KOMERA

CHALLENGE

- Currently, school-age girls in Rwanda miss up to 50 days of school each year due to lack of access to sanitary protection.
- Due to the high cost of pads, many resort to improvised measures, using rags, bark or mud for sanitary protection
- Missing one week of school each month is detrimental to a woman's ability to complete her education.

Designers:	MIT Mechanical Engineering Class 2010 Undergraduate Student Team
Manufacturers:	Under Development
Contributors:	MIT Public Service Center Course 2.009 Professors & Mentors SHE Affiliates Pappalardo Laboratory Staff Course 10.26
Sector:	Health
When:	Potential Debut in Fall 2011
Where:	Rwanda
Cost:	Machine - $1000 USD Pads - $0.75 USD for a pack of 10
Status:	Prototype
FYI:	komera@mit.edu web.mit.edu/komera

How does it work: Komera is a sanitary pad manufacturing process. The machine will be fabricated out of simple materials, and assembled using screws, nails, bolts, and weld joints – all within the capabilities of local workshops in Rwanda. The absorbent material inside the pads will use a pulp from banana trees. Rwandan women will take out microloans to buy a machine and begin producing pads within local, already established training centers. Additional women will be hired to distribute the pads outside the community center. Profits will be used to pay back the microloan, salary the workers, and eventually generate revenue.

My Story: Katie Smyth recently graduated with a degree in mechanical engineering from MIT, and has been working on the Komera project since September 2009. Sustainable Health Enterprises (SHE), assisted in the development of a microfinance business model to implement the process. Before Komera, Smyth worked mainly with medical devices starting research with needle-free injection in the BioInstrumentation Lab at MIT and then working as an intern for 3M Drug Delivery Systems Division and Medtronic Energy and Component Center. She has also explored other fields including ocean engineering working for the Monterey Bay Aquarium Research Center on the development of a Long Range Autonomous Underwater Vehicle (LRAUV). Her research over the past year has focused on experimental work with surface wetting and adhesion on micro-textured surfaces. She now attends graduate school at MIT with the ultimate goal of receiving a PhD in mechanical engineering.