

## THE PROBLEM

Ebola Virus is a contagious disease that can quickly spread between humans if the proper protocols are not carefully taken into consideration. Most humans are infected due to human-to-human transmission of infected body fluids such as blood, feces, and semen.



[https://en.wikipedia.org/wiki/Ebola\\_virus](https://en.wikipedia.org/wiki/Ebola_virus)

The spread of Ebola Virus Disease can be attributed to several factors:

- Direct contact with contaminated blood
- Unprotected sex
- Handling the deceased bodies of infected individuals
- Exposure to feces and improper sanitation
- Contact with surfaces contaminated with body fluids

## EPIDEMIOLOGY: DRC

The first outbreak of Ebola was recorded in the Democratic Republic of Congo in 1976 and has since infected people across Africa.

The tenth outbreak of the Ebola Virus was detected in the DRC in 2018. It is the second-largest outbreak ever recorded.

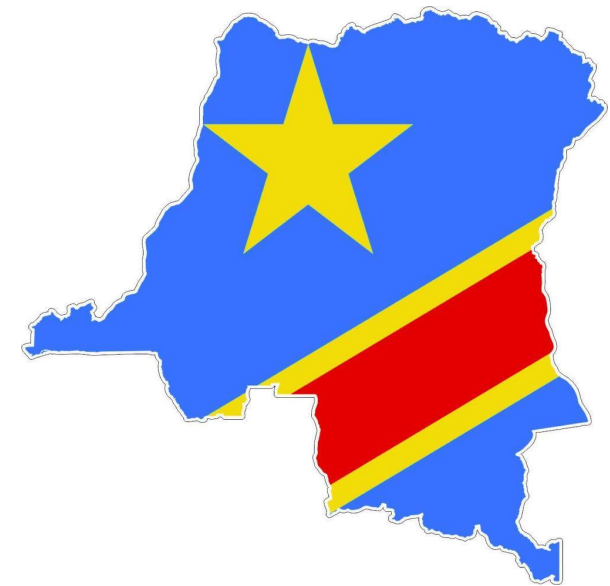
The outbreak is currently approaching 1000 cases and over 600 deaths in the North Kivu and North Ituri provinces.



**SEEK IMMEDIATE HELP IF THESE SYMPTOMS OCCUR**



## EBOLA VIRUS IN THE NORTHEAST DEMOCRATIC REPUBLIC OF CONGO



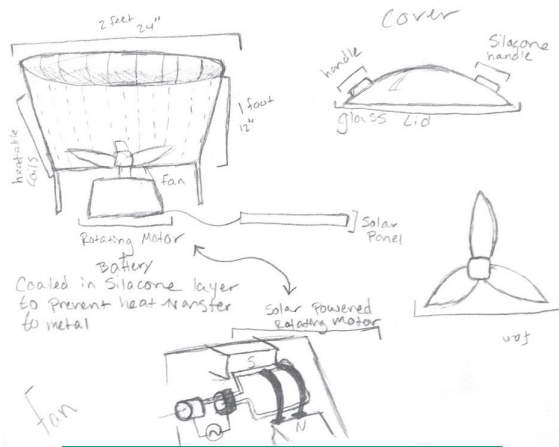
- The Problem
- The Epidemiology
- The Solution



<http://endrc.onmason.com/>

# THE EWASH140 SOLUTION

## Design Sketch



### 3 Implementation

This machine is primarily planned to be implemented throughout the **14 hospitals** in the Northeast of the Dominican Republic of Congo



With further progress the EWASH140 could additionally be added to more public communities

### 3 Effectiveness

### 1 Overview

Ebola Virus can be killed off using **high heat**. Our solution is a **small washing machine** that clean clothes in boiling water (**140°F**) for **one hour** to kill off any remnants of contaminated body fluids, such as sweat, blood, saliva, and semen. Using **solar energy**, the clothes are sanitized of Ebola.

### 2 Materials Needed

- Metal tin: \$6.00
- Silicon handles: \$6.00
- 10 ft. heating coils: \$5.00
- Rotating motor: \$6.00
- Glass lid: \$10.00
- Fan blades: \$3.00
- 5-10 Watts Solar Panel: \$15.00-\$30.00
- Solar panel battery: \$20.00

### \$ Cost

**\$76.00**

