WFP
World Food Programme

SAVING LIVES
CHANGING LIVES

WFP Global Artificial Intelligence Strategy

2025-2027

Contents

I. Preface

ACCELERATING TOWARDS ZERO HUNGER USING ARTIFICIAL INTELLIGENCE

In an era where technology is rapidly transforming every aspect of our lives, the World Food Programme is determined to harness the exciting potential of Artificial Intelligence (AI) and Machine Learning to address one of the most pressing challenges of our time: global food insecurity.

The WFP Global AI Strategy 2025-2027 sets out how we will grasp the immense opportunities offered by these cutting-edge innovations to enhance frontline operations, optimize the allocation of precious resources, and ultimately save and change more lives.

By embracing AI, we can better predict food shortages, identify hunger hotspots and reinforce supply chains, ensuring that lifesaving aid reaches those in urgent need more swiftly and efficiently. These technologies will enable more effective data-driven decision-making, support a sharper understanding of conditions on the ground, and allow frontline teams to respond to emergencies with greater agility and precision.

The WFP Global AI Strategy outlines a comprehensive framework for embedding this powerful new tool right across the organization. It focuses on five pillars: delivering impactful AI solutions, building robust AI infrastructure, safeguarding strong AI governance and ethics, fostering an AI culture, and forming strategic partnerships. These pillars are designed to ensure that WFP's use of AI is not only innovative and effective but also ethical and transparent.

As we navigate this rapidly evolving landscape, we will also stay focused on learning and adapting our use of these new technologies so that they deliver real impact and improvements to frontline operations.

In the years ahead, unleashing the full potential of Artificial Intelligence and Machine Learning will be a shared priority for WFP's global team and our many partners. Together, we will harness their power to create new opportunities, drive innovation and fuel progress towards our goal of a world free from hunger and malnutrition.

Official portrait of Ms. Cindy H. McCain, Executive Director of the United Nations World Food Programme. WFP/Rein Skullerud

II. Executive Summary

Artificial Intelligence (AI) and Machine Learning (ML) are critical tools for addressing global food insecurity, helping WFP respond faster, more efficiently and make the most of limited resources. By placing science, technology, innovation and partnerships at the forefront of transforming how WFP operates, WFP contributes and fosters the UN 2.0 agenda.

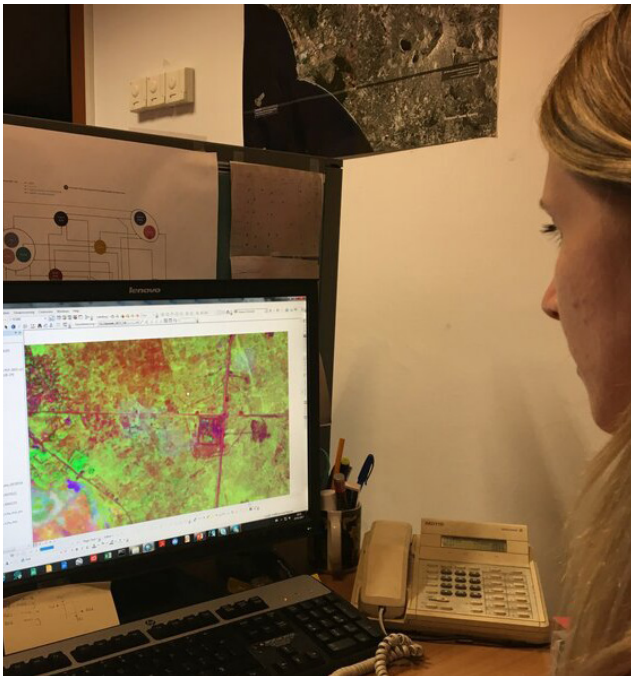
Although the technology has existed for years, the emergence of generative AI and rapid changes in capabilities create both opportunities and challenges for WFP. The risks associated with AI, especially in contexts involving vulnerable populations, highlight issues such as equity, bias, data privacy and other potential unintended consequences associated with the use of the technology and processing of data.

The WFP Global AI Strategy signals the organization's ambition to fully explore and augment capabilities with AI while committing to using AI safely, fairly and transparently to improve WFP's humanitarian work. WFP supports the adoption of responsible AI in humanitarian and development operations across the entire UN system, in an inclusive and prudent manner in line with the humanitarian values and principles that we all uphold.

Although there is no universally agreed-upon definition of AI, WFP defines AI as a field of computer science focused on developing machines and systems capable of performing tasks that typically require, or even surpass, human intelligence.

The WFP Global AI Strategy provides an overarching framework for accelerating the adoption of AI in WFP by focusing on key dimensions: delivering **impactful and innovative AI solutions**; building a **robust AI infrastructure**; ensuring **strong AI governance and ethics**; fostering an **AI culture**; and forming **strategic partnerships**. Due to the dependency of AI models and solutions on high-quality data, this strategy is intricately linked to the WFP Global Data Strategy, ensuring that data initiatives support AI activities. This AI Strategy also complements the WFP Innovation Strategy and WFP Knowledge Management Strategy, which address the processes needed to explore early-stage ideas and embed AI into institutional practices.

While the Global AI Strategy Framework provides the direction, objectives and model for scaling the adoption of AI in WFP, the implementation plan and activities will require the collective effort of WFP's headquarters departments and divisions, regional bureaux and country offices. Recognizing the rapidly evolving AI landscape, updates to the strategy and subsequent implementation plans will be needed. Establishing an AI-centric culture also requires change management to ensure communication, risk mitigation and the harnessing of new capabilities is enabled both from a top-down and bottom-up perspective.



Remote Sensing Analyst Sarah Muir. WFP/Andre Vornic

III. The Promise of AI for WFP

WFP has already piloted and launched AI-powered solutions; however, the opportunity now exists to expand and normalize the use of AI across WFP to transform business functions and modernize operations.

The promise of AI: What AI will bring to WFP

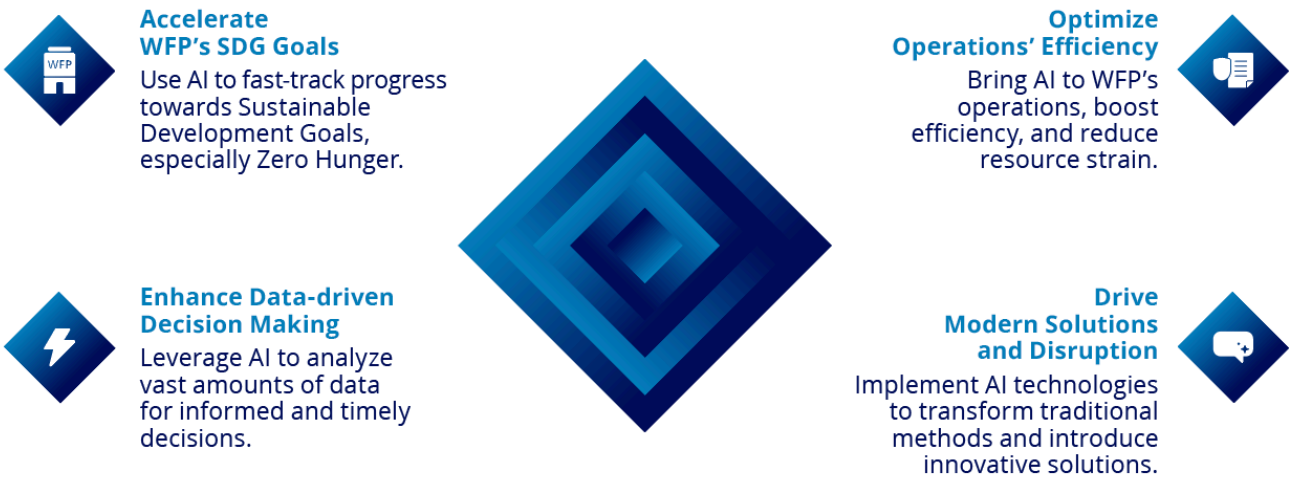


Figure 1: The promise of AI for WFP.

Accelerating progress towards WFP's Sustainable Development Goals

AI will be instrumental in fast-tracking efforts to meet the Sustainable Development Goals (SDGs), particularly SDG 2 (Zero Hunger) and SDG 17 (Partnership for the Goals). By harnessing AI's capabilities, WFP can create more effective interventions, aligning actions with these global targets and contributing to WFP's vision of Zero Hunger.

WFP's contributions to SDG 2 goals of ending hunger, achieving food security and improving nutrition can be amplified and accelerated. AI has shown promise in many areas such as disaster risk reduction, predicting food shortages and identifying malnutrition hotspots for timely interventions. AI models can also predict weather patterns and climate changes, aiding sustainable practices and resilience against climate-induced food insecurity. Real-time AI-driven analytics can also enhance the monitoring of WFP activities, ensuring interventions are effective and adaptable.

WFP has already leveraged AI with innovative early-stage pilots and shown the organization's ability to scale promising solutions such as HungerMap Live.

In terms of SDG 17 (Partnerships for the Goals), the use of AI has the potential to strengthen WFP's global partnerships and collaboration among WFP partners by enabling new approaches. By leveraging AI technology and data, WFP can enhance capabilities to integrate data from various sources to provide a comprehensive view of food security challenges and facilitate coordinated responses, enhancing national programmes and systems. The ability to convene partners can help to balance inequalities in accessing advanced technologies and allow the participation of a larger audience.

Enhancing data-driven decision making

AI enables smarter, faster decisions by analysing vast amounts of data, augmenting employee capabilities and supporting data-driven decision making. AI-driven insights enhance situational awareness, better target assistance, optimize internal processes and support effective programming. By converting data into actionable insights, AI ensures WFP can respond to both immediate needs and long-term challenges with agility and precision, ultimately saving more lives and resources.

Emergency response and preparedness are key priorities given rising conflicts, diminishing resources and increasing humanitarian needs. AI empowers WFP to enhance its emergency response capabilities by anticipating crises and optimizing resource allocation. For example, AI can analyse real-time data from various sources to predict the outbreak of conflicts or natural disasters, enabling WFP to better plan, pre-position supplies and deploy resources more effectively. AI can also support WFP security activities to provide enhanced foresight in terms of resources and assets in emergency contexts.

The integration of AI will drive significant innovation within WFP, transforming traditional methods and introducing new standards in the fight against hunger. This includes developing advanced early warning systems to predict food security threats, precision agriculture to increase crop yields, anomaly detection in cash-based assistance programmes and implementing AI-driven tools to optimize resource allocation. By exploring new horizons with AI, WFP can implement cutting-edge solutions that enhance impact and effectiveness in combating hunger.

Guatemala. Agroclimatic sensor, which sends climate data through an application that can be consulted by farmers from their homes. WFP/Nelson Pacheco

Optimizing operational efficiencies and effectiveness

AI will significantly enhance the efficiency of WFP's operations by streamlining processes and automating routine tasks. The use of agentic AI can augment WFP's capacity and capabilities, freeing up time for more value-added activities. For example, applying AI to optimize supply chains can reveal information that supports the effective use of resources, enhancing processes and allowing assistance to reach those in need more swiftly. Additionally, using AI in Country Office workflows leads to better-targeted assistance and a reduction in resource constraints, maximizing the impact of every dollar spent. There is also a potential to support countries using enhanced AI capabilities and solutions to facilitate the improvement of national programmes and systems focused on enhancing food security. Another impact area is AI's potential to improve workforce management including predicting workforce needs, targeting specific candidates, detecting biases and creating personalized learning and development content.

IV. Current AI Landscape

History

Recognizing the potential of AI, WFP has already developed pilots and scaled implementation of AI initiatives (see Annex 1 for more information). These early efforts provide a foundation for WFP to leverage AI and ML as the organization further develops relevant competencies and capabilities. Internal teamwork between WFP's Technology Division, Innovation Accelerator and Analysis, Planning and Performance Division yielded a foundation to launch a secure AI Sandbox environment available for all eligible WFP teams; create pilot project cohorts; launch an internal peer group for data scientists; and establish an initial AI governance committee.

WFP's AI pilots on predictive analytics for monitoring food insecurity; use of satellite and drone imagery to improve emergency response; enhanced feedback mechanisms; and productivity improvements are a testament to WFP's capabilities in innovation and technology. Partnerships established with industry leaders in AI and organizations such as the German Space Agency (DLR), European Organization for Nuclear Research (CERN), the Luxembourg Institute of Science and Technology (LIST) and European Space Agency create the synergies needed to mature AI practices.

More recently, a collaboration between WFP, the University of Oxford, IGAD Climate Prediction and Applications Centre (ICPAC), Kenya Meteorological Department (KMD), European Centre for Medium-Range Weather Forecasts (ECMWF) and the Ethiopia Meteorological Institute (EMI), using grant funding from a private-sector partnership, is leveraging expertise in artificial intelligence, weather prediction, early warning systems and emergency response to protect lives and livelihoods in Eastern Africa.

Utilizing the private-sector partnership leadership and network provided by WFP's Partnerships and Innovation Department, WFP can rapidly move towards development of a new wave of partnerships to support the next phases of scaling AI, especially in the provision of localized solutions for WFP country office and regional bureau contexts.

A maturity assessment of WFP's AI capabilities, conducted in 2024, indicates that WFP is currently in the Experimenting stage (Level 2). By adopting and implementing the WFP Global AI Strategy, WFP aims to reach the Transforming stage (Level 4) within three years. This progression requires commitment to implementing the strategic dimensions and key initiatives highlighted in this strategy and the readiness to quickly adapt as AI technologies and capabilities change.

WFP's DEEP software shows damaged houses in red and undamaged ones in purple — patchwork drone imagery turned into a detailed map. WFP

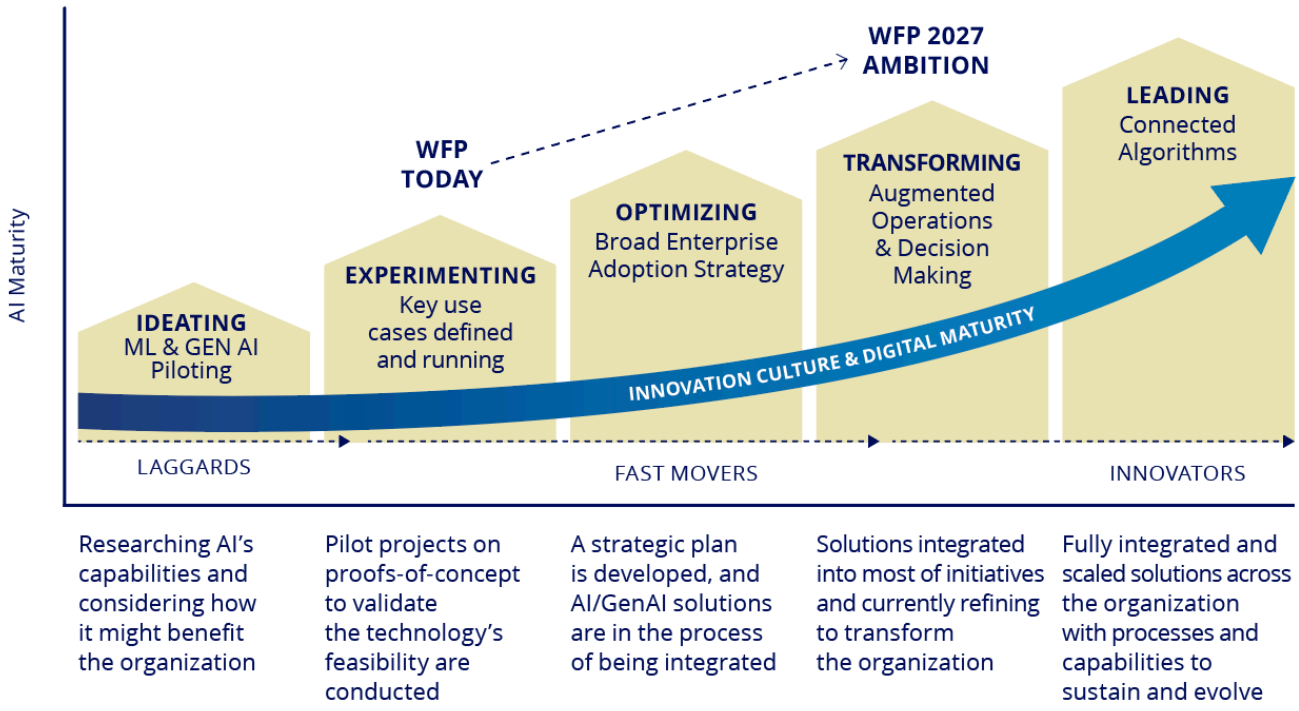


Figure 2: AI Maturity Model. Source: EY.ai, modified for WFP, 2024.

Gaps and opportunities for improvement

As one of the leaders in the wider UN context, WFP has forged ahead with establishing an initial AI foundation. To support WFP's goals to further expand the use of AI, several areas need improvement to fully harness the potential that AI/ML offers. Current AI practices are often siloed, limiting their transferability across different contexts.

To ensure long-term impact, it is crucial to establish systematic processes for testing, evaluating and scaling the use of AI to benefit from the flexibility that AI provides while assessing intrinsic trade-offs between models developed in-house versus commercial off-the-shelf products.

The link between AI and data highlights the parallel efforts to enhance WFP's data maturity (via WFP's Data Strategy) requiring the rationalization of WFP's multi-cloud and on-premises platforms to support modern data processing and AI analytics.

The scalability and sustainability of AI solutions are critical, especially in the dynamic humanitarian landscape. Addressing cultural disparities; managing expectations regarding AI capabilities; and investing in data and AI talent are pivotal. Expanding partnerships for knowledge transfer will further bolster WFP's AI initiatives.

Ensuring robust data governance and security to prevent breaches and manage sensitive data effectively is a priority. Ethical considerations, such as algorithmic bias and misinformation, must be addressed to ensure responsible AI deployment. Recognizing and addressing digital inequalities and connectivity issues is also essential to ensure equitable access to AI technologies across different regions.

While initial progress has been made on developing AI pilots, there is an opportunity to leverage existing processes and strengthen co-creation approaches to foster a culture of experimentation, building and scaling solutions for advancing AI in WFP.

V. The WFP Global AI Strategy

WFP's ambition for the use of AI, ML and advanced technologies is to embrace the immense potential offered to transform WFP functional areas, operations, augment WFP capacity, reduce inequalities and fast -track contributions to the SDGs. To make the most of the positive impact of AI, WFP also needs to address the challenges posed, and create a balanced approach to ensure alignment with existing data privacy and protection guidance, mitigate biases and promote transparency in how WFP uses AI and the role AI plays in WFP's decision-making processes.

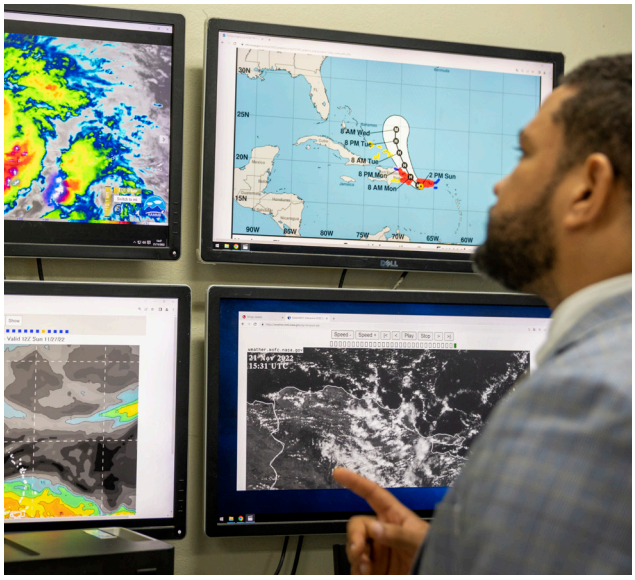
The WFP AI Strategy is a framework which provides details on the strategic investments needed to scale the use of AI within the organization. Based on the gap analysis and maturity level assessment, areas to strengthen include the proactive pursuit of identifying, prioritizing and implementing **impactful and innovative AI solutions** supported by a **world class AI technology infrastructure;** a holistic approach to developing and implementing **AI governance in WFP**; building of an **AI culture** anchored in learning and knowledge management; and leveraging private-sector partnerships to find **new partners** which can support WFP's AI objectives. By leveraging existing processes, people and technology artefacts; implementing enhancements; and building new capabilities and competencies, WFP can accelerate the adoption of AI.

In developing the AI Strategy, WFP also recognizes the rapidly changing technology landscape driven by advances in AI/ML technologies and the broader efforts of the UN to provide normative guidance and initiatives under UN 2.0; the UN System Chief Executives Board for Coordination High-Level Committee on Management AI task forces (WFP acts as a Co-Chair); Inter-Agency Working Group on Artificial Intelligence; and the recent Pact for the Future. Every effort has been made to ensure that the WFP Global AI Strategy aligns with the existing UN guidance and provisions to accommodate future changes.

Figure 3: WFP Global AI Strategy vision statement.

Strategic dimensions

To achieve the vision and goals of the AI Strategy, WFP needs to strengthen core areas. There are five strategic dimensions that require attention and implementation. Building a robust AI infrastructure is essential, with models using clean and relevant data for training and testing.



Employees from the National Meteorological Office enhanced their capacity to monitor and provide updates of climatic events thanks to WFP's collaboration. WFP/Esteban Barrera

There is a strong link to WFP's Global Data Strategy and the activities on establishing data governance, including data privacy, data security and establishing data standards. The second dimension is making sure that AI/ML models are fair and do not perpetuate biases, such as gender, which may exist in training datasets through implementation of guidelines and frameworks to govern the use of AI and mitigate risks. The third dimension involves WFP employees: to develop relevant AI solutions, a diverse set of skills and competencies are required. Upskilling and reskilling WFP's workforce and attracting new talent is key to promoting a culture that embraces AI. The fourth dimension encompasses building strategic alliances with technology innovators and academic leaders to enhance WFP's AI capabilities, foster global collaboration and open innovation to drive breakthroughs in humanitarian solutions. The final dimension, which consolidates the benefits of the holistic approach, is the delivery of impactful solutions leveraging AI capabilities.

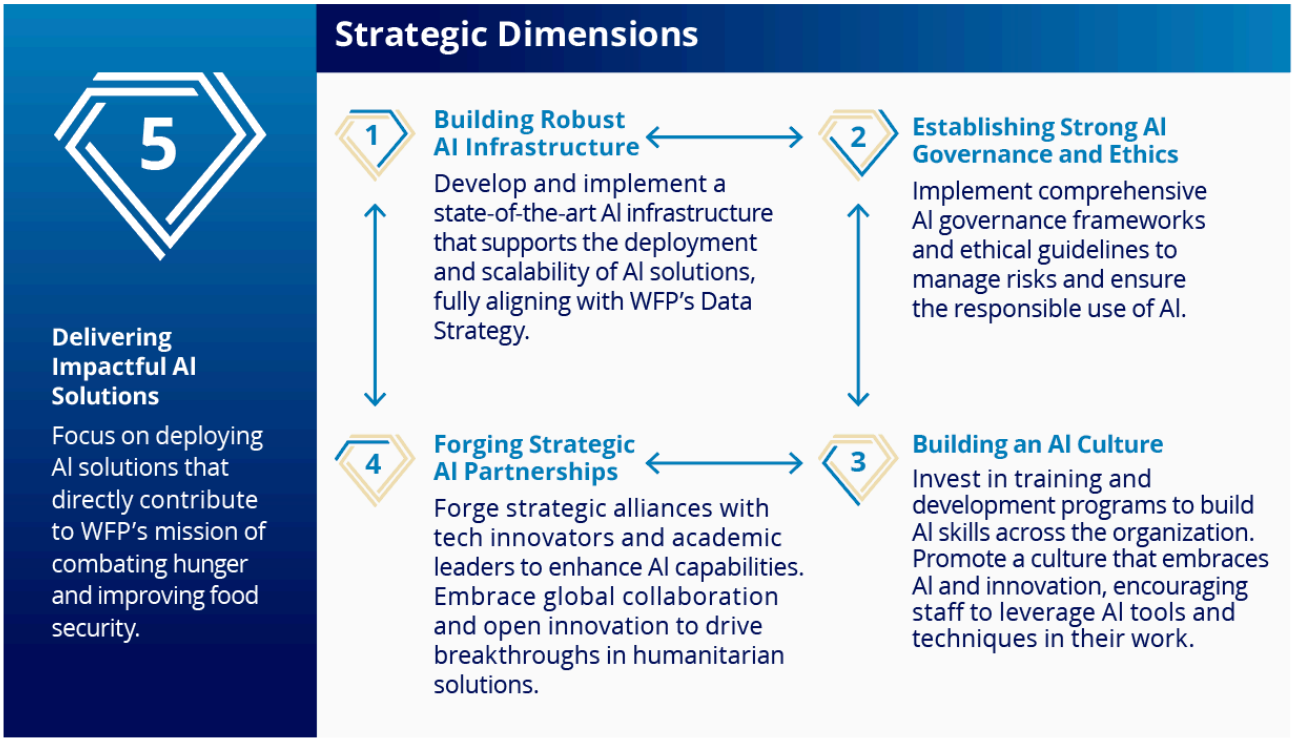


Figure 4: WFP's AI Diamond: The five core strategic dimensions to drive WFP's Global AI Strategy.

Delivering impactful and innovative AI Solutions

WFP recognizes the immense potential for AI to enhance the organization's ability to deliver humanitarian assistance to those in need.

AI can automate tasks, optimize resource allocation, enhance decision making and support more timely and targeted responses to crises. However, this potential must be balanced with the need to keep people at the centre of AI efforts, ensuring that even in this era of powerful technologies, a human centred approach is adopted.

AI FOCUS AREAS

Through surveys conducted across country offices, regional bureaux and headquarters, WFP identified numerous AI use cases that hold transformative potential. These surveys revealed a considerable number of planned initiatives and ideas, reflecting WFP's commitment to leveraging AI to enhance its mission. To transform these focus areas into action, WFP needs to develop an AI Use Case Prioritization Framework to guide the selection and implementation of AI projects, ensuring they align with strategic goals, are feasible and deliver significant impact.

Areas of Focus for Transformative Impact Were Identified Across COs, RBx and HQ

Survey Overview[1]

Out of these responses:

63 responses in total
51% non-HQ responses

We identified...

35%
ongoing AI-related initiatives[1]

25+
planned AI-related initiatives[1]

More details on the survey results can be found in the annex.

AI Focus Areas

Operations & Delivery	**US$6 B**	**- worth of goods procured in 2022.[2]**
Governance, Reassurance & Oversight	**US$20 B**	**- estimated total AI investment in the banking sector.[6]**
Early Warning, Anticipatory Action & Emergency Response	**90%**	**of hazards are caused by flood, drought or storms.[5]**
Knowledge Management and Content Creation	**58.5%**	**- Generative AI automation potential.[3]**
AI-Supported Workforce	**23,915**	**WFP staff.[4]**

NON-EXHAUSTIVE Illustrative Projects[7]

Track and Trace - use AI to improve visibility of the value chain incl. warehouses; report; monitor partner distributions.

Anomaly Detection for CBT (AI Sandbox) - AI assisted anomaly checks on the delivery data.

ML4AA (AI Sandbox) - Use the very latest generative AI methods for image super-resolution to increase granularity of rainfall forecasts.

AI for Country Strategic Plans (AI Sandbox) - The project focuses on leveraging Large Language Models to analyse timely and accurate strategic information to improve decision making throughout the CSP cycle.

UN AI Booking Hub (AI Sandbox)- Generate a set of recommended itineraries regarding a possible mission travel for humanitarian travelers' community.

Source (1) RAITF's Survey on AI & Innovative Technology in WFP, based on current understanding of the use cases; 2) Supply chain | World Food Programme (wfp.org): (3) Economic potential of generative AI | McKinsey; (4) WFP HR Analytics; (5) Anticipatory Action for climate shocks | World Food Programme (wfp.org); (6) Worldwide spending on AI by industry 2023 | Statista; (7) Non-exhaustive lists used for illustration, RAITF's Survey on AI & Innovative Technology in WFP

Figure 5: WFP's identified areas of AI focus.

ADVANCING WFP'S GOALS THROUGH AI SOLUTIONS

Focusing on WFP's AI Diamond (see Figure 4), WFP aims to deploy AI solutions to enhance efficiency, promote sustainable growth and align with WFP's strategic goals to contribute towards achieving WFP's strategic plan and tactically implement solutions to modernize WFP's operations.

To bring AI use cases from initial concepts and ideas to full-scale implementation, WFP will adopt a structured approach, focusing on four key steps aligned to the IT solution delivery process, as shown in Figure 7.[1]

Moldova. Emergency preparedness: engaging with retailers for Cash-Based Transfers (CBT) activities. WFP/Giulio d'Adamo

Optimizing Resources and Enhancing Operations	Strengthening Emergency Response and Preparedness Using AI	Promoting Sustainable approaches and Aligning with AI Initiatives with SDGs
EFFICIENCY	**EFFECTIVENESS**	**GROWTH**
Operational Efficiency: Use AI/ML capabilities for supply chain optimization, focusing on demand forecasting, dynamic inventory strategies, automated upstream and downstream planning, including better distribution plans for gains in assurance and cost efficiencies.	**Crisis Preparedness and Response:** Leverage AI to enhance WFP's ability to anticipate, prepare for and respond to crises, ensuring timely and effective humanitarian assistance.	**Achieving SDGs:** Prioritize AI initiatives that contribute to Zero Hunger, good health and well-being, and reduced inequalities.
Data-Driven Resource Allocation: Enhance decision making for resource allocation, directing food and assistance to vulnerable populations based on real-time data and predictive analytics.	**Performance Measurement:** Continuously monitor and evaluate AI-driven strategies to refine and improve the efficiency and effectiveness of WFP's programme of work and initiatives.	**Community Empowerment:** Develop AI-powered tools and platforms that empower communities, enhance local capacities, and ensure equitable access to resources and information, promoting sustainable agricultural practices and improving food security.

Figure 6: Categorization of potential AI solutions.

Figure 7: AI use case implementation approach. Source: EY Consulting.

AI USE CASE PRIORITIZATION FRAMEWORK:

• To prioritize implementation of AI use cases, criteria will be established and aligned with existing criteria for technology and innovation requests. While development of the criteria is in progress, see Annex 2 for additional guidance provided by the High-Level Committee on Management's AI documents on prioritization of AI use cases.

• To fully modernize WFP operations supported by AI solutions, initiatives will need to be co-created with teams across WFP, with particular focus on country office and regional bureau participation. This approach will ensure that use cases are fully tailored to local contexts. Access to AI technologies will be comprehensive so that front-line employees are equally equipped to utilize and benefit from solutions.

TECHNOLOGY ANALYSIS:

• Leveraging existing processes, WFP will conduct a detailed analysis of the technological requirements for each prioritized AI use case. The detailed analysis to be developed includes reviewing AI models, checking infrastructure requirements, estimating timelines and selecting tools to support implementation. Aligned to WFP's Enterprise Architecture practices, WFP will seek to use existing technological capabilities while also adding new innovative AI solutions to bridge any gaps identified. WFP acknowledges the need to find the right balance between exploring new and innovative solutions while ensuring alignment with the target information and technology architectural landscape.

RISK, GOVERNANCE AND COMPLIANCE:

• This step ensures that each AI use case is managed within the WFP AI Governance Framework (which will need to be refined and implemented) to identify, evaluate and mitigate risks. WFP will establish clear policies, procedures and guidelines to manage data privacy, security and ethical considerations. Regular risk assessments, contextualized for AI, will be conducted to ensure ongoing compliance with both internal standards, broader regulations and local contexts.

ORGANIZATIONAL TRANSFORMATION:

• Finally, by using change management, upskilling the existing WFP workforce and acquiring new talent, WFP will prepare the organization for the successful adoption and embedding of AI solutions in everyday activities. The development of a change and adoption strategy, and establishment of AI literacy across all levels of the organization is required. By fostering a deep understanding of AI, WFP will ensure that AI integration is seamless, empowering employees to utilize AI tools effectively to augment capacity and create new capabilities.

Building a robust AI infrastructure

The objective of building a robust AI infrastructure is to develop scalable, secure and flexible systems that support advanced AI solutions. To support the end-to-end process from ideation and piloting to launching fully implemented AI solutions, foundational blocks including interoperability, AI experimentation, AI governance and WFP's cloud infrastructure will need to be strengthened.

A key requirement for the optimized use of AI is data. AI infrastructure and solutions rely on access to high-quality data relevant to WFP contexts. Strengthening data infrastructure, data governance and literacy are components of the WFP Global Data Strategy and are essential in complementing and supporting the WFP Global AI Strategy.

The development of data and AI infrastructure by WFP's Technology Division will prioritize integration with corporate and regional systems and data sources from country offices, regional bureaux and headquarters divisions. This approach will ensure that AI initiatives are grounded in local contexts, providing a robust foundation for scalable and adaptable AI solutions that can address specific operational challenges.

INTEROPERABILITY

The modular architecture of AI systems will be prioritized to make them flexible, integrated and vendor-agnostic. This approach allows different components of the AI system to be developed, tested and deployed independently, enhancing the overall system's adaptability and ease of maintenance. Focusing on creating interoperable systems that can easily exchange and use information across different WFP platforms and applications will facilitate the seamless integration of new AI solutions with existing systems, promoting efficiency and reducing operational silos.

Burundi CO is installing a solar PV system with RBN's help in data collection. They're also partnering to boost renewable energy for SME food processors through energy audits. WFP/Kevin Gitonga

AI EXPERIMENTATION

WFP must continue to build on advances in creating adaptive processes to experiment with early ideas; build solutions required by the organization with re-use and open-source principles in mind; and scale successful pilots, increasing access to AI, tools and solutions for data science profiles across WFP.

WFP has already invested in an AI Sandbox to enable early-stage exploration of AI and ML, allowing the organization to experiment and learn from innovative AI-driven solutions. Lessons learned from the AI Sandbox highlight the need to expand the use of AI across the organization, ensuring that it serves as a platform to develop scalable and impactful solutions.

In addition, access to multiple cloud providers and investments in additional resources are required to truly leverage the AI Sandbox to support WFP AI experimentation and the development of impactful and innovative AI use cases.

AI Infrastructure Principles

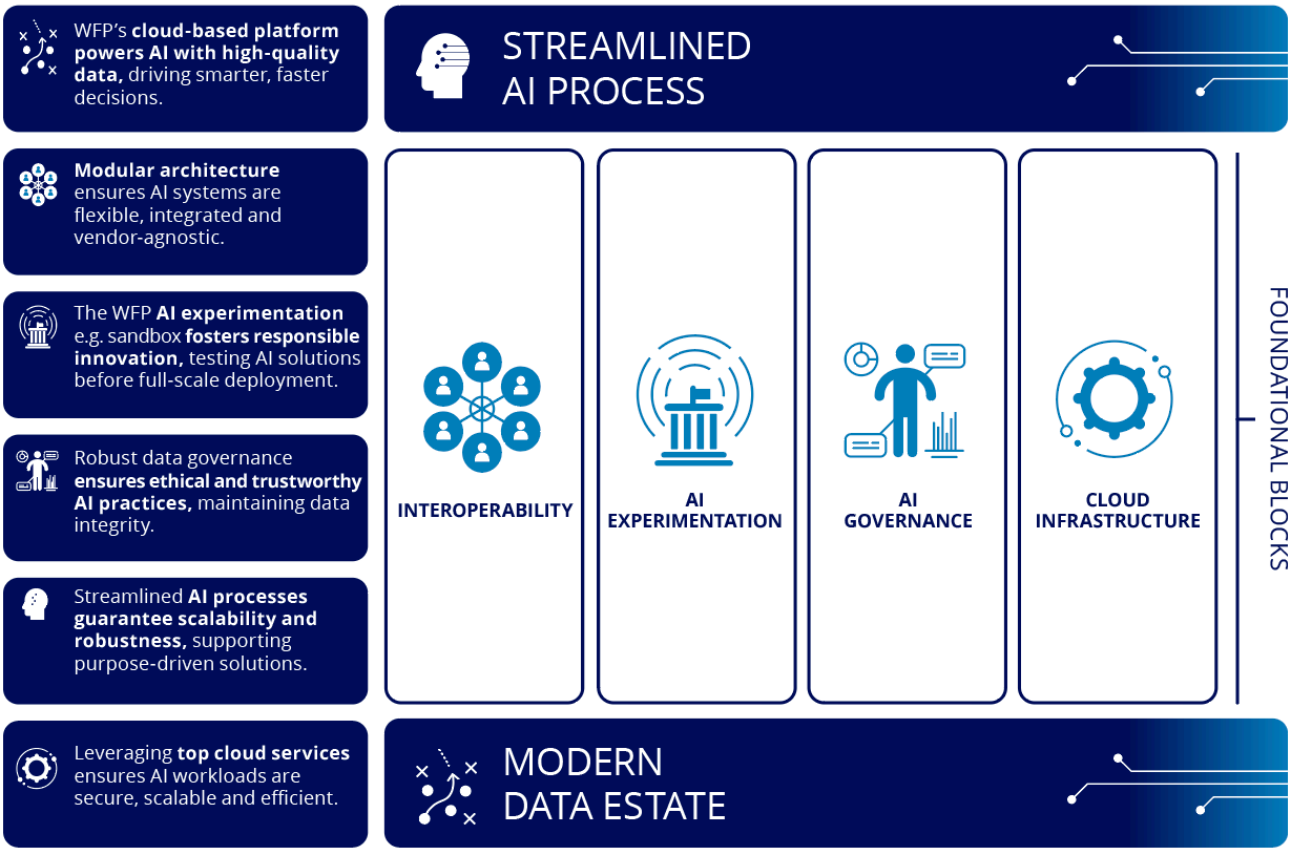


Figure 8: WFP's AI infrastructure principles

In alignment with the WFP Innovation Strategy, utilizing the peer network and processes created by WFP's Innovation Accelerator and the technology provided by WFP's Technology Division, will further enhance the organization's ability to offer AI at scale and provide an end-to-end process for early idea generation to fully supported technology environments. Dedicating resources for controlled testing and iteration of AI solutions will ensure that innovative solutions can lead to full-scale deployment, and that they are viable and effective in real-world scenarios. A dedicated effort will be made to develop digital public good AI-powered solutions.

WFP is committed to fostering internal partnerships across the organization, ensuring that all teams are aligned on this transformative AI journey.

Through collaboration and effective use of expertise and knowledge, WFP divisions, country offices and regional bureaux will actively contribute to the development and deployment of AI solutions, reinforcing a unified movement towards achieving WFP's strategic objectives and in alignment with the key objectives of WFP's Knowledge Management Strategy.

WFP will also adopt green AI practices by implementing energy-efficient AI technologies and processes to minimize environmental impact, ensuring that sustainability is a core component of WFP's infrastructure strategy. WFP will also explore initiatives such as prioritizing energy-efficient algorithms; collaborating with cloud providers who utilize renewable energy sources; and implementing mechanisms to monitor and report on the energy consumption of AI applications. Where possible, WFP could also invest in carbon offset programmes to further mitigate the environmental impact of its AI activities, reinforcing the organization's commitment to sustainability.

CLOUD INFRASTRUCTURE

Leveraging cloud technologies will provide WFP with scalable and flexible computing resources essential for deploying and managing data and AI solutions efficiently. The required infrastructure relies on automated and monitored pipelines plus computational resources, data storage and AI/ML platforms that can handle very large volumes. Cloud platforms will support disaster recovery, redundancy and continuous operation, ensuring robust performance. The AI components will facilitate data pre-processing, AI model training, and development and integration with applications and systems. By streamlining workflows, automating tasks and implementing best practices, WFP's AI solutions will be scalable and efficient. Similar to other organizations, WFP faces the challenge of proliferation of cloud platforms and applications with AI components. Working with Enterprise Architecture and technology blueprints will be key to ensuring a holistic approach to selection, adoption and retirement.

Yemen. Ehab, 45, a fisherman on his boat in the sea in Mukalla. He is one of the beneficiaries of WFP's early warning centre, which provides him with up-to-date weather forecasts and information to ensure his safety during fishing. WFP/Hebatallah Munassar

Establishing strong, responsible AI governance and ethics

WFP is committed to ensuring the implementation of AI technologies is conducted responsibly and ethically. A comprehensive AI Governance and Risk Management Framework will need to be developed and used to construct the policies, standards, processes and guidelines that will balance the benefits of AI against ethical considerations and risk management practices to safeguard against potential issues such as bias, fairness and transparency. The objective is to ensure that AI systems are developed and deployed in a manner that aligns with WFP's humanitarian values and global standards and protects WFP's most sensitive data.

Marco Codastefano, a data scientist with WFP, feeds drone images into his algorithm. WFP/Rafael Tarasantchi

The imperative for robust AI governance and ethics within WFP arises from the profound impact that AI technologies could have on WFP's mission to combat hunger and improve food security. AI-driven decisions directly influence food distribution, disaster response and the well-being of vulnerable populations, making the maintenance of public trust and the safety of AI implementation paramount. By adhering to the highest standards, WFP must safeguard against the unintended consequences of AI, ensuring that these technologies enhance rather than hinder WFP's humanitarian objectives. This approach will be crucial in preventing the exacerbation of existing vulnerabilities or the creation of new inequalities and addressing the challenges of accessibility to new technologies and reducing the digital divide.

AI PRINCIPLES

A core component of WFP's approach to AI governance is the establishment of principles. WFP has endorsed and adopted the UNESCO Ethics of Artificial Intelligence Principles,[2] which guide the development and deployment of AI systems, ensuring they are transparent, reliable and aligned with WFP's strategic goals. See Annex 3 for details of the UNESCO principles.

WFP AI GOVERNANCE AND RISK MANAGEMENT FRAMEWORK

The WFP AI Governance and Risk Management Framework needs to be developed and refined as part of the AI Strategy. It is a key dimension, and development of the framework will result in a comprehensive set of policies, processes, controls and standards that will ensure the responsible and ethical development and deployment of AI within WFP. It will provide a structured approach to managing AI-related risks and protection of sensitive data while aligning AI initiatives and solutions with WFP's goals.

Given the close interdependency between AI and data, this framework must be implemented in conjunction with WFP's broader data governance strategies.

The early-stage draft framework shown below is composed of several key components, each addressing critical aspects of WFP's AI governance and risk management approach, which is aligned with the normative guidance provided to date by the UN, and ensuring a holistic approach to AI implementation. See Annex 4 for more detailed description of the AI Governance and Risk Management Framework.

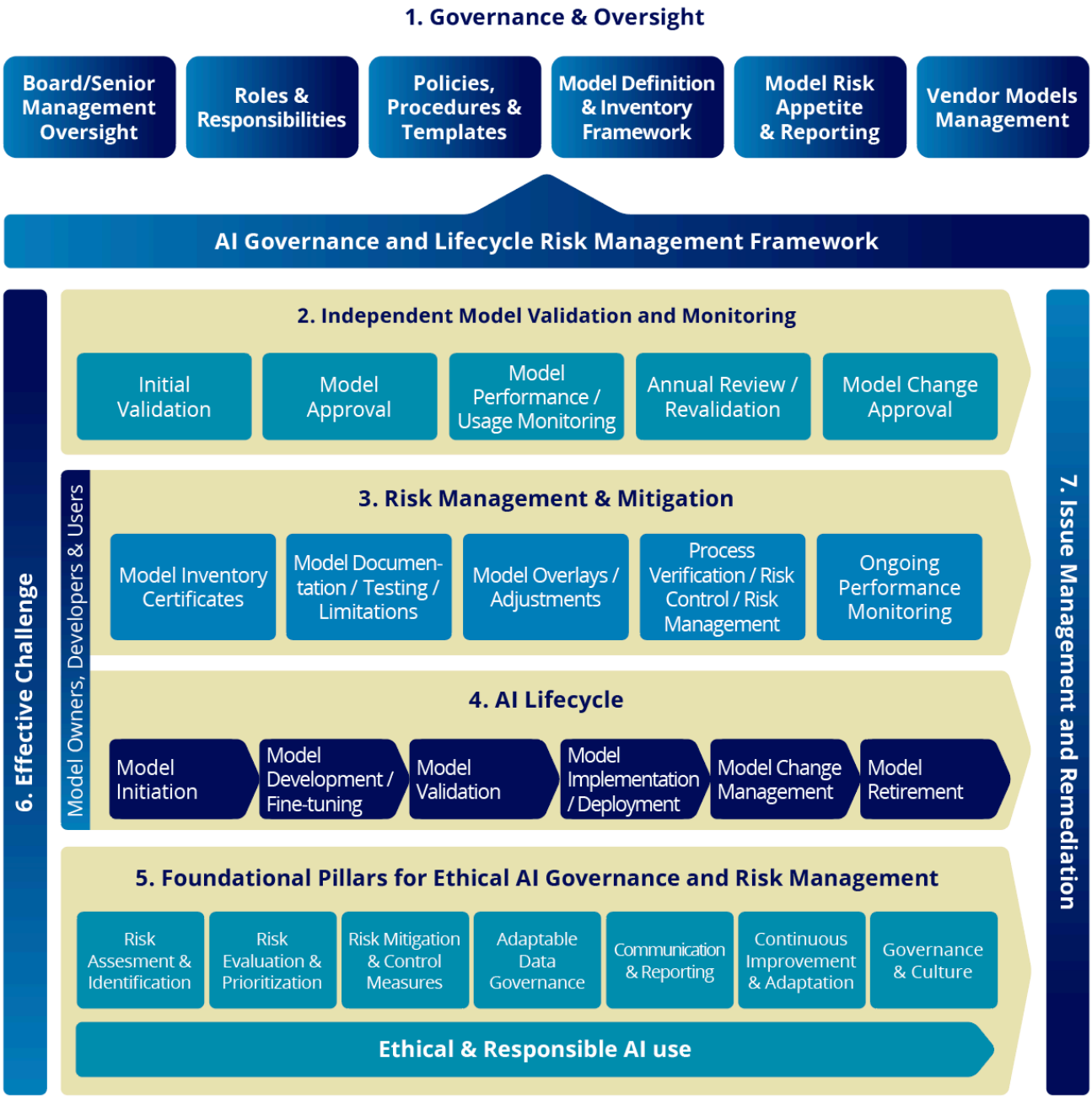


Figure 9: WFP's AI Governance and Lifecycle Risk Management Framework.

Building an AI culture

Building a strong AI culture within WFP is fundamental to fully harness the power of AI technologies. This cultural transformation requires enhancing AI literacy, continuous learning and strengthening of other associated skills such as analytical and creative thinking and leadership, plus the need to integrate new AI roles into the workforce as outlined in the Key Enablers section of this strategy.

AI literacy in multiple languages is essential for equipping employees with the skills and competencies needed to understand and effectively utilize AI-driven analytics, tailored to their tasks and business challenges. This includes recognizing AI's utility across expert analytics, business insights and general-purpose functions.

Additionally, fostering a culture of AI readiness involves strategic talent acquisition to attract top AI experts and practitioners. Change management will play a crucial role in this transition, ensuring that the introduction of AI roles and technologies is met with acceptance and that employees are supported throughout the process. By cultivating an AI-centric culture, WFP can ensure that its workforce is prepared to leverage AI effectively, driving innovation and enhancing operational efficiency. This approach aligns with the UN 2.0 [3] mandate, which focuses on building a future-ready workforce. Key components include:

Understanding AI fundamentals: Providing employees with knowledge and training about AI basics and its potential applications within the humanitarian context.

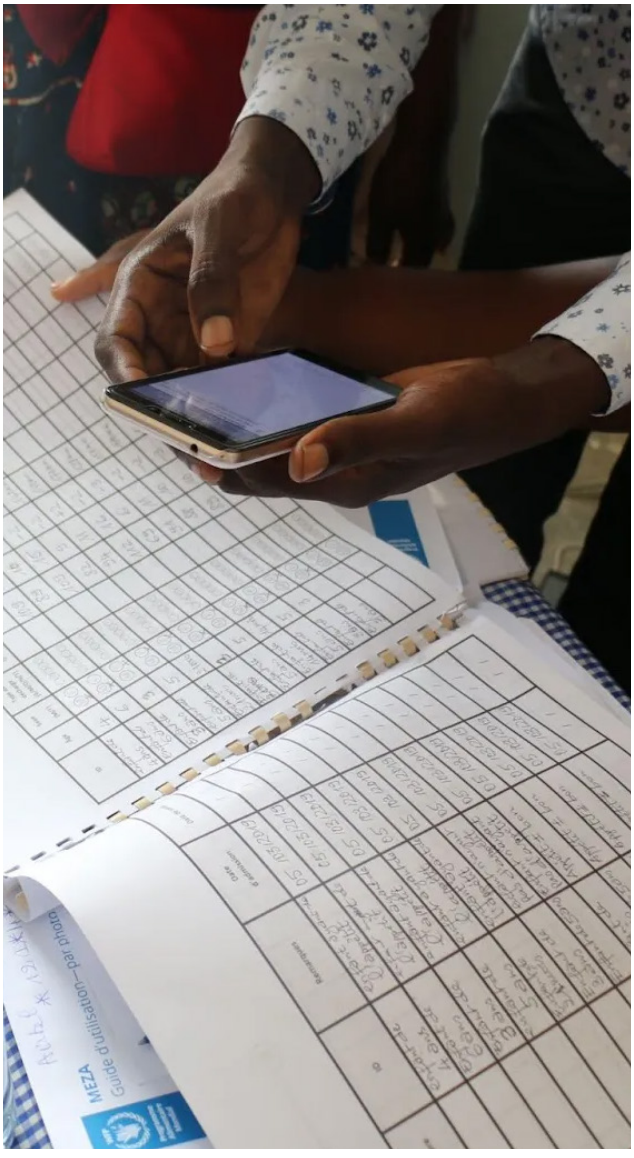
Ethical considerations: Ensuring that employees can identify ethical concerns and implement responsible AI practices in development and deployment.

Utilizing AI analytics: Training employees to use AI-driven analytics to enhance decision making and operational efficiency while fostering trust in AI systems.

Promoting engagement and knowledge-sharing is a key component of this programme. It involves engaging with users across WFP to encourage the management of knowledge and insights generated from AI projects. The adoption of continuous learning ensures that lessons learned can be applied across the organization, enhancing the effectiveness and impact of AI initiatives. This is crucial given the increased demand for insights from the extensive evidence generated over recent years on WFP and Partner activities.

WFP's AI literacy upskilling initiative aims to create a common language of understanding AI for all employees, starting with foundational knowledge. Learning paths will offer opportunities to deepen in-house AI expertise and strengthen other needed skills as WFP demand evolves.

Change management: Change management is essential for building an AI culture at WFP, as AI technologies are uniquely disruptive to traditional operations. AI integration may naturally meet some resistance, so it is crucial to manage this proactively to ensure smooth adoption. WFP will assess the impact of AI; develop and implement a change management plan; and engage stakeholders at an early stage to build support. Clear communication will highlight AI's benefits, and pilot projects will involve users to foster ownership. Managing resistance through change champions and adapting projects based on feedback will be key. By integrating these practices, WFP will ensure that AI initiatives are successfully embraced and implemented.



MEZA allows digitizing paper records quickly using low-end smartphones. WFP/MEZA.

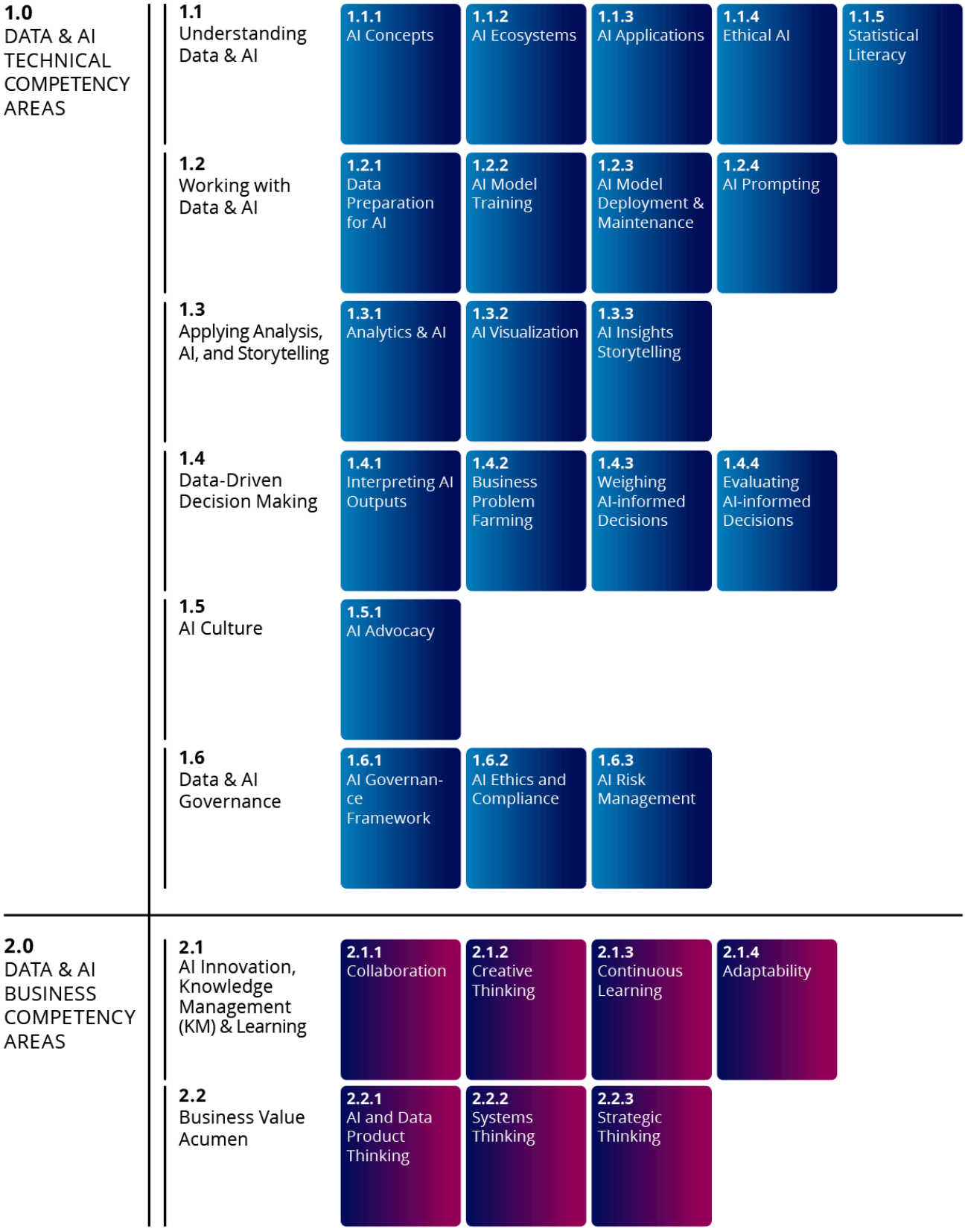


Figure 10: WFP's AI Literacy Framework.

Forging strategic AI partnerships

Forging strategic AI partnerships is a cornerstone of WFP's AI strategy, aimed at accessing innovative technologies and expertise. These partnerships are crucial for enabling innovation, resource sharing and the rapid deployment of AI solutions across WFP's operations.

WFP will seek to forge strategic partnerships with diverse types of entities to support initiatives. These partnerships will be designed to facilitate knowledge-sharing, capacity building and the integration of innovative solutions tailored to regional needs. Key areas of collaboration include:

Academic and research institutions:
Collaborate on AI research and development projects, ensuring access to the latest methodologies and emerging technologies.

AI research and experimentation:
Leverage agile and innovative solutions that can be rapidly developed and deployed, bringing fresh perspectives and novel technologies.

Humanitarian and UN organizations:
Share knowledge, resources and best practices to align AI initiatives with broader UN goals and policies including recommendations from the UN System Chief Executives Board for Coordination's High-Level Committee on Management AI task forces, enhancing the collective impact of AI.

Local entities:
Engage with regional tech firms and universities to tailor AI initiatives to specific needs and foster community involvement. Collaborations with academic and research institutions should include those in the Global South and in WFP Programme Countries to help support bridging the digital divide and enhance local AI capabilities.

WFP and the National Disaster Risk Management Commission will start deploying drones in mapping flood-risk zones in Ethiopia. WFP/Katarzyna Chojnacka

Governments: Establish strategic partnerships with Programme Countries to improve their national programmes and systems to enhance food security and emergency response. A focus on context and communication via culturally appropriate ways is also needed to work within communities.

Open data and innovation:
Encourage the collaborative development of novel solutions with partners to drive breakthroughs in food security.

Private-sector partnerships:
Development of private-sector partnerships is an essential component to address AI challenges, provide access to scarce skilled resources and accelerate WFP's adoption of AI.

Strategic partnerships will be particularly important at country office and regional bureau levels, where collaboration with both local and international partners will be key to ensuring access to the latest technologies, expertise and resources necessary to drive regional innovation.

VI. High-level Road Map

WFP actively seeks new ways of delivering humanitarian assistance by exploring cutting-edge technologies and innovations and has done so since its earliest days. WFP/Jörg Koch.

The WFP AI Strategy road map spans three years, aiming to transform maturity in AI adoption by establishing a strong foundation, scaling successful initiatives and achieving full integration into operations. In acknowledgment that AI technologies are rapidly changing, the three-year and one-year road maps will be living documents and subject to change depending on internal and external factors. The road maps require further enhancement, and the implementation plan will need to be endorsed by the requisite governance bodies. Meanwhile, WFP resource plans and budgets also need to be aligned with the road maps.

In Year 1, WFP will build the foundation by leveraging partnerships with technology and academic institutions, initiating workforce training, extending existing AI exploratory environments (e.g. the AI Sandbox) and establishing focused teams for concepts such as AI labs and launching pilot projects. Some initiatives may be fast tracked for scaling. Year 2 will focus on mainstreaming scaling and integrating these initiatives into operational workflows, expanding data infrastructure, enhancing AI governance, continuing workforce training and defining roles and responsibilities. By Year 3, WFP aims to achieve full AI integration, promoting continuous improvement, open data policies and exploration of emerging AI technologies.

The organization will refine governance frameworks, establish dedicated teams for AI and solidify partnerships to drive innovation and progress towards food security goals.

Engaging with country offices and regional bureaux

A key component of WFP's AI strategy involves robust engagement with country offices and regional bureaux to ensure the successful implementation and localization of AI initiatives. This engagement will include:

- **Socializing AI:**
  Conducting workshops and informational sessions to introduce AI concepts and demonstrate their potential benefits in various operational contexts. These sessions aim to build awareness and generate enthusiasm for AI applications among country office and regional bureau employees.

- **Capacity strengthening:**
  Providing targeted training programmes and resources to enhance employees' AI literacy and technical skills at all levels. This will include hands-on training with AI tools, as well as guidance on integrating AI into day-to-day operations.

Egypt. Shaimaa, a Sudanese refugee, receives WFP cash assistance via an electronic card system. WFP uses the system to provide real-time funds and identify those needing extra support. WFP/Gabrielle Menezes

Gina Ratovoarisoa running an analysis on Optimus to choose the best sourcing option for cereals. WFP/Volana Rarivoson

- **Localizing AI solutions:**
  Collaborating with country offices and regional bureaux to develop and adapt AI solutions to the specific needs and contexts of different regions. This ensures that AI applications are relevant, effective and culturally appropriate.

- **Continuous support and feedback:**
  Establishing channels for ongoing support and feedback, allowing country offices and regional bureaux to share their experiences, challenges and successes. This will foster a collaborative environment where best practices and lessons learned can be disseminated across the organization.

This structured approach will ensure the systematic enhancement of WFP's AI capabilities across WFP, driving innovation, efficiency and effectiveness in the organization's mission to combat hunger and improve food security globally.

High-level Road Map: Three-Year Plan

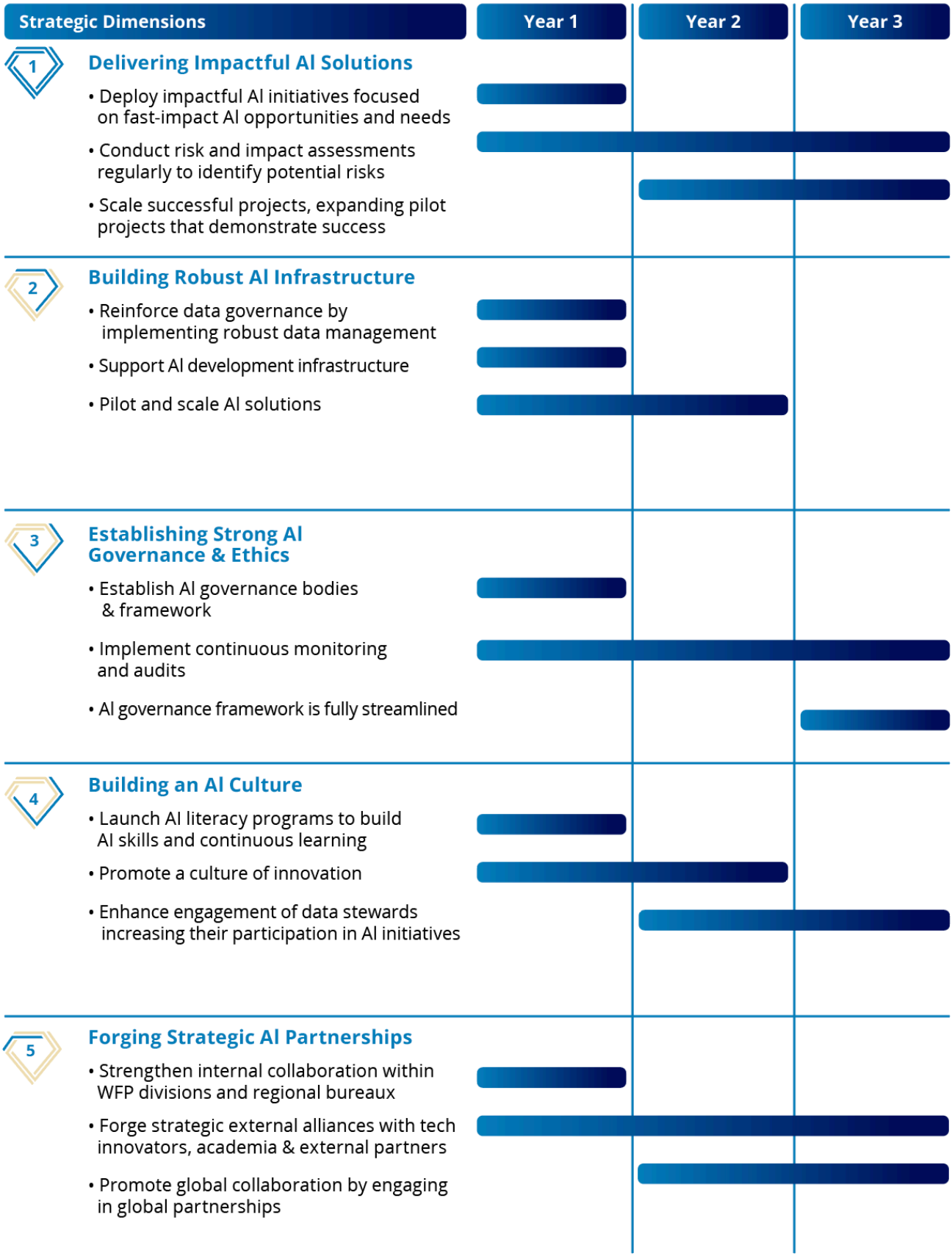


Figure 11: High-Level Road Map of the three-year plan.

First-Year Road Map: Building the Foundation

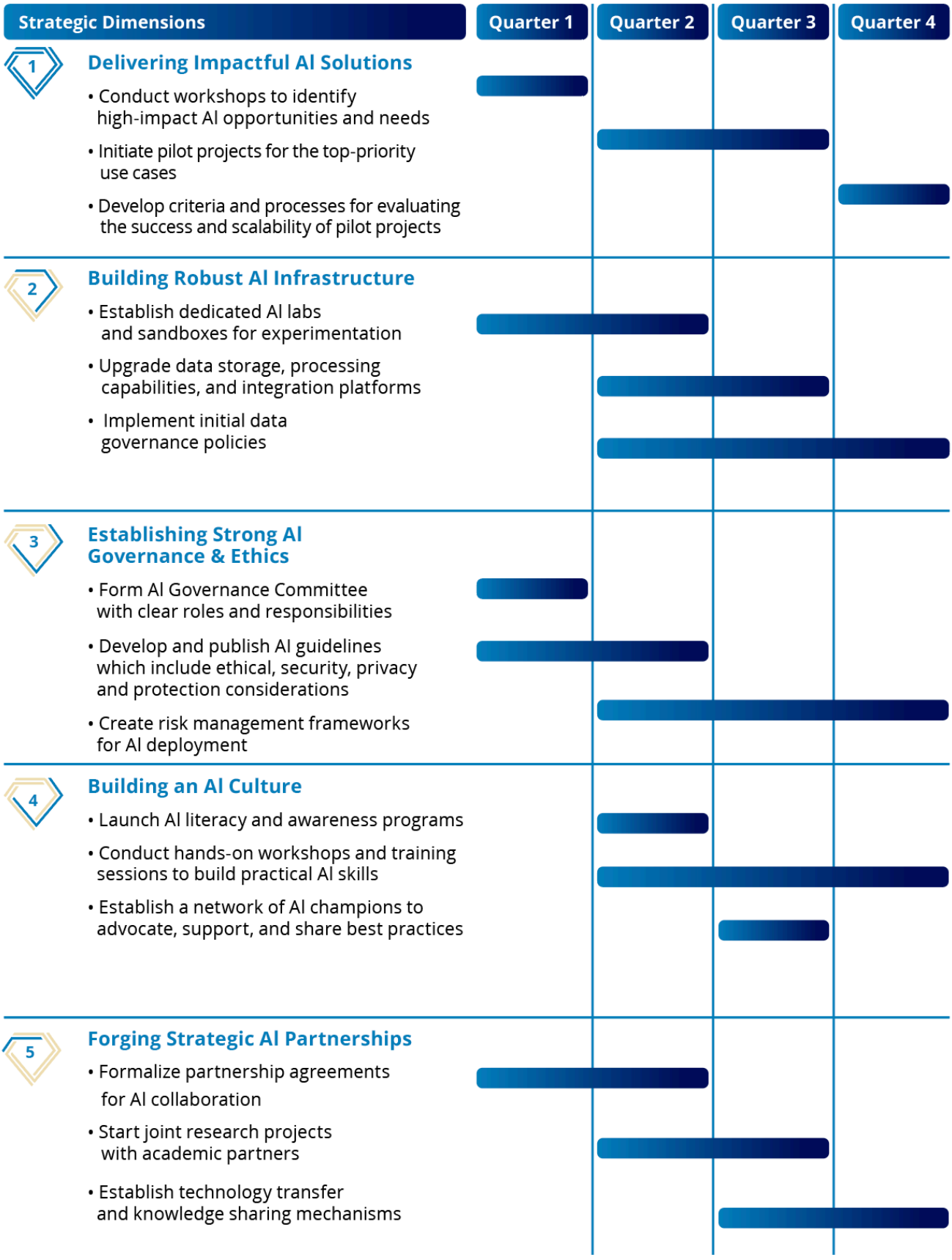


Figure 12: First Year Road Map: Building the Foundation.

VII. Key Enablers

People: People are critical to WFP's ability to successfully implement AI. To leverage the full potential of AI, WFP must not only upskill its existing workforce and reskill qualified employees but also attract a diverse set of subject matter experts who bring specialized knowledge and experience in implementing AI technologies. Upskilling the workforce involves providing comprehensive training programmes that enhance AI literacy and equip employees with the technical skills needed to work with AI tools effectively, combined with knowledge management tools and continuous learning processes. Reskilling qualified employees requires identification of competencies and adaptation to new diverse roles. This ensures that WFP's employees are well-prepared to integrate AI into their daily operations and decision-making processes.

Attracting **AI talent**, however, poses a unique challenge in the current environment where AI expertise is in high demand. To remain competitive, WFP must create conditions that appeal to top talent, which includes promoting the organization's strong commitment to social responsibility and its globally recognized brand. By emphasizing WFP's humanitarian mission and the opportunity to work on projects that have a direct positive impact on vulnerable populations, WFP can position itself as an employer of choice for AI professionals who are motivated by the desire to contribute to meaningful global change. To support talent acquisition, exploration of talent pools established in key functional areas may be needed.

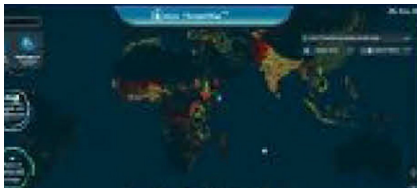
Technology: A solid technological foundation is another key enabler for WFP's AI Strategy. Under the umbrella of WFP's I&T Strategy, AI will be incorporated into the technology blueprint. This includes investment choices on deploying state-of-the-art AI tools and platforms that can handle the complexity and scale of WFP's operations. It also includes ensuring that the necessary computational power, cloud infrastructure and technical support are in place to sustain AI applications over time. By investing in cutting-edge technologies, WFP can accelerate the development and deployment of AI solutions that will enhance the organization's ability to respond to global challenges efficiently.

Employees from the National Meteorological Office enhanced their capacity to monitor and provide updates of climatic events thanks to WFP's collaboration. WFP/Esteban Barrera

Funding, partnerships and innovation: Securing funding for AI projects and initiatives is crucial for the success of the AI Strategy and implementation activities. WFP must actively seek and secure financial resources to support the development, deployment and scaling of AI technologies. The Partnerships and Innovation Department is a core enabler. Strong ties with external organizations, including private sector technology companies, academic institutions and other humanitarian agencies, will provide the assistance needed to accelerate WFP's AI practices and maturity level. Partners can provide access to cutting-edge technologies, expertise and additional funding, enabling WFP to leverage external knowledge and resources to amplify the impact of its AI initiatives.

Annex 1: WFP's AI Solution Landscape

Existing AI Initiatives in WFP

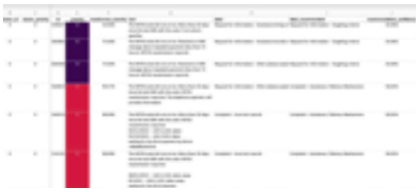


HungerMap Live

Real-time monitoring and forecasting of food security index (Up to 60 days in advance).

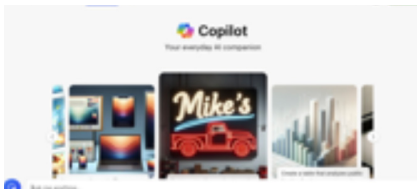
DEEP

A quickly deployable solution that **assesses building damage using drone imagery and AI.**



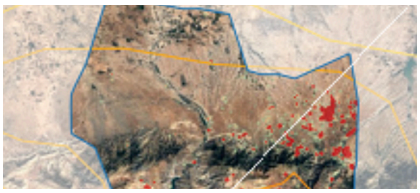
NEMO

Leverages AI to **assist on collection and monitor quality of feedbacks and complaints** from hotlines.



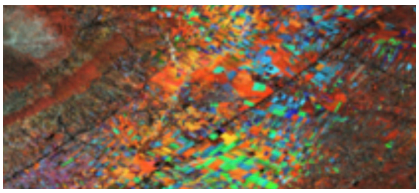
Copilot Office 365

A Generative AI productivity solution provided by WFP for safe, secure, and controlled use.



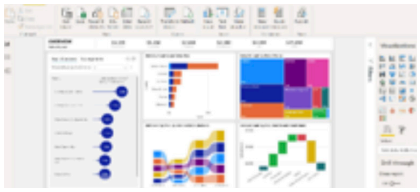
SKAI

An AI-powered solution that **assesses building damage in satellite imagery with minimal human intervention.**



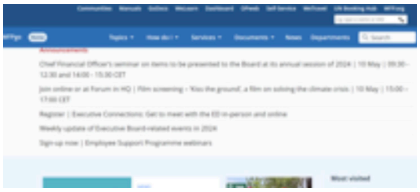
Climate and Earth Observation

Forecasts, interprets and detects key climate factors affecting food security.



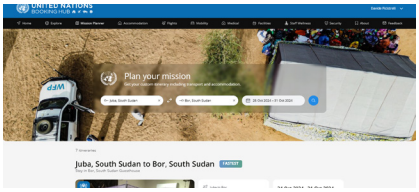
AI BOTS

Use of Cloud Platforms, Chatbots and Agentic Bots help with automating repetitive tasks and end-user interactions.



WFPGo (Intranet)

Leveraging Google Vertex AI to enhance search capabilities and information access on WFP.



UN AI Smart Mission Planner

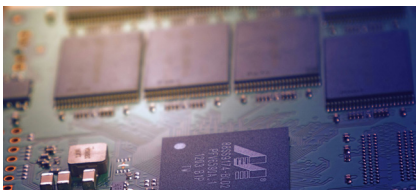
The UN AI Smart Mission planner utilizes AI to automatically create the optimal mission plan based on the criteria provided.

Ask MSD: AI ChatBot

Utilizing AI capabilities, the new Ask MSD chatbot provides real-time answers to common Management Services inquiries.

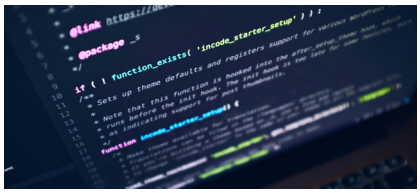
AI4CSP

Leveraging AI to analyze and extract meaningful insights from multiple documents in support of strategic decision making at CSP formulation phase.



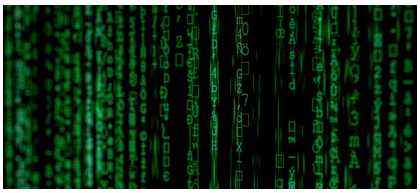
LLM-based Forecasting System

An AI agentic system based on UC Berkeley research aimed at providing reliable probabilistic forecasts on key conflict and economic events affecting humanitarian conditions.



Market data AI Data Validation tool

A LLM-based tool to rapidly analyze and validate market data (prices and MFI) sheets to be uploaded on Databridge.



Real time AI process assistant

A chatbot (utilizing RAG model) providing responses on Analysis, Planning and Performance information fine-tuned on frequently asked questions and answers.

Security Incident Data Quality AI Solution

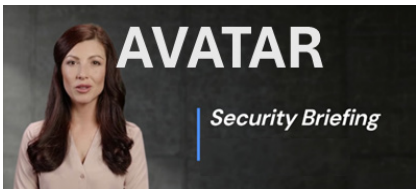
Generative AI models to improve security incident data accuracy by suggesting corrections, streamlining quality control, and reducing workload.

Security Operational Report (SOR) Generator

Use of Generative AI models to support automation of security situation reports process, tailoring data for diverse audiences and maximising situational insights.

SRM Coherence AI

Use of AI models to reinforce consistency in Security Risk Management (SRM) assessments (linking threats to mitigations) for informed field decisions.

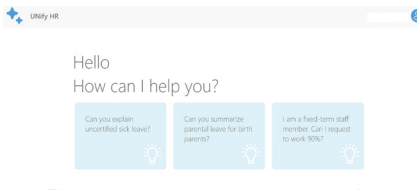


Security Briefing Avatars

AI-generated avatars create engaging, multilingual security briefings, enhancing accessibility and efficiency in communication.

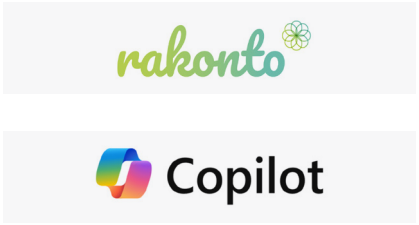
Virtual Security Officer (VSO)

A chatbot that provides quick, reliable security knowledge. It is a chatbot solution designed to provide immediate responses and support to SEC Security professionals and WFP personnel drawing upon validated sources and aligning to WFP Corporate Duty of Care and Knowledge Management Strategy.



UNify HR Chatbot Solution

Is the result of an interagency collaboration to deliver an innovative Generative AI based solution designed to streamline HR policy inquiries and benchmarking.



Rakonto + Copilot

This combination leverages two advanced technologies to help WFP capture responses to questions or prompts effortlessly. Users can provide their input in audio or video format by simply scanning a QR code or clicking on a link, without the need for typing. Rakonto handles the collection, automatic translation and transcription of all inputs, while Copilot further analyzes and enriches these responses in its environment.

Figure 13: Existing AI Initiatives in WFP

Annex 2: AI Prioritization Framework

Prism Model

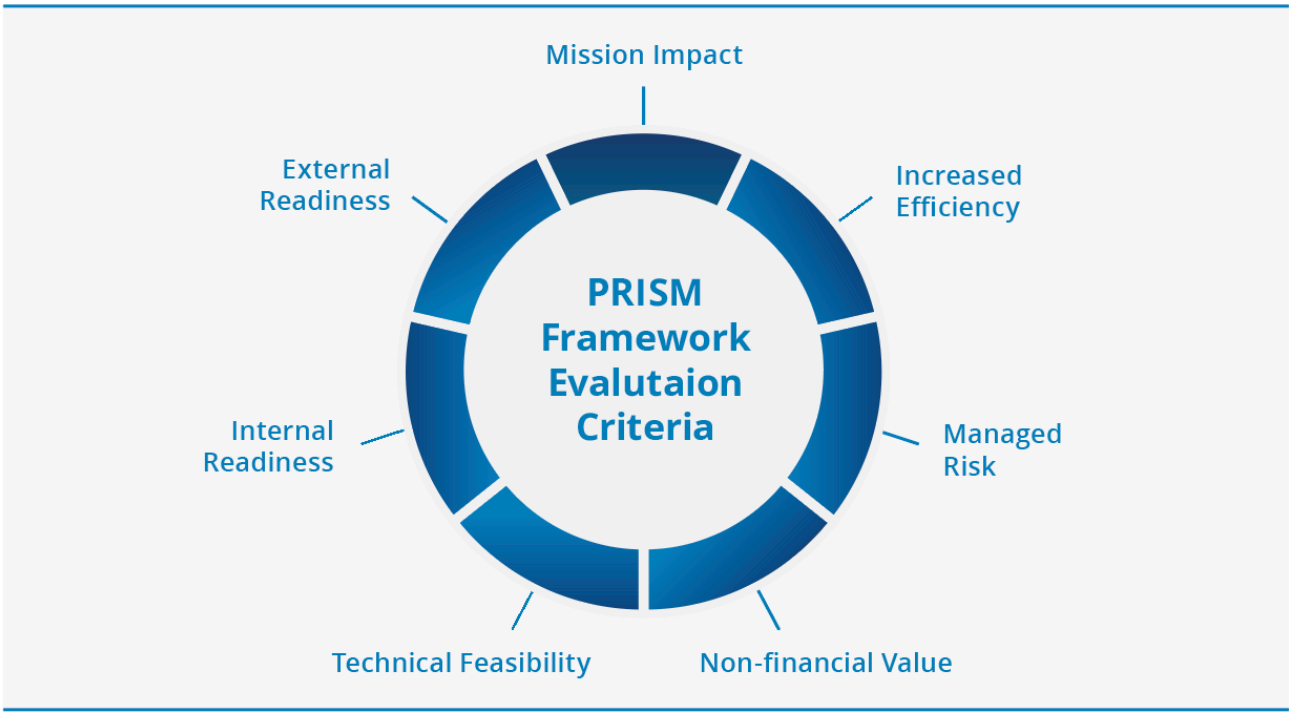


Figure 14: PRISM Framework for AI use case evaluation criteria

The United Nations System Chief Executives Board for Coordination under the High-Level Committee on Management commissioned the creation of two task forces to:

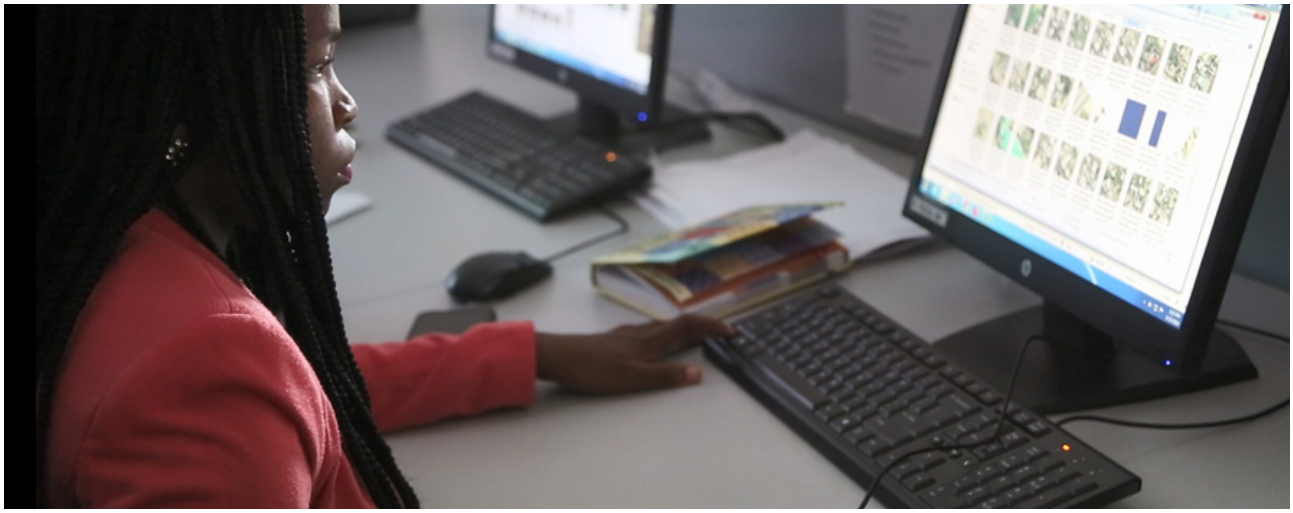
- develop a normative guidance/model policy for the UN system on the use of AI; and
- develop a system-wide normative and operational framework on the use of AI in the UN system.

Under the draft normative and operational framework, the following issues emerged:

- As organizations in the UN system continue to plan for the development of future AI use cases and solutions, it will be important to determine how to select which projects should move forward or not.
- Recognizing this issue as a common challenge and opportunity for the introduction of tools to help decision makers, the DTN GenAI CoP designed a tool specifically for UN system organizations to score and prioritize AI use cases. The tool, known as the PRISM Framework and adapted for the UN context from Gartner's Use Case Prisms on Generative AI for Analytics and AI Leaders, provides a structured approach for evaluating potential AI applications based on multiple dimensions.

WFP will need to assess how to refine the framework to ensure it is fit for purpose for WFP contexts and create an adoption strategy as part of efforts to implement the AI Strategy Framework.

Annex 3: UNESCO AI principles



Students from Eduardo Mondlane University helped with image annotation when training the DEEP model. WFP/Rafael Tarasantchi

The UN System Chief Executives Board for Coordination adopted UNESCO's principles for the ethical use of AI in the United Nations system[4] in late 2022. Shortly thereafter, WFP announced adoption of the principles.

As a follow-up to WFP's adoption of the principles, the WFP AI Strategy is committed to incorporating the principles in the AI Governance Framework and subsequent development of policies, standards, procedures and guidelines to support implementation efforts. **The ten principles are outlined below.**

DO NO HARM

Artificial intelligence systems should not be used in ways that cause or exacerbate harm, whether individual or collective, including harm to social, cultural, economic, natural or political environments.

All stages of an artificial intelligence system's life cycle should operate in accordance with the purposes, principles and commitments of the Charter of the United Nations.

All stages of an artificial intelligence system's life cycle should be designed, developed, deployed and operated in ways that respect, protect and promote human rights and fundamental freedoms. The intended and unintended impacts of artificial intelligence systems, at any stage in their life cycle, should be monitored in order to avoid causing or contributing to harm, including violations of human rights and fundamental freedoms.

DEFINED PURPOSE, NECESSITY AND PROPORTIONALITY

The use of artificial intelligence systems, including the specific artificial intelligence method(s) employed, should be justified, appropriate in the context and not exceed what is necessary, and proportionate to achieve legitimate aims that are in accordance with each United Nations system organization's mandate and governing instruments, rules, regulations and procedures.

SAFETY AND SECURITY

Safety and security risks should be identified, addressed and mitigated throughout the artificial intelligence system's life cycle to prevent or, at least, limit any potential or actual harm to humans, the environment or ecosystems. Safe and secure artificial intelligence systems should be enabled through robust frameworks.

FAIRNESS AND NON-DISCRIMINATION

United Nations system organizations should aim to ensure the equal and just distribution of the benefits, risks and costs associated with artificial intelligence systems and to prevent bias, discrimination and stigmatization of any kind, in compliance with international law. The use of artificial intelligence systems should not lead to individuals being deceived or to unjustifiable restrictions on their human rights and fundamental freedoms.

SUSTAINABILITY

Artificial intelligence should be aimed at promoting environmental, economic and social sustainability. To this end, the human, social, cultural, political, economic and environmental impacts of such technologies should be continuously assessed, and appropriate mitigation and prevention measures should be taken to address adverse impacts, including on future generations.

RIGHT TO PRIVACY, DATA PROTECTION AND DATA GOVERNANCE

Individuals' privacy and rights as data subjects must be respected, protected and promoted throughout the life cycle of artificial intelligence systems.

When the use of artificial intelligence systems is considered, adequate data protection frameworks and data governance mechanisms should be established or enhanced, in line with the Personal data protection and privacy principles, also to ensure the integrity of the data used.

HUMAN AUTONOMY AND OVERSIGHT

United Nations system organizations should ensure that artificial intelligence systems do not impinge on human beings' freedom and autonomy and should guarantee human oversight. All stages of an artificial intelligence system's life cycle should follow and incorporate human-centric design practices and leave meaningful opportunity for human decision making. Human oversight includes ensuring that humans have the capability to manage the overall activity of an artificial intelligence system and the ability to decide when and how to use it in specific situations, including whether to use such a system, and the ability to override a decision made by such a system. As a rule, life or death decisions or other decisions affecting fundamental human rights require human intervention and must not be ceded to artificial intelligence systems.

SKAI uses artificial intelligence to analyze satellite images to automatically assess damage post disasters. WFP

United Nations system organizations should ensure the transparency and explainability of artificial intelligence systems that they use, at all stages of their life cycles, and of decision-making processes involving such systems. Technical explainability requires that the decisions made by an artificial intelligence system can be understood and traced by human beings. Individuals should be fully informed when a decision that may or will affect their rights, fundamental freedoms, entitlements, services or benefits is informed by or made based on artificial intelligence algorithms and should have access to the reasons and logic behind such decisions. The information and reasons for a decision should be presented in a manner that they can be understood.

RESPONSIBILITY AND ACCOUNTABILITY

United Nations system organizations should have appropriate oversight, impact assessment, audit and due diligence mechanisms, including protection for whistle-blowers, to ensure accountability for the impacts of the use of artificial intelligence systems throughout their life cycles. Appropriate governance structures should be established or enhanced to ensure that humans or legal entities are made ethically and legally responsible and accountable for artificial intelligence-based decisions made at any stage of an artificial intelligence system's life cycle. Harm caused by or as a result of the use of artificial intelligence systems should be investigated, and appropriate action taken in response. Information on accountability mechanisms should be communicated widely throughout the United Nations system in order to build shared knowledge, resources and capacities.

INCLUSION AND PARTICIPATION

When designing, deploying and using artificial intelligence systems, United Nations system organizations should take an inclusive, interdisciplinary and participatory approach, and promote gender equality. They should conduct meaningful consultations with all relevant stakeholders and affected communities as part of the processes of defining the purpose of an artificial intelligence system, identifying the assumptions underpinning its use, identifying the associated benefits, risks, harm and adverse impacts, and adopting prevention and mitigation measures.

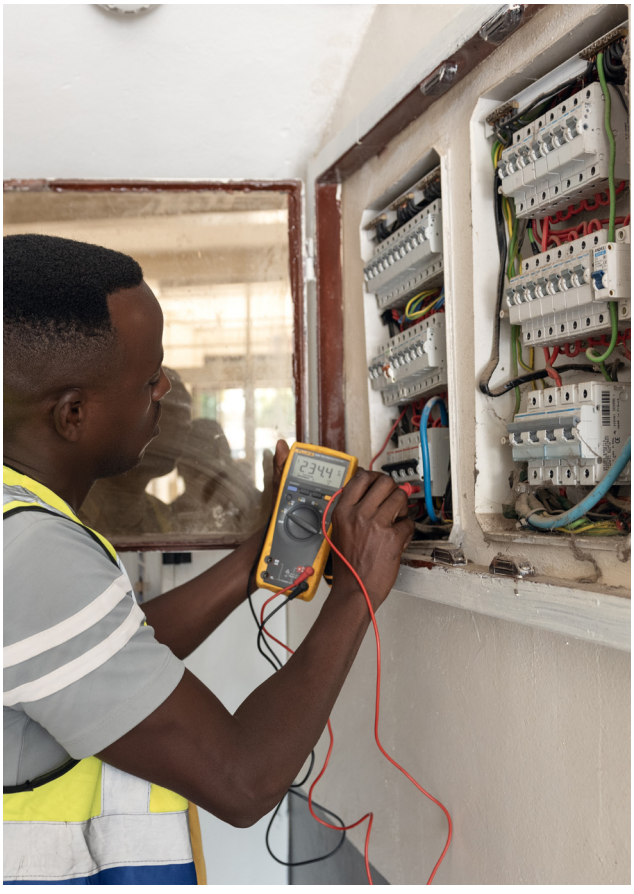
Guatemala. Resilient Pilots Project Ixil Indigenous Women. The project seeks to address two challenges: economic inequalities and difficulties in creating up-to-date information by training rural and indigenous women in the use of drones for their economic empowerment and the generation of context-specific information. WFP/Nelson Pacheco

Annex 4: WFP AI Governance and Risk Framework

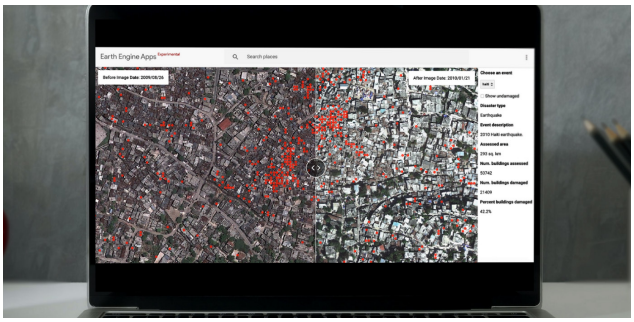
The WFP AI Governance and Risk Framework has not yet been established. Work is needed to refine and create a draft adhering to the processes established under the Digital Business and Technology Committee and the Data Management Committee.

Specialized teams responsible for validation, risk management and compliance are not yet in place and the roles and responsibilities for headquarters, country offices and regional bureaux are yet to be defined.

The AI Governance and Risk Management Framework provides a starting point to ensure the engagement and activities required to refine the framework and implementation plan are structured.



Burundi. Electrical data collection. WFP/Kevin Gitonga



SKAI is unique in having been trained with past-onset disasters that were previously tagged by manual analysts.

The components of the framework include:

GOVERNANCE AND OVERSIGHT

This component ensures that AI initiatives align with WFP's strategic goals and ethical standards. Proper governance is crucial for managing risks and maintaining transparency. The Digital Business and Technology Committee, with the support of its subcommittees as needed, oversees AI initiatives by offering strategic direction and involving business units and domain experts in decision-making processes. Responsibilities for governance are distributed across TEC, headquarters, regional bureaux and field offices, ensuring alignment with WFP's goals across all levels.

INDEPENDENT MODEL VALIDATION AND MONITORING

This process is vital to ensure that all AI models meet rigorous criteria for accuracy, reliability and fairness. The importance of validated models lies in preventing biases and errors that could negatively impact WFP operations. Specialized teams are responsible for conducting independent validation before deployment, with ongoing monitoring (as an example for gender, protection and disability inclusion perspectives), regular assessments to maintain model performance and adherence to standards and risk management practices.

RISK MANAGEMENT AND MITIGATION

This process focuses on identifying, assessing and mitigating the unique risks associated with AI technologies. Effective risk management is essential to ensure that AI-driven decisions do not exacerbate vulnerabilities or create new inequalities, particularly in critical areas such as food security and disaster response. WFP implements a comprehensive risk management process that involves collective responsibility across all organizational levels. Departments, divisions and offices across WFP will need to contribute to the development of AI specific policies, guidelines and standards with focus on internal controls and inputs from teams in Risk Management, Global Privacy Office, Legal, Inspector General and Ethics. Governance bodies within WFP will oversee the continuous monitoring of AI systems through scenario analysis and regular audits to address potential risks in a timely manner.

Aligning to the United Nations System white paper on Artificial intelligence Governance: An analysis of current institutional models and related functions and existing international normative frameworks within the United Nations system that are applicable to artificial intelligence governance [5] will be required. The AI risks identified in the document are shown in Figures 15 and 16 below.

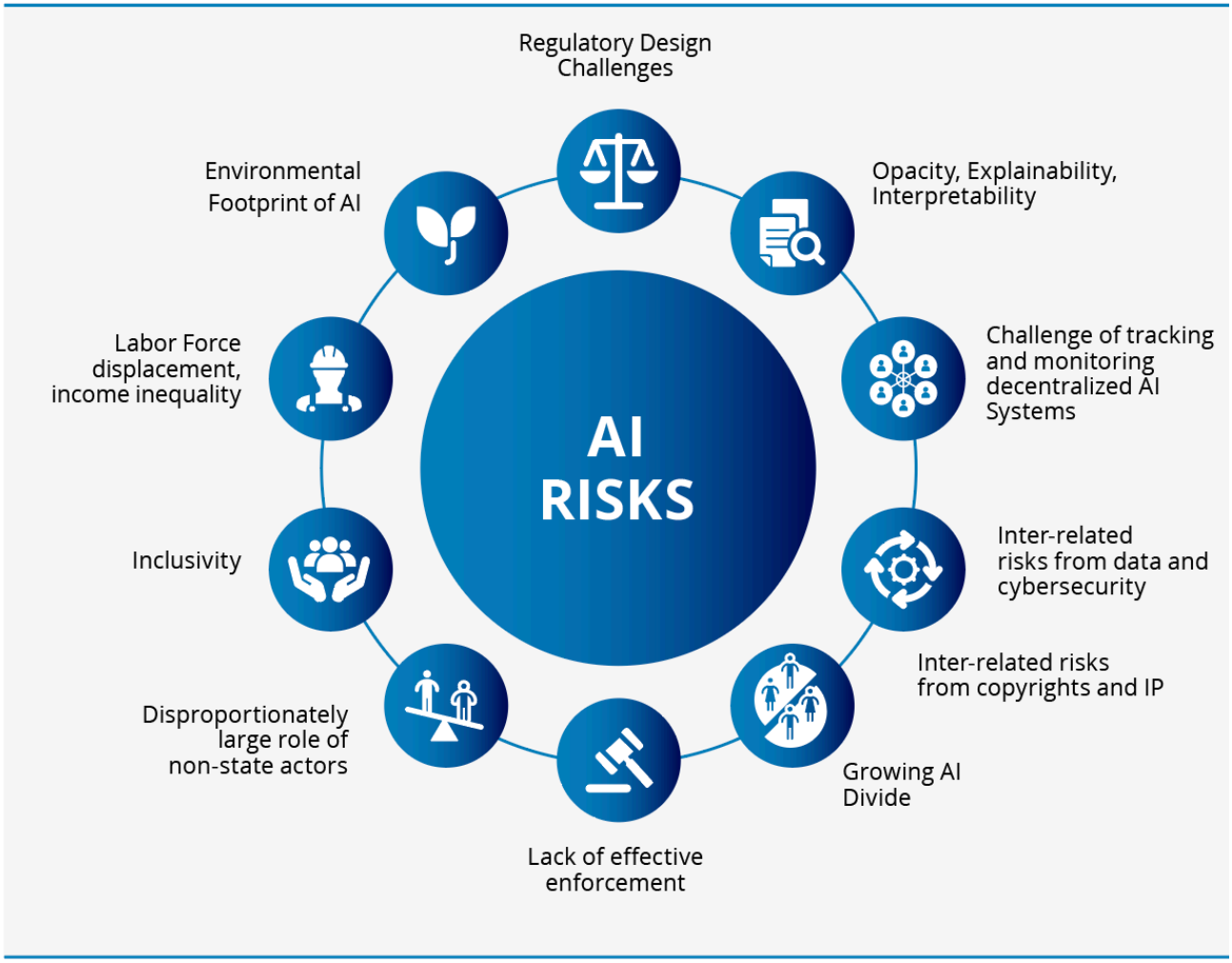


Figure 15: Current and evolving global AI risks.

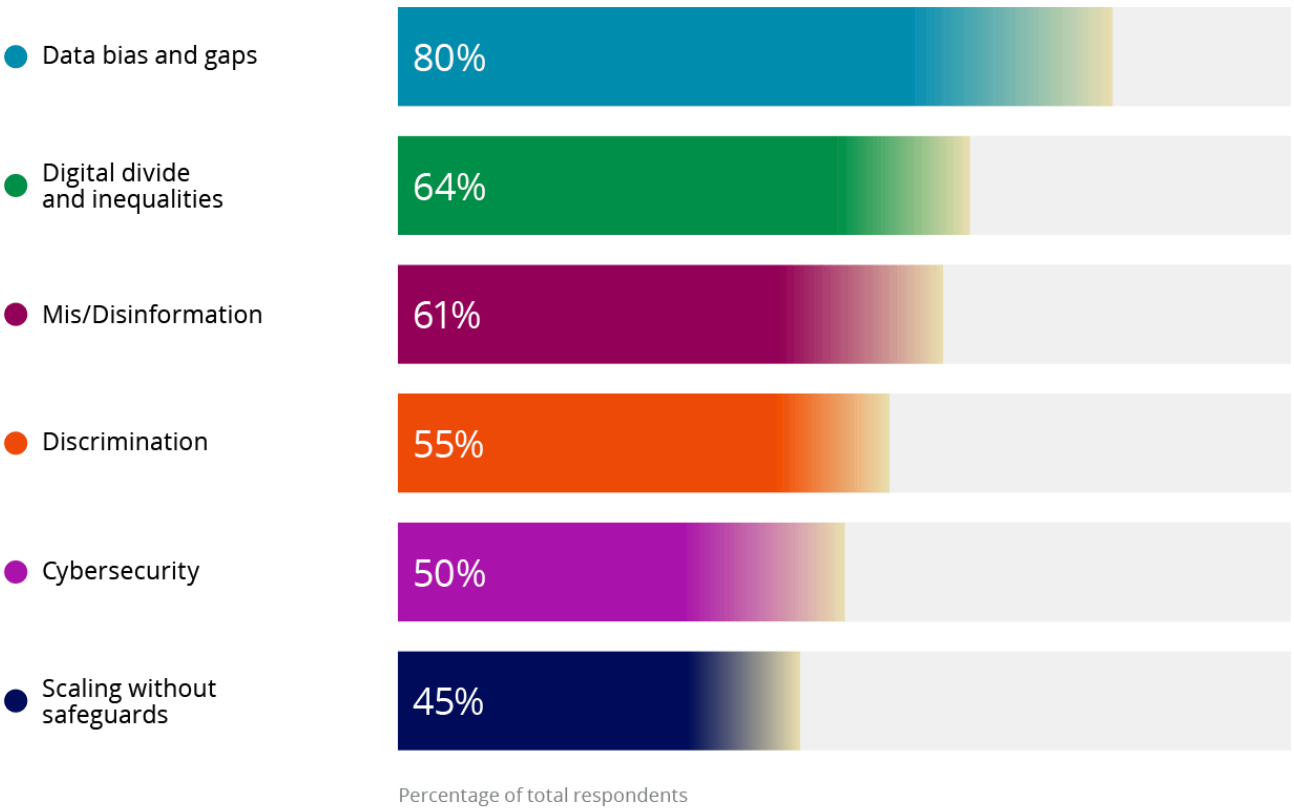


Figure 16: Survey results presented in the White Paper on AI Governance.

AI LIFE CYCLE

The AI life cycle manages AI models from their initial development to their eventual retirement, ensuring that each phase is meticulously planned and executed. Proper life cycle management is critical to ensure that AI models remain effective and aligned with WFP's long-term strategic goals. The development phase is managed by specialized teams, while operational teams handle deployment and regular updates. Governance bodies, product managers and technology teams are responsible for overseeing the entire life cycle, ensuring that AI models are decommissioned safely without disrupting ongoing operations.

FOUNDATIONAL PILLARS

These pillars focus on standardized risk assessment, including stress testing and algorithmic audits, to ensure continuous improvement and alignment with ethical standards. Ensuring compliance and maintaining a culture of ethical AI use is crucial for WFP's mission. The framework includes robust security controls, ongoing monitoring and alignment with data governance and protection measures. Accountability will need to be assigned to relevant personnel, with continuous improvement supported by regular training and knowledge management initiatives.

Annex 5: Alignment with the UN AI Guidelines and Associated Initiatives

WFP AI Strategy Dimensions	UN 2.0	UNESCO Ethics of AI	UN OICT Responsible Technology Playbook	CEB Whitepaper on AI Governance	UN General Assembly Resolution: Seizing the opportunities of safe, secure and trustworthy AI	HLCM TF-AI policy guidance and use cases report
Dimension: Impactful Solutions	✓		✓		✓	✓
Dimension: Building Robust AI Infrastructure			✓		✓	✓
Dimension: AI Governance and Ethics		✓	✓	✓	✓	✓
Dimension: AI Culture and Literacy	✓			✓		✓
Dimension: Partnerships	✓		✓	✓	✓	✓

Note: Implementation activities for AI Governance should also align with the UNSG's High- level Advisory Body on AI's Final Report, Governing AI for Humanity.

Glossary

AI: Artificial Intelligence

AI experimentation: Testing and iterating AI models in a controlled environment before full-scale deployment.

AI Governance Framework: Policies, standards, guidelines and processes ensuring ethical, transparent and accountable AI development and deployment.

AI lab: A dedicated environment where WFP employees and potentially partners collaborate on machine learning, data science and cognitive computing to create impactful solutions for WFP.

AI life cycle: The stages involved in developing, deploying and maintaining AI models, including problem definition, data collection, data preprocessing, model training, model evaluation, deployment and monitoring.

AI model: A mathematical model built using machine learning algorithms to perform specific tasks based on input data.

AI Sandbox: A platform for WFP and external partners to collaboratively, efficiently and responsibly experiment; develop AI solutions to assess their feasibility; and scale to deliver their impact.

Automated decision making: Decision making by processing personal data through automated means and without review or any intervention by a natural person.

CEB: Chief Executive Board.

Cloud infrastructure: Hardware, software and services provided via the cloud to support AI solutions, including storage, computing power and networking.

Data governance: The management of data availability, usability, integrity and security through policies, procedures and standards.

Data preprocessing: Cleaning and transforming raw data into a usable format for training AI models.

Global Data Protection Officer (DPO): The Director of the Global Privacy Office, acting as the main delegated authority for personal data protection and privacy internally and externally.

Global Privacy Office (GPO): The formally established function within WFP supporting the Data Protection Officer in her/his delegated authority over personal data protection and privacy matters and as Director of the GPO.

Green AI: AI practices aimed at minimizing environmental impact through energy-efficient algorithms and optimized computational resources.

HLCM TF-AI: High-Level Committee on Management Task Force on Artificial Intelligence (a committee of the Chief Executive Board).

Interoperability: The ability of different systems to communicate, exchange data and use the information exchanged.

Machine Learning (ML): A branch of AI and computer science that focuses on using data and algorithms to enable AI to imitate the way that humans learn, gradually improving its accuracy.

Model inference: Using a trained AI model to make predictions or decisions based on new data.

Model training and development: Feeding data into a machine learning algorithm to build an AI model.

Personal data: Any information relating to an identified or identifiable natural person; an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural, ethnic or social identity of that natural person.

Programme Countries: Countries where WFP has an Office.

Risk management framework: Identifying, assessing and mitigating risks associated with AI deployment.

Sensitive personal data: Personal data that qualifies as a special category of data, referring to the private and most intimate sphere of an individual, based on the likelihood and severity of potential harm that may materialize because of the data's inappropriate use, disclosure or processing. This includes but is not limited to personal data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, trade union/staff association memberships, genetic data and biometric data capable of uniquely identifying a natural person; data concerning health; or data concerning an individual's gender expression or identity, sex life or sexual orientation.

UN OICT: United Nations Office of Information and Communications Technology.

Endnotes

[1] **IT solution delivery**: the activities that take place for the introduction or evolution of an Information & Technology (I&T) solution, whether through procurement, software development, contracting, partnership, or any other means. Refer to applicable directives for I&T Solutions Governance and Management.

[2] https://www.unesco.org/en/artificial-intelligence/recommendation-ethics

[3] https://www.un.org/two-zero/en

[4] https://unsceb.org/sites/default/files/2023-03/CEB_2022_2_Add.1%20%28AI%20ethics%20principles%29.pdf

[5] https://unsceb.org/united-nations-system-white-paper-ai-governance

World Food Programme
Via Cesare Giulio Viola 68/70,
00148 Rome, Italy - T +39 06 65131
wfp.org