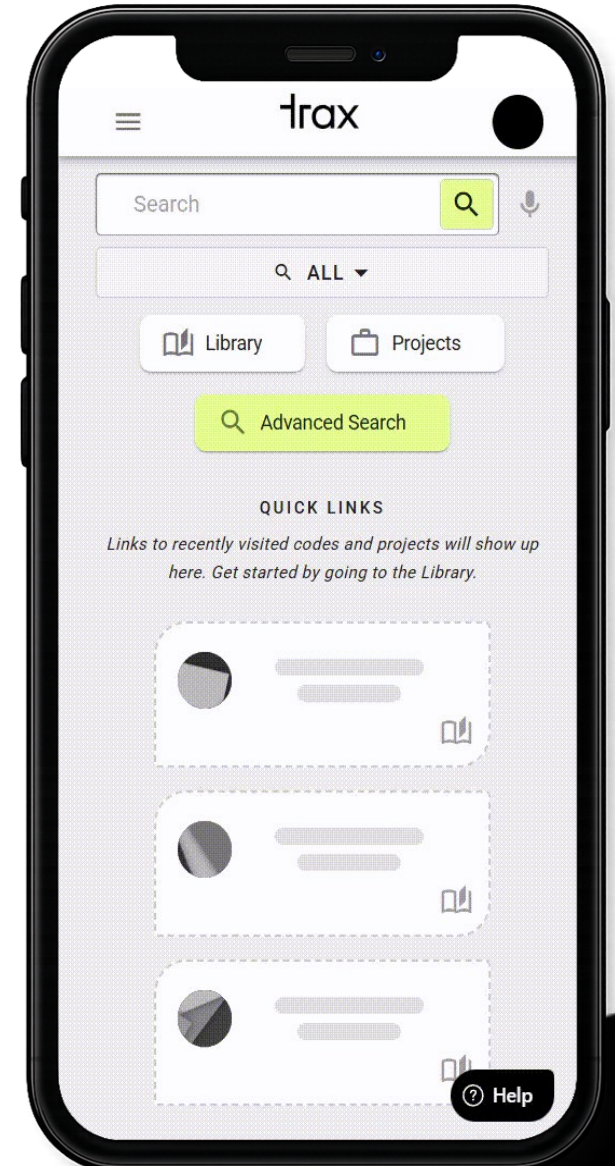
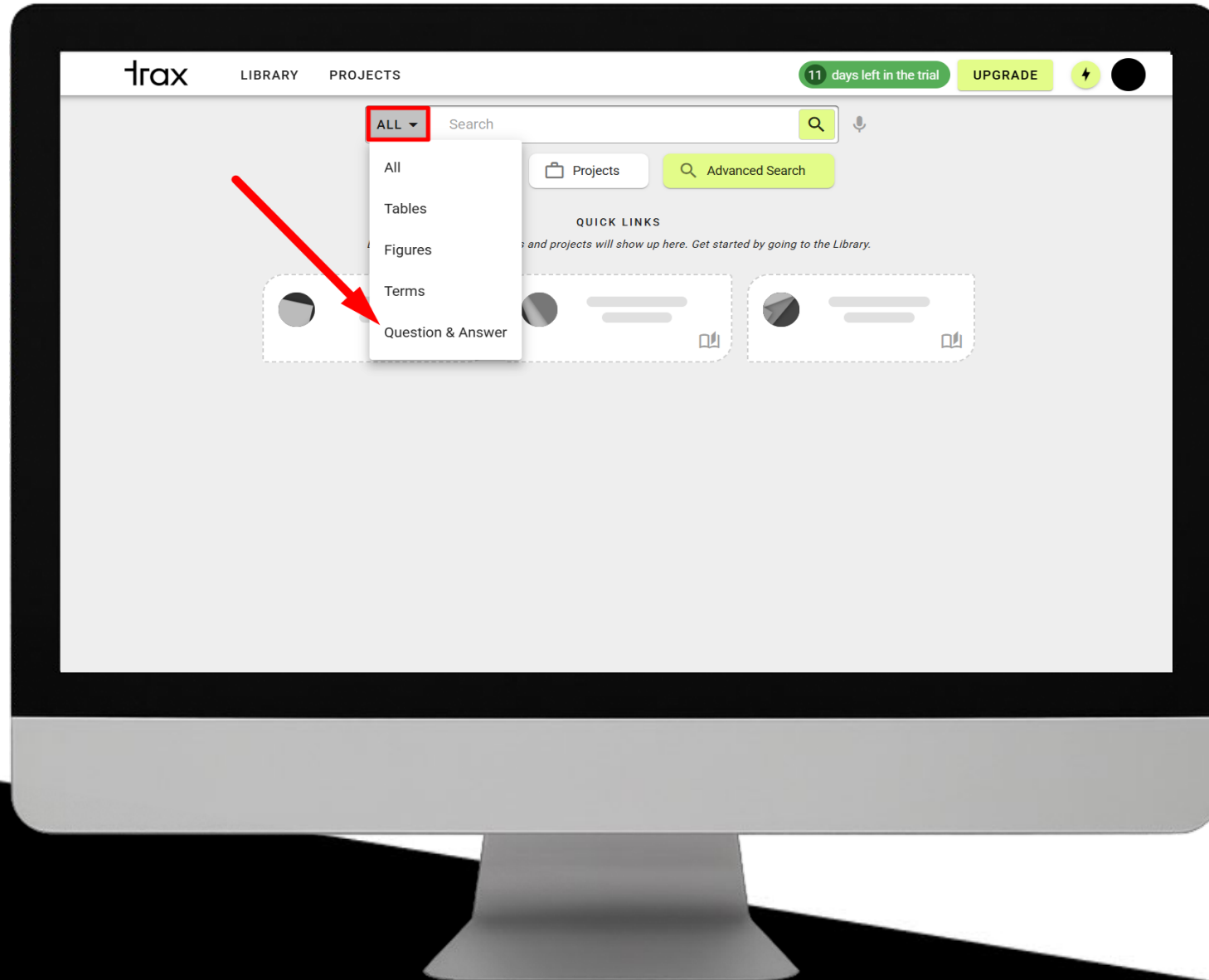
# Trax Codes Library



# Trax Codes Library

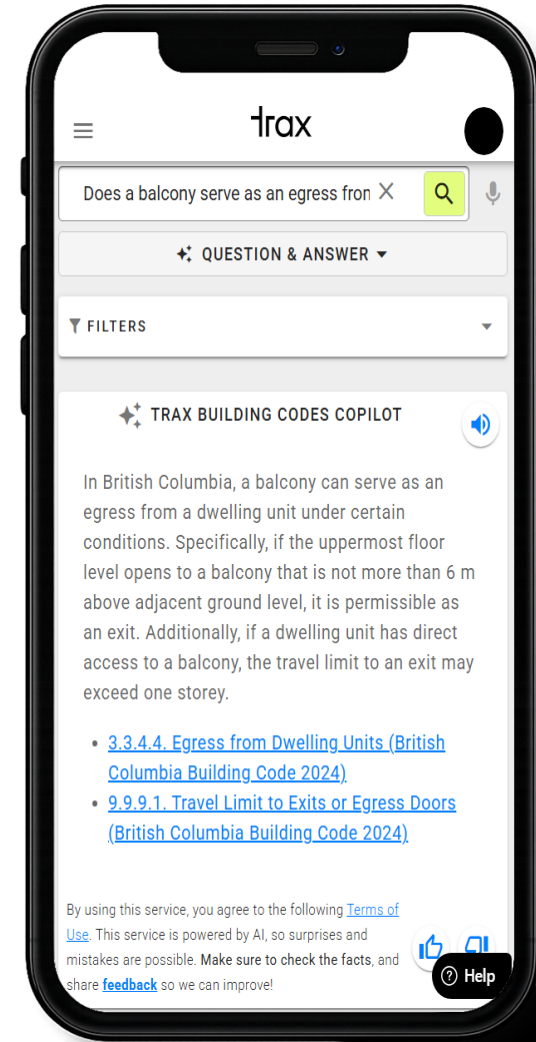
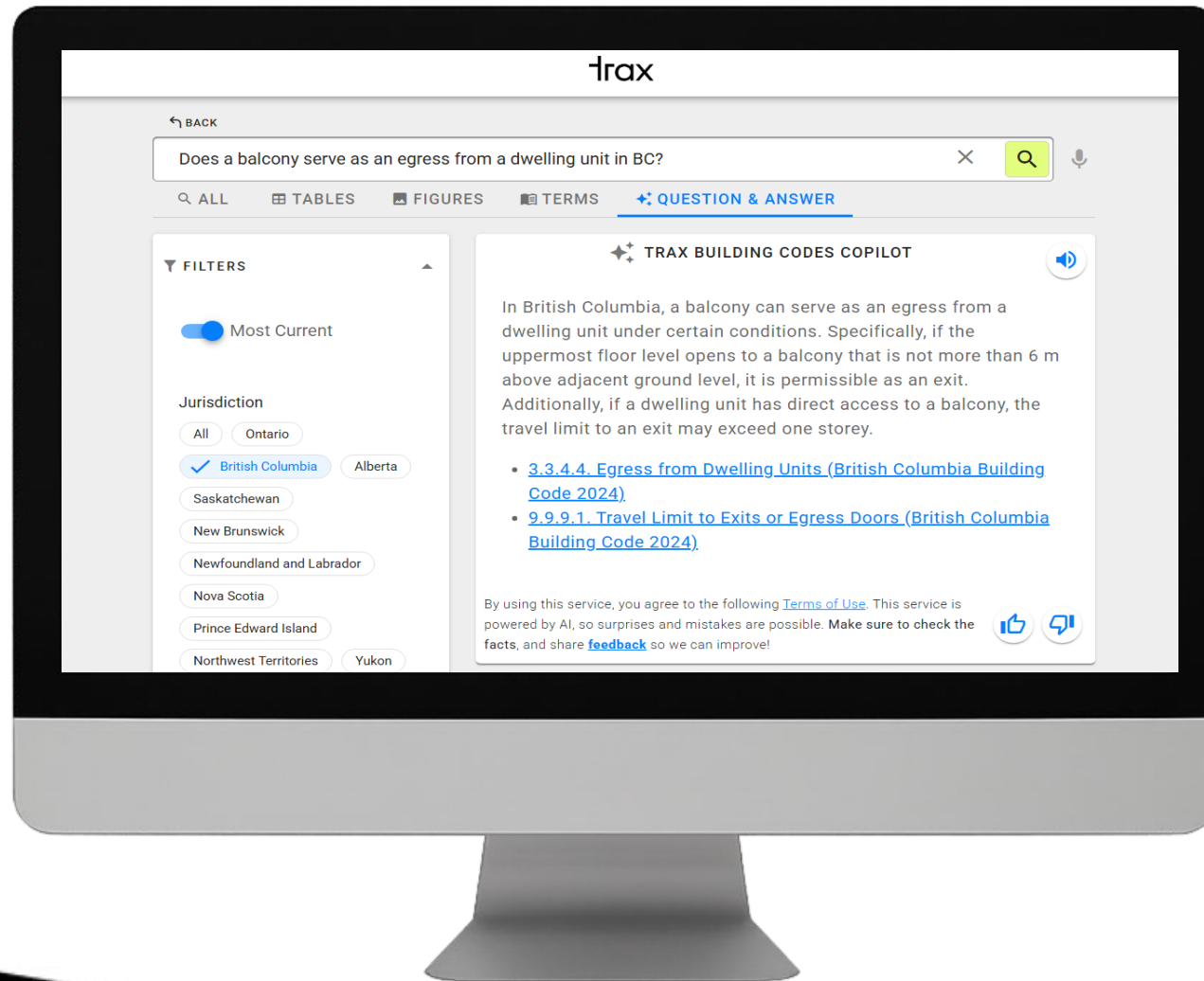


# Trax Codes Search



# Trax Codes Search

Does a balcony serve as an egress from a dwelling unit in BC?



# Remember: Prompt Quality



“What is the minimum footing size for a house?”

“What is the minimum footing size for a 2 storey house with brick veneer and trusses spanning 38 feet?”  
[+ select jurisdiction]

# Prompts to Try

Create a prompt based on one of the scenarios below. Or create your own!



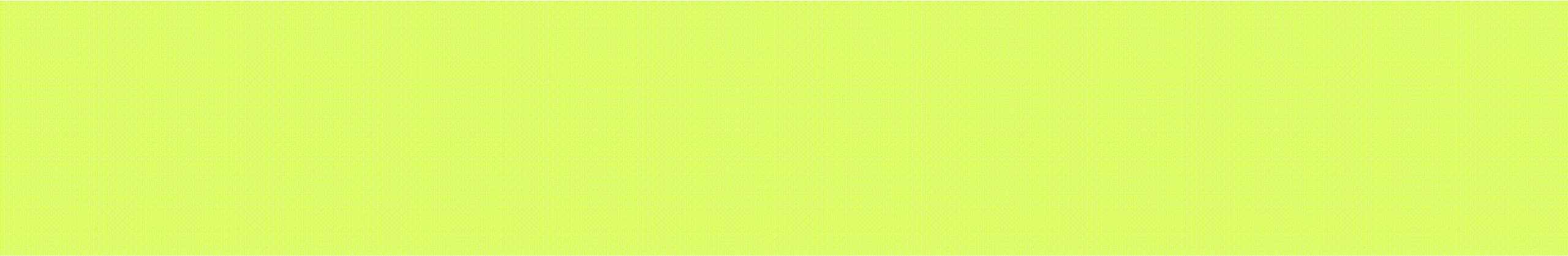
You are looking at a plan for a residential building that has a barrier-free ramp and need to check the permitted slope.



You are doing a plans review and you see on a drawing that there is electrical and openings leading to ducts that pierce through a fire membrane.



You are looking at a portable classroom. It is located within 10m of a school. You are considering fire safety requirements.



**Trax** training and support: <https://help.trax.co/en/support/home>



# Thanks to Our Partners

trax



SIMON FRASER  
UNIVERSITY



UNIVERSITY OF  
**WATERLOO**  
COMPUTER SCIENCE



ONTARIO BUILDING OFFICIALS ASSOCIATION

**OBOA**



# End/Questions:



Tim Warner  
Twarner@boabc.org

