THE 7TH ANIMAL WELFARE CONFERENCE

25th – 27th September 2023

Kigali, Rwanda

Dr. Mary Mbole-Kariuki

AFRICAN UNION
INTERAFRICAN BUREAU FOR ANIMAL RESOURCES
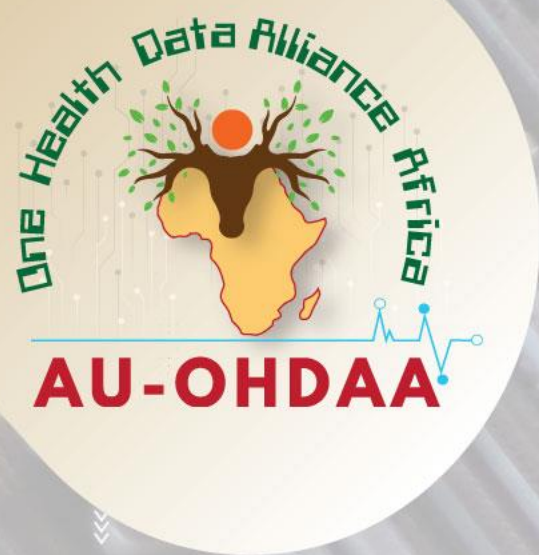
- Africa - Livestock-rich continent representing about one-third of the world's livestock population
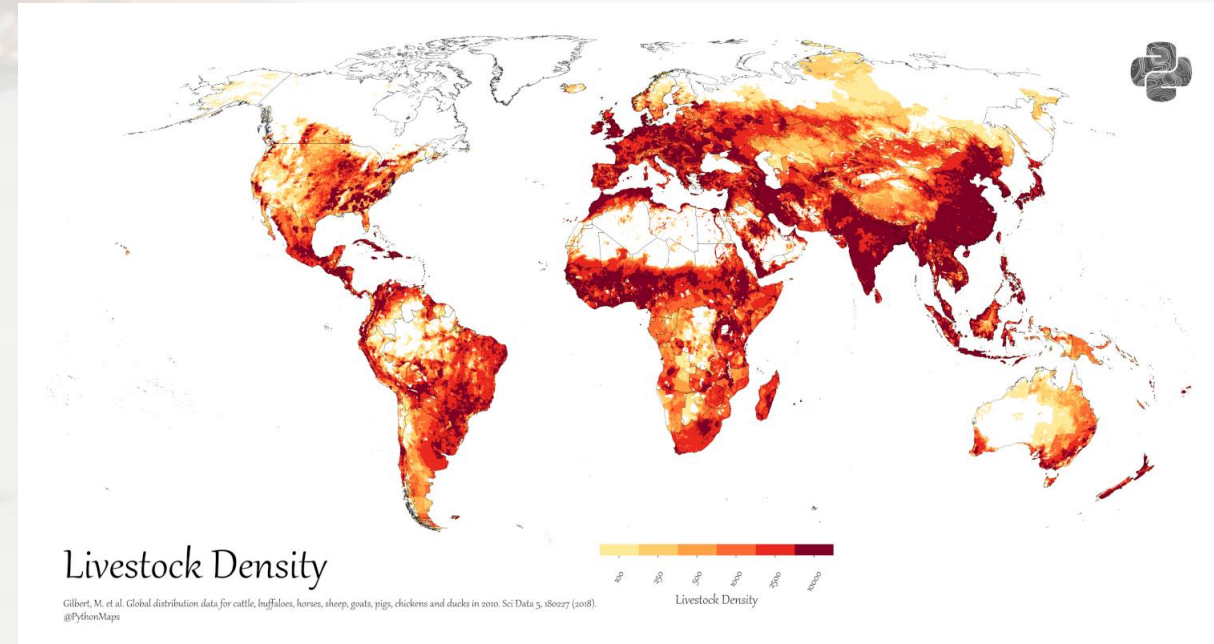
- Livestock sector contributes between 30% and 80% to countries' agricultural GDP

- ~350 million people are directly dependent on livestock for their incomes and livelihoods

- Livestock products such as milk and meat - richest sources of protein currently contributing up to 13% of the world's calorie intake

- Sector holds promise to alleviate food and nutritional insecurity and poverty

Livestock Density

Gilbert, M. et al. Global distribution data for cattle, buffaloes, horses, sheep, goats, pigs, chickens and ducks in 2010. Sci Data 5, 180227 (2018). @PythonMaps

Livestock Density
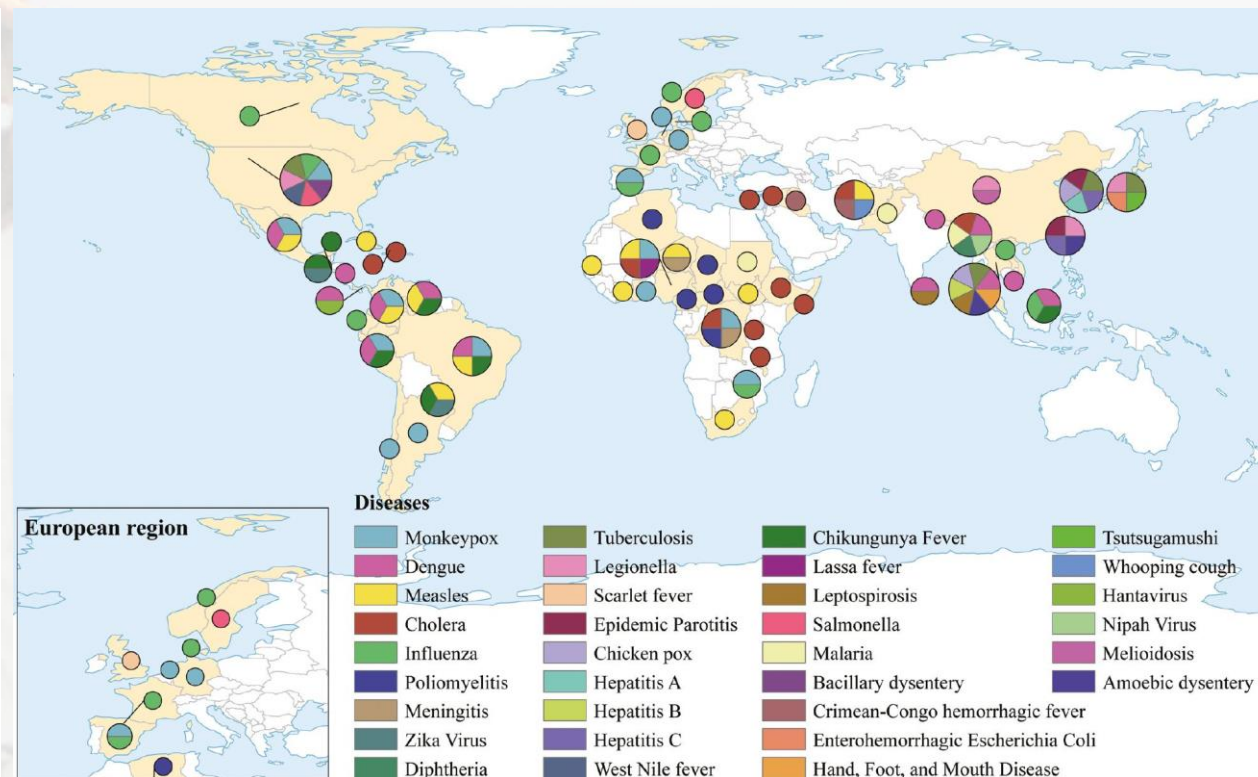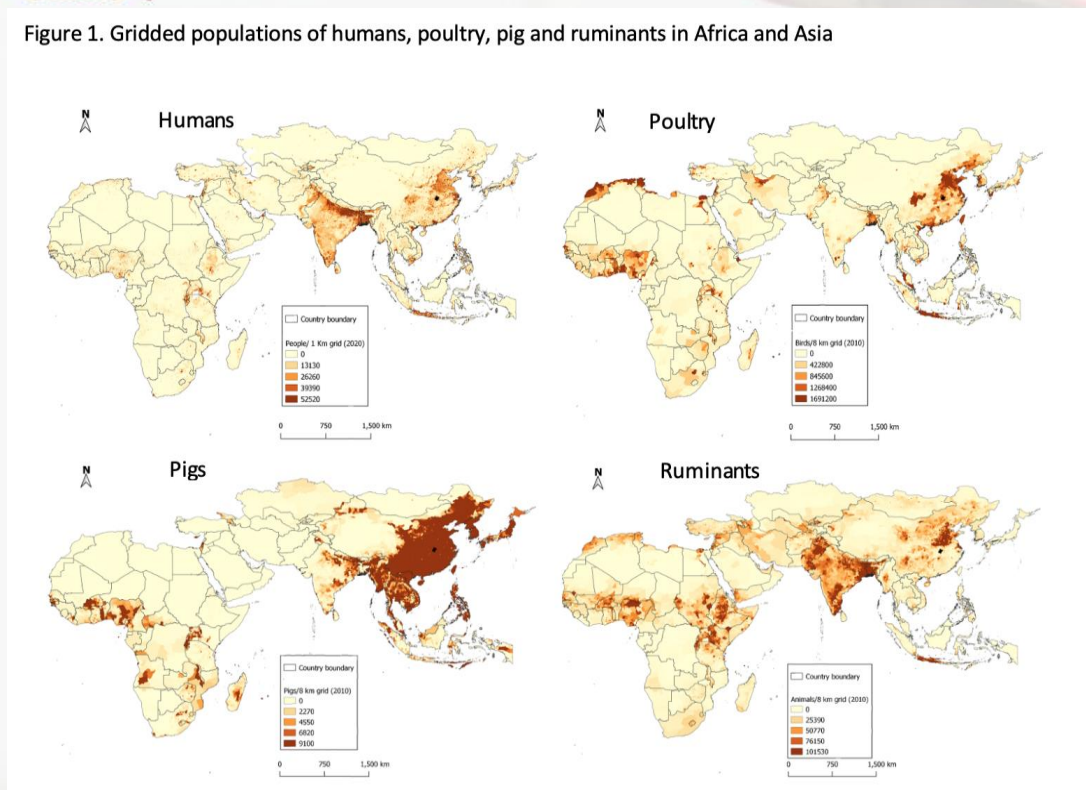
Source:https://www.visualcapitalist.com/cp/mapped-global-livestock-distribution-and-density/

AU-OHDAA

Figure 1. Gridded populations of humans, poultry, pig and ruminants in Africa and Asia

Source: Bett et all, 2020 https://www.ifpri.org/blog/africas-growing-risk-diseases-spread-animals-people

Source He et al., 2023 https://www.scienceopen.com/hosted-document?doi=10.15212/ZOONOSES-2023-1001

- 75% of emerging human infectious disease outbreaks are "zoonotic,"
- A 63% jump in diseases spread from animals to people in Africa
- Silent pandemic – AMR – causing 4.95 million deaths globally reported in 2019

Digitalized One Health; a catalyst to efficient and effective health systems

World Health Organization Declares COVID-19 a 'Pandemic.' Here's What That Means

HEALTH • COVID-19

World Health Organization

Dr Tedros Adhanom Ghebreyesus
WHO DIRECTOR-GENERAL

TIME
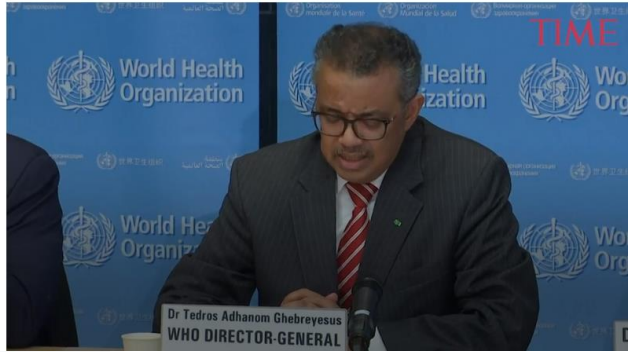
Retired Soccer Star John Terry Cuts Half a Million

World Health Organization

New report highlights the impact of changes in environment on One Health

Русский

Credits

Annals of Medicine and Surgery 81 (2022) 104418

Contents lists available at ScienceDirect

Annals of Medicine and Surgery

ELSEVIER   journal homepage: www.elsevier.com/locate/amsu

ANNALS of MEDICINE and SURGERY

Correspondence

Anthrax outbreak amidst the COVID-19 pandemic in Africa: Challenges and possible solutions

Check for updates

ARTICLE INFO

Keywords
Anthrax
COVID-19
Zoonoses
Africa

ABSTRACT

Anthrax and coronavirus disease 2019 (COVID-19) are both notable zoonoses that have high morbidity and mortality, not to mention adverse socio-economic and health consequences on the communities they ravage. Anthrax wreaks disease amongst mammalian species worldwide and has an endemic distribution in Africa and Asia. Kenya, for example, records an average of 10 outbreaks annually. In 2014 and 2017, it held anthrax attack rates of 15% and 29%, respectively, and case fatality rates of 1–5%. As with COVID-19, effective surveillance, containment, and vaccination programs are crucial in the fight against anthrax. While there is no evidence of direct, human-to-human transmission of anthrax currently, *Bacillus anthracis* remains a disease of public health

UN environment programme

Who we are

WEBINAR

Advancing the One Health response to Antimicrobial Resistance (AMR)

11 January 2021
Online

Home › Infectious disease topics › A–Z disease list › Ebola virus disease › Threats and outbreaks › Eb

Ebola virus disease outbreak in Uganda

Translate this page

Situation update as of 11 January 2023

The fifth outbreak of Ebola virus disease (EVD) due to *Sudan ebolavirus* in Uganda was declared over on 11 January 2023.

On 20 September 2022, the Ministry of Health in Uganda, together with the World Health Organization - Regional Office for Africa (WHO AFRO), confirmed an outbreak of Ebola virus disease (EVD) due to *Sudan ebolavirus* in Mubende District, Uganda.

Overall, 142 confirmed cases of EVD caused by *Sudan ebolavirus*

Latest updates

Scientific and technical p
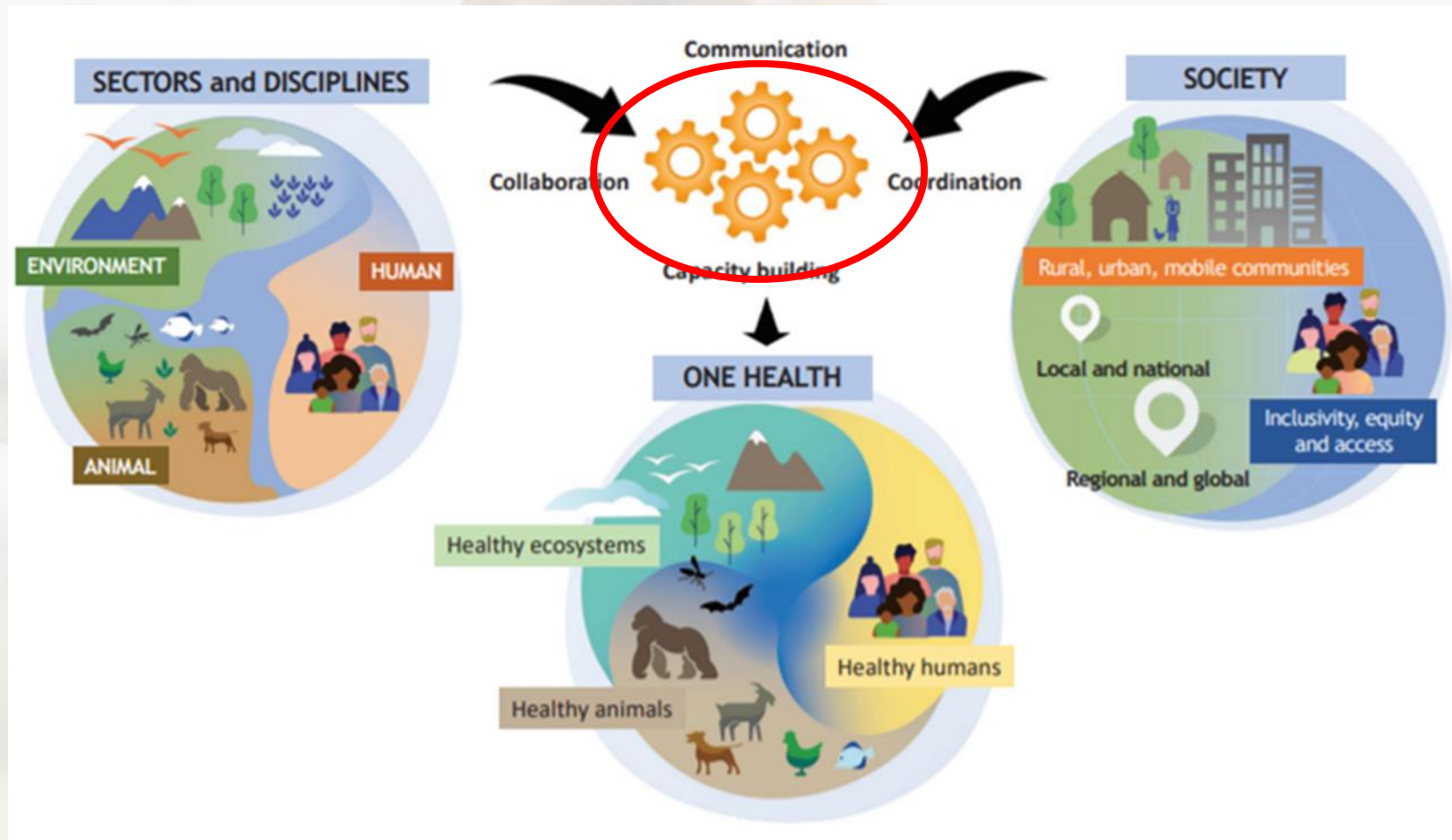Communicable disease t
2
Monitoring - 13 Jan 2023

Digitalized One Health;

AU-OHDAA

One Health High Level Expert Panel (OHHLEP) definition of
One Health, 2021
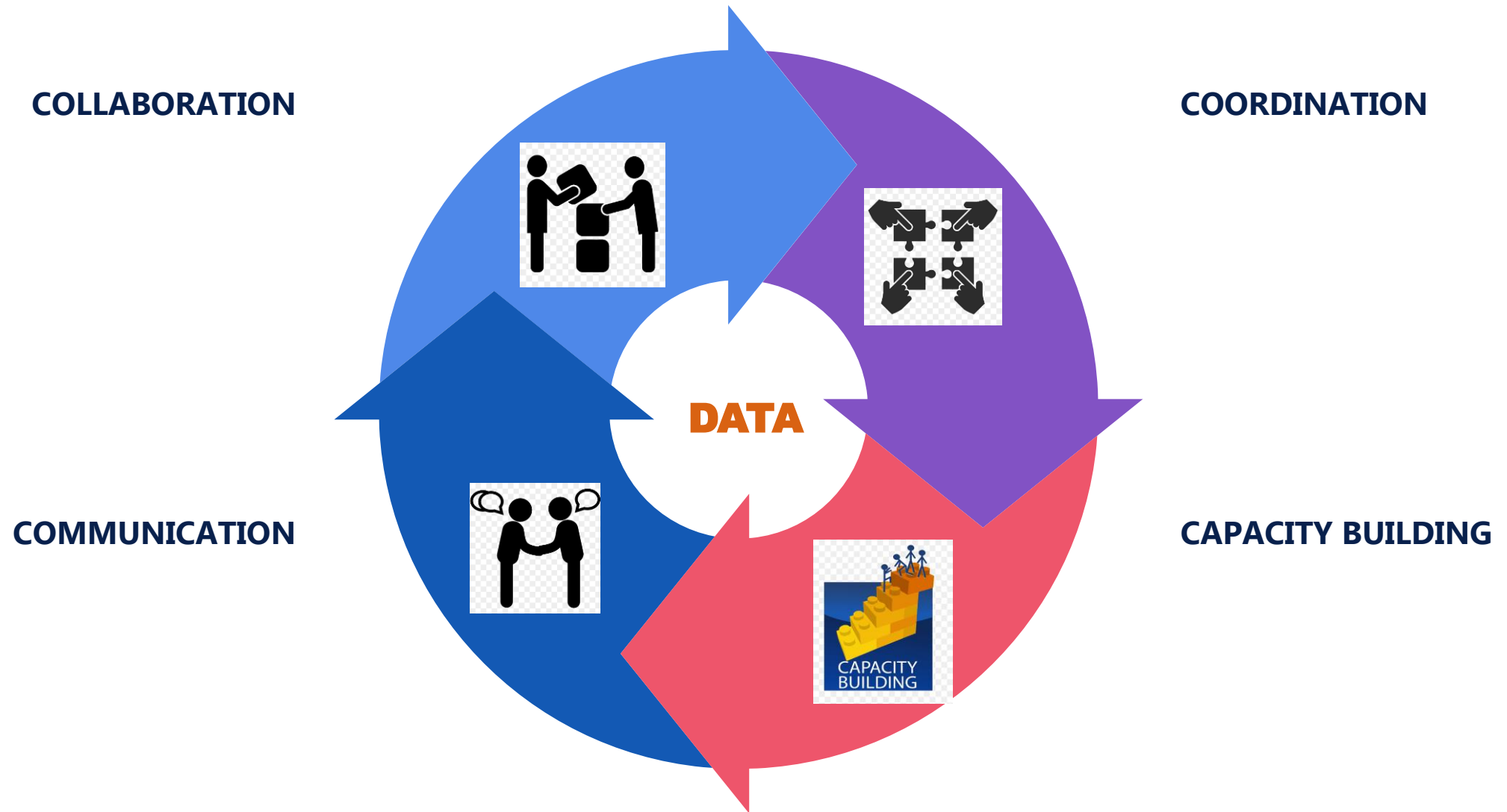
Digitalized One Health; a catalyst to efficient and effective health systems

1. Capacity building for OH implementation in AU MSs

2. Coordinating harmonized mechanisms;

   - Animal Health Strategy for Africa (AHSA),

   - Integrated National Action Plans (INAPs),

   - OH Units, AU Common Position on AMR and the AU Framework for AMR,

   - AU Task Force on AMR; food safety committees;

   - Integrated Regional Coordination Mechanism (IRCM);

   - Regional Animal Health Centres (RAHCs) and Networks (RAHNs)

   - Continental Animal Health platform (CAHP-Africa)

3. Convening OH actors and promoting dialogue on OH

4. Animal Diseases Data reporting - generate data/evidence on OH

❏ Focusing on the **A**nimal Health Strategy for Africa (2019-2035)** which provides a common vision and goals for the African continent for the improvement of animal health delivery systems - **S**trategic Objective 3:2.3.1 aims to promote the One Health approach** through;

> ❏ Support advocacy and awareness creation among stakeholders and policy makers and the general public on the One-Health approach in order to promote risk management actions;
>
> ❏ Promote the establishment, strengthening and institutionalization of the One Health Approach to foster sustainable collaboration and coordination at all levels
>
> ❏ Promote joint research initiatives on disease dynamics at the animal-human-environment interface;
>
> ❏ Promote the integration, periodic review and strengthening of One-Health modules into the curriculum of Veterinary Education Establishments and continuous professional development programmes.

AFRICAN UNION ONE HEALTH DATA ALLIANCE AFRICA (AU-OHDAA)

Project Duration:January 2023 – December 2024

Funded by BMZ

Digitalized One Health; a catalyst to efficient and effective health systems

The lack of data sharing platforms and granularity of data has affected one health governance and management in Africa

ONE HEALTH
GOVERNANCE

"DO THE RIGHT
THINGS "

DATA SCIENCE

MACHINE LEARNING

ALGORITHM   BIG DATA

CLASSIFICATION   DATABASE

DATA ANALYSIS   CLUSTERING

DATA ENGINEERING   DATA SCIENCE   DATA MINING

ONE HEALTH
MANAGEMENT

"DO THINGS RIGHT"

Vision

An Africa where the health of humans, animals, and ecosystems are viewed as interconnected and are collaboratively managed

Build a **data-driven culture** in the animal health space across the continent where information sharing forms the bedrock of decision-making in One Health matters

THEORY OF CHANGE

Impact: Efficient and Effective health systems contributing to reducing socio-economic effects of One Health

Outcome 1

Outcome 2

Outcome 3

Efficient One Health digital platform to guide multi-sectoral decision making
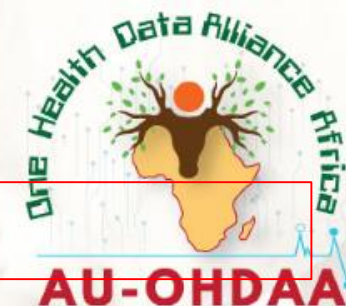
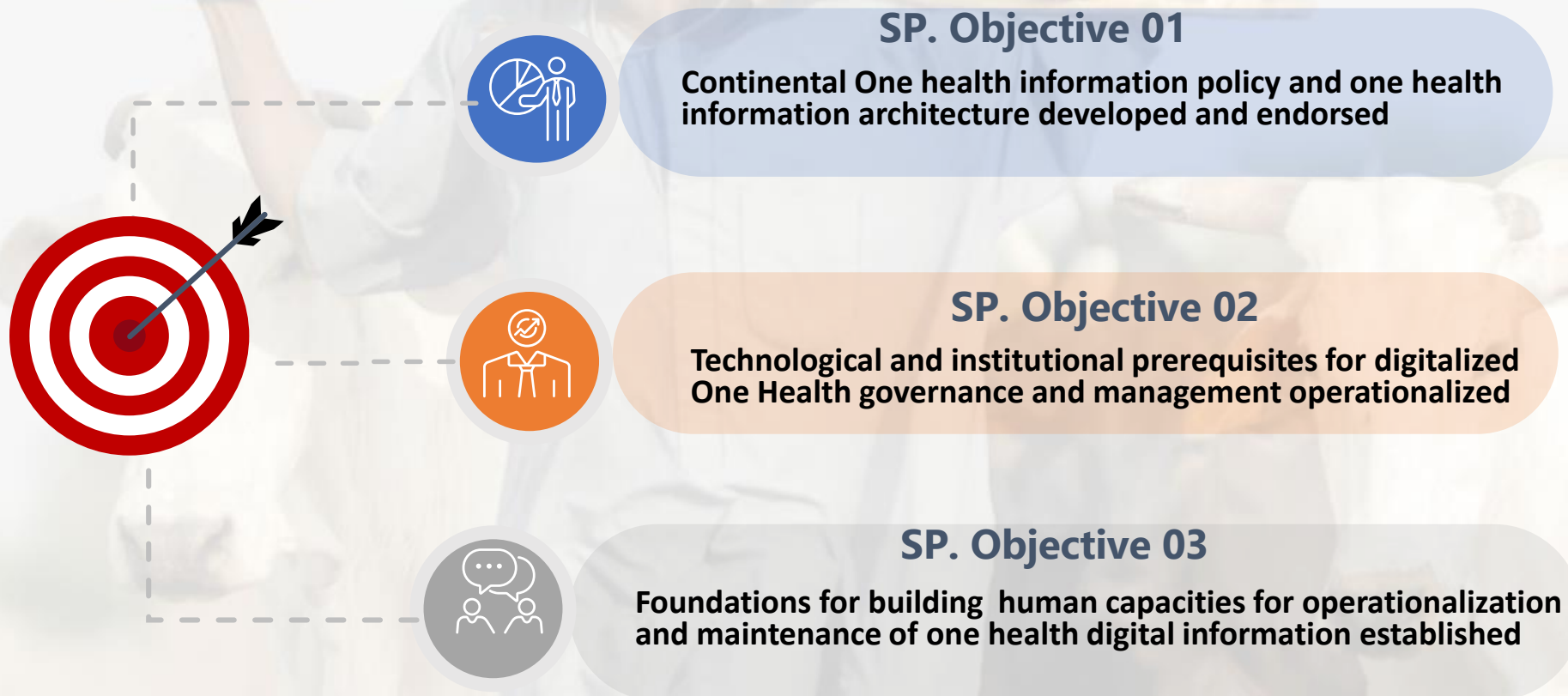Well trained and robust One Health Expertise to for delivery of Effective health systems

Robust and enabling One Health policy environment for improved One Health Governance and management

Cross-cutting themes: Gender equality; Inclusivity; climate change

Digitalized One Health; a catalyst to efficient and effective health systems

AFRICAN UNION
INTERAFRICAN BUREAU FOR ANIMAL RESOURCES

Overall objective: Digitalized One Health governance and management in Africa is improved

SP. Objective 01
Continental One health information policy and one health information architecture developed and endorsed

SP. Objective 02
Technological and institutional prerequisites for digitalized One Health governance and management operationalized

SP. Objective 03
Foundations for building human capacities for operationalization and maintenance of one health digital information established

Digitalized One Health; a catalyst to efficient and effective health systems

AU-OHDAA

SO1: One health information policy and one health information architecture developed and endorsed

1 Establishment of the technical working groups across the OH domains

2 Formulation and validation of the OH information policy (IP) and Information Architecture (IA).

3 Endorsement at AU level proposed OH information policy(IP) and Information Architecture(IA).

4 Develop and operationalize a maintenance model for the endorsed OH information policy (IP) and OH information Architecture (IA).

Digitalized One Health; a catalyst to efficient and effective health systems

SO2: Technological and institutional prerequisites for digitalized One Health governance and management operationalized

Assessment and mapping of the OH data regulatory, data standards, ICT and governance systems at continental, regional and national

Develop and Operationalize the AU One Health digital Platform hosted at AU-IBAR

Assessment of National OH digital platforms in 2 select MS

Digitalized One Health; a catalyst to efficient and effective health systems

SO3. Foundations for building human capacities for operationalization and maintenance of one health digital information established

◆ Develop Africa Union E-training portal for OH competencies and assessment

◆ Develop and document standards for the competency profiles and quality standards for African specialists

◆ Training of trainers on the 5 Competences in the One Health digital data and information platforms

AU-OHDAA

- African Union African Centres for Disease Control and Prevention (Africa CDC),

- Regional Economic Communities

- One Health Regional Networks or networks

- OH desks, OH focal points* or OH units in national public sector institutions, such as institutions related to human, animal and environmental health as well as socio-economic development.

- RAHCs

- RCC

- AU institutions involved in environment/climate, biodiversity, water/sanitation, and economic development/trade

- The OH Research, Education and Outreach Centre in Africa (OHRECA)

- AFROHUN

- AFROHNET

- **Veterinarians and Animal Health Workers**: Better tools for surveillance, diagnostics, and disease control; evidence-based decision support; enhanced knowledge sharing across Africa's veterinarian community.

- **Farmers and Agribusinesses**: Improved productivity and animal health through early outbreak warning; data-driven planning and supply chain management; access to veterinary expertise.

- **Policy Makers**: Integrated predictive analytics for scenario planning; holistic insights spanning animal, human and ecosystem health to guide cross-sectoral strategies and investment alignment.

- **Researchers**: Rich integrated data resources to conduct studies and close evidence gaps across One Health domains; findings can further refine policies and systems.

- **Vulnerable communities** – Women, youth and pastoralists Reduced risk from zoonotic diseases and food insecurity; livelihood protection; increased understanding of human-animal links
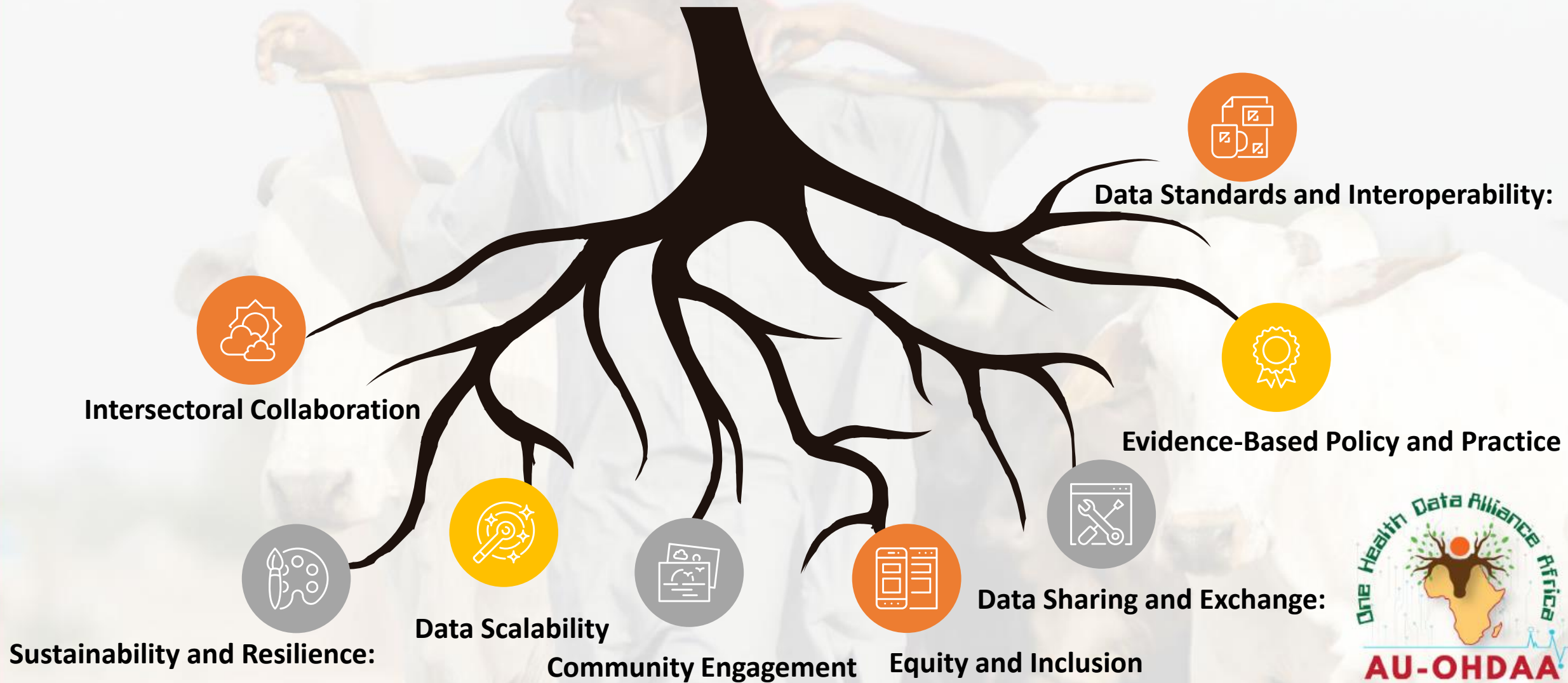
SNEEK PEEK

GUIDING PRINCIPLES

Data Standards and Interoperability:

Intersectoral Collaboration

Evidence-Based Policy and Practice

Sustainability and Resilience:

Data Scalability

Community Engagement

Equity and Inclusion

Data Sharing and Exchange:

Digitalized One Health; a catalyst to efficient and effective health systems

AFRICAN UNION
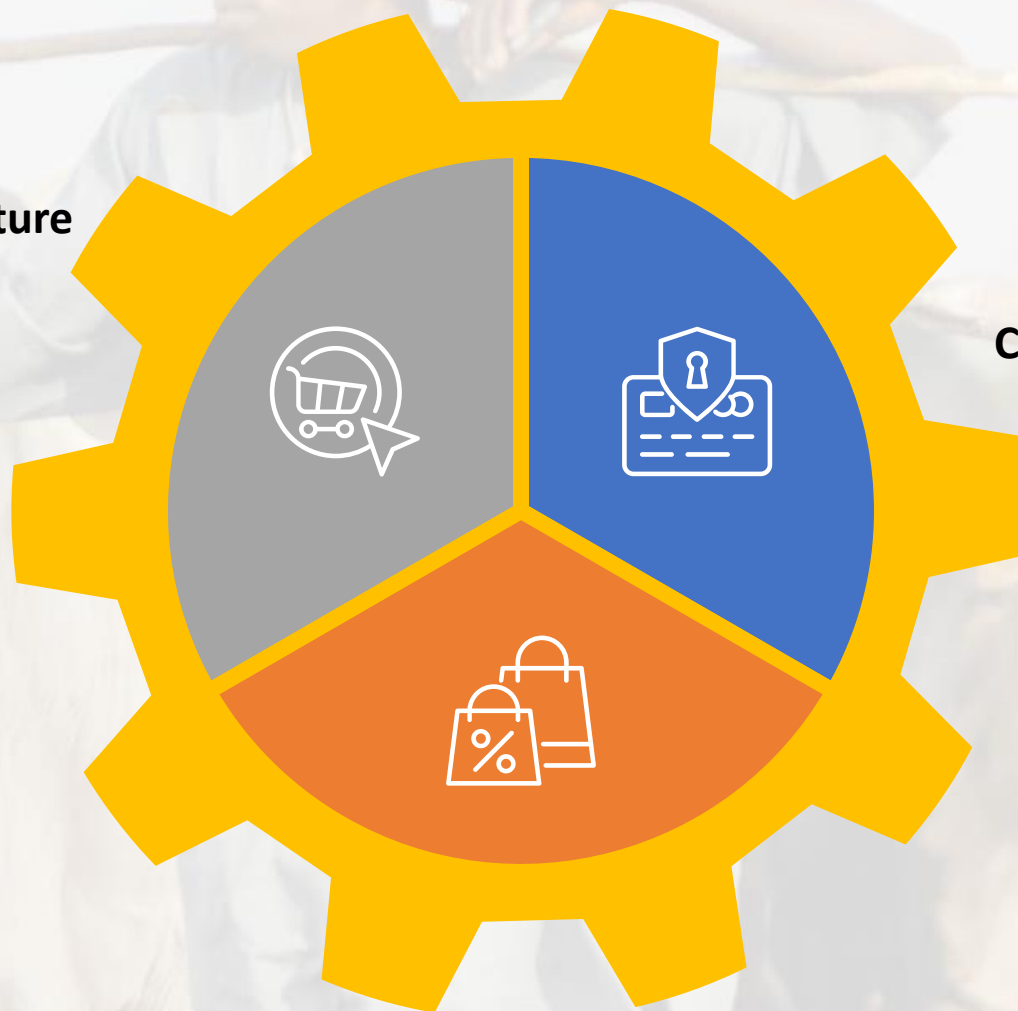**INTERAFRICAN BUREAU**
FOR ANIMAL RESOURCES

One Health Information Architecture

Data standards

Data analytics

Data informatics

Data governance

Feedback loop

Operational framework.

Enabling digital OH co-ordination environment and sustainability

One Health Secretariat

AU OH technical Working groups

**Capacity building of Digital One Health technical competencies**

Data analytics, Data informatics, Risk communication, .

AU-OHDAA

One Health Data Alliance Africa

Digitalized One Health; a catalyst to efficient and effective health systems

USE CASES

- **Disease Prevention and Response**: Leveraging integrated laboratory, surveillance, and vaccination data to enable rapid and informed actions during health emergencies

- **Evidence-Based Policy Making**: Utilizing integrated One Health data for the development and formulation of evidence-based policies, regulations, and strategies related to animal health.

- **Predictive Analytics**: Leveraging data integration to identify trends and make predictions related to One Health matters such as zoonotic diseases with pandemic potential, environmental degradation, and climate change impacts.

- **Community Awareness**: Utilizing integrated data to generate and disseminate best practices and lessons learned and drive community awareness initiatives as well as improve the delivery of One Health interventions at the community level.

- **Regulatory Compliance**: Facilitating compliance with data sharing policies, ICT regulations, and data privacy policies through the use of standardized and harmonized One Health data.

- **Competencies and Capacity Building**: Using data insights to identify gaps and needs in building digital One Health technical competencies, including data analytics/science, data management, data informatics, and risk communication

AFRICAN UNION
INTERAFRICAN BUREAU
FOR ANIMAL RESOURCES
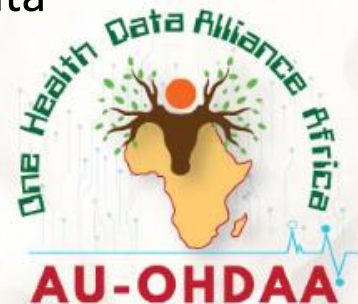
ANIMAL HEALTH

Poor husbandry and animal management practices.

Weak animal health systems

HUMAN HEALTH

Weak public health delivery systems.

ENVIRONMENTAL HEALTH

Impacts of climate change – droughts, floods adverse impacts on animal resources- biodiversity, disease increase

ANIMAL WELFARE

GOVERNNACE

Lack of animal-welfare sensitive policies, strategies and frameworks
Lack of inclusivity.

AU-OHDAA

Digitalized One Health; a catalyst to efficient and effective health systems

Promote One Health and One Welfare

There is need to complete the puzzle

AU-OHDAA

Digitalized One Health; a catalyst to efficient and effective health systems