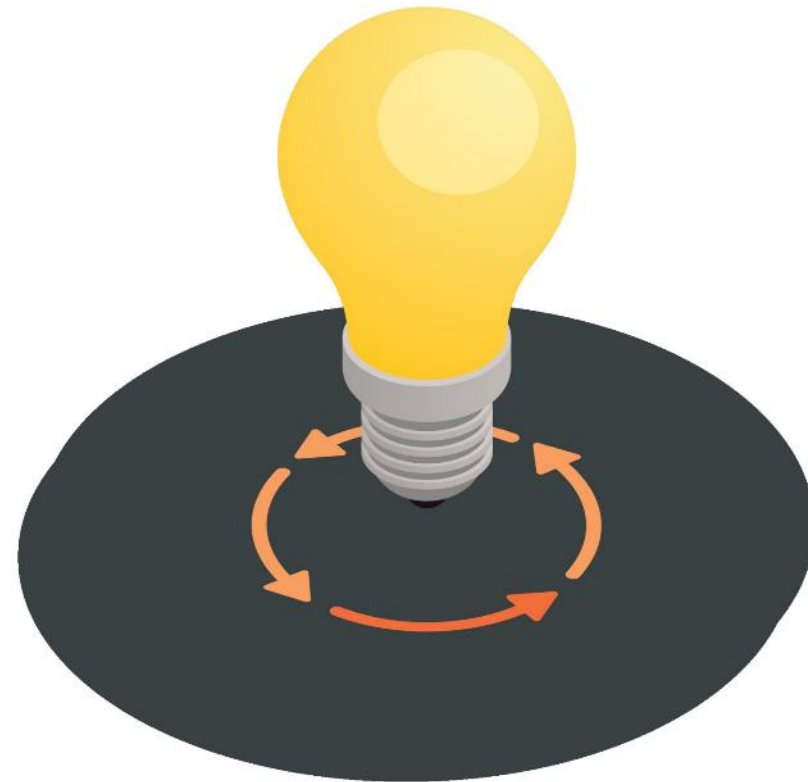




**Humanitarian
Leadership
Academy**

AI & the Humanitarian Sector

28th February 2024





Humanitarian
Leadership
Academy

AI & the Humanitarian Sector

L&D Inspiration Series

In partnership with

nesta

NETHOPE



Today's hosts



James Maltby

Head of Digital Learning
Humanitarian Leadership Academy

Today's panel



Aleks
Berditchevskaia
Principal Researcher,
Centre for Collective
Intelligence Design, Nesta



Daniela Weber
Deputy Director of the
Center for the Digital
Nonprofit, NetHope



Austen Shand
Digital Learning
Specialist, HLA

Agenda

Introduction

Presentations from our panel:

- **NetHope:** AI for Nonprofits: Bridging the Gap
- **Nesta:** A case study of designing AI with frontline staff and communities
- **HLA:** How can AI be used to improve learning & training for humanitarians?

Q & A & discussion





AI for Nonprofits: Bridging the Gap





AI for Nonprofits Bridging the Gap

NetHope is a **catalyst for collective impact** that advances humanitarian, conservation, and international development efforts worldwide.

For more than 20 years, we've enabled international nongovernmental organizations (NGOs) and leading technology partners to address our world's most pressing challenges and advance global good through collaboration, collective action, and the transformative power of technology.

OUR NETHOPE GLOBAL COMMUNITY

65+ international NGO Members

50+ global technology partners

800K staff supported at Member organizations

1.67B people served

190 countries touched

60% of non-governmental aid distributed worldwide

EVOLVING DIGITAL LANDSCAPES BRING NEW CHALLENGES

A generation ago, the Digital Divide described the gap in access first to computers, and then to the internet and essential technologies.

But today, with 70%+ of the world online—and only 12% of the United Nations' 2030 Sustainable Development Goals on track—**new digital challenges threaten international NGO mission advancement** as organizations are forced to grapple with the widening gap between available resources and growing needs.

These new challenges—what we call the **New Digital Divides**—represent critical gaps in infrastructure, systems, capabilities, and knowledge across 5 key areas:

Digital Skills & Leadership

Digital Inclusion

Digital Protection

Digital Transformation & Innovation

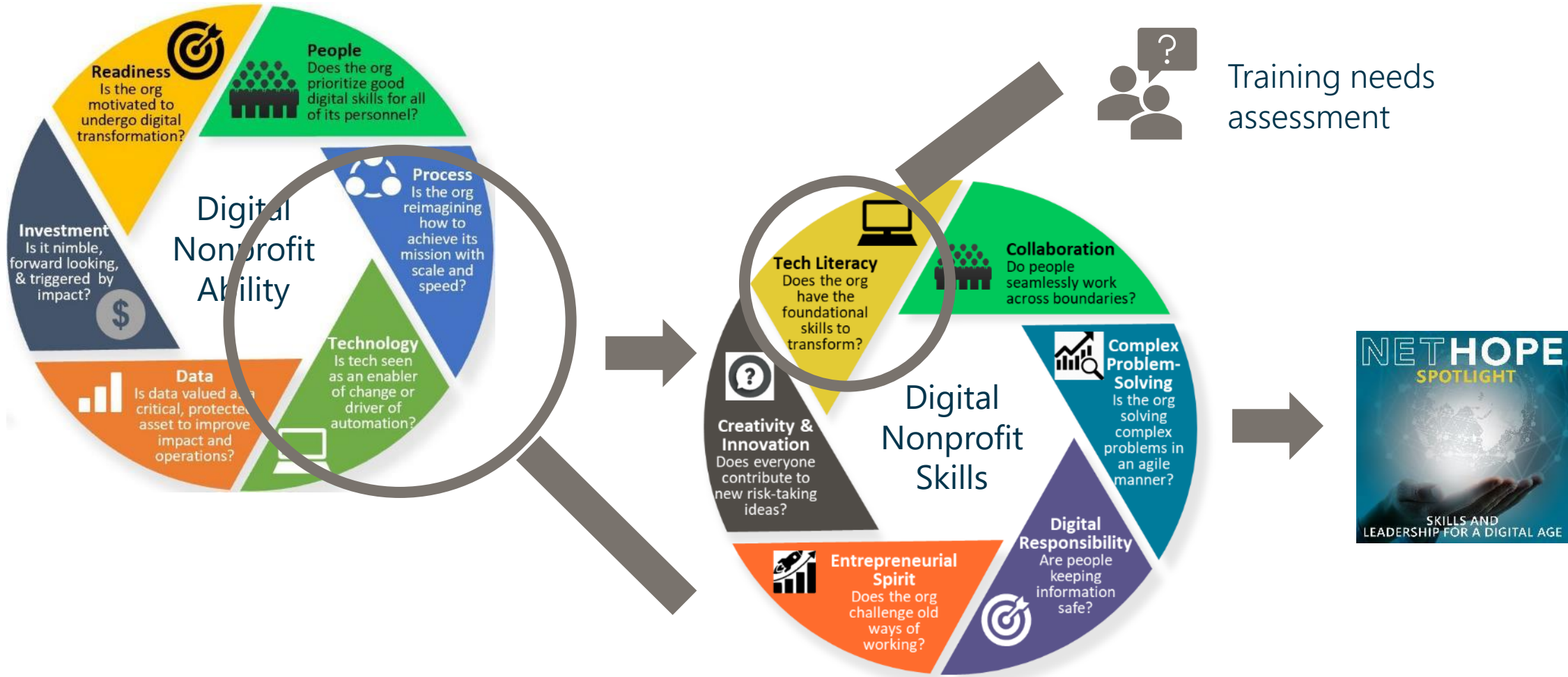
Digital for Climate Adaptation & Resilience

DIGITAL TRANSFORMATION & INNOVATION

Innovation is required to meet the emerging and existing challenges the nonprofit sector faces in serving communities worldwide. At a time when NGOs are being asked to help more people with fewer resources, we must incubate emerging ideas and programs, test and iterate these approaches, and collaborate to identify proven, scalable practices.

NetHope will utilize our influence, networks, experience, and data to tackle complex issues with insightful policies and ethical technology solutions. Our focus on efficiency, relevance, and scalability includes leading the safe adoption of emerging technologies, such as AI.

Assessment Frameworks



Building AI skills

Member Working Group



AI Workstream

- Case studies
- Vendor information
- Experience & Learnings Sharing
- Networking

Toolkits & Research

AI Ethics for Nonprofits Toolkit



Guide to AI Usefulness



- Research papers
- Workshop tools
- Webinars

NetHope Digital Leadership Institute (NDLI)

Gender Equitable AI Toolkit

Welcome!

As gains in machine learning (ML) and artificial intelligence (AI) continue, it has the potential to address complex challenges and transform various aspects of our lives. However, without intentional efforts, these solutions can also exacerbate inequity and deepen digital divides, particularly from the lens of gender. Discriminatory AI systems have hindered access to equitable opportunities in education, jobs, healthcare, and other critical services. Recognizing these risks and opportunities, this resource is designed to empower nonprofits and their partners in leveraging and fine-tuning existing AI models to advance gender equity.

Managing Machine Learning Projects In International Development



Principles



Imagine



Design



Execute



Assess



Important Links

- Self-service learning material
- Facilitated learning sessions

Focus areas for AI capacity building

Safe and ethical AI

- Ethics
- Governance
- Trust
- Security

Practical Guidance

- How to get started
- Solutions & Roadmaps
- Architecture
- Benefits & Cost

Use Cases

- Programmatic applications
- Efficiency

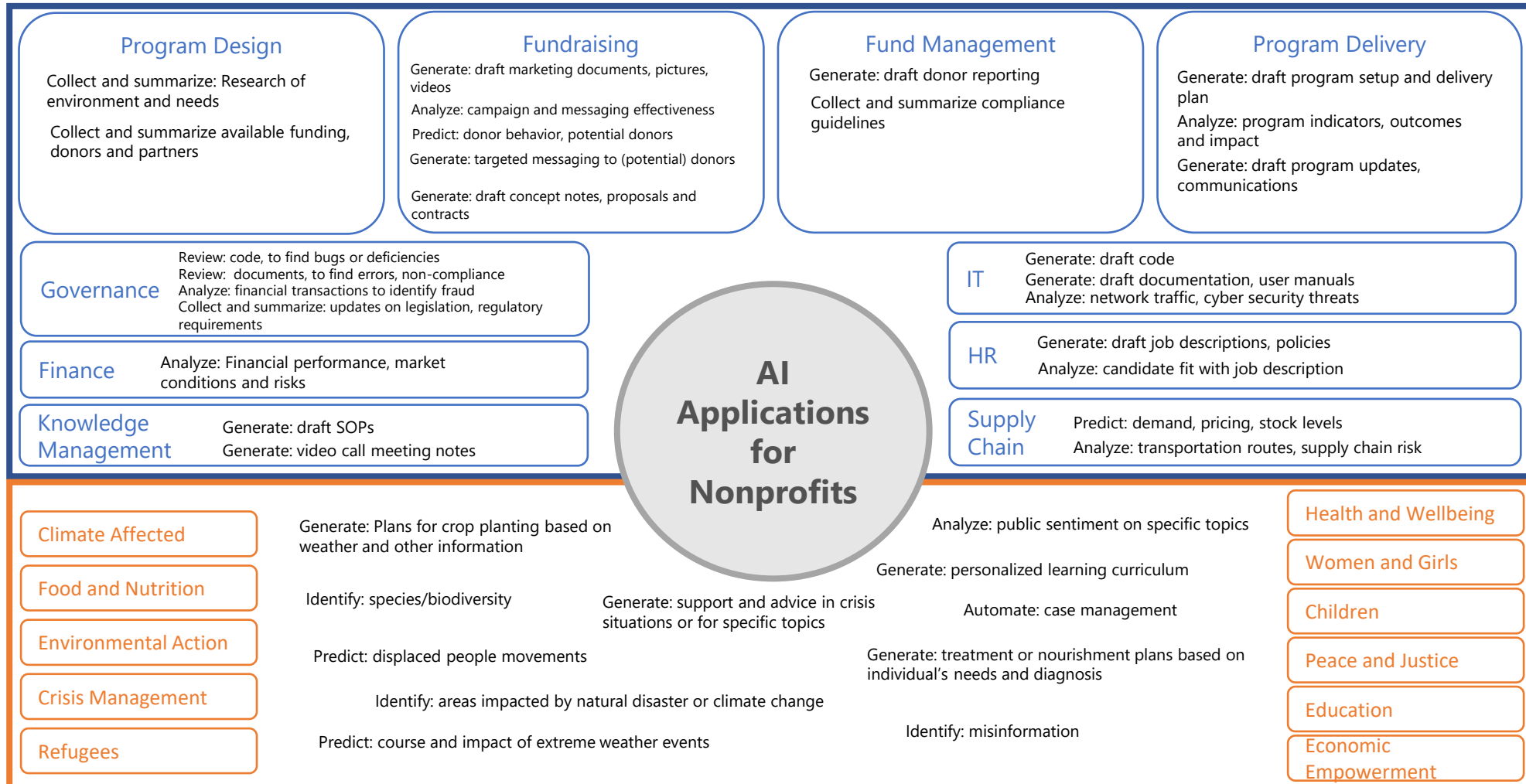
AI related training needs

In our recent training needs survey, we found:

- Need for AI implementation and use training was named by about one third of responses, across most areas of the organization
- AI enabled areas such as data analytics and process automation feature even higher

Applications for AI in nonprofits

Create efficiencies, grow income and improve compliance



Support and enable the mission

Join the discussion!

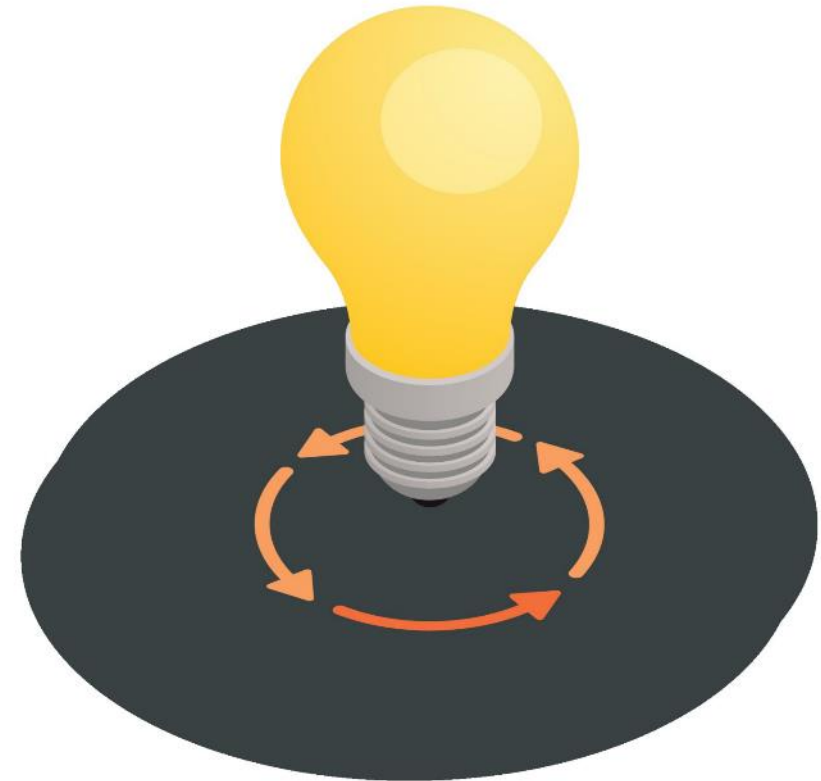
daniela.weber@nethope.org

**JOIN TOGETHER.
ACT TOGETHER.
ACCELERATE TOGETHER.**

nethope.org

nesta

A case study of designing AI
with frontline staff and
communities



A case study of designing AI with frontline staff and communities

Aleks Berditchevskaia

Principal Researcher

Centre for Collective Intelligence Design

nesta



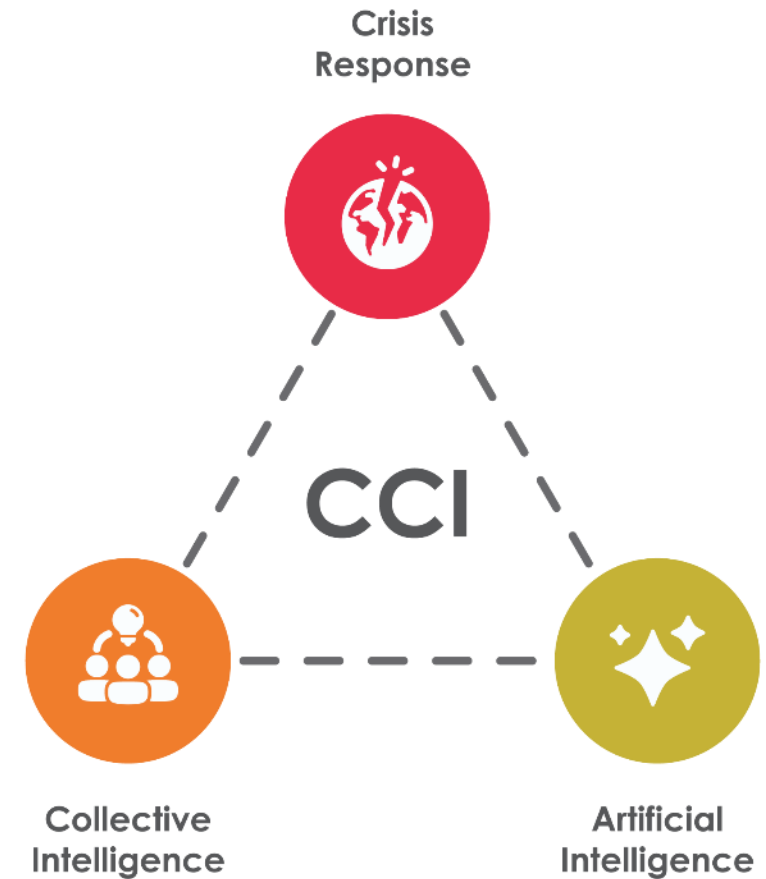
The Centre for Collective Intelligence Design

We create social impact by harnessing the collective intelligence of people *and* the power of digital technologies



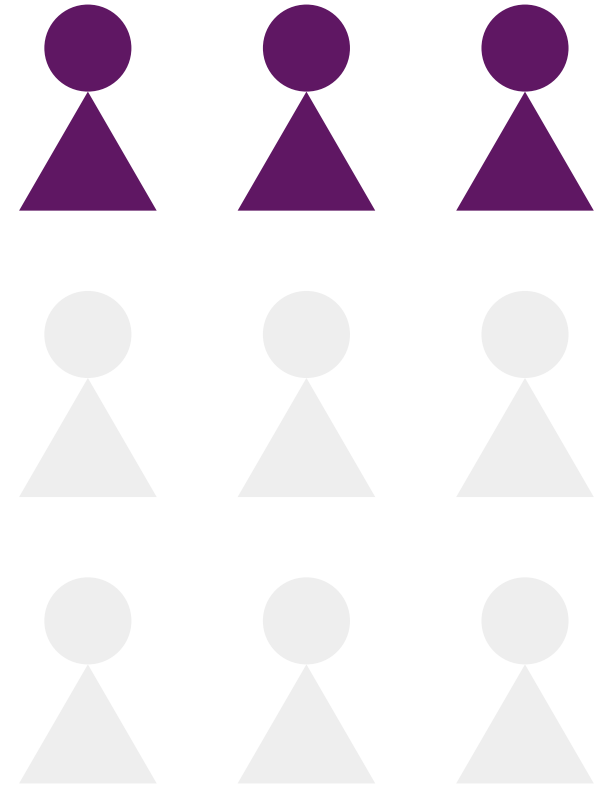
What is community crisis intelligence?

Community crisis intelligence (CCI) combines crowdsourced data from affected communities and frontline responders with artificial intelligence (AI) for more effective crisis mitigation, response or recovery.



Participatory AI (PAI)

in its broadest sense, it refers to the involvement of a wider range of stakeholders than just technology developers in the creation (and governance) of an AI model, tool or application.



Why should we care about participation when it comes to AI?

- Improving model **accuracy**
- Aligning the tool with **diverse values, needs and preferences**
- Anticipating and **mitigating** broader impacts or harms
- Increasing **usability** and uptake of a tool by end-users
- Increasing **trust** in the tool by different stakeholders

Using
community
crisis
intelligence to
predict needs
before a crisis
strikes

 नेपाल रेडक्रस सोसाइटी

 | solferino
academy

nesta


openlab



NFRI-Predict



Nepal Red Cross wants to understand what items are most useful for different types of households

The team inputs a few example households to the model

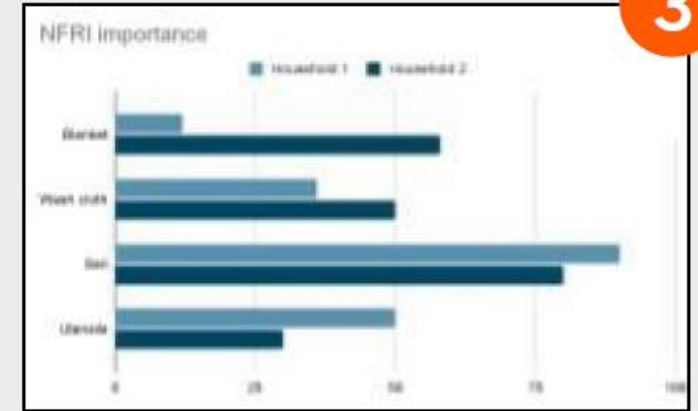
Percent female	60%
House material	Clay
District	Sindhupalchok

1 x2 households



The models predict item essentialness for each household

2



Results are displayed in a format that makes it easy to compare item essentialness for different households

3

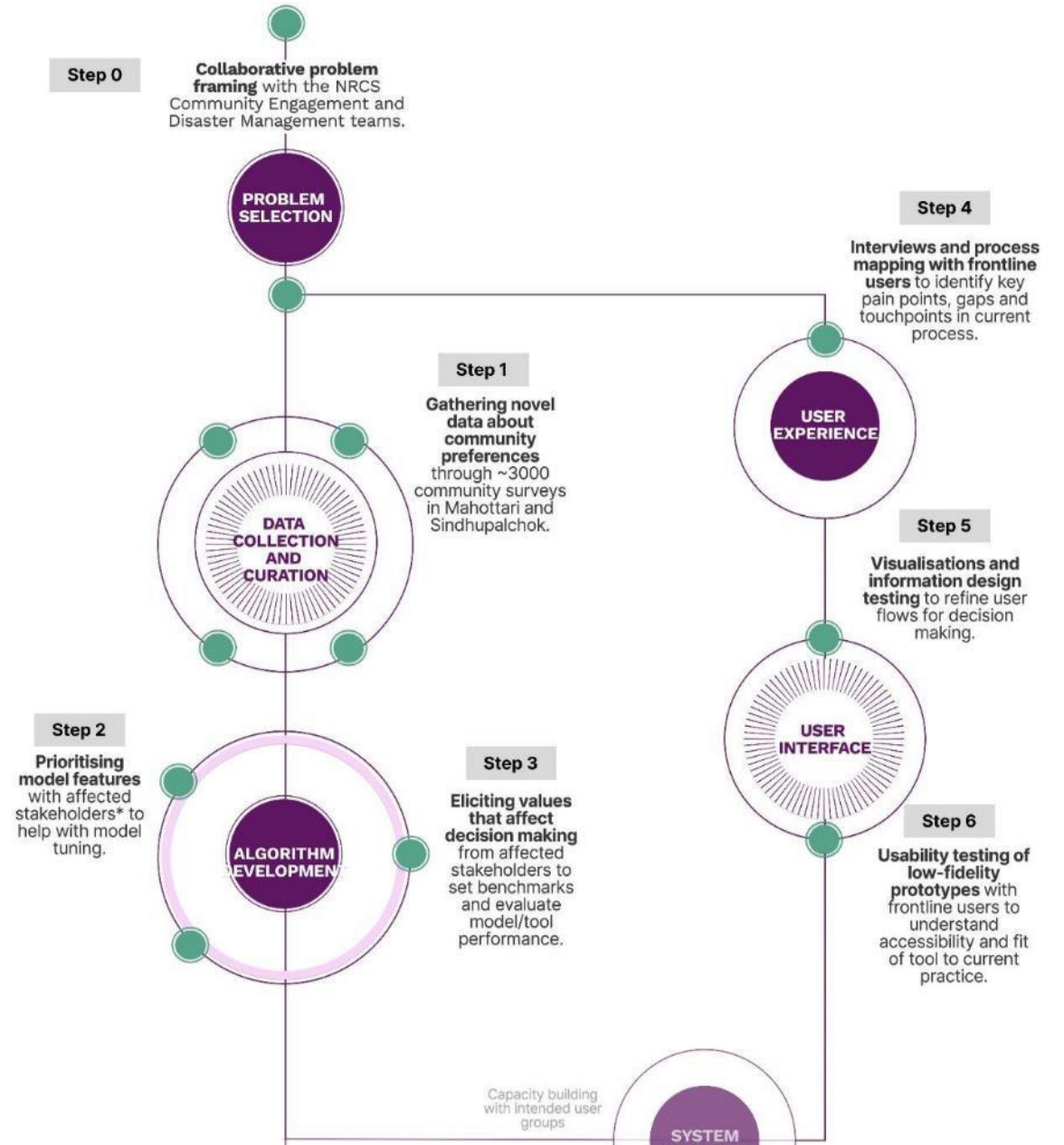
Use cases for NFRI-Predict

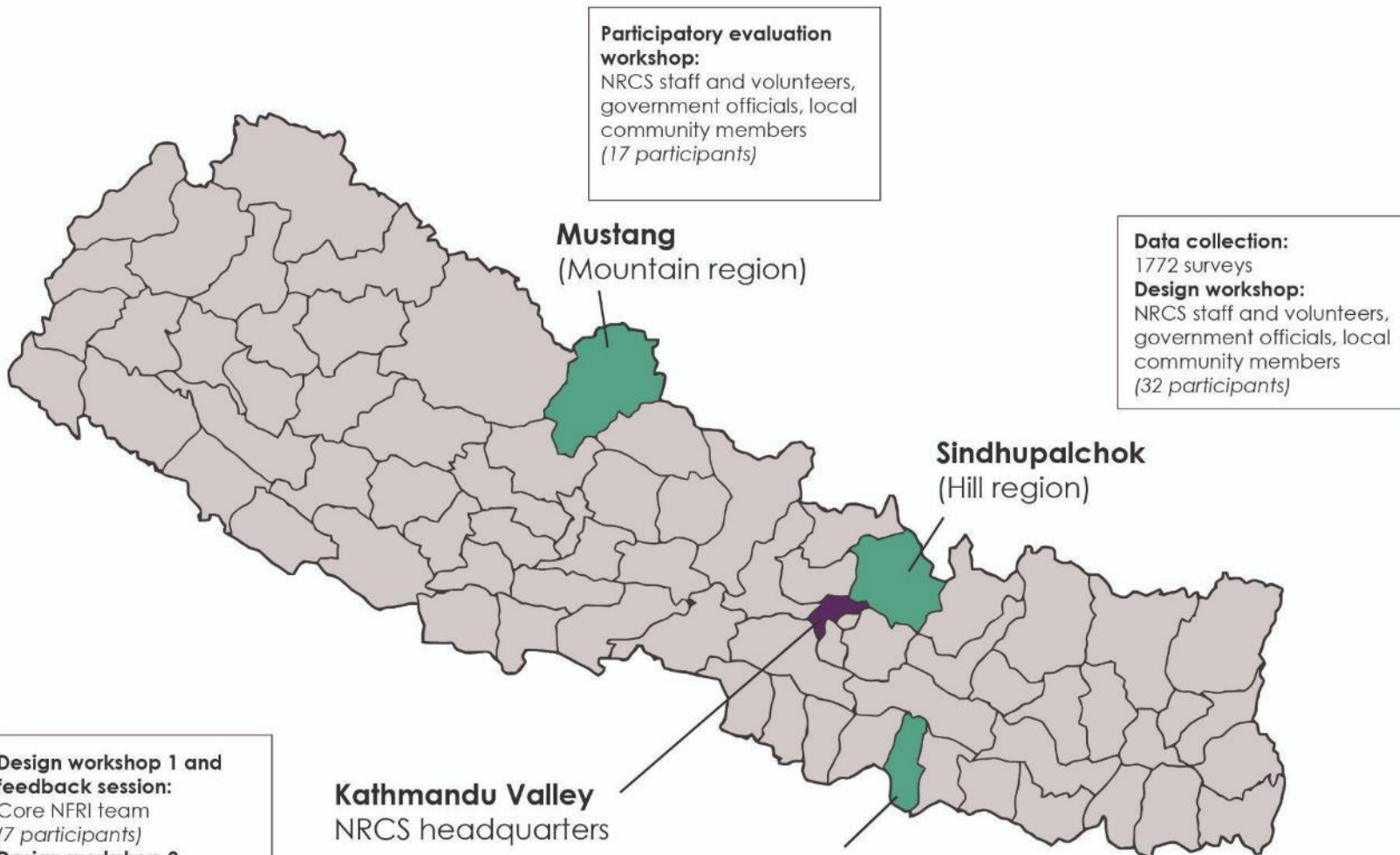
1. **Predicting resource needs** can help humanitarian organisations, governments and citizens to prepare better.
1. It can also be used to help with **identifying the resources needed by the most vulnerable** in the immediate aftermath of a crisis.
2. If resources are constrained, the tool can be used to **better understand differential needs**.

Designing the NFRI-Predict tool using participatory AI

MODEL DEVELOPMENT

TOOL DESIGN





Participatory evaluation workshop:
 NRCS staff and volunteers, government officials, local community members
(17 participants)

Data collection:
 1772 surveys
Design workshop:
 NRCS staff and volunteers, government officials, local community members
(32 participants)

Design workshop 1 and feedback session:
 Core NFRI team
(7 participants)
Design workshop 2
 Core NFRI team
(3 participants)
UI visualisation workshop:
 Central disaster management team
(17 participants)
Participatory evaluation workshop:
 Central disaster management team
(22 participants)

Data collection:
 1491 surveys
Design workshop:
 NRCS staff and volunteers, government officials, local community members
(33 participants)

Kathmandu Valley
 NRCS headquarters

Mahottari
 (Terai region)

NRCS = Nepal Red Cross Society

Participatory AI - can help address AI critiques

Prioritising model inputs with different stakeholder groups:

- optimising the model for diverse preferences

Identifying values for decision making with different groups:

- locally relevant performance benchmarks for evaluating the model

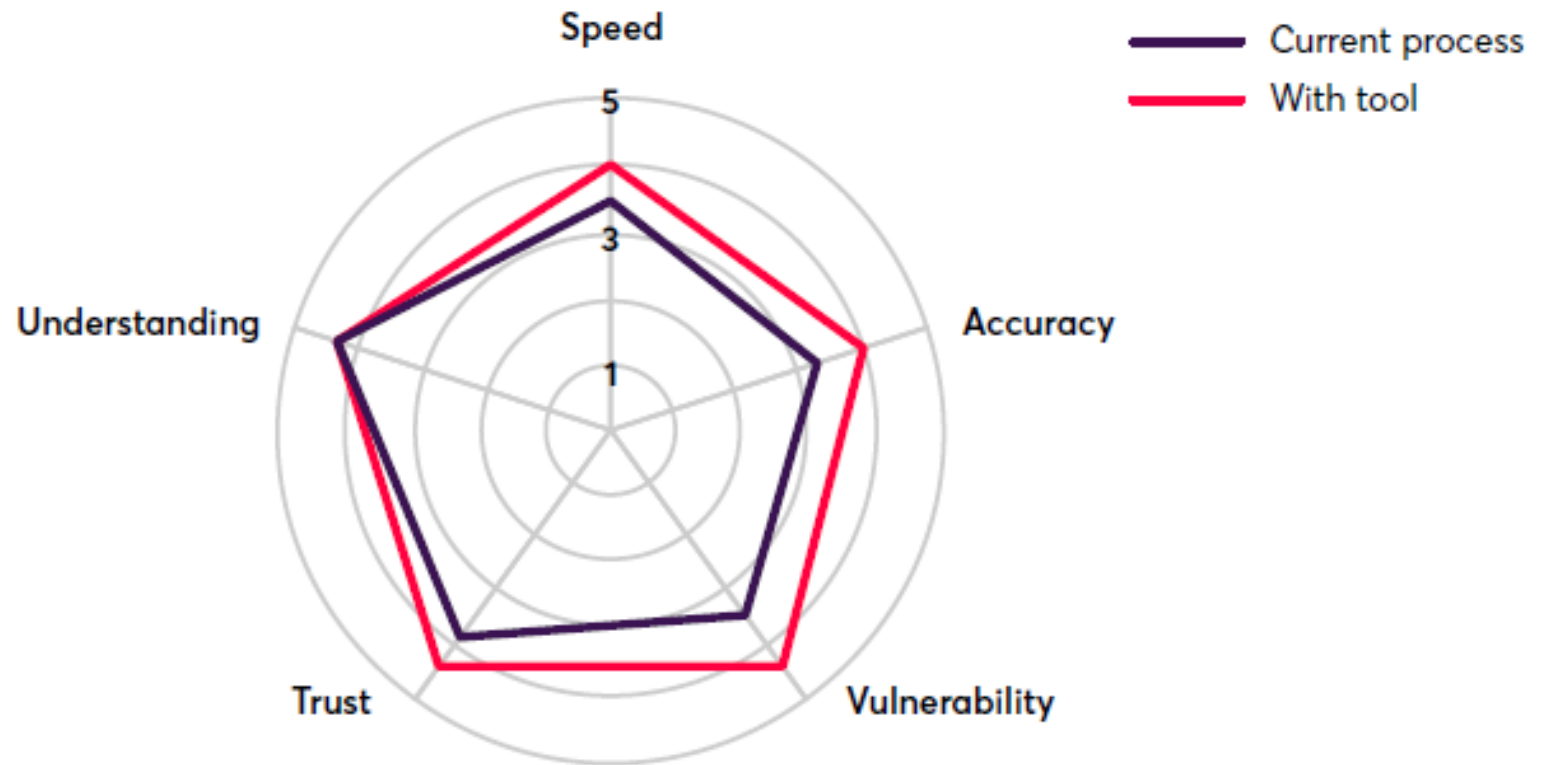


Key results - participatory evaluation

Trust and uptake

- 73% of participants in Kathmandu
- 88% of participants in Mustang

...felt positive about the tool



What we learned

Collective crisis intelligence and participatory AI **can help increase trust** in AI tools

Participatory AI can **overcome several critiques and limitations** of AI to improve model performance

Participatory AI helps **surface tensions** between the assumptions and standards set by AI gatekeepers versus the pragmatic reality of implementation

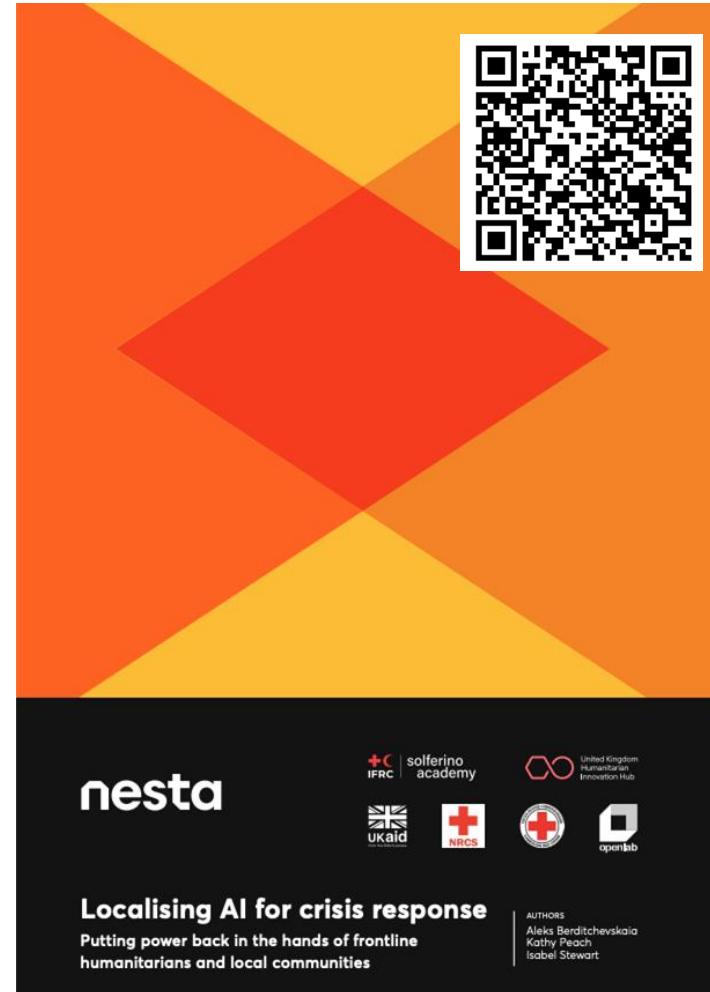
Participatory AI creates **opportunities for building and sharing new capabilities** among frontline staff and data scientists

Resources - our work



Six long-form case studies of the work of others

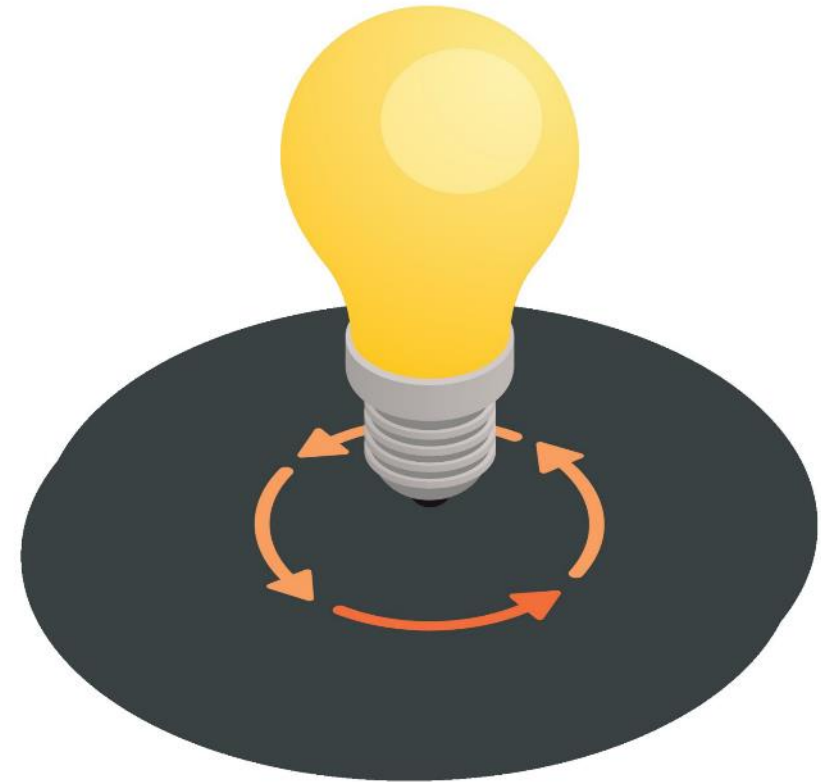
Analysis of participatory approaches for tool development in humanitarian contexts



Two case studies: our experience following a collaborative design process with the Red Cross

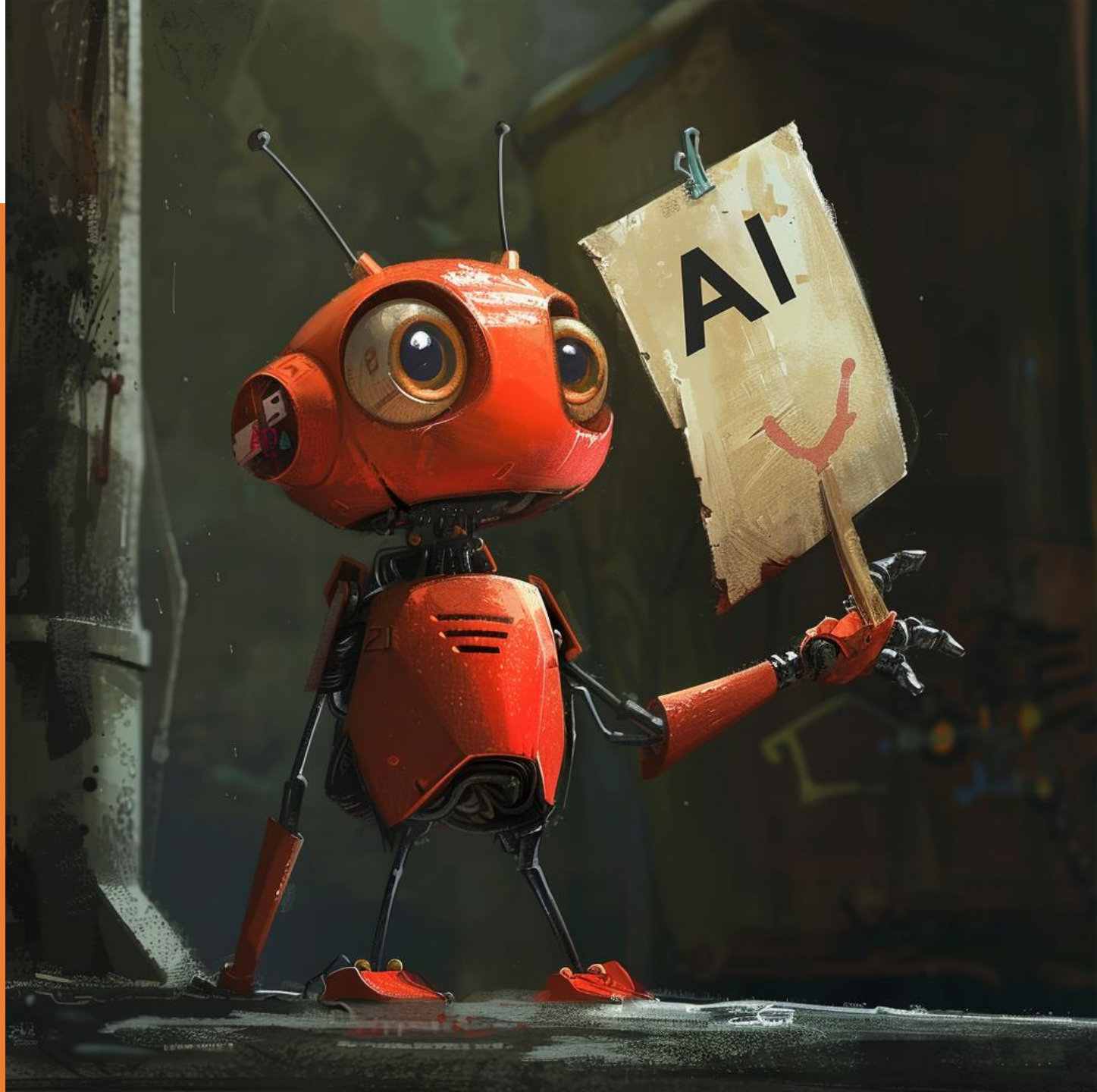


How can AI be used to improve learning & training for humanitarians?



How can AI be used to improve Learning & Training for Humanitarians?

Austen Shand
HLA Digital Learning Specialist



Generative AI ChatGPT etc.

Tackling the information dump by asking ChatGPT to make this more succinct without losing context

Create a scenario based on...


Create a script based on the conversation between....

Hint

- You are still responsible for the content. Be sure to check it for accuracy.
- Make iterative improvements, ensuring that the resource is user-friendly, culturally sensitive and on target.

 **You**

Give a scenario example for a learning module on conflict sensitivity in a humanitarian context

 **ChatGPT**

Title: "Navigating Conflict Sensitivity in Humanitarian Aid: A Practical Training Module"

Scenario:

You are a field officer deployed to a conflict-affected region where a humanitarian organization is providing emergency relief to internally displaced persons (IDPs). The region has a complex history of ethnic tensions, political instability, and resource disputes. Your task is to lead a team in distributing essential supplies, including food, water, and medical assistance, to the affected population.

Learning Objectives:

1. Identify potential sources of conflict in the target area.
2. Develop strategies to mitigate and prevent conflict during humanitarian operations.
3. Apply conflict-sensitive approaches in the planning and execution of aid distribution.

Scene 2: Conflict Analysis

Frame 2:

TL: (serious) Our first step is understanding the conflict context. CLO, could you guide us through the potential sources of tension?

Community Liaison Officer (CLO): (thoughtful) Certainly. (points to the map) Here, historical disputes over resources and political affiliations might influence health center placement.

AI Tools

Text To Image Overview

- Easily tell the visual stories
- Aspirational
- Inclusive and diverse
- Consistency of style
- Save time looking for the perfect image for visual narrative

- A Photo is a snapshot in time
- Not tied to a story for the rest of your life

Hint

- An artist's representation – Oils, Water Colours
- Sometimes it gets it wrong – check details



AI Tools

Text To Image Styles

By adding and adjusting settings and command prompts you can adjust the look, style and aspect ratio of your images.

You control the image by adjusting the prompts, adding or removing details and giving the prompt commands that determine style, size and how much it can deviate from the original prompts.

--ar 16:9 for example means aspect ratio 16:9



A humanitarian woman with brown hair sitting at a desk. **cartoon style**



A humanitarian woman with brown hair sitting at a desk. **oil paints style**



A humanitarian woman with brown hair sitting at a desk. **Pencil drawing style**



A humanitarian woman with brown hair sitting at a desk. **Salvador Dali style**

AI Tools

Text to Image

Make sure that your choices are driven by the learning narrative and appropriate for delivery and audience.

DALL-E by OpenAI:

DALL-E is an AI model developed by OpenAI that generates images from textual descriptions.

Deep Dream Generator:

The Deep Dream Generator is based on Google's DeepDream algorithm. It takes input images and transforms them into dreamlike, surreal creations.

Artbreeder:

Artbreeder allows users to adjust sliders to mix and modify images, creating unique visual compositions.

This image was created using Midjourney.



AI Tools

Text to Audio

Text-to-speech AI programs offer the advantage of accessibility, making information available to individuals with visual impairments or those who prefer audio.

Additionally, they can increase productivity by enabling hands-free consumption of written information or a different approach to when engaging with lots of information.

You can use this method to bring your previous script to life with different AI characters or upload your own voice sample.

I used elevenlabs for this demo.



Speech Synthesis

Unleash the power of our cutting-edge technology to generate realistic, captivating speech in a wide range of languages.

Text to Speech ✓
Convert text into lifelike speech using a voice of your choice.

Speech to Speech
Create speech by combining the style and content of an audio file you upload with a voice of your choice.

Settings

Eleven Multilingual v2

Lily + Add Voice

Voice Settings

Text

Text-to-speech AI programs offer the advantage of accessibility, making information available to individuals with visual impairments or those who prefer auditory learning. These programs enhance user experience by providing a natural and human-like voice that can read text content aloud, contributing to a more engaging and inclusive interaction with digital content. Additionally, they can increase productivity by enabling hands-free consumption of written information, such as during multitasking or while commuting.

521 / 2500

Total quota remaining: 8712

Generate

AI Tools

AR & VR

VR/AR environments can replicate realistic humanitarian scenarios, allowing practitioners to practice and enhance their decision-making skills in a safe and controlled environment.

This is particularly beneficial for training in complex, high-stakes situations.

Tools:

Skybox
Adobe Aero (Beta)
Unreal



AI Tools

Text to Video

The next big step for Ai tools that will be of use to us will be AI video/animation generation.

This is a demo video created by sora using the prompt:

A beautiful homemade video showing the people of Lagos, Nigeria in the year 2056. Shot with a mobile phone camera.

openai.com/sora



AI Tools

Translation

Machine Translation is the automated process of translating text or speech from one language to another using computer algorithms. It aims to produce accurate and fluent translations, often employing techniques from natural language processing and artificial intelligence.

Some notable tools include:

- Google Translate
- DeepL
- ChatGPT

Note

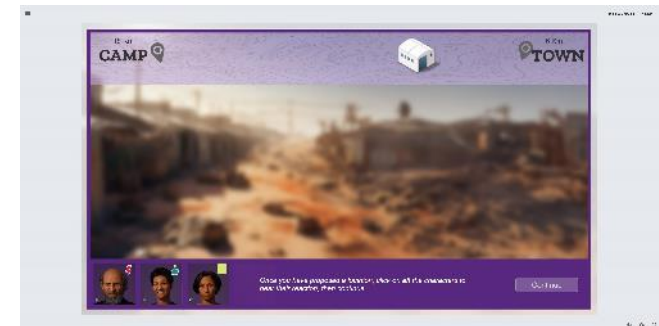
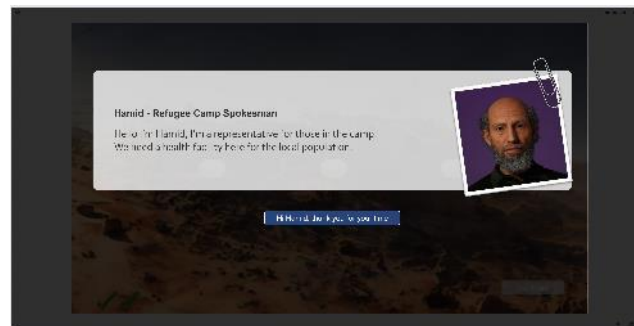
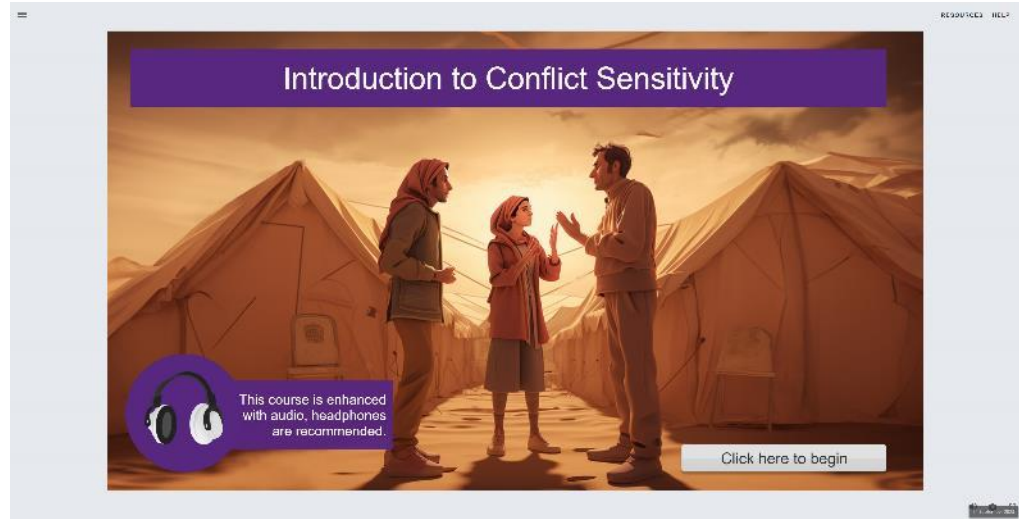
Have a native speaker check the content before publication



Introduction To Conflict Sensitivity

What AI Tools did we use:

- ChatGPT for Scenarios
- Skybox AI generated VR style environments
- Midjourney for AI Art
- Synthesia for AI videos
- D-ID for animated characters
- Wondercraft for AI generated podcast
- Metahumans for people





Thanks!

Questions & discussion





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