a Skin Diagnostic Device for Uganda

Designing Frugal Embodiments

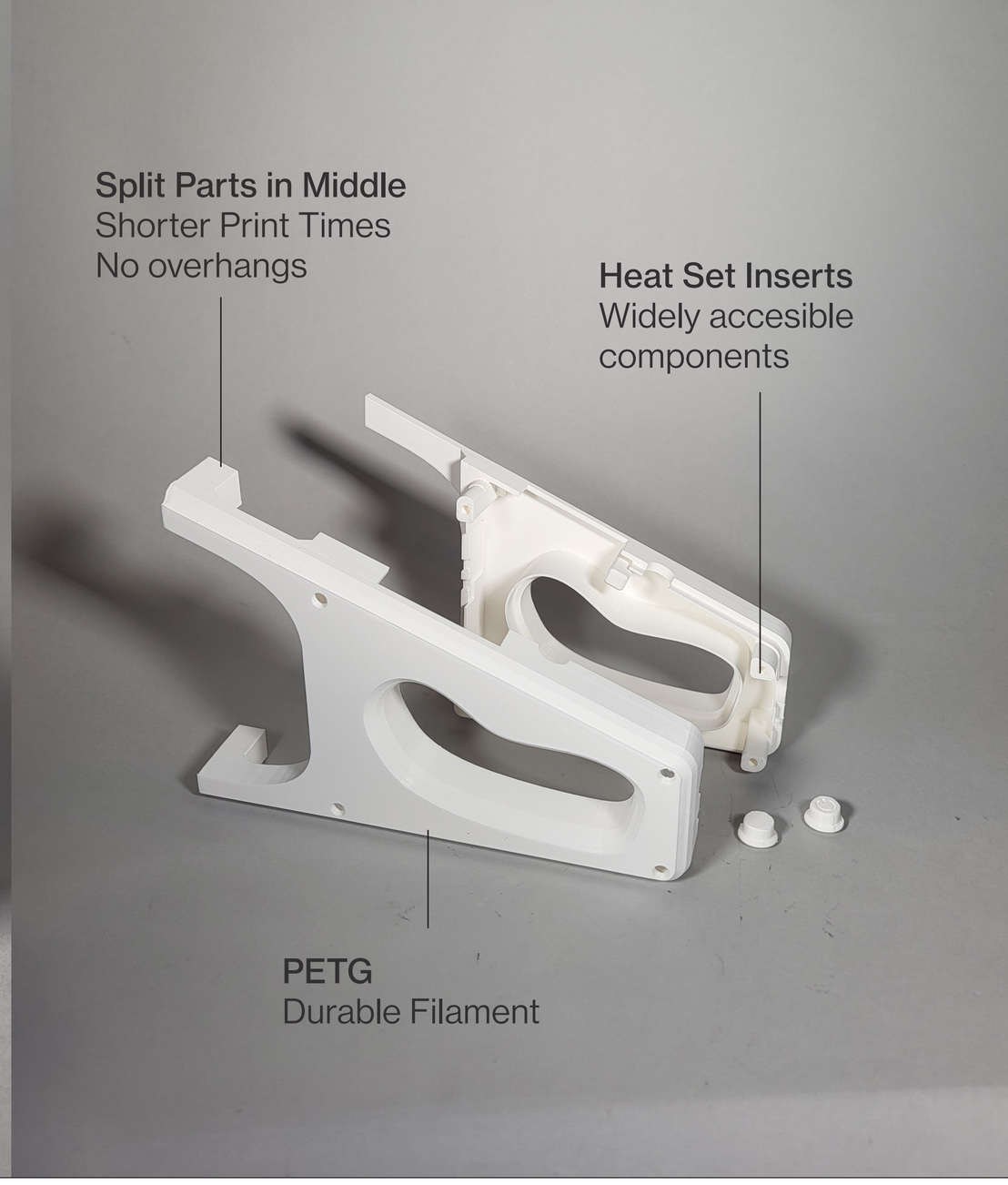
Skin conditions like DCPA, eczema and psoriasis are common in Uganda, but accurate diagnosis is rare. With only 12 dermatologists for over 45 million people (Mundeli et al., 2025), nurses and clinical officers at Health Centre III facilities must assess visually similar conditions, so misdiagnosis and delayed treatment are frequent. A diagnostic imaging device can aid them tell these conditions apart.

The embodiment is designed from a functionality first approach and to be producable in Uganda. Firstly starting with what the device needs: clear imaging of any body site, fast to operate in a hectic workday and portable to be taken for field visits. Power Interruptions are common and affect the working of the device and the manufacturing.



Possibility of local production directed to 3D printing. This gave a set of rules for smooth prints. Two prototype options were created and taken to Uganda for field tests with 5 healthcare practitioners. Visits to local maker facilities evaluated the possibility of production.





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Integrated Product Design

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