



30TH WORKSHOP ON SPACE TECHNOLOGY FOR SOCIO-
ECONOMIC BENEFITS: "CHALLENGES AND CAPACITY-
BUILDING OPPORTUNITIES FOR EMERGING SPACE
NATIONS"

LESSONS LEARNT IN BUILDING A SPACE ECOSYSTEM

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FOUNDER: IMPACT SCHOOL AND HOLBERTON SCHOOL LESOTHO

SIX INTERESTING FACTS ABOUT LESOTHO



- We are a country within another country. Completely landlocked by South Africa.
- We have a population of only two million.
- We are a monarchy.
- Known as the Kingdom in the sky, Lesotho has the highest lowest point in the world.
- Lesotho is rich in diamonds and water. The fifth largest diamond in the world was discovered in Lesotho.
- Lesotho is one of the few countries in Africa where you can go skiing.

THE STATE OF THE ECONOMY



- Despite the rich country that it is (in many more minerals than diamonds), Lesotho's unemployment keeps climbing.
- Prostitution and informal jobs like street hawking are rising and shacks are cropping up at every corner.
- In the current times of remote work, one of the great contributors to the struggles of Basotho graduates is unemployability caused by old and outdated curriculums.

THE STATE OF ED-TECH IN LESOTHO



- The most ambitious of our youth and the most disciplined of our youth, find it hard to secure employment. Not because they lack talent, not because they lack the resources of the mind, but because of the lack of opportunity for quality education.
- Every year Lesotho produces graduates that should easily find jobs in the tech industry. But they are hindered by resistance to change within the education system and irrelevant and outdated curriculums forced upon them.

ABOUT MAMONAHENG KOENANE

- I studied Computer Science at Griffith College in Dublin, Ireland and I am both a Lesotho and EU citizen.
- I have lived in several European countries and have been exposed to the comforts of the first world and the hardships of being born in a third world country.
- I have seen the contrasting differences of well-run countries and a country whose citizens are failed by poor education.
- I moved back to Lesotho with the resolve to start a school that will have REAL impact and create REAL software developers, who will have REAL jobs and make REAL contributions in the tech industry.
- The plan is to build something that will benefit the rightful beneficiaries and leave a legacy that will affect generations to come.
- I named it IMPACT SCHOOL. We headquartered it Dublin Ireland for two reasons; accountability and to be closer to some of the leading tech companies of the world.



ABOUT IMPACT SCHOOL



IMPACT SCHOOL IS COMPRISED OF TWO UNITS:

- The first unit takes in students from as young as 8 years old and all the way up to over 18s. The programs are designed to introduce concepts of Electronics, Coding and Robotics with a practical and hands on approach.
- The more advanced groups are introduced to ROS - Robot Operating System which deals with actual industrial robots and **Space Technology**.
- The second unit is a third level education program in partnership with Silicon Valley founded computer science and software engineering school, Holberton School



THE INTRODUCTION SPACE TECH IN LESOTHO



PHAKOE (AKA FALCON)

- Around 2020 during covid lock downs, Impact School received a Cube Sat prototype kit from our partner FIRST Global Challenge.
- Through this gesture. A number of surprises hit us.
- Impact School became the first organisation to introduce a Space Technology program in Lesotho.
- Our students will be youngest to launch an object to the stratosphere.
- PHAKOE (meaning Falcon) as the student have fondly named the satellite prototype, will be the first object launched in Lesotho to reach the stratosphere.



- There is no National Space Agency in Lesotho.
- We approached the Lesotho National Defence Force (LDF) - Air Wing to for authorisation and a launch date we can use for our Cube Sat Prototype.
- The LDF invited the Department of Civil Aviation on board. In turn we have had to do multiples of presentation before the military and the Department of Civil Aviation.
- With instruction from the Chief of Defence Staff, we have been granted permission to launch.
- The launch of the Cube Sat prototype has brought on discussions on the table such as, implementation of Lesotho National Space Agency, opportunities in having our own satellite for internet and data collection on the country.
- Impact School has had visitations from the ambassador to the European Union in Lesotho, H.E. Paola Amadei, the United Nations Development Programme Lesotho Resident Representative, Dr. Jacqueline Olweya (who is looking forward to the launch).
- This coming months we are also expecting visitations from French and USA ambassadors.



OUR APPROACH

- Impact School plans to introduce a more detailed space education program to our curriculums.
- Seek mentorship from industry experts: to train the trainers
- Seek support with curriculum development (Hands-on Learning, e.g. focus on CubeSat)

LESSON 1: DARE TO DREAM BIG

Regardless of background:

- Embrace ambitious goals
- Overcome self-imposed limitations
- Inspire students to think beyond boundaries

LESSON 2: COLLABORATION DRIVE SUCCESS

- Cultivating a diverse range of expertise
- Partnerships with space technology experts
- Instilling resilience in our students

LESSON 3: LEARN THROUGH ADAPTATION

- Embracing of a continuous learning
- Adapting and evolving in the face of challenges
- Instilling resilience in our students



THANK YOU

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