

BEGINNER DRONE TRAINING FOR ST. JOSEPH'S

TITLE OF PROJECT	Beginner Drone Training
FUNDING PERIOD	August 28-29, 2021
REPORTING DATE	September 6, 2021
NAME OF DONOR	ZOF AFRICA
FUND RECIPIENT	Precision Aerial
RECIPIENT ADDRESS:	The Performance Hub, 170 The Chase, Groombridge, Harare, Zimbabwe

BACKGROUND OF PROJECT:

Fast-paced, worldwide digitalisation dramatically affects the job requirements of the future. To have the capacity to become tomorrow's leaders and innovators, it is essential for youths to be well educated in STEM (science, technology, engineering, and maths). In its beginner drone training, Precision Aerial uses drones as a tool to introduce young learners to the STEM world: Students improve their computer literacy and learn the importance of data. Besides, they enhance their problem-solving skills and out-of-the-box thinking as well as teamwork and story-telling capacity. These skills can empower students to become leaders and entrepreneurs in the digital economy of the future.

In addition to the tangible introduction to STEM via Precision Aerial's beginner drone training, students learn the basics that allow them to become drone pilots and develop drone applications. This is of high relevance as a shortage of drone pilots across industries in the upcoming years is expected. At the same time, drones can contribute to increasing social and economic wellbeing especially in Zimbabwe and Africa: As an example, drones can provide food and medical care in rural areas more efficiently, contribute to preventing Malaria infections, or enable farmers to produce more efficiently.

Eventually, ZOF Africa organises and funds a beginner drone training for the boys at St. Joseph's Halfway House with the aim of encouraging them to learn basic drone operation skills and knowledge, stimulating their entrepreneurial thinking, as well as raising their awareness of and strengthening their capacity for career opportunities in STEM and the drone industry.

DETAILED DESCRIPTION OF PROJECT:

- ZOF Africa funded a Beginner Drone Training, conducted by Precision Aerial. The training entailed six hours in total, spread across two days.
- Training content:
 - o What drone use case applications exist and can be developed? Why are these applications relevant and important, what problems can they solve?
 - o What types of drones exist?
 - o Drone operation
 - Drone safety
 - Flight planning and preparation (incl. pre-flight checklist)
 - Take-off and landing protocols
 - Operate the Tello safely, incl. basic manoeuvres
- Participants: Nine boys from St. Joseph's Halfway House for Boys

EXPENDITURE TABLE:

Item	Beneficiary name	Amount (local currency)	Amount USD)	Invoice included (y/n)
Beginner Drone Training (six hours)	Precision Aerial	n/a	620	y
Snacks during Drone training	Precision Aerial	n/a	160	y
Transport (Halfway House <> Precision Aerial) for all sessions	Taxi	n/a	18	n

SHORT TERM IMPACT REPORT:

1. Involvement:

a. How would you describe the boys' motivation and involvement during the training?

Most of the boys were quite intrigued by the drone workshop though a few were a little hesitant to get fully engaged at first, particularly during the theory training but they soon warmed up and became more engaged.

b. Have you observed any changes in their involvement and motivation? If yes, when and why?

During the practical exercises the boys became more engaged and motivated as they gained more confidence in operating the drone.

c. Did the boys come up with and work on their own ideas proactively (e.g., regarding drone applications or manoeuvres)?

2. Skills and progress:

a. How well did the boys learn and progress throughout the training?

By the end of the workshop and training, all of the boys were proficient enough to be able to carry out take off and landing protocols, drone manoeuvres and even navigate a basic obstacle course.

b. How many boys would you consider fit for the intermediate/advanced trainings?

Maximum number of boys we could accommodate in the intermediate and advanced training courses is 10.

3. General:

a. What were the main takeaways and benefits for the boys?

- Awareness of drone technology as a tool for work in a global and local context
- Understanding of Drone use case applications across a variety of industries
- Introduction to types of drones, structure, and classification in aviation
- Summary of local drone regulations
- Practical flight training with two types of drones (educational and professional drones)

b. What were the biggest problems (anything from organisational to content-related problems)?

There were no major problems. Some minor issues included boys arriving late for the first day of training. Very windy conditions experienced during the outdoor training on Day 2.

c. What is your overall impression of the training?

The workshop was a good exhibition and eye opener for the boys and helped them to see the potential opportunities, career outcomes and possibilities brought about by drones. The boys were well mannered and became quite engaged as they got more into the training and gained confidence with the basic drone operations. The workshop was a good starting point and it would be ideal if some of them can take this further.

SUGGESTED IMPROVEMENTS AND NEXT STEPS

Next steps:

Discuss and agree with ZOF on enrolment of boys into the intermediate course depending on interest from the boys. This would entail a longer 5-day program which will culminate in a certificate of competency if completed successfully.

Also consider having a few of the boys (2 or 3) join our volunteer program, where they can assist with other drone activities and youth training and gain soft skills and as well technical skills on drone operations.