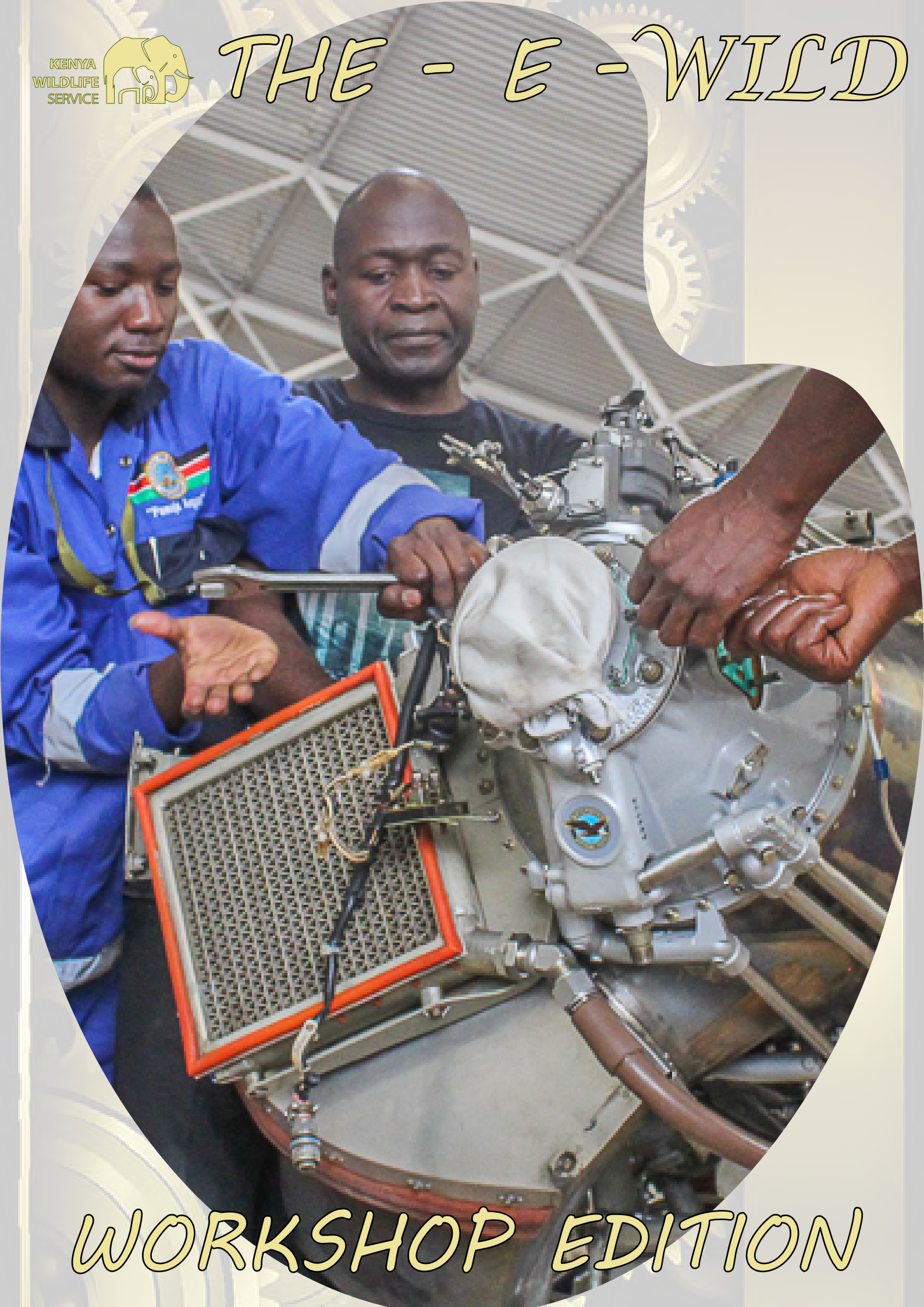


THE - E - WILD



WORKSHOP EDITION

Preface

When you Google Kenya Wildlife Service and click on the ‘about us’ tab, a truly impressive narrative summarizing the Service pops up. Reading through all the amazing-ness that is KWS’s vision, mission, core values and mandate imbues outsiders with admiration, whilst insiders feel a sense of ownership and pride.

However, that synopsis of KWS does not even begin to scratch the surface of what actually drives the Service, or hint at the vast human capital and myriad other resources needed to maintain the clout we are admired for.

KWS staff can recognize our acting Director General, his Deputy Directors, SADs and other senior staff in the blink of an eye. These ‘big kahunas’ carry vast responsibilities on their able shoulders.

Have you ever stopped to consider how the CEO and his managers excel at their covetable positions? Supporting these movers and shakers are those behind the scenes employees who are always on call at the drop of a hat and constantly work their magic to ensure that all is well. We rub shoulders with them in our corridors, in the staff buses, at tea/lunch time, scurrying around (like the swan’s webbed feet paddling furiously underwater, yet looking perfectly serene above the water).

In this 2023 inaugural E-Wild edition, Corporate Communications team interviewed some truly impressive staff to capture their contribution towards keeping the great conservation ship KWS afloat, come low or high tide. Hats off to our team of valiant scribes.

Enjoy the Workshop/Hangar Edition.



Airwing Hangar: The Lungs

By: Alice Wawira

KWS Airwing team is akin to the human body's breathing system – most people don't give much thought to the workings of their lungs, but we wouldn't be able to survive more than a few minutes without them. Some of the background contributors to KWS's excellent lung health are:

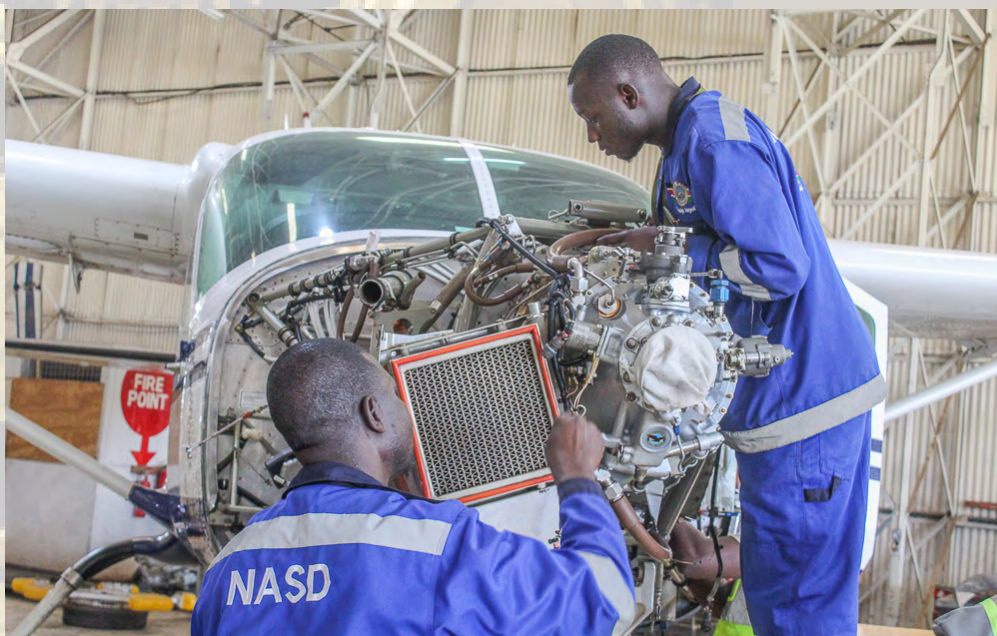
AIRCRAFT TECHNICIANS (Interviewees: – Judy Nyakio Kabue, Stephen Rotich, Suleiman Musa, Felix Ochieng and Sydney Ogunya).

Who is an aircraft technician?

Judy: Better referred to as an aircraft mechanic, is one who is responsible for service and repair of aircraft and their systems or components. Services and repairs involve planning, scheduling and quality control, where I mainly participate. I'm a stickler for proper processes that ensure smooth flow of activities on ground for timely return to service and safety in the air.

Rotich: An individual who conducts both scheduled and unscheduled maintenance of KWS and clients' aircraft. Scheduled maintenances are done at stipulated times, in hours or months, e.g. 50, 100, 200 and 400 hour checks, or 12, 6, and 3 months. For aircraft in storage, there is a corrosion-prevention program where we usually open, inspect, clean and then store the aircraft. Unscheduled maintenances include tyre bursts. Aviation is dependent on regulation and maintenance manuals from the airplane manufacturer, Kenya Civil Aviation Authority (KCAA) and KWS.

Musa: My job comprises the removal, installation, repair and servicing the aircraft and its component parts to ensure airworthiness. Besides the hands-on work, there is paperwork called the worksheet, which is generated from the Technical Records office, after which the Base Maintenance Manager ascertains that whatever is contained in the worksheet is exactly what is supposed to be done at that particular time. In that worksheet there is a checklist, on which every single activity is signed for. Upon completion, the worksheet is returned to the Certifying Engineer, who certifies that a particular technician worked as per the reg-



KWS AMO Technician Sydney and Police Airwing Technician Leonard Okong'o (back facing camera) servicing an Aircraft at KWS Wilson Hangar. Photo | Hope Nyangweso

ulations of the maintenance manual and all the procedures under his supervision.

Sydney: My two-and-a-half-year stint as an aircraft technician has seen me work on both the engine, airframe, fixed wing and the rotorcraft.

Favourite/Challenging part(s) of your job?

Judy: The processes, which cater to my love for orderliness and are the reason I came to KWS as an aircraft technical staff. My office is a compliance one, similar to an auditing office. Our regulator (Kenya Civil Aviation Authority) demands strict compliance to laid down procedures for utmost safety. Originally I began at Base Maintenance Managers office, as a technical support for reports development. I would volunteer in order to learn on-the-job, which is how managers noticed my extra skill sets/enthusiasm.

Rotich: One major challenge we have is getting aircrafts airworthy on time during emergencies. KWS maintains aircraft that are specifically meant for aerial surveying. As per the regulations, for all maintenance, technicians must refer to all the manuals to rectify any aircraft defects and then present to KCAA the necessary documentation indicating that we have rectified a certain snag or defect. KCAA is a busy organization which attends to all other aviation companies. This makes it difficult to get the aircrafts airworthy on time; nonetheless, we always strive to do our best.

Musa; Aviation is an expensive industry but over the years KWS has ensured that personnel are well equipped to conduct their duties. For instance, the Service periodically initiates staff trainings, purchases online materials and provides special equipment to balance in the maintenance of the different aircrafts. Even so, the Service should increase the number of personnel being trained. There is also currently a shortage of tools. KWS has a lot of potential in maintenance; but we need to do more marketing, to attract more clientele and increase revenue streams.

Felix: This being a high-risk job, more training would go a long way in building staff capacity and enhancing efficiency.

Do you handle aircraft?

Judy: Initially, I had massive interest in doing so, but was restricted by my other duties and lack of experience. The vertical career growth of an aircraft engineer or technician in Kenya is dependent on certain examinations administered by KCAA, which exams depend on the examinee's hands-on experience. It is an inescapable hurdle that must be conquered to advance in this field, so tenacity must be ingrained in those wishing to succeed.

Qualifications to handle this job?

Judy: The passion for my job makes me a handywoman; from being a fixer of things to maintaining smooth flow of pro-



Joel Apondi and Judy inspecting an aircraft at KWS Wilson Hangar. Photo| Hope Nyangweso

cesses. My partiality for order enables me to fit virtually anywhere, from quality control to donning overalls while working on a plane component. My Jill of all trades is a strength that has seen me succeed in the past.

Rotich: I have a Diploma in Aeronautical Engineering - a basic requirement for anyone to qualify as a technician. In terms of character, it's all about attitude, due to the pressure that comes with the job, so one needs a positive attitude, persistence and to work smart, not hard - to survive the stress. Even so, aviation is one of the best careers to be in.

Felix: This career needs much patience, ambition and perseverance for one to succeed, considering the challenges we face. Musa: It's all about hard work and being passionate in whatever you are doing. This career also demands maximum patience to avoid losing hope when faced with on-the-job difficulties.

Sydney: You need patience, to be hardworking, trustworthy and able to work without supervision. Additionally, you must have integrity; any errors one commits must be immediately reported, failure to which you will be risking people's lives.

What have you done to improve your knowledge as an aircraft technician?

Judy: I took annual leave from KWS and joined another company on volunteer basis to gain hands-on experience, so that I could indulge my passion for all things aircraft maintenance. The requirement for advancement is hands-on experience in maintenance or servicing a plane. I have applied

for a basic license – a step which enables one to move to the next level.

Rotich: First, there is the mandatory advisory circular that the KCAA normally prints out for the maintenance aviation family, which we continuously update ourselves with. Secondly, there is the airworthiness directive, which advises on the changing dynamics of maintaining an aircraft. For example, today, I could be maintaining a helicopter a certain way, then, in a months' time there could be a new airworthiness directive affecting how said maintenance is done. These directives provide us with day-to-day skills advancement.

Musa: I keep my knowledge up-to-date by constantly reading the manuals and the manufacturer's advice through service bulletins on certain modifications on particular parts of the aircraft. I also follow up on current affairs and emerging skills in the global aviation industry. In aviation, regardless of skill, the regulations state that one should always refer to the manuals to avoid complacency.

Sydney: I learn from the most experienced people and consult regularly. My bosses are great motivators who trust me enough to assign me tasks; the onus is on me to prove I am capable and deserving of that trust. Aircraft come with different defects every time. Fortunately, we have manuals for reference. Hands-on aircraft maintenance and attending available trainings ensures that I keep my knowledge updated.

Can you fly an aircraft?

Judy: No. Flying and maintenance

are like water and oil. For flying, you require knowledge in ground and flight operations, plus training on actual flying skills, while maintenance involves servicing aircraft and ensuring that before a pilot operates an aircraft, it is serviceable and airworthy, which is the essence of an engineer/technician. Though it is possible for an individual to train for both flying and maintenance of aircraft concurrently.

Compare Airwing hangar in 2023 with the one in 2030.

Judy: Technological advancements are fast and furious. Some companies are light years ahead in terms of embracing these evolutions, like eliminating paper work. Some of our processes are somewhat analogue, e.g. general tools of work and the bureaucracy, but I believe this will change soon, leading to improved processes and better service delivery. There will also be increased gender parity during recruitment. What has the growth-graph been like in Airwing?

Rotich: Since I joined there has been an increase in manpower. As a team we have managed to rebuild an aircraft from scratch 'bravo to bravo' - now in service, and we have another one which is 70% done. Additionally, the Service's client list has grown, such that we have become a recognizable organization in maintenance of aircrafts. No one will trust you with their aircraft if you are not doing an excellent job.

Would you say that an aircraft technician in KWS is different from one in, say, KQ, given the unique nature of conservation aviation?

Judy: No. The seven staff names written on the office white board are those of certifying engineers who have been mandated by KCAA to specialize in particular plane models for which they have acquired requisite skills. There are approximately 30 staff in the technical team, which explains why Airwing continuously approaches the Training Department, seeking funds to facilitate staff training in the overseas factories in which the planes were manufactured.

NB: KWS Airwing doesn't solely recruit staff needed; KCAA - as the regulating body - has significant input in this process. Furthermore, training is supposed to be conducted every two years.

For the license I applied for, the onus is upon

me and my employer - to a certain extent - to advance to that level. I can go and work for KQ, for example, but they would need to train me on Boeing 737/777 - or other aircraft models in their fleet which I would be working on - by taking me to the factory which manufactured said plane(s).

Can you dismantle any plane to its composite parts and put it back together?

Judy: Yes, as a technician, I can, but my work has to be supervised by engineers and the regulator. Due to the safety aspect of our work, the regulator places restrictions on what the Service can do. As such, KWS cannot overhaul an aircraft engine, because we lack the requisite equipment, facilities and training.

NB: In aviation, one cannot 'reach adulthood' or be experts who know everything. Regardless of experience, technicians must always refer to specific manuals in keeping with the regulator's quality control, to assure safety and minimize the human error aspect of the job.

Would you say there are many women in this field?

Judy: In 2007 during my tertiary education, there were two ladies in my class out of a whole stream. Nowadays there are considerably more women coming in for attachment to join the maintenance or technical team, meaning that the industry is opening up for women who excel in basic Mathematics, English and the Sciences, in addition to being passionate, confident and accepting of challenges of a 'dirty' job. For KWS, in terms

of aircraft maintenance, two of us were extremely fortunate to be absorbed - for the first time ever - in December 2018.

Challenges you face in this job due to gender, and what can the Service do to alleviate these?

Judy: The top managerial technical positions in Kenya are held almost exclusively by men, but not because women are incompetent. Rather, as women - probably due to the way we've been created, we have unique responsibilities apart from the work place, e.g. carrying a baby. Some private companies actually dismiss or replace women who take time off for child-related issues. In an ideal world, if more women could penetrate the glass ceiling and be promoted to managerial positions, they would be in a better position to understand their counterparts' special circumstances and design effective work spaces inclusive of all, with the added advantage of benefitting from women's intuitive brand of logic in problem-solving.

For example, when training opportunities arise, trainees will almost exclusively be men, who are assumed to have no down time. Having a woman manager can open opportunities for fellow women to contribute to creating policies and decision-making.

Where do you envision yourself in 10 years?

Judy: My current role in KWS is not outlined in a clear job description (JD). I assist the Base Maintenance Manager with administrative duties (KWS services other companies' planes and generates revenue). In spite of this, my dream is to scale to the

pinnacle of my career and be a trailblazer for future generations of ambitious women.

Knowing what you know now, would you pursue this career and what is the dream?

Rotich: I have been working in KWS Airwing for more than five years. I have learnt a lot and I would absolutely take this career path all over again. I feel comfortable and happy in my work, and recently achieved my dream of becoming a licensed engineer. Even so, the graph does not stop there; growth is essential. Engineering is my only talent. Even at home, all I do is engineering-related activities.

Musa: I have been working for KWS for three years and currently pursuing my engineering license. My experience as an aircraft technician has imbued me with the necessary skills for this job. Even so, I look forward to further upgrading myself. In another life, I would still want to be an aircraft technician. Whenever I work on aircraft, I feel very happy and fulfilled.

Felix: I joined KWS in 2018, and would, without hesitation, do this all over again, which is why I am currently working towards my engineer license. Being an engineer for me is an inbuilt thing. I have dreamed of it since childhood. Every time I saw a plane flying overhead, I would get very excited because I always wanted to be near those aircraft.

Sydney: During my attachment, I might have changed paths because things were really challenging, but as of today I would absolutely do this again. I have learnt a lot and persevered even more. Were I to start all over again, I would be starting with experience, because KWS gifted me with the experience of aviation. During my first year in campus, I was the only one with no aviation background. The first people I interacted with in KWS unselfishly taught me a lot. Since I didn't have powerful connections, I had to create a good rapport with my superiors, which has really kept me going.

I believe I am the youngest technician and my dream is to achieve my license by the time I am 27 years old. I am currently working on my craftsmanship, before I start pursuing my license.



Phelix servicing an aircraft at KWS Wilson Hangar. Photo | Hope Nyangweso

Airwing Technical Stores

By: Catherine Warui

Interviewees: Joan Nyambura, Sylvester Marinka & James Chepkwony

Airwing is a stand-alone Approved Maintenance Organization (AMO) within KWS, and Technical Stores, domiciled in the hangar, are part of KWS' general Procurement and Supply Chain Management.

James Chepkwony is in charge of the Airwing Technical Stores. He is assisted by Marinka Sylvester, who has six (6) years' experience in Technical Stores under his belt, and Joan Nyambura, who has worked there for three (3) years.

What is Technical Stores and why is it important?

Chepkwony: Airwing Technical Stores comprises seven (7) specialized stores, all within Wilson hangar. The stores are: bonded store (contains aircraft parts & equipments); quarantine (similar to bonded, but used to briefly store items from suppliers which cannot be mixed with others before they are inspected and certified); tools; special tools (for various kinds aircraft); flammable (a segregated/detached store for dangerous goods e.g. fuel, petrol, oils); commercial (anything not directly aircraft-related, e.g. boots, jerricans); dark room (pitch black storage for tyres, tubes, or any other rubber material affected by direct sunlight) and general (stationery).



Marinka at the technical stores at KWS Wilson Hangar. Photo| Hope Nyangweso

NB: Special tools store is for tools which are unique to particular aircraft or can only be used in a certain way. They are a component of an aircraft, as a requirement from the manufacturer.

When an aircraft is purchased, how is it delivered here?

Marinka: It cannot fit in the Technical Store, so it is put in the hangar. We in stores have to get the procurement documents (what was ordered, versus what was received). The engineers advise on these details, which is where teamwork comes into play.

The plane comes as a consignment, and we in store receive and document the individual parts in the container, after which we issue

to Workshop for assembly.

Are there Technical Stores in other conservation areas?

Marinka: No. As per regulations, aircraft are serviced at the Wilson base. Technicians and engineers may be assigned to repair field aircraft which develop problems, after which the plane is returned to Wilson hangar for further action. These qualified technicians work under the same license of this AMO; no unauthorized technician is granted access, as part of quality controls.

Does Supply Chain Management have unique rules for specialized entities?

Joan: Yes. Items found in general stores cannot lead to life-threatening situations like those in special tools store. All tools movement is strictly monitored and recorded. There is no margin for error: if a tool has been issued out and cannot be traced, it could be in an aircraft. This is literally a life and death situation since unsecured tools can cause an aircraft to crash, e.g. by interfering with controls.

This store can be likened to an ammunition store or a nuclear plant.

Challenges on the job?

Joan: When KCAA auditors call on us, they examine anything aviation-related, not differentiating between general and other stores. Yet there are only three personnel manning these stores, on standby every day. Working in Technical Stores requires an engineering background. I am a KWS Supply Chain professional, in addition to also now working for both KWS and Kenya Civil Avia-



Joan at the technical stores at KWS Wilson Hangar. Photo| Hope Nyangweso

tion Authority.

How can KWS support you to acclimatize better to Technical Stores?

Chepkwony: Offer training opportunities. There are well-defined, international standard courses available from East Africa School of Aviation (EASA) in Embakasi, but budgetary constraints prevail. To further compound issues, management at headquarters are unaware of the training needs of staff in Technical Stores.

Why are there tools displayed with their outlines traced on the wall?

Chepkwony: It is a requirement from KCAA. Due to experience, I am able to recognize all the tools on display; what you may call pliers is actually a cutter. Tools currently not displayed here are in use by technicians/engineers.

Name a painful experience that you learned a lot from?

Joan: This one happened with a local airline, whereby the Captain was older than the pilot he was monitoring. The latter pointed out an error, but was ignored due to on-the-job experience being assumed to be superior. Regrettably, the plane crashed. This taught me to embrace teamwork with my three colleagues at Technical Stores.

Chepkwony: Sometimes, aircraft disasters are not caused by mechanical problems. As I said, an aircraft must be totally free from loose tools and even harmless-seeming items like cushions, before it embarks on a flight.

Marinka: The aftermath of any aircraft disaster is always followed by an intense KCAA audit. Queries commence from Technical Stores: What was issued for the aircraft? Were issues done correctly & serial numbers captured procedurally? Was the item sourced legitimately? Every item that passes through this store must have a certificate.

Why were there so many documents being signed during a KWS CSR handover of a non-serviceable airplane engine to Chavakali High School?

Marinka: KCAA has stringent procedures for every facet of aviation, even during disposal of condemned engines. The condition of the donated engine must be indicated, the recipient, etc., and copies of records of such transactions meticulously maintained. These controls ensure that no one can fraud-

ulently claim the condemned engine (whose serial number is unique to only that engine) to be fit for use in an aircraft.

Who are your clients besides KWS & KCAA?

Joan: We deal with internal and external customers, and also commercial. Some clients bring their aircraft to Wilson hangar for maintenance (third party maintenance for revenue purposes), in addition to those owned by the Service. To maintain a positive image of the Service and attract more clients, we endeavour to treat these clients with kid gloves, so our duties also entail heightened Customer Service skills to accommodate client expectations. Is it possible to use the parts from a client's airplane in KWS/other clients' planes?

Marinka: Internal controls are stringent; there are several checks after spares are issued from Technical Stores, all which result in certificates being issued. You cannot corrupt all the personnel in this chain – it would be too expensive and unsustainable.

Did you choose this job, or did it choose you?

Joan: The job and me choose each other. I am a marketer blessed with the gift of gab and thrive in the challenging marketing environment. Like Saul on his way to

persecute Christians in Damascus, who later changed his mission, I decided to become one of the pioneers in Purchasing and Supplies, in 2007. When I scrutinized the course outline, what I had studied in Marketing was similar; in 2010 I came as an attachee in KWS, and to this day I am satisfied with my career choice.

Favourite/Least favourite part of your job?

Joan: I feel satisfied when an airplane is serviced, goes to the field, and when it comes back safely in the evenings I feel happy, "At least Kilo Whiskey Whiskey (5Y KWW) is back safe." Least favourite is when colleagues request to be prioritized over other assignments I am already working on, leading to stress or even forgetting to complete the assignment I paused to cater to a request.

Chepkwony: Least enjoyable is when a client brings their aircraft to be serviced and some components aren't available to have the job done, leading to frustration on the client's part, and a sense of failure on my part, through no fault of my own. Most satisfying is when we have the required parts and we are able to issue them speedily. We do not have purchasing control, only issuing control.



Chepkwony at the technical stores at KWS Wilson Hangar. Photo | Hope Nyangweso

Who buys parts for maintenance?

Chepkwony: For KWS to get any parts required for maintenance, we have to go through National Air Support Department (NASD). The time required for us to get our requirements is quite lengthy, unlike previously when I would raise the Local Purchase Order (LPO) and the item was delivered and issued.

For now, we raise documents which are subjected to lengthy military bureaucracies; one item can take up to two weeks to be procured.

To solve this challenge, we are trying to introduce stop gap measures where we assess our high-priority investments and stock up on them, so that we have fewer delays because there are always buffer stocks to cushion against lengthy delays.

This forecast isn't perfect, because you cannot tell, for example, when a starter is going to fail (starters/engines cannot be stocked due to their prohibitive costs. A starter for the Caravan costs 800,000 shillings, and the engine costs 40 million).

NB: The Technical Stores are the custodians

of equipment approximated to be not less than 300 million shillings, excluding aircraft.

Compare Technical Stores today and in 2030?

Joan: NASD have already adopted the Enterprise Resource Planning (ERP) software, similar to the one used in supermarkets to track sales and deducting automatically from stores balances. They are in the process of training staff. Within five years Technical Stores Staff will be trained on it, leading to increased efficiency and effectiveness. There could be an interlinking platform in aviation across the world, because in aviation one cannot work in isolation.

Imagine you are the CEO?

Marinka: I would recognize exemplary team member's efforts (discipline, punctuality, milestones, innovation, etc.). I would borrow a leaf from Presidential awards and cascade smaller (non-monetary) awards, like personalized carvings, certificates and other tokens.

NASD usually takes us for a team building sessions, which have a positive impact on staff morale.

Parting shot?

Joan: Working in aviation is an eye opener, given the constant emerging issues and lightning-fast evolution of the industry. Aviation is global and there are niches which need to be filled; more people are venturing into aviation and soon, Wilson Airport will not be sufficient to cater to forecasted demand.

Chepkwony: People outside Wilson need to be more informed of all the activities which go on here of the evolving aviation industry and the impact it has on Kenya's economy.

Marinka: Aviation is not only about flying/maintaining various aircraft. There is so much more that goes on behind the scenes before an aircraft is able to fly from one place to another. Working in Technical Stores is challenging and one needs dedication to enable them contribute effectively to KWS's overall mandate.



The tool store at KWS Wilson Hangar. Photo | Hope Nyangweso

Airwing Technical Records

By: Catherine Warui

(Interviewees: Allan Gichangi and Philomena Mwacharo)

To work in Technical Records office, one needs an Aeronautical Engineering qualification. Allan and Philomena are different in every way it is possible to be: personalities, generations, work experience, you name it. But their passion for, and knowledge of their work is clear and we should all take a leaf from their book.

What are Technical Records?

Philomena: Detailed maintenance records required to be kept by the aircraft's owner/operator, allowing the determination of airworthiness status of the aircraft and its components and to plan future maintenance as required by the Aircraft Maintenance Program (AMP).

NB: The AMP describes the Operators' routine scheduled maintenance tasks which are required to comply with the obligations to ensure continuing airworthiness, in addition to the rules by which the Operator is approved to operate with the program.

Describe your typical work day.

Allan: All staff in this office are technicians, because we deal with strictly engineering-related affairs.

We log in and customers' open jobs online from their end, then state maintenance requirements for their aircraft, which leads to orders being generated for the AMPs.

Philomena: When an Operator requests for maintenance to be done on an aircraft, we do so after Operator has furnished us with details of how many hours their aircraft has flown, with focus on the AMP. We can track each aircraft with 50, 75, 100 or 150 hours, depending on the Operator's request, and under the guidelines of the KCAA regulations.

After how many hours should an aircraft be brought for maintenance?

Allan: For a majority it's 50, but for helicopters it can reach 100 or 150 hours. It depends with which periodic inspection is chosen, after which we follow the AMP in regard to hours chosen, subject to KCAA approval.

Hours flown by an aircraft are recorded in the



Allan at the technical records office at KWS Wilson Hangar. Photo | Hope Nyangweso

Technical Log Book. This 'tech log' is unique to each aircraft and has details of the amount of fuel on board, flight times and any aircraft defects that were experienced during the flight.

For example, if an aircraft is supposed to be maintained after 100 hours, it's owner is supposed to bring it here. If he exceeds by even 0.5 hours and the aircraft is involved in a mishap, the responsibility for that is on him. Sometimes they bring planes in before the hours' elapse, just to be on the safe side. To 'burst' hours is an offence, but can be done in certain circumstances. We don't only maintain aircraft domiciled in Nairobi. Others come from Juba in Sudan, so we can burst some hours from there to here, because all maintenance checks must be done in this hangar.

Philomena: Operators are allowed to burst, by up to 10 per cent as long as their AMPs provide for escalation; before this happens, approval has to be sought. Therefore, for 100 hours bursting can be 10 hours, giving 110 hours, which will reduce the flying hours before the next maintenance is due, by 10 hours, to 90 hours.

You deal with KCAA on the client's behalf?

Philomena: The client is supposed to be aware, because they report to us on what service they need for their aircrafts,

e.g. a certificate of airworthiness. For any aircraft to fly it must be airworthy and for this to happen we must submit documentation to prove that it can fly. Therefore, we submit it annually to KCAA on behalf of the Operator.

NB: Technical Records office is a restricted area due to it being privy to sensitive information. There are more than 50 aircraft scheduled for maintenance listed on a white board. Some of these are under termination of their contracts, having not renewed after three years. One plane actually needs to be exported and won't be listed on the board after two weeks.

Allan: The hand-written board is one of KCAA's regulations and it acts as a backup of details already in the system; a quick reference point for summarized maintenance jobs pending.

How do you and the engineers coordinate to ensure smooth work flow?

Allan: We are the ones to tell the engineers what to do. Each component in any aircraft has a lifespan, and they don't all "expire" at the exact same time.

Philomena: We have a Maintenance Training System (MTS) program, in which we feed all details regarding the aircraft. We wait for service bulletins on what we are supposed to do, even as we monitor component status e.g. landing gears, propeller, engine

and its components like magnetos, etc.

Is there machinery to measure the age in hours for each component?

Philomena: No. Engines come with their own manuals, which provide the details of the engine's components. In the provision, there are three Certificates of Release to Service (CRS) forms. KWS can issue CRS Class 1 & 3; Class 1 is issued by KWS upon completion of a scheduled maintenance. We tally and record the hours and the engineer declares the aircraft airworthy and signs the clearance. If an engine is installed in our aircraft, we refer to Form 8130 or Class 2 CRS (issued by Authorized Maintenance Organizations {AMOs} which have been approved to carry out overhauls or repairs that the Service isn't authorized to do), which provides either the time since new or time since overhaul, for the components.

NB: A CRS must be issued upon the completion of any maintenance carried out on an aircraft and its components once it has been verified that the ordered maintenance has been properly carried out in accordance with KCAA guidelines.

Should the aircraft complete the hours, our system gives us a red alert that there are a few hours left until the component has to be removed, so that we inform the engineers. E.g. on the white board, one aircraft has been marked as 132 hours to propeller overhaul; our system has issued a warning and there needs to be keen focus on the 132 hours so as not to be overdue. The onus is on the Operator to be aware of how many hours

are flown, as we maintain many aircraft and might forget.

What happens if an Operator does not bring their aircraft for maintenance on time, but continues to fly?

Philomena: Our Head of Base will call the Operator and remind them not to fly until the overhaul is done. Operators risk being grounded by KCAA. There are a plethora of regulations attached to aircraft: how to register and operate it; helicopters are supposed to have a noise certificate and aircraft weighing above 5,700 kilogrammes are supposed to have a noise certificate. All these are regulations from KCAA and must be adhered to.

Allan: The Operator will fly at his own risk, and doing so is a massive offence. Operators are well aware of this and cannot dare because the pilot risks having his/her licences revoked.

What is the role of Technical Records in the event of an aircraft disaster?

Allan: Following an aircraft crash, the air investigators must come to this office first, to ascertain how the aircraft was being maintained. Did it follow all regulations? Was the CRS up to date? The slightest irregularity will have serious consequences for officer(s) in Technical Records, including dismissal. The intense risk levels mean that we bend over backwards to avoid any errors.

Can investigators pinpoint the exact cause of an aircraft crash?

Philomena: Yes, they can. The Air Accidents Investigation (AAI) work under the

annexes (guidelines - done during a convention in Chicago - on how an aircraft is supposed to be operated). There is an African Incident Investigation Annex – Annex 13, which they work with, following the guidelines espoused in Convention on International Civil Aviation (ICAO). Before investigators confirm the cause of a plane accident, they examine our books' history on the plane to verify that all checks were done.

There appears to be several checks and balances in this office.

Allan: An aircraft is not a car, which one can park on the road side if there is a problem. Maintenance must be done regularly, and engineers who do the maintenance must commit themselves in writing. Similarly, we must also sign the Log Book Certificate.

Philomena: Whenever an Operator brings their aircraft for a check, we must record the work that was done, it could be in the aircraft log book, engine log book or propeller. These log book entries must have a KWS logo, in which summarizes the maintenance that was carried out. It could be scheduled maintenance or a snag (rectifiable defect), all must have jobs opened for them.

Challenges on the job?

Philomena: This is a high-pressure work environment, especially when it comes to certification of airworthiness. Clients want us to provide the annual renewal package in good time. KCAA's regulations provide that we do the application 14 days prior, so, should we delay for any reason, we are actually delaying the customer from flying, because once it expires the aircraft is grounded and cannot fly.

Allan: The risks associated with Technical Records are so high; one can be sacked at any time, so many people are averse to working in this office. We are liable for any number of seemingly insignificant errors and omissions, e.g. most certifying engineers rely on this office, because they cannot sign anything without the approval of this office.

Also the constant noise from the aircraft in the hangar. After working here for 20 years, "masikio inapotea!" (one gradually loses their hearing). Not to mention the chemicals (paints and engine-washing agents).

Are there training opportunities offered to keep you on top of your field?



Philomena at the technical records office at KWS Wilson Hangar. Photo| Hope Nyangweso

Philomena: Yes, there are. I have been here for only two years and have not had the chance to attend any. There are systems, e.g. for Bell helicopters we work with the Bell helicopter manufacturer. For Caravans there is an ATP hub (ATP Aviation Hub is a system which has all manuals for all Cessnas) so in the event there is an alert of any change of something we are supposed to do, e.g. a service bulletin or an airworthiness directive, we get the alert from the ATP hub, then we instruct our engineers on what to do by writing. Let's say it's a service bulletin in regard to ejector fuel lines, we write for them in the work pack and they work on it. There are alerts which come from our subscriptions.

Allan: I attended one training in 2022. We are the ones to handle each and every document for all aircraft. When an operator brings a new aircraft here, he takes the KCAA inspector from the airworthiness department who will come to inspect that aircraft, oversees to the aircraft's manufacturing factory. The Operator also chooses the pilot and engineer to attend the factory training. I believe that this training is also supposed to include a staff from Technical Records, who will handle all the documents pertaining to the aircraft.

How long has Technical Records been at Airwing?

Allan: Since the start of Airwing. In Africa this office is called Technical Records, but other countries call it Planning Office, without which the Airwing would be ground-

Can a less-than-honest Operator get a Certificate of Airworthiness for a faulty aircraft?

Allan: Here we cannot accommodate such requests because it is impossible to issue a Certificate of Release to Service by oneself. For this aircraft, it is supposed to be signed by several independent people. AMO invoicing is very detailed. We open a Maintenance Job Request, then it's assigned to an engineer. Thereafter it goes to the accountable manager, certifying engineer, technicians, back to certifying engineer, Technical Records again, to invoicing and the accountant, each of whom have to append their signature.

Philomena: Even if I were to agree and may forge the tallied hours, Engineer on duty will have to sign, and he can only do so after certain processes are undertaken. It is highly improbable that I can convince so many right-thinking individuals to attempt to pass fraudulent certifications and risk so much for negligible benefits shared several ways.

Best/worst parts of the job?

Allan: At the end of my day, I go home still wondering if I did everything I was supposed to do. "Ni nini ninaweza kuwa ni-mekosea?" Customers can also be challenging, e.g. one brings his aircraft here for maintenance after 100 hours. Client has brought the tech log to be filled in immediately because he has a contract worth millions in three days and he is ready to pay to get his plane. To avoid this,

the rule of thumb here is, "never open job card before system and log books are updated."

Philomena: Best part for me is the work experience I have gained here. I started as an intern. Worst experience is the pressure and timelines that come with this job.

Role models at Airwing or elsewhere?

Allan: There is such a strong element of teamwork, that we all value each other greatly. Outside KWS, I look up to Richard Branson, owner of Virgin Atlantic.

Philomena: I am my own role model because I am self-driven.

Which job would you fail at?

Allan: None. I've been at Airwing since 1994, 10 years in engineering, five years in the engine shop, I could even fly a plane if push came to shove. The only reason why I practically cannot fly is because of the stringent regulations in place. The only place I have not worked is Finance.

Philomena: The hands-on engineering work.

Airwing without Technical Records?

Allan: The engineers would be unable to work. Technical Records is literally the heart of Airwing. Our aircraft records are good. Most government agencies Kenya Power/Kenya Forest and Kenya Police bring their aircraft here for maintenance, in addition to the Flight Training School and non-KWS owned helicopters.

You are KWS DG. How will you make Technical Records exceed expectations?

Allan: This office requires much to be overhauled. Regular training opportunities would be availed to staff, because, today you have an analogue instrument. Tomorrow, it's a glass cockpit. We need to be on top of all these advancements. Some organizations actually train Technical Records personnel more than engineers, due to the more dynamic nature of documentation (e.g. export certificates) than hardware in aviation.

Philomena: Increase recognition, staffing, improve salaries and offer training. In Technical Records we don't usually go out in the field, like engineers. We need to embrace innovations, e.g. getting a back-up system for all these records we maintain here and do everything electronically for heightened efficiency.



Aircraft status board at the technical records office at KWS Wilson Hangar. Photo/ Hope Nyangweso

KWS Central Workshop - The Service Liver

By: Cornelius Kibet



Stephen & Morgan repairing a vehicle engine at the workshop. Photo | Samuel Bekko

Do you know the men in the Service who are rarely seen in front of cameras, but their presence is felt when that cruiser ferrying rangers to duty in the midst of a crisis, or that veterinary van ferrying a rescued rhino calf breaks down midway in a park?

Have you ever imagined how the service would operate without that mechanic and Engineer who regularly checks on the system functioning of that bus/van/cruiser we always use to and from work every morning and evening?

Do you know who is behind the engine system functioning of that crane lifting a baby elephant to safety after being stuck in the mud in our parks?

Or the service men/women who repair and maintain that bulldozer, tractor, water boozers, trailers or tibas that maintain our infrastructure in our parks and reserves?

We conducted a special interview involving the staff stationed at the KWS Central workshop unit, led by the Workshop Manager-in-charge Norman Wekesa Kiplimo – Senior Engineer (Mechanical; who happens to have worked for the service for over 17 years with accumulated experience in the mechanical and technical engineering practice in the same profession). where they handle motor vehicle and other automotive

Machines. The workshops which are comprised of approximately 58 staff inclusive of Mechanics or at times known as automotive service technicians, wiring technicians, they make vital contributions to the conservation agenda;

Mr. Wekesa during his response to Kibet Cornelius, Communications correspondent, explained that he has several other supervisors, who are enjoined, working under him to enhance service delivery within the sections in the workshop. He further add-

ed that teamwork, timely communication and coordination between departments and sections enhances smooth work flow within the organizations thus timely service delivery on conserving, protecting and managing

Their main work at the Central Workshop is;

- Building and assembling machines or mechanical components according to the requirements.
- Replacing faulty electrical systems, welding, car valeting or removing salvageable items from cars which are about to be scrapped.
- Inspecting machines, engines and other related transmissions
- Run diagnostic tests to discover functionality issues in vehicles.
- Conducting repairs aiming for maximum reliability.
- Storage - Garages tend to be areas of storage for many

Extra services might include painting the bodywork, removing dents and scratches from the exterior. We realized that the unit plays a critical role in the Service, and one of the staff termed it as the Liver and Service Conveyor since you would not be able to get to work or pick up your children from school.

Do you know that even users of vehicles other than your own vehicle help you every day. For example, without a mechanic, trucks would not be traveling the countryside bringing food to the cities or your important



Wycliffe & Jacob repairing a vehicle at the workshop. Photo | Samuel Bekko

packages/parcels.

A recent research done in the Auto Industry revealed that mechanics and vehicle technicians are in high demand. Nationally, demand for auto technicians nearly doubled in the past, — from 136,503 in 2020 to 258,000 in 2021.

The interview basically focused on

technical sections of the workshop. Other areas in the Workshop included the Procurement department – which deals with the procurement procedures, purchase, inspections of purchased items and documentation for financial accountability in conjunction with the Procurement department in the main office Headquarters.

Also comprises of the technical office which does registration and recording of the vehicle problem, Documentation of vehicle details as well as issuing of a job card to the driver in charge and final reporting of the Problem diagnosis.

	SECTION/EQUIPMENT	DAILY ROUTINE CHORES	COMMON CHALLENGES	RESPONDENTS
a)	Tire Repair and Tire Changing Section (Car Lifters, Mobile workshop kit, Engine Lifters)	<ul style="list-style-type: none"> i. Tire changing, ii. Wheel balancing and wheel alignment iii. Pressure inflation iv. Car lifting v. Tire marking and identification 	<ul style="list-style-type: none"> a. Cumbersome procedures to acquire spare parts, b. Regular breakdown of heavy machinery section due to overuse 	Morgan Ouma
b)	Spraying Unit and Color Mixing	<ul style="list-style-type: none"> a. Computerized Spray Painting b. Fittings and Sits c. Computerized color mixing in paints d. Dashboard decorations and seat covers e. Color blending and corporate brand designing f. Logo branding g. Filters Selection 	<ul style="list-style-type: none"> i. Outdated Spraying equipment which may not bring pleasant/desired color ii. Technological advancements that call for acquisition of modern machine related equipment and skilled manpower iii. Inadequate technical staff 	Isaac Ayati alias Mzee Wa Kazi
c)	Engine Shop/Engine Overhaul	<ul style="list-style-type: none"> i. Engine diagnosis and maintenance ii. Gear box diagnosis and maintenance iii. Engine Overhaul iv. Top setting for grant shaft. v. Gear Box servicing 	<ul style="list-style-type: none"> i. Current trends in Engine models that do not match with available spare parts ii. Careless driving among some drivers that causes engine to knock iii. Shortage of staff leading to multitasking of some technicians iv. Worn out working tools v. Delays in spares delivery causing inconvenience in responding to wildlife crisis life Rhino Protection unit vi. Insufficient up to date trainings for the staff 	<p>Leonard Nziani (Supervisor, Driver & Plant technician)</p> <p>Stephen Ojwang aka Professor (Driver, Grand shaft Operator, General Engine Diagnostic)</p> <p>Morgan Ouma (Grant Shaft Operator)</p>
d)	Heavy commercial Plant	<ul style="list-style-type: none"> i. Repair and maintenance of road construction equipment ii. Diagnosis of special equipment 	<ul style="list-style-type: none"> a. Sometimes supplies may not meet the required original spare parts for old equipment b. Outdated equipment. c. Understaffing leading to Multitasking of staff d. Insufficient funds e. Long procedures when procuring repair materials 	Wilfred Njoka (Supervisor & Plant Technician)
e)	Electrical Engineering and Wiring section	<ul style="list-style-type: none"> i. Alternators ii. Wiring for lighting and sound systems. iii. Battery handling and replacement iv. Battery marking and identification v. Fixing of Car Monitors and tracking equipment 	<ul style="list-style-type: none"> a. Inadequate technical staff b. Long procedures of procuring spares thus causing delays c. Unavailability of modern equipment to diagnose vehicles fitted with modern vehicle computers d. Inadequate up-to-date equipment for diagnosis. 	Collins Omondi and Meshack
f)	Stores and Spares Section	<ul style="list-style-type: none"> a. Record keeping of inventory b. Dispatch of required spares and needed equipment c. Inspecting and verifying of procured items 	<ul style="list-style-type: none"> a. Insufficient funding for equipment b. Understaffing leading to Multitasking of staff 	Norman Wekesa (Briefing On behalf)

IT Workshop - The Skeleton

By: Catherine Warui



Moses and Newton repairing laptop computer. Photo| Cornelius Kibet

(Interviewees: Moses Waweru, Lydia Kendi, Newton Muraya, Faith Muthoni, Kennedy Omondi)

The human body is comprised of different independent systems, each with a vital role, just as are organizations. In the analogy on human systems, I daresay our Information Technology (IT) department would be the skeleton, given their importance in ensuring the smooth running of the organization, countrywide.

Daily routine?

Moses: We deal with End User support, computers and printers installation and maintenance, maintain Local and Wide Area Networks (LAN & WAN) and also liaise with our service provider for speedy solutions in case of breakdowns.

Lydia: We collaborate with IT Helpdesk. Upon reporting for duty, technicians log in and ascertain the tasks assigned by Helpdesk, who are the liaison between our clients (staff having issues with their hard-

ware/software/network) and IT Workshop. Also, we follow up on any pending issues – purchase of IT-related spares for staff, until final installation.

Unique challenges faced on the job?

Moses: When there is a fibre cut, the Service lacks internet. To counter this, we have a redundant link which acts as a backup in case of service provider interruptions.

Kennedy: Customer frustration, trickle-down challenges from the service provider such as interruptions of network; some jobs require synchronicity with other departments, e.g. electricians, which can lead to minor delays.

Ways to keep staff motivated?

Moses: IT is a fascinating field, so the concept of being bored on the job doesn't exist. Due to its dynamic nature, we must keep researching to stay current, and innovations in this industry tend to be riveting. The cohesiveness we enjoy as a team ensures that we all lift each other up and ensure no one gets left behind.

Kennedy: Understand that clients are emotion-prone; any frustrations they express is not to be taken personally, because our priorities are to assist clients and maintaining a positive attitude ensures staff morale is paramount.

How does IT support conservation?

Moses: The well-managed Earth Ranger system monitors/tracks tagged wildlife through GPS. It requires close collaboration with other departments such as Telkoms.

Newton: Due to IT successfully linking all conservation areas to headquarters, the speedy communication between far-flung areas via email facilitates instantaneous decision making.

What setbacks do you encounter in this role? Lessons learned?

Moses: Near-obsolete equipment with accompanying frequent breakdowns tied to age. Most computers are more than 10 years old, needing urgent upgrades or re-

placement. Maintenance costs are too high.

Lydia: Sometimes after assessing a client's computer, technicians may diagnose a problem and suggest a course of action to resolve it. For example, an extremely sluggish computer needing a new SSD Card to maximize its efficiency. This isn't a one-day job because there are behind-the-scenes activities such as requisitions and the like, which translates to extended waiting periods. Technicians have to forecast timelines, in conjunction with other departments, in which a service is expected to be delivered, which they must then communicate to the client.

Describe IT in relation to KWS.

Lydia: The backbone of KWS. Today's digital world depends on IT for online meetings and most forms of communication, such as this interview.

What other resources do you employ to enhance service delivery?

Newton: Online research, wide consultations with experts and being members of IT bodies and forums in order to keep up with evolving industry trends.

How do you keep your technology skills current?

Muthoni: Personal initiatives such as continuous reading/researching and undertaking online trainings.

Favourite and least favourite IT models/products if any? If so, why?

Newton: HP and Dell are preferable. Lenovo and Asus are somewhat problematic,

due to their price tag and associated expensive spare parts. The latter tend to be donations from partners.

Majority of staff use desktops, which makes arising issues fairly easily solvable across the board due to experience, such as formatting, upgrading Windows. That being said, laptops are more convenient to deal with because they automatically connect to the network once booted.

How do you handle/manage difficult customers?

Lydia: By understanding that the root cause of their frustration stems from an inability to complete assigned tasks due to system interruptions. In addition, several years' experience in KWS Customer Service armed me with in-depth skills for handling frustrated clients.

Explain a technology you use in IT

Lydia: Ever heard of an SSD (Solid State Drive) Disk? It is a new generation of storage device used in computers. SSDs use flash-based memory, which is much faster than a traditional mechanical hard disk. SSDs remarkably speed up/upgrade the Service's computers, enhancing efficiency.

Why do computer chargers need those big adapters? Why not connect them directly to the power outlet?

Moses: The power from the outlet is too much for computers/phones to handle. Therefore, we utilize chargers/adapters that can regulate the amounts of power to prevent the destruction of the device.

Benefits of working in this environment?

Lydia: We benefit in so many ways, e.g. the students who are posted to IT always have so much of the latest industry trends to share with us, which enhances our capabilities and streamlines our output.

Compare IT in 2023 with IT in 2015 and 2033

Moses: We have increased our bandwidth speed (a bandwidth is like a superhighway), secured our network through implementing a firewall (a network security device which is able to monitor incoming/outgoing network traffic and block malicious traffic such as viruses and hackers). It is both a soft/hard ware.

By 2033, implementation of total digitization will result in excellent workflow by automating/increasing work efficiency and cutting down on paperwork. For instance, now we have a Human Resource Management System (HRMS), through which staff can access services from the comfort of their offices, such as applying for annual leave online.

Won't digitization lead to job losses?

Moses: Not really. It is just the paperwork that will be eliminated. If anything, it will lead to job creation because increased data will lead to databases being created for various functions; these will require personnel to attend to them.

Why does it appear like there are more men than women in IT Workshop?

Muthoni: The job is not difficult. Like engineering, it is wrongfully perceived as challenging because in years past, workshops and the white coats we wear to work were associated with heavy lifting and prone to be male-dominated. As long as one has a passion for the job, it is doable and even fulfilling, gender notwithstanding.

Are there stations/areas which are still analogue?

Newton: Yes, there are scattered pockets of older machines still in use, some require upgrades while others need replacement. Field technicians collaborate with headquarters and communicate needs to management for action.

How do you dispose of your waste (obsolete equipment) responsibly?

Lydia: Obsolete equipments are disposed of through selling to third parties, who may use them as a source of spare parts.



Moses and Lydia inspecting computers. Photo | Cornelius Kibet

Telcoms - The Heart

By: Catherine Warui

(Interviewee: Victor Ian Mika Matsanza)

“Brian Mc Clennan said that communication is what makes a team strong,” quipped Victor. His welcoming demeanour and strong, confident personality seems perfect for a member of a competent team whose job of ensuring that the heart of KWS – efficient messaging across all eight conservation areas and beyond - is healthy and active, 24-7.

What professional strengths qualify you to work in Telecoms?

Victor: I am a telecoms engineer who doubles up as an EarthRanger System Co-ordinator.

What is EarthRanger?

It is a web-based system; a software solution customized for KWS, which empowers protected area managers to monitor vast areas and their wildlife tenants in real-time. This leads to making more informed operational decisions for wildlife conservation. Each conservation area is able to access its own specialized system under the EarthRanger, to decentralize decision making and increase efficiency.

Is EarthRanger a KWS innovation?

No. It was developed by Vulcan Inc. in collaboration with several conservation and technology partners.

EarthRanger collects, integrates and displays all historical and available data and combines it with field reports to produce a unified view of collared wildlife, ranger movements and infrastructure within a protected area.

Our conservation partners also utilize EarthRanger and share their data on the same platform with KWS, which is at the conservation apex and therefore in a position to monitor events across Kenya. This blends perfectly with our key pillars of conservation, collaboration and enterprise.

How is data captured by EarthRanger used?

EarthRanger is an excellent management tool because it allows integration of all other existing systems, including collars, digital radios - adopted by KWS in three conservation areas, namely Tsavo, Southern and Central Rift. KWS aircraft are also all integrated into the EarthRanger system to improve



Victor demonstrating Earth Ranger system to guests. Photo/ Menza Kazungu

monitoring.

Officers manning command centres are able to guide ground teams on patrol should there be incidents such as the sighting of suspected poachers' tracks, human wildlife conflict, bush meat poaching and the like.

Weekly reports are generated from the usage of the systems, which lead to holistic decision-making.

What technical resources do you find most useful in your work?

Diverse skills, such as my telecommunication engineering qualification and IT knowledge. Mathematical calculations are also required in Telecoms during designing the digital radio networks. We conceptualized, designed, simulated and actualized the idea from scratch, an extremely involving process.

Imagine KWS is the human body. What organ is Telecoms?

The heart. The security aspect - which is what KWS is all about - requires communication to function. Radio communication is invaluable for officers in diverse areas to share important updates. Office telephony is another area. Imagine the living nightmare that would be walking from office to office to deliver messages, some urgent.

Is there a different set of skills required to man the EarthRanger?

Staff interested in working with

EarthRanger must go the extra mile and equip themselves with requisite IT and project management skills, which broadens their perspective on what needs to be done while implementing EarthRanger.

Are you a Trainer of Trainers, in keeping with life's succession rules?

I have trained approximately 1,600 personnel in KWS on the intricacies of EarthRanger; in KWS Law Enforcement Academy at Manyani when staff are going for conversion, promotional and other courses. In addition, I have an extremely competent team who are able to train others even in my absence. Together, we have created the ToTs. My perspective now is to oversee the entire implementation, to make room for others to benefit as I have.

Compare KWS Telecoms in 2015 and in 2030.

I'll go even further back - to 2005 - when the telephone system was barely existent. There wasn't a reliable infrastructure as there was only one operator. The PABX (Private Automatic Branch Exchange) used to generate extensions back then was an old one called Infinity. If any problems arose, the technician had to manually disconnect it from the battery, which always resulted in the loss of three/four extensions. Daily, we would reduce extension numbers due to the PABX's high failure rate.

Management facilitated us and we were finally able to install the system in use for the last 17 years to date. However, it requires improvements to catch KWS up with the latest IP-based technology, which would entail simply plugging in telephones to use, eliminating complicated wiring networks. Going forward, an IP PABX will enable staff from all KWS stations to communicate more freely, leading to new opportunities from increased efficiency.

NB: A PABX is a private telephone switchboard which allows an organization to keep internal employee calls on its company's telephone network, concurrently handling external telephone traffic. The use of this kind of switchboard allows organizations to significantly cut down on the number of telephone lines, therefore reducing the costs.

How do field stations without electric power supply function?

In places where there is no electricity, Telecoms has ensured that there are functional power back-ups with the installation of solar systems. My duties also extend to the design and sizing of these systems after obtaining station requirements, examine the capacity – what do they want to power? – get necessary ratings, do calculations and offer a lasting solution.

Describe your typical work week.

I begin by ensuring that all communication across the country is uninterrupted, because we monitor the digital radio network. I also seek statuses from areas not equipped with digital radios, to identify any

breakdowns, because headquarters coordinates the seven workshops across Kenya. For any identified problems, I consult for the best solutions.

Secondly, I ensure the EarthRanger is running as expected; data captured correctly and consistently. If any collars aren't visible I have to contact our partners for solutions, in keeping with my JD as an EarthRanger.

Third comes reviewing the previous week's challenges and achievements to try to learn and grow from these.

Does the EarthRanger incorporate the microchips implanted into rhino horns?

We are yet to integrate those microchips with our system, which is so robust that it can allow integration of vulture tags, some of which are GPS-enabled, to allow for consistent tracking.

Did you know that vultures are tagged because a concentration of them is an early indicator of the presence of one or several carcasses?

KWS without Telecoms?

We cannot replace radios; we may try to find other mediums around Telecoms, but the unit plays a major role, especially the communication aspect of it. Telecoms is felt across all departments. As we speak, I am working on a Paper on data sharing between KWS and her conservation partners to maximize informed decision making, because the Service is accountable to the government.

If you were the CEO of KWS, what would you do for Telecoms?

Engage a team that works with

passion and embraces teamwork. Secondly, innovation being the way to go, I'd invest in technology and empower, equip and facilitate my teams by allocating more resources to them. I would bring more partners on board as well, to foster unity of purpose.

What are some Telecoms terms not known by laymen?

In digital radio networks, a base station is a repeater station. It has two channels, receiving and sending signals. For optimum communication, two base stations are ideal. When a signal is transmitted it tends to be weak and has noise transmitted along with the actual voice. Before it is transmitted to another place, one has to regenerate it, done through a repeater, which is similar to an amplifier, but the repeater filters noise and sends a clear signal; an amplifier sends both voice and noise. The signal thus moves through the repeater to the transceiver or radio.

Do you still use Morse Code in Telecoms?

We have deviated from it, but it remains a vital tool in allowing coded transmission of sensitive communication, especially in Security. It is on my list of things to polish up on.

Advice to the youth wishing to pursue a career in Telecoms?

It is a vast field with myriad opportunities, such as the radar system, digital communication, GSM (Global System for Mobile Communications), programming, installations, design and so many more. I encourage open mindedness to those venturing into this field, which will lead to job satisfaction.

If you encountered a friendly elephant relaxing in the field, what would you tell her?

Elephants are a threatened species, given that KWS protected areas are imperilled by deforestation, community encroachment, poaching, climate change and illegal trading of wildlife.

I would assure her that I am here to create a safe environment for her and her family and that provision of pasture and water is high on the Service's plan for her continued survival.



Victor demonstrating some of the equipments used in Telecoms. Photo| Cornelius Kibet



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