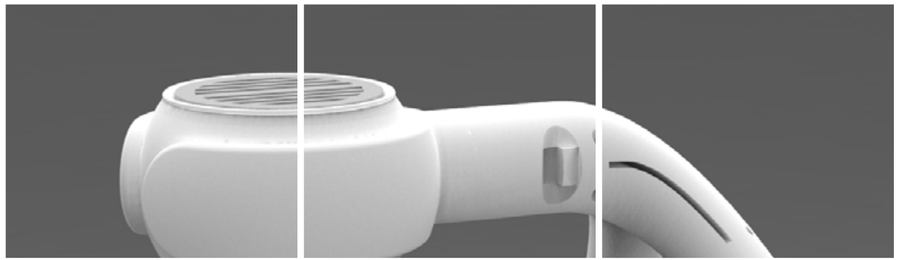
Laura Markee

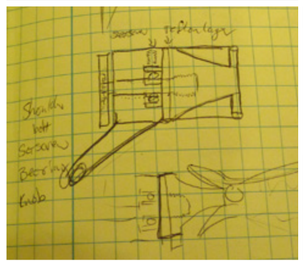
MS Engineering Design & Innovation

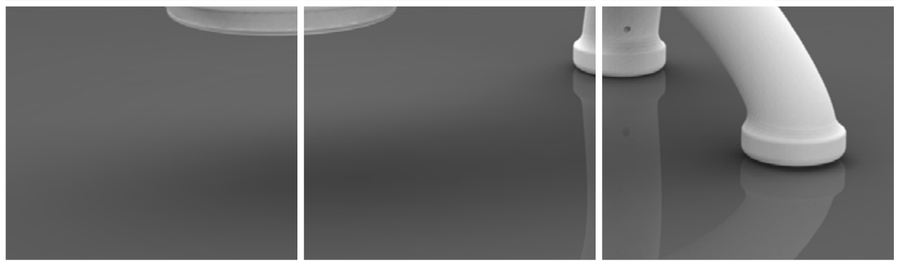
NUvention Medical Innovation

Laura Markee
lmarkee@gmail.com
765.603.6655

NUvention is a medical technologies start-up program at Northwestern University that brings together multidisciplinary teams from the law, business, medical, and engineering graduate schools.

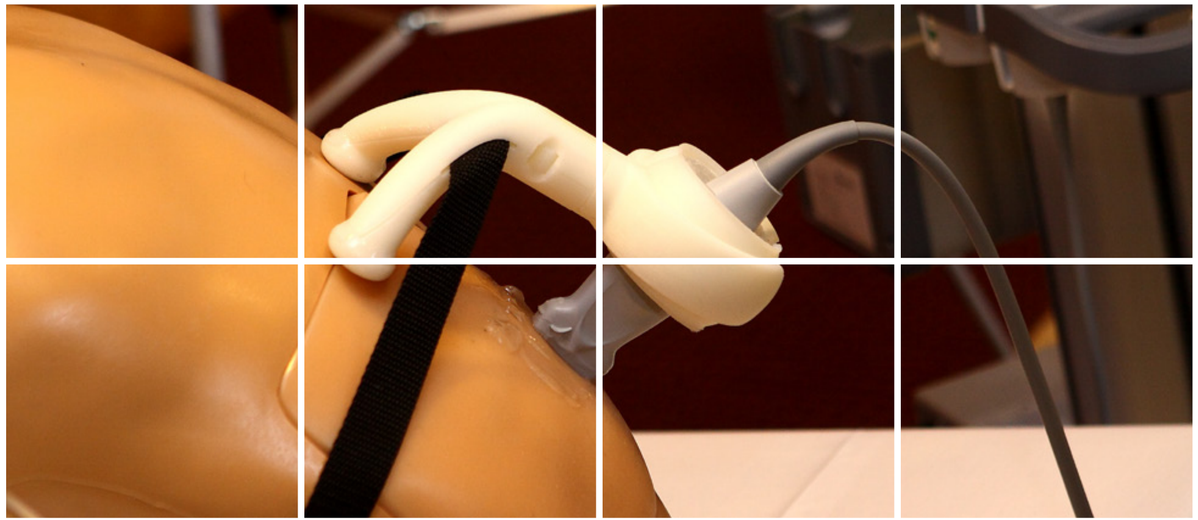


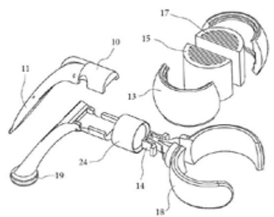




We identified clinical needs through ethnographic research, narrowed them based on engineering feasibility and business opportunity, and focused in on lumbar punctures.

Through iterative prototyping, we developed the Sonograsp – a universal, hands-free ultrasound transducer holder. The innovation eliminates a blind procedure and leverages the rapidly growing field of point-of-care ultrasonography.



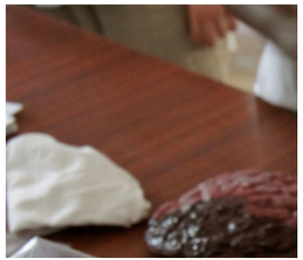


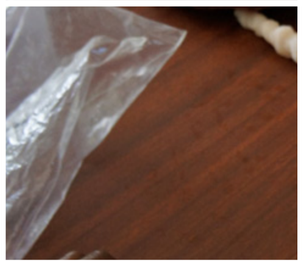
We navigated the intellectual property, regulatory, and business development steps associated with the innovation and entrepreneurial life cycle, and represented Northwestern at the Rice Business Plan Competition.

Innovate for Impact

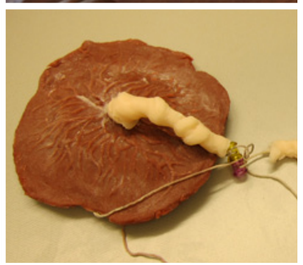
Laura Markee
lmarkee@gmail.com
765.603.6655

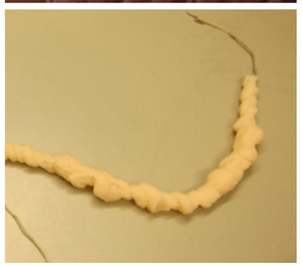
Innovate for Impact is a program integrating design, social entrepreneurship, and innovation for the betterment of humanity. My team was comprised of students of business, design, and social policy.





We worked in partnership with a team of biomedical engineering students to further develop a low-cost solution to reduce postpartum hemorrhaging, a leading cause of maternal mortality.





With a focus on sub-Saharan Africa, we traveled to Malawi for in-field design research and user feedback on a training simulator for nurses and midwives.

Avenues to Market

Nursing College	NEEDS	FUNDING
Theory	Inexpensive Comprehensive	Donors, School, Gov't
Practice	Delieverable Responsive Durable	Donors, School, Gov't
On-the-Job Training	Delieverable Comprehensive Modular Training	NGO, Gov't, Donors
Traditional Birth Attendants	Inexpensive Durable Training Tool	NGO, Donors

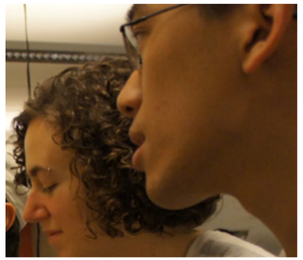
Our work culminated in design recommendations and a business plan for implementation to be carried on by future students.

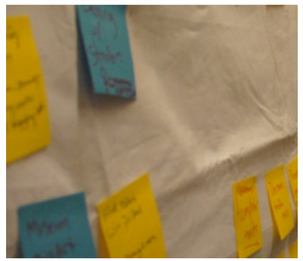
Procter & Gamble FemCare

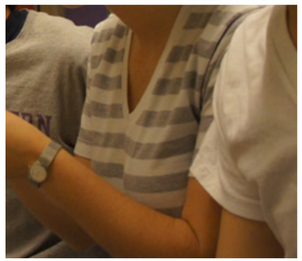
Laura Markee
lmarkee@gmail.com
765.603.6655

In a project sponsored by Procter & Gamble's FemCare division, my team and I were charged with improving the process of changing and disposing Always pads.

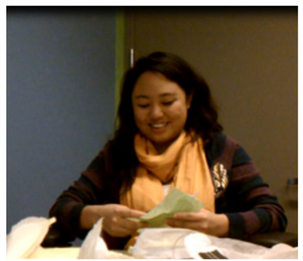








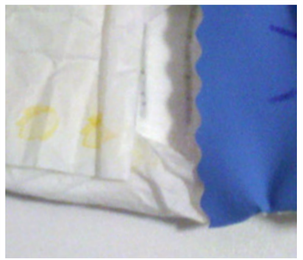
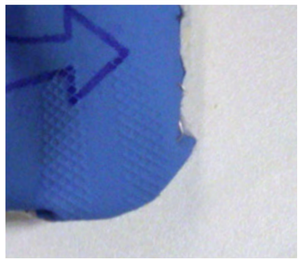
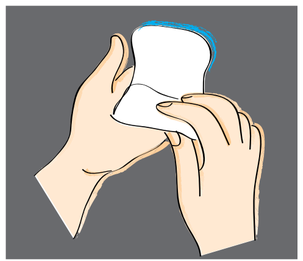
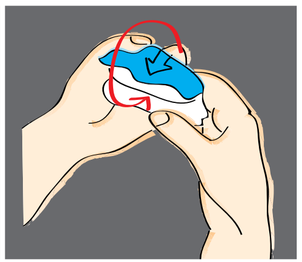
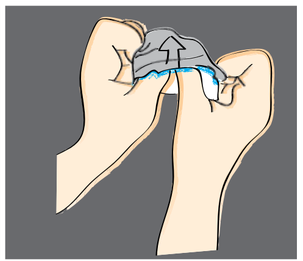
We began this undertaking with interviews looking for patterns in routines, desires, and emotional connections. We found women want products that are discrete, fast, and self-contained, but that they are reluctant to change their habits.







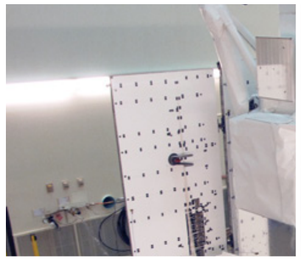
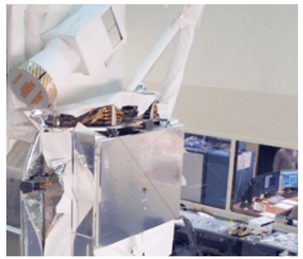







Through frameworking, brainstorming, and prototyping, we developed a new model that borrows from everyday sandwich bags. Leveraging a simple, effective, and familiar motion, it tested well with users.

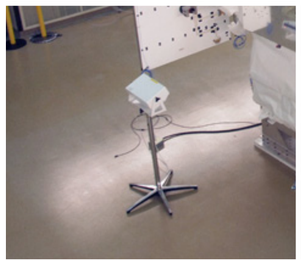
Aerospace Design

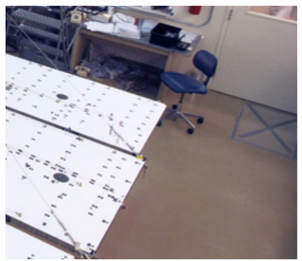
Laura Markee
lmarkee@gmail.com
765.603.6655

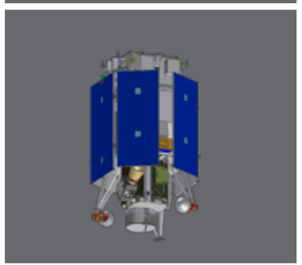
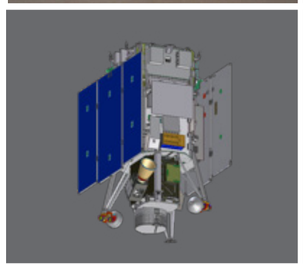
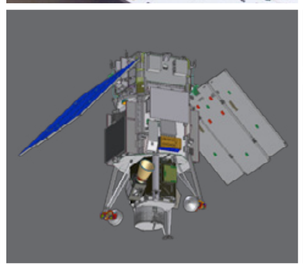
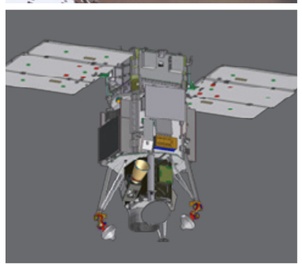
I interned at Ball Aerospace as a Space Systems Engineer, working on Earth-observing satellites to produce images for NASA, the DoD, and Google Maps.


I integrated subsystems for launch configuration, autonomous initialization, and power budgeting.





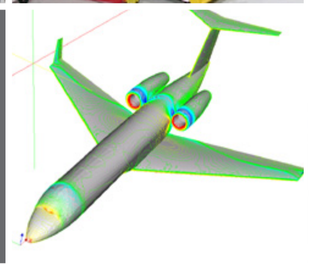











As an Aerodynamics Engineer at Gulfstream, I performed computational fluid dynamic analysis and design optimization on the GV and G650.



I lead the implementation of photogrammetric analysis for aerodynamic loading and wing flex measurement. I also expanded its application as a faster, less expensive solution for measurement in manufacturing and sustaining.

Laura Markee
lmarkee@gmail.com
765.603.6655