CONTACT INFORMATION 1.1

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SUBMITTING CATEGORY 1.2

STUDENT
Design Incorporates Aluminum
MUNDUS \textit{[l a t i n]} - world, universe, nature, earth, mankind

\section*{Problem Statement}
According to the 2016 Fashion Transparency Index, high end brands like Chanel, Hermès, Fendi, Prada, and Michael Kors are among the lowest rated companies based on the transparency of their ethical practices. With no current codes of conduct or ethical production in place, little effort is being made to be transparent about the supply chain practices. All of these brands capitalize on luxury leather handbags and carry hefty price tags.


In addition to company ethics, consideration must be given to the impact of leather production on the environment. The traditional leather tanning process is chromium based and #5 on the top ten list of the world's worst pollution threats, affecting 1.8 million people throughout the world. This system creates large amounts of contaminated waste water which affects communities surrounding tanneries. An alternative material is synthetic leather which is mostly manufactured with PVC, which is deemed by Greenpeace to be "the most damaging plastic on the planet." Its production releases dioxins, and the material itself contains cadmium, a neurotoxin and carcinogen.

https://oecotextiles.wordpress.com/2014/07/16/whats-pleather/
http://www.worstpolluted.org/projects_reports/display/88

\section*{Design Goals}
The goal behind MUNDUS is to create a collection of minimalist high-end leather handbags that utilize Cradle to Cradle certified products and help promote knowledge and awareness about the problems with traditional leather tanning practices. The goal is to create a brand that educates people about material health and social enterprise through the production and marketing of well-constructed leather bags.
I designed and built (from Cradle to Cradle certified materials) three different sized bags that compliment each other while serving separate purposes. Each step in fabricating these bags can be done without electricity. They are all cut, hammered, sanded, and stitched manually.
**MATERIALS 4.1**

- **ACCOYA WOOD** - acetylated wood with outstanding dimensional stability + decay resistance [Processed in The Netherlands]
- **ALCOA ALUMINUM** - Simple threaded, two part button stud that acts as a closure for leather bags [Alcoa has aluminum smelters in Spain]
- **WET GREEN LEATHER** - All natural leather tanning agent based 100% on olive leaves, is completely biodegradable, and doesn’t pollute the environment around the tannery [German company with tanneries in Germany and Spain]
- **WAXED HEMP TWINE** - biodegradable plant based hemp with beeswax coating for durability [Available in Spain]

**MATERIAL REUTILIZATION SCORE 4.2**

\[
\frac{100 \times 1}{3} + \frac{100 \times 2}{3} = 100
\]

**MATERIAL HEALTH 4.3**

- **BIOLOGICALLY INERT**
  - ACCOYA WOOD
  - WET GREEN LEATHER
  - WAXED HEMP TWINE
- **NFPA 0**
  - ALCOA ALUMINUM

**REUTILIZATION CYCLE 3.0**

- ORGANIC MATERIALS BIODEGRADE AND ALUMINUM IS RAPIDLY RECYCLED
- BORROW RAW MATERIALS FROM THE EARTH
- ETHICALLY BUILD QUALITY PRODUCTS THAT LAST
PRODUCTION - Spain currently has the second highest unemployment rate in Europe [19.3%]. Develop production guild in Spain to create dignified jobs that revitalize a rich heritage of quality, hand-made crafts.


LOGISTICS - Accoya wood is shipped from The Netherlands to Spain where aluminum and leather are already being produced.

MATERIAL EFFICIENCY - Patterns for the bag are designed to efficiently use leather and minimize scrap waste.

THE TOTE
- 2 x 15" wood bars
- 2 x cut-out pieces are used to make a pocket on the inside of bag, big enough for a phone + wallet

BACKPACK
- 1 x 12.5" wood bar
- 9" wood piece

CLUTCH
- cut piece sewn inside of bag as a card pocket

MARKETING - Focus the brand language towards reinvigorating a market driven by an emotional, empathetic connection between the buyer and the maker; and an intellectual connection with the materials and Cradle to Cradle ideology.

MATERIALS
- List every material used in each bag, explain how and why they are Cradle to Cradle certified and the process of turning the raw materials into the beautiful finished product they are purchasing.

PRODUCTION
- Integrate the maker with the production story by highlighting the stories + heritage of the artisans and their design processes. Promote transparency by creating annual reports about worker conditions, pay, and benefits.

WARRANTY
- Guarantee a 20 year warranty for every bag so that when normal wear occurs, usually first in the stitches, the user can mail it back to the guild for full repairs.

MATERIAL BREAKDOWN + RECYCLING - everything is biodegradable and should be composted except for the aluminum button stud, which can easily be unscrewed from the bag. Offer a buy-back solution where user can return aluminum to the store where the bag was originally purchased to receive cash back or a percentage off their next purchase.

EXTRAS
- The spare scraps of leather are used to create badges that go on the inside of the bag to celebrate the artisan — the user can go to the brand website to read the maker’s story and see their design process.

*example of pattern pieces arranged on one side of a leather hide

*if the button stud is still in good condition it could be reused on another bag - if it is broken or worn down, it will be rapidly recycled at an Alcoa smelter.