



Towards a More Resilient Veterinary Workforce for Africa 2024

Continental Conference
26 – 28 November 2024 Nairobi, Kenya

Youth Perspectives on Futures of the Veterinary Workforce in Africa

Youth foresight report January 2025

Table of Contents

<i>Youth Perspectives on Futures of the Veterinary Workforce in Africa</i>	1
<i>Youth Perspectives on Futures of the Veterinary Workforce in Africa Executive Summary</i>	3
<i>Acknowledgments</i>	5
<i>Acronyms</i>	7
<i>Background</i>	8
<i>Purpose</i>	9
The Youth Foresight Goals:	9
<i>Methodology</i>	10
Questions	10
Format	12
<i>Virtual Workshop 1&2 – English and French</i>	13
Goals:	15
• Understand youth hopes/fear expectations for the future	15
• What changes youth are seeing emerging (through storytelling in their eyes/context)	15
• Concrete recommendations from youth to decision makers	15
Primary task:	15
Workshop Inputs:	15
<i>The Stories</i>	15
<i>Sharon the Animal Whisperer – Ghana</i>	16
Implications of Change in Sharon & John’s Stor	16
<i>Bob and Mercy, Cabinet Secretary Agriculture, Kenya</i>	18
Implications of Change in Bob & Cabinet Secretary.Mercy	18

<i>Nairobi Workshop (Onsite)</i>	19
Drivers Mapping	19
Each group explored four different sub-questions identified in the project. These questions were:	20
The participants then proceeded to prioritize the change drivers by impact and uncertainty.	20
<i>Dissemination of Youth Perspectives on Futures of the Workforce at the Conference</i>	29
Results	29
<i>Recommendations</i>	30
<i>References</i>	32

Youth Perspectives on Futures of the Veterinary Workforce in Africa Executive Summary

In November 2024, the World Organisation for Animal Health (WOAH) and partners hosted the **Africa Continental Conference: *Towards a More Resilient Veterinary Workforce for Africa 2024***. The conference aimed to evaluate progress, share regional experiences, and encourage further investments in veterinary workforce development.

In preparation for the conference, WOAH launched its first direct youth engagement project. From August to November 2024, WOAH brought together 80 young people from over 16 African countries to explore the future of the veterinary workforce using futures and foresight methodologies.

The project consisted of three Youth Futures Workshops: two online sessions (in English and French) and one face-to-face event in Nairobi (in English). These workshops built upon WOAH's first major youth-focused event, **'Is WOAH Ready for the Future?'**, held earlier at the 91st General Session in May 2024 with International Veterinary Students Association (IVSA) representatives. Through these consultations, participants identified key challenges, opportunities for innovation, and critical dilemmas shaping future veterinary workforce development.

While WOAH has traditionally supported education through developing guidelines and curricula, this initiative on workforce development marked WOAH's first direct engagement with youth stakeholders. This Youth foresight process created an inclusive platform for exploring critical uncertainties and trends. Participants examined emerging disruptions and opportunities affecting veterinary education and workforce development, emphasising the importance of futures thinking in building resilience. They later presented their findings to decision-makers, veterinary education professionals, and associations at the November Conference.

The 2024 Conference provided a crucial opportunity to examine the current state and future evolution of Africa's veterinary workforce over the next 20-30 years. It highlighted the importance of anticipating future needs while addressing current challenges, emphasising that meaningful engagement with future custodians and experts as well as inter-generational dialogue, are essential for maintaining relevant workforce planning and education.

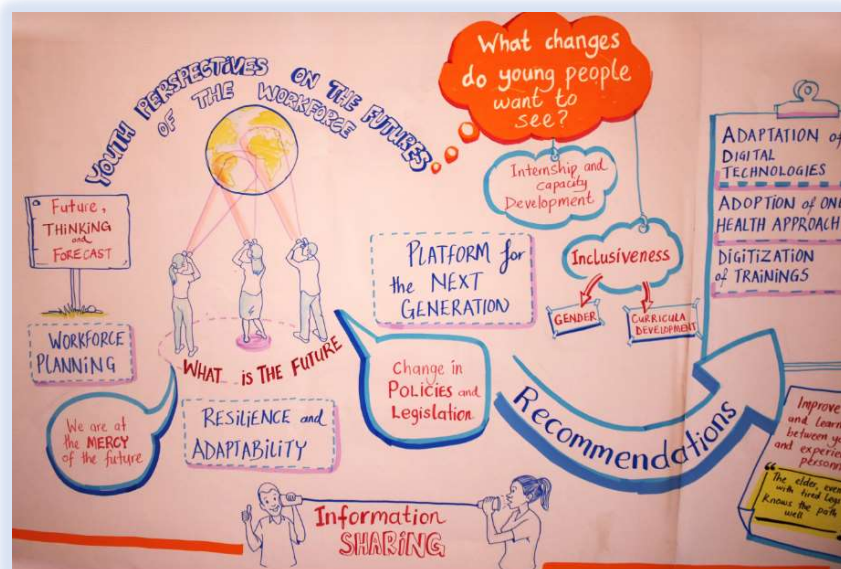
Feedback from youth participants highlighted how the collaborative foresight methodologies were empowering and eye-opening, providing them with new skills which they felt would be valuable in their studies and career.

The initiative also strengthened WOAH's and Members' commitment to inclusive engagement, highlighting how workforce development efforts can remain relevant to the evolving needs of young professionals by involving youth across stages of planning for policy, but also for education and enterprise development.

By incorporating foresight methodologies, WOAAH has demonstrated leadership in preparing for future challenges in veterinary services. This project marks a significant step toward ensuring the resilience and adaptability of the veterinary workforce in Africa. Through amplifying the voices of the next generation, WOAAH is paving the way for a future-ready animal health sector.

Key Takeaways

- Future Directions for Members include understanding the importance of sustainable workforce planning, engaging the next generation of veterinary personnel and adapting to emerging workforce changes
- Engaging young people directly adds value to decision-making and ensures workforce planning is relevant to future needs.
- Futures thinking enhances awareness of anticipated changes within and outside the veterinary domain, fostering resilience.
- The process identified trends in how veterinary education and service delivery are organised, calling for innovation and adaptability.
- **The Africa workforce conference 2024 included youth perspectives in workforce planning as one of ten Recommendations to Members, along with other new recommendations such as wellbeing and mental health, gender inclusion, collaboration and digitalisation, which reflect significant priorities identified through the youth consultations.**



Acknowledgments

This report was written by Nancy Mugei and Finn Strivens, and the project was managed by Sonia Fèvre, with support from Tianna Brand.

We extend our heartfelt gratitude to all the young people who participated in the three workshops in this project. Your insights, enthusiasm, and dedication were instrumental in shaping the outcomes of this report. Your valuable contributions have not only enriched the foresight process but also underscored the vital role of youth in shaping the future of the veterinary workforce in Africa.

We are especially grateful to the more than 80 young people from 16 African countries who brought diverse perspectives and innovative ideas to the table. Your participation has demonstrated the importance of engaging the next generation in workforce development.

Notably, we would like to thank the following young people who attended the Nairobi Workshop in November 2024:

Alvin Karori Monanda
Andati Majani
Angel Mwangi
Asha Lumumba
Boaz Mitemei
Boru Ali Waqo
Bramwel Mitey
Caesar Wanja
Charity Nadzua Mbito
Corazon Nyambura
David Lentikoka Leshipayo
Eliud Kiplimo Kipchumba
Emma Mugo
Erick Korir
Esther Macharia
Esther Njeri Karime
Faith Wamaita
Faith Wanjiku Mwangi
Grace Mumo
Hosea Munei
Ian Mugambi Muriungi
Jared Odhiambo
John Gavu
Malale Beverly Ayuma
Martha Adul
Mary Nyambura Gathongo
Mathew Kiplimo
Maurine Wanjira
Mercy Otieno
Mercy Tago
Milia Samson

Mutsotso Elvis
Paul Adenyo Ochieng'
Purity Mutua
Sophie Waweru
Steven Ndurumo
Susan Kuria
Sydney Kigen
Winfred Wanja

We would like to thank the following young people who attended the English-speaking online workshop in Africa in November 2024:

Nyasuna Diana Jesca
Sama Nasser Zeidan Mohamed
Grantinia Joseph
Mmesoma Arungwa
Wilka Kayoko
Charline Rutagengwa
Emmanuel Boakye Anim
Latifah Abdulkarim
Leonard Alimoyoh
Busiran Seidu
Mercy Bisala
Assouman Tuyishime
Muhammad Salihu
Benson Angaluki
Chikondi Kipangazi
Nickson Medard Tarimo

Efua Takyiwaa Owusu
Jamilu Ali, Garba
Ngoga Aimee Nicole
Marian Mensah-Abrampa

Kirui Collins Kipkoech
Abdullahi Suleiman Sarkinfulani
Muwanguzi Ibrahim
Ingabire Clementine

We would like to thank the following young people who attended the French-speaking online workshop in Africa in November 2024:

Kossi Edoh Paul ASSEDI
Fride Fezeu
RADAIWA
ILBOUDO Bernadine
Yasmina YOUGBARE
Gaspard Junior AYISSI AYISSI
Yemienguigna Nougnon COULIBALY
Jean-Baptiste Vianney YOODA
Alvine Laure NGONGO Youmbi
Ngassou Djarssoumna
Esther Rosette Nneme Nkolo
Fernande Carine Ekotto koya
serge Bikim
Gbohounou Fabrice GNALI
Boubacar Sidiki Kané
B. Ido Apollinaire BAKO
Pierrette Pebga Pebga
Françoise Raissa Yomb
SEDJRO Afito Josephine
Daouda OUEDRAOGO
Alvine AMAWOTA
Hayatou Babba
MOHAMED BABA OUMAROU
Esthelle Yvette LOM BOTT
CHE FRU LANDRY
Nabila ADAM
Basse KABORE
Kadjogbé Eustache Shériff ESSE
Kotimogognini Dramane
OUEDRAOGO
Moussa OUEDRAOGO
Franck Cresmy TOUALA BOTCHAK
Abasse ZOMBRA
Michaëlle Arielle KOUAKEP epse
TSOH
Abdoul-Kader CISSE
Tom-irazou Essomanda TCAHLIM
Koudoua Piklewé ALAWI
Ali SAWADOGO

Experts

We would also like to thank all the experts we consulted who provided insights.

In particular we would like to acknowledge:

Peer Reviewers

We also wish to acknowledge the efforts of the individuals who peer-reviewed this report. Jan Sang, Diana Nyasuna, Latifah Abdulkarim, Wilka Kayoko, Purity Mutua, Kasadha Nicholas. Your constructive feedback, expertise, and thoughtful suggestions have ensured the quality and accuracy of the content. Your commitment to supporting this initiative has been invaluable.

Special Thanks

A special note of appreciation goes to the International Veterinary Students Association (IVSA) for their partnership and to the WOAHP Team, the University of Nairobi for hosting a workshop, Foresight Experts and organisers who worked tirelessly to make these events a success.

This report reflects the collective effort of all contributors. We hope it inspires further collaboration and action toward building a resilient and inclusive veterinary workforce for the future.

Acronyms

IVSA	International Veterinary Students Association
NamLITS	Namibian Livestock Identification and Traceability System
SOIF	School of International Futures
STEEPLEV	Social, Technological, Economic, Environmental, Political, Legal, Ethical, and Values
VPP	Veterinary paraprofessional

Background

Veterinary workforce development is inherently connected to the future, as today's training shapes tomorrow's workforce. This process can take anywhere from 1 to 10 years, emphasising the importance of strategic, forward-thinking training programmes. An essential element of workforce development is **lifelong learning**, ensuring that professionals continuously adapt to evolving demands.

As **Veterinary Services** and **veterinary educational establishments** update their approaches to training and deployment of veterinarians and veterinary paraprofessionals, it is crucial to incorporate foresight into curriculum planning, development, and even legislative frameworks. This ensures that these policies and programmes remain flexible and responsive to future needs. A notable example of this occurred during the COVID-19 pandemic, where the question arose of whether veterinarians were considered **essential workers** and could assist with human vaccinations (AVMA, [1a], WOA [1b]).

Given that the future is unpredictable, various approaches exist to help actors across disciplines consider the implications of change, the current status, and the spectrum of possible futures. These methodologies enable the examination of how present-day decisions will shape future outcomes and prepare stakeholders for multiple potential futures. Terms such as "**VUCA**" (volatile, uncertain, complex, and ambiguous) describe the environments that modern workforces must be prepared to navigate. As highlighted in The World Bank's *World Development Report: The Changing Nature of Work* (2019, [2]), the increasing role of technology across all sectors requires advanced cognitive skills, and **human capital** is valued more for adaptability than ever before.

Beyond the veterinary sector, a growing field of research, thought leadership and policy is developing around the concept of 'the future of work'. For example, as well as the World Bank report cited above, the Global Commission of the International Labour Organization (ILO) published a report in 2019 [3] entitled "Work for a brighter future".

Various themes of relevance to the future of work which also relate to the veterinary domain include the demographics of the working population, access to learning, skill sets required for future workforces, diversity and inclusion, digitalisation of the workforce and veterinary technologies, transition of the workforce to a green economy and mental health. Some studies posit that the mental health burden is normalised in the veterinary professions and there is "the need for mental health to be more centrally incorporated into the veterinary curriculum and professional development" (Connolly, C. E., et al, 2022, [4]).

The global framework of the Sustainable Development Goals include numerous targets which relate to the changing nature of work, such as improving rural economies, lifelong learning and gender parity, amongst others. The African Union's Seven Aspirations for 2063 [5] also include reference to lifelong learning, under Aspiration 1, A prosperous Africa based on inclusive growth and sustainable development, identifies the goal of "well educated citizens and skills revolutions underpinned by science, technology and innovation".

Purpose

The Youth foresight project sought to provide a platform for next generation voices within WOA's workforce development programme for the first time, to share diverse future perspectives among key stakeholders, and to foster resilience and adaptability in workforce planning for WOA, its Members and regional partners. By involving the next generation, the project showed how workforce planning and education can stay relevant and meaningful to young people.

The Youth Foresight Goals:

- Create a platform for the next generation in the WOA ecosystem.
- Elicit and share diverse youth perspectives on veterinary workforce futures.
- Explore current and potential trends and expectations about education and training, jobs, employment and how animal health service delivery are organised.
- Identify changes, trends, and patterns, in how people will learn and work and how that can inform the way we organise around learning and employment.
- Provide recommendations on how actors in education and employment be more responsive to the needs of the next generation in the evolving veterinary workforce.

Key questions explored through the design of the youth Foresight process included a reflection of the following:

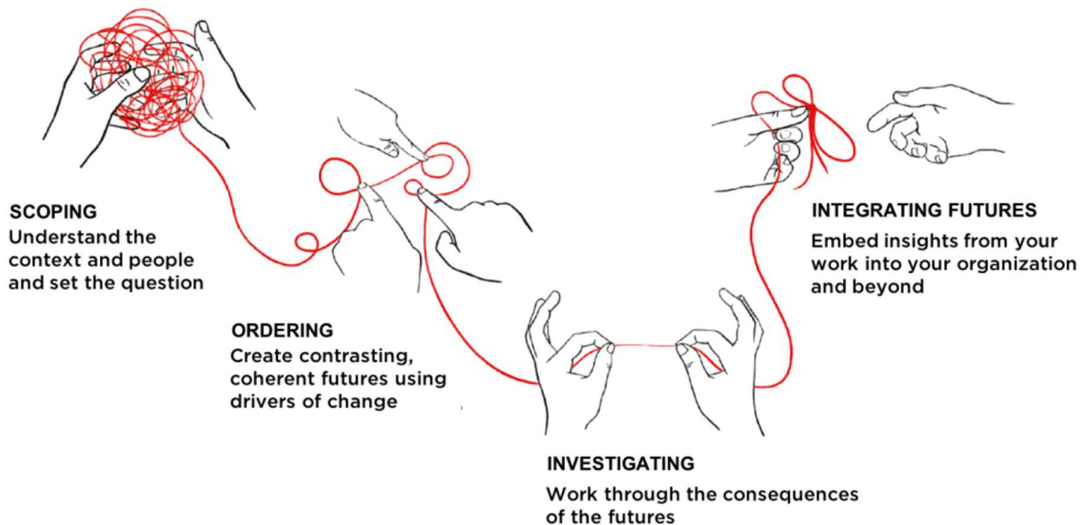
1. What current global trends could affect the future of work?
2. What local or national trends could affect the future of work?
3. What challenges or trends do vets and VPPs being trained now need to be prepared for? Do climate change or pandemic preparedness figure in their preparation?
 - What changes in the world are relevant to animal health/veterinary science?
 - If the gender demographics of the veterinary workforce change significantly, will the organisation of the workforce be adapted and responsive to the needs of women in the workforce?
4. How should training programmes prepare new graduates in the veterinary domain for the future of their work?
5. Do current animal health/veterinary science education and training align with current global changes?
6. How will these changes affect animal health/veterinary science and practice in the future?

Additional questions were introduced to test the project's **vision** for a more resilient veterinary workforce in Africa. The team examined their assumptions about the future and potential risks that could impede workforce development.

They analysed necessary trade-offs, critical uncertainties, and dilemmas that African member states would face. Central to this analysis was understanding **how leaders on the continent and stakeholders were ensuring fairness for both present and future generations in building a more resilient veterinary workforce.**

Methodology

The Youth Foresight Process followed the School of International Futures (SOIF) framework. This is a method-agnostic foresight approach, designed to structure foresight with impact. Where this framework excels, in contrast to many foresight approaches, is in prioritising attention to scoping and integrating phases of the work. We think good foresight needs this time in order to land, and the projected added more days into the work plan for these steps as a result.



During the Scoping phase, the project focused on understanding the context and establishing key questions. The team refined the six questions (see purpose) into a two-part question with four sub questions.

Questions

- 1) How are the emerging changes in education and the future of work shaping the veterinary workforce?
- 2) How should veterinary education and workforce planning adapt in order to meet the needs of new generations of the veterinary workforce?

Sub-questions

- What new skills will be needed in veterinary practice and how to best prepare students for those?

- What must governments do to incentivise and increase accessibility and equality of new generations joining the veterinary workforce?
- How is changing animal health influencing the nature of veterinary work and careers?
- How might policy on education and veterinary workforce planning change in order to realise young people's vision of the future?

The project utilised mix methods to explore these questions, which included:

- Domain Map
- Futures Wheel¹
- Storytelling
- Stakeholder interviews
- Trends analysis and driver cards
- Workshops and methodologies for online and Nairobi workshop (slightly separate)

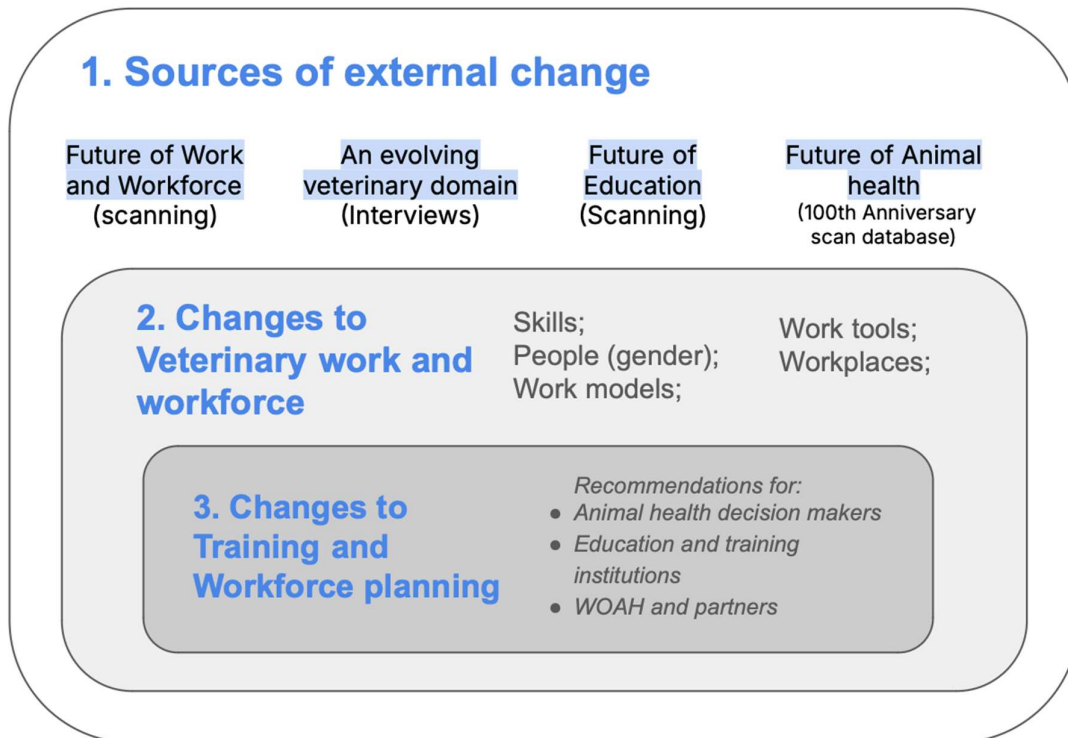
Post Workshops

- We held a Panel at the Africa conference where youth representatives shared the outcomes and recommendations from the process
- The project team hosted a technical session at the Africa conference where participants engaged in storytelling and refining of recommendations, these stories were devised in the posters, and used to inspire futures-based discussions.

The Domain Map

The team developed a domain map to provide a framework for guiding research and scanning, while clearly defining the project's scope. The map used the Social, Technological, Economic, Environmental, Political, Legal, Ethical, and Values (STEEPLEV) framework to organise knowledge as we scanned across four main themes for signals of change. From this scan, we created vignettes depicting different possible futures of the veterinary workforce.

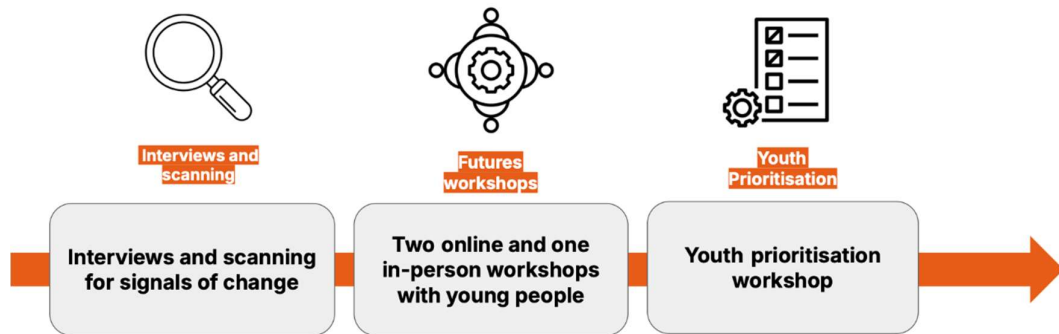
¹ The Futures wheel is accredited to Jerome Glenn



We then developed questions from these vignettes to interview key stakeholders, who helped inform our contextual understanding of the veterinary workforce domain, including signals of change, trends, concerns, and opportunities around training and workforce planning.

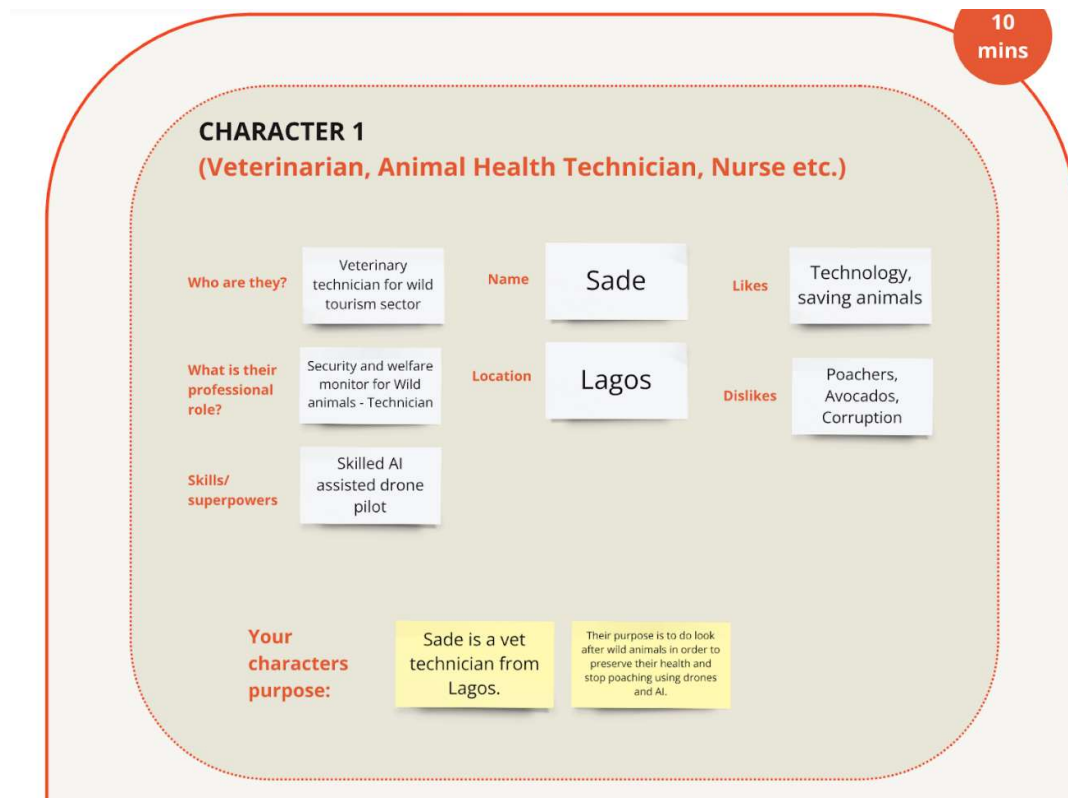
Format

- The project methodology consisted of three **3-hour workshops during the consultation phase**, and one **2-hour technical session at the Africa conference**. Each component was designed to maximise participation and engagement, with tools customised for both young people and conference attendees. Two virtual workshops were conducted, one in English and one in French, followed by an in-person workshop in Nairobi. While the virtual workshops used identical tools, the in-person format was adapted to leverage face-to-face interactions. Before the workshops, the team conducted expert interviews and literature reviews, which helped identify 30 drivers of change during the scanning process for signals of change.
- Through these three workshops—two online and one in-person—youth participants developed a comprehensive set of recommendations.
- The young people then peer reviewed and prioritised these recommendations.



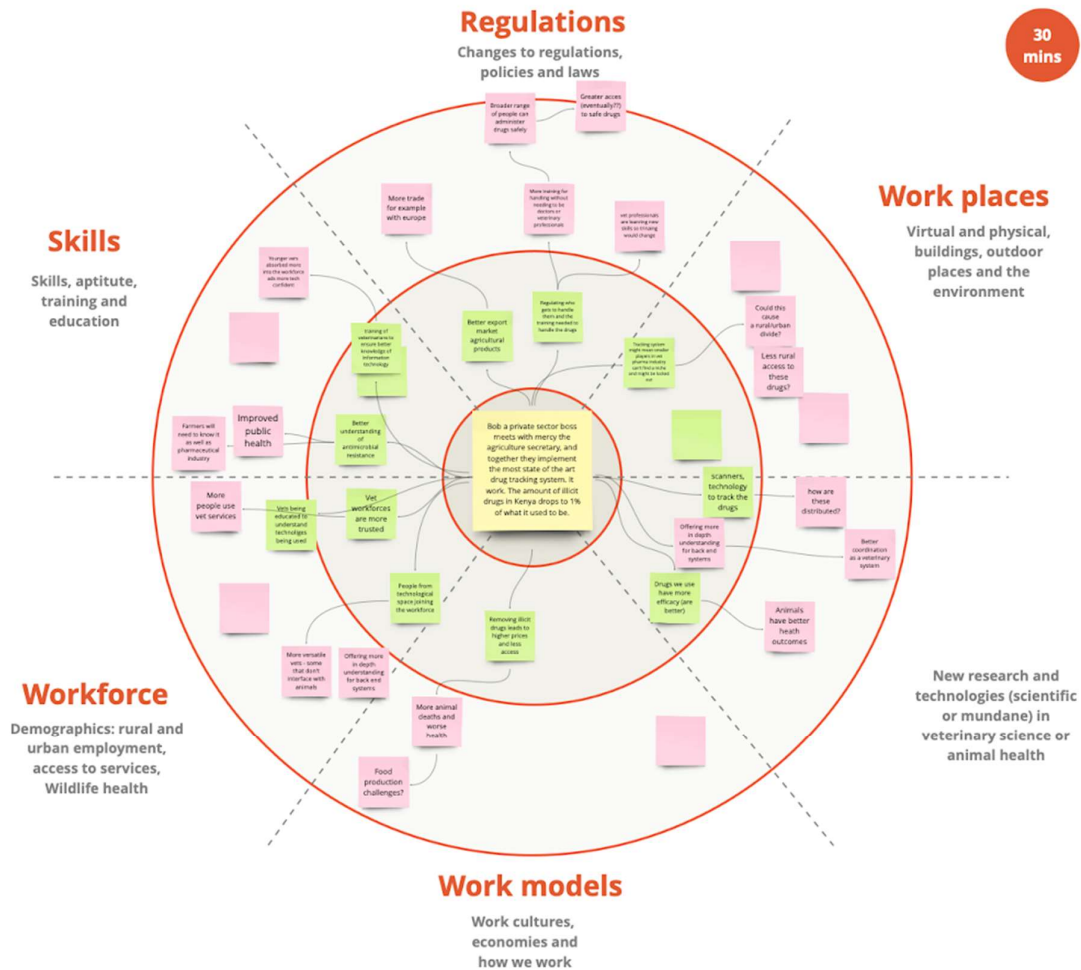
Virtual Workshop 1&2 – English and French

The workshop structure consisted of three carefully designed sessions. The first session, lasting 1 hour and 20 minutes, focused on Future Stories. After an initial icebreaker in plenary, participants broke into smaller groups where they selected change cards to craft narratives about future veterinarians. This creative exercise helped bring theoretical concepts to life by situating them within real-world contexts, while encouraging participants to push the boundaries of their imagination. The stories served as windows into participants' perspectives and concerns.



A screenshot of a section the Miro board that young people used to create their future character.

Following a short break, the second 50-minute session centered on Impact Wheels. Working in breakout rooms, participants analyzed their stories' consequences using structured impact wheels organized by STEEP categories (Social, Technological, Economic, Environmental, Political).



30 mins

Example of an impact wheel completed by participants.

The final 40-minute session focused on developing recommendations. In new breakout groups, participants transformed their impact wheel insights into concrete recommendations. The session concluded with a plenary discussion where groups shared their recommendations and reflected on their key learnings from the entire workshop experience.

Goals:

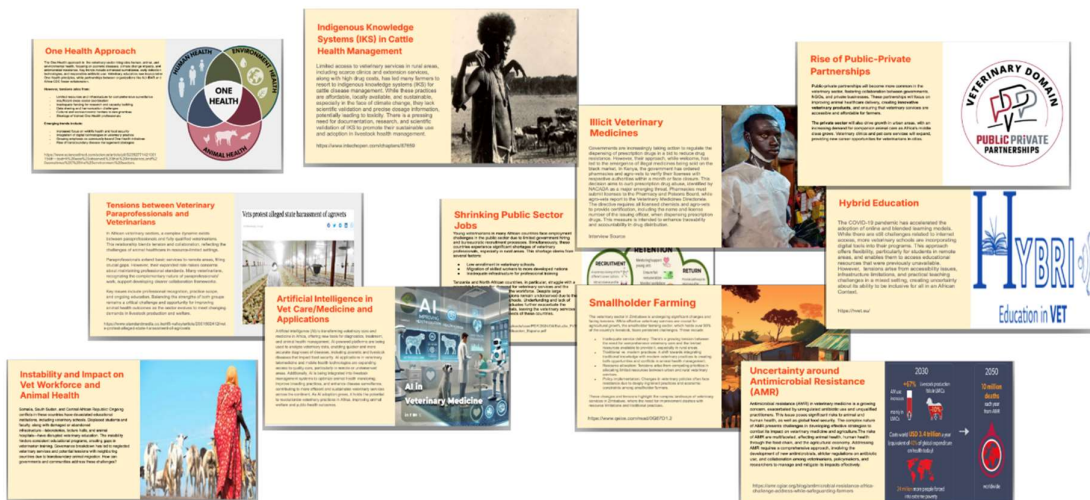
- Understand youth hopes/fear expectations for the future.
- What changes youth are seeing emerging (through storytelling in their eyes/context)
- Concrete recommendations from youth to decision makers.

Primary task:

- The workshop was primarily an exercise in generating recommendations from young people for the future of the veterinary workforce.
- The process begins with telling stories about future veterinary workers, inspired by 'change cards'.
- The purpose of this activity was to situate the change cards in the contexts and issues that matter to young people today.
- The rest of the workshop used impact wheels to draw out consequences that those stories have on the wider system, and finally asked young people to write their own recommendations for WOA, Animal Health Decision makers, and educational institutions based on the futures they have thought about.

Workshop Inputs:

- **Driver Cards:** Facilitators created 30-40 simple driver cards (digital/ printed) with a title, brief description, image, and link (if applicable). Used in workshops.
- **Pre-Read:** Participants received an optional, brief introduction to futures thinking ahead of the workshops.



Some examples of the drivers of change presented to participants in the workshop

The Stories

- Each breakout group had an area on a *Miro* Board with 5 change cards.
- Facilitator asked each group members to read out loud one of the change cards.

- The group chooses 3 to work with.
- They used the template to tell a story.
 - **Sonia's Miro choose**
 - Brain Drain,
 - Shrinking Public Sector Jobs
 - Small holder farming
 - **Finn's Miro choose**
 - Illicit vet meds
 - Brain drain
 - Shrinking public sector

Sharon the Animal Whisperer – Ghana

- Sharon is a Vet Paraprofessional from Ghana who offers Advisory services to farmers, treatment and diagnosis.
- She loves interacting with animals, books, nature walks and dislikes the inaccessibility of certain areas in Ghana and the low income in what she is passionate about
- Jeji John is a twelve (12) year old boy who loves animals. His father is a farmer. He likes to play in nature with animals in the farm and goes on long walks and adventures. He is inquisitive and loves being with animals and especially cubs. He is however worried that his father does not care for animal welfare.
- He calls Sharon who is the only vet in their sub-county to see how they can better improve genetic breeds of the animals and improve livelihoods. They learn that most people lack education on how to treat animals, how to farm or aspects of animal welfare.
- When they meet, they get more perspective in improving productivity and changing the mindset of Jeji's father to improve the breeds since with better breeds they can get better productivity and income by for instance improving milk production from 2 liters to 10 liters and have excess for sale.
- Summary: Some animals got sick, and Sharon treats the animals, and they think its magic, and she treats them, and Sharon forms a farmer's coop for the farmers to check on their animals, vaccinate and share knowledge

Implications of Change in Sharon & John's Stor

Skills and Education- The future of veterinary practice will emphasize:

- Practical, hands-on training in animal care and welfare
- Continuous, lifelong learning for veterinarians and farmers
- Sustainable training programs covering entire regions
- Curriculum focused on improving productivity and ensuring animal welfare

Regulations and Policies - Anticipated changes include:

- Formation of cooperative societies to improve animal welfare
- Implementation of laws and sanctions on animal welfare infringement
- Integration of animal welfare into sustainable development goals
- Regulations promoting plant-based diets and sustainable farming practices

Workplace Environment- Future veterinary workplaces will likely feature:

- Increased awareness and accommodation for animal welfare
- Shift in veterinary services due to improved farmer knowledge.
- Attractive work policies with competitive salaries and benefits

Technological Advancement- Emerging technologies in veterinary practice include:

- Advanced tracking and traceability systems for livestock
- E-extension services for remote animal care
- Mobile apps facilitating communication between farmers and veterinarians

Work Models and Communication- Future work models will prioritize:

- Enhanced communication between veterinarians and clients
- Regular community meetings for knowledge sharing
- Culturally sensitive approaches to veterinary services

Workforce Demographics-The future veterinary workforce is expected to see:

- Increased gender diversity in the profession, More women in leadership roles, especially in culturally conservative areas through Adaptation of veterinary services to local cultural contexts

Learnings from Implications of Change

- Access to proper equipment for tracking animal health and vaccination trends leads to more comprehensive data collection. For example, the Namibian Livestock Identification and Traceability System (NamLITS) helps trace animals in specific regions and identify their origins. NamLITS also aids in research for developing vaccines or treatments in specific areas.
- Effective communication with clients results in better diagnoses, as it allows for better education on problem-solving. Regarding gender in communication, women generally have more access, despite cultural limitations and the gap between men and women due to middlemen. There's a need to train women paraprofessionals who can interact with and diagnose other women. In Kenya, a female vet is perceived as more sophisticated compared to a male vet.
- More women are being trained to bridge the cultural gap in Northern Nigeria. Women service providers are encouraged to reach out to women producers. This approach is expected to lead to a future with more women providing

services and creating a comprehensive women's value chain, including production and processing in Northern Nigeria.

- While you can't change people, you can adapt to the culture to make services more sustainable. For instance, there are more men than women in veterinary schools in Kenya. In contrast, in Namibia, women outnumber men in veterinary medicine.

Bob and Mercy, Cabinet Secretary Agriculture, Kenya

- **Mercy is the cabinet secretary for Agriculture in Kenya. They want to stop AMR** but they are short on budget while Bob is a very senior veterinarian in a large company and also interested in AMR. He needs to have **policy changes to ensure that better drugs can access the market from outside the country.** They arrange a meeting, which is prescheduled at Mercy's office.
- They both encounter **a corruption challenge** given there is a cumbersome process to follow to get a drug. Even with a license, they get stopped at the point of entry. They also noticed that **some people at the border don't inspect the certificates and take bribes instead and that sometimes the authorities prefer the inspection** to follow up on what drugs are available since some of the drugs should only be prescription but can also be found locally at any market.
- They agreed to review the challenge and check for any other **contributing factors for example in Ghana, conflict of interest is a challenge that increases corruption.**
- They also agreed to **implement a digital tracking system** whereby every drug is tagged with a specific number, which ensures that every drug is checked and to put in place a requirement for vets to have a license for making prescriptions.
- **Bob a private sector boss meets with mercy the agriculture secretary, and together they implement the most state-of-the-art drug tracking system. It work. The number of illicit drugs in Kenya drops to 1% of what it used to be.**

Implications of Change in Bob & Cabinet Secretary.Mercy

Skills: skills, aptitude, training, and education

- Enhanced understanding of antimicrobial resistance improves public health, benefiting farmers and the pharmaceutical industry.

- Veterinary training now emphasizes Information Technology skills, with younger vets demonstrating higher tech proficiency.

Regulations: changes to regulations, policies & laws

- Improved export markets for agricultural products, particularly to regions like Europe.
- Expanded training for drug handling, allowing a broader range of professionals to safely administer medications and increase access to safe drugs.
- Continuous skill development for veterinary professionals to adapt to changing industry needs.

Workplace: virtual and physical, buildings, outdoor places and the environment

- Potential challenges for smaller veterinary pharmaceutical companies due to advanced tracking systems, possibly leading to rural-urban disparities in drug access.

Work tools: new research and technologies (scientific and mundane) in veterinary science or animal health

- Implementation of advanced backend systems, including scanners and tracking technology, for improved drug distribution and coordination.
- Enhanced understanding of backend systems to improve drug efficacy and animal health outcomes.

Work models: work cultures, economies and how we work

- Stricter control on illicit drugs may lead to higher prices and reduced access, potentially impacting animal health and food production.

Workforce: Demographics; rural and urban employment, access to services and wildlife health

- Increased trust in veterinary services due to improved technological education, leading to higher utilization of veterinary care.

Nairobi Workshop (Onsite)

Drivers Mapping

The participants engaged in a comprehensive mapping exercise to identify key factors influencing the future of veterinary workforce, animal health, and education. This exercise focused on three main categories: observable **trends** in the present, **critical uncertainties** with unpredictable impacts, and **potential disruptors** that could challenge existing systems and norms.

The mapping process examined distinct driver categories. These included quantifiable trends with established patterns (such as demographic shifts and climate changes), uncertainties with unpredictable trajectories (like technological advancement rates and geopolitical dynamics), and potential disruptors (including breakthrough technologies and unexpected socio-political changes) that could fundamentally alter current systems.

The analysis highlighted the importance of precise language in describing these drivers. This meant using neutral terms for trends, qualifying phrases for uncertainties, and conditional language for disruptors. For example, trends should be described using "level of" rather than directional language, while uncertainties are better expressed with phrases like "extent to which" or "degree of."

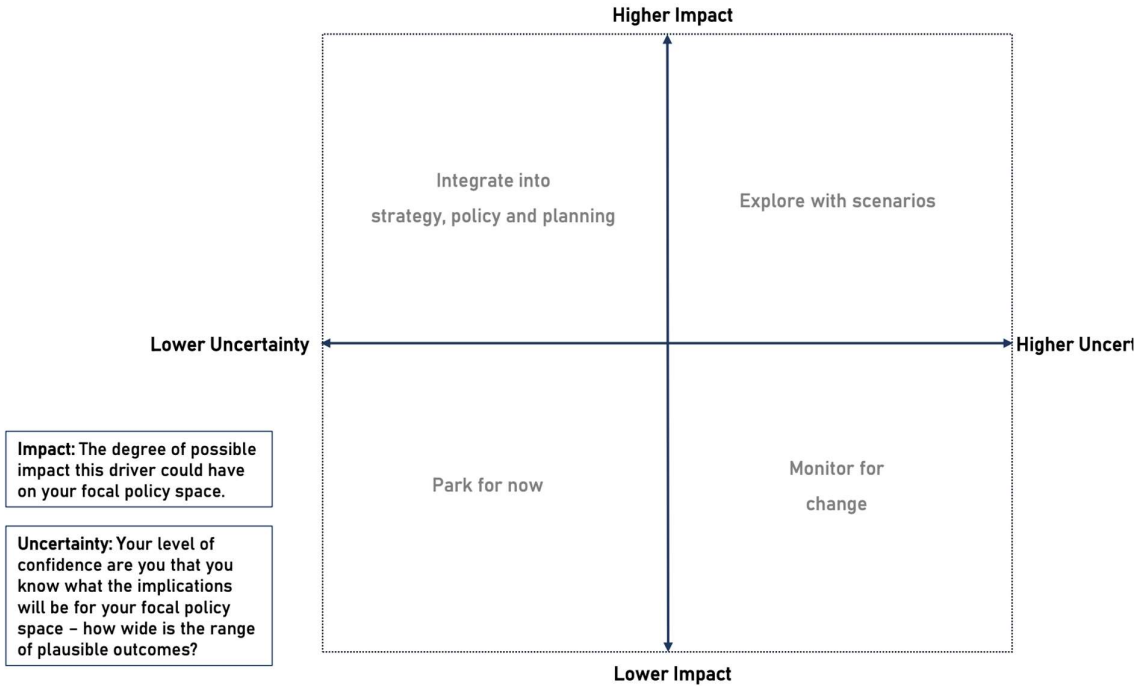
Two key factors emerged as essential for successful driver mapping: a clear focus through well-defined policy questions that help assess driver relevance, and diverse input that incorporates various stakeholder perspectives to ensure comprehensive and reliable analysis.

Each group explored four different sub-questions identified in the project. These questions were:

What changes in education and the future of work might shape the veterinary workforce by 2035? How should veterinary education and workforce planning adapt in order to meet the needs of new generations of the veterinary workforce? (2035) 10 years.

- What new skills will be needed in animal health and how to best prepare students for those?
- How might policy on education and veterinary workforce planning change in order to realise young people's vision of the future?
- How are changes in animal health influencing the nature of veterinary work and careers?
- What is needed for the vet sector to become more inclusive and diverse?

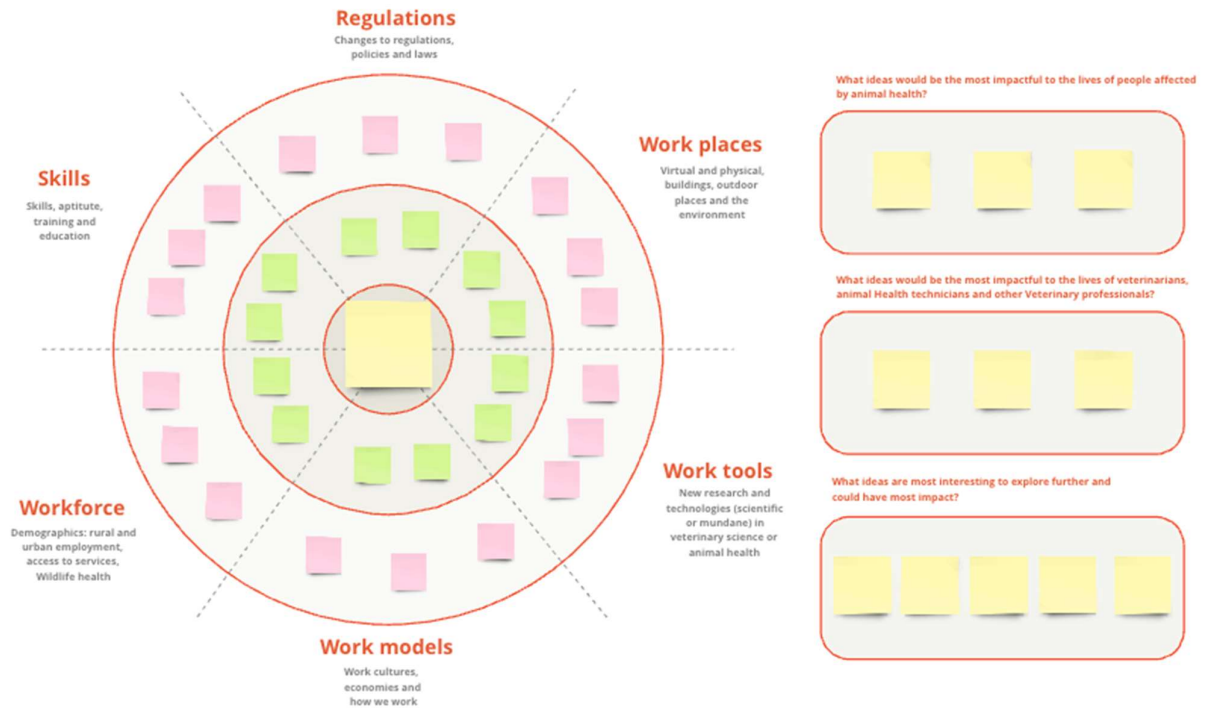
The participants then proceeded to prioritize the change drivers by impact and uncertainty.



Low Uncertainty, High Impact – Integrate in Recommendations (Strategy, Policy, and Planning)	Low Uncertainty, low impact (park for now)	Lower Impact and High Uncertainty monitor for change	High uncertainty, High Impact Explore with Scenarios
The extent to which government regulator imports expired drug stocks	Alternative to antibiotics e.g. Bacteriophage technology	Emerging vet clinics securing of jobs	Possibility of pandemic that might be equally lethal to animals and humans by 2035 (Groupiosis)
Extent to which High cost of living accelerates AMR Issues	Eradication of certain diseases that lead to emergence of other diseases	Recurrence of rinderpest	Global demand for animal products from Africa could possibly reduce due to artificial grown meat products
Level of underfunding to the animal health industry	Emerging private laboratory diagnostic facilities	Improved technological development in pharmaceutical industry	Degree to which Corruption leads to unequal access to vaccines
Increase in global demand for cattle products, possible outcomes, increase in employment opportunities	More diverse pets	Extent to which biological weapons impact on vet funding/skills and animal health	The level to which artificial intelligence will replace vets
Improvement in technology in studies	Corruption has negatively impacted realisation of policies and developments of projects	Education bands alienates poor students impacting on farmers in rural areas accessing vets	
Reducing public sector jobs thus increasing privatisation	Increase in brain drain	Extent to which new education model alienates poor students leading to poor farmers impacted due to limited access in rural areas {Education bands}	
Government board policy – drug regulation, private practice to avoid drug misuse AMR, Losses in revenue and quacks	Increase in need for animal companionship	Taxation of large animals relegates livestock to rich increase illicit drugs	
Possibility of increase of negative impact of climate change affecting our ability to predict disease outbreaks	Increase implementation of one health	Economic instability disruptor	
The extent to which AI affects Animal Health	Zoonoses – relevance of the vets in the significance of these zoonoses		

	Increasing levels of literacy, information access. Possible barriers, policy, and regulation		
Extent to which biological weapons impact in vet funding/skills animal health	The level to which animal health gets integrated into natural biosecurity efforts		
Extent to which small scale holder farmers adapt to modern farming may influence meeting the demand for animal products	Occurrence of pandemic leading to hybrid education		
The level to which there is access to illicit vet drugs due to coercive regulations	Emerging land use laws by government may influence the utilization of land by small holder famers		
Getting alternatives to antibiotics may create an uncertainty by 2035 such as use viruses to treat bacteria	Level of underfunding to the animal health industry		
Possibility of increase of negative impact of climate change affecting our ability to predict disease outbreaks	Reducing public sector jobs leading to huge private sector		
Human influence on biodiversity pool, breeding unhealthy aspects e.g. Breeding of Brachycephalic breeds, toy breeds	Outdated data for disease modelling		

- After identifying and prioritising change drivers, the participants selected key high-impact drivers to explore further. They then identified possible direct implications and consequences. Green post-it notes were used for first-order impacts, while pink notes indicated possible indirect implications and consequences. The participants also ideated second-order consequences.
- Following this, the group proceeded to identify key actions they would take to respond to the implications and develop recommendations.



Critical Uncertainties

Possibility of pandemic that might be equally lethal to animals and humans by 2035 (Groupiosis)

Global demand for animal products from Africa could possibly reduce due to artificial grown meat products

Degree to which Corruption leads to unequal access to vaccines

Possibility of Bioterrosism by 2035

The level to which artificial intelligence will replace veterinarians

	What ideas would be most impactful to the people affected by animal health?	What Ideas would be most impactful to the lives of vets, animal health technicians and other vet professionals	What Ideas are most interesting to explore further could have most impact
<p>Potential reductions in global demand for animal products from Africa due to artificial grown meat products</p>	<ul style="list-style-type: none"> • innovation Fund: Support R&D in sustainable animal husbandry • Product Strategy: Develop markets for non-traditional livestock products. • Tax Benefits: Incentivize value-addition in meat and dairy. • Traceability System: Enhance quality assurance standards. • Cooperatives: Strengthen farmer groups for better market access • Infrastructure: Invest in rural cold chain facilities 	<ul style="list-style-type: none"> • Increased job opportunities across the livestock sector • Improved productivity and operational efficiency of production facilities • Higher appeal of veterinary and related career paths 	<ul style="list-style-type: none"> • Research natural meat benefits: Fund studies showing nutritional, environmental, and economic advantages of African livestock over artificial alternatives. • Modernize livestock technology: and automation for better productivity. • Meet global standards: Launch program to train producers on international standards and support certification for market access. • Implement One Health: Create policy framework linking human, animal, and environmental health in livestock production.
<p>Degree to which Corruption leads to unequal access to vaccines</p>	<ul style="list-style-type: none"> • Vaccine Tracking: Deploy system for monitoring distribution and effectiveness. • Auditing: Establish independent oversight and regular monitoring protocols 	<ul style="list-style-type: none"> • Mental Health Support: Establish helplines and insurance coverage for veterinary professionals' mental wellbeing. • Vaccination Program: Provide free rabies and 	<ul style="list-style-type: none"> • Regulatory Framework: Reform industry regulations to improve standards and vaccine distribution transparency. • Education: Update veterinary curricula to

	<ul style="list-style-type: none"> • Communication: Implement digital platforms and forums for stakeholder collaboration • Disease Prevention: Fund research, vaccination programs, and improved husbandry • Legal Framework: Update laws to ensure accountability and equitable access. 	<p>tetanus vaccines to veterinarians and VPPs.</p> <ul style="list-style-type: none"> • Accountability Framework: Implement mentorship programs, audits, and ethics training for veterinary practices. • Inclusivity Policies: Create equal opportunities and anti-discrimination measures, especially for women and marginalized groups. 	<p>align with global trends and technology.</p> <ul style="list-style-type: none"> • Workforce Planning: Ensure diversity through youth engagement and gender balance policies. • Communication: Develop clear strategies for vaccine awareness and stakeholder information sharing.
<p>Possibility of pandemic that might be equally lethal to animals and humans by 2035 (Groupiosis)</p>	<ul style="list-style-type: none"> • Establish a robust emergency response system for rapid detection and containment of zoonotic diseases in both rural and urban areas. • Implement comprehensive training programs for veterinary professionals and livestock farmers on pandemic preparedness and biosecurity measures. 	<ul style="list-style-type: none"> • Detection: Install advanced systems for early identification of Groupiosis outbreaks • Awareness: Increase public recognition of veterinary work in managing zoonotic diseases • Collaboration: Foster partnerships between veterinary, human health, and public health sectors • Specialization: Create specialized roles for pandemic and zoonotic disease management 	<ul style="list-style-type: none"> • One Health Integration: <ul style="list-style-type: none"> ○ Develop national strategy integrating human, animal, and environmental health. ○ Establish coordination mechanisms and dedicated funding at all levels. • Capacity Building: <ul style="list-style-type: none"> ○ Create cross-disciplinary training and specialized courses. ○ Implement national

mentorship program.

- **Research Investment:**
 - Fund zoonotic disease research and establish research centre.
 - Create public-private partnerships for vaccine development.

Dissemination of Youth Perspectives on Futures of the Workforce at the Conference

The Technical Session sought to:

- Explore current and potential trends and expectations about education and training, jobs, employment and how animal health service delivery are organised.
- Provide recommendations on how actors in education and employment can be more responsive to the needs of the next generation in the evolving veterinary workforce.
- The session also explored the interactions between human health and animal health and their interdependency on the environment.

Results

- **WOAH conducted** consultations with over 80 young people from the veterinary sector in Africa, including veterinary and veterinary paraprofessional students, research students, and recent graduates. Participants represented more than **16 countries**
- Three workshops were organized: two online sessions (in English and French) and one face-to-face event in Nairobi (in English).
- Workshop recommendations were synthesized and reviewed by project stakeholders through peer review process to prioritize the recommendations.



Recommendations

- **Youth voices:** integrate mechanisms for youth perspectives to input to strategies and planning around veterinary workforce development
- **Workforce Development:** Develop strategies for continuous professional development of veterinarians and paraprofessionals
- **Diversity:** promote policies and actions which help the veterinary workforce become more inclusive with more diverse demographics, including youth, women, people with special needs, and ethnic minorities.
- **Lifelong Learning:** The future of veterinary practice will need to emphasize continuous, lifelong learning for veterinarians and farmers
- **Vet. Associations:** Provide comprehensive mental health support for all veterinary professionals
- **Implement:** Implement comprehensive training programs for veterinary professionals and livestock farmers on pandemic preparedness and biosecurity measures
- **Vaccine Distribution Tracking:** Implement a national vaccine tracker system to monitor distribution at national and subnational levels, ensuring equitable access and enhancing transparency.
- **Education:** Update curricula to align with regional and global trends, including animal welfare, antimicrobial resistance, and bioterrorism preparedness
- **One Health:** Create cross-disciplinary training programs for veterinary and human health professionals.
- **Invest in Disease Prevention and Control:** Allocate resources towards programs that reduce the disease burden in animal populations. This includes research, vaccination campaigns, and improved animal husbandry practices to boost overall animal production and health.
- **Compensation Review:** Recommend the Directorate of Veterinary Services to conduct regular reviews of salaries and stipends across veterinary professions to ensure fair compensation.
- **Global Market Access:** Develop strategies to position African countries competitively in global markets for animal products, led by relevant government departments and ministries.
- **Inter-Professional Collaboration and research:** Enact policies promoting collaboration among veterinarians, animal health technicians, and other veterinary professionals to enhance service delivery and sector efficiency.
- Increase opportunities and investment for veterinary research

Conclusions and Suggestions for further work

In addition to the specific recommendations from the youth foresight session, the Africa conference also produced a series of ten recommendations for Members, which were adopted unanimously by the conference participants. These recommendations included items which reflected many of the concerns and issues highlighted during the foresight process, including youth inclusion, gender inclusion, well being and mental health, and collaboration.

Overall, this project served to raise awareness amongst a broad set of partners, stakeholders, and students in the animal health sector, of the value of futures thinking related to workforce planning and education.

It is hoped that engagement through this process will strengthen the commitment of Veterinary Services, Veterinary education establishments and VPP institutions, VSBs and veterinary associations, to develop more inclusive practices which include youth perspectives in policy making and planning. Indeed, the representative of the Veterinary Statutory Body for South Africa, who was a panelist at the conference closing, highlighted that the Veterinary Statutory Body for South Africa left the conference with the intention of creating a more systematic process for including youth perspectives across the work of the Body.

By amplifying the voices of the next generation, actors in the veterinary sector can help pave the way for a future-ready animal health sector.

Key Takeaways

- Engaging young people directly adds value to decision-making and ensures workforce planning is relevant to future needs.
- Futures thinking enhances awareness of anticipated changes within and outside the veterinary domain, fostering resilience.
- The process identified trends in how veterinary education and service delivery are organised, calling for innovation and adaptability.
- **The Africa workforce conference 2024 included youth perspectives in workforce planning as one of the ten Recommendations to Members, along with other new recommendations such as well being and mental health, gender inclusion, collaboration and digitalisation, which reflect significant priorities identified through the youth consultations.**

References

- [1a] [AVMA, WSAVA: veterinary practices are 'essential businesses'](#)
- [1b] [WOAH \(2020\) List of African countries where Veterinary Services remain operational as "essential services"](#)
- [2] [World Development Report 2019: The Changing Nature of Work](#)
- [3] ILO - [Work for a brighter future](#)
- [4] [Barriers to mental health help-seeking in veterinary professionals working in Australia and New Zealand: A preliminary cross-sectional analysis](#)
- [5] African Union's Seven Aspirations for 2063