Harnessing the Transformative Potential of Generative AI for Humanitarian Multi-Purpose Cash Assistance Opportunities, Risks, Barriers, and Recommendations

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Executive Summery

This report, authored by Market Impact lead consultant Thomas Byrnes, explores the transformative potential of Generative AI for Multi-Purpose Cash Assistance (MPCA) programs in humanitarian contexts. The report is divided into four main chapters.

The Potential Opportunities of AI tools and systems for MPCA (Pages 9-21)

The first chapter, "The Potential Opportunities of AI tools and systems for MPCA," delves into how AI can revolutionize various aspects of MPCA programs, including needs assessments, beneficiary targeting, delivery mechanisms, project implementation, monitoring and evaluation, and accountability to affected communities.

Risks of Using AI in MPCA Programs and potential mitigation measures (Pages 21-28)

The second chapter, "Risks of Using AI in MPCA Programs and potential mitigation measures," examines critical risks associated with AI adoption, such as data privacy and security concerns, algorithmic bias, lack of transparency, informed consent challenges, and the risk of overreliance on AI. It proposes robust data governance, regular audits, explainable AI, and maintaining human oversight as key mitigation strategies.

Barriers to the Use of AI in MPCA Programs and potential mitigation measures (Pages 28-32)

The third chapter, "Barriers to the Use of AI in MPCA Programs and potential mitigation measures," explores the technical, financial, regulatory, and cultural obstacles to AI adoption in MPCA programs. It recommends capacity building, innovative partnerships, advocacy for flexible funding, and effective change management to overcome these hurdles.

Recommendations for Humanitarian Actors (Pages 32-34)

The final chapter, "Recommendations for Humanitarian Actors," provides actionable guidance for organizations seeking to responsibly integrate Generative AI into MPCA programs. Key recommendations include investing in AI literacy, prioritizing participatory approaches with affected communities, establishing robust ethical frameworks, and fostering cross-sector collaboration to share best practices.

By addressing the opportunities, risks, barriers, and recommendations outlined in this report, humanitarian organizations can harness the transformative power of Generative AI to deliver more efficient, effective, and accountable MPCA programs, ultimately enhancing aid delivery to crisis-affected populations.

Contents

Introduction

Multi-Purpose Cash Assistance (MPCA) has emerged as a powerful tool in humanitarian response, offering adaptability and beneficiary choice in crisis situations. While its use is increasing, MPCA's potential remains untapped due to systemic barriers such as insufficient needs assessments, limited funding, and organizational capacity constraints. Amidst growing humanitarian needs and funding gaps, the sector seeks greater efficiency and effectiveness in aid delivery. The rapid evolution of artificial intelligence (AI) presents a compelling avenue for innovation. Generative AI, in particular, holds potential to augment MPCA programs – from streamlining processes to enhancing needs analysis. However, the humanitarian sector has struggled to fully engage with AI. As noted by Sandvik and Jumbert (2023), "AI is evolving at such a rate that humanitarian agencies struggle to keep up with the rapid progress, with even governments struggling to adapt their policies as fast as Silicon Valley is developing the systems."[1] However, as with any rapidly evolving technology, its impacts – both positive and negative – are uncertain,[2] and strategic adoption is necessary. The lack of understanding in the humanitarian sector, combined with AI's own inherent risks such as algorithmic bias and data security concerns, underscores the need for careful consideration.

This report investigates the transformative potential of Generative AI within MPCA. It examines specific opportunities it unlocks, such as needs assessment support and administrative automation. Crucially, the report also analyses risks – including data privacy breaches and transparency issues– and advocates for strategies to ensure responsible, ethical AI integration. This report is designed for humanitarian actors, donors, and all stakeholders engaged in MPCA initiatives. It aims to foster informed decision-making on the use of AI in this crucial aid modality, ultimately paving the way for more effective, human-centred humanitarian responses.

Acknowledgements

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[1] Sandvik, K. B., & Jumbert, M. G. (2023). AI in aid: Framing conversations on humanitarian policy. Global Policy Opinion, July 12, 2023. Retrieved from https://www.globalpolicyjournal.com/blog/12/07/2023/ai-aid-framing-conversations-humanitarian-policy [Accessed April 20, 2024].
[2] Madigan, S. (2024). Responsible AI: The Aid Sector's New Challenge. The Machine Race. Retrieved from https://medium.com/@themachinerace/responsible-ai-the-aid-sectors-new-challenge-2d14fe1fd0ab.

Objectives and Scope and Methodology

This report examines the transformative potential, inherent risks, and responsible use of Generative AI within Multi-Purpose Cash Assistance (MPCA) programs. It focuses on the following key areas:

- The Potential Opportunities of AI tools and systems for MPCA Programs.
- Risks of Using AI in MPCA Programs and potential mitigation measures.
- Barriers to the Use of AI in MPCA Programs and potential mitigation measures.
- Recommendations for Humanitarian Actors related to AI use in MPCA Programs.

This report integrates insights from a thorough literature review on AI, NLP, and Generative AI in humanitarian contexts with findings from 15 Key Informant Interviews (KIIs). Interviewees included INGO, NGO, UN, and donor staff working on MPCA in Ukraine and those at regional/global levels. This approach allows for a comprehensive exploration of the potential and risks of using AI in MPCA, ensuring diverse stakeholder perspectives and alignment with humanitarian principles.

Within the humanitarian response landscape, Multi-Purpose Cash Assistance (MPCA) has emerged as a powerful tool in providing flexible and adaptable support to crisis-affected communities. Let's examine the current state of MPCA and its increasing importance before exploring how Generative AI could further enhance its potential.

Current state of Multi-Purpose Cash Assistance (MPCA)

The use of Cash and Voucher Assistance (CVA) within humanitarian response has significantly increased in recent years. The CALP Network's 'The State of the World's Cash 2023' report highlights a volume growth from US$6.6 billion in 2020 to US$10 billion in 2022. [3] While impressive, this needs to be contextualized against the overall rise in humanitarian funding. As a proportion of total assistance, CVA's increase appears more modest (rising from 20.3% to 20.6%). The CALP Network estimates that CVA could reach 30-40% if used wherever feasible and appropriate. Multi-Purpose Cash Assistance a flexible and unrestricted form of CVA, has been a key driver of this growth. MPCA empowers beneficiaries by giving them choice and dignity and has been a focus of policy emphasis since the 2016 Grand Bargain.

MPCA's growth stems from its potential to improve aid delivery, empower beneficiaries, and boost local economies. Defined as a financial transfer designed

[3] CALP Network. (2023, November 15). The State of the World's Cash 2023. Retrieved from https://www.calpnetwork.org/collection/the-state-of-the-worlds-cash-2023-report/.

to cover a household's basic needs (either fully or partially) [4], MPCA programs often utilize a Minimum Expenditure Basket (MEB) to establish transfer values. Agencies like USAID's Bureau for Humanitarian Assistance (BHA) and the European Civil Protection and Humanitarian Aid Operations (DG ECHO) have aligned on this approach.[56]

Despite its increasing adoption, MPCA faces challenges in needs assessment, beneficiary communication, and data analysis. Artificial Intelligence (AI), particularly Generative AI, holds the potential to address these hurdles. To understand these possibilities, let's explore AI's foundational concepts.

Understanding the Foundations: AI and its Tools for Humanitarian Impact

To grasp the transformative potential of Generative AI within humanitarian aid, it's crucial to understand the broader landscape of artificial intelligence (AI) technologies it builds upon. This report focuses primarily on Generative AI but introduces related fields like Natural Language Processing (NLP) and Machine Learning (ML) as they act as essential building blocks for these powerful creative systems.

- **Artificial Intelligence (AI):** The broad field of designing intelligent computer systems.
- **Natural Language Processing (NLP):** Enables AI systems to understand, process, and generate human language.
- **Machine Learning (ML):** The core method allowing AI to learn from data and improve without explicit programming.
- **Generative AI:** Specializes in creating new, original content (text, images, code, etc.)

Why This Matters for Humanitarians

Generative AI offers humanitarian organizations, planning to undertake MPCA the tools to enhance the efficiency, reach, and the quality of their aid delivery. Imagine using it to:

- **Generate clear reports** summarizing complex situations.
- **Create accessible visuals** conveying vital information in multiple languages.
- **Automate routine tasks** freeing up staff for critical work.
- **Provide tailored support** directly to affected populations via chatbots.

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[4] CALP Network. Glossary of Terminology for Cash and Voucher Assistance. 2023. Manual and Guideline. URL (Glossary of Terms - The CALP Network)
[5] USAID/BHA. Emergency Application Guidelines: Sector Requirements. October 12, 2022. URL (https://docs.google.com/document/d/1uv2N9MpWVWR0PqDGcurxUhexQeFLFhgeMLpPtuwy5UI/edit#heading=h.2et92p0)
[6] Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO). Thematic Policy Document No 3: Cash Transfers. March 2022. URL (https://ec.europa.eu/echo/files/policies/sectoral/thematic_policy_document_no_3_cash_transfers_en.pdf)

This report delves into these specific use cases and explores how Generative AI can revolutionize humanitarian programming.

The Power of Generative AI

Generative AI holds immense potential across the humanitarian program cycle. From streamlining content creation to enhancing communication and automating tasks, the range of applications is vast. The rapid progress and expanding capabilities of AI systems have been highlighted by Mollick (2023),[7] who describes the current landscape as a 'jagged frontier' where AI performance varies significantly across different tasks and domains. Mollick (2024)[8] further notes that the tasks AI can do well are expanding rapidly, underscoring the need for ongoing research and monitoring of these developments.

Table 1 provides an overview of key application areas, the Generative AI tools commonly used, and the types of outputs they produce.

Table 1: Summary of Different AI Applications, Generative AI Tools, and output types		
Application	Generative AI Tools	Output Type
Content Creation		GPT-4, ChatGPT, Anthropic Claude, Gemini	Humanitarian reports, crisis updates, emergency response plans, fundraising appeals, social media posts
Text Analysis and Processing	Text Summarization	GPT-4, ChatGPT, Anthropic Claude, Gemini	Automatically summarize complex reports, documents, and data to support humanitarian and development decision-making, such as identifying trends, tracking progress, and evaluating impact
	Translation	Google Translate, DeepL, Microsoft Translator	Text translations for humanitarian reports, crisis updates, emergency response plans, and refugee support materials
	Transcription	Whisper Ai, Nvidia Neom,	Automated transcripts of crisis response meetings, key informant meetings,

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[7] Mollick, E. (2023). Centaurs and Cyborgs on the Jagged Frontier. One Useful Thing, September 16, 2023. Available at: https://www.oneusefulthing.org/p/centaurs-and-cyborgs-on-the-jagged. Accessed April 30, 2024.
[8] Mollick, E. (2024). What just happened, what is happening next: The tasks AI can do well are expanding rapidly. One Useful Thing, April 09, 2024. Available at: https://www.oneusefulthing.org/p/what-just-happened-what-is-happening. Accessed April 30, 2024.

			focus group discussions and humanitarian training sessions
Conversational Dialogue	GPT-4, Anthropic Claude, Gemini		Crisis counselling chatbots, refugee support conversational agents, emergency response virtual assistants
Image Generation	DALL-E, Midjourney, Prisma		Create pictures for PowerPoints, or reports.
Code Generation	GitHub Copilot, Microsoft Copilot		Humanitarian software, crisis management platforms, refugee registration systems, emergency response apps

As evident in the table, content creation and text analysis are particularly fertile areas for Generative AI in humanitarian work. The following sections will explore how these tools can streamline report generation, enhance data analysis, and improve beneficiary communication.

Beyond its direct application in crisis response, Generative AI holds the potential to transform the internal workings of humanitarian organizations. By streamlining processes, extracting insights from data, and optimizing operations, AI applications can lead to greater efficiency, adaptability, and impact across functions.

Practical implementations of AI in the humanitarian sector have been documented by organizations such as NetHope. Their AI Primer[9] provides an introduction to the technology, while their subsequent publications and webinars share lessons learned from AI implementations in the nonprofit sector and the humanitarian field specifically.[10][11] They have found that AI-powered content generation assists in rapidly producing high-quality reports and proposals, saving time, and ensuring consistency. For data analysis, tools like natural language processing and computer vision unlock insights from vast unstructured data (e.g., social media), leading to more targeted interventions. Additionally, Generative AI-driven predictive analytics aid in optimizing programs and forecasting outcomes, as seen in the World Food Programme's Optimus tool.

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[9] NetHopeOrg (2019a). AI Primer. Available at: https://www.youtube.com/watch?v=L4OeAZ1gwDQ. Accessed: 12 April 2024.
[10] NetHopeOrg (2019b). How to get started with AI: Learn from current practical implementations in the nonprofit sector. Available at: https://www.youtube.com/watch?v=3i-lF7I7srU. Accessed: 12 April 2024.
[11] NetHopeOrg (2020). Lessons Learned from Practical Implementations of AI in the Humanitarian Sector. Available at: https://www.youtube.com/watch?v=qt-m6qgPS18. Accessed: 12 April 2024.

Table 2 provides a comprehensive overview of current Generative AI applications within humanitarian organizations, showcasing the diversity of tools and projects where this technology is making a difference.

Table 2: Summary of Different Organizational Use Cases of Generative AI in Humanitarian Programming as of May 2024		
Application	Agency and Project	Description of AI Tools
Content Creation and Tone Consistency	UNICEF: End-Year Summary Narrative Quality Assurance Tool[12]	AI tools understand and generate text for quality assurance.
Text Analysis and Processing	UNHCR Innovation Service & UN Global Pulse: Social Media Analysis[13]	AI tools perform social analysis to identify protection issues.
	UNHCR Uganda: Feedback Referral and Resolution Mechanism (FRRM)[14]	Tools enable call categorization and processing.
	World Food Programme: Voice to Text AI Tool[15]	Tools perform voice transcription for remote data collection.
Conversational Dialogue	OCHA: Chatbot for Data Insights[16]	Large language models enable chatbots for data access.
	UNICEF: Safer Chatbots Initiative[17]	AI chatbots detect and respond to harm disclosure.
	CLEAR Global: Uji Chatbot[18]	Chatbots provide COVID-19 information in multiple languages.
Image and Data Analysis	WFP: Meza Tool[19]	OCR technology digitizes handwritten data from clinics.

[12] United Nations. "United Nations Activities on Artificial Intelligence (AI)." Accessed May 6, 2024. https://www.itu.int/hub/publication/s-gen-unact-2022/.

[13] Moreno, Rebeca. "Teaching a 'robot' to detect xenophobia online." UNHCR Innovation. Accessed May 6, 2024. https://www.unhcr.org/innovation/teaching-robot-detect-xenophobia-online/.

[14] UNHCR. "UNHCR and partners launch communication system for refugees in Uganda." October 10, 2018. Accessed May 6, 2024. https://www.unhcr.org/africa/news/news-releases/unhcr-and-partners-launch-communication-system-refugees-uganda-0.

[15] WFP Innovation, 'Voice to Text AI: Artificial intelligence for nutrition surveying', accessed May 6, 2024, https://innovation.wfp.org/project/voice-text-ai

[16] Briefing Note on Artificial Intelligence and the Humanitarian Sector," United Nations Office for the Coordination of Humanitarian Affairs, April 17, 2024, accessed May 6, 2024, https://www.unocha.org/publications/report/world/briefing-note-artificial-intelligence-and-humanitarian-sector.

[17] United Nations. "United Nations Activities on Artificial Intelligence (AI)." Accessed May 6, 2024. https://www.itu.int/hub/publication/s-gen-unact-2022/.

[18] GDPC. (2023, April 6). Chatbots in humanitarian contexts: Learning from practitioner experiences [Report]. Retrieved from https://communityengagementhub.org/wp-content/uploads/sites/2/2023/06/20230623_CEA_Chatbots.pdf.

[19] World Food Programme. "Meza: Digitising paper records for smartphones." Accessed May 6, 2024. https://innovation.wfp.org/project/meza

	ICRC: Trace the Face[20]	Facial recognition helps locate missing persons.
	FAO: ASIS[21] and WaPOR Portal[22]	ML models monitor agricultural areas and provide data access.
	Humanitarian OpenStreetMap [23] and UN Rapid Mapping Service[24]	AI models analyse satellite imagery and other data for disaster mapping.
Program Optimization and Design	World Food Programme: Optimus.[25]	AI tool optimizes food assistance programs.
Predictive Analytics	OCHA, UNHCR, IFRC, UNICEF[26]: Various Projects[27]	AI and ML enable predictive analytics for various humanitarian contexts.
Coding	IFRC ESSN, Software Development	ChatGPT was used to support the creation of Python code to support MEB and targeting activities related to the 2023 Earthquake response

The trends highlighted in Table 2 demonstrate the significant potential of Generative AI within MPCA. Applications like content creation, text analysis, and conversational dialogue offer valuable avenues to streamline processes, gain insights, and enhance beneficiary interaction. Let's now delve into how these can be leveraged to achieve greater efficiency and effectiveness within MPCA programs.

[20] Beduschi, Ana. "Harnessing the potential of artificial intelligence for humanitarian action: Opportunities and risks." International Review of the Red Cross No. 919 (June 2022): 34. [Accessed May 6, 2024]. Available at: https://international-review.icrc.org/articles/harnessing-the-potential-of-artificial-intelligence-for-humanitarian-action-919

[21] Food and Agriculture Organization of the United Nations, "Earth Observation - GIEWS ASIS," accessed May 6, 2024, https://www.fao.org/giews/earthobservation/asis/index_2.jsp?lang=en.

[22] Food and Agriculture Organization of the United Nations, "WaPOR, Remote Sensing for Water Productivity," accessed May 6, 2024, https://www.fao.org/in-action/remote-sensing-for-water-productivity/en/.

[23] Beduschi, Ana. "Harnessing the potential of artificial intelligence for humanitarian action: Opportunities and risks." International Review of the Red Cross No. 919 (June 2022): 34. [Accessed May 6, 2024]. Available at: https://international-review.icrc.org/articles/harnessing-the-potential-of-artificial-intelligence-for-humanitarian-action-919

[24] Beduschi, Ana. "Harnessing the potential of artificial intelligence for humanitarian action: Opportunities and risks." International Review of the Red Cross No. 919 (June 2022): 34. [Accessed May 6, 2024]. Available at: https://international-review.icrc.org/articles/harnessing-the-potential-of-artificial-intelligence-for-humanitarian-action-919

[25] WFP Innovation Accelerator. "5 innovations powered by artificial intelligence that tackle world hunger." Medium, December 7, 2021. https://wfpinnovation.medium.com/5-innovations-powered-by-artificial-intelligence-that-tackle-world-hunger-81c59247759e

[26] Thinking Machines. "Thinking Machines pushes for open science through the AI4D Research Bank." April 22, 2022. Accessed May 6, 2024. https://stories.thinkingmachin.es/unicef-ai4d-research-bank/.

[27] Briefing Note on Artificial Intelligence and the Humanitarian Sector," United Nations Office for the Coordination of Humanitarian Affairs, April 17, 2024, accessed May 6, 2024, https://www.unocha.org/publications/report/world/briefing-note-artificial-intelligence-and-humanitarian-sector.

The Potential Opportunities of AI tools and systems for MPCA

The 2023 CALP State of the World Cash Report found that "AI offers clear opportunities for increasing efficiency and effectiveness of Cash and Voucher assistance, presenting alternative and faster ways of targeting, enhanced feedback loops, data analysis to improve anticipatory action, and much more."[28] By leveraging advanced technologies and data analytics, Generative AI can help humanitarian actors to create more efficient, precise, and inclusive MPCA programs that better serve the needs of affected populations, and make efficient use of limited humanitarian funding.

Assessment and Response Analysis

Designing effective MPCA programs relies heavily on needs assessments, market analyses, financial service provider evaluations, and broader response data analysis. These processes are often time-consuming, resource-intensive, and hindered by limited data. Humanitarian actors can struggle to efficiently process, analyse, and extract insights from the vast amounts of unstructured data generated during crises. AI-powered tools offer the potential to streamline these critical assessments. By analysing multiple data sources – social media, news articles, field reports, and more – AI can help identify key trends in affected populations' needs and vulnerabilities. This can not only complement traditional assessment methods but also guide priority areas for more in-depth needs analysis, ensuring MPCA programs are tailored to the specific and evolving requirements of beneficiaries.

Uncovering Needs & Vulnerabilities

AI can help address the challenges of incomplete or unstructured datasets. Natural Language Processing (NLP) tools can analyse a vast range of sources – including social media, news reports, and beneficiary feedback – to extract key themes and sentiment trends. This can complement traditional needs assessments by revealing emerging issues or areas of unmet need. For example, UNHCR's Social Media Analysis project highlights how NLP can identify protection risks faced by refugees, informing targeted MPCA interventions.[29]

Accelerating Analysis & Informing Decisions

Time-consuming analysis can hinder aid delivery. Machine learning algorithms can rapidly process complex datasets, accelerating assessments and freeing staff to focus on action. WFP's Voice to Text AI tool automates the transcription of nutrition surveys, saving time and tools like it could be used to enable a wider reach of

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[28] CALP Network. (2023, November 15). The State of the World's Cash 2023. Retrieved from https://www.calpnetwork.org/collection/the-state-of-the-worlds-cash-2023-report/.

[29] Moreno, Rebeca. "Teaching a 'robot' to detect xenophobia online." UNHCR Innovation. Accessed May 6, 2024. https://www.unhcr.org/innovation/teaching-robot-detect-xenophobia-online/.

MPCA beneficiaries. Additionally, AI-powered data visualizations and dashboards can present findings in a clear, accessible manner, aiding communication and facilitating decision-making about resource allocation.

Some examples of software that can achieve this include:
- Tableau, which offers AI tools to develop interactive dashboards and visualizations that can be used to analyse and present humanitarian needs assessment data.
- Power BI, which provides AI-powered data visualization tools that can be used to create interactive dashboards and reports.

AI-Enhanced Market Analysis in Ukraine – Insight from a Key Informant

Problem: Assessing market functionality and supply chain risks is crucial for ensuring the feasibility of MPCA programs in Ukraine.

Key Informant Insight: A key informant highlighted the potential of AI to enhance these assessments with real-time analysis of data from:
- Price Monitoring Systems: Identifying inflationary pressures and potential market disruptions.
- Supplier Databases (if accessible): Assessing capacity and supply chain resilience.
- Social media: Uncovering shortages or complaints, revealing potential bottlenecks that traditional analysis might miss.
- Unique Opportunity in Ukraine: Public availability of shop locations and price data via API creates a particularly conducive environment for testing the use of AI tools.

Key Benefit: This integrated, dynamic analysis would inform timely adjustments to MPCA, maximizing its impact in a fluctuating context.

Considerations
- Data Access: While some data is open, the accessibility of supplier databases may vary.

Tool Development: Tailored AI solutions may be needed to fully leverage this opportunity.

AI-Powered Transfer Value Optimization for MPCA

Ensuring that MPCA transfer values remain sufficient to cover the Minimum Expenditure Basket (MEB) is a complex challenge. Market prices fluctuate, needs assessments can be time-consuming, and manually comparing data from various sources is inefficient. These factors can lead to discrepancies, hindering beneficiaries' ability to meet their basic needs.

AI tools can streamline the process, ensuring a more data-driven and adaptive approach to transfer value determination. They can:

- **Automate and Integrate Data:** AI can continuously gather and process pricing data from multiple sources, including needs assessments, WFP VAM reports, and even publicly available supplier information.
- **Analyse and Identify Discrepancies:** Algorithms quickly compare this data to the MEB, flagging any inconsistencies and suggesting necessary adjustments to transfer values.
- **Predict and Recommend:** Through predictive analytics, AI tools can forecast potential price changes, leading to proactive transfer value updates that maintain beneficiaries' purchasing power.

For example, the World Food Programme's Optimus tool is a leading example of this AI solution in action. In Syria, Optimus analysed scenarios and identified adjustments to food basket contents and sourcing strategies. This allowed the WFP to optimize its budget and extend its reach by 20%. Optimus demonstrates how AI can analyse vast datasets, streamline processes, and provide actionable insights. Ultimately, this leads to more effective MPCA programs that better meet the evolving needs of beneficiaries.

Case Study: IFRC Turkey Earthquake Response – Leveraging ChatGPT for Humanitarian Coding

The Challenge: In the aftermath of the 2023 Turkey–Syria earthquakes, the IFRC faced urgent needs assessments and rapidly fluctuating market prices amidst limited government data. This created obstacles to ensuring that MPCA transfer values remained aligned with the Minimum Expenditure Basket (MEB) to meet beneficiaries' needs.

AI-Driven Solution: Due to the rapid need to develop the tools in hours, existing in-house programming and data analysis expertise was not sufficient to response rapidly so, the IFRC team turned to ChatGPT to assist in generating the Python code necessary for dynamic MPCA processes. ChatGPT's natural language processing capabilities helped bridge the skill gap, enabling the team to develop tools for:

- **Price Scraping:** Overcoming the lack of government data, ChatGPT-assisted Python code automated real-time price data collection for critical MEB tracking.
- **Vulnerability Targeting:** ChatGPT supported code development for analysing diverse, unstructured data sources to pinpoint areas of greatest need, guiding targeted MPCA delivery.

The Outcome: By deploying ChatGPT in this innovative way, the IFRC team:
- Overcame limitations in traditional data sources, ensuring a more responsive MPCA program.

- Streamlined MEB analysis, enabling potential adjustments to transfer values for maintaining purchasing power.
- Enhanced targeting processes, facilitating prioritization of resources towards the most vulnerable populations.

Key Takeaway: This case study demonstrates the power of AI-powered tools like ChatGPT to augment humanitarian capabilities even in situations of limited technical resources. By enabling rapid code development, ChatGPT can be a force multiplier for MPCA programs, fostering data-driven decision-making and improving aid delivery in crisis situations.

Key Takeaways: AI-Enhanced Assessment & Analysis for MPCA

- **Reveal Hidden Needs:** AI expands data sources (social media, feedback) to uncover unmet needs and inform targeted interventions.
- **Accelerate Insights:** Machine learning algorithms streamline analysis allowing swift action, like WFP's Voice to Text AI tool.
- **Optimize Transfer Values:** AI integrates dynamic data (needs assessments, costs) to ensure transfer values match market realities and maintain purchasing power.
- **Data-Driven Decisions:** Clear visualizations aid rapid decision-making and effective resource allocation.

Important Considerations:

- **Contextualization:** Tailor AI solutions to a specific crisis, leveraging unique opportunities like Ukraine's open data.
- **Human-Centred Approach:** AI augments, not replaces, human expertise in assessment and analysis.

By integrating AI into market assessments and cash feasibility analyses, humanitarian actors can gain more accurate, timely, and actionable insights into market conditions and cash feasibility. This can help them design and implement more effective MPCA programs that are responsive to local contexts and deliver better outcomes for beneficiaries and communities.

Beneficiary selection and targeting

Identifying and prioritizing the most vulnerable individuals and communities for humanitarian assistance is a complex challenge, especially in rapidly evolving crises. Traditional targeting methods often rely on limited data sources and time-consuming manual processes, hindering swift and accurate responses. Generative AI offers the potential to revolutionize beneficiary selection and targeting, enabling more effective responses through real-time, data-driven insights into vulnerability

patterns. However, it's crucial to recognize the significant ethical concerns surrounding AI use, including the potential for bias, reduced transparency, and the need to balance data-driven insights with human judgment.

The Power of Prediction: Proactive MPCA Targeting

AI has the potential to transform the way humanitarian organizations target and select MPCA beneficiaries. By analysing diverse datasets – including climate patterns, conflict trends, market data, and more – predictive models can forecast where needs for cash assistance are likely to spike. This gives organizations crucial time to prepare MPCA programs in those areas, mobilizing resources and pre-positioning staff for timely and effective support. Projects like UNHCR's Jetson in Somalia and the WFP's Hunger Map demonstrate the power of predictive analytics to address displacement and food insecurity, enabling proactive MPCA interventions.

Satellite Imagery for Post Disaster Damage Assessment & MPCA Targeting

AI-powered analysis of satellite images can rapidly assess the extent of damage to housing and infrastructure in crisis zones, helping prioritize MPCA interventions. By overlaying these damage maps with demographic and pre-crisis vulnerability data, humanitarian actors can identify communities needing MPCA support to enable recovery and rebuilding. AI could further analyse changes in land use patterns and temporary shelter construction to monitor displacement trends and target MPCA to those whose livelihoods and homes have been destroyed.

Social Media and Mobile Data for Dynamic Targeting

Social media trends and anonymized mobile phone records offer real-time insights into population movements during crises. AI algorithms can scour social media platforms, monitoring displacement indicators, and analyse sentiment to reveal areas experiencing supply shortages or urgent needs. Additionally, AI can analyse call detail records to track population movements, identifying displacement hotspots where MPCA interventions are needed. This approach is valuable in conflicts, natural disasters, or protracted crises – anywhere traditional data collection might be impossible or outdated. For example, a 2022 study tracked Facebook users with Ukrainian language settings in EU countries to map displacement patterns following the Russian invasion. This method highlighted Poland, Germany, and Czechia as major destinations for refugees, informing targeted MPCA interventions.[30]

AI for Deduplication and Data Cleaning

AI is highly effective in improving data quality and integrity in MPCA programs. Algorithms can be trained to identify and flag potential duplicates in beneficiary

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[30] Umberto Minora, Claudio Bosco, Stefano M. Iacus, Sara Grubanov-Boskovic, Francesco Sermi, and Spyridon Spyratos, "The potential of Facebook advertising data for understanding flows of people from Ukraine to the European Union," EPJ Data Sci. 11, no. 1 (2022): 59, https://doi.org/10.1140/epjds/s13688-022-00370-6.

databases, as well as perform data cleaning tasks like identifying missing or inconsistent information. By automating these processes, AI helps ensure that MPCA programs base decisions on accurate and reliable data, crucial for effective targeting and resource allocation.

AI for Targeting: Proceed with Caution

While AI offers potential for beneficiary targeting, it's crucial to address serious concerns about data quality, bias, and transparency. As a senior humanitarian key informant warns, "Anything which reduces the transparency of targeting... is likely to be very unwise."

Key Concerns:
- **Data Accuracy:** AI models are only as good as the data they're trained on. Inaccurate or incomplete data can lead to unfair targeting decisions.
- **Algorithmic Bias:** Hidden biases in datasets or algorithms can perpetuate discrimination and inadvertently exclude vulnerable groups.
- **Lack of Explainability:** Complex AI models can be difficult to interpret, making it hard to understand why certain decisions are made, undermining accountability.
- **Social Complexity:** AI models currently often struggle to fully capture the intricate nature of social problems, potentially leading to oversimplified solutions.[31] Effectively addressing the root causes of vulnerability requires a deep understanding of the socioeconomic and political context. Humanitarian organizations should prioritize understanding these underlying factors for more sustainable impact.

Responsible AI Use
Rigorous data quality checks, efforts to mitigate bias, focus on transparent and interpretable models, and a balanced approach that combines AI insights with human expertise are essential for the ethical and effective use of AI in beneficiary targeting.

Key Takeaways: AI-Enhanced Beneficiary Selection & Targeting for MPCA

- **Harnessing the Potential of Data:** AI could revolutionize targeting by analysing vast and diverse data sources – social media, mobile records, imagery – to provide real-time insights into evolving needs.
- **Predictive Power:** AI models could forecast areas likely to experience surges in need, enabling proactive MPCA planning and resource allocation.

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[31] Madigan, S. (2024).

- **Precision Targeting:** AI has the potential to pinpoint displacement hotspots, damage zones, or hidden vulnerability patterns, ensuring MPCA reaches those most in need.
- **Ethical Considerations are Key:** Prioritizing bias mitigation, data quality, and transparency will be essential as AI is implemented to ensure fairness and effectiveness.
- **A Tool, not a Solution:** While AI offers powerful capabilities, understanding social, economic, and political contexts remains crucial for addressing the root causes of vulnerability and designing sustainable MPCA programs.

Delivery Mechanisms

The increasing use of digital solutions like mobile money and e-vouchers in MPCA programs offers opportunities for AI to streamline delivery and optimize the beneficiary experience. AI-powered chatbots and virtual assistants hold great potential for supporting beneficiaries in navigating these digital platforms.

AI-Enhanced Support for MPCA Beneficiaries

As MPCA programs move towards digital solutions like mobile money and e-vouchers, AI holds the key to streamlining processes and enhancing the experience for both beneficiaries and program teams. AI-powered chatbots and virtual assistants are exceptionally helpful in guiding beneficiaries as they interact with these digital platforms.

These AI tools offer several crucial benefits. For starters, they provide 24/7 guidance with step-by-step instructions on registration, troubleshooting common issues, and answering frequently asked questions. This round-the-clock availability ensures beneficiaries receive support whenever they need it. Furthermore, AI chatbots can break down language barriers by offering guidance in multiple languages. This is vital for reaching diverse beneficiary populations and promoting inclusion. Additionally, these tools improve accessibility by assisting beneficiaries with disabilities or limited digital literacy, enabling them to access MPCA more easily. Finally, virtual assistants powered by AI can solve technical problems and answer questions related to specific vendors, reducing the need for beneficiaries to seek in-person support.

Inspired by existing initiatives, we can envision how similar models can be adapted for MPCA programs. For example, the Sésamo Chatbot from Sesame Workshop, designed for educational content, could be tailored to guide beneficiaries through the registration and use of digital cash platforms. Similarly, UNICEF's focus on incorporating sensitive issue detection in their Safer Chatbots can highlight how AI tools could identify safeguarding concerns raised by beneficiaries, ensuring timely intervention. Clear Global's Uji Chatbot demonstrates the power of multi-language support, and adapting this approach can ensure that all beneficiaries receive support in their preferred language.

Enhanced Monitoring and Real-Time Insights

While AI chatbots excel at supporting beneficiaries on the ground, AI's potential extends further. Program teams managing MPCA delivery through Over the Counter Cash channels could leverage AI-powered analytics for real-time insights into vendor performance and potential issues, by undertaking the following steps.

- **Transaction Monitoring:** AI can analyse real-time data on cash disbursement records, potentially identifying anomalies in payout times or discrepancies between transferred amounts and disbursed amounts. This could indicate potential issues at specific Hawala locations, allowing for quicker investigation and intervention.
- **Vendor Performance Analysis:** AI can analyse historical data on disbursement times, beneficiary complaints, and cash availability across different vendors. These insights can be used to identify consistently problematic vendors or areas with inefficient cash out processes.
- **Predictive Analytics:** By analysing historical trends and incorporating external factors (e.g., security risks, holidays), AI models could potentially predict potential cash flow disruptions or delays at specific vendors, allowing program teams to proactively address them.

It's important to emphasize that AI is a powerful tool, but it should be used alongside human expertise for optimal results. For instance, AI might flag a Hawala location with unusually long cash-out times, prompting a human investigator to verify the issue and work with the vendor to resolve it. But based on examples in other industries, particularly the financial services industry integrating AI for real-time monitoring and analysis, MPCA programs can gain valuable insights into vendor performance, identify potential issues with over-counting or delays, and ultimately ensure timely and efficient cash delivery to beneficiaries.

Key Takeaways: The Future of MPCA Delivery with AI

- **24/7 Beneficiary Guidance:** AI chatbots could provide step-by-step support on digital MPCA platforms, troubleshooting issues, and answering questions at any time.
- **Breaking Down Barriers:** AI tools could offer multi-language guidance and accessibility features, ensuring MPCA reaches diverse populations and those with limited digital literacy.
- **Enhanced Vendor Monitoring:** AI could analyse real-time data to identify potential bottlenecks, cash-out delays, or discrepancies at vendor locations, enabling swift issue resolution.
- **Predicting for Proactive Management:** AI models have the potential to learn from historical data, potentially predicting cash flow disruptions or delays, allowing teams to address them proactively.

Implementation of MPCA projects

AI agents hold the potential to significantly impact how MPCA programs are implemented at every stage. By automating administrative tasks, coordinating workflows, and providing data-driven insights, these intelligent systems can boost operational efficiency throughout the program lifecycle. This allows humanitarian teams to focus on strategic decisions and direct beneficiary support.

These systems are capable of planning and streamlining tasks across the entire MPCA program lifecycle. From initial design and needs assessments to ongoing implementation, monitoring, and evaluation, AI agents can coordinate schedules, flag potential delays, and optimize resource allocation based on real-time data. This frees up human teams from repetitive tasks, allowing for more strategic oversight and timely program adjustments.

Content Creation and Tone Consistency

Maintaining a consistent voice and style across documents in the humanitarian sector, especially those with multiple contributors, can be time-consuming and complex. AI writing assistants, powered by models like GPT-4, can offer significant support. These tools analyse existing documents to learn an organization's preferred style, and then suggest edits to align contributed sections with established guidelines. UNICEF's use of AI to quality-check their End-Year Summary Narrative reports highlights this potential, demonstrating how AI streamlines the editing process, allowing experts to focus on content while the AI ensures a polished, consistent output.

Analysing Handwritten Text

Gathering and analysing data from remote or low-resource areas is essential in MPCA for targeting interventions. The World Food Programme's Meza tool exemplifies how AI can streamline this process. Meza's use of Optical Character Recognition (OCR) technology converts handwritten health records into digital format, drastically reducing the time needed for data analysis. This near real-time data availability empowers swift, context-specific decisions, improving the effectiveness of MPCA programs.

Streamlining Beneficiary Management

AI agents can automate crucial aspects of beneficiary management in MPCA programs. These tools could handle initial registration processes, verify eligibility against complex criteria, and even track changes in beneficiary status, such as displacement or relocation. This automation reduces the potential for human error, speeds up processes, and frees up caseworkers for more complex needs assessments.

Enhancing Financial Oversight

In the realm of financial transactions, AI agents can offer significant benefits for MPCA accountability and efficiency. These agents could automate secure transfer approvals, proactively flag suspicious activity within vendor networks, and streamline the reconciliation of accounts. This level of oversight could enable increased trust in the system and ensure funds reach beneficiaries swiftly and reliably.

Automating Payment Approvals and Transfers

Building on the capabilities mentioned above, AI can further streamline financial processes by automating file transfer for approved payments. This would involve developing a system that can detect when a payment has been authorized and then trigger the secure transfer of relevant files (invoices, beneficiary information, etc.) to the designated payment platform, such as Red Rose. This eliminates the need for manual file transfer, reduces potential errors, and accelerates the disbursement of funds to beneficiaries.

Real-Time Insights for Proactive Response

AI's ability to analyse and generate reports in real-time has immense value for MPCA implementation. AI agents could automate reporting on transfer volumes, beneficiary spending patterns, and fluctuations in market prices. These rapid insights empower program teams to adjust transfer values proactively, tailor responses to localized needs, and identify potential supply chain disruptions for rapid intervention.

AI for Streamlining MPCA Administration

MPCA programs offer vital support to crisis-affected communities. Yet, the administrative demands of these programs can be substantial, including beneficiary registration, data entry, document processing, reporting generation, and compliance checks. These tasks, while necessary, often divert humanitarian resources away from strategic planning and direct beneficiary engagement. AI offers a powerful solution to streamline these processes, enabling efficiency gains and improved service delivery.

AI solutions can revolutionize MPCA administration in multiple ways. Optical Character Recognition (OCR) and Natural Language Processing (NLP) allow for automated extraction of data from beneficiary registration forms, monitoring reports, and other documents, significantly reducing manual data entry and minimizing errors. AI algorithms trained on document classification can automatically identify and route beneficiary requests, flagging urgent cases to ensure timely responses. Regular reports can be automatically generated, pulling relevant data from multiple sources and compiling it into standardized templates, saving valuable staff time. Furthermore, AI can enhance compliance by conducting automated checks against established regulations and highlighting inconsistencies for further review.

By streamlining these administrative tasks, AI leads to increased efficiency, freeing up personnel for tasks requiring strategic judgment and human connection. Accuracy in data entry and reporting improves, contributing to the overall accountability of MPCA programs. However, implementing AI for MPCA administration requires careful consideration. Data privacy and security must be paramount, with adherence to strict regulations for collecting, storing, and utilizing beneficiary data. It's essential to ensure seamless integration of AI solutions with existing MPCA management systems. Finally, thorough staff training builds capacity and facilitates smooth adoption of AI tools within the organization.

Key Takeaways: AI for Streamlined MPCA Implementation

- **Efficiency Across the Lifecycle**: AI agents can automate tasks at every stage of MPCA programs, from design to evaluation, optimizing resource use and freeing staff for strategic work.
- **Enhanced Beneficiary Management:** AI simplifies beneficiary registration, eligibility checks, and status tracking, reducing errors and enabling caseworkers to focus on complex needs.
- **Financial Transparency:** AI strengthens MPCA accountability by automating secure transfer approvals, flagging potential fraud, and streamlining financial reporting.
- **Data-Driven Insights**: Real-time reporting powered by AI allows teams to quickly adjust transfer values, respond to localized needs, and identify potential supply chain issues.

Monitoring and Evaluation

Monitoring and evaluation (M&E) of MPCA programs can be time-consuming, resource-intensive, and prone to biases or errors. Generative AI offers the potential to revolutionize how humanitarian actors collect, analyse, and communicate M&E data. From automating tasks to extracting insights from vast datasets, AI can improve the efficiency and impact of these processes.

Monitoring Public Sentiment and Protection Risks
Manually monitoring the vast number of social media and other public data sources for mentions of MPCA programs, potential protection concerns, or negative sentiment presents a significant challenge for humanitarian organizations. However, AI-powered tools with natural language processing (NLP) capabilities offer a solution. These tools continuously scan public data sources, filtering for relevant keywords and analysing sentiment. UNHCR's partnership with UN Global Pulse, which used NLP to identify hate speech and xenophobia against refugees, demonstrates how similar tools could be applied to monitor MPCA programs. AI could help flag emerging protection-related risks faced by beneficiaries, helping organizations take proactive measures.

Streamlining and Categorizing Feedback

Processing and categorizing the large volume of beneficiary feedback received through surveys, calls, or other channels is a time-consuming and resource-intensive task. AI algorithms offer a solution by automating the classification of this feedback. These algorithms can identify key themes, sentiment, and actionable categories within the data, such as issues with vendors or security concerns. UNHCR Uganda's project to automate call classification demonstrates how AI can streamline feedback processing. This automation allows MPCA programs to rapidly identify and address issues, improving the beneficiary experience.

Unlocking Insights from Qualitative Data

Extracting meaningful insights from focus group discussions, key informant interviews, and other sources of unstructured text data requires significant time and effort. Natural language processing (NLP) techniques provide a solution. AI-powered NLP can analyse qualitative data, identifying common themes, sentiment trends, and key insights within beneficiary narratives. The IRC's use of NLP to analyse beneficiary feedback showcases AI's ability to quickly surface trends and inform adaptive program design, empowering MPCA programs to better respond to evolving needs.

Overcoming Language and Literacy Barriers

Traditional M&E methods that rely on written surveys or forms can exclude beneficiaries with limited literacy or language barriers. AI addresses this challenge through advanced speech recognition tools and AI-powered translation. These technologies enable the collection and analysis of feedback in multiple languages, including audio recordings from beneficiaries. The WFP's "Voice to Text AI" tool demonstrates how AI can break down communication barriers, leading to more inclusive M&E processes in diverse MPCA contexts.

Data-Driven Insights and Visualization

Communicating M&E findings to stakeholders can be challenging, as traditional reports might not be engaging or easily interpreted. Here, AI-powered data visualization tools and chatbots offer powerful solutions. They can generate interactive dashboards, reports, and even answer stakeholder queries on the fly, all based on analysed M&E data. OCHA's collaboration with DataKind demonstrates how AI chatbots can simplify data access and generate insights on demand. This has the potential to transform how MPCA M&E results are shared and utilized for data-backed decision-making.

Key Takeaways: Transforming MPCA M&E with AI
• **Proactive Issue Identification:** AI-powered tools continuously monitor social media and other public data to identify potential protection risks, negative sentiment, or emerging issues related to MPCA programs, enabling proactive responses.

- **Streamlined Feedback Analysis:** AI automates the classification of beneficiary feedback from various sources, quickly surfacing key themes, sentiment, and actionable categories (e.g., vendor concerns), enabling MPCA teams to rapidly address issues and improve beneficiary experiences.
- **Unlocking Qualitative Insights:** AI, through natural language processing, analyses focus groups, interviews, and other qualitative data to extract valuable insights and trends. This aids rapid, data driven MPCA program adaptations to meet evolving needs.
- **Inclusive M&E:** AI-powered translation and speech recognition tools break down language barriers and address literacy challenges, enabling the collection and analysis of feedback from diverse beneficiary populations. This ensures MPCA programs are designed and evaluated with the needs of all beneficiaries in mind.

Accountability to Affected Populations

Accountability to affected populations is paramount in MPCA programming. Generative AI offers innovative ways to enhance communication, feedback mechanisms, and participatory processes, empowering communities to have a greater voice in the cash assistance they receive. To ensure AI is used ethically and effectively in MPCA programs, humanitarian organizations must prioritize inclusivity, data protection, and maintain a human-centred approach.

AI-Enhanced Communication

In MPCA programs, clear and accessible communication is vital. AI-powered chatbots and virtual assistants can provide timely updates on transfer amounts, payment schedules, and eligibility guidelines in multiple languages. This bridges communication gaps, empowering beneficiaries to access crucial information, particularly in linguistically diverse or low-literacy settings. For example, a chatbot could guide beneficiaries through the MPCA registration process in their local language, significantly enhancing accessibility.

Fostering Inclusive Participation

MPCA programs should actively involve beneficiaries in decision-making. AI-powered participatory mapping tools can enable communities to visually represent their needs, local resources, safety risks, and preferred vendor locations for cash distribution. This geospatial data, collected and analysed with AI, can inform MPCA design and ensure it better reflects community preferences. AI-driven crowdsourcing platforms could also be used to gather beneficiary input on MPCA improvements, fostering ownership and empowerment.

Key Takeaways: AI for Enhanced Accountability in MPCA

- **Break Down Communication Barriers:** Utilize AI-powered chatbots and translation tools to ensure beneficiaries receive essential MPCA information

(registration, payments, etc.) in their preferred language, promoting understanding and access.

- **Empower Through Participation:** Leverage AI-based participatory mapping tools to give beneficiaries a voice in identifying preferred cash distribution locations, safety concerns, and local resources. Integrate this community input into MPCA design.

Risks of Using AI in MPCA Programs and potential mitigation measures

While Generative AI offers exciting potential for MPCA programs, its use poses unique risks that must be carefully managed. From data privacy breaches to the potential for algorithmic bias, humanitarian organizations must implement robust mitigation strategies to ensure AI deployment is responsible, ethical, and aligned with beneficiary protection. This section explores critical risks associated with AI in MPCA and highlights best practices for mitigating those risks to ensure technology serves, rather than undermines, humanitarian principles.

Data Privacy and Security Concerns in MPCA

Generative AI in MPCA programs relies on collecting and analysing vast amounts of sensitive beneficiary data, including names, addresses, financial status, and vulnerability factors.[32] This poses significant privacy and security risks, as data breaches or unauthorized access could have devastating consequences. The risk increases with the volume and complexity of the data processed. As noted by Silverman (2023), even well-intentioned use of AI tools can inadvertently expose confidential beneficiary information.[33]

Implications and Challenges

- **Compromised Beneficiary Safety:** A data breach in MPCA could expose beneficiaries to identity theft, financial fraud, or even physical harm if sensitive information falls into the wrong hands. It could put those already in vulnerable situations at even greater risk.
- **Misuse of Data:** MPCA beneficiary data could be misused internally or externally. A key informant highlighted the potential for AI systems to track spending patterns and unfairly drop beneficiaries from programs, demonstrating how AI, if not carefully implemented, could further marginalize vulnerable groups.
- **Erosion of Trust:** Data breaches or unauthorized access can severely damage the trust between humanitarian organizations and the communities they

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[32] CALP Network. (2023, November 15). The State of World's Cash 2023 Report: Cash and Voucher Assistance (CVA) in Humanitarian Action. CALP Network. https://www.calpnetwork.org/community/
[33] Silverman, E. (2023). 5 security risks of generative AI and how to prepare for them. Zapier Blog, June 14, 2023. Retrieved from https://zapier.com/blog/ai-security-risks/ [Accessed April 20, 2024].

serve. This could hinder the effectiveness of current and future MPCA programs.

Mitigation Strategies for MPCA Projects

- **Robust Data Protection:** Implement stringent data protection measures like encryption, secure storage, and strict access controls. Establish comprehensive data governance protocols covering how MPCA data is collected, used, and shared within the organization.[34]
- **Proactive Vigilance:** Conduct regular security audits and risk assessments to proactively identify and address vulnerabilities in MPCA AI systems. Train staff on data protection best practices, test for breaches, and continuously update security protocols.
- **Collaboration and Knowledge-Sharing:** Participate in industry working groups and initiatives focused on data privacy and security within the humanitarian sector. Share knowledge and learn from the experiences of other organizations to strengthen collective data safeguards for MPCA programs.
- **Clear Data Governance:** Establish clear MPCA-specific data governance frameworks that outline roles, responsibilities, data sharing protocols, and mechanisms for addressing breaches and potential harms. These frameworks should prioritize the protection of beneficiaries and adhere to humanitarian principles.
- **Ethical Standards:** Consider adopting industry-recognized data governance frameworks and responsible AI principles, such as those outlined in Microsoft's Responsible AI Standards, to ensure ethical AI use in MPCA[35].

Protecting MPCA Beneficiaries

By prioritizing data protection, remaining vigilant, and fostering a culture of collaboration and ethical AI use, humanitarian organizations can work to mitigate data security risks in MPCA. These efforts are crucial to protect beneficiaries, safeguard trust, and ensure the responsible use of AI in delivering life-saving assistance.

Risks of "Shadow IT" in Humanitarian Agencies

The rapid adoption of generative AI tools, such as ChatGPT, among students[36] and professionals raises concerns about the potential emergence of "shadow IT" within humanitarian agencies. As new employees join these organizations, many of whom are accustomed to using generative AI for various tasks,[37] there is a risk

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[34] CALP Network. (2023, November 15). The State of World's Cash 2023 Report: Cash and Voucher Assistance (CVA) in Humanitarian Action. CALP Network. https://www.calpnetwork.org/community/
[35] Kazaz, J. (2023). The Impact of AI on the Society: Key Takeaways. GLOBSEC Event Centre for Democracy & Resilience, August 7. Retrieved from https://www.globsec.org/what-we-do/events/impact-ai-society-key-takeaways [Accessed April 20, 2024].
[36] Adams, Richard. "More than half of UK undergraduates say they use AI to help with essays." The Guardian, February 1, 2024. Available at: https://www.theguardian.com/technology/2024/feb/01/more-than-half-uk-undergraduates-ai-essays-artificial-intelligence. Accessed April 30, 2024.
[37] Half of Japanese University Students Have Used Generative AI." Nippon.com, April 8, 2024. Available at: https://www.nippon.com/en/japan-data/h01946/. Accessed April 30, 2024.

that they may continue to use these tools unofficially, regardless of organizational policies or guidelines. This practice, known as "shadow IT," can introduce significant risks and challenges for humanitarian agencies, potentially undermining data security, compliance, and the overall effectiveness of their operations.

Implications and Challenges

- **Data Security Breaches:** Unauthorized AI tools could inadvertently expose sensitive beneficiary data, reports, or strategic plans. This undermines trust and compromises the safety of those the organization serves.
- **Compliance Violations:** Humanitarian work is bound by strict regulations and ethical guidelines that may limit the use of certain AI technologies. "Shadow IT" practices could lead to violations, incurring legal and reputational damage.
- **Lack of Oversight:** "Shadow IT" circumvents governance structures. The unregulated use of AI tools can lead to inconsistent processes, unreliable outputs, and reduced overall quality of the organization's work.
- **Unreliable Information:** While powerful, AI models can generate inaccurate or biased content. Using unapproved tools without validation opens the door to disseminating harmful misinformation, potentially hindering humanitarian efforts.
- **Skill Gaps:** Uncontrolled AI tool use could widen skill gaps across the organization, making it difficult to leverage AI effectively and responsibly across different teams or departments.

Mitigation Strategies for MPCA Projects

- **Clear Policies and Guidelines:** Develop and communicate transparent policies on the use of AI tools within the organization, outlining approved options, appropriate use cases, and processes for requesting access.
- **Monitoring and Access Controls:** Implement access controls (authentication, logging) and regular audits to detect and address unauthorized usage of AI tools.
- **Open Communication:** Encourage staff feedback channels to identify potential gaps in the approved tools, informing future policy updates or acquisitions.
- **Training and Capacity Building:** Invest in comprehensive training programs on the responsible and effective use of approved AI tools, promoting compliance and addressing skill gaps.
- **Tech Solutions:** Explore secure technological environments (e.g., virtual desktops, cloud platforms) that provide controlled access to AI tools while mitigating the risks of "Shadow IT" and data exposure.
- **Collaboration and Knowledge Sharing:** Actively participate in industry working groups and initiatives focused on managing "Shadow IT" risks in the humanitarian sector, sharing best practices and lessons learned for collective progress.

Balancing Innovation and Oversight

By proactively addressing "Shadow IT" risks, humanitarian organizations can harness the potential of AI while ensuring data security, compliance, and upholding humanitarian values. It's vital to find a balance that empowers responsible innovation alongside strict adherence to ethical principles.

Algorithmic Bias and Fairness in MPCA

The use of Generative AI in MPCA raises serious concerns about bias and fairness. AI systems can perpetuate or even amplify existing inequalities if they are trained on biased data, lack diverse development teams, or rely on historical practices that were discriminatory.

Implications and Challenges

- **Unfair Outcomes:** Biased AI could lead to unequal aid distribution in MPCA programs, reinforcing power imbalances and further marginalizing vulnerable groups. For example, targeting systems might prioritize certain beneficiaries based on flawed assumptions, excluding those in need[38].
- **Overlooking Diverse Needs:** AI-powered needs assessments might miss the specific needs of women, those with disabilities, or minorities if the data is not representative. This could lead to MPCA programs failing to address these groups' unique challenges.
- **Reinforcing Existing Inequities:** AI models can reflect biases in their training data or those of their developers. In humanitarian contexts, this could exacerbate discrimination and violate core principles of equity and inclusion[39].
- **Lack of Transparency:** Opaque AI decision-making can make it hard to identify and correct bias. This lack of accountability undermines MPCA efforts and erodes trust.
- **Data-Driven Exclusion:** A reliance on data-hungry systems, like those requiring digital identity or biometrics, for MPCA delivery could exclude those who lack such documentation[40].

Mitigation Strategies for MPCA Projects

- **Diverse and Representative Data:** Ensure AI training data in MPCA is diverse, reflects the full range of affected populations, and actively counters historical biases. This necessitates collaboration to collect inclusive data.

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38 VOICE (2024) 'Artificial Intelligence: disruption or opportunity for humanitarian aid?', VOICE. Available at VOICE Key highlights - 'Artificial Intelligence: disruption or opportunity for humanitarian aid' (https://voiceeu.org/news/artificial-intelligence-disruption-or-opportunity-for-humanitarian-aid-voice-key-highlights)(: 12 April 2024).

39 Sandvik. B., Lidén, K., & Jumbert, M. G. (2023). Artificial intelligence could be a game-changer for the humanitarian sector. Panorama News, October 13, 2023. Retrieved from https://www.panoramanyheter.no/bistandsbransjen-humanitaer-bistand-kunstig-intelligens/kunstig-intelligens-kan-bli-en-gamechanger-for-humanitaer-sektor/347728 [Accessed April 20, 2024].

40 Coppi, G. (2024). Private tech, humanitarian problems: how to ensure digital transformation does no harm. Access Now. Retrieved from [https://www.accessnow.org/private-tech-humanitarian-mapping]([invalid URL removed].

- **Prioritize Transparency and Explainability:** Develop AI systems with clear processes for understanding and auditing how decisions are made. This helps identify and correct bias.
- **Regular Bias Assessments:** Conduct audits and analyses of AI systems to proactively detect and mitigate bias in MPCA programs. Engage external experts for objectivity.
- **Inclusive Development and Deployment:** Foster diversity in AI development teams and prioritize the needs of marginalized communities in the design and use of MPCA AI systems. This ensures a broader range of perspectives.
- **Ethical Data Collection:** Critically examine the need for data-intensive systems. Balance the need for data in MPCA with the risk of excluding vulnerable groups who lack certain documentation[41].

Prioritizing Fairness in MPCA

By addressing algorithmic bias, humanitarian organizations can harness the potential of AI for MPCA while staying true to principles of equity. This requires diverse data, transparent processes, regular audits, inclusive development, and a constant focus on those most in need.

Lack of Transparency and Explainability in MPCA

The use of AI tools and systems in MPCA programs raises concerns about transparency and explainability. Transparency means understanding how an AI system works, while explainability means being able to understand the reasoning behind its decisions. These are crucial for accountability, trust, and fairness in MPCA work.

Implications and Challenges

- **Unseen Errors and Biases:** Without transparency, it's harder to find and fix errors or biases in AI systems used for MPCA. This could lead to unfair outcomes and erode trust in the programs.
- **Misalignment with Humanitarian Principles:** Opaque AI decision-making can make it difficult to ensure AI systems align with values like impartiality and accountability. This could lead to AI being used in ways that undermine the core principles of humanitarian action.
- **Eroding Trust:** If beneficiaries, donors, and the public can't understand how MPCA AI systems work, they might question their fairness. This loss of trust can damage support for these vital programs.
- **Ethical and Regulatory Challenges:** Unexplainable AI makes it harder to comply with ethical guidelines and regulations on transparency and fairness. This risks legal issues and reputational harm for organizations.

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41 Madigan, S. (2024). The dangers and exclusions of AI and datafication in the humanitarian sector. ALNAP 2024 Research & Innovation Forum. Retrieved from https://library.alnap.org/membership/members/odi

- **The Risks of AI-Generated Imagery:** Using AI to create images for humanitarian communication, even with good intentions, can blur the line between real and fabricated. This can undermine public trust and the fundamental purpose of humanitarian documentation and reporting[42].

Mitigation Strategies for MPCA Projects

- **Prioritize Transparent AI:** Work with developers to ensure MPCA AI systems allow for human oversight and understanding. Use transparent algorithms, document inputs/outputs, and create clear interfaces.
- **Ethical Frameworks:** Adopt frameworks like those from the Humanitarian Data Science and Ethics Group (HDSEG) that emphasize transparency and fairness. These guide best practices for explainable AI and help monitor for issues.
- **Collaboration and Knowledge-Sharing:** Participate in working groups and engage with researchers to learn and share best practices for ensuring transparency in humanitarian AI.
- **Staff Capacity Building:** Invest in training for humanitarian teams on ethical AI, data literacy, and effective communication. This empowers them to develop and use accountable AI systems, maximizing benefits for beneficiaries.

Informed Consent for AI Use in MPCA Programs

Obtaining informed consent in MPCA when using AI presents unique challenges. Beneficiary vulnerability, complex technical concepts, urgency, and language barriers create hurdles for truly voluntary and informed agreement to data processing.

Implications and Challenges

- **Power Imbalance:** Beneficiaries in crisis, reliant on aid, may feel pressured to consent to AI without fully understanding the implications, undermining the voluntary nature of consent[43].
- **Technical Complexity:** Explaining AI and data use in ways understandable to those with varying technical literacy is particularly difficult. This obstacle can prevent true informed consent.
- **Crisis Urgency:** In emergencies, the need to act quickly might limit time for comprehensive explanations and informed consent for AI use[44].
- **Language and Culture:** Ensuring AI concepts are communicated in a culturally sensitive and accessible manner across diverse communities can be a major barrier.

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[42] Jumbert, M. G. (2024). The AI Dilemma: Can Artificial Images of War and Suffering Stir Empathy? Global Policy Opinion, March 15, 2024. Retrieved from https://www.globalpolicyjournal.com/blog/15/03/2024/ai-dilemma-can-artificial-images-war-and-suffering-stir-empathy [Accessed April 20, 2024].

[43] Messenger, C., & Steller, R. (2020, December 10). Consent to Data Processing in Humanitarian and Development Contexts, Part 1: Who, What, When, and How. Retrieved from https://dai-global-digital.com/consent-to-data-processing-in-humanitarian-and-development-contexts-part-one.html.

[44] Jacobs, C. (2020). Getting prior informed consent – a thorny issue. Retrieved from https://trafig.eu/blog/getting-prior-informed-consent-a-thorny-issue.

- **Limited Alternatives:** When MPCA is essential for survival, beneficiaries may not feel they have a real choice to withhold consent for AI use, even if there are risks.[45]

Mitigation Strategies for MPCA Projects

- **Deep Community Engagement:** Prioritize participatory methods. Work with communities from the outset to understand their perspectives on AI and create culturally appropriate consent processes.
- **Accessible Communication:** Use videos, graphics, local languages, and other formats to clearly explain AI concepts, tailored to the audience's literacy and cultural context.
- **Tiered Approach:** Start with consent for essential AI use in emergencies, then introduce more detailed options for non-urgent AI as the situation stabilizes.
- **Minimize Detriment:** Where possible, offer alternatives if beneficiaries refuse AI use, and ensure no one is denied life-saving aid based on their data consent choices.
- **Accountability and Redress:** Establish clear policies on consent, along with accessible ways for beneficiaries to voice concerns, get information, or have issues addressed.

Continuous Improvement

Treat informed consent as an ongoing process. Regularly monitor, evaluate, and adapt consent procedures in response to community feedback and evolving AI risks. Collaboration with other humanitarian organizations is key to improving consent practices for AI in MPCA.

The Risks of AI-Generated Misinformation in MPCA

The ability of AI to create deceptive audio, video, or images poses a significant threat to MPCA programs. This could erode trust, misdirect resources, and hinder the ability to provide effective aid to those in need.

Implications and Challenges in MPCA

- **Eroding Trust in MPCA:** AI-generated media could be used to create misleading content, jeopardizing the trust beneficiaries and donors place in MPCA programs. This could lead to reduced participation, funding cuts, and damage to the organization's ability to operate.
- **Impersonating Staff:** Deepfakes or voice cloning could be used to fabricate statements or actions attributed to staff. This could disrupt communication, sow confusion about aid priorities, and undermine beneficiaries' confidence in the program.
- **Manipulating Aid Distribution:** Bad actors could use AI fakes to exaggerate need in certain areas or fabricate incidents, misdirecting resources away from those most in need.

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[45] Messenger, C., & Steller, R. (2020)

- **Politicization and Attacks on MPCA:** AI-generated media could be used to falsely portray MPCA programs as biased, eroding support and making it difficult to maintain neutrality and access to vulnerable populations.

Mitigation Strategies for MPCA Projects
- **Detection and Clear Policies:** Organizations need robust capabilities to detect AI fakes, alongside strict policies against creating or spreading them without prominent labelling.
- **Staff Training and Countermeasures:** Staff must be trained to identify AI-generated fakes and have clear protocols for reporting suspected misinformation and addressing its impact on MPCA delivery.
- **Tech Collaboration:** Partner with tech firms and researchers to refine MPCA-specific detection methods, as AI deception techniques specifically targeting humanitarian work are likely to evolve.
- **Transparency and Trust-Building:** If AI-generated media is responsibly used in limited cases (e.g., protecting beneficiary identities), it must be clearly labelled as such. Proactive communication to build trust with beneficiaries is key.
- **Accessible Reporting:** Establish ways for beneficiaries, staff, and others to securely report suspected AI fakes related to MPCA programs, enabling quick investigation and corrective action.

Protecting MPCA Integrity
By proactively addressing the threat of AI-generated misinformation, MPCA programs can safeguard their reputation, ensure resources reach those most in need, and uphold the trust essential for their life-saving work.

Overreliance on AI and the "Falling Asleep at the Wheel" Phenomenon

While Generative AI offers significant potential for enhancing MPCA programs, there is a risk of overreliance on these systems, leading to complacency and a failure to critically evaluate AI-generated outputs or decisions. This phenomenon, referred to as "falling asleep at the wheel,"[46] can have severe consequences in humanitarian contexts, where mistakes or biases can significantly impact the well-being of vulnerable populations.

Implications and Challenges
- **Eroding Decision-Making Skills:** Reliance on AI recommendations could weaken humanitarian staff's analytical skills and judgment, especially in complex situations requiring nuanced understanding of beneficiaries' needs.
- **Unnoticed Errors and Bias:** Even sophisticated AI makes mistakes. Overreliance means these errors, or biases within the AI, might go unchecked,

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[46] Mollick, Ethan, September 16, 2023.

causing unfair distributions or ineffective interventions within the MPCA project.

- **Reduced Accountability:** When AI drives decisions, it can become unclear who is responsible when things go wrong. This undermines trust and makes it harder to improve MPCA projects based on past experience.
- **Perpetuating Inequities:** If AI is trained on biased data, or lacks diverse perspectives, it risks reinforcing existing inequalities within the MPCA project. Complacent reliance on such AI outputs would worsen these problems.

Mitigation Strategies for MPCA Projects

- **Emphasize Critical Thinking:** Organizations must build a culture where humanitarian staff actively question and validate AI recommendations, maintaining independent judgment.
- **Robust Validation Processes:** Establish strict checks on AI outputs before action is taken, including peer review, comparison with other data, or expert spot-checks.
- **Prioritize Explainable AI:** Seek out AI tools that offer some transparency into their decision-making. This helps humanitarian staff spot potential errors or biases within the project.
- **Staff Training and Development** Provide training so humanitarian staff working on MPCA projects understand both the power and limits of AI. This makes them effective collaborators with AI, rather than passive recipients of its outputs.
- **Clear Accountability:** Establish policies clearly outlining who is responsible for decisions within MPCA projects, even when AI tools are used. This includes processes for addressing any issues that arise.

Staying in Control
By avoiding overreliance and promoting the critical use of AI tools, MPCA projects can harness AI's potential while remaining focused on beneficiaries, ensuring accountability, and delivering the best possible aid.

Barriers to the Use of AI in MPCA Programs and potential mitigation measures

While Generative AI holds significant promise for MPCA programs, the road to successful implementation is complex. Significant barriers exist, ranging from technical and financial limitations to the practical challenges of navigating evolving regulations and fostering staff acceptance. To realize the full benefits of AI, humanitarian organizations must address these obstacles head-on. This section explores these key barriers to the widespread adoption of AI in MPCA, and outlines potential strategies to overcome them, paving the way for more effective, data-driven humanitarian aid.

Limited ability to deploy and scale AI systems.

Humanitarian organizations, especially in remote or crisis-stricken areas, often lack the infrastructure to fully implement AI for MPCA. This limits their ability to harness AI's potential benefits. Further, even when data is generated, the culture and systems required to consolidate it into usable mega-datasets may be absent. This lack of readily available, large-scale data hinders AI development, particularly for forecasting and vulnerability mapping in MPCA contexts.

Implications and Challenges

- **Inadequate Infrastructure:** MPCA settings may lack powerful servers or reliable electricity and internet access, which are crucial for running AI systems.
- **Operational Constraints:** Without the capacity to deploy AI at scale, MPCA programs can face delays in data analysis and decision-making, compromising the speed and effectiveness of aid delivery.
- **Absence of Mega-Datasets:** Populations in crisis might lack access to technology that generates easily transmissible data (e.g., smartphones), or humanitarian datasets might be fragmented and not designed for AI analysis. This makes it difficult to train AI models effectively.
- **Blurred Accountability:** As humanitarians become reliant on external tech providers for AI deployment, lines of responsibility can blur [1]. This raises concerns about upholding humanitarian principles when commercial interests might be at play.

Mitigation Strategies for MPCA Projects

- **Assess Needs Realistically:** Organizations must thoroughly understand the specific infrastructure and data requirements for the AI tools they plan to use in MPCA. This helps prioritize investments.
- **Cloud-Based Solutions:** Using cloud services for computing power and storage can provide scalability without major on-site infrastructure development.
- **Invest in Resilience:** Backup power and redundant internet options, where feasible, are key to ensure AI systems function reliably in MPCA settings.
- **Offline and Low-Resource AI:** Explore AI systems designed to operate even with limited connectivity or on less powerful devices, suiting the realities of many MPCA contexts.
- **Collaborate with Clear Boundaries:** Tech companies and humanitarian organizations must partner strategically, with clear roles. Humanitarians remain the primary aid providers, upholding humanitarian values, while tech companies provide tools and expertise in a way that supports, not disrupts, humanitarian principles.

Skill gaps and capacity constraints

The development, deployment, and maintenance of Generative AI systems require specialized technical skills and expertise, which may be in short supply within humanitarian organizations. The high demand for AI talent in the private sector and the limited resources available for staff training and development can make it challenging for humanitarian organizations to build and retain the necessary technical capacity.

Implications and Challenges

- **Limited in-house expertise:** Many humanitarian organizations may lack the in-house technical expertise required to develop, deploy, and maintain AI systems effectively. This skill gap can hinder the adoption and scaling of AI-powered solutions in MPCA programs.
- **Difficulty in attracting and retaining AI talent:** The high demand for AI skills in the private sector can make it challenging for humanitarian organizations to attract and retain top AI talent. The competitive salaries and benefits offered by technology companies can limit the ability of humanitarian organizations to build and maintain specialized AI teams.
- **Insufficient resources for capacity building**: Humanitarian organizations often operate with limited budgets and resources, which can constrain their ability to invest in staff training and capacity building programs focused on AI skills. This can perpetuate the skill gaps and hinder the long-term adoption and sustainability of AI-powered solutions.

Mitigation Strategies for MPCA Projects

- **Develop targeted capacity building programs:** Humanitarian organizations should invest in targeted capacity building programs to equip staff with the necessary skills and knowledge to work effectively with AI systems. This can include training on data science, machine learning, and AI ethics, as well as practical workshops and hands-on experience with AI tools and platforms.
- **Foster partnerships with academic institutions and technology companies:** Ongoing discussions and research on the use of AI for addressing real-world problems, such as those hosted by the NYU Center on International Cooperation (2023)[47], DeepLearningAI (2023),[48] and the UC Berkeley Center for Long-Term Cybersecurity (2023),[49] can inform the development of training materials and capacity-building initiatives for humanitarian staff working with Generative AI systems.

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[47] NYU Center on International Cooperation (2023). AI for Good: Leveraging AI across the UN peace, humanitarian, and human rights pillars. Available at: https://www.youtube.com/watch?v=2CDaQOlcAtk&t=4s. Accessed: 12 April 2024.

[48] DeepLearningAI (2023). AI for Good: A discussion on addressing real-world problems with AI. Available at: https://www.youtube.com/watch?v=8-wzjpZA2sc. Accessed: 12 April 2024.

[49] UC Berkeley Center for Long-Term Cybersecurity (2023). UC Berkeley AI Policy Research Symposium. Available at: https://www.youtube.com/watch?v=TwqHxpQJ_-w&t=1s. Accessed: 12 April 2024.

- **Promote cross-functional collaboration and skill-sharing:** Encouraging cross-functional collaboration and skill-sharing among staff can help bridge the AI skill gaps within humanitarian organizations. Fostering a culture of continuous learning and knowledge exchange can enable staff to learn from each other and collectively enhance their AI capabilities.
- **Explore alternative talent acquisition models:** Humanitarian organizations can explore alternative talent acquisition models, such as remote and flexible work arrangements, to attract and retain AI talent. Offering competitive compensation packages, career development opportunities, and meaningful work in the humanitarian sector can help organizations attract skilled AI professionals who are motivated to make a positive social impact.

Limited and unpredictable funding

Implementing AI in MPCA requires investment in technology and skilled staff, but humanitarian organizations often face budget constraints and unpredictable funding cycles. This limits their ability to undertake ambitious AI projects.

Implications and Challenges
- **Difficult to Secure AI Funding:** Donors may see AI as risky or unproven, making it hard to get dedicated funding for AI initiatives, particularly when evidence of impact is limited.
- **Short-Term Funding:** Project-based grants make it hard to plan for long-term development and maintenance of AI systems in MPCA.
- **Competing Priorities:** With limited resources, humanitarian organizations must make difficult choices. Investing in AI could mean diverting funds from other vital programs.

Mitigation Strategies for MPCA Projects
- **Compelling Case for AI:** Organizations must clearly demonstrate the potential impact, cost-effectiveness, and long-term benefits of AI for MPCA to donors.
- **Innovative Funding Models:** Explore partnerships with tech companies, philanthropic organizations, or impact investment initiatives to secure resources for AI in MPCA.
- **Advocate for Flexible Funding:** Engage with donors to promote longer-term, flexible funding that allows for sustainable AI development in humanitarian work.
- **Prioritize AI in Strategic Plans:** Embed AI initiatives into the organization's overall strategy and budget. This ensures a sustained commitment to AI alongside other essential humanitarian activities.

Regulatory and Legal Barriers

The use of AI in MPCA programs raises complex legal and ethical questions. There's often a lack of clear regulations specifically about AI in humanitarian work,

creating uncertainty for organizations. The impact of AI on society and the need for appropriate governance frameworks have been highlighted by Kazaz (2023), who provides an overview of key takeaways from a GLOBSEC event on this topic. These insights can inform efforts to navigate the complex regulatory landscape surrounding the use of Generative AI in humanitarian contexts.[50]

Implications and Challenges

- **Data Privacy and Protection:** AI in MPCA often relies on sensitive beneficiary data. Humanitarian organizations must navigate complex data protection laws that vary across locations, making compliance difficult.
- **Ethical Concerns:** AI systems must be designed to avoid causing harm, perpetuating bias, or compromising beneficiary dignity. There are few established ethical standards specific to AI in humanitarian contexts.
- **Liability and Accountability:** If an AI-driven decision in MPCA causes harm, it may be unclear who bears responsibility. This lack of clear legal frameworks poses risks for humanitarian organizations.
- **Inconsistent Global Regulations:** AI regulations are fragmented and differ significantly between countries. This makes it challenging for humanitarian organizations that work across borders to ensure consistent compliance.

Mitigation Strategies for MPCA Projects

- **Robust Data Governance:** Implement clear policies on collecting, storing, and using sensitive data in AI systems. Ensure consent processes are robust and data security measures are in place.
- **Prioritize Ethical AI:** Engage in ongoing ethical assessments of your MPCA AI systems. Establish ethical review mechanisms and consult with affected communities to address concerns.
- **Establish Clear Accountability:** Define who is responsible within the organization for AI decisions. Have transparent decision-making processes and offer ways to get redress if AI causes harm.
- **Advocate for Global Standards:** Participate in the development of clear regulatory frameworks and ethical guidelines specific to AI in humanitarian action.
- **Invest in Expertise:** Build in-house legal and ethical knowledge, or work with external experts, to navigate this evolving regulatory landscape and manage risks.

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[50] Kazaz, J. (2023). The Impact of AI on the Society: Key Takeaways. GLOBSEC Event Centre for Democracy & Resilience, August 7. Retrieved from https://www.globsec.org/what-we-do/events/impact-ai-society-key-takeaways. Accessed April 20, 2024.

Resistance to Change and Adoption of New Technologies

Implementing AI in MPCA can be met with resistance. Staff may fear job losses, be uncomfortable with new workflows, or simply lack trust in how AI systems reach their conclusions. Overcoming these hurdles is key to success.

Why Change is Hard

- **Fear of Job Loss** Staff might worry AI will automate their tasks, leading to redundancy. This fear is a major obstacle to adoption.
- **Lack of Trust in AI:** If staff don't understand how AI systems work, they might be sceptical of the results, especially in high-stakes MPCA decisions.
- **Skill Gaps and Learning Curves:** Introducing AI often means staff need new skills (data literacy, understanding of AI tools). This can be intimidating, especially for those already feeling overworked.
- **Attachment to Existing Processes:** Change is disruptive. Staff may be reluctant to abandon familiar ways of working, even with the promise of AI improvements.

Mitigation Strategies for MPCA Projects

- **Culture of Innovation:** Leaders must foster an environment where trying new things is encouraged, and the potential benefits of AI are clearly communicated.
- **Staff as Partners:** Include staff throughout the design and implementation of AI tools. This builds ownership, addresses their concerns, and helps ensure the AI fits their actual needs.
- **Training and Support:** Provide comprehensive training on how to use AI tools effectively (and ethically). Offer ongoing support to build confidence and help troubleshoot.
- **Transparent Communication:** Be clear about how AI will be used, address fears about job security, and explain the benefits for both staff and beneficiaries.
- **Gradual Implementation:** Start with small AI pilot projects to showcase success and let staff adjust at their own pace.

Focus on Collaboration

Addressing resistance to AI in MPCA isn't just about technology – it's about people. By treating staff as partners in the process, demonstrating the benefits of AI, and providing support, humanitarian organizations can foster trust and create an environment where AI is embraced as a tool to enhance their vital work.

Recommendations

To harness the transformative power of AI in MPCA programs while upholding humanitarian principles, organizations must prioritize ethical frameworks, robust

data governance, capacity building, process optimization, community participation, rigorous monitoring, and cross-sector collaboration. These recommendations provide a roadmap for responsible, impactful AI implementation.

Develop and Implement Foundational Ethical Principles

- Co-create clear ethical guidelines with affected communities for using Generative AI in MPCA, aligned with humanitarian values.[51]
- Mandate ethical review processes that include affected populations for all Generative AI initiatives, assessing potential risks, benefits, and compliance.[52]
- Assign senior ethics officers responsible for overseeing implementation of ethical guidelines across the organization.

Implement Robust Data Governance

- Implement a data governance framework with strict protocols for ethical collection, secure storage, use, sharing and deletion of beneficiary data.
- Explore appropriate data anonymization techniques to further protect beneficiary privacy in Generative AI systems.
- Conduct regular data protection impact assessments, designating data safety officers accountable for proactive risk mitigation.

Invest in Responsible AI Capacity

- Develop training curricula covering both technical Generative AI skills and critical analysis of potential biases or misinterpretations.
- Foster continuous learning through staff participation in AI conferences, communities of practice, and knowledge-sharing sessions.
- Establish an internal AI advisory council providing cross-departmental guidance and promoting consistent, responsible AI use.

Undertake AI-Driven Process Optimization of existing MPCA programs.

- Conduct a comprehensive review of MPCA processes to identify areas where AI could be leveraged to streamline operations and reduce manual workload.
- Analyse current workflows to pinpoint bottlenecks or repetitive tasks and explore tailored AI solutions to address these issues.
- The goal is to optimize processes and free up human resources for more complex, strategic, or beneficiary-facing tasks.

Prioritize High Impact Use Cases

- Crowdsource potential Generative AI use cases from staff and beneficiaries.

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[51] Digital Humanitarian Network (2020). Artificial Intelligence Principles for Vulnerable Populations in Humanitarian Contexts, Analysis. Available at: https://reliefweb.int/report/world/artificial-intelligence-principles-vulnerable-populations-humanitarian-contexts. Accessed: 12 April 2024.
[52] MOAS (2024). 'AI for humanitarians – benefits, challenges, impact, ethics'. Available at: https://www.moas.eu/ai-for-humanitarians-benefits-challenges-impact-ethics/#:~:text=AI%20has%20the%20potential%20to,strengthening%20evidence%2Dbased%20decision%20making. Accessed: 12 April 2024.

- Pilot high-impact use cases through phased testing, gathering insights to inform responsible scale-up while mitigating risks.

Meaningful Community Participation
- Co-design systematic strategies with affected communities for their ongoing engagement throughout all Generative AI initiatives.
- Implement accessible feedback mechanisms with designated officers ensuring communities' inputs are addressed and concerns resolved.

Rigorous Monitoring and Adaptive Management
- Implement M&E frameworks tracking Generative AI performance, impacts on both beneficiaries and internal staffing, and unintended consequences.
- Analyse M&E findings to course-correct AI use, openly sharing lessons and enabling continuous improvement through decision-making feedback loops.

Enable Equitable Cross-Sector Collaboration
- Facilitate diverse, equitable participation from Global South stakeholders in co-developing sector-wide Generative AI guidelines and governance frameworks.
- Foster cross-sector partnerships leveraging expertise from academia, tech firms and regulators to shape responsible, ethical AI practices.

Undertake Transparent External Communication
- Develop clear public communication strategies explaining if, when and how Generative AI is utilized in MPCA programs.
- Assign dedicated transparency officers responsible for proactively sharing AI use with donors and the wider public to build trust.

Conclusion: Embracing AI's Transformation of Humanitarian Cash Assistance

The debate is over - AI technologies like Generative AI, natural language processing, and machine learning are rapidly transforming humanitarian multi-purpose cash assistance. From streamlining beneficiary targeting and needs assessments, to optimizing transfer values and delivery mechanisms, to enhancing monitoring and accountability - the positive impacts of AI on MPCA are not theoretical, but our present reality.

However, realizing AI's full potential while mitigating risks requires humanitarian organizations to take decisive action today. The ethical concerns are real - escalating AI capabilities raise privacy, bias, and misinformation risks that could undermine MPCA's core principles if not proactively addressed. Responsible stewardship through co-developed governance frameworks and organization-wide AI ethics is critical.

This demands investment in comprehensive capacity building that provides MPCA staff and affected communities alike with AI literacy training. Going beyond just technical skills, this training must nurture the ability to critically analyse AI's limitations and inherent risks when applied to cash assistance.

Moreover, the MPCA community must lead the broader conversation, openly sharing use cases, lessons learned, and tangible successes. Sector-wide knowledge sharing platforms and cross-sector collaboration with technologists and policymakers are vital next steps to inform guidelines while building public trust.

Bolder still, MPCA actors should pilot AI integration through focused, ethical initiatives that adhere to best practices from the start. Crucially, affected populations must co-create these solutions to ensure AI-powered cash assistance respects their rights, needs and dignity. Identified change champions within MPCA organizations can help drive this structured learning and momentum.

The humanitarian call to action is clear: Embrace AI's transformative potential for multi-purpose cash assistance in an equitable, responsible manner centred on communities. When we merge cutting-edge technologies like Generative AI with ethics-driven, inclusive collaboration and continuous capacity building, we open new frontiers for efficient, accountable, and impactful humanitarian cash delivery.

The opportunity to redesign MPCA for the AI era has arrived. It's time to start actively building that future of dignified, data-driven cash assistance today.

In conclusion, this report has explored the transformative potential of Generative AI for Multi-Purpose Cash Assistance (MPCA) programs and the broader humanitarian sector. Through a comprehensive analysis of the current AI landscape, cross-cutting opportunities and risks, and practical implementation considerations, we have highlighted the ways in which these technologies can enhance the efficiency, effectiveness, and impact of humanitarian assistance.

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