

## The Kolahta-19WD Hand Washing water dispenser Project

### Introduction

Our planet has been devastated by the outbreak of the coronavirus pandemic. This virus was first discovered in the Wuhan province in China and has widely and rapidly spread around the world devastating nations and fated millions of citizens into death and chronic sickness. Whilst cureless the coronavirus pandemic is still at large, many nations have passed laws and declared new state of emergencies in order to tackle the spread. Ever since the outbreak of this deadly virus millions have been infected and hundreds of thousands citizens of the globe have died. The World Health Organization (WHO) has recommended five prevention methods: (1) social distancing; (2) wearing surgical masks; (3) wearing hand gloves; (4) washing hands with soap and water repeatedly for 20 seconds and using hand sanitizers; and (5) avoiding hand touching our eyes, nose, and mouth before washing both of our hands.

Pursuant to these highly recommended preventive measures, many innovators at Kenya have developed foot operating hand wash machines with Mobil tankers that are usually placed at outdoors and gates of businesses and other public service delivering venues. Having been inspired with those activities and deeply observing those inventions, and learning that one of the best preventive mechanisms of this pandemic is to wash hands with soap and water, I have designed an innovative mechanical foot pedal water dispenser device, called Kolahta-19WD, that would be mounted to any kind of existing water outlet taps, and hand washing sinks. When people wash hands with taps or other hand operated gate valves, as long as the hand closing and opening actions are involved no matter how cautious they are on the methods of closing they are not immune and safe from contamination. The most unique characteristic of Kolahta-19WD is that it is free from hand touch and thereby avoids contamination and spread of coronavirus. The machine automatically dispenses water with foot pedal operation, by simply applying feet force by stepping on the press pedals of the machine and releasing.

The idea of my invention emerged from the very perception that if we continue to touch hand washing tools that may have been contaminated, it will only further escalate those chances of being infected by the virus. Therefore, I have developed this new machine that will help us wash our hands without hand touch, but utilizing it to dispense water and soap using our feet. Moreover, the machine is water consumption efficient and will prevent the excess use of water that is fated to waste during its operation and could ultimately lead into water shortage. Kolahta-19WD could reduce water shortage by **more than 50%** during operations.

The location of my project will be at Kenya . One machine will benefit more than 100 people per day. My target in 3 months is to produce 1000 pcs which covers 1000 households. And the period to manufacture is one month. I can take 1000 pcs order at a time. With having a complete machinery and staff, I feel that I can make 200 to 400 a day.

### **Main benefits of Kolahta-19WD**

1. Kolahta-19WD is purpose built to combat and tackle the coronavirus outbreak to community members .
2. It is water consumption efficient that cuts down the water wastage during hand washing, which will contribute profound impact on the environment where water is the most vital commodity to combat coronavirus transmissions. Specially now people are using high water consumption, so there is high water shortage everywhere, this machine solves this problem. People are worrying about the shortage of the water not the money that they pay to used water.
3. It does not require batteries, electric source or consumes fuel to function because it is mechanical that functions with any feet force applied to its depressor peddle. It is eco-friendly and it does not emit any Carbone or any hazardous elements to the atmosphere during operations.
4. It does not require any additional water source lines and tankers and other new sanitary fixtures since it is purpose built to be installed with pre-existing water lines taps and water sources. Outdoor and indoor.
5. The machine is simple to manufacture in small workshops and with few machineries as well as labor making the price tag low and affordable to buy. It is made of metal sheet and very small in size and easy for mobility. In addition to its cost effectiveness, it is a tool that could be manufactured in a short period of time in order to meet the spike of demand at any time and level.
6. It creates side by side job opportunities and creates business linkages for people, especially women, who are going to work on manufacturing whereby it would contribute its role in alleviating unemployment rate that is highly on the spike, especially with the emergence of this pandemic for the vulnerable people (Women).
7. It would draft credit sales schemes post production to members of society who face financial constraints. By granting down payments and credit sales in order to make it affordable and enclose a large scale of distribution.
8. It will improve the social impact of coronavirus once the project is developed into fully fledged manufacturing and selling of its products and provide an income to the owner.
9. It is durable and we are willing to give a 6 months guarantee. It has users manage guide stipulated on its body that guides simple operations. Also 6 points of COVID-19 protection messages and contact numbers to report about COVID-19, in English and local language is posted on the top device, so people can read it while washing their hands.
10. It is positioned in such a way (height and weight) that it can be used even by children and adult members of the society. On my 3<sup>rd</sup> edition of this device I am going to include for vulnerable people (disabled) own collecting information and specially when I own my work shop, sure I will make a solution.

11. Once installed with bolts and nuts inside rooms with the ceramics it cannot be easily removed and therefore it is safe and secured from robbery.
12. It is very easy to export it to any corner of the globe. Given its size and nature of built it is easy for transportation, shipping and cargo flights and does not require larger space for both manufacturing and post production storage. Size=17cmx14cmx7cm. Next planned size=4cmx4cmx4cm.

### **Sustainability of Kolahta-19WD**

1. Serve as a water dispenser even after the pandemic, for it has the potential to save much water wasted during hand washing activities and also avoid the contamination of bacterial transmitted diseases and other virus infections.
2. It does not require large space and is easily movable from place to place and can be installed easily at water tap lines and function simply. It can be installed with any given amount of water size and could function everywhere you place it, such as toilets, any water pipe lines priory installed in bed rooms and baths, showers or any outdoor water outlets. Installation period 15 minutes.

### **Manufacturing of Kolahta-19WD**

Kolahta-19WD is made of iron sheet that is highly durable and it has a written guide of usage displayed on top of its body. And it cannot be easily broken or easily removed once it is properly installed. Its internal components are made of iron and metallic springs and there are internal metallic connectors placed that fix the pipe line and its internal components. The water dispenser depressor pedal is made of metal that is connected with the internal furculum machine. It is durable and stronger that can withstand any relative human force exerted on it while opening and clothing the water source line. Most importantly, since it is a surface mounted machine that is installed and fixed on ceramic floors and ground zero level, there is a good chance that the floor itself would observe thereby protect it from damage when force applied to it during operating.

<b>Items</b>	<b>Cost in \$</b>
Iron sheet	8.87
Spring wire	7.39
(Reinforcement) iron rod.	1.47
Welding iron	2.95
PVC plastic pipe	1.18

Connectors for water tab (unions)	5.32
Screw nuts and bolts	0.23
Assistant labor cost	2.07
Usage guide information sticker	0.59
Flexible water pipe hose	1.18
<b>Total cost for 1 pc of Kolahta-19WD machine</b>	<b>\$ 31.25</b>

### **Business plan**

This project proposal is written for a newly invented hand washing machine that automatically dispenses water with foot pedal depressors by simply applying feet force by stepping on the press pedals of the machine. The newly invented machine is invented by an individual inventor by the name Mr. Micheal weldegebrial. Address Ethiopia, Shire Endassilassie, tel No: +251920253811-----

### **Budget break down**

<b>Budget item</b>	<b>Cost in \$</b>
House rent for work shop 3 months	900
Expense for workshop materials, Machineries and equipment	4,304.69
Expense safety tools	1,693.66
Office furniture	I will manage with what I have and make life easier.
Project running staff salary for 3 months	3,382.53
Starting capital to produce 200 pcs of Kolahta-19WD	6,250
NB=target is to produce 1000 pcs of Kolahta-19WD and distribute them in 3 months. After this the project	Will have work advantage for the staff who started with me and hiring more staff as well.

will keep going by generating income by itself.	
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