

Fighting Ebola

蔡文力 Ed Choi

King's Sierra Leone Partnership

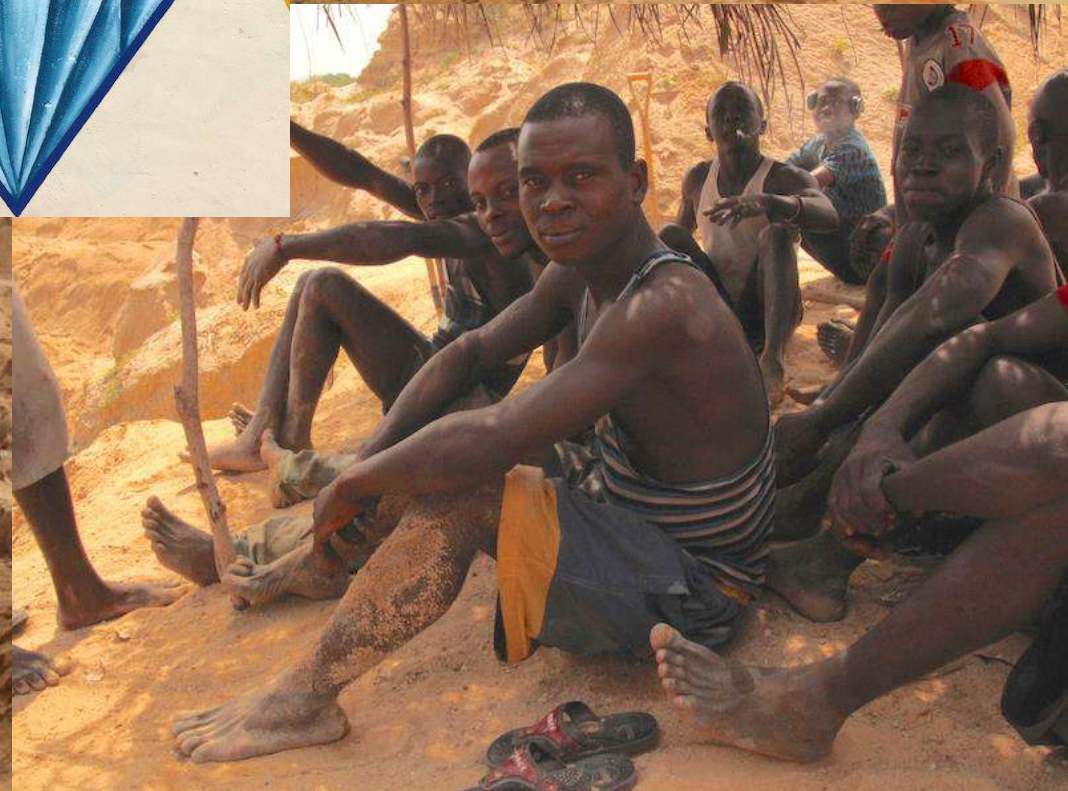
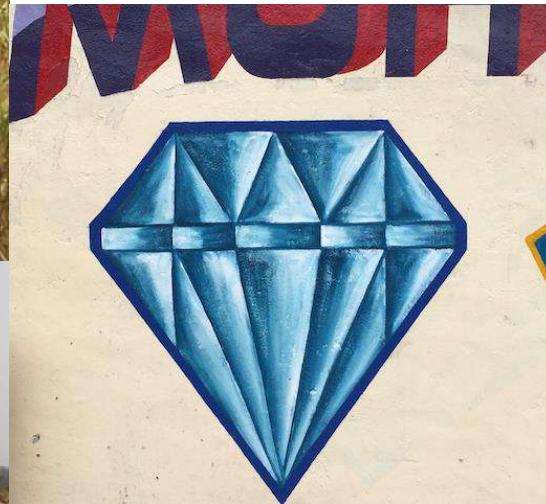


Sierra Leone 塞拉利昂



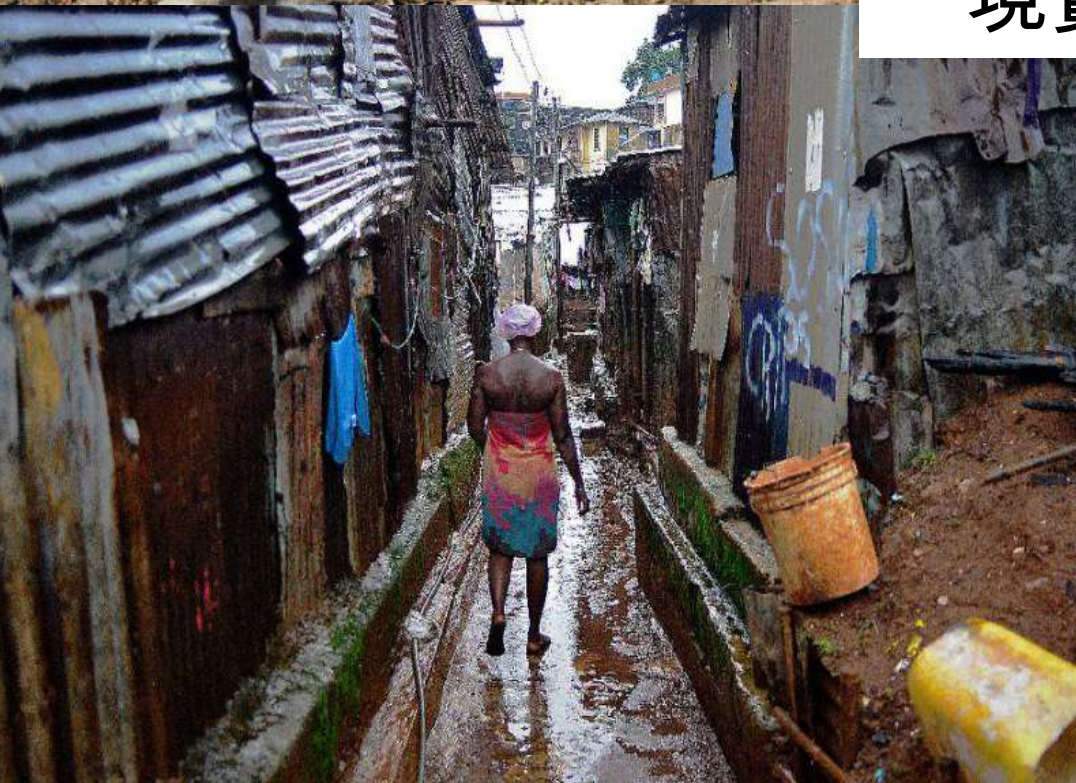


鑽石山





現實



獅子山 vs 獅子山



人口:	7M	6M
醫生:	13000	120
平均壽命:	81-86	46
兒童死亡率:	0.17%	50%
赤貧:	14%	70%



Timeline

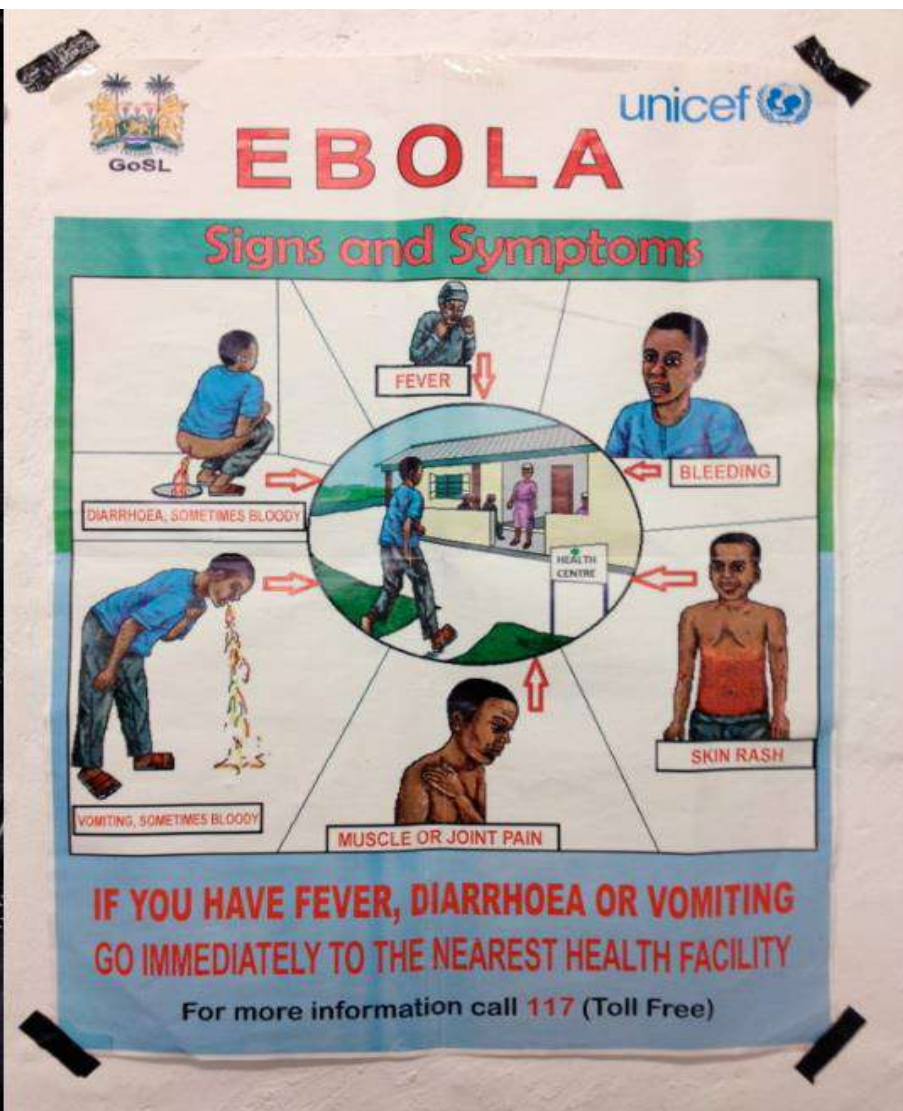
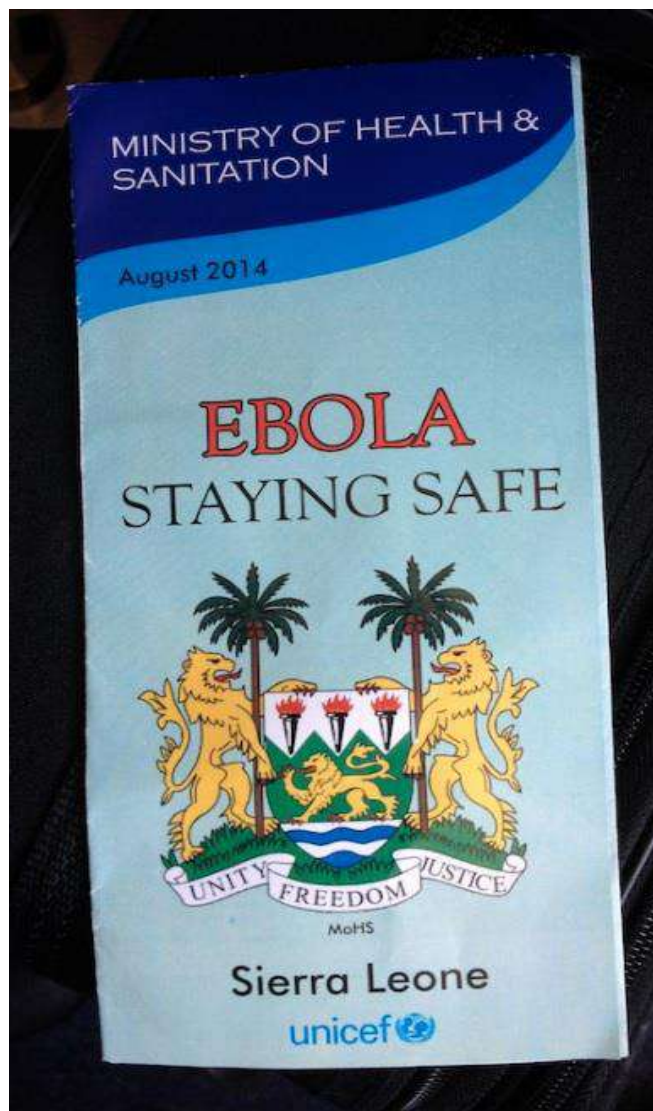
疫苗: 黃熱病, 麻疹, 霍亂, 白喉, 破傷風, 傷寒,
小兒麻痺症, 型肝炎, 乙型肝炎, 瘋狗症, 肺結核, 流感

2014

2015

2016

Late
October:





International
Coordination



Regional
Coordination



MINISTRY OF DEFENCE

Save the Children®

Treatment Centers



Public Health
England



中国疾病预防控制中心

Diagnostic Lab



Quarantine



Road blocks &
Check points



樂施會
Oxfam

Surveillance &
Contact Tracing

世界宣明會



Safe & Dignified
Burial



Social Mobilization

District Ebola Response Centre

伊波拉認變中心



Ebola case



Check point

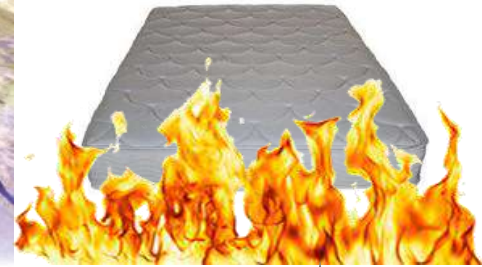
MISSING



Missing contacts



Quarantine Houses



Old mattress burnt



New mattress

應變設施



Holding Center 拘留中心



Treatment Center 醫療中心



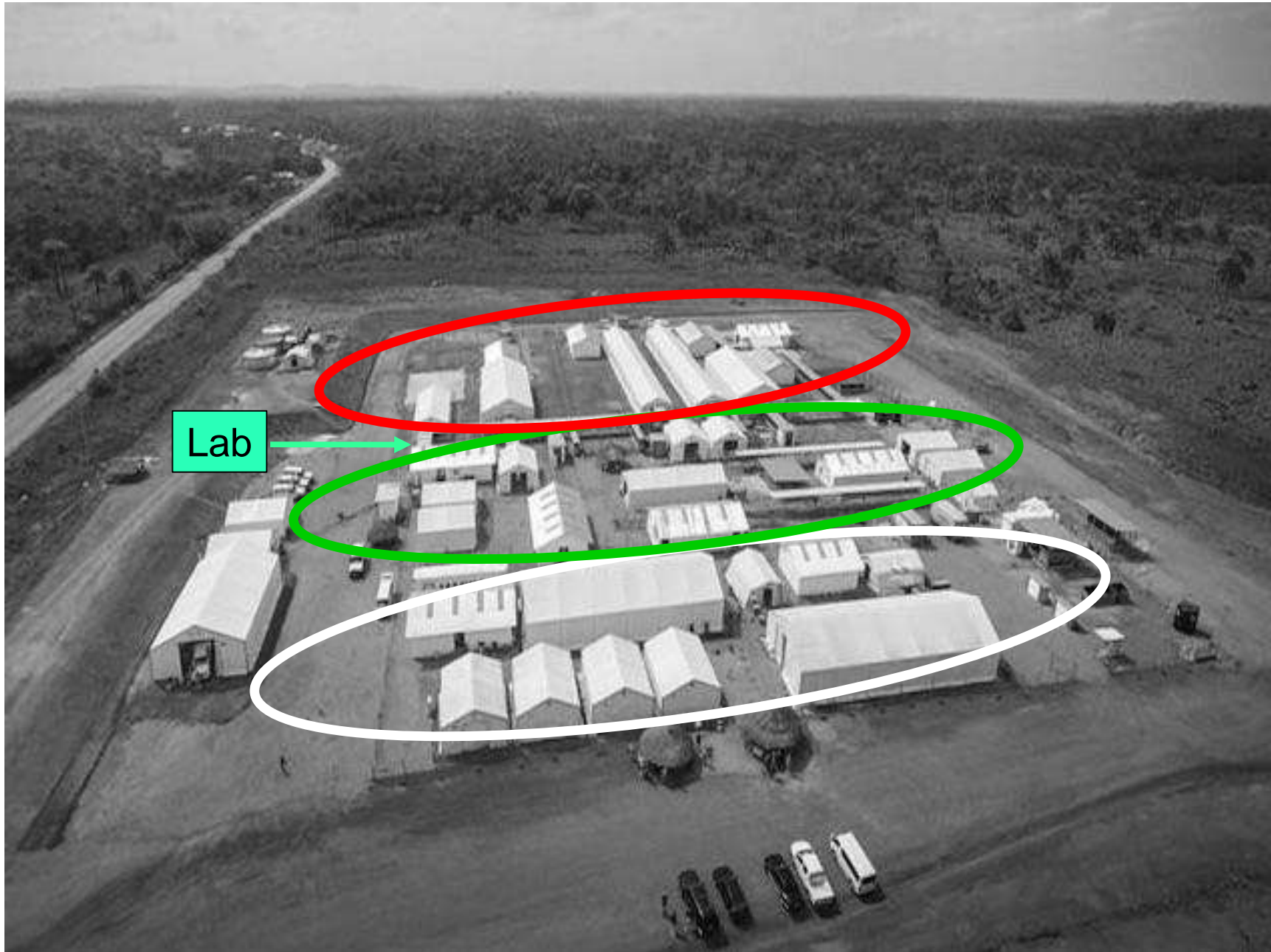
Permanent P3 Lab 實驗室



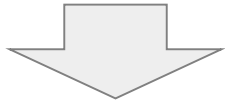
Mobile Lab 流動實驗室



Makeni 伊波拉醫療中心



Entering



Hand wash, Temperature



e



PPE with buddy





“The heat was exceptional. I almost drowned in sweat a number of times. I had to swallow my own sweat to avoid passing out.” - Dr Ken Soy

What we do

Diagnostics:

Ebola testing 伊波拉病毒測試:



Live patients 病患者

Diseased patients 死屍

Survivor semen testing 生還者



Malaria 瘧疾 & Dengue 登革熱

GI & Respiratory panels 腸胃炎, 氣管炎

Biochemistry & Haematology 驗血

Clinical trials: 藥物臨床試驗



UNIVERSITY OF
CAMBRIDGE

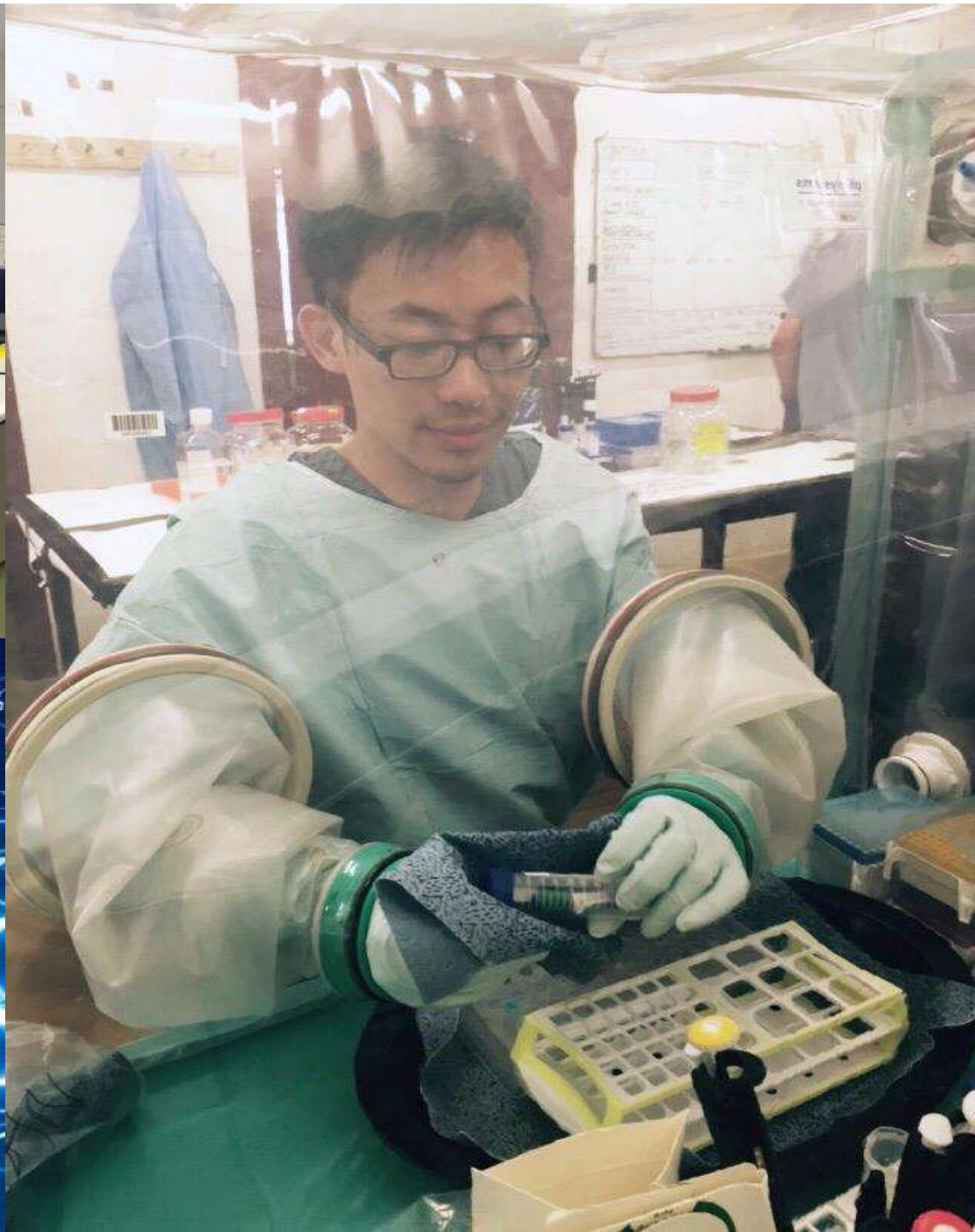
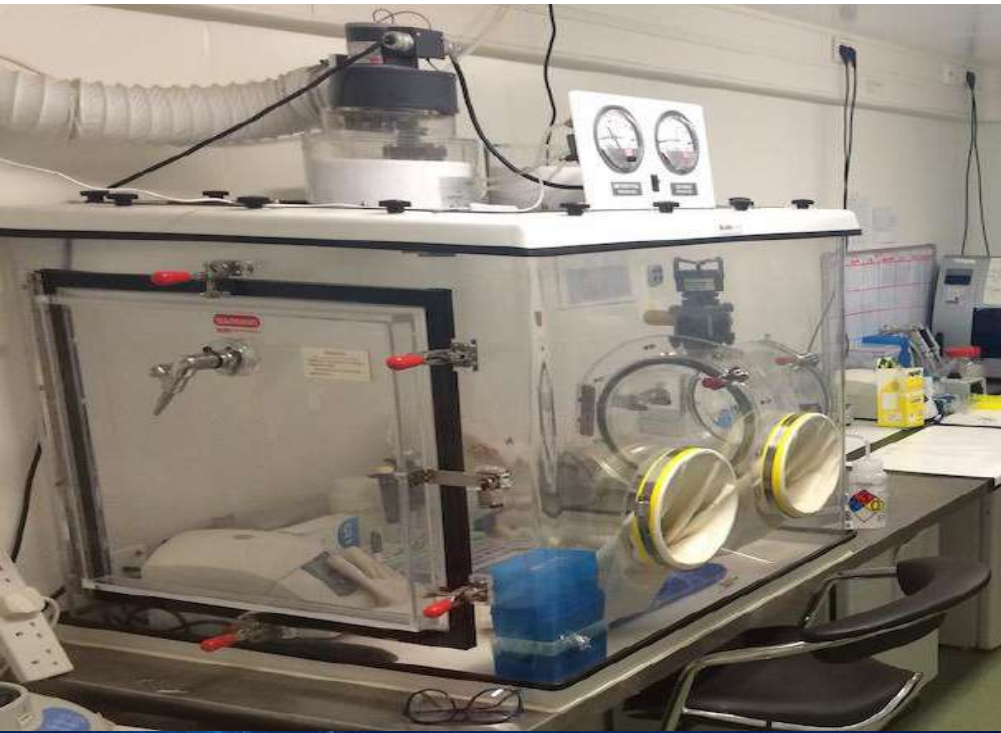


World Health
Organization

LONDON
SCHOOL of
HYGIENE
& TROPICAL
MEDICINE



伊波拉實驗室



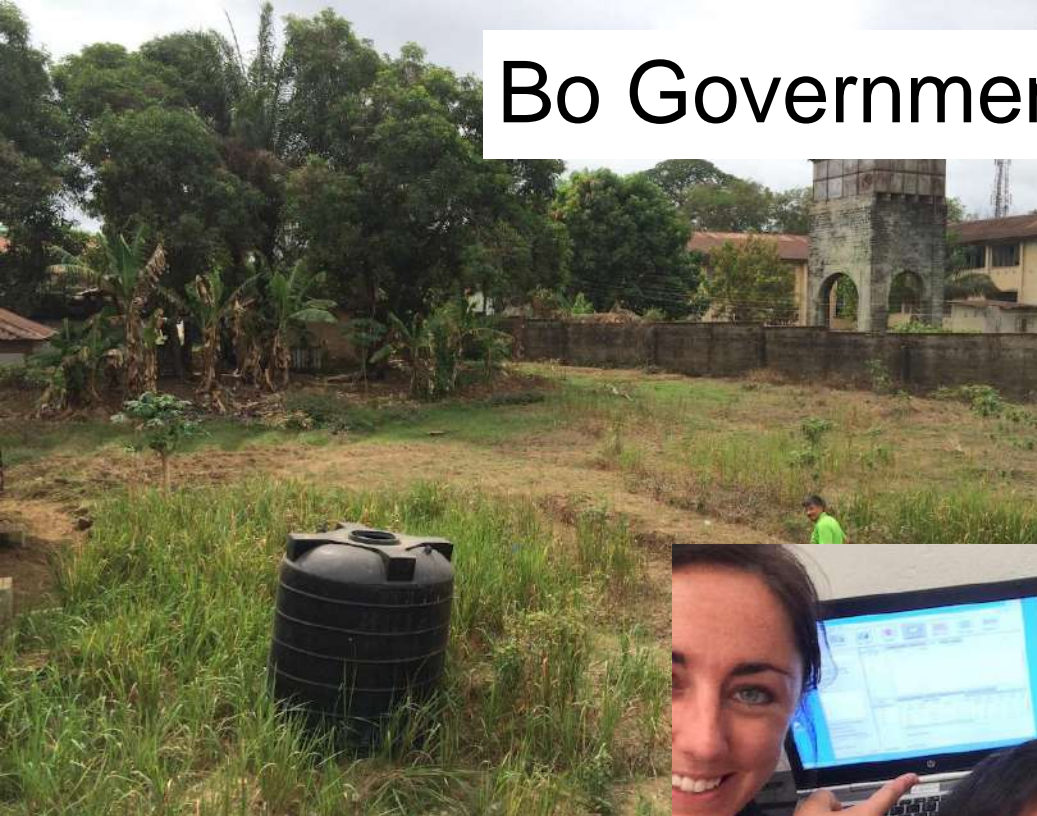
為下一次作準備

10000+ Ebola Survivors

- * 病毒監控
- * 專業培訓
- * 拓展新科技



Bo Government Hospital Lab









Sierra Leone - Beyond Imagination



plasticware



scrap-metal



sofa



chicken



apples



eggs



veggies



bread









Makama Amputee Camp

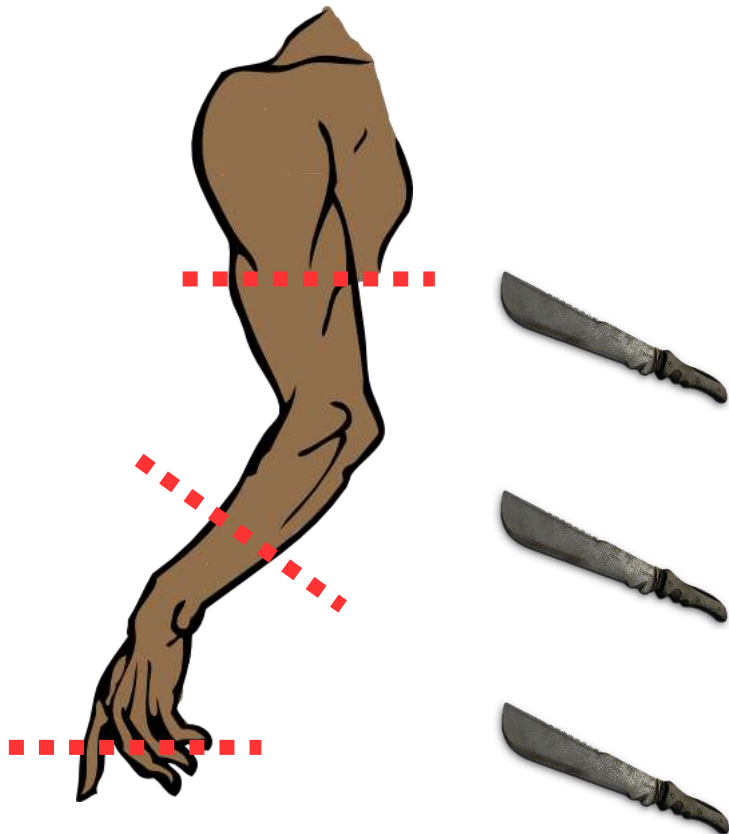


No, it's not okay to ask me what happened

... but I will tell you.



Sierra Leone Civil War 1991-2002



“People have power in their hands”

What Sierra Leone needs?



The Problem

The People

The Solution



3D Printing



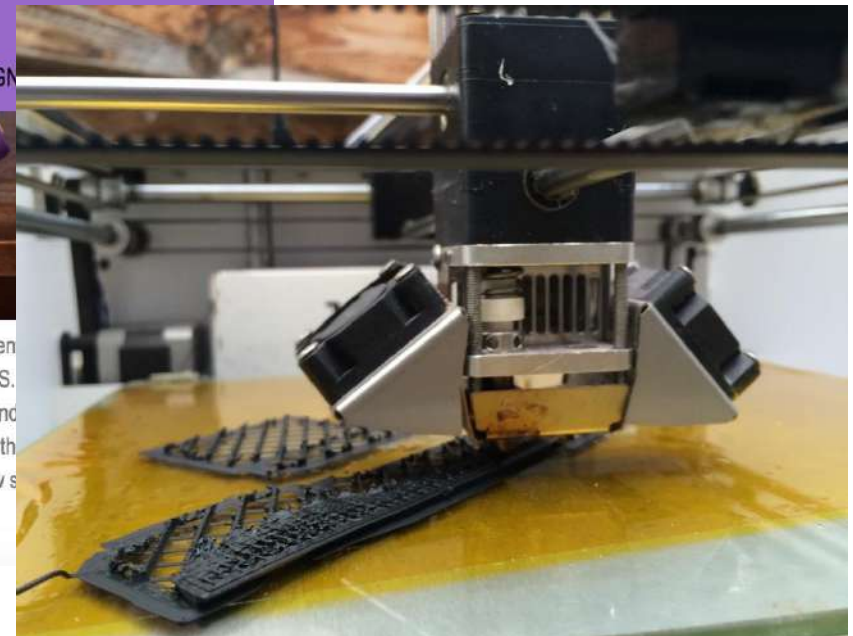
- HAND DEVICES
- WHICH DESIGN?
- WRIST POWERED
- ELBOW POWERED
- SINGLE FINGER
- DESIGNS
- TASK SPECIFIC
- ALTERNATIVE DESIGN

- The Raptor Hand
- Talon Hand

THE RAPTOR RELOADED



The team behind the original Raptor has released the [Raptor Reloaded](#), an updated and re-factored version of the Raptor Hand. The new design is modeled in [Fusion 360](#), a free CAD tool that can import and export most standard solid body modeling formats such as STEP and IGES. By moving the design to a tool compatible with numerous CAD packages, we hope to lower the barrier to contribution to the e-NABLE project for engineers and designers. If a designer wanted to make a small adjustment to a part of a hand, they'd have to rebuild the entire part in their CAD software before the change. Now they can [download the source files](#) and just spend their time making the specific change they had in mind. With this new design, we hope to improve the pace of research and development within the design community.





[Home](#) » 3D printed prosthetic hands created at the Radcliffe Science Library



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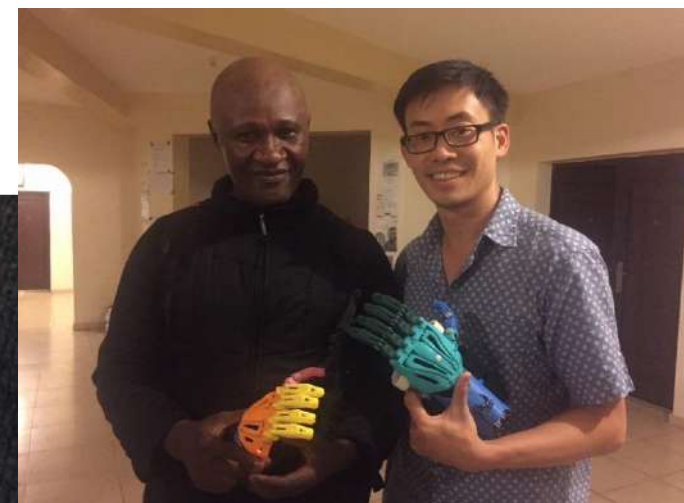
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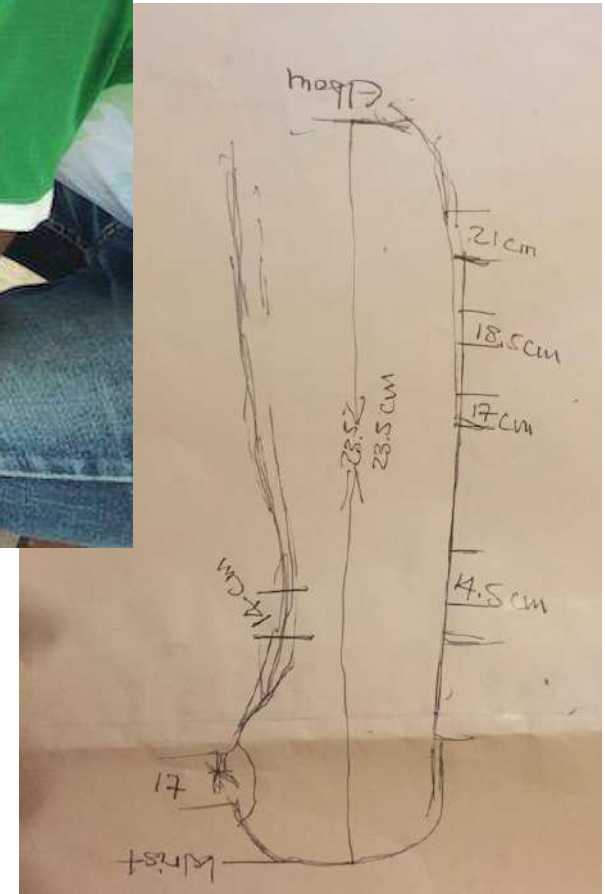
3D printed prosthetic hands created at the Radcliffe Science Library

4 March 2016

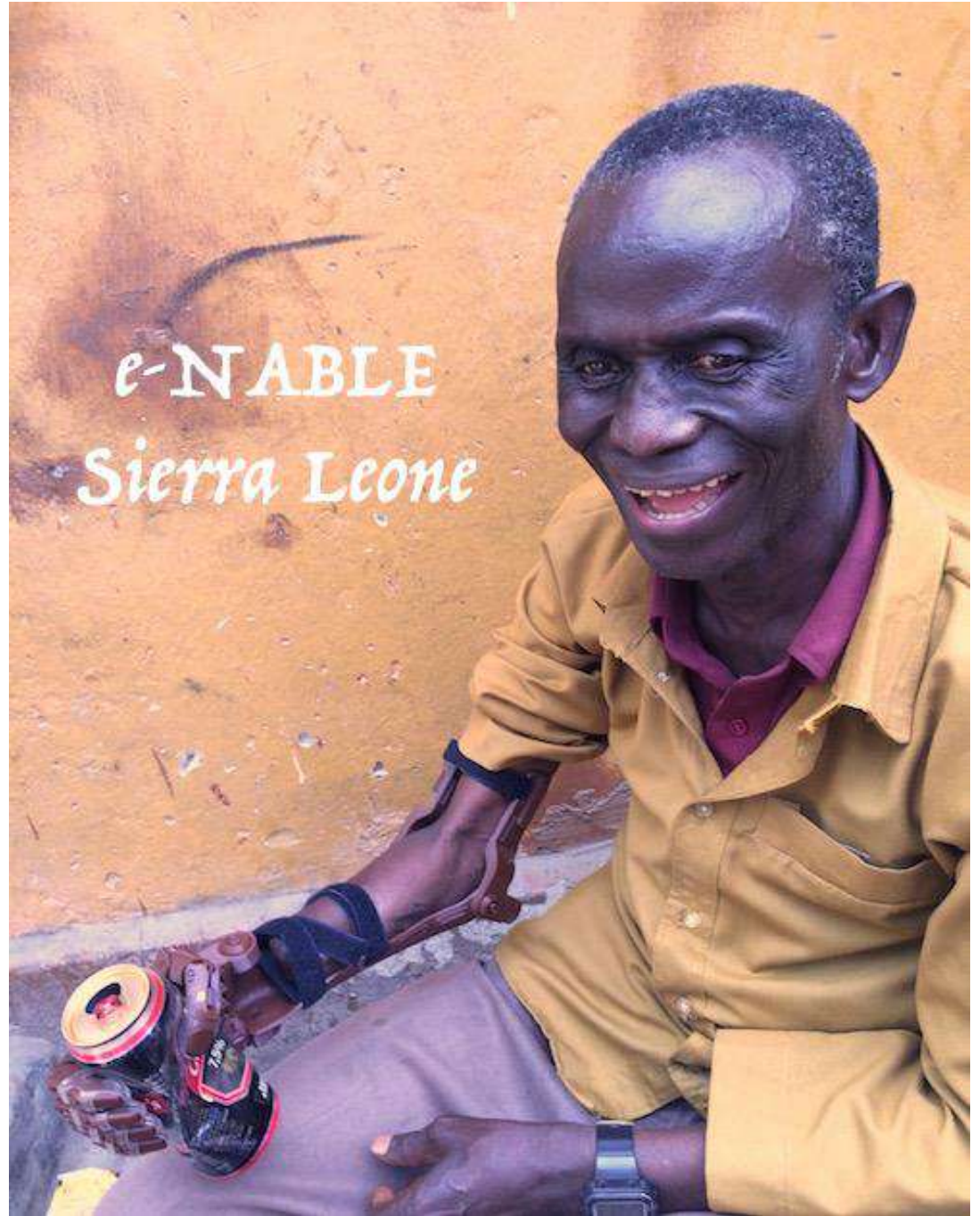


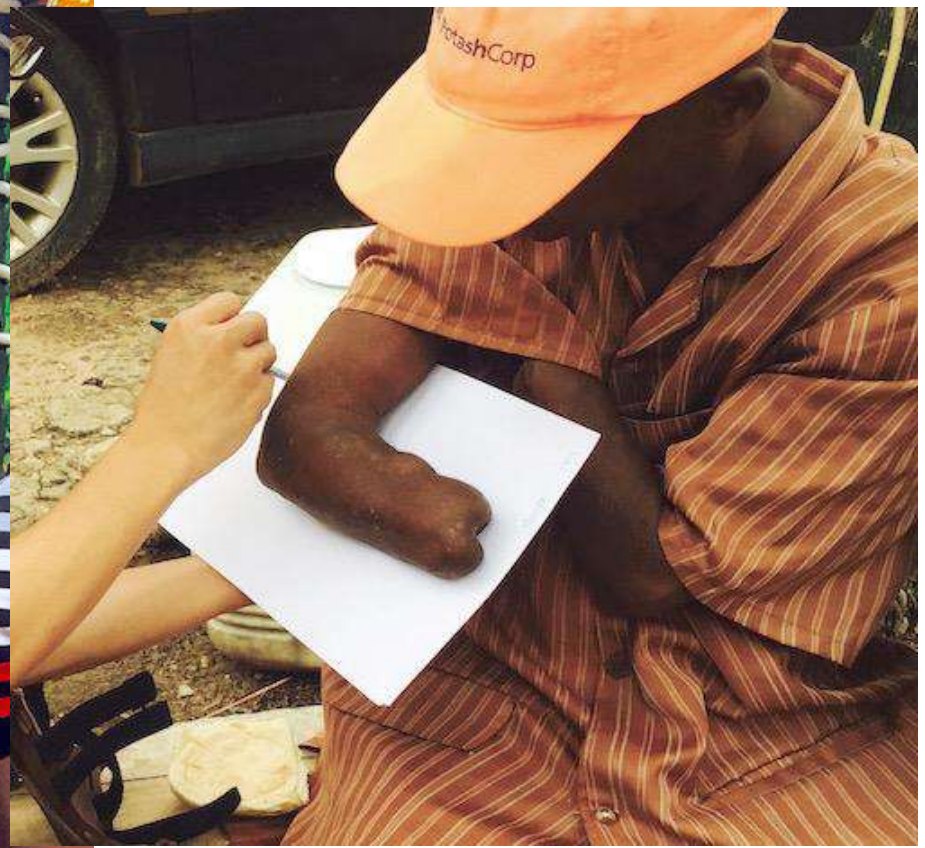
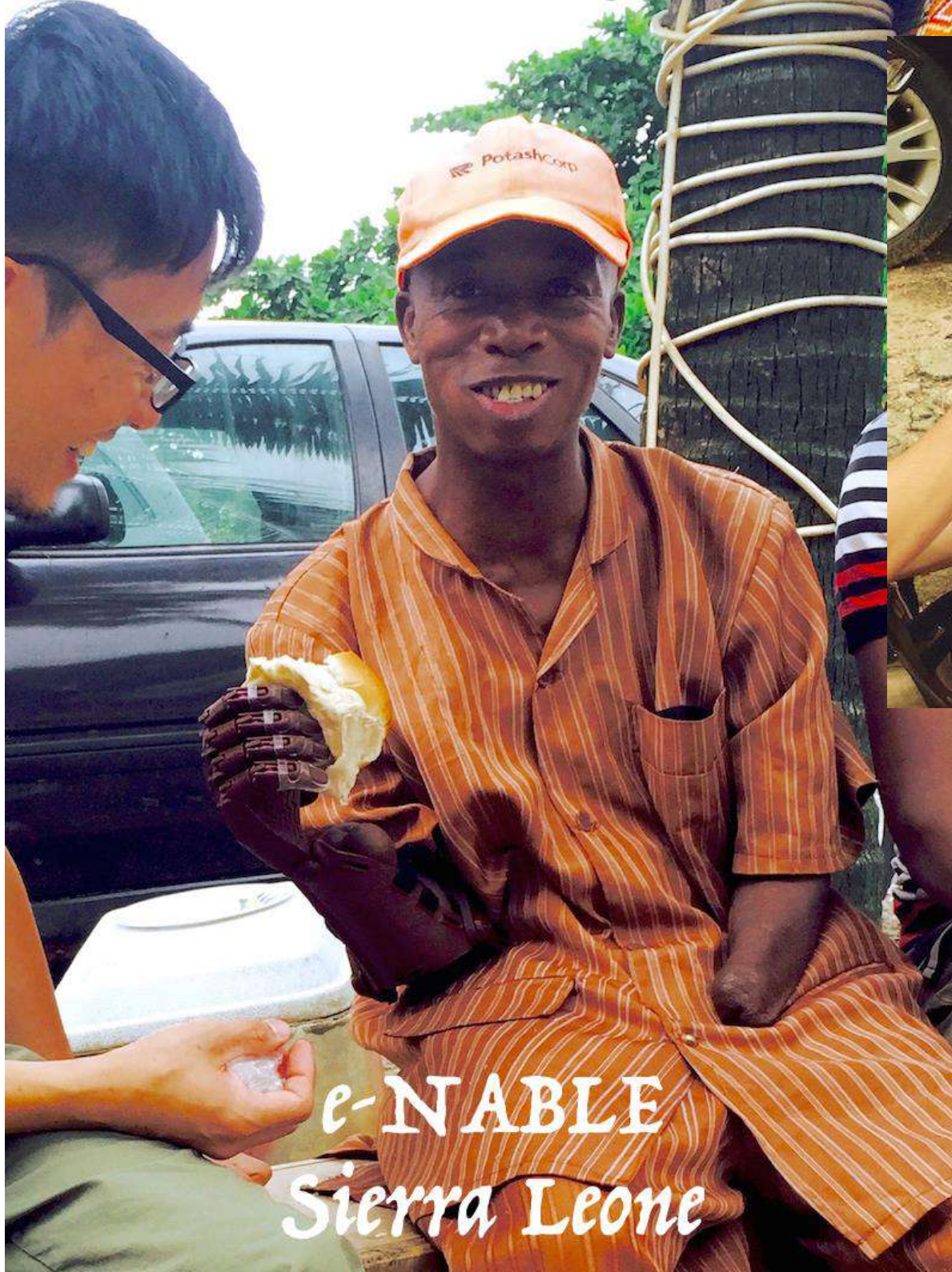
Contact [Richard Smith](#) for more details

The Bodleian Libraries Radcliffe Science Library (RSL) has been involved in an exciting and innovative project with the Department for Infectious Diseases and Tropical Medicine at Churchill Hospital. Ed Choi, a researcher in the department has been using the RSL's 3D printers to create 3D prosthetic hands, downloaded from Enabling the Future, to show to charities in Sierra Leone for potential use for people who have lost limbs due to the civil war and the blood diamonds trade.









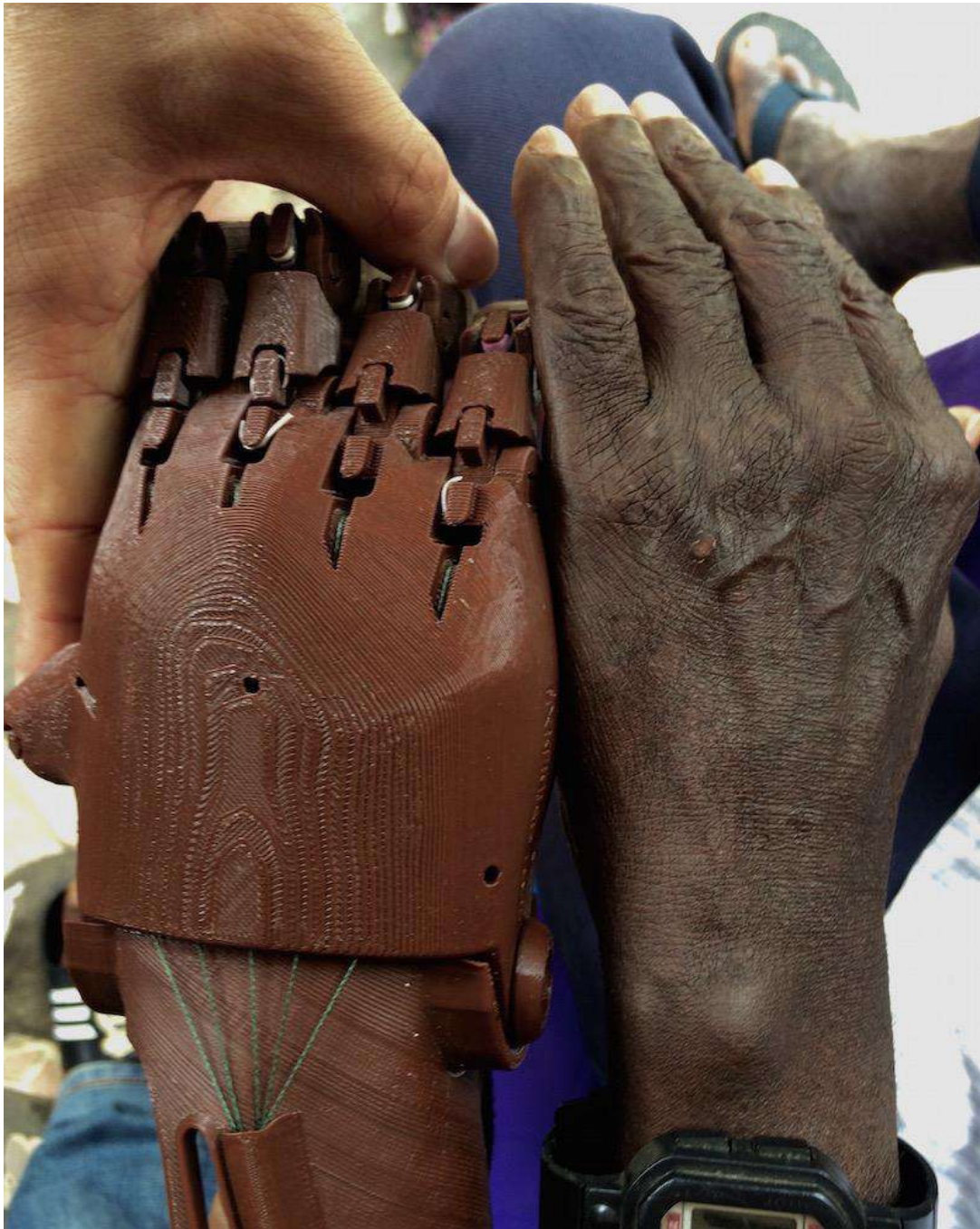
e-NABLE
Sierra Leone

No electricity

No running water

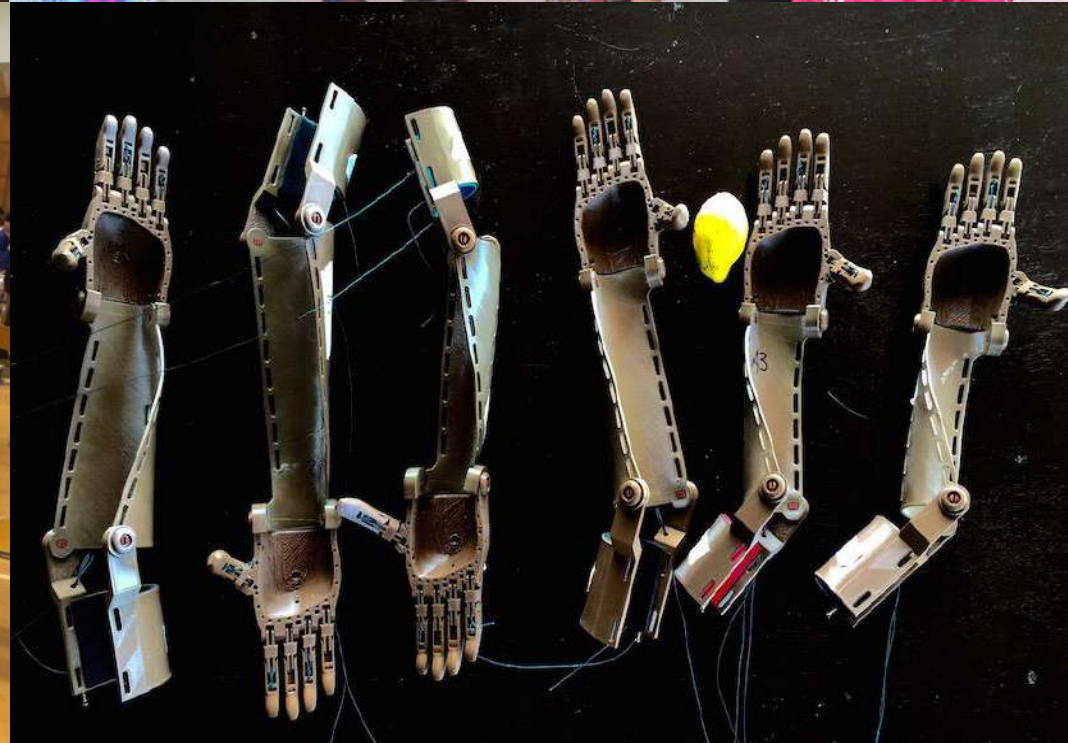


Colour – not a trivial issue



What do they use it for?





單腳足球隊



...我都做得到!



只要有心...





鳴謝

All Ebola volunteers and survivors

國際青年商會 JCI, Hong Kong

e-NABLE online volunteer network

Hong Kong Maker Club

宣道會陳朱素華紀念中學

Sponsored by:



立體意念打印與設備服務(香港)公司

idea 3D Printing and Equipment Services (Hong Kong) Company



Printact

