Background on the Risk Lab

The famous American Economist, Frank Knight said, “Profit is the reward for taking risk.” Dr. Knight argues that profit and risk are intertwined. In seeking profits, we must therefore seek risks that are attractive. In the Risk Lab, students examine the attractiveness of risk in a real-world investment decision.

The Risk Lab is an experiential learning course, focused on evaluation of risks facing a company or business venture. Students will develop skills in performing risk evaluations in real-world settings. Special emphasis will be given to the investment in the venture, the risks and their impacts, and how to best communicate the impacts of risk when evaluating an investment decision.

Projects in the Risk Lab are sponsored by companies, offering students exposure to real-world business challenges, complete with complexities and other realities. The focus of evaluation in these real-world settings is not necessarily to avoid risk or even to directly reduce it, but rather to understand the risk and evaluate its properties, for the purpose of investment consideration. Such examinations may include, for instance, the impact of international economic changes, market trends, policy adjustments, and competitive action, etc. on the enterprise and its profit. The goal of the class is to develop skills in identifying risks, evaluating the nature and impact of risks, and gaining experience in communicating the impact of those risks in the context of an investment decisions.

Details on projects, companies, and information about selecting projects is available at:
http://kellogg.northwestern.edu/faculty/walker/htm/rl

READ THIS!!!!! Course Expectations

Risk Lab is an experiential class, with a strong focus on the application of risk management and market measurement in a real-world, client-facing, consulting environment. It provides an excellent opportunity for Kellogg MBA students to get real-world experience in consulting and in
applying risk management and risk 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. This is a class on the application of risk management 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.
- 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 risk management and risk measurement 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 Risk Lab is unique, real, and driven by an actual client-facing challenge or opportunity. Your project will vary from others. Projects have different goals, different risk-focused opportunities, and clearly different clients. You can apply for the project(s) that most interests you.
- Risk Lab is a lot of work, a lot of learning, and a lot of fun. Many students consider it a top Kellogg experience. Be sure that your schedule, life, and other commitments permit you to get the most from the class.

Course Details

The Risk Lab is offered as MECN 920, a full credit course.

Projects in the Risk Lab are sponsored by Kellogg alumni, at very senior levels in their firms. Students taking the Risk Lab are assured a strong learning experience and a commitment from the firm to provide access to decision makers and information that will make the experience meaningful.

Details on projects, companies, and information about selecting projects is available at the end of this document.

Application Process

Students interested in the Risk Lab must submit an application for project selection.

The application permits optimal project assignment, based on student goals, client needs, and project requirements.
Applications are accepted by the Kellogg Experiential Learning system. Students should apply for MECN 920 via the Kellogg Experiential Learning System, at:

https://www4.kellogg.northwestern.edu/el/

Applications open: June 29
Applications close: July 13
Decisions to students on application status: July 19
Round 1 Bidding begins: July 20

- Resume or CV
- List of courses taken at Kellogg with grades
- Description of any professional Analytical Experience (no specific experience needed)
- Description of any professional Investment Experience (no specific experience needed)
- Reasons for taking the Risk Lab
- Goals for taking the Risk Lab
- Project Choice #1
- Project Choice #2
- Any fellow desired Kellogg student for a team (limit of one student to specify). Team member preference is only considered if both people select each other.

Student teams that are fully formed (a team of 4) are encouraged and will be given special preference. If you are forming a team and submitting as a team, do make that clear in the application and stress how your team has come to select the project and how it meets your goals.

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

**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.

**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 on the risk evaluation, 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 developing a risk evaluation 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 4PM on weekdays. PTMBA students are welcome to the class, but cautioned on this scheduling constraint. PTMBA are further recommended to form teams.

Our class sessions are scheduled for Wednesday from 1:30PM to 3:00PM

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 (Meeting as a Class)
Developing a Risk Evaluation of an Enterprise or Business Venture

Special Session on Corporate Research with NWU-Kellogg Librarian
1:30-3:00

Week II:
Group Meeting I:
Developing a Work Plan, Project Analysis
Evaluation of Relevant Market and Economic Data

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
Class Session II (Meeting as a Class)
Mid-term progress review and team mini-presentations
Mid-point document due at beginning of class

Week VI
Group Meeting IV:
Mid-point feedback, planning for next phase

Week VII
Group Meeting V:
Used as needed per team project

Week VIII
Group Meeting VI:
Used as needed per team project

Week IX
Group Meeting VII:
Dry-run of presentation with Professor

Week X
Class Session III (Class Meeting)
Project Findings
Final project deliverable due to Professor and Client
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
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
- Organization, preparation, and availability
- Collaboration and respect for peers

Required questions are as follows:

- What did you and each person do well?
- What would you do differently going forward and would you ask of each team member going forward?

Peer Evaluations will be collected at the midpoint presentation and also at the end of the class. This is to provide teams and individuals an opportunity to address any team dynamic issues. 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 Risk Lab 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: 30%
Professor Evaluation of Work plan and Mid-point review: 20%
Client Evaluation of Final project materials and presentation: 10%
Peer Evaluations (*): 20%
Professor Evaluation of Preparation during meetings and class: 20%

* Note: The Professor reserves the right to adjust any student’s final grade up or down by a full letter grade in the event that the student’s peers unanimously score his or her contributions significantly above or below the overall team effort.

**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 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 Risk Lab 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 or 4 Kellogg 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 Risk Lab team.

The team should expect to contribute about 300-400 hours over the 10-week period to this Risk Lab project. This is a reasonable expectation for a team working on a project and is consistent with other experiential and lab courses at Kellogg. 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 expect to solve the problem, but should provide ample expertise, data, and contextual information to the Risk Lab team. The business challenge or opportunity provided by the client will reflect a real-world investment decision with risk evaluation core to the consideration of the risk.

**Prerequisites**

All students in the Risk Lab must have completed DECS core and have proficiency in spreadsheets. Your enrollment and selection of the project is subject to the approval of the Professor, based on courses taken and general performance in analytical courses.

**Some FAQs:**

**What is the Risk Lab?**
It is a course available to Kellogg MBA students that are interested in developing a skill in the evaluation of risks.

**What do you mean by Risk?**
The consideration of risk is holistic. The risk evaluation of a business or venture may include many or a few key specific risks. Teams are not asked with managing the risk or even reducing the risk, but evaluating the risk and its attractiveness for investment.

**How can PTMBA and Saturday MBA Students participate?**

The Risk Lab is open to PTMBA and Saturday MBA students on a limited basis, subject to all meetings with the Client and Professor being conducted during normal business hours, which are taken as before 4PM on weekdays only. Please contact Dr. Russell Walker on any questions regarding your interest on the course.

**How does this experience benefit the students?**

Kellogg MBA students taking the risk Lab will work on a real-world challenge under the direction of a Kellogg faculty member. 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.

**Majors that this supports**

Analytical Consulting Major
Others may be possible based on the project nature

**How does the Client benefit from this opportunity?**

The Risk Lab is an intensive experiential elective that attracts some of our most analytically talented MBA students. It is expected that the student group will commit about 400 working hours to the project. Additionally, the student project will be overseen by a Kellogg faculty member that has expertise in risk evaluation 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?**

Most of the analysis will be done in a spreadsheet environment.
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. Most projects in Risk Lab are “market assessments” or firm assessments, conducted as an analyst might from the outside. Part of the project and learning experience is to identify the needed data and assemble it from public and industry sources. Specifics on the projects will be reviewed in detail during the class.

Students will be expected to research data on markets, for instance, through the Northwestern Library.

What types of business problems can be considered?
As the class in focused on developing skills in risk evaluation, most business challenges will include some evaluation of a market or venture and the risks that could make the investment unpalatable. Projects might include risk evaluations of: market entry, alternative or novel assets, operational systems, partnerships, or market-changing products.

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 application to the Kellogg Experiential Learning application tool before the deadline (see above). The application is used to build teams, assign you to one of your top project choices.

Contact Information
Please contact Russell Walker, Ph.D. Via e-mail at russell-walker@kellogg.northwestern.edu or via phone at +1 847 467 2148.
Welcome the Analytical Consulting Lab!

In the following pages, you will find candidate projects from sponsoring companies under the Risk Lab (MECN 920) for Fall 2018.

The projects listed include working with actual company data, developing meaningful analytical models for managerial decision-making, and presenting results and recommendations to company executives. Most projects will require some level of Non-Disclosure Agreement (NDA) with the sponsoring company.

**A maximum of six projects, each with up to 4 members per team will be selected from the applications of teams. The following list includes more than 6 projects, allowing teams to select their most desired projects. No more than 6 projects will be selected, however. Teams should provide information on why they desire the selected projects.**

More information about the class can be found at its website:
http://kellogg.northwestern.edu/faculty/walker/htm/acl/

Please feel free to contact me at
847 467 2148 or russell-walker@kellogg.northwestern.edu
with any questions and interest

Thanks for your interest.

Russell Walker, Ph.D.
Clinical Associate Professor
Kellogg School of Management
Northwestern University
Name: Creation of Macro Risk Model for Capital + SAFI

1. Background of Capital + SAFI

Capital + SAFI is an independent asset management firm, leading the closed end funds in Bolivia. Currently we manage four closed end funds with assets under management of USD 400 MM. These investment funds meet the following specific objectives:

- **Sembrar Micro Capital**: main purpose is to fund with private debt small micro finance entities.
- **Sembrar Alimentario**: the main purpose is to fund with private debt companies engaged in the food industry.
- **Sembrar Productivo**: has the objective of promoting a wide diversity of local economy fields with private debt.
- **Sembrar Exportador**: has two primary objectives, to support exporting firms in Bolivia with private debt and to generate additional value with cross border investments in ETFs and fixed income (sovereign and corporate).

Our management team has an average experience of 20 years in the management industry, distribution, asset management, corporate finance, private equity/mezzanine finance and structured trade finance.

2. Objective of the Project

Assessment of the macro risks that could affect the business model of Capital + SAFI or any major risks that could disturb the company’s long-term positioning and performance (identification of key risk factors that may impact our business). In order to create value, we need to manage risk detecting how risk could affect our business. The key risk that may be assessed could be: change in economic variables, technological, regulatory, competition and changes in capital markets.

3. Expected Outcomes

- Assessment model of risk trends in terms of likelihood and impact
- Key Risk Indicators (KRIs) in order to monitor changes in the levels of risk exposure to detect warning signs, prevent crises and mitigate them in time.
Stress testing on the performance of the company and the investments funds under management.

Scenario and Simulation Assessments

*Capital Safi is an Alumnus Firm of many Kellogg Lab Classes!*
Moore & Warner Farm Management
www.moore-warner.com

About the firm
For over 160 years and six generations, Moore & Warner and its predecessor family entities have owned and managed farmland assets throughout the American Midwest and Great Plains. Today, Moore & Warner guides the acquisition and management of direct farm holdings for families, family offices, private investors, and institutions who prioritize the long-term wealth generation of steady-handed stewardship and progressive management. Moore & Warner also provides expert consulting services and project support to private equity, venture capital, and corporate clients who require the domain expertise and on-farm perspective to contextualize rapidly evolving opportunities in agtech, ag big data, and row crop production systems.

Project Description: Agricultural Land Evaluation Modeling

The volatility of today’s commodity markets has increased the importance of commodity risk management and hedging for the farmers and landowners who derive their livelihoods from grain production. That would take

1) The global Supply & Demand data on grain commodities (such as corn, soybean, and wheat)
2) Corresponding commodity price regimes (such as the current low commodity price regime versus the recent high commodity price regime of a few years ago
3) Risk-driven model and market assumptions on direct input prices,
4) Projections for crop yield increases due to technology and crop breeding,
5) Price basis data
6) An outlook on some set of other factors (e.g governmental policy, crop insurance, machinery expense, labor).

The output is a risk-driven evaluation of the price of agricultural land, and would be used for pricing of such assets.

The project is open to further exploration based on time and interest of the team. This opportunity is sponsored by Jonah Kolb ’13 who is also an alumnus of Risk Lab and founding leader of the Kellogg Food and Agribusiness Club. He is a great leader in agribusiness.

Moore and Warner is an alumni firm of the Risk Lab!
Project

Food Industry Innovation
Food is one of the core industries besides energy and healthcare. The industry is not only challenged by meeting the massively growing demand on top of the short supply today but is under pressure from the changing consumer expectations and preferences.

The project will explore use of AI, IoT and technology in helping food industry meet the current challenges and innovate to meet the new expectations and demands of the next generation of population. It will understand the existing challenges plus the future predictions on the consumer behaviors. Explore and imagine potential future scenarios and how advancements on the AI and technology can potentially address the scenarios. Focus will be on Farm-to-Fork value chain and the risks posed by innovation and technology and how to best leverage these going forward.

Essentially, the food players are competing in a “Red Ocean” marketplace. This project would leverage a Design-Led Innovation approach to brainstorming how an organization within this industry could transform themselves, their marketplace, or their industry to drive value for their consumers and shareholders, while accounting for risks in such a transformation. We’ll look across current innovations within and outside their industry in terms of new business models, value migrations, consumer trends and patterns. We’ll also look into advances in technologies in areas such as predictive analytics, cloud computing, artificial intelligence, bots, social networking, and mixed reality. From our list of ideas, we’ll evaluate each based on risks, investments required, and potential impact to shareholders, consumers, and their value chain.

Microsoft is an alumni firm of the Risk Lab!
Risk Assignment

To evaluate a firm’s readiness and risk for transformation in the wake of AI, fake news, and the Facebook/Cambridge Analytica episode.

In the wake of the significant rise AI propaganda risk exposed vividly through Facebook and Cambridge Analytica in the political sphere, commercial concerns for companies in every sector have skyrocketed. Emotional manipulation and fake news amplified by bots damages corporate value in an instant as short sellers, competitors, and nation states swarm. From artificially inflating the impact of an event to fundamentally incorrect information, digitized warfare is now a leading global threat. A large client (to be named), has requested the following:

- A full audit this new commercial threat and its implications
- Brief examples, analysis, and insights on companies that have been targeted
- Risk metrics for evaluating probability, financial impact, and reputational damage
- Risk management framework for a proactive approach to fast growing threat

*Harlan Loeb and Edelman are alumni of the Risk Lab!*
Menus of Change
www.MenusofChange.org

Project Descriptions
There are multiple projects available with Menus of Change, a partnership between the Harvard School of Public Health and the Culinary Institute of America. Each looks at a critical input to the world’s food supply. Risks associated with the use, availability, pricing, and environmental impact follow and will drive the risk-decision approach to the use of these food inputs.

This project is sponsored by Arlin Wasserman, a Founder and Director of the Menus of Change and sponsor of previous Risk Lab projects.

Project 1: A New Food World: Can the Best Known Early Stage companies all succeed…and what happens if they do?
In recent years, food is one of the most active areas for scaling up new and disruptive business models and attracting the interest and support of investors. And business and food media are full of announcements about companies that intend to dramatically change how we eat, or at least a portion of us eat some of the time. From meal kit delivery businesses like Blue Apron, Amazon, Chef Jet and Hello Fresh that intend to deliver complete meals to our homes and replace both restaurants and grocery stores, companies like Sweet Greens or Roti that intend to be the next Chipotle of one type of cuisine or another, BrightFarms and AeroFrams that will change our relationship to salad (and leafy greens) to Shake Shack and Fat Burger which intend to make their better burgers so irresistible we eat them more often, along with a host of other business models that are about delivering a meal that is somewhere between partly assembled and fully cooked and ready to eat. So the question is: if all this disruption occurs and these startups achieve what they’ve promised their investors and the market, how will we eat, what will our dietary patterns or habits look like, what will happen to larger legacy companies, and are there enough eating opportunities to go around?

Project 2: Ingredient (Bio)Diversity and Shareholder Returns
Eating a wider variety of food contributes to better health and raising a greater diversity of crops and animals also supports greater biodiversity and a more resilient agriculture sector, but in recent decades our diet has narrowed to a handful of crops with significant implications for the health of agricultural ecosystems and our planet. With Americans spending a larger share of the food dollars than ever before to eat meals prepared by business and culinary professionals, either in a restaurant or to bring home, more of the choices about ingredients are now in the hands of business. But is ingredient diversity, or biodiversity, also good business? That’s the question to answer by looking at the menus and financial performance of the largest publicly traded restaurant companies and seeing if a correlation exists between a greater diversity of
ingredients and key measure of performance like (sales growth, shareholder performance, same store sales, and shareholder return, and what that can tell us about the business case for changing menus in order to maintain our ecosystem

Project 3: Genetically Modified Organisms (GMOs): Understanding Value Creation in the GMO and agricultural technology segment
A recent study by the USDA Economic Research Service concluded that GMO soy and corn have not increased per acre yields over the past two decade but did increase the use of glyphosate, a chemical pesticide in Round Up that is now detected in breast milk and tentatively linked to the rise of gluten intolerance (not a major health concern, but noteworthy). The larger issue is that GMOs have created patentable intellectual property in the agriculture sector, which previously lacked vehicles to create value through information. If not on the field, then where is wealth shifting or being created by the advent of GMOs among companies that sit in the farm input to major food production/processing supply chain. How as intellectual property as a share of valuation shifted among supply chain segments, and/or has the introduction of patentable intellectual property created new value.

Teams should specify the project(s) of their choice.

MenuofChange.org is an alumni firm of the Risk Lab!
The Institute of EthnoMedicine

www.ethnomedicine.org

About the Project

The research of the Institute of EthnoMedicine has showed that cyanobacteria caused various neurological diseases. Cyanobacteria are photosynthetic bacteria of ancient date in the geological record. It is believed that cyanobacteria played a major role in generating the oxygen atmosphere of the earth. These cyanobacteria also occur in water bodies, like lakes and in particular, show large bloom cycles in the Great Lakes.

Neurological diseases that are believed to be caused by or otherwise amplified by cyanobacteria include ALS, Alzheimer's, Parkinson's and other tangle diseases. Data collected show a larger than expected occurrence of Alzheimer’s in various parts of the US that use water supplies subject to cyanobacteria occurrence.

Due to the molecular size of the neurotoxin originating from cyanobacteria, most common water treatment processes do not adequately remove the neurotoxin from water. The Institute of EthnoMedicine has studied the neurotoxin, originating from cyanobacteria, and believed to be a factor in Alzheimer’s disease and other neurological diseases and has developed a patented filtration process that would remove the neurotoxin molecules from drinking water. This project will examine the economics developing and selling such a filter. As the Institute of EthnoMedicine desires to learn more about the presence of cyanobacteria in drinking supplies and its role in neurological diseases, learning filtration deployment will be focused on providing a means for additional data capture.

This project involves building a business case, economic evaluation, deployment recommendations for the filter, and marketing messaging for the Institute of EthnoMedicine.

Given that cyanobacteria is common in northern lakes, including the Great Lakes during certain period of the year, the millions of people that drink water from these lakes are potentially at elevated risk for neurological disease. This project will focus on identification of the populations that are also at risk and suitable for use of the newly developed water filter system.

About the Institute of EthnoMedicine

"We have only one wish at the Institute for EthnoMedicine: to discover new treatments for serious illnesses. This focus has led to the discovery of two promising new drugs for ALS, Alzheimer's, Parkinson's and other tangle diseases. We have a third drug in development. Our novel path to discovery has been exciting. Each step of this path, beginning in Guam, has brought us closer to a cure." - Paul Alan Cox, Ph.D., Executive Director

The mission of the Institute for EthnoMedicine is to search for new cures by studying patterns of wellness and disease among indigenous peoples.

A major research initiative at the Institute is to find and fight the causes of ALS and other motor neuron diseases. ALS (Amyotrophic Lateral Sclerosis), sometimes known as Lou Gehrig’s disease, is characterized by death of motor neurons and muscle atrophy. Although ALS occurs at about the annual frequency of multiple sclerosis (MS), because of the lethal nature of the disease,
it appears to be rarer since at any one time there only 25,000 patients living in the United States. Well-known examples of persons living with ALS include physicist Stephen Hawking, as well as the courageous professor with ALS portrayed in Mitch Albom’s best-selling book, Tuesdays with Morrie.

The Institute operates a state-of-the-art Research Center in Jackson Hole, Wyoming. The Institute also maintains a close association with the University of Miami Miller School of Medicine, the University of Dundee, Scotland, Portsmouth University, the University of Hawaii at Manoa, Chiba University, Japan, Stockholm University, and the University of California, Berkeley. The Institute collaborates with anthropologists, botanists, chemists, linguists, microbiologists, oceanographers, neurobiologists, neurologists, and other physicians and scientists throughout the world.
Element Bars

WWW.ELEMENTBARS.COM

We are a custom energy bar company located in Chicago. Started in 2008, the company originally allowed customers to create their own custom energy bar by selecting from all natural and organic ingredients and then naming their own bar. As the company grew, 99% of revenue now comes from contract manufacturing granola and protein bars for other brands that are nationally distributed.

The Founder and CEO Jonathan Miller is a Kellogg alum from the Class of 2008. We have worked with several students from Kellogg – including hiring summer interns and serving as clients for other class projects.

The Analytical Consulting Lab provides another great opportunity to provide students with rewarding experiences while allowing Element Bars to leverage student skills. Below are 2 projects of interest.

Project

As a manufacturer, we are considering developing the capability of doing higher protein bars similar to Quest. This poses new risks from being in a new market, using new ingredients, and selling to a new customer segment. What are these risks? And how can these be managed. This project would include stocking new ingredients (subject to minimum order quantities), using new machines (different through-puts), and different production speeds. The output would be an Excel model that cost and benefit of entering this market that evaluates the risk. The data we can provide includes ingredient cost, machine cost, and rough market estimates (but these will need to be refined by the client team).

Element Bars is an alumni firm of Risk Lab!
About:
HighTower is a national advisor-owned financial services company serving high-net-worth individuals and institutional clients from our headquarters in Chicago and corporate centers in New York and San Francisco as well as branch offices nationwide. Our advisors are experienced investment professionals with large and established advisory practices.

By reinventing how advisors on the front lines of wealth management can best serve and protect investors, HighTower has created a financial services business model in a ground-breaking class all its own.

Unlike integrated brokerage firms designed to build and distribute financial products – which drives profitability for the firm, but not necessarily returns for the clients – HighTower puts financial advice at the center of its business model.

Open Source and Employee-Owned
HighTower’s unique open source model means the entire financial services industry competes for our clients’ business. The HighTower tool chest includes resources, research and technology. And as an employee-owned firm, HighTower team members have an equity stake in the firm and a vested say in how the business evolves.

HighTower’s autonomy, combined with our access to Wall Street sophistication, truly sets us apart.

Project Evaluation of Equity Investments in the US and globally

The global economy is in unique situation. Energy prices are low and according to many forecasters, can be expected to be low for many years. Interest rates are low and in fact some economies in the developed work are seeing deflationary pressures. Agricultural commodities have deflated in recent years. Essentially, costs to operate businesses are low, but earnings and growth are absent in many industries. Technology firms have enjoyed rapid increases in stock prices recently and investors have been very bullish on this sector. China’s annual percent GDP growth is higher than the US or Europe, but it is slowing.

The team will examine the conundrum of the US and global economy for strategies to invest in equities. The task is to develop a thoughtful, risk-driven, approach to considering broad industry or sector investments (no necessarily individual firms). Moreover, the approach should be compelling and explain how current and changing marco-economic and demographic realities will likely impact the investments.

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