Teaching engineers to tackle the SDGs
An Enginpreneur's Journey: From 2K at CERN to 2°C in Last-mile Vaccine Cold-chain in Low-resource Settings

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Global Need

2-3 M Child Deaths per year

19.9 M Unvaccinated

Immunization Agenda 2030’ being drafted by WHO, GAVI, ICRC et al.

- Strengthening global immunization efforts to leave no one behind
- Meningitis prevention and control

Top 10 countries in need
The Crucial Last-Mile

• 2-8°C

• Few hours to 7 days

• Up to 85%* of vaccines spoiled
$1 Billion

Wasted every year

- Vaccine wastage + transportation cost. Source: WHO 2016 Annual Report
Issues with current vaccine carriers

Without opening

 too cold

 too hot

^AOV at 37°C ambient

Temperature (°C)

Time (hour)

8°C

2°C

*GOOD HEALTH AND WELL-BEING*
Current vaccine carriers don’t work
Human errors accelerate spoilage

*Photos taken in remote Madagascar as part of Ideabatic’s field trial in Nov 2019*
What if we could reduce the wastage and extend journeys to up to 5 days?

**SMILE**

Smart Last-Mile Vaccine Carrier
What did the healthworkers say?

“We have the honour of asking you to grant our request to prioritise Ikongo Health District the use of SMILE when approved by the World Health Organisation and the Malagasy State through the Madagascar Ministry of Public Health.”

“We don’t need to return to base and refill the icepacks after one day. We can visit several villages for 5 consecutive days.”

“We don’t need to worry about vaccines being broken during the bumpy journey.”

“SMILE is practical, especially in inaccessible and rural areas. Ideabatic’s involvement is increasing these teams’ experience, especially during the individual practical session.”

“The vaccine organisation system makes the work easier.”
Market research, design, proof-of-concept

System design iterations, verification, prototyping, testing

Launch

User feedback

Design ready for production, producing field test units, testing

Expo 2020 Dubai

Partnerships, Collaboration towards commercialisation, Post field trial work

Reach out to more people & preserve medicine globally
Awards/ Supporters

12 Innovation awards worldwide

Funded by Innovate UK

National Physical Laboratory

Intellectual Property Office

MassChallenge UK

Department for International Trade

Imperial College London

University of Cambridge Judge Business School
Last-mile vaccine delivery is challenging, let’s work together to reach out to every child however difficult the journey is!