

EnPRO 353: Crop to Truck

Illinois Institute of Technology



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I. Team Charter

I PRO 353, Crop to Truck: Think outside the Cup.

Team members' Profiles can be found in the Appendix A.



Team Purpose:

Crop to Cup's business mantra is "Pride to crop, quality, and cup". I PRO 353, Crop to Truck, will embody this statement through investigation into mobile coffee baristas. Our design and business models will present a world-conscious, attractive truck space that improves customer experience and ease of access to the best quality, responsibly sourced coffee available. We will complete the cycle that Crop to Cup has set forward in a sustainable manner that benefits consumer, producer, and barista alike.

Objectives:

- Design a 'mobile franchise' that will effectively represent Crop to Cup and their values.
- Propose feasible design solutions that include utilizing new and repurposed trucks for the mobile coffee barista.
- Create an ideal space for efficient coffee production and optimal consumer experience.
- Review I PRO 333's involvement with Crop to Cup and explore opportunities of collaboration to better serve our mutual sponsor.
- Communicate with existing food truck owners who are already part of Chicago Food Truck movement.
- Create an attractive business plan for potential investors.
- Follow city codes pertaining to all aspects of the mobile coffee barista including: fire safety, food processing, transportation, water management, etc.
- Review design and feasibility of the truck with working professionals in the fields of business architecture, engineering, and technology.



II. Background

History:

Crop to Cup (C2C) Coffee Company supports family farms in East Africa that produce coffee beans and connects them to coffee-lovers around the world. By traveling to individual farms, C2C is able to establish a relationship with farmers and export partners. Email, cell phones, digital cameras, and GPS connect farmers to interested consumers. The company's website provides video profiles, message boards, forums, as well as a way to track the origin of purchased coffee beans. Engaging in dialogue helps build awareness and bring the community of farmers closer to the consumers who enjoy their beloved crop. This allows C2C to better serve both the clients and their customers.

Coffee farmers are rewarded for producing high quality coffee. The farmers are insured with over 20% of premium market purchase rates and they also receive 5% of every coffee purchase and 10% of the company's profits. Additional funds support community projects, develop training in technology, and help local artists receive international recognition.

C2C is now preparing to implement a new plan in 2011 called "Whole Crop" in which they will commit to purchasing 100 percent of the coffee produced from the farmers they currently work with, in two regions of Uganda, Gibuzaale and Kapchowra. They plan to buy the coffee at an above-market price along with committing to pay a premium to individual farmers based on coffee quality. An important part of this plan is building a storage facility for this larger amount of beans, compared to the 14 percent they currently purchase. (Consulted Crop to Cup website, IPRO 333).

Current Issues and Technology:

- Current laws and codes prevent only allow food trucks to serve prepackaged items.
- New codes have been written but are currently being debated.
- Finding a feasible vehicle for the mobile coffee barista.
- Finding suitable equipment that aligns with vehicle and sponsor parameters.
- Proper utilization of space and being energy efficient while still being cost effective.
- Need to develop plans for energy consumption, water storage, etc.
- Creating an adaptive design to cope with the extreme weather in Chicago.
- Competition from other food trucks.
- Resistance from conventional brick and mortar stores.
- Utilizing appropriate technology to keep the vehicle safe for operators and consumers.



Ethical Considerations:

An opposition to food trucks in Chicago has been from downtown “brick & mortar” establishments (see reference 6). They fear that enhanced mobile food service, where food can be prepared in the vehicle, would run them out of business with poor quality, unsanitary food. However, food service in Chicago is already very competitive. Most new restaurants close 6 months after opening. Sanitary regulations that apply to “brick & mortar” business could be applied to food trucks.

The *mobile coffee barista* is a special kind of food service: it is a mobile franchise. Our objective will be to enhance the experience of coffee and truck in an efficient and friendly way. However, we must realize that there is animosity within food service professionals against mobile franchises. We believe competition is in the best spirit of business, and it will eventually benefit the consumer and producer alike. Providing alternative food service that is high quality, convenient, cost effective and enjoyable could directly benefit profit margins and consumers simultaneously.

With a ‘mobile franchise,’ as with any franchise, quality control is an issue. Crop to Cup is built and relies on the reputation of the Eastern African Farmers. If the ‘mobile franchise’ diverts from that then there could be potential harm done to the farmers and Crop to Cup’s core brand values.

Past Attempts:

The Mobile Coffee Barista is a first of its kind. This is the first attempt at designing an eco-friendly, mobile “coffee shop” in Chicago. The team will have to work together to design a truck that fulfills sponsor’s wants while compiling with city codes. Since this is the first attempt, the team will investigate other successful mobile food service in Chicago that currently only operates in compliance to City’s ordinances to have pre-packed, items sold from the vehicle..

There are several successful food trucks throughout the United States. However, Chicago is a different story. There are a limited number of food trucks because of the strict ordinances that currently exist. Food trucks are not allowed to cook food directly on the truck but instead the food has to be prepared beforehand. Gaztro-Wagon is one of several food trucks in the Chicago area. It serves Naan-Wiches, which are prepared at a brick and mortar store prior to being served to customers. Another new food truck to Chicago is the Simple Sandwich. Like the Gaztro-Wagon, Simple Sandwich prepares food at permanent location before taking the food on board. Even though there is a strict ordinance in place there has been movement to get it changed within the next year. The team will research these vehicles to see what steps they have made to comply with current codes and still be adaptable to the new ones that may come into effect.

References:

1. http://www.gaztro-wagon.com/Gaztro-Wagon/Who_We_Are.html
2. <http://www.nbcchicago.com/feast/Meet-Chicagos-Newest-Food-Truck-Simple-Sandwich-101676943.html>
3. http://www.diningchicago.com/2008/show_new_article_test.php?aID=88
4. <http://www.simplechicago.com/>
5. <http://www.flirtycupcakes.com/>
6. http://articles.chicagotribune.com/2010-06-01/features/ct-met-street-food-20100601_1_food-truckgourmet-ordinance/2



III. Team Values

Team Values Statement:

- Through design, successfully represent Crop to Cup™ and their philosophy about offering an excellent product, while at the same time making a social, environmental and economic impact.
- To group our individual knowledge, acquired in the different areas of study, so as to complement each others' ideas and efforts.
- Be open to and respectful of the ideas of each other.
- Be respectful of each other's time by arriving punctually to meetings and not wasting time during the meetings .
- Create the best end product our abilities allow through an overall commitment to conscientiously address the self evident needs of the project as well as other unexpressed needs we may uncover in our research.
- Communicate in the best of levels by sharing ideas and concerns promptly.

Conflict Resolution:

- Listen to all sides before making final decisions.
- Create a resolution that is acceptable to everyone.
- Team members are invited to express themselves freely, and be honest, as well as respectful, about their feelings involving a certain issue or conflict.
- Place the group's priorities, as a whole, before those of the individual.

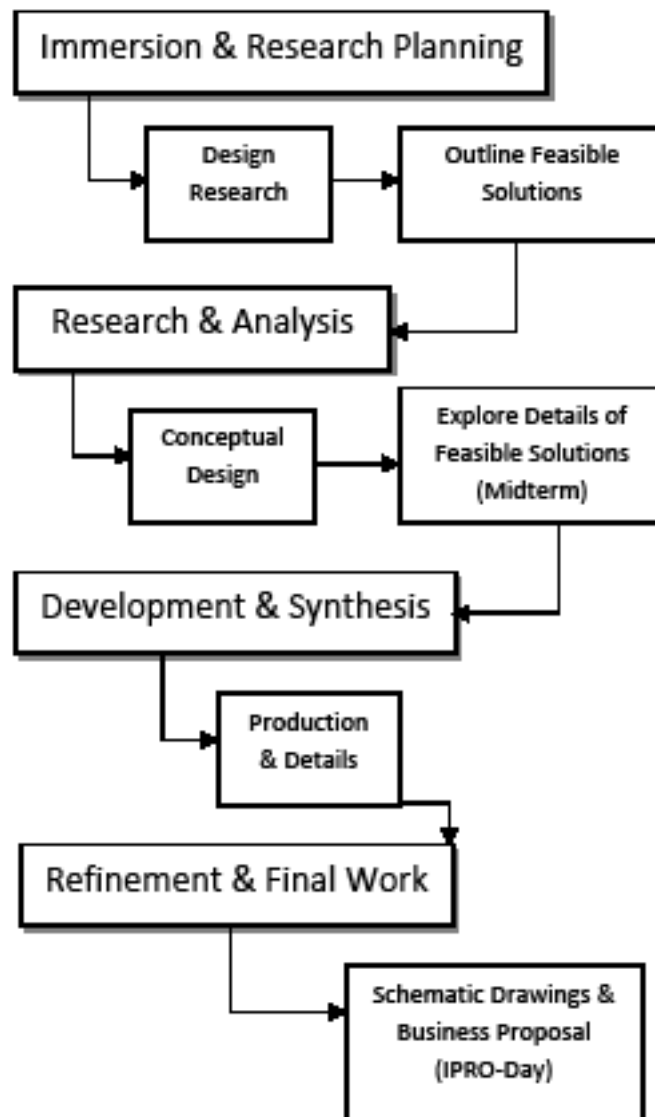


IV. Work Breakdown

Problem Solving Strategy

Crop to Truck will design 3 *mobile coffee baristas*. One design will start with a “blank slate,” and the other two designs will begin with pre-determined vehicle models, selected by the EnPRO sponsor, which will be repurposed. The combination will put our group’s creativity and ingenuity to the highest test.

The research phase will determine which functions, options, and equipment will best suite each version of the truck. Conceptual Design will produce the first look at possibilites, presented at mid-term. We will take critiques from mid-term and develop our design possibilities into a final Schematic Design & Business proposal, for IPRO-Day.



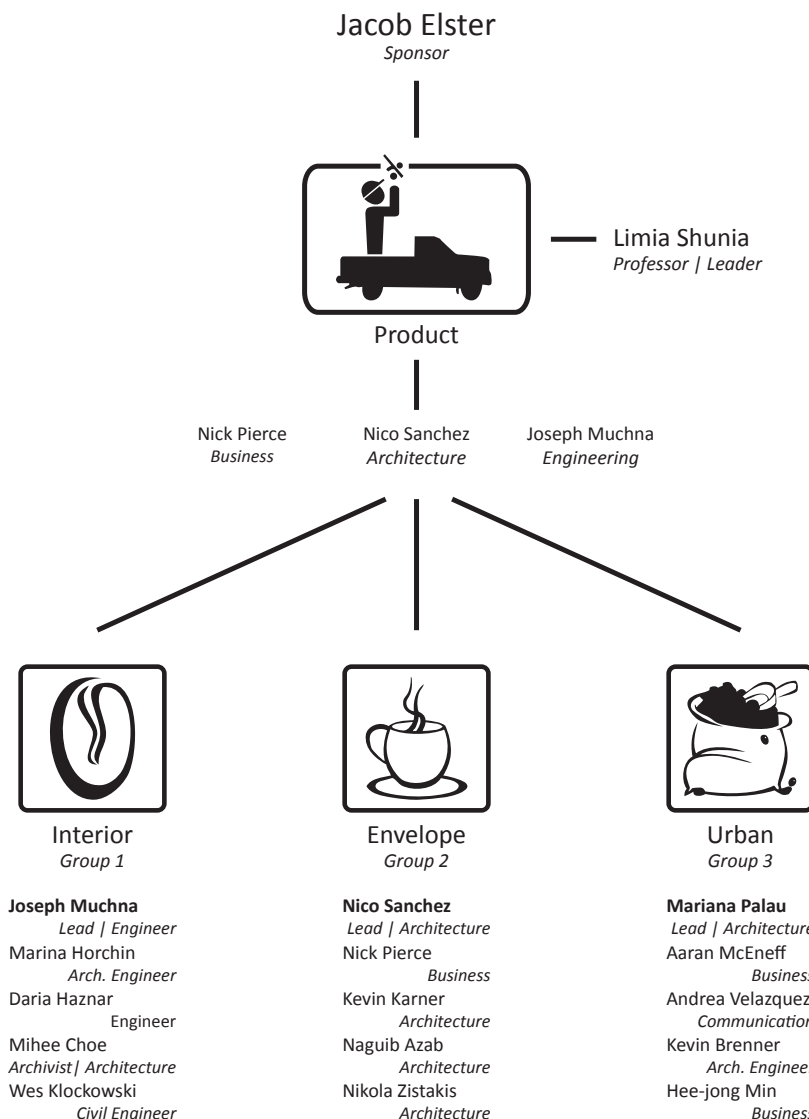


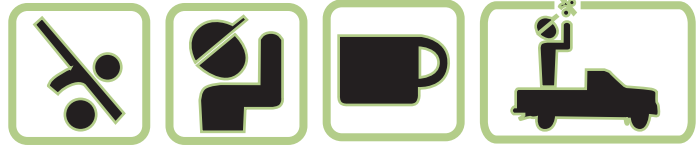
Team Structure:

In order to tackle the various scales of the project we will split into 3 groups. Group 1, Interior, will look at equipment necessities, interior truck space, and codes concerning food preparation, aesthetics, form, and function of the vehicle. Group 2, Envelope, will look at exterior spacial design, aesthetic & form, materiality, and codes concerning truck size. Group 3, Urban, will look at route feasibility, zoning, site context, and codes concerning urban implementation. All three groups have a user centered mind-set driving the solutions.

Crop to Truck, a team of 15, is composed of 3 groups of 5. There will be a full group meeting once a week, every Tuesday, to review work, production flow, and process. The full group meetings will be lead by Nico Sanchez, Nick Pierce and Joseph Muchna who represent the three major disciplines: architecture, business, and engineering, respectively. Each group will have a team leader which will be responsible for outlining the required tasks each week and distributing the tasks evenly between group members. The team leaders will meet together with the Minute Taker and Agenda

Group Hierarchy





Gantt Chart:

ID	Task Name	Start	Finish	August		September 2010					October 2010					November 2010					December		
				8/23	8/31	9/7	9/14	9/21	9/28	10/5	10/12	10/19	10/26	11/2	11/9	11/16	11/23	11/30	12/3	12/7			
1	Overall Team Tasks																						
2	Team Building	23-Aug	31-Aug	█	█																		
3	Project Plan	31-Aug	10-Sep		█	█																	
4	Midterm Report	12-Oct	19-Oct								█	█	█										
5	Final Presentation/IPRO Day Preparation	23-Nov	3-Dec																			█	█
6																							
7	Group A: Interior																						
8	Background Research	14-Sep	28-Sep			█	█	█	█														
9	Inventory Research	28-Sep	12-Oct								█												
10	Equipment Research	28-Sep	12-Oct								█												
11	Truck Interior Research	12-Oct	26-Oct								█	█	█	█									
12	Initial Designs	26-Oct	16-Nov											█	█	█	█						
13	Modifications	16-Nov	23-Nov															█	█				
14	Final Design	23-Nov	30-Nov																			█	█
15																							
16	Group B: Envelope																						
17	Inquiry Building	7-Sep	14-Sep			█																	
18	Design Research	14-Sep	21-Sep				█																
19	Case Studies	14-Sep	28-Sep				█	█															
20	Code Familiarization	14-Sep	28-Sep				█	█															
21	Food Truck Visits	28-Sep	14-Oct								█	█	█										
22	Consumer Observations	28-Sep	14-Oct								█	█	█										
23	Design Refinement	14-Oct	26-Oct									█	█	█									
24	Mock-ups	26-Oct	2-Nov											█									
25	Modifications	2-Nov	16-Nov																				
26	Rendering	16-Nov	23-Nov																				
27	Modeling	16-Nov	23-Nov																				
28	Final Mock-ups	23-Nov	30-Nov																				
29																							
30	Group C: Urban																						
31	Case Study Research	7-Sep	21-Sep			█	█	█															
32	Compilation Research	21-Sep	28-Sep				█																
33	Demographic Research	28-Sep	5-Oct																				
34	Site Research	28-Sep	5-Oct																				
35	Regulation/Code Research	5-Oct	12-Oct									█											
36	Schematic Designing	12-Oct	26-Oct									█	█	█									
37	Development of Design	26-Oct	16-Nov												█	█	█						
38	Design Refinement	16-Nov	23-Nov																				
39	Final Design	23-Nov	30-Nov																				



V. Expected Results

The expected results for EnPRO 353 are the following. The delivery of these results lies in the fulfillment of the following goals:

EnPRO 353 was created to design an eco-friendly mobile coffee shop that is meant to be a model for future franchise opportunities. EnPRO 353 is responsible for creating a model of a truck to test the efficacy of the *mobile coffee barista* in the Chicago market. The mobile Barista team is expected to conduct market research in order to find and create an optimal route and appealing menu for potential customers by doing on site surveys and demographic profiles. Ultimately, the team will be construction a proposal delineating a mobile coffee experience for the customer, the baristas, and franchise owners.

Team Organization:

- Follow a scalar framework to achieve small, medium and large goals
- Develop a plan to find optimal consumer needs as well as optimize the use of space inside and out, and researching energy efficient ways to reduce cost and waste, aligning with Chicago's initiative to create sustainable models.
- Plan and technical brainstorm to develop a budget and business plan
- Collaborate between individuals and groups for the development of a cohesive design concept
- Research and project estimates of truck cost/franchise ownership
- Embody Crop to Cups values

Crop to Cup's Planning Deliverables:

- Design an eco friendly *mobile coffee barista*
- Modify an existing truck to test the efficacy of the idea in Chicago
- Conduct market research to determine an attractive route and proposed menu list
- Conduct Demographic research and on-location surveys
- Determine strength of local competition
- Study logistics of operation and propose an optimized route
- Provide a franchise narrative and preliminary financials



Potential Obstacles:

I PRO 353 is trying to create an entire franchise in a limited timeframe, without efficient communication within team members and good time management skills the focus of the group will not be set to accomplishing the set of goals that we have developed per each phase of the project.

The idea of food trucks in Chicago is still very new; if the team does not focus on maintain record and knowledge of every regulation related to this project could risk the development and efficiency of goal completion.

Also, the team size functions both as asset for the amount of work that needs to be achieved over the course of the semester. A large team, however, requires heightened management efforts in order for the team to be as productive as possible and still have a meaningful end product.



VI. Preliminary Budget; IPRO 353, Crop to Truck: Think outside the Cup.

<u>Transportation</u>	\$Unknown	Site visits not determined
<u>Architectural Models</u>	\$450	Appox. cost of architectural models
<u>Research</u>	\$75	Coffee testing assumes 15 team members @ \$5 per person to test crop to cup products.



VII. Designation of Roles

Minute Taker: Daria Haznar will be responsible for keeping minutes of each full team meeting, she will post them to igroups, and she will have them available for reference during team meetings.

Agenda Maker: Mihee Choe will be responsible for preparing a weekly agenda for weekly team meetings.

Time Keeper: Mihee Choe will be responsible for keeping team meetings on schedule.

iGroups Moderator: Neguib Azab will be responsible for updating and monitoring files on iGroups.

Sub-Group/Team Leaders: Joseph Muchna, Mariana Palau, Nicolas Sanchez will be responsible for outlining the required tasks each week and distributing the tasks evenly between group members. The team leaders will meet together with the Minute Taker and Agenda Maker weekly to synthesize the week's tasks effectively and review accomplished tasks.

Each discipline: architecture, engineering, and business will be represented by Nico Sanchez, Joseph Muchna, and Nick Pierce, respectively. This leadership will assure that each discipline is represented at the full team meeting as well as bringing continuity across the three scales of development: Interior, Envelope, and Urban.



Appendix A: Profiles

Naguib Azab

Fifth Year Architecture

It is not about what coffee Naguib Azab prefers, it's about the right time and place. Naguib regards drinking coffee as a relaxing experience, or a period of reflection. He is interested in material exploration, technology, and how they influence architectural design. Naguib is skilled in technical drawing, 3D modeling & animation (AutoCad, 3ds Max, Adobe Creative Suite, Microsoft office). He also has experience in code and zoning research. Naguib wants to develop business experience and collaborate with people from different disciplines. He hopes to work effectively with EnPRO 353 in a collaborative environment.

Kevin Brenner

Fourth Year Architectural Engineering

Kevin doesn't drink coffee often, but when he does it is like a little treat that makes the day a little better. He is very efficient with his time and can be flexible when unforeseen events arise. If new ideas are proposed, Kevin is very open to considering them. However, he realizes that he has a lack of knowledge of general business practices. Through EnPRO 353, Kevin hopes to learn to effectively express himself to others. He also hopes to be able to apply the knowledge he has gained during his education to a real-world project and develop a project plan for an investor.

Mihee Choe

Fifth Year Architecture

Mihee loves the taste of coffee but hates its jittery effects. Her skills include creative foresight in planning and detail oriented work and editing. She joined EnPRO 353 with the hopes of learning how to put a professional project together with diverse individual strengths. Mihee is interested in seeing how the Crop-to-Cup business endeavor will affect future consumer-provider relationships. She anticipates significant steps forward in raising awareness for this project.

Daria Haznar

Fourth Year Computer Engineering

When it comes to coffee Daria is extremely picky. There is only one coffee that she would drink everyday, which is the Starbucks Gingerbread latte, but it only comes out during the holiday season. She is knowledgeable in computer related items such as Microsoft Office, creating websites, and programming. She is also good at keeping things organized and being a good listener. Daria would like to develop better public speaking skills through EnPRO 353. She joined EnPRO 353 in hopes of creating something that will actually be used in the real world and to help the Crop to Cup organization fulfill their goals.



Marina Horchin

Fourth Year Architectural Engineering

Marina does not like her latte unless it's made with love, Starbucks doesn't work. She is an organized and responsible student. She is LEED certified and has leadership experience as the vice-president of the American Society of Civil Engineers. She likes to see progress in work and changes made. Marina is very enthusiastic about the fair trade issues as well as the small business enterprise of Chicago, and hopes EnPRO 353 will succeed in developing a great design for the mobile barista Crop-to-Cup business. She believes communication and networking will help solve any problems EnPRO 353 may face.

Kevin Karner

Fifth Year Architecture

Kevin seldom drinks coffee but will definitely finish off a glass or two before a long night at the drafting table. Kevin is artistic and creative and is skilled in computer modeling and graphic design. He has extensive experience with Photoshop, Illustrator, AutoCAD, 3ds Max, Revit, PowerPoint, and Word. Kevin has a great work ethic and is not afraid to stay awake all night in order to finish what needs to be done on a project. He joined EnPRO 353 because it is a project that is close to home. Chicago based projects give the EnPRO experience a realistic feel and help Kevin better visualize successful solutions to the design of the mobile barista. While in EnPRO 353, Kevin hopes to improve his leadership skills and take a central role to design solutions. He also looks forward to working in an interdisciplinary setting.

Wes Klokowski

Fifth Year Civil Engineering

Wes is definitely a coffee lover. He loves his coffee regular with 2 sugar packets, 2 French vanilla creamers, and 4 ice cubes (to make it drinkable). Wes has skills in the Civil Engineer aspects and also in the Business threw his major and minor. Some of his strengths include: working well with others, being open minded, hard working, positive, punctual, and fully committed to his work. Wes also has leadership experience. Wes hopes to improve his public speaking skills. His expects to learn how to effectively and efficiently collaborate between majors to solve problems that EnPRO 353 may face.

Aaran McEneff

Fourth Year Business Administration

Aaran has business experience specializing in marketing. Aaron is a good communicator, team player and motivated a hard worker. Through EnPRO 353 he hopes to see the team's hard work come to fruition. Aaron wants to look at the mobile barista when it is completed and be proud that he played a part in making it come to life. Aaron wants to improve his time management skills.



Hee-Jong Min

Fourth Year Business Administration

Hee-Jong needs to gulp down a cup of coffee or two in the morning for that extra jolt before heading off to class. Also, he simply enjoys the taste of this strong, aromatic beverage in his free time. Hee-Jong knows how to share his ideas with co-workers in efficient ways. He hopes his meticulousness will help EnPro 353 achieve their goals. He expects to improve team spirit by working with EnPRO353. In addition, he hopes to gain knowledge of how to approach customers with innovative contents.

Joseph Muchna

Fourth Year Material Science & Engineering

Joe likes his coffee black with extra sugar. Joe is captain of the swim team at IIT and an active member of the Phi Kappa Sigma Fraternity. He interns at A. Finkl & Sons steel forge for their Metallurgy lab in Lincoln Park. He brings leadership experience, financial management and budgeting experience, and an engineering mindset to the team. Joe joined EnPRO 353 to learn about entrepreneurship and gain hands-on experience in some of the start-up functions of a small business.

Nick Pierce

Fourth Year Business Administration

Nick does not drink coffee but loves the smell of it in the morning or anytime of day for that matter. He has knowledge in the fields of physics and business. He is skilled in Microsoft Office (Excel, PowerPoint, Word). He is also experienced in leading an organization of students. He will use his skills and knowledge to assist EnPRO 353 where they are needed. Nick joined EnPRO 353 to gain experience in the entrepreneurship field as well as developing a marketing strategy for a new business to enter a niche market. Nick is also excited to be part of major change to the city of Chicago with the new food truck ordinance. He also wants to further develop his team building skills and leadership skills by working together with his peers in EnPRO 353.

Nico Sanchez

Fifth Year Architecture

Coffee! Coffee! Coffee! Nico believes in the power of beans: chocolate, refritos, and coffee. Nico has 16 years of experience in renovation, design, and landscape. Design has inspired him to bridge the gaps of home, heritage and the bustling metropolis. He is also experienced with computer drafting, modeling, physical models, and rendering. Nico is a practical designer, though he does recognize the importance of the occasional impracticality for beauty's sake. He is looking forward to designing an attractive and effective service space through EnPRO 353.



Andrea Velasquez

Third Year Technical Communications

Andrea loves a blended mocha frap with soymilk and no whip cream in the summer. In the winter she likes her coffee sweet and warm with a little French vanilla. Being a part of EnPRO 353 means she gets to share her passion for coffee with others who feel the same. She hopes to help develop the idea of the mobile barista by providing as much feedback and creativity to the group. Andrea hopes that her experience as a barista will assist EnPRO 353. She is great at planning and writing. Andrea thrives from a structured environment where the team plans ahead and sets goals. She hopes to provide the best of her strengths to the team and be part of an innovative idea that will reshape the way people think of coffee.

Nikola Zistakis

Fifth Year Architecture

Niko likes his coffee cold, a frappe. With architecture as his main focus, Niko also has a strong passion for business and psychology. He joined an IPRO that gave both positive and negative feedback about general aspects of IIT culture to help improve the way students, alumni, faculty and staff perceive their institution. Niko is excited to join another IPRO that can have a profound effect on how business is conducted in the City of Chicago. He hopes to influence the design of this project to incorporate a friendly and revolutionary experience to give Crop to Cup a profitable and well-designed project. This includes changing the general image of food and coffee trucks, and providing the user with an extremely enjoyable experience.