

ANALYTICS CONSULTING LAB SYLLABUS SPRING 2022 01-25-22 UPDATE

Background on the Analytical Consulting Lab

The Analytics Consulting Lab (ACL) is part of the Foster experiential learning initiative. The specific interest in the Analytics Consulting Lab comes out of the deep demand for business leaders that can provide guidance in analysis and focus that analysis to specific business questions. Additionally, many recruiters and employers have commented that finding talent that bridges the business and analytical communities is difficult. The ACL strives to provide a real-world learning experience for students to work with sponsoring companies on business questions that revolve around analysis. Students work in teams using analysis (broadly defined) to answer current and important business questions.

READ THIS!!!!!!

Analytics Consulting Lab is an experiential class, with a strong focus on the application of analytics and market measurement in a real-world, client-facing, consulting environment. It provides an excellent opportunity for Foster MBA students to get real-world experience in consulting and in applying analytics and market measurement techniques to actual business challenges and opportunities.

Therefore, it is important to set some very important expectations in regards to this class:

- **The class does NOT involve lectures to present new theory or analytical techniques. Students seeking new analytical techniques or lectures on analytics, primarily, should consider other courses for that goal. This is a class on the application of analytics in a real-world, team-based environment.**
- **You will work in a team. Team dynamics will be instrumental in your experience. It is important that you are available, accountable, dedicated, and willing to contribute in a team. In most cases, you get to choose your teammates. Be extremely open and honest with your teammates in terms of their contribution and hold each other accountable in a supportive and respectful manner.**

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- **The Professor is your advisor, coach, aide, and sounding-board.** He is here to help you in your journey through the project. **The MBA team is in a leadership role to execute the project, communicate and present to the client, and formulate recommendations.**
- The Professor can help you with reviewing regression, analytical concepts, data visualization, consulting best practices, and most any topic that arises on the project. **Execution of the project is, however, the responsibility of the MBA team.**
- **Each project in ACL is unique, real, and driven by an actual client-facing challenge or opportunity.** Your project will vary from others. Projects have different goals, different analytical opportunities, and clearly different clients. You can apply for the project(s) that most interests you.
- **ACL is a lot of work, a lot of learning, and a lot of fun.** Many students consider it a top Foster experience. Be sure that your schedule, life, and other commitments permit you to get the most from the class.

Course Details

The ACL is offered as MKTG 535.

Projects in the ACL are sponsored by professional contacts of Dr. Walker, and alumni of the school, at very senior levels in their organizations. Students taking the ACL are assured a strong learning experience and a commitment from the firm to provide access to decision maker and information that will make the experience meaningful.

Application Process

Students interested in the ACL must select MKTG 535 during elective bidding. Once in the class, email Dr. Walker of your:

- Project Choice #1
- Project Choice #2
- Any fellow desired student for a team (limit of one student to specify). Team member preference is only considered if both people select each other.
- Other information that you may wish to share in your application, personal goals, career aspirations, etc.

Student information in the application process is used in formulating teams and assigning projects so that goals, backgrounds, skills, and expectations are all best aligned.

Project Assignment

Student assignments to client projects will be based on individual preferences, requested skill sets and industry experience, and team member diversity. Every attempt will be made to grant students their first or second choice of projects. Student information is

collected via the application. Students may select one fellow student for a project. This fellow student selection is honored as possible, if the both students select each other. Students will be notified about their project assignments during the term before the class. All efforts are taken to accommodate first choices, while forming teams with an appropriate set of skills and interests.

Case Packet and Readings

As this course is an experiential one, there are no specific cases to prepare. However, many students have looked for examples of companies that have excelled at Analytics. Also, as the course emphasizes consulting and best practices in a professional client engagement, there is a need to consider some of these best practices. Given this, the following text is recommended and optional:

- 1) The McKinsey Way, Ethan M. Rasiel, McGraw-Hill

These texts are easily purchased on-line, so these are not requested in the bookstore.

Course Meetings

As with other experiential courses, the focus is on the team project and its delivery to the sponsoring company.

Teams will meet with the Professor on a regularly and frequent basis in order to discuss the analysis, flow of work, final presentation and delivery to the sponsoring team. The class will also meet with the prescribed schedule to review concepts and themes important in being successful with the analytical consulting function and in order to provide presentations for the purpose of group learning.

All Group Meetings are to be held with the team and the Professor at a pre-defined time that works mutually. Meetings with the Professor and Client must conclude before 4:30PM on weekdays. Students who cannot make meetings in person are encouraged and welcome to join via telephone.

Pre-term activities

- Project identification
- Team formation
- Identification of Team Liaison to Client
- Identification of Team Liaison to Professor
- Client Introduction
- Project description
- Schedule first group meeting with Professor
- Schedule first client meeting with Client

Week I:

- Class Session I
 - Getting Started with ACL

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Managing Project Ambiguity
Managing Teams
Overview of the Consulting Approach
Dealing with Data, Descriptive Statistics
Using Tools: JMP, Excel, Tableau

Week II:

Group Meeting I:
Developing a Work Plan, Project Analysis
Examples of Past Analysis
Use of Graphics, Best Practices in Presentation of Data
Building Points Through Analysis

Week III:

Group Meeting II:
Preliminary Analysis of Data
Teams to bring descriptive statistics to meeting with Professor
Work Plans due to Professor

Week IV

Group Meeting III: Focus on Data and Analysis
Address questions and issues in analysis

Week V

Group Meeting IV: Prep for Midpoint Check-in

Class Session II
Mid-term progress review and **team mini-presentations**
Mid-point document due at beginning of class
Mid-point team and mid-point peer feedback due to professor

Week VI :

Group Meeting V:
Mid-point feedback, planning for next phase

Week VII

Group Meeting VI:
As per team needs

Week VIII

Group Meeting VII:
As per team needs

Week IX

Group Meeting IX:

Dry-run of presentation with Professor

Week X

Class Session III

Project Findings

Final project deliverable due to Professor and Client on last

Wednesday.

Meetings with Clients to be held and presentations made to client in person during or before final week of classes.

As in any professional consulting engagement, the students are requested to regularly meet with the client to receive input, data, direction of project goals, and feedback on the progress as needed. All clients are committed and dedicated to fulfilling the learning and business aspect of the project.

Teams may schedule additional time with the Professor as needed and as available.

Grading

Grading of the project is driven largely by the quality of the team project. The Professor will evaluate the project, its analysis, presentation, and delivery on the following major points:

- Analysis:
 - Quality of analysis (thoroughness, appropriateness)
 - Clarity and quality of model summary and description
 - Intellectual impact (was the analysis creative, novel, clever, or otherwise compelling?)
- Project Document
 - Quality of project description
 - Quality of analysis summary
 - Quality of recommendations and conclusions
 - Use of meaningful graphs, graphs, and presentation of data
- Presentation Documents
 - Quality of presentation
 - Professional impact of the presentation
 - Ability to communicate main points of the analysis and recommendations
- Team Meetings
 - Preparation
 - Organization
 - Progress

The Professor will ask the client company to provide feedback on the same above points.

Peer evaluations will also be collected from each member. Each student must rate their teammates on the following dimensions:

- Intellectual and creative contribution
- Workload and willingness to take initiative

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- Organization, preparation, and availability
- Collaboration and respect for peers

Peer evaluations will be on a 1-10 scale with 10 being excellent and 1 being poor. All peer evaluations will be treated confidentially.

All ACL students must participate, as participation is also important to make this a meaningful learning experience for all involved.

Grade Breakdown

Professor Evaluation of Final project materials and presentation:	35%
Professor Evaluation of Work plan and Mid-point review:	20%
Client Evaluation of Final project materials and presentation:	15%
Peer Evaluations and Participation:	15%
Professor Evaluation of Preparation during meetings:	15%

Role of the Professor

The Professor serves as an aide, counselor, and advisor for the team. The Professor does not conduct the analysis, but will provide detailed direction on analytical approaches. The Professor does not serve as the team liaison or representative to the client. The team must organize itself and identify such a liaison. The Professor may accompany the team to select team meetings and or participate in calls, but the Professor cannot in practically, attend all such meetings.

In the event that the client or the ACL student team encounter an incompatibility or encounter an issue, the Professor will intervene to remedy the situation.

The Professor may also resolve project assignments, as needed.

Role of the Team

The team will consist of 3 to 6 Foster MBA students working as a team to complete analysis, as defined by the client as agreed to before the start of the academic term.

The team should be mindful to control the amount of time that is required of the client. This means being prepared for meetings, having a designated liaison to schedule meetings, request information, and follow-through with next steps. This level of preparation and understanding is needed as most clients sponsor this project but do not allocate a full-time associate to work with the ACL team.

The team should expect to contribute about 400-500 hours over the 10-week period to this ACL project. This is a reasonable expectation for a team working on a project and is

consistent with other experiential and lab courses in other MBA programs. This translates to 8-10 hours per person per week.

The team will produce a white paper that documents the study, results, and recommendations. The team will also prepare a presentation and deliver it in person to the client and its team. A reduced version with emphasis on key findings is also to be presented at the last class.

Role of the Client

The client provides the real-world learning opportunity, data needed to complete the appropriate analysis, and feedback on the quality of the project and its analysis. The Client is not expected to solve the problem, but should provide ample expertise, data, and contextual information to the ACL team.

Prerequisites

All students in the ACL must have completed a statistics class. There are no other requirements.

Some FAQs:

What is the Analytical Consulting Lab?

It is a course available to Foster MBA students that are interested in the use of analytics in business. Students must take specific prerequisites and have strong academic performance in such classes to take the Analytics Consulting Lab. Students work in teams to resolve a real-work business problem using analytics.

What do you mean by Analytics?

It is meant to be broad but includes the use of specific quantitative approaches, such as regression analysis, time series analysis, forecasting, market segmentation, data mining, optimization, logistical analysis, scenario simulation, and risk analysis, as examples. In particular, we mean solving a business problem using data and applying one of these quantitative approaches.

How does this experience benefit the students?

Foster MBA students taking the ACL will work on a real-world problem under the direction of Dr. Walker. The opportunity to apply analytical theory and learn about a business, make recommendations, and bring together many aspects of their business education is unparalleled. We also ask that the students focus on how to communicate the results of analysis in the context of business decision-making. For students interested in moving to an industry to deep in analytics after graduation or developing new business skills in analytics, this course will be very attractive.

The Analytics field is one of the most demanded in the workforce and students have expressed deep interest in developing strong skills in analytics. This course meets an interest in our students and provides them an exceptional experiential learning opportunity.

How does the Client benefit from this opportunity?

The ACL is an intensive analytics elective that attracts some of our most analytically talented MBA students. It is expected that the student group of 5 will commit about 500 working hours to the project. Additionally, the student project will be overseen by Dr. Walker, who has 20 years plus experience and deep expertise in analytics and its application in business.

We expect that the project deliverables, recommendations, and report will provide direct value to your organization. However, we also believe that the project provides your organization and opportunity to determine how and where to invest in more analytics. If this includes the acquisition of more analytical talent, the project provides an excellent conduit to members of our student body that are talented and interested in this space.

How does the team work with the Client?

For the student team, the partnering company is a client. They will conduct their analysis and provide recommendations through a report and presentation in the same format and in the same manner as a consulting service. The faculty member also serves as an important liaison between the partner and the student, serving to manage time commitments and negotiate deliverables. It is expected that the student team can meet with and speak with key members of your team that can help them answer questions relevant to the analysis.

Which software will we use?

It really depends on the project and your familiarity with software packages. This course is software agnostic, meaning most software packages are acceptable. The course does not have as a goal to teach a particular package, but rather to enable analytics in a business project. You are welcome to use software of your choice. Most projects can well be completed with a combination of Excel and one statistical package. If you are unsure or unfamiliar with statistical software, we will discuss that during our first meeting. Some packages may have a minimal cost.

What about the data?

To make this experience valuable to the students and the to solve the business problem at hand, we do need access to data. It is important that the data be available before the project begins. Additionally, the project should make use of “scrubbed” data, that is data that is free of specific information that would be sensitive or otherwise governed by a law, such as social security numbers of customers or names of customers.

What types of business problems can be considered?

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As analytics is helpful in many business functions, we are open to many applications of analytics. Specific business problems in marketing, forecasting, customer segmentation, pricing, commodity analysis, logistics, risk management, operations, inventory leveling, supply chain improvement, and scenario planning are sure to provide great analytical opportunities.

Will the analysis become public?

The work between the students and your organization is considered confidential. If necessary, the students may be asked to sign a non-disclosure agreement. If this is necessary, we ask that the non-disclosure agreement be such that it does not prevent the students from seeking employment or from building on their experience gained on the project.

From time to time, such company-student projects lead to very interesting business lessons. As a leading business school, we are interested in sharing such lessons with our next generation students and business leaders. We do this through business cases. If such an opportunity exists with your project, we will seek your permission to relate the business lesson through a case study.

How to I join the Class?

First, you must meet the prerequisites. Then submit your project selections to Dr. Russell Walker upon entering the course.

Contact Information

Please contact Russell Walker, Ph.D.
Via e-mail: rwalker1@uw.edu

SPRING 2022 PROJECTS

TAMPA BAY RAYS

TAMPA BAY RAYS

SPORTS ANALYTICS

Project Scope:

- Perform a demographic and psychographic segmentation of our lead universe by leveraging the Rays' extensive database. We are trying to understand who our customers are and how they behave in order to better serve them
 - This will probably impact how we market/communicate with them both in messaging and channels as well as what product mix would accommodate most of our customers
- Ideally, we would have discussions with the participants in order to discuss what data points might be available and how are we going to perform the data handoff. We could also discuss the possibility of performing a survey in order to complement a potential psychographic segmentation

The Tampa Bay Rays are an alumni frim of the ACL!!!

UW ATHLETICS

[GO HUSKIES](#)

SPORTS ANALYTICS

This project is sponsored by the Athletic Department. Given the recent court rulings that allow collegiate athletes to earn from Name, Image, and Likeness (NIL) activities, the UW Foster MBA team will research and advise the UW Athletics team on NIL activities across conferences, teams, and events. The team will work with senior members of the UW Athletic Department.

More details on this project will be added very soon.

UW Athletics is an alumni firm of the ACL!

PWC CLIMATE CHANGE ANALYSIS

PWC SUSTAINABILITY

ENVIRONMENTAL & SUSTAINABILITY ANALYTICS

Research prompt

In 2022, climate change is already having observable effects on the environment. Earth's average global temperature has increased about 1 degree Celsius since pre-industrial times, and broad and drastic action is required to minimize climate catastrophe - not only by governments and citizens, but by companies and their stakeholders as well.

Companies around the world are undertaking ambitious initiatives to reduce their greenhouse gas footprint across Scope 1, 2 and 3 emissions - and making equally bold commitments to regulators and investors. Furthermore, some firms across a variety of industries are using the language of climate action to make broad claims about the carbon footprint of their operations and products in order to appeal to their customers (whether they be governmental, commercial, or consumer).

However, earnest efforts to reduce climate impact often compete with other business priorities, and it can be difficult to make informed decisions due to the lack of standardization, accuracy and completeness in how total GHG emissions are measured. These challenges are particularly pronounced in supply chains, where the sheer volume of actors, systems, and material flows make tracking and accountability extremely difficult.

To chart a path toward net zero emissions and communicate meaningful impact to customers and other stakeholders alike, companies must align on objective standards and methods for quantifying and communicating the overall impact of their supply chains on the climate change problem. This team at PwC is particularly interested in how companies will manage, incentivize and adapt climate sustainability performance across their supply chains.

This broad problem can be addressed from any number of perspectives, or some subset of examples given below:

1. Given the pressing need for generally accepted, interoperable standards for GHG accounting that can be shared across suppliers and buyers, what are the necessary characteristics/elements of a successful standard? Given the landscape of competing/overlapping standards, what are the strengths, weaknesses, opportunities and threats of the leading options, and how do they measure up?
2. What operational levers (e.g., supplier accountability programs, business process transformation) are most effective at driving climate sustainability across the supply chain? What can be learned from competing approaches around the world?
3. What data commonly exists already within supplier companies that can be used to calculate climate impacts of operations analytically, and where are the biggest data gaps in terms of relevance and practicality to collect? What emerging technologies (e.g. IoT, cryptocurrency, AI) should be applied to shed light on emissions reduction opportunities across the supply chain? * In cases where data is expensive or difficult to collect, how should companies approach giving value to that data? What analytical techniques or processes should stakeholders (managers, customers, investors, and others) employ to best make use of the data that is available?

*The urgency of the issue demands immediate action, so priority focus should be given to solutions with current feasibility, demonstrated effectiveness, compatibility with other business objectives and the greatest possible potential for impact.

4. What data collection practices, analytical approaches and strategic frameworks are most appropriate for modelling, forecasting and mitigating supply chain disruption that may occur as a result of climate change, especially transition risk (e.g. supply chain assets that rely on fossil fuels). How should companies communicate their resilience to these risks to investors, customers and other stakeholders?

Notes for the team:

- It is highly recommended to narrow the scope of the prompt as necessary, e.g. by focusing on a particular industry such as Consumer Packaged Goods (CPG) or Energy & Utilities.
- PwC will make a number of experts in thought leadership on this topic available for the team to interview. The team is also encouraged to leverage their diverse networks, industry contacts and publicly available data (e.g. CDP) to catalyze their thinking and support their conclusions.
- While regulatory action and taxation are both important elements in climate action, for purposes of this research question it is recommended that the team focus their efforts on options available to companies to achieve their ambitious decarbonization goals, independent of specific regulatory considerations.

Nathan is an ACL alumnus will be the main point of contact for this project!

THE CROP PROJECT

THE CROP PROJECT

FOOD & ENVIRONMENTAL ECONOMICS

THE CROP PROJECT

We are on a mission to bring regenerative crops to market.

About TCP: The Crop Project is an agricultural processing and wholesale company devoted to bringing regenerative crops to market. Regenerative crops have a compounding, beneficial effect on everything they touch, from the water and soil in which they are grown, to the community that farms them, to the health of the consumer. We work directly with small farms to transform regenerative crops into ingredients that are immediately useful to CPG companies, beginning with Atlantic Sugar Kelp.

Why Kelp: Kelp is one of the fastest growing organisms on Earth, producing an amazing amount of biomass with zero inputs. It has been used for centuries, across cultures, for food, beauty, fertilizer, and much more. It has enormous capacity to build biodiversity, capture carbon, and reduce ocean acidification, while offering tremendous functional benefits. Along the way, it's a boon to farmers, looking to diversify income with this winter crop.

Project Proposal: Help The Crop Project identify go-to-market opportunities and grow its impact by answering:

- What are potential commercial native seaweed species by growing region?
- What are the nutritional, chemical and environmental impact measures of sugar kelp and other seaweed species?
- How do those measures compare to existing commodity ingredients (soy, corn, etc.)? What are the best tools for us to easily assess seaweed nutrition / composition on an ongoing basis?
- What are the best market/channel fits for different seaweed species, based on the composition? What kind and where might a blend make sense?

Deliverables:

- Database of nutritional, chemical and environmental impact (e.g. carbon footprint, nitrogen impact, biodiversity) of sugar kelp, 3-5 other seaweed species, soy, corn, cotton and 2-3 other commodity crops
 - Environmental impact will be at a macro level, not full LCA
 - Include tangible benefits of attributes (e.g. prevents osteoporosis, easily soluble)
 - Include guidance on how to maintain and update database over time
- Assessment of which seaweed species could best substitute for which existing ingredients, and what seaweed blends would make viable substitutes.
- Recommendation on substitutes / channels to pursue and the recommended go-to-market approach, including articulation of trade-offs. Include barriers to consider and how to overcome them.

In addition to providing industry and company context, The Crop Project will engage the exec team in project discussions and offer connections to industry experts. We are open to creative approaches and excited to hear your ideas! We look forward to partnering.

Jessica is an Alumnae of the ACL!

CHANGING TASTES

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FOOD & ENVIRONMENTAL ECONOMICS

Project 1: Where Should We Eat? How Will the Long-Term Effects of COVID19 Reshape the Consumer Food Marketplace in the U.S.?

The U.S. consumer food market is in the midst of a long-term transition, which has been disrupted by our responses to COVID. For more than twenty years, Americans have spent an increasing share of all consumer food dollars on meals prepared by professionals, either in restaurants or ready to eat from grocery stores, and to do less cooking of recipes and purchase of individual ingredients. Before COVID, we had reached a point where over half our “food dollars” were spent on food cooked by professionals.

Then COVID 19 changed it all. Over 30,000 independent restaurants closed and many fear that more will close with each variant and wave of reduced occupancy or diner hesitancy. Whenever restrictions are lifted, Americans are again flocking back to restaurants, but labor shortages and supply chain disruptions have curtailed innovation in favor of “simpler menus.”

Grocery shopping also changed, with prepared food counters, “grab and go” ready to meat meals, salad bars and much else closing due to safety concerns and dealing with supply chain issues as they work harder to keep existing products on shelves more than ever, leaving less capacity for new product innovation. There’s also no sticking your hand into a tray of food at the grocery store and inventory management has taken a priority over finding shelf space for new items.

On-line grocery shopping is another COVID release valve, that so record growth during the spring of 2021 followed by sharp declines as restrictions were lifted during the summer of 2021. Few have stuck by their initial enthusiasm for online grocery shopping.

COVID also has accelerated a demographic change that supports these transitions. The Baby Boomer generation, which was most likely to cook at home, is no longer the largest by number or purchasing power. All generations decline, but the Boomers suffered more from COVID than other generations

This begs the question: over the next 3-5 years, where will we eat and who will do the cooking? And, based on that, what shall we eat? Or how are new foods successfully introduced?

For decades, the playbook for introducing new foods, producers, cuisines and other kinds of eating habits in the U.S.: have chefs at independent restaurants put something new on the menu, if it works, larger corporate restaurants copy them and offer it to millions of diners in a low risk environment: order it, see how its cooked and see if you like it. Then buy it and make it at home. In store sampling in grocery stores also helped with more familiar foods, such as items with new flavors.

With the impact of COVID how will new food products successfully enter the market, or “tastes be changed,” in the post-COVID era? And what channels or market segments should new food entrants work with to introduce their products.

That’s what this project will answer.

We have plenty of data about customer traffic and spending during COVID, and forecasts about the future of the consumer marketplace after COVID along with your best ideas and insights. We expect that by accessing third party databases like Crunchbase through UW, the team also can look at the launches by big and small food companies since March 2020, some of which “broke through” from on-line to bricks and mortar grocery stores and all which can be evaluated, as well as looking at parallels in other industries that relied on small retailers and “foot traffic” as the gateway to change.

Project 2: Certifications: Do They Create or Destroy Progress and Value?

Should food companies and brands use certifications to back up their sustainability claims? Does it lead to better business outcomes and create financial value, and does it also result in actual improvement and benefit to the environment?

Third party verifications of food have a long history in the U.S. going back to the creation of kosher certification by the sheriff and rabbi of New Amsterdam (now Manhattan) almost 500 years ago. Halal followed the same path on an accelerated basis with Malaysia now being a center for global trade in halal certified foods.

In more recent decades, the US congress and the USDA set a national standard for organic which grew an industry with a market of US\$ tens of billions while with the EU also established national and global standards for organic certification and the EU created a host of others. Third party standards like Fair Trade, Rainforest Alliance, Utz, Certified Hume and a host of others have grown in marketplace presence and more recently the Marine Stewardship Council and a handful of others are now certifying fish and seafood and reaching into the ocean.

Of interest, independent standards like MSC are also independent businesses and have granted “exceptions” to compliance in order to secure market presence with key

producers while other standards, like Kosher and Halal, are “black and white” about meeting them.

So here are the questions:

1. When a business relies on a third-party standard, does it result in better business outcomes? Does it help market entry, acceptance, sales, etc.? Does it affect brand value (do you trust the brand or the mark of the certifier), etc.
2. When they do so, does it drive improvement in environmental, animal welfare or other relevant areas of performance? Or are the standards more likely to confirm current practices.
3. Is there a model that works better than others (such as government managed, independent, etc.) in achieving sustainability outcomes?

Changing Tastes in an Alumni firm of the ACL!!!

RUBICON

[HTTPS://WWW.RUBICON.COM](https://www.rubicon.com)

ENVIRONMENTAL ANALYTICS



About Rubicon: *Rubicon is a software company that provides smart waste and recycling solutions for businesses and governments. Using technology to drive environmental innovation, the company helps turn businesses into more sustainable enterprises, and neighborhoods into greener and smarter places to live and work. Rubicon's mission is to end waste, in all its forms, by helping its partners find economic value in their waste streams and confidently execute on their sustainability goals.*

Project Proposal: Accelerating decarbonization through the circular economy

Growing awareness of climate-related risks, changing consumer demand, and legislative and regulatory activity may result in growing customer demand for sustainable services -- such as commodities sales, organics services, specialized recycling, and reuse offerings. Such a trend would present favorable opportunities to our business, given the margins from our portfolio of circular services are higher than those from landfill services.

In 2020 Rubicon saw an uptick in customer requests for sustainability and diversion services, resulting in significant revenue growth of our sustainability service portfolio. We believe that, in the near future, these services may likely represent our fastest growing revenue streams and greatest drivers of profitability, accordingly, have made expansion of our circular economy services portfolio a central pillar of our growth/go-to-market strategy.

As an example, as addressing food waste has become a more prominent climate issue for many companies, we have made aggressive growth of our organics recycling services a priority in anticipation of growing demand -- establishing new partnerships, expanding our scale to achieve better service costs, diversifying the types of services (anaerobic digestion, composting, animal feed) we are able to offer.

Using market data and conversations with internal stakeholders, we would like students to identify and prioritize go-to-market strategies for Rubicon's circular economy (non-landfill) services. Key questions needing to be answered include:

- Based on Rubicon's brand positioning and existing capabilities, how can the company efficiently expand its sustainability product and service offerings?
- What additional capabilities should the organization develop to meet future demand for circular economy services? Should these be internal or outsourced?
- What markets should the company be targeting?
- What types of key partnerships are most critical to the success of this strategy(ies)?

CONSCIOUSBRANDS

[HTTPS://CONSCIOUSBRANDS.COM](https://consciousbrands.com)

FOOD / SUSTAINABILITY ECONOMICS

Project Name: Data Strategy and Financial Analytics + Projections

Principle Background:

Rob's passion for business has found him at the pioneering phase of many new and exciting industries, including the Internet and IT industry in Calgary, self-producing a traveling, internet-based vegan cooking show, and becoming president and owner of an organic food manufacturing company called Friendly Foods. He now uses that experience to help businesses grow and thrive by showing them the inherent value of taking their economic, human and natural capital into account, and working with all of those resources. Rob is also a sustainability consultant with Imaginal Collective, a co-creator of Secrets of B Corp Consulting, and a co-creator of Conscious Crypto.

Organization Overview:

Our diagnostic software helps companies to uncover holistic leverage points to be a better-for-the-world company. The Conscious Brands Assessment Tool is designed to help organizations' review and develop their self-awareness and assess how that awareness is showing up through their brand and practices by listening to their stakeholders. We build capacity and are catalysts for companies to be the businesses the future requires of us. Since 2006, we have energized customized projects that foster strategic action and collaborative learning in moving towards being a Conscious Brand.

At the end off the semester, what is the ONE main question that you would like the student team to have helped answer?

How Conscious Brands can optimize its go-to-market strategy in open software usage agreement to related consulting firms.

Detailed Description of the situation and challenges that you would like the student team to work on.

1. Creation of a open software usage agreement

- the specifics of the data governance between Conscious Brands and affiliated partners, including data privacy and confidentiality forms agreements. The division of responsibility between partners and Conscious Brands.
- the optimal pricing logistics/administration to be used for software usage with affiliated partners.
- gaining CBI Assessment model clarity and validation.
- standardization and automation of CRM processes based on preliminary trial runs

2. Data analytics and financial optimization

- research into further applications of the data gathered from the software; uses for consultants, future/untapped uses, validation that this data is valuable.

3. Data privacy

- used in an anonymous, non-extractive way, and in align with progressive privacy policies.
- Building of financial projections and goals for the go-to-market strategy of the software. What is the long-term viability of the usage agreements of the software, what goals need to be met, etc.

Challenges associated with this:

- This software is fairly and/or entirely unique in the data it gathers, which makes it difficult to compare to competitors (blue ocean strategy).
- The interest/knowledge surrounding purpose-driven business is still in earlier innovation stage, but want to remain authentic in our communications (not following trendy language).
- Our methodology: Conscious Brands has the objective of co-creating a community of consultants around the software, so the financial model should be geared around profitability for all participants.

What are 1-2 outcomes that you would like to see from this project?

1. A working framework of open usage of the software and relationships that can be built upon it.
2. Data governance recommendations, financial processes and modeling to validate the current go-to-market strategy.

Resources available for project:

All previous data from past users of the software. Access to Conscious Brands relevant database information (past projects, documentation of test partnerships, strategy/planning sheets, meeting records, past market research.) Access to Conscious Brands employees for interview, consultation on project.

ELEMENT BARS

WWW.ELEMENTBARS.COM

CUSTOMER AND PRODUCTION ANALYTICS

In the food industry, the FDA sets a standard maximum allowable variance (MAV) for how much the actual net weight of a product is permitted to be under the declared label weight. Typical MAV for a product is around 9%. Food manufactures work to find an optimal balance to safely avoiding falling under this weight, while also producing the most output possible. As a food bar manufacturer, the initial goal would be to identify the mean of four of our most popular bars (listed below) vs the declared label weight of 26gs. Internal records of the daily baked averages for each bar can be used to sample the population and estimate the mean. Provide confidence intervals to show the range of the true mean. The estimated means and data provided can be used to find trends in yield and profit, and reveal opportunities for improvement. Data for the four food bars that will be provided: final production yields, daily baked averages, ingredient cost, rate, water activity

Legacy

Apple Spinach

Banana Carrot

Expansion

Blueberry Oatmeal

Banana Strawberry Sun butter

Some questions to consider:

How do the means of the different bars vary?

Is there a correlation to yield quantity based on what bar is being produced?

How does that relate to the mean? Use production yield data to help calculate.

What bars generate the most profit based on ingredient cost, rate, yield, labor cost?

The four bars can be placed in to two separate categories, Legacy and Expansion. The most notable difference between legacy bars and expansion is the expansion bars have puree in them and the legacy do not. Water activity is historically higher in the bars containing puree. Are there noticeable trends in the data between the two categories?

Element Bars in an Alumni firm of the ACL!!!

Founder, Jonathan Miller, is a Shark Tank Winner – check him out!

DAVID STINE FURNITURE

STINE WOODWORKING

SOCIAL MEDIA, DIGITAL MARKETING ANALYSIS



Sustainable, Environmentally Conscious Bespoke Furniture

About Us

We specialize in natural wood furniture handcrafted from sustainably harvested American hardwoods. Our work is offered to the trade and to the public. The work is high end; our average price point is \$3,500. We've been in business 25 years. We have three full-time employees and two part-time employees.

Strengths

We are vertically integrated. We own the land where we harvest the wood; the sawmills where we mill the wood; the kilns where we dry the wood; the seasoning and storage sheds where we store the wood; and the wood shop and showroom. We have no debt.

We stay in our lane and play to our strengths: We do not do cabinetry or small items (like boxes). We stick to large, flat surfaces like tables, coffee tables, benches, etc. that come in at a high price point.

We have a devoted following on Instagram.

We have a strong foothold in the St. Louis area and have developed a strong commercial/trade clientele.

Weaknesses

We have a very limited budget for marketing.

We can no longer rely on serendipity and eyeballs at large shows, like the Architectural Digest Show in New York or the One-of-a-Kind Show in Chicago, which we stopped doing during covid. Despite boosting posts and following algorithms, our Instagram feed is not growing nearly as much as our competitors, who have hundreds of thousands of followers while we have just 45,000.

Problem Statement

We seek to better understand the landscape of social media and marketing for a small company like ours.

We seek to better understand how people shop for high-end custom furniture and how we can capture that.

We seek to better understand Google Analytics, our customer buyer data, and our social media outreach so that we can market our work more effectively.

What are the sales and marketing opportunities we are missing?

We envision the students helping us wade through the data to better understand how our marketing efforts are — or are not — paying off. We also envision the students helping us to develop data on our buyers so that we may market more effectively. As resources and expertise are limited, we are interested in creative ways to follow up and utilize this information in cost-effective ways.

David Stine Furniture is an Alumni firm of the ACL!!!

David Stine Furniture

Visit our [Website](#) for more information.

[Instagram](#) • [Facebook](#) • [YouTube](#)

SEATTLE UNIVERSAL MATH MUSEUM

SEATTLEMATHMUSEUM.ORG

NON-FOR-PROFIT & COMMUNITY ANALYTICS



Project Description for the Analytical Consulting Lab

After years of tireless efforts to get kids interested and engaged in math classes, Tracy, a passionate math teacher, was frustrated with the lack of field trip opportunities for her students: "Why do my colleagues have the opportunity to take kids to the art, history, natural history, and science museums, but I have nowhere to take my kids to play and experiment with math?? How are we supposed to help our kids appreciate the universal applications of math if there is no place that makes math fun, accessible, and engaging?"

SUMM years later, [Tracy Drinkwater](#) founded [Seattle Universal Math Museum](#) (SUMM) – a nonprofit organization that has a mission to spark each and every person to love math. With such a mission, it was not hard to find passionate supporters, build a board of directors, and enlist volunteers. Now, all together, we are building a math museum – to create a better future where kids can become anything they want through math.

What have we done so far?

- We found over 30 passionate and talented individuals who comprise our [board of directors](#), [our advisory board](#), and a pool of volunteers who work on multiple committees, including exhibits, programs, and communications committees;
- We launched a Lunch + Learn bi-weekly virtual series where our founder, Tracy Drinkwater, tells our story, shares our progress, and spreads the passion for SUMM with the community;
- We started our seed fundraising stage at the end of the summer with the goal to raise \$150,000, and are already more than one third into the goal;
- We curated and displayed [an exhibit of mathematically-inspired art](#) at a local gallery and ran our first awareness and fundraising event at the exhibition;
- We partnered with several local organizations, such as, e.g., Prime Factor Math Circle, and ran and planned summ joint programs to raise awareness about SUMM and raise funds;
- We started working with [a design strategy consulting firm](#) and completed our first workshop, where we created a project timeline, built an understanding of what it takes to build a museum (in sq. f. and \$), and put together our preliminary project program.



What's next?

As we are working on the exhibit and concept development, we need help forming our strategy, business model, and business plan. In particular, should we focus on static physical presence, or should we supplement it with traveling exhibits, outdoor exhibits, museum van, etc.? How can we take advantage of what we've all learned and grown accustomed to during the pandemic, and create a hybrid model, such that the museum offers virtual tours, virtual programs, etc? What should be the revenue model (e.g. % fundraised, % from revenue-generating programs, rental, etc)? What is an effective outreach and marketing plan? What programs should we offer? What data should we collect and what KPIs should we use to help us make these decisions? For example, we have a good relationship with [MoMATH](#), the only other math museum in the country, and they are willing to share data with us - if you formulate a data request, we should be able to get the requested data. Finally, what are the philanthropic opportunities (foundations, family offices, individuals, corporations) we should target and how our strategy can be supported by fundraising (which we perceive to be the main revenue source).

There are many questions that need to be answered and we will work with you to formulate the project scope with your interest in mind during the initial meeting. [Dr. Masha Shunko](#), Associate Professor of Operations Management at Foster School of Business, is one of the board members at SUMM, and will be happy to talk to you about any questions you have about the project and SUMM. The project team will be invited to and encouraged to participate in SUMM events (next one scheduled Nov 5). The outcome of the project will be a presentation to the Board with key recommendations and reference materials.