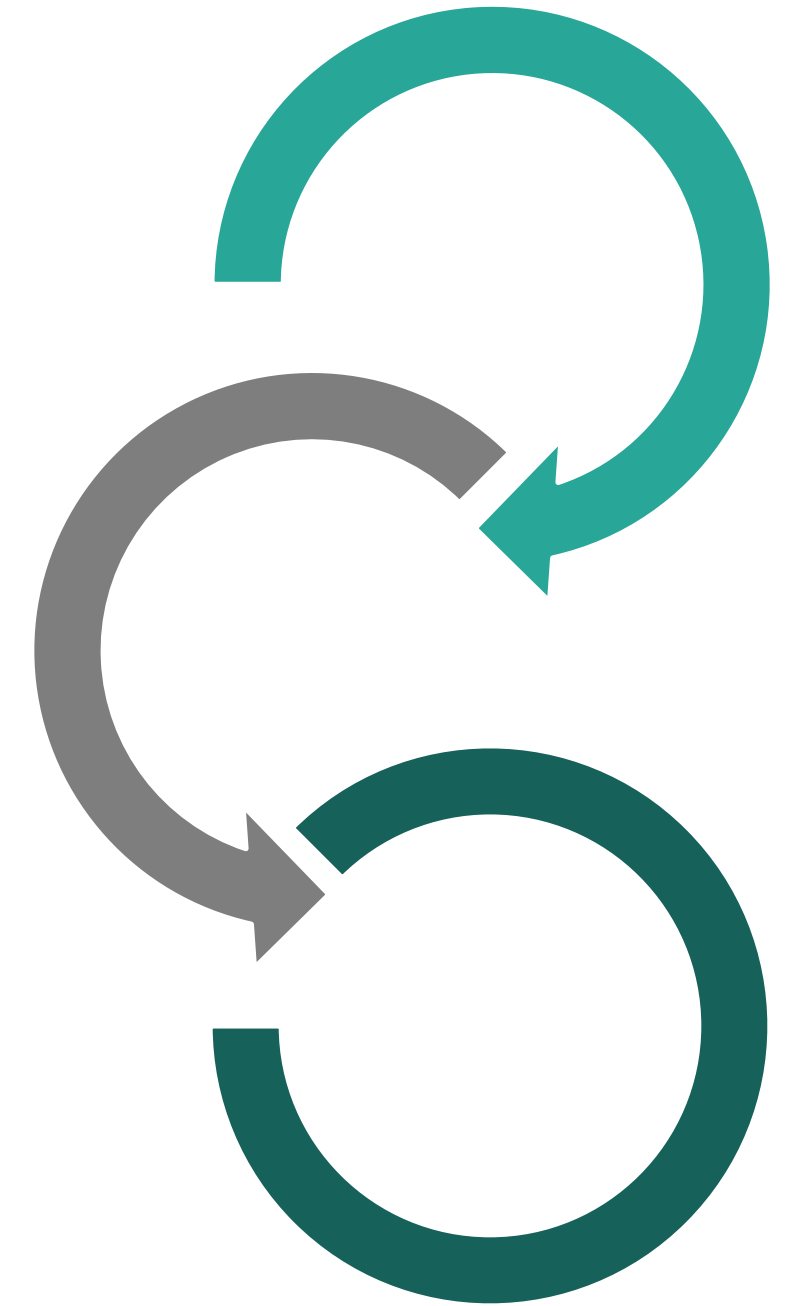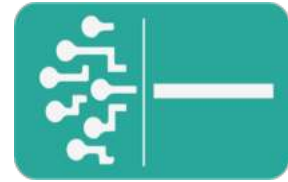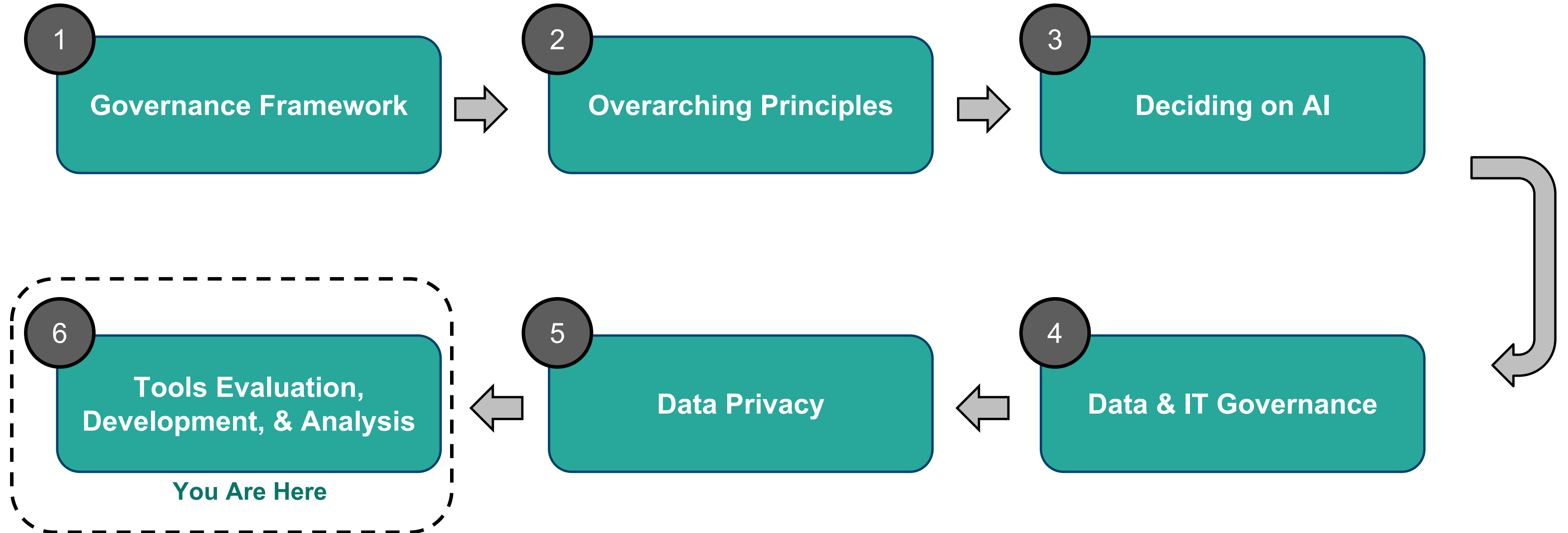# AI Tools Evaluation, Development, & Analysis

Generative AI for Tech Builders

Presented by ANB Advisory Group

Afua Bruce and Rose Afriyie

Six modules will guide you through important considerations for nonprofits when implementing AI

1 Governance Framework

→

2 Overarching Principles

→

3 Deciding on AI

6 Tools Evaluation, Development, & Analysis

You Are Here

←

5 Data Privacy

←

4 Data & IT Governance

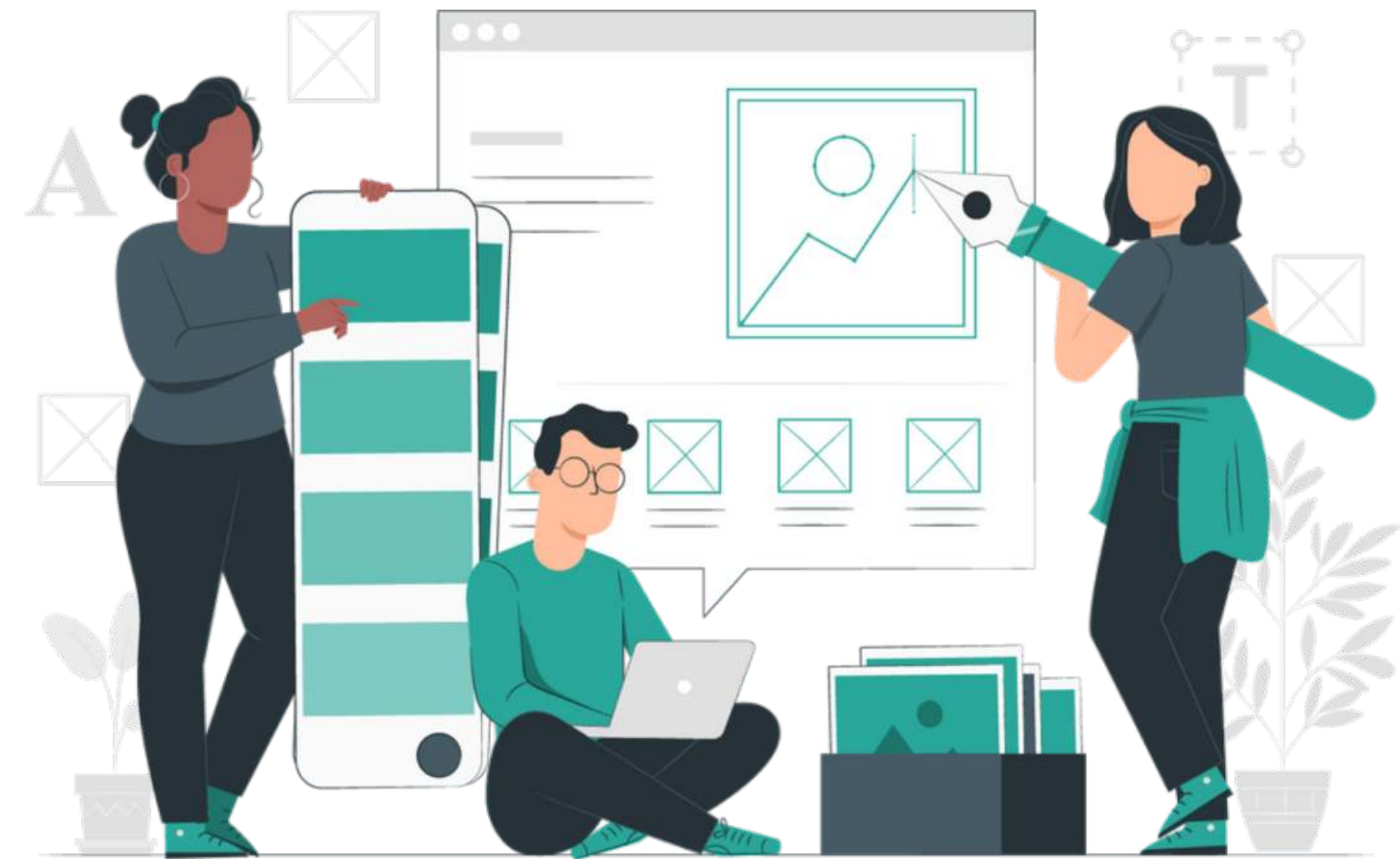# At the end of this module, you will...

Understand key factors and roles involved in evaluating AI tools

Discover how nonprofit leaders build AI platforms for internal and external use

Know best practices when building with AI

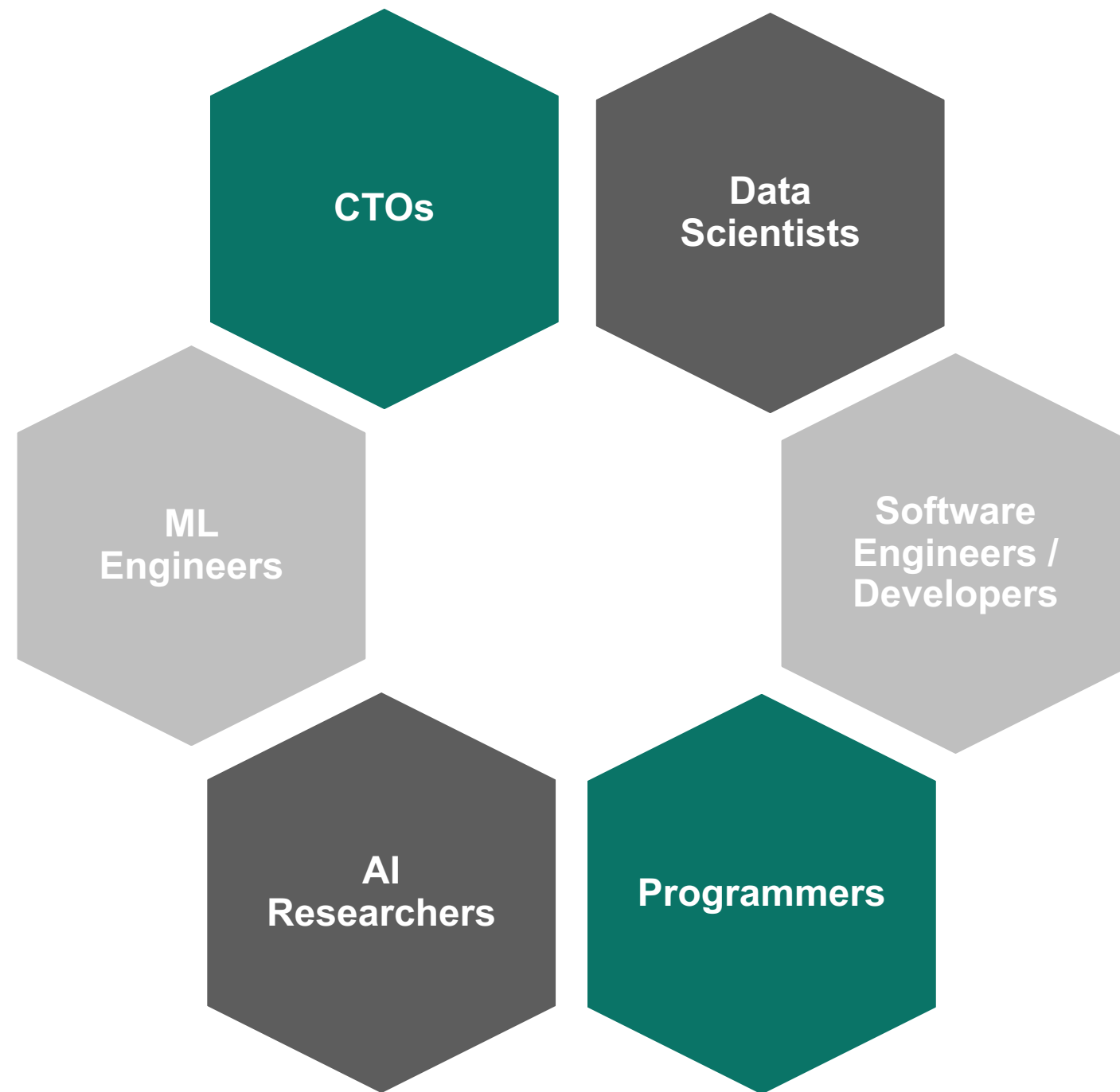# Selection of AI tools involves the evaluation of several critical factors

- Development environments

- Infrastructure

- Data management

- Data manipulation and visualization

- Computing power technologies

The Center of Excellence describes the process of selecting what tools to use for AI purposes with the following criteria above.

A range of people may be involved in developing, deploying, monitoring, and training on models

Roles

- CTOs
- Data Scientists
- ML Engineers
- Software Engineers / Developers
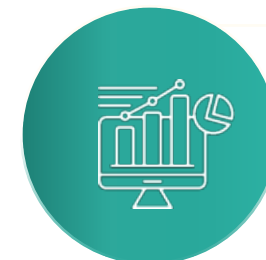- AI Researchers
- Programmers

Responsibilities

Making use of machine learning frameworks to provide pre-built architectures and models

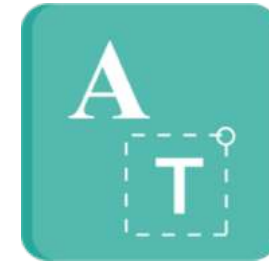Automating model training and deployment processes

Employing visualization tools to explore data and understand model performance

This team will need to work together to ensure proper treatment of data, critical when developing AI tools

Focus on Data Hygiene:
- Develop a routine for checking data accuracy and addressing inconsistencies as they arise
- Encourage staff to double-check their data entries

Embrace Data Literacy:
- Create a culture where staff understand, interpret and use data effectively for informed decision making

Curate relevant data:
- Focus on collecting and storing data directly relevant to your AI training goals

Label data strategically:
- Prioritize labeling the most critical data points, since labeling data for AI training can be time-consuming

In addition, Cloud & Infrastructure and DevSecOps teams have particular considerations, if relevant to your org

Cloud & Infrastructure

✓ **Use cloud platforms** for limited in-house computing resources or intense computing needs

✓ **Leverage cloud-based** AI for tasks that free up staff time

DevSecOps

✓ **Integrate software development, IT operations, and security teams** for seamless AI delivery

✓ **Prioritize Security from the Start:** Integrate security and development teams from the outset of the DevSecOps process to foster a collaborative environment

✓ **Embed security throughout** the development lifecycle, not as an afterthought

✓ **Automate Security Testing:** Utilize cloud-based tools to automate security testing throughout the development pipeline

✓ **Implementation of continuous monitoring** helps identify and address vulnerabilities early, preventing delays and ensuring a more secure codebase

Some areas AI tools can be used include HR & onboarding, volunteer management, and client support

HR & Onboarding

Enable new employees to acquire institutional knowledge through an internal chatbot

Smart Volunteer Matching and Training

- Match volunteers to specific projects
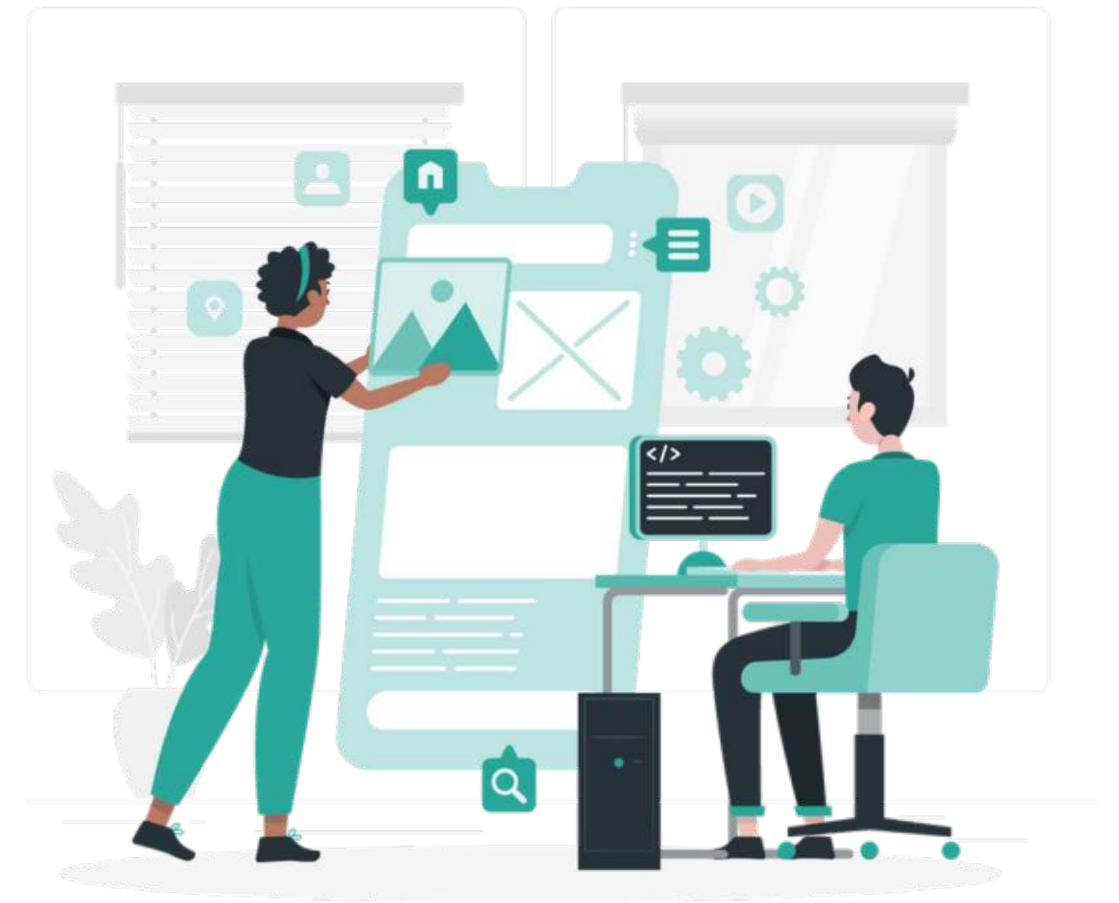- Leverage AI to ensure volunteers can practice real scenarios

Personalized Client Support

- Provide initial support to clients seeking assistance via AI-powered chatbots
  - Fielding FAQs
  - Scheduling appointments
  - Directing clients to key resources

Best practices for AI tool development involve thorough planning and thoughtful deployment

✔ Pilot consumer facing tools with experts before your launch

✔ Allow for tools to "fail safely" over to a human

✔ Monitor error rates and develop recovery plans for hallucination

✔ Leverage open source and commercial products appropriately

Tools in Practice:
AnnieCannons & Curriculum Development

AnnieCannons trains, prepares, and connects individuals who have experienced human trafficking to sustainable careers in tech

How They Leverage AI	Refactoring and curriculum development, specifically to help with the creation of new exercises and learning models, as well as with custom learning pathways
Environment Used	Plugins within Visual Studio Code
Tools Leveraged	Github Copilot + Chat GPT
AI Uses for Curriculum Development	• Comparing curriculum materials from different courses • Generating exercises and assessment question • Brainstorming ideas for ways to integrate other important principles around trauma-informed care and accessibility-first practices

" If I'm coming up with an in-class exercise to have front end students build a website, sometimes I'll use ChatGPT to generate the site's text content. That way, the project looks and feels like a real website they could put in their portfolio, rather than filled with the impersonal lorem ipsum. "

~AnnieCannons Coding Instructor

Note: Some staff members are strongly opposed to using AI, citing environmental and copyright concerns.

Tools in Practice:
mRelief & SNAP Enrollment

mRelief's mission is to transform access to social services for the inherent dignity of all people

How They Leverage AI	Helping people apply for Supplemental Nutrition Assistance Program benefits in the U.S.
Environment Used	Heroku and Docker

Tools Leveraged	• Google's DialogFlow
	• Python
	• Twilio
	• Their own curated content library
	   o Includes the development of intents to capture a series of sentiments and topics representative of current user queries
	   o Intents are core to the training data of mRelief's chatbot

AI Uses for SNAP Enrollment	• Answering policy questions • Providing enrollment support • Giving empathetic support to SNAP applicants

" We spent a lot of time on prompt engineering and coming up with the best data structure for our training data which led us to craft our own content library. "
~ Dize Hacioglu, mRelief CTO

Additional nonprofits are also implementing AI tools

American Red Cross

Clara, an AI chatbot to answer questions about disaster relief and connect people with resources

MEDECINS SANS FRONTIERES DOCTORS WITHOUT BORDERS

AI to analyze medical data and predict outbreaks more effectively

empowerwork

AI chatbot, along with peers, to help volunteers practice providing supportive services to workers after training

Move through your AI journey step-by-step to ensure success

✓ **Focus on human-centered design**
Ensure AI complements human expertise, not replaces it

✓ **Use AI internally**
Gain internal expertise before extending to the larger public

✓ **Start small and scale gradually**
Pilot AI projects and learn from experience before large-scale implementation

✓ **Monitor and evaluate results**
Regularly assess the effectiveness and fairness of AI initiatives

THANK YOU!

✉ https://www.anbadvisory.com/