1 Identification

1.1 Session ID: 200311

1.2 Session Title: INDIGENOUS KNOWLEDGE FOR GLOBAL HEALTH SOLUTIONS Co-creation through African Leadership, Artificial Intelligence, and Policy Development for Equitable Impact

1.3 Session Date and Time: 20th September 2024, 11:00 AM – 2:00 PM (Eastern Time)

1.4 Convenor name: Dominic Forson (AI/ML Product Owner at Landcent)

2 Speakers and Panelists

2.1 Speaker 1

2.1.1 **Name:** H.E. Amb. Cessouma Minata Samete

2.1.2 **Organization:** African Union

2.1.3 **Type of Organization:** Intergovernmental organization

2.1.4 **Title of Presentation:** The African Union's Vision for Indigenous Knowledge Systems

2.1.5 **Summary of the presentation (max 200 words):** This presentation will explore the African Union's strategy for embedding indigenous knowledge within continental health systems and development strategies, emphasizing the African CDC's initiatives and their potential impact on health innovation.

2.2 Speaker 2

2.2.1 **Name:** Mosoka P. Fallah, PhD, MPH, MA

2.2.2 **Organization:** African CDC

2.2.3 **Type of Organization:** Government/Public Health

2.2.4 **Title of Presentation:** Integrating Indigenous Knowledge into Health Innovation Strategies (TBD)

2.2.5 **Summary of the presentation (max 200 words):** Focuses on the Africa CDC's role in incorporating indigenous knowledge into health initiatives and the establishment of a continental center of excellence for traditional medicine.

2.3 Speaker 3

2.3.1 **Name:** Professor Motlalepula Matsabisa

2.3.2 **Organization:** University of the Free State

2.3.3 **Type of Organization:** Academic Institution

2.3.4 **Title of Presentation:** Indigenous Medical Knowledge as a Foundation for Health Innovation

2.3.5 **Summary:** A comprehensive understanding of indigenous medical knowledge, highlighting its historical and contemporary relevance. It will showcase present-day applications in health research and healthcare provision, emphasizing its potential through compelling case studies. Attendees will gain insights into how indigenous medical knowledge has contributed to the development of novel drugs and therapies, addressing critical global health challenges.

2.4 Speaker 4

2.4.1 **Name:** Peter Atadja, PhD.

2.4.2 **Organization:** Landcent

2.4.3 **Type of Organization:** Private Sector/Research

2.4.4 **Title of Presentation:** Co-Creating Health Innovations with Indigenous Knowledge and AI

2.4.5 **Summary:** This presentation will address the limitations of current medicine and preventative product discovery processes, particularly concerning diseases of poverty. It will highlight the significant opportunities presented by integrating indigenous knowledge with advanced technologies to expedite healthcare innovation. Attendees will learn about Landcent's ongoing Bill and Melinda Gates-backed Indigenous Knowledge project, which leverages Traditional Chinese Medicine and insilico tools to discover novel insecticides against mosquitoes. Furthermore, the presentation will introduce Landcent's pioneering AI-powered discovery platform, designed to accelerate the discovery and development of novel solutions based on African Indigenous knowledge. A live demonstration of this platform will showcase its capabilities and future potential.

2.5 Panel Moderator and Other Speakers

2.5.1 **Moderator:** Magdalena Skipper (Editor-in-Chief, Nature)

2.5.2 **Welcome Note:** Declan Kirrane

2.5.3 **Closing Remarks:** Arun Stanley Prabhu (CEO, Landcent)

2.5.4 **Master of Ceremony (MCs):** Ben Dotsei Malor (UN) / Marlize Coleman (Landcent)

3 Content

3.1 Session Abstract (max. 500 words)

- This session will explore the critical role of African Indigenous medical knowledge in transforming global healthcare, particularly in the context of the post-2030 UN agenda and the forthcoming Summit of the Future. As the WHO's Traditional Medicines Strategy 2025–2034 calls for integrating traditional medicines into global health frameworks, this session highlights the untapped potential of Indigenous knowledge, especially from Africa, in driving sustainable healthcare innovations.
- Participants will delve into the rich history and current applications of Indigenous medical practices while also examining how Artificial Intelligence (AI) and Machine Learning (ML) are co-creating new pathways for health discoveries. Experts, including academics, policymakers, and industry, will showcase real-world case studies and examples that highlight the ethical, practical, and policy-driven aspects of merging Indigenous knowledge systems and technical advancements.
- A central focus will be the launch of a white paper developed by Landcent and partners, which outlines a comprehensive policy framework for protecting and integrating Indigenous knowledge into national and global health systems. This white paper will provide actionable recommendations on data sovereignty, access and benefit-sharing, active engagement with Indigenous communities in policy development to drive equitable impact. This framework is vital to ensure that Indigenous knowledge is recognized not just as a resource but as a foundational element in the co-creation of future healthcare solutions.
  The session aligns with the UN's six key transitions for sustainable development, emphasizing equitable healthcare access, resilient food systems, and science and technology innovation. It will also address how these Indigenous-led solutions can contribute to WHO's Universal Health Coverage (UHC) goals by embedding Indigenous perspectives into global health policy. Policymakers, researchers, and funders will be urged to invest in frameworks that respect Indigenous data governance, ensuring that the benefits of these healthcare innovations are shared equitably with the communities at their origin.

3.2 Project Objectives

List the key objectives your session or project aimed to achieve.

3.2.1 Objective 1: **Integrate Indigenous Knowledge into Global Health Systems**
The primary objective is to establish a structured framework for integrating Indigenous health knowledge into national and global health systems. This framework will incorporate AI and ML tools to translate traditional ethnobotanical knowledge into actionable healthcare solutions. It will prioritize the recognition, protection, and ethical use of Indigenous knowledge, ensuring it contributes to solving global health challenges, particularly those related to diseases of poverty.

3.2.2 Objective 2: **Develop AI-Powered Healthcare Solutions Derived from Indigenous Knowledge**
Leverage AI and Machine Learning to systematically catalogue, analyze, and apply Indigenous health knowledge in the development of new healthcare interventions, including drugs and therapies. By using advanced AI techniques such as Natural Language Processing (NLP) and Named Entity Recognition (NER), the project will create a scalable, searchable database that can accelerate the discovery of novel treatments, particularly for non-communicable diseases and conditions endemic to Africa

3.2.3 Objective 3: **Create a Policy Framework for Data Sovereignty and Benefit Sharing for Indigenous Communities**
This framework will ensure that the knowledge used in healthcare innovation is ethically sourced and that Indigenous communities receive direct economic, social, and cultural benefits from their contributions. This objective also includes advocating for adherence to international protocols like the Nagoya Protocol to ensure fair access and sharing of benefits.

3.2.4 Objective 4: **Foster African Leadership in Global Health Policy Development**
Promote active participation and leadership from African policymakers, healthcare professionals, and Indigenous communities in global health policy discussions. The goal is to shape health systems that not only integrate Indigenous knowledge but also ensure Africans play a pivotal role in decision-making, thus fostering policies that are inclusive and representative of Indigenous perspectives.

3.2.5 Objective 5: **Enhance Collaborative Partnerships to Support Sustainable Development Goals (SDGs)**
Strengthen partnerships between academic institutions, government bodies, Indigenous communities, and private organizations to drive innovation and support the United Nations Sustainable Development Goals (SDGs). This objective focuses on promoting collaboration for the sustainable use of Indigenous knowledge, ensuring that it contributes to achieving SDG targets like good health and well-being, reduced inequality, and partnerships for development.

3.2.6 Objective 6: **Establish a Center of Excellence for Indigenous Knowledge and AI**
As part of this initiative, the creation of a Center of Excellence is proposed to focus on the intersection of Indigenous knowledge and AI. This center will serve as a hub for research, collaboration, and the development of health innovations that respect and utilize Indigenous knowledge. It will also serve as a training and resource center to strengthen capacity in this field and expand the knowledgebase to support a sustainable and expanding initiative. .

3.2.7 Objective 7: **Promote Ethical Research Practices in Indigenous Knowledge Utilization**

Establish guidelines and protocols to ensure that all research and development activities involving Indigenous knowledge are conducted with the utmost ethical considerations. This includes obtaining prior informed consent from Indigenous communities, adhering to culturally sensitive research practices, and ensuring transparency and accountability in all stages of knowledge utilization and innovation.
