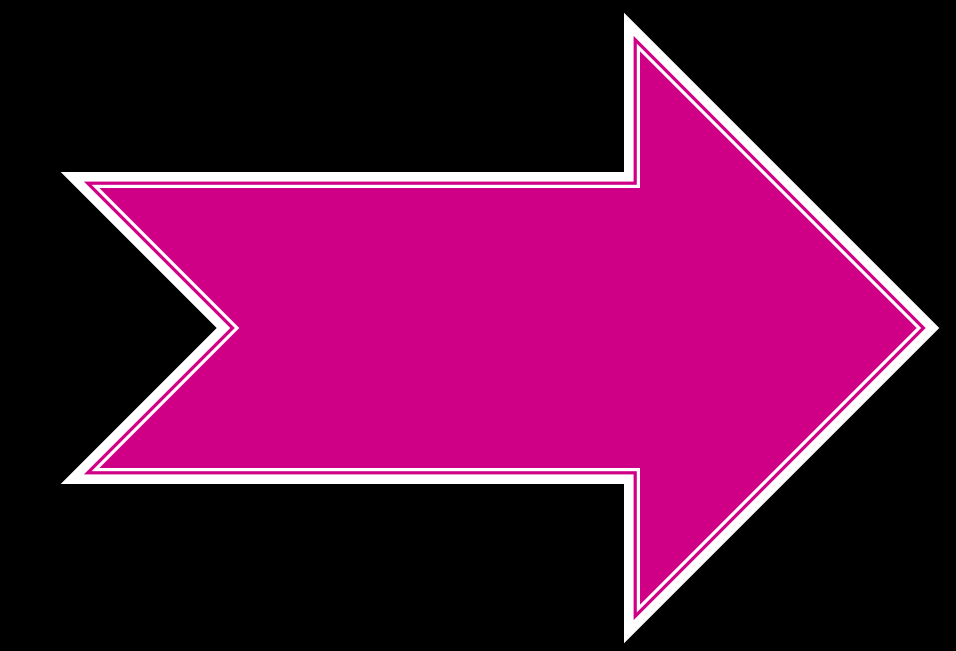


Welcome



Tips for creating successful
research poster presentations.

UNH Printing Services

www.printstorefront.com/unhprinting

Main # 862-0537 ~ Darleen Smith 862-3533

URC

Poster Printing Guide

Spring 2014 - UNH PRINTING SERVICES



NAMING YOUR FILE

Include your name in your file name.

Example: "John_Smith_URC_poster.pptx"

PRINTING SCHEDULE

(papers run on alternate days)

Matte: Monday – Wednesday – Friday
Semi-Gloss: Tuesday – Thursday

Please allow **24-48** hour turnaround. *Add an extra day for lamination or mounting.*

Proofs: Plan ahead and add an extra two days, as proofs and final poster are not run on the same day.

PRICES

Poster *(student discount applied)*

24" x 36" Semi-Gloss = \$20.28	36" x 48" Semi-Gloss = \$40.56
Matte = \$18.72	Matte = \$37.44
32" x 32" Semi-Gloss = \$23.11	40" x 56" Semi-Gloss = \$50.55
Matte = \$21.33	Matte = \$46.66
32" x 40" Semi-Gloss = \$30.04	40" x 60" Semi-Gloss = \$56.33
Matte = \$27.73	Matte = \$52.00

Lamination *(student discount applied)*

24" x 36" = \$7.80	36" x 48" = \$15.60
32" x 32" = \$9.24	40" x 56" = \$20.22
32" x 40" = \$11.56	40" x 60" = \$21.67

Mount to Foam Core *(maximum size 36" x 48")*

up to 24" x 36" = 27.00 32" x 23" thru 36" x 48" = \$54.00

11" x 17" Proof = \$8.50 **Tube** = \$4.00

HOW TO SUBMIT YOUR FILE

1. Online

- Go to: <http://www.printing.unh.edu/>
- Click on "Online ordering"
- Select "Printing order form"
All "*" fields must be filled out.
- Scroll down the page for **POSTERS**.
- Type of Poster Paper: Select matte or semi-gloss.
- Include your name in your file name.**
Example: "John_Smith_URC_poster.pptx"

2. Email printing.services@unh.edu

3. Drop off your file at Printing Services, 10 W. Edge Drive

SETTING UP YOUR FILE

1. Set your page size correctly.

PowerPoint on the PC: Design – Page Setup –
"Slides sized for:" select **Custom**,
enter the correct width & height.

PowerPoint on the Mac: File – Page Setup –
"Slides sized for:" select **Custom**,
enter the correct width & height.

2. 3/8-inch margins minimum.

Allow at least 3/8-inch margins for all text and images.
Any less and edges of type/images may be cut off
during trimming. (It is OK to extend the background to
the edge.)

3. Avoid fancy backgrounds.

The use of some of the "fancy" backgrounds can cause
unpredictable results during printing, and makes the
text more difficult to read.

4. CAUTION! Enlarging images.

Images downloaded from the web are low-res (72 dpi).
**For best quality use images that are at least 100 dpi
at the size you are using them.** Exercise caution when
enlarging rasterized images (ie. jpeg, tiff, png, gif),
unless you know they are high enough resolution.

5. Color: what you see is NOT what you get.

Colors often appear differently on-screen than on
paper. If color is a concern, please consult our color
chart for accuracy (available at Printing Services).

FILES ACCEPTED

**Please provide PDF, along with the original file
(PowerPoint, Photoshop, InDesign, etc).**

(PDF eliminates font substitutions. However, if we need to
troubleshoot the file, we will need the original file.)

DELIVERY

Can't make it out to West Edge? We can deliver your **PAID**
poster to your Academic department, GSS Box in the MUB,
Gables or Woodsides Apartments.

PAYMENT

Payment can be made by cash, credit card, Cat's Cache (in
person), check, or department PO number. Posters must be
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The Refugee Experience: Overseas Processing

Rebecca Bergman, University of New Hampshire, Department of Social Work, 2012

Key Terms

Refugee: A refugee is a person who has been forced to leave their country in order to escape war, persecution, or natural disaster

Refugee Status: is a form of protection that may be granted to people who meet the definition of a refugee and are of special humanitarian concern to the United States (UCIS)

Immigrant: A person who comes to live permanently in the United States by choice

Options for refugees

- 1) Repatriation
- 2) Integration into host country
- 3) Resettlement

Note: A refugee has the right to refuse resettlement

What is Overseas processing? [1]

Overseas processing is the procedure of identifying a vulnerable population then determining if the population and its people are refugees. This is the first step towards becoming a New American and beginning the process of resettlement. In 2011, over 56,000 refugees were processed overseas and resettled throughout the U.S.



References

1. Office of refugee Resettlement, retrieved from <http://www.acf.hhs.gov/programs/orr/data/fy2011RA.htm>
2. Dan Church Aid, received from, <http://www.danchurchaid.org/news/news/70-year-old-refugee-in-nepal-the-camp-is-my-home> (box)
3. Church World Service, Power Point
4. NASW Code of Ethics

A Refugee Journey [2]

Who? Bhutanese people of Nepali Origin

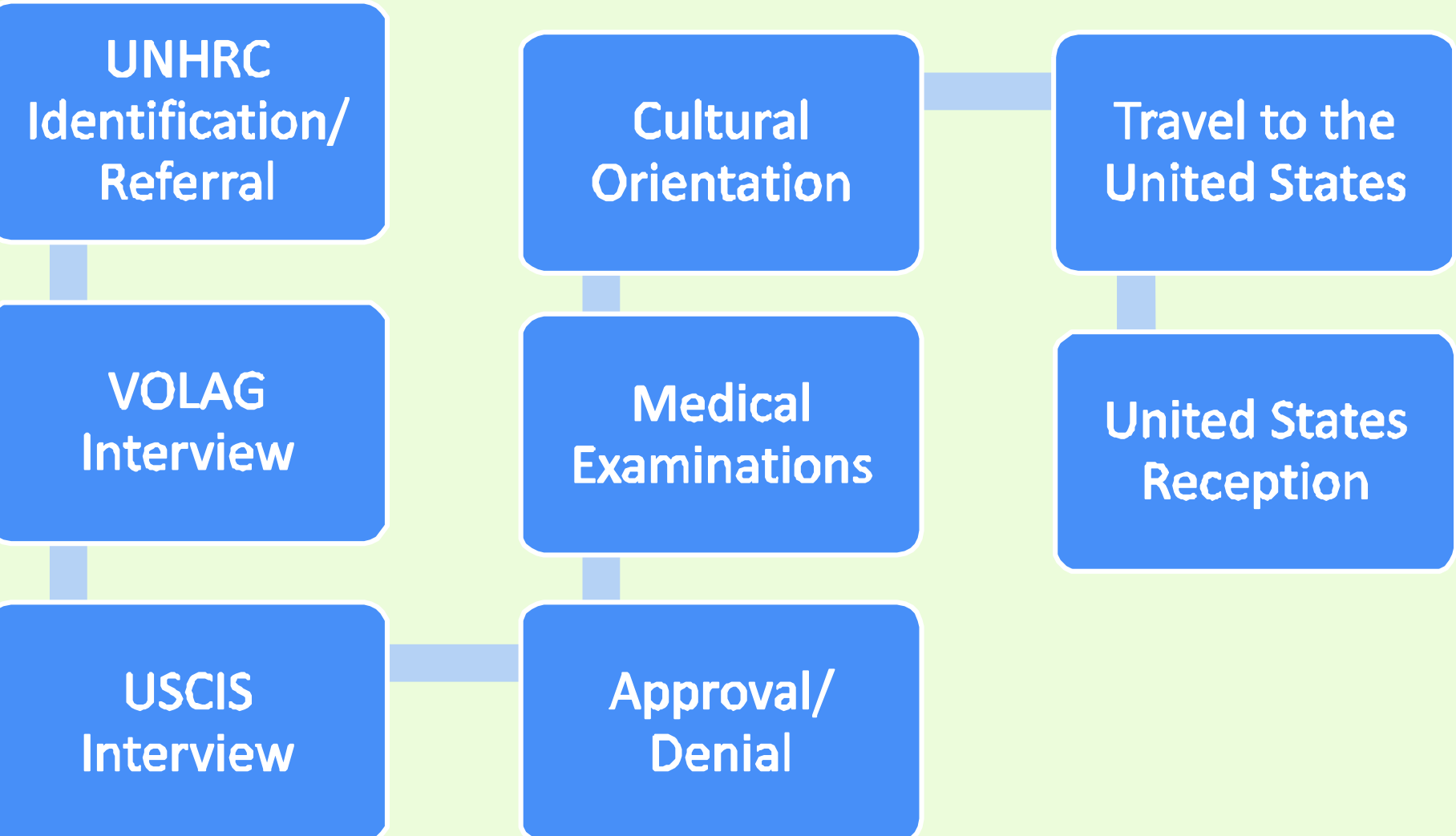
Why? The Lhotshampa people were seen as a threat to the Bhutanese culture

Result: 80,000 Bhutanese fled to India and Nepal

Effects:

- ◆ 7 refugee camps formed in Nepal starting in 1991
- ◆ Some refugees living in camps for 18+ years
- ◆ Poor food rations, unsanitary living spaces,

The Overseas Process [3]



Refugees Resettled in NE in 2011 [2]

State	Bhutan	Iraq	Somalia
NH	432	42	29
VT	299	4	0
RI	65	9	0
ME	0	44	116
MA	503	380	94
CT	91	94	21

Implications for Social work

Overseas processing can be long, scary, and overwhelming. The process can take anywhere from 6 months to several years. This waiting time is very mentally and emotionally straining. Understanding the difficulties of the process will help us as social work professionals better serve our clients and identify areas of improvement.

Difficulties of the Overseas Process

- ◆ Loss of independence
- ◆ The waiting period of acceptance/ denial
- ◆ Change in lifestyle
- ◆ Process is not fast enough
- ◆ Host country is not friendly to refugees

Areas For Improvement

- ◆ Pre / Post Arrival Counseling
- ◆ Realistic portrayal of American lifestyle
- ◆ Relationship Building between refugees and host country

Overseas Processing has significant areas for improvement that the social work field can support changes through advocacy and community organizing.



"Social workers promote social justice and social change with and on behalf of clients." [4]

"Overseas processing and resettlement is a rescue mission. It is a matter of saving lives"

Forkpah Sumo, LSS caseworker and Liberian refugee

Color is
not a bad
thing!



Asteroid Modeling and Prediction

Underwater Asteroid Ballistics

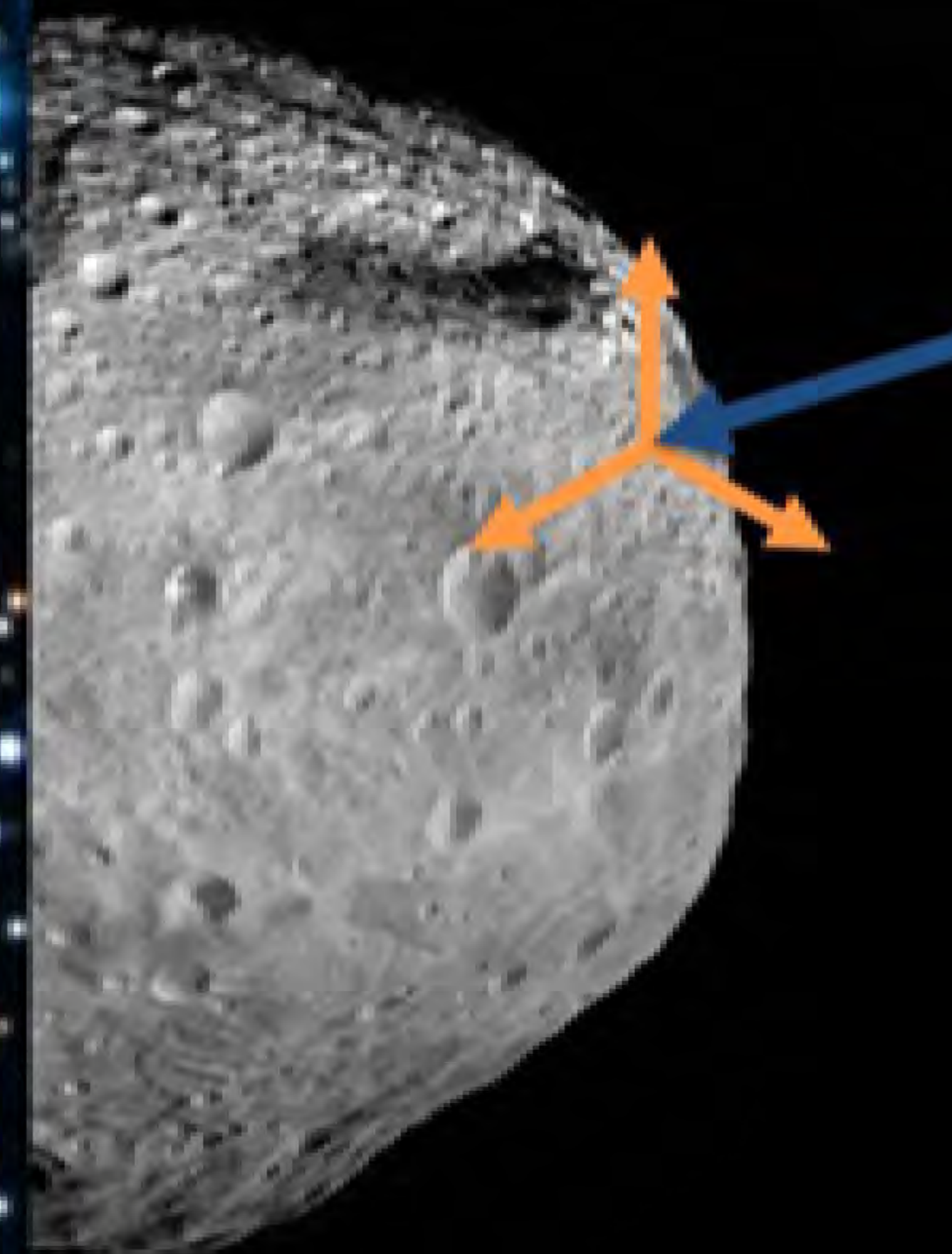


Team Members: Kimberly Worcester, Luigi Pasto, Zachery Levesque, Jacob Therrien, Justin Remillard, Jon Nappi, Jeff Puzzo

Background & Objective

- As of today, April 2013, there are approximately 10,000 discovered near Earth objects.
- About 860 of these are asteroids with a diameter of one kilometer or larger. Any asteroid that has a diameter of two kilometers or larger will cause a global catastrophe if it impacts Earth.
- As of this year, we have only mapped about 10% of near Earth asteroids, and Earth is long overdue for an asteroid impact.
- One method of asteroid mitigation is impacting the asteroid with a ballistic to perturb its orbit.

This project is an attempt to determine the feasibility of modeling an asteroid collision with a ballistic underwater to mimic a zero gravity environment. An underwater test bed was designed to model an asteroid collision. The goal of this test was to analyze the precise moment of impact, in addition to immediately before and after the collision. In order to conduct this test, a model asteroid was designed, and mechanisms were created for the ballistic and launching mechanism. The data was acquired through a microprocessor and an inertial measuring unit (IMU). This data will be confirmed visually through video and object tracking software as well as through analytical modeling predictions.



Ballistic Impulse

Reaction Accelerations

Mechanical Design & Analysis

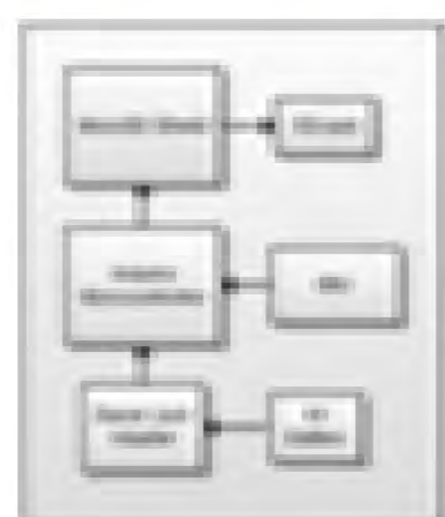


Model the asteroid housing according to the waterproof box size and by machining restrictions. ABS plastic for buoyancy purposes, due to the fact that ABS plastic is slightly more dense than water. Waterproof box is less dense than water, and combined with the plastic, will create a neutrally buoyant asteroid.



Rig designed to fit in our test tank of 3'x3'x5'. Made of 6061 aluminum (so it won't rust underwater). Base ring can move 360 degrees and launcher can travel 180 degrees around the arm arches. Combined will allow us to launch at a complete hemisphere of the asteroid. Launching mechanism includes a compression spring which can be held in place by a pin at various predetermined stages of compression.

Electronics Design & Implementation

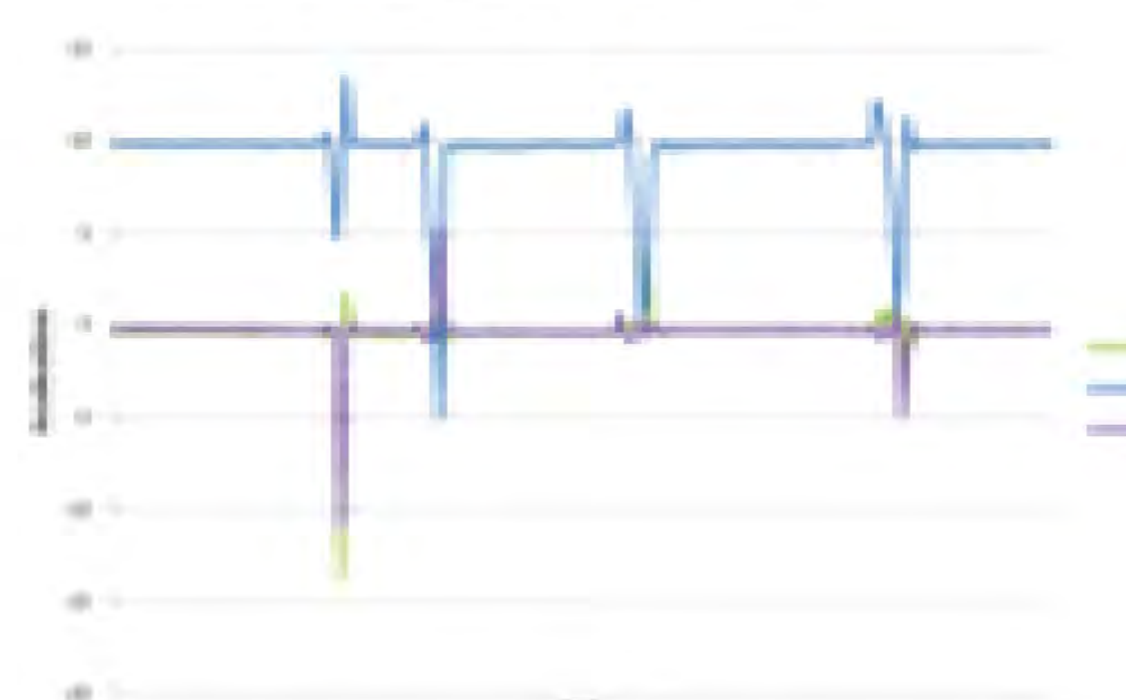


Block diagram of electronics design. The components involved are listed below along with some specifications:

- Arduino Uno Microcontroller
 - 32k Flash Memory
 - 16 Mhz Clock Speed
- 6 Degrees of Freedom IMU
 - ADXL345 accelerometer
 - ITG-3200 gyro
- MicroSD Shield
- Powered via 5V battery



This setup secures within a waterproof box, which will then be encapsulated by the model asteroid housing. Powered by a 5V battery, the design is untethered.



Sample data of IMU accelerations as a result of device being placed on a shaly surface. Each spike corresponds to each jolt of the IMU.

The flow chart below describes the arduino code that logs the data collected from the IMU. The datalogger accounts for the x, y, and z components of acceleration and angular velocity (gyroscope). All data is time stamped via milliseconds.



X-Accelerations

Y-Accelerations

Z-Accelerations

Object Tracking & Analysis



3 SeaView cameras are positioned around the rig, one per axis, to record asteroid collision. Video from the cameras is saved on a 4 channel DVR to be retrieved later and processed using Object Tracking Software (OTS).



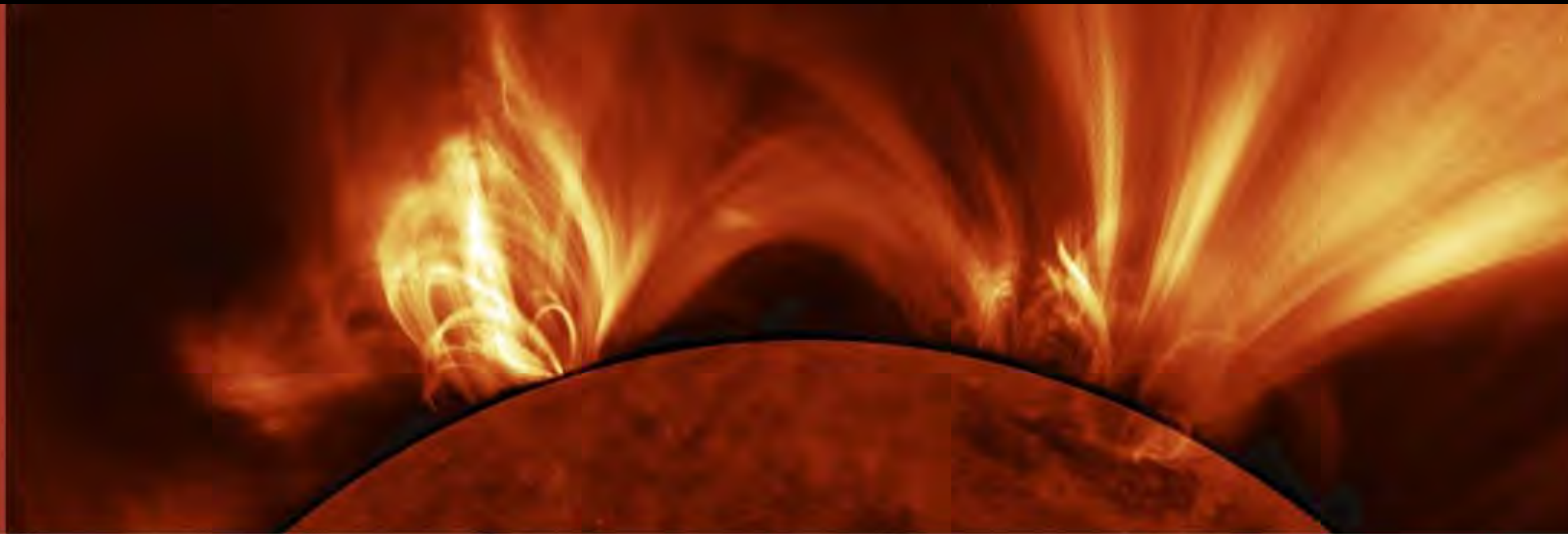
Video is removed from the DVR and converted to the AVI format for the Object Tracking Software (OTS) to process it. Stepping through the video frame by frame, the OTS uses the Kalman Filter to analyze the video and gather positional data, which is then converted to acceleration data.

PLACEHOLDER

A special thanks to our generous sponsors: NH Sea Grant and Professor May-Win Thein and project assistance from Paul Lavoie, Donya Frank, and Professor May-Win Thein

Great design, flow and layout, replace the seal with the correct UNH logo and this poster is just about perfect.

Solar Orbiter Satellite: Processing Ion Particle Trajectories and Readings



Benjamin Kramer
UNH Space Science Center
Project Engineer John Nolin
Experimental Physicist David Heitzler
Principal Investigator Toni Galvin

Class Advisor: Prof. Chrissy O'Keefe, Advanced Technical Writing

UNH Space Science Center is involved with the National Aeronautics and Space Administration (NASA) and European Space Agency's (ESA) collaborative mission Solar Orbiter (SolO), a satellite that will observe and measure the characteristics of the Sun's heliosphere and solar wind. UNH is designing the Heavy Ion Sensor (HIS) that will focus on taking the in-situ measurements of the solar wind.



Figure 1: Inner Circuit Housing for the HIS, Prototype 1

The concept of the HIS is to manipulate the particle intake trajectory using the charged surfaces of the instrument. Particle paths move from the intake, bending through the instrument onto the delicate microchannel plate detectors. UNH's involvement in SolO is similar to their work for the mission Solar Terrestrial Relations Observatory (STEREO) in 2005

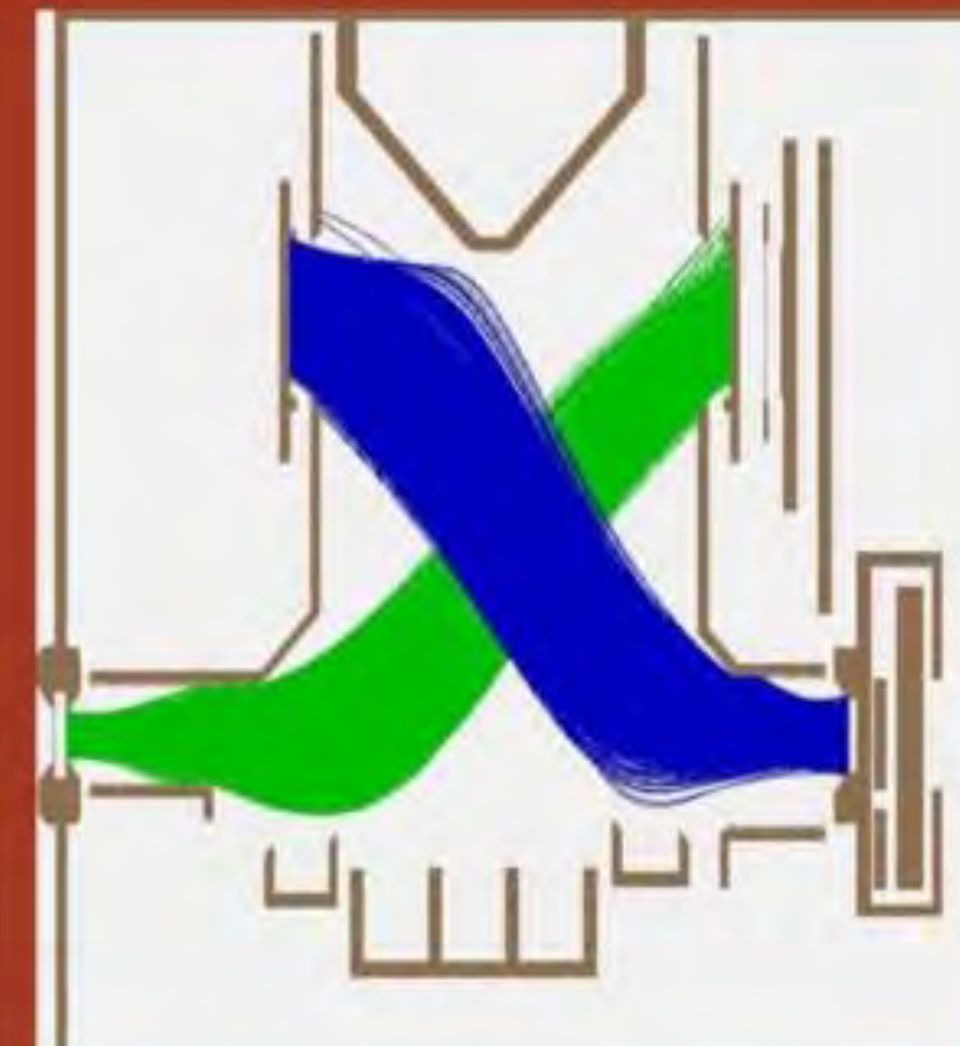


Figure 2: Image generated from SIMION software, showing the particle trajectory onto the plate detectors

To simulate the particle interactions with the HIS, physicists use SIMION 3D, a modeling software that calculates electric fields and ion trajectories. The software requires an image to create a three-dimensional potential array to demonstrate the voltage potential difference between electrodes, calculating the electric field. The image is generally created by using Microsoft Paint, as show in Figure 3. This unfortunately limits the resolution of the image, and the modeled simulation from SIMION.



Figure 3: MS Paint Image created as input for the SIMION Simulation (see figure 2)



Figure 4: Inside view of the Inner Circuit Housing for the HIS, Prototype 1

The complexity of potential array dictates the accuracy of the simulation. To increase the resolution of the simulation, the design of the instrument—and subsequently the features of the potential array—is based from some cylindrical or planar symmetry. The HIS however has payload specifications that make symmetry limiting in design

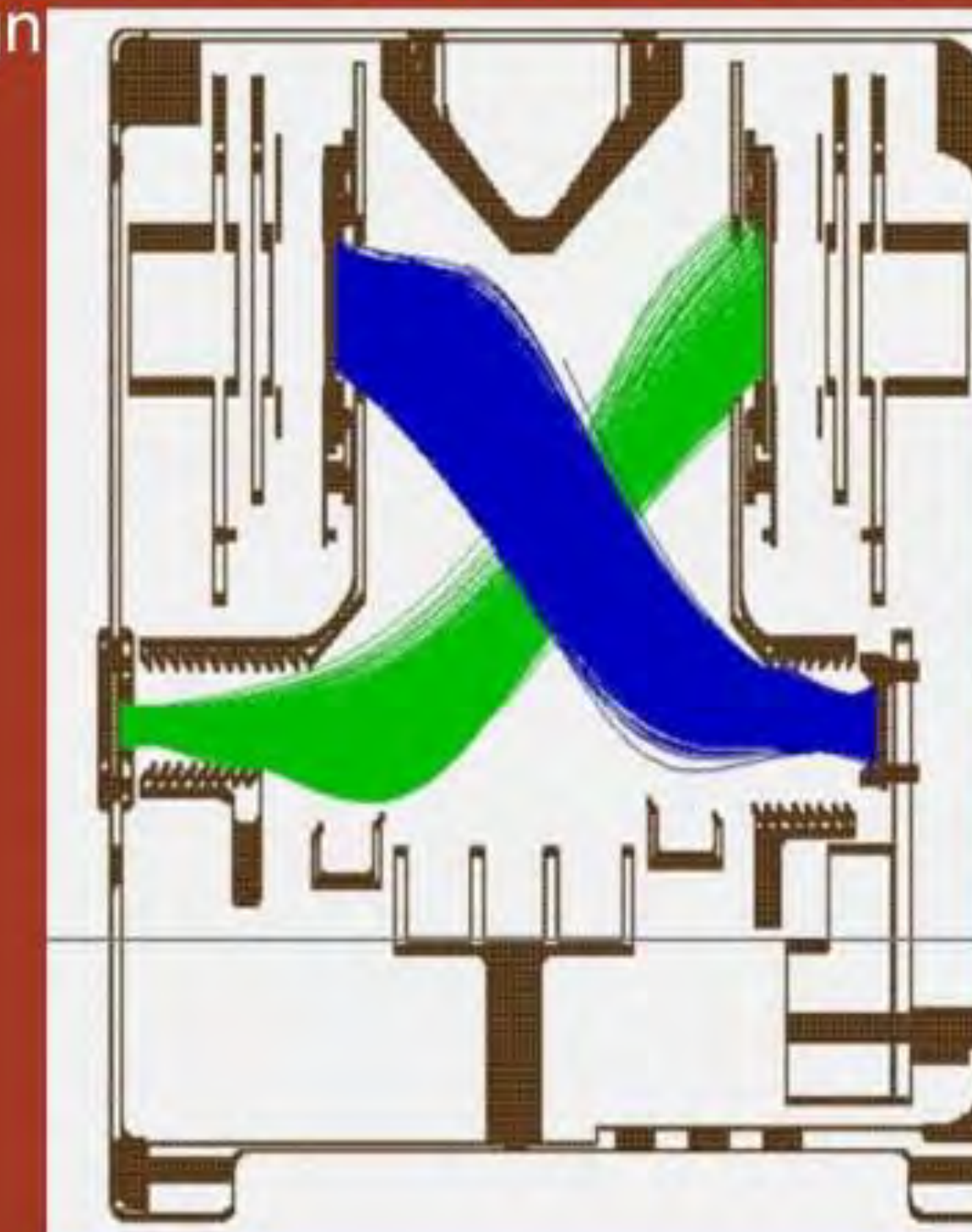


Figure 5: Image generated from SIMION software, with a higher input file resolution

A new technique for creating better image resolution is to utilize SolidWorks, a Computer Aided Design (CAD) software, to generate the images. SolidWorks is already used in the mechanical design of the HIS by constructing the manufacturing models and drawings. By formatting the file type as a stereolithographic, the SolidWorks model geometry can be uploaded into SIMION.

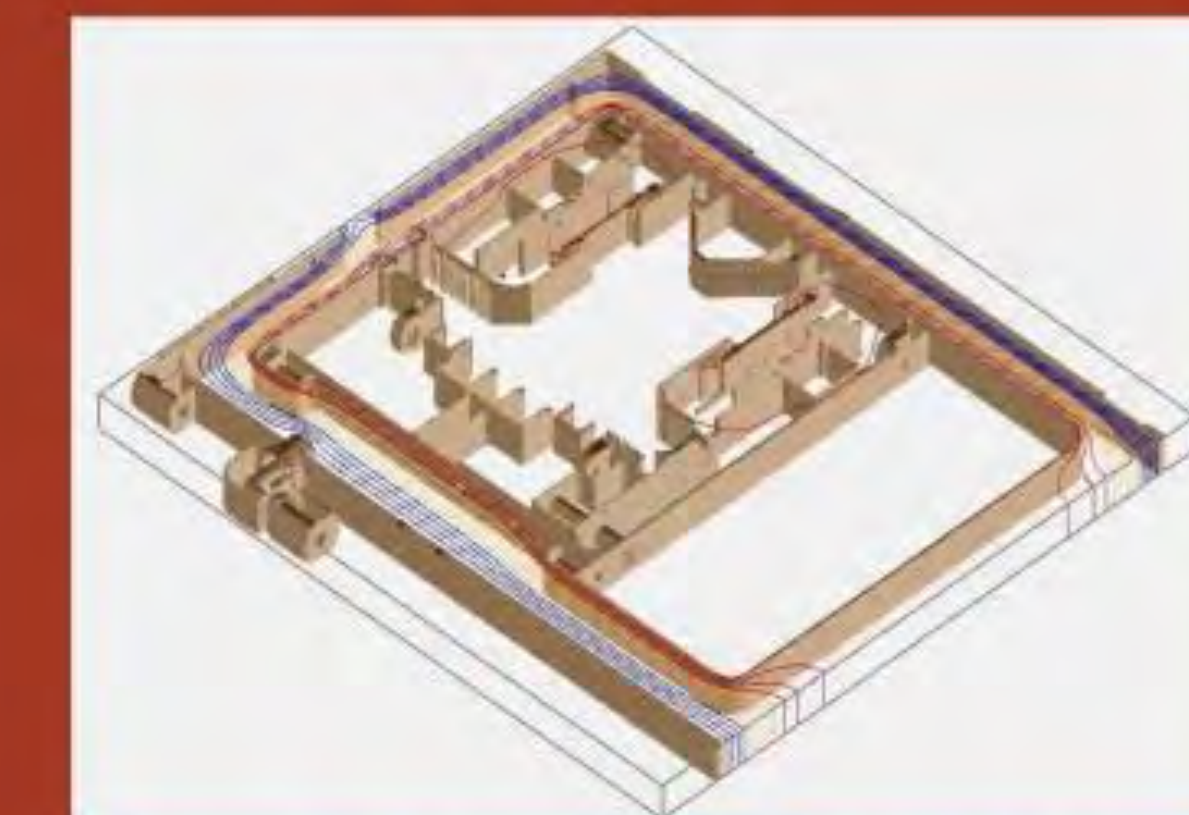


Figure 6: A sectional cut of the SolidWorks' file of Prototype 1, ready for SIMION simulation

The resulting resolution is significantly higher, and creates a simulation that details the instrument interactions to a higher degree.

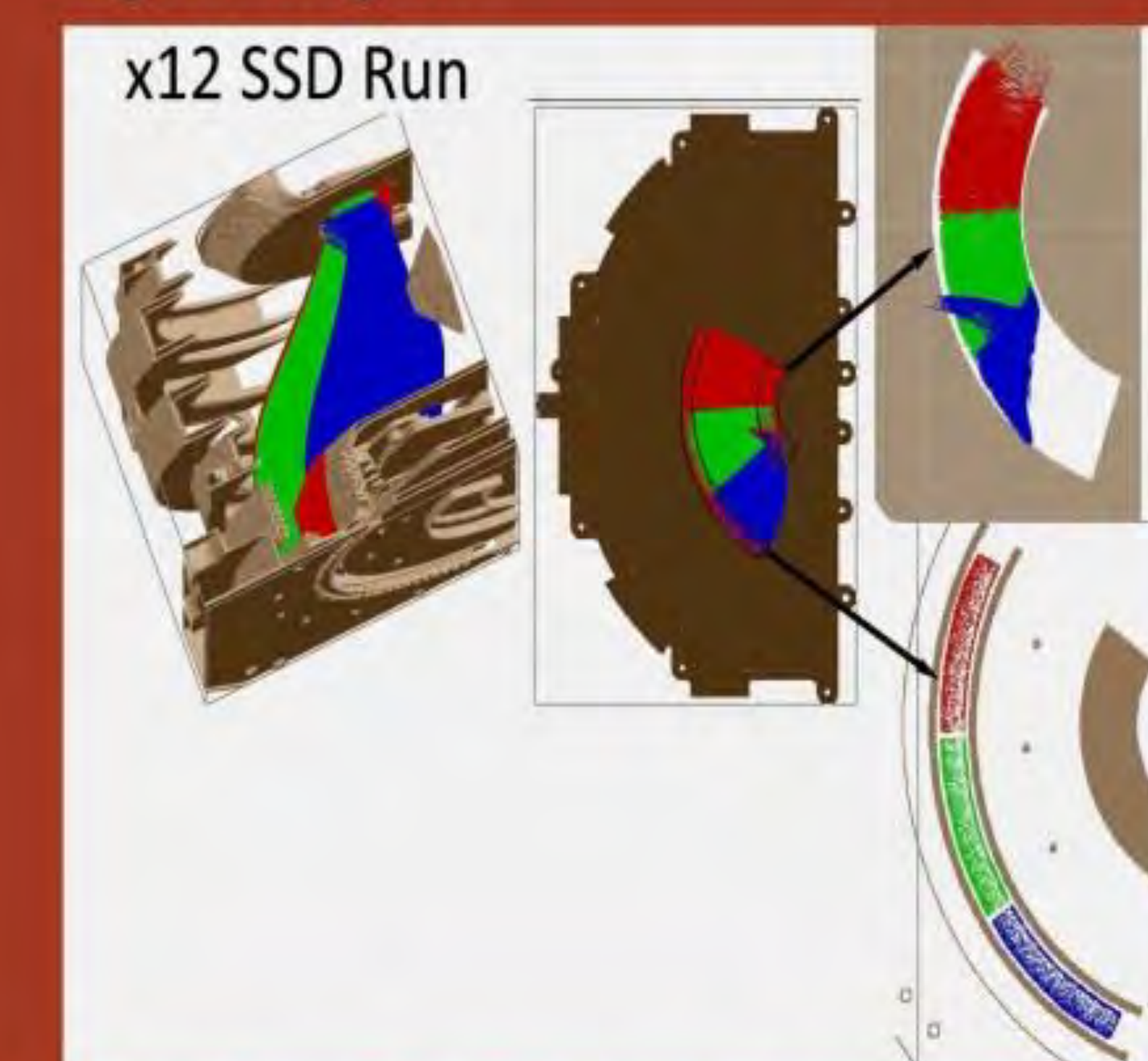


Figure 7: Different orientations of images generated from SIMION, detailing particle distribution and paths

Wonderful photos and graphics, great color and clear message.

THE ROLE OF FOOD AND BEVERAGE MANAGERS IN ENSURING A SUSTAINABLE FUTURE



Rebecca Rothman
University of New Hampshire, Peter T. Paul
Hospitality Management and EcoGastronomy

STRATEGIES

FOOD

- Grow your own
- Source locally
- Purchase organic
- Use socially responsible supply companies



WASTE

- Avoid overbuying
- Inspect all orders
- Store properly
- Donate food
- Compost
- Recycle
- Animal feed
- Waste loop

STRUCTURE

- Insulation
- LED lights
- Natural gas
- Wind power
- Water saving appliances



○With these strategies managers have to keep in mind that they are running a business, therefore cost is a leading factor in what implications are possible.

Young's Restaurant in Durham, NH strives to ensure a sustainable future. Within the last 10 years Mr. Young has completely changed the structure of his business.

"I have been deeply committed to making Young's a more sustainable business. That means continually reducing our environmental impact while increasing our long-standing commitment to the local community and local economy." – Ken Young



Clean, crisp – with lots of white space and a simple message.



Adaptation of Crops to Climate Change in Western Africa and Latin America

Margaret Baldwin ♦ EcoGastronomy & Environmental Conservation Studies



THE REGIONS:

- ❖ Both are arid and semi-arid areas that are reliant on rain-fed agriculture.
- ❖ Much of the current farming is done traditionally by smallholder farms that use "low-resource" agriculture.
- ❖ Western Africa faces potential yield decreases of 10-20% by the year 2050.
- ❖ ~50% of Latin America's agricultural lands will be susceptible to desertification and salinization by 2050.

Adaptations are needed to make "adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts."
—United Nations Framework Convention on Climate Change website

THE PROBLEMS:

- ❖ Effects of climate change are exacerbating the vulnerability of crops:
 - > erosion, increased occurrence of extreme weather events, unsuitable temperatures, decrease in water availability, increased presence of pests/disease...
- ❖ Farmers' livelihoods are being negatively impacted due to diminishing supplies and income.
- ❖ Current agricultural techniques are a contributing factor to climate change due to release of additional CO₂



BANANA

Western Africa

- Better management of soil organic matter
- Management of irrigation waters
- Development of pest-resistant crops
- Crop rotations

Latin America

- Crop rotations
- Crop residue retention (reduces evaporation)
- Management of irrigation waters and better irrigation practices
- Black Sigatoka (disease) control strategies



MAIZE

Western Africa

- Late planting by 40 days for optimal temperatures and conditions
- Breeding drought-tolerant maize
- Breeding for insect resistance
- Reduction of tillage
- Surface residue cover

Latin America

- Minimum soil disturbance
- Surface residue cover
- Crop rotation
- Adoption of high-yielding varieties



COCOA

Western Africa

- Lay down ground cover to increase soil moisture
- Grow crops at higher altitudes (short-term fix)
- Shade management
- Farm diversification
- Irrigation systems

Latin America

- Development of pest-resistant materials (Integrated Pest Management Systems)
- Replacement of shade-grown trees with full-sun and high-yielding variety
- Intercropping to avoid monocultures

ADAPTATION IMPLEMENTATION STRATEGIES:

- ❖ Development and execution of various research activities that meet the needs of farmers
 - > The Consultative Group on International Agricultural Research (CGIAR) has developed strategies through research to balance food security and productivity.
- ❖ Building of strong communication connections between stakeholders, researchers, and farmers
 - > Fairtrade connects producers and enterprises through its global networks and partnerships to help give a voice to all in order to establish effective policies and increase participation in adaptation planning processes.
- ❖ Use of modeling for climate forecasting
- ❖ Establishment of farmer training programs with farmer participatory approaches
 - > The World Cocoa Foundation's Cocoa Livelihoods Program (WCF/CLP) works to improve marketing efficiency, cocoa production efficiency, and farmer competitiveness through farmer business skills training programs and improving farmer organizations, among others, to increase adaptive capacity.

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Appropriate color scheme with research area, nice layout, visually very appealing.

Which is greener: eReader or Paper Books?

by Courtney Sharpe



=



3rd generation iPad

44 books

- Emits 379lbs CO₂e over 3 years
- 1 book emits 8.85lbs of CO₂e
- Total greenhouse gas emissions include: production, transportation, consumer use, and recycling.
- The average person reads 6.5 books per year.
- 6.5 books x 8.85lbs = 172lbs, 1/3 less than the iPad

How green are you reading?

- ▶ Simple, but yet very effective. Missing any reference to
- ▶ where the research was done, or for what college or class.



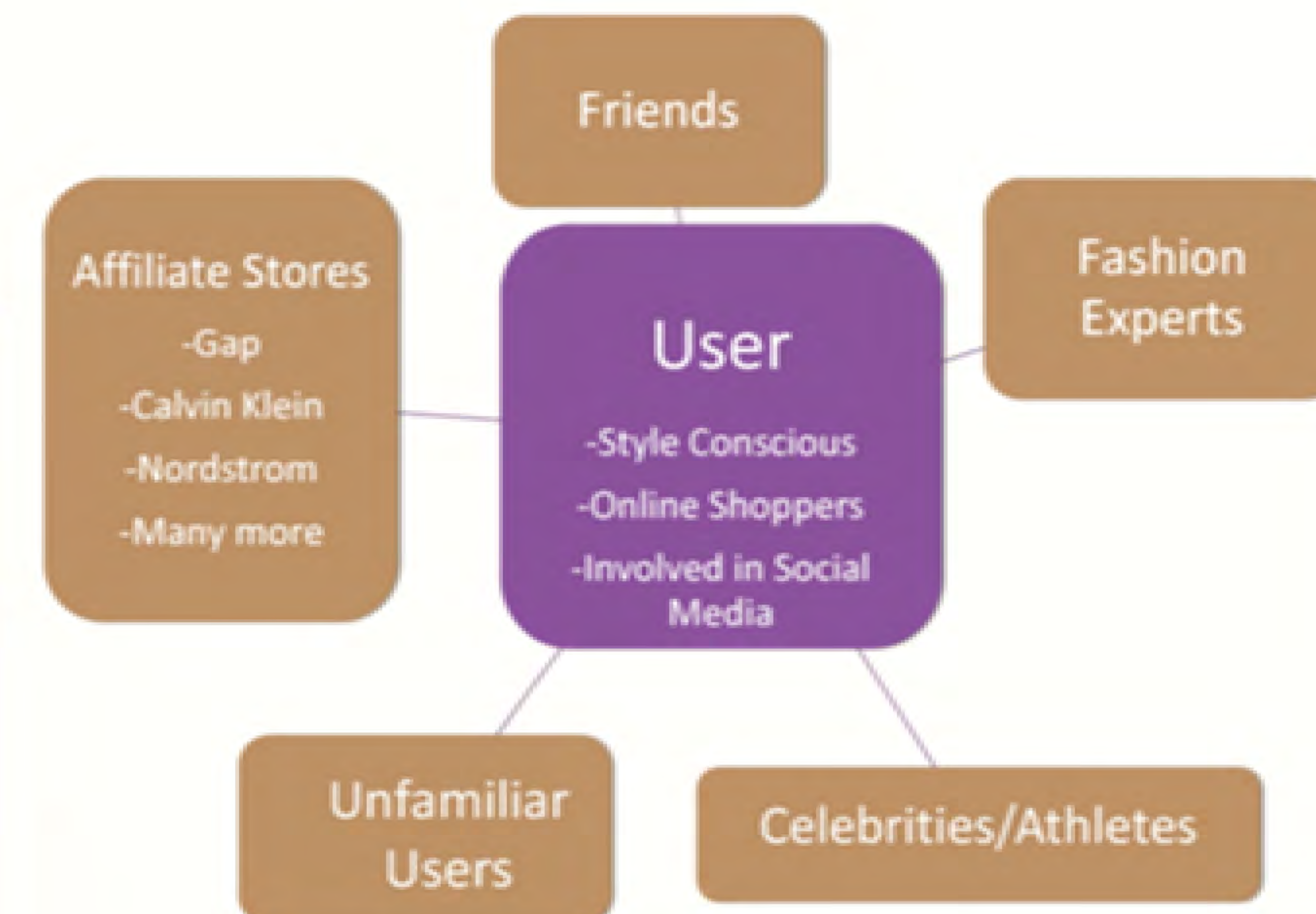
Travel the World's Closets TM

What it is: Hangr is a social mobile application focusing on browsing, sharing, and purchasing fashion items.

What it does: Hangr allows users to explore what people around the world are wearing and what fashion items interest them.

How to use it: By following fellow users that are of importance, users can discover new items and trends. Exploring a users' profile page referred to as a "closet" and discovering the clothing items that the person "hangs" entices social interactions and prompts purchase behavior among users of the app. By simply clicking on an image in a user's closet the visitor will be brought to the exact webpage of the online retailer where they can purchase said item as well as browse other items from the retailer.

Why we are here: When a user clicks on the article of clothing in a closet bringing them to the retailer, Hangr will be compensated from that particular retailer on a pay-per-click (PPC) system.



80% of surveyed agree or strongly agree that friends influence fashion decisions.

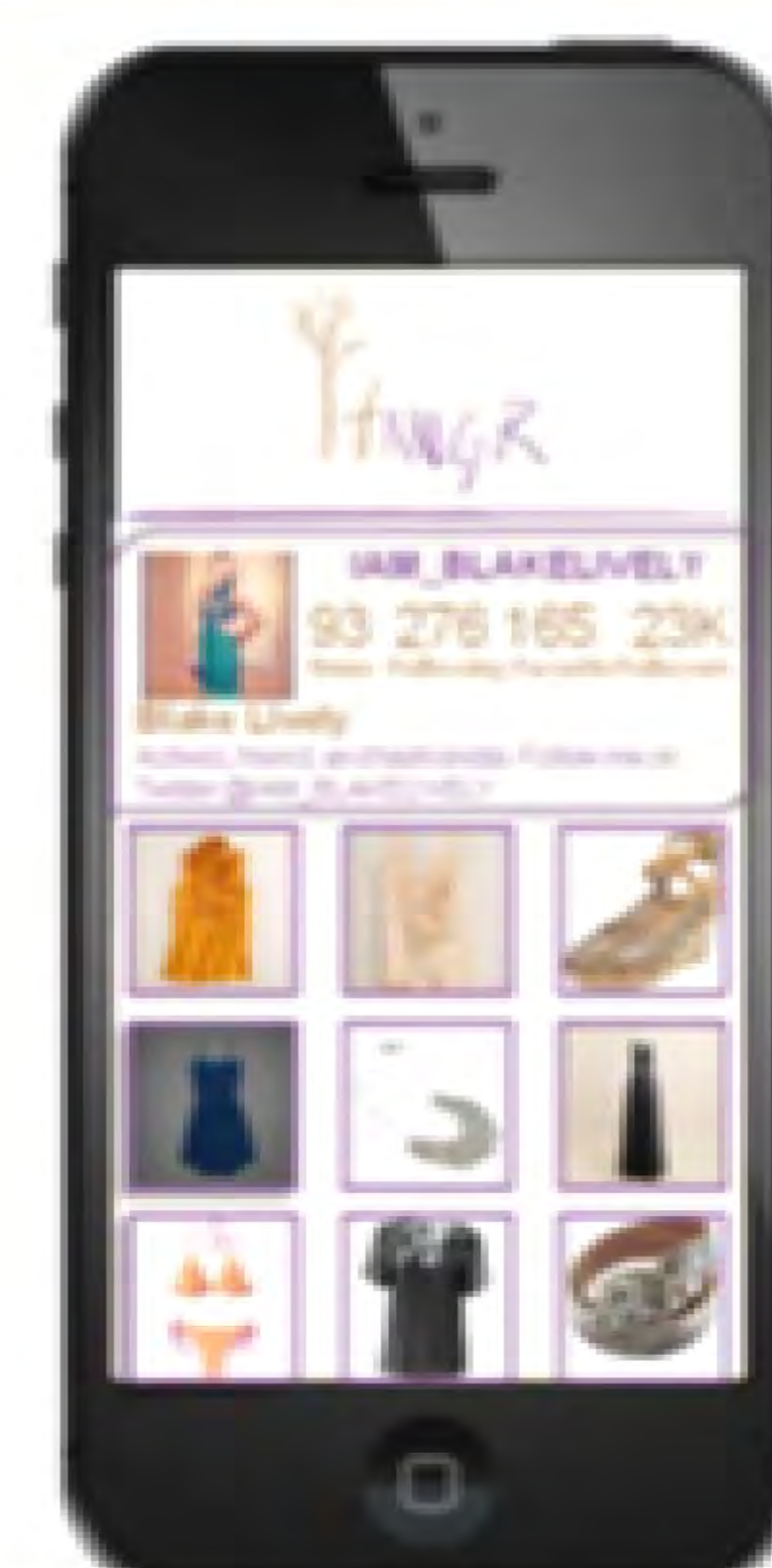
38% of surveyed agree or strongly agree that TV/Movie actors influence fashion decisions.

Other influencers of fashion decisions include models (22%), socialites (25%), athletes (25%), and unfamiliar users (36%).

Follow Feed



Browse Closet



Shop Stores



Hang Items



Great use of a flow chart, and nice color combination. It also has no name, college or identifying information!



The Edible Green:

An Edible Landscape for New England Country Clubs

ecoGastronomy

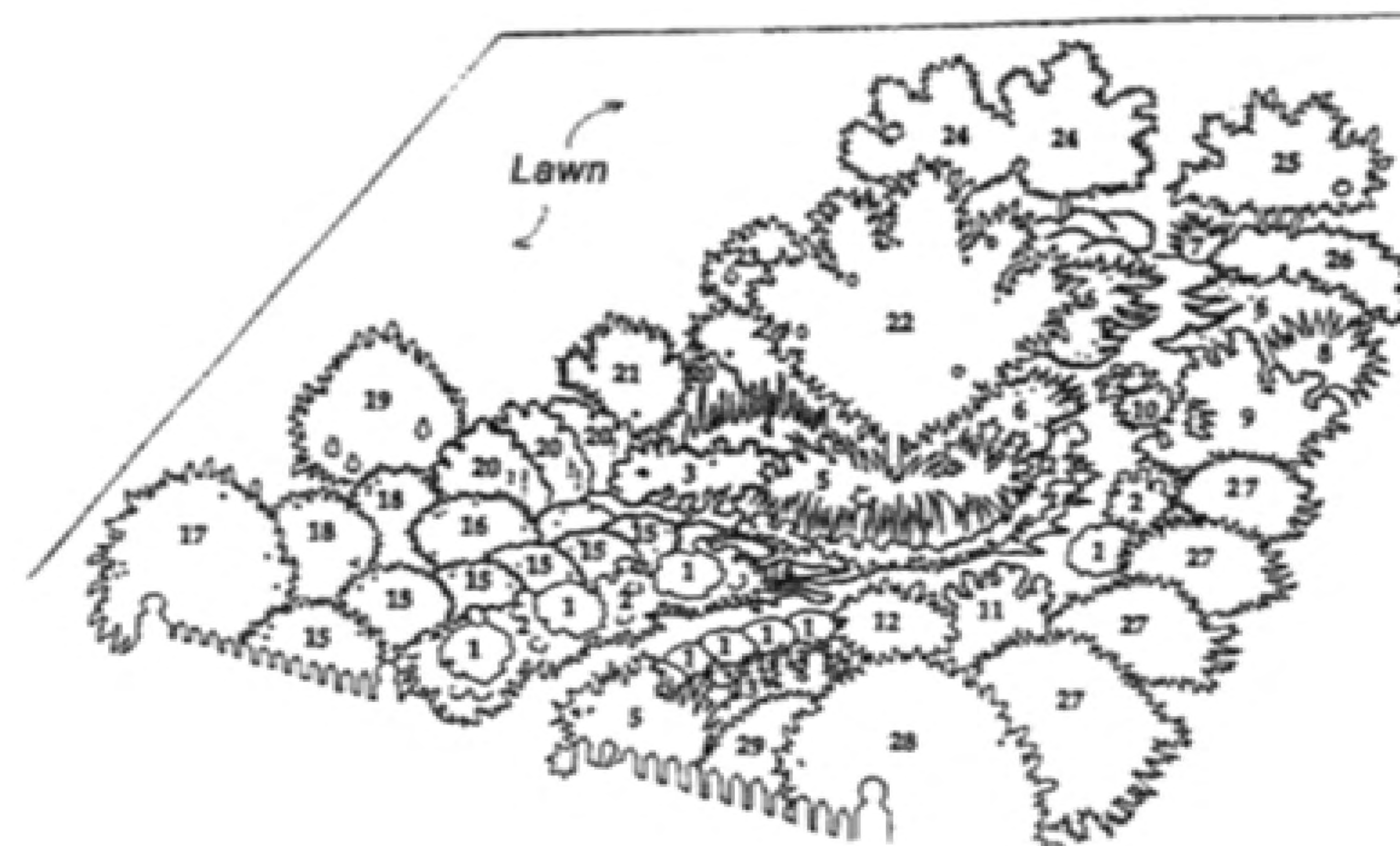
Edible Landscape

A constructed landscape which includes vegetables, fruits, herbs, and other consumable plants combined with ornamental flowers, in an aesthetically pleasing way.

The design is flexible and needs to include a minimum of one consumable plant.

Why Country Clubs?

Country clubs are built and run for members and their guests. There is an entire **grounds department** focused on maintaining the appearance of the club. Most country clubs own an **abundance of land**, and **provide high quality food service**. All of these factors make country clubs the perfect candidate to incorporate an edible landscape.



Hannah Hoban

1	Sedum
3	Romaine Lettuce
5	Cherry Tomatoes
7	Garlic
8	Chives
9	Peppers
11	Rosemary
12	Thyme
15	Impatiens
20	Heirloom Tomatoes
25	Blueberries
27	Rhubarb
28	Ornamental Grasses



Step 1: Assess Needs

Look into the needs of the kitchen, and wants of the members.

Step 2: Location, Location, Location

Pick location, track sun exposure, and assess risk management.

Step 3: Design and Layout

Consider Variety, aesthetic, needs of the plants, and additional risk management.



Great use of graphic examples of her research, eye catching and not type heavy.

Doing the World a Flavor



Ben & Jerry's Ecological Efforts



Cassandra Spencer ENGIL 602

Company Background

- Founded in May of 1978
- First scoop shop located in Burlington, VT



Product Mission Statement

To provide quality, wholesome & natural ingredients while promoting business practices that respect the environment

Greener, Cleaner, Freezer

- Freezer Developed by Ben & Jerry's
- Uses Hydrocarbon Coolant
- 250 freezers eliminated Greenhouse Gas emissions equivalent to annual electricity use of 75,000 homes



Above: Ben & Jerry's Greener, Cleaner, Freezer

Ben & Jerry's Foundation

- Ben and Jerry's philanthropy organization
- Donates time and funds ecological efforts
- Highland Institute project promotes educational programs about agriculture & sustainable energy



More information about Ben & Jerry's green efforts available at benjerry.com

Waste Recycling

- Dairy Waste is sent back to dairy supply farms & combined with other waste to power the farm
- Ice cream containers are made out of certified paperboard saving over 1,000 tons of paper waste per year

Very simple but effective use of eye catching graphics.

Moving Toward Eco Restaurants

“Each ‘Eco Restaurant’ is designed with green elements that reduce energy, water and waste consumption. This bodes well for the 100-percent franchised chain, yielding greater opportunities to save money.”

— Subway Spokesman



One of Subway's 14 Eco Restaurants

- Subway opened its first Eco Restaurant in 2007
- Grown to 14 Eco Restaurants
- The first Eco Restaurants were designed under LEED standards, since come up with its own set of green standards.
- New mandates that force all new franchises to be environmentally friendly
- Subway encourages franchisees to open green restaurants by providing information on cost benefits



**By Chloe Swift
and
Zander Hatch**

Water:



- Use of low-flow faucets—saves 182.1 million gallons of water annually
- Worked with suppliers to save 739,000 gallons of water per year

Energy:



- Switched all remodeled restaurants to energy efficient LED lighting
- All new restaurants are required to have Energy-Star rated appliances

Waste:



- Encourage franchisees to recycle and compost by making bins available
- Work with suppliers to reduce product packaging—removed paper interleaf between cheese

Paper Products:



- Towel and tissue are made up of 100% recycled material and up to 75% post consumer content
- Napkins are printed with soy or water-based inks

Packaging:



- Franchisees have the option to serve dine-in guests with a reusable basket
- Testing new ways to secure individually wrapped sandwiches without a bag

Transportation:



- Strategically placed distribution centers save 21.8 million truck miles per year and 3.6 million gallons of diesel

Subway Eco Restaurant Certifications:

- High efficiency HVAC (Heating, ventilation and cooling) equipment
- High efficiency lighting program
- Motion sensor lighting controls in restrooms
- Daylight sensors in guest area
- LED interior and exterior signage
- Outside air monitoring of CO₂
- Indoor air quality management during construction
- Reuse of at least 30% of store furniture
- Electrical sub metering and thermal comfort monitoring
- Certified green cleaning program
- Recycling and construction waste management program

Compactor

Trash
Adapt

A Component of
the TrashAdapt System

David Hawk (Senior in Mechanical Engineering)
Nihco Gallo (Junior in Mechanical Engineering)
Garret Healey (Junior in Mathematics)
Advisor: Prof. Yannis Korkolis.

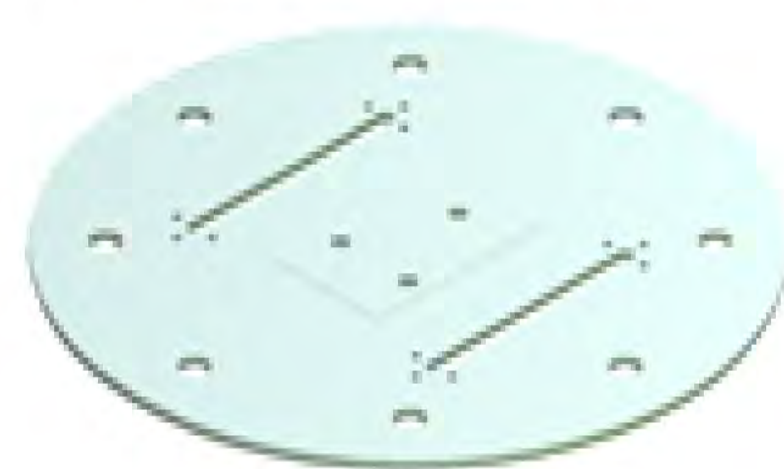
Goal

Create a Trash Compactor
that is:

1. Cheap to manufacture
2. Cheap to maintain
3. Strong
4. Easily operated

Compression Plate

- Distributes the applied force over the surface of the trash
- Applies a maximum of 15 psi to the trash
- Trash can be bundled when fully compressed by tying straps or twine through the slots (shown below)



55 Gallon Drum

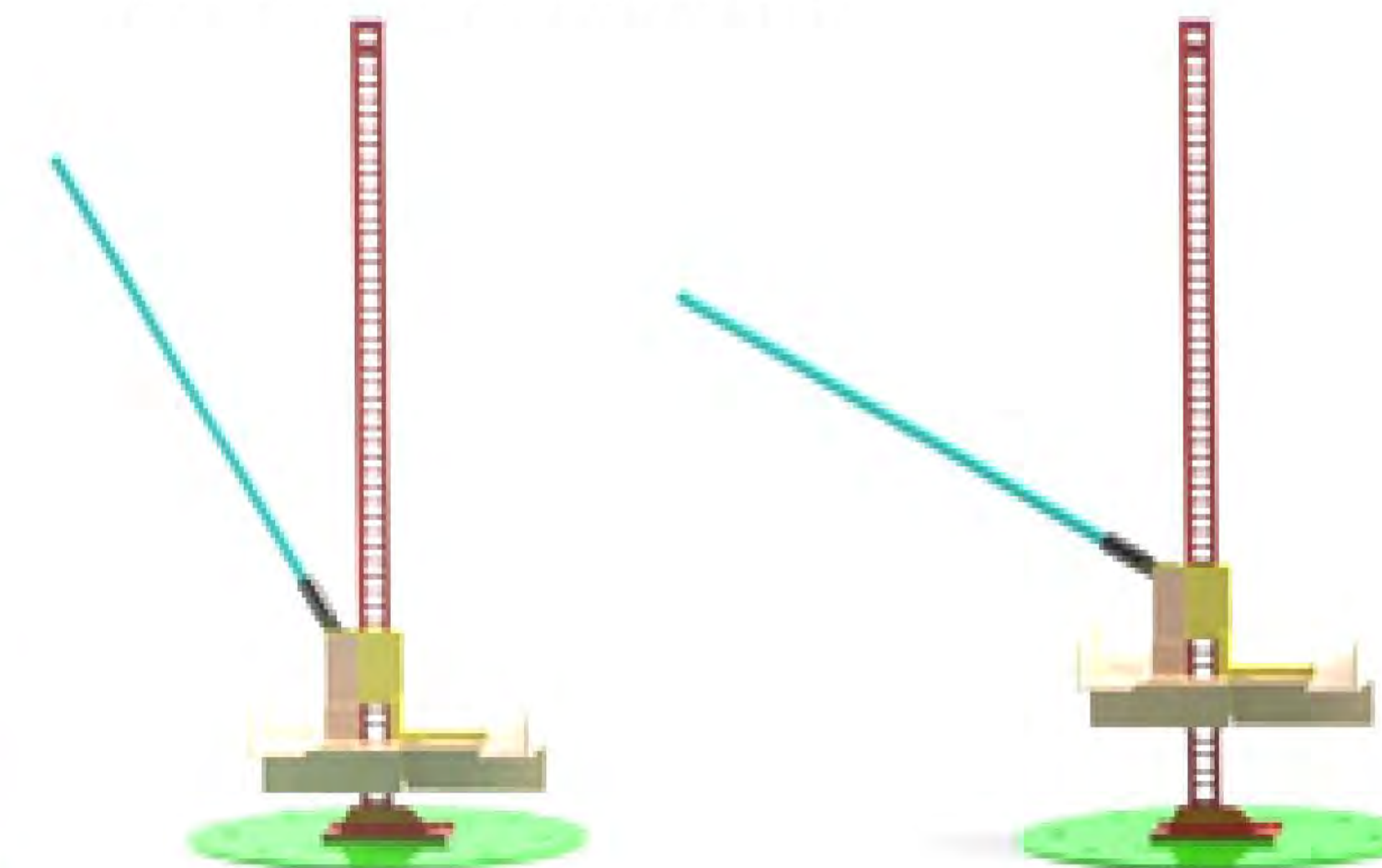
- Contains the trash while it is collected and compressed.

Drum Hinge

- Compactor can be emptied by tipping the barrel

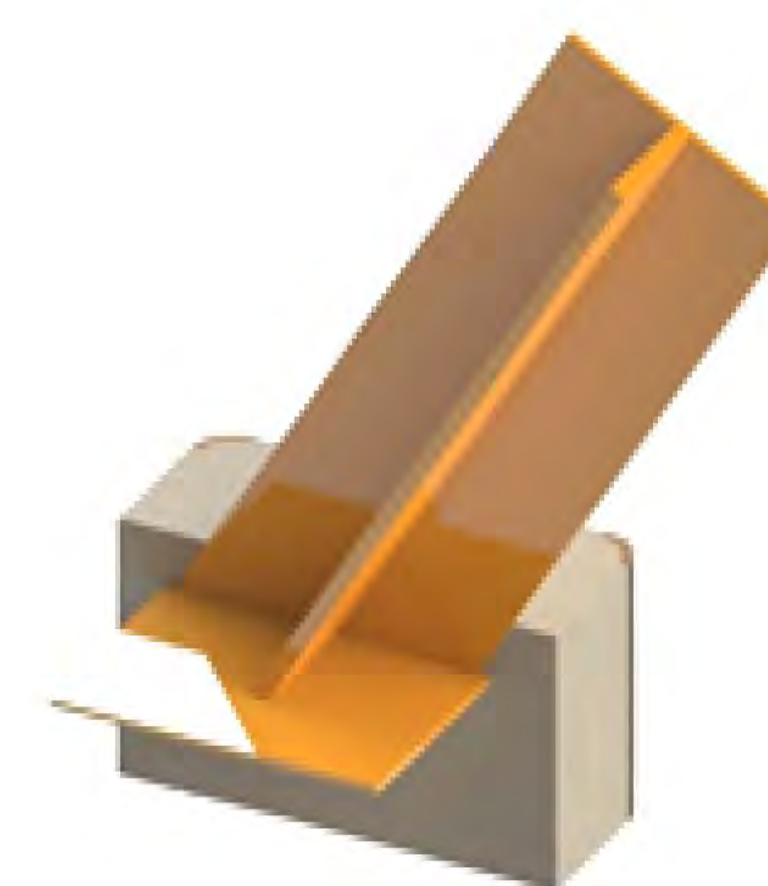
Hi-Lift

- A vital component in the compactor that costs a minimal amount
- Transfers 6000 lbs. of force to the waste deposited in the 55 Gallon Drum
- Converts a pumping action into a vertical application of force along the rack gear (shown below in red)
- Requires less than 150 lbs of force to operate the lever (light blue)



Legs

- T-shaped cross section increases structural stability
- Built from 3/16" steel angle - a commonly accessible material



Foundation

- Designed to be a permanent structure i.e. the legs are formed in concrete (shown above)
- For the purpose of this demonstration the structure is fastened to wood
- The concrete base counters the upward force applied by the Hi-Lift by applying a force down on the structure to keep it on the ground

Future Plan

- Expand the abilities of the compacting component by adding other components to its system (i.e. grinding wagon for collection and reduction, adaptors to manipulate the waste)
- Apply for a creative commons license to encourage growth.
- Share our designs with the global community

Great decision to use a
portrait layout instead of a
landscape set-up. Super
clean, very good layout
and flow of information.
Easy to follow and discuss.