



SPRING 2016 ANALYTICAL CONSULTING LAB: DECS 915

Department of Managerial Economics and Decision Sciences

Kellogg School of Management • Northwestern University

Professor: Russell Walker

ANALYTICAL CONSULTING LAB CANDIDATE PROJECTS SPRING 2016

Welcome to the Analytical Consulting Lab!

In the following pages, you will find candidate projects from sponsoring companies under the Analytical Consulting Lab (DECS 915) for Spring 2016.

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.

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



SPRING 2016 ANALYTICAL CONSULTING LAB: DECS 915

Department of Managerial Economics and Decision Sciences

Kellogg School of Management • Northwestern University

Professor: Russell Walker

THE E15 GROUP- NHL PLAYER ANALYTICS PROJECT WWW.E15.COM

E15 Background

E15 is a next-generation analytics and emerging technology company that brings unmatched industry intelligence and cutting edge analytics to sports, entertainment, hospitality and retail industries to help companies make forward-looking decisions to benefit their business, fans and customers.

Our parent company, Levy Restaurants, saw firsthand the incredible appetite for data and analytics support from its partners. Teams began coming to us for needs outside of food and beverage. E15 was a natural next step in expanding our capabilities to support these industries against an unmet need.

Project Description

While sabermetrics is tremendously advanced in baseball and to a smaller extent, basketball, it is still in its infancy in hockey. At E15, we feel as though part of the reason for this is a lack of available data, in particular, around passing. E15 is working with an NHL team to understand and quantify the value of passing as it relates to player valuation, team strategy, and overall impact on the game. Outside of the standard assist marked by NHL staff, very little data related to passing currently exists. This project will include watching game tape and marking passes, but most of the focus will be on analyzing the data we produce to assess value. This might entail creating new statistics or developing a toolkit to help front offices quantify player value in a meaningful way. Your analysis may include excel or SQL modeling and Tableau visualization. An NDA will be required and the project may continue into the summer if there is interest.

E15 Contacts

Sandeep Satish, Manager of Analytics (Kellogg '15 and ACL alumnus!)

Mike Rinaldi, Director of Analytics

MEMPHIS GRIZZLIES

WWW.NBA.COM/GRIZZLIES

Situation

The Memphis Grizzlies are currently completing their 15th season in Memphis. The team has experienced great success on the court of late, qualifying for the playoffs in each of the last 5 seasons and reaching the Western Conference Finals in 2013. The Grizzlies are currently in position to continue that streak during the 2015-16 season.

The Grizzlies have also been experiencing unprecedented success off the court, reaching all-time highs in key revenue streams like ticket sales and partnerships this season. Some of that success can be attributed to a dedicated focus under the current ownership group to invest in talented analysts to help drive additional value for the company.

Task

The Partnership Marketing department, responsible for selling and maintaining all of the Grizzlies' corporate partner relationships, has recently implemented a CRM system to help track and maintain those accounts. A key component of the CRM effort relates to the organization's rate card, which sets prices for the different assets that the team has available for sale. The organization has not updated the rate card in several years, however, and wants to explore whether the currently assigned values are still relevant in a rapidly changing marketing environment.

Action

- Consider how Memphis' prices compare to existing benchmarks
 - Data from around the NBA
 - Data from other industries
- Suggest revisions to the existing rate card
 - Based on specific adjustments for the Memphis market
 - Take into consideration the supply of and demand for certain assets from partners
- Identify revenue potential of making updates to the rate card
 - What impact will an updated rate card have on current deals?
 - What impact will an updated rate card have on potential new deals?

Result

Kellogg students are able to provide the Grizzlies with a rate card that more accurately reflects the true value inherent in available assets. These updated prices will allow the team to better structure partnership deals in the future to help generate additional revenues going forward.

Students will work with Gavin Driskill, Kellogg and ACL alumnus!

STATS LLC – NBA PLAYER PERFORMANCE STUDY**WWW.STATS.COM****About STATS:**

STATS was founded in 1981 and has grown to become the world's leading sports technology, data and content company with operations and sports coverage on every continent (except Antarctica).

We provide next-generation sports technology, data and content delivered to meet the evolving needs of the Media, Broadcast, Leagues & Teams, Fantasy providers and players as well as major B2B and B2C brands. Our focus on driving innovation organically and inorganically means our customers are always at the forefront of end-user engagement and loyally using STATS' products in a variety of contexts.

STATS offers unrivaled Associated Press editorial content and maintains relationships with many major sports leagues across the globe.

About SportVU:

STATS' SportVU® product utilizes a six-camera system installed in basketball arenas to track the real-time positions of players and the ball 25 times per second. Utilizing this tracking data, STATS is able to create a wealth of innovative statistics based on speed, distance, player separation and ball possession.

The combination of player and ball tracking and STATS' rich historical information database provides the most comprehensive and sophisticated basketball data stream available.

Project Description:

Our SportVU System provides unparalleled data to NBA team trainers and doctors regarding the physical performance of the players. We have data regarding speed, distance run, accelerations, loads and more. NBA trainers and doctors are using this data to help keep the players healthy and performing at peak levels.

The work here is to analyze the trends in the data over the course of the game.

Illuminating any clear trends would be beneficial but the following key questions are of interest:

How are a player's performance metrics affected by consecutive minutes on the court?

Example: If a player plays over 10 consecutive minutes, is there a drop-off in his performance metrics?

How do a player's performance metrics change over the course of a game?

Example: Does a player's average speed or distance travelled drop after a certain threshold?

Is there a correlation between a player's performance metrics and his statistical effectiveness?

Example: Is there a correlation between a player's FG% and his performance metrics?



SPRING 2016 ANALYTICAL CONSULTING LAB: DECS 915

Department of Managerial Economics and Decision Sciences

Kellogg School of Management • Northwestern University

Professor: Russell Walker

ELEMENT BARS WWW.ELEMENTBARS.COM

About

We are a custom energy bar company located in Chicago. This means that at <http://www.ElementBars.com>, customers can create their own custom energy bar by selecting from all natural and organic ingredients and then naming their own bar. Our whole food ingredients are carefully handpicked and kept as nature intended. Then we hand make our bars using the ingredients our customers choose, bake them in our ovens and deliver them freshly baked from our ovens to their doors. The Founder and CEO Jonathan Miller is a Kellogg alumnus from the Class of 2008. He has 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 projects of interest. The Analytical Consulting Lab provides another great opportunity to provide students with rewarding experiences while allowing Element Bars to leverage student skills.

The data we can provide includes purchase behavior, Google Adwords access, and Google Analytics access.

Project - Social media marketing

Explore different social media advertising (most likely with a focus on Facebook) and how their demographic targeting overlaps with our target segments. Run test campaign to see conversion. Analyze (very) old social media campaign to see what targeting works best.

The data we can provide is sales data, customer data, Google Analytics data, Facebook access. Jonathan Miller founder and owner of Element Bars is a Kellogg alumnus, Shark Tank Tamer, and longtime ACL sponsor.



SPRING 2016 ANALYTICAL CONSULTING LAB: DECS 915

Department of Managerial Economics and Decision Sciences
Kellogg School of Management • Northwestern University

Professor: Russell Walker

RXBAR **WWW.RXBAR.COM**

RXBAR.com

RXBAR manufactures, markets and distributes whole food protein bars. While the protein bar market is crowded, RXBARs are the cleanest protein bar available and our branding stands out. A unique, “No B.S” value proposition in a rapidly growing health food market has our company positioned for growth.

RXBAR was started by 2 good friends who were looking to disrupt the protein bar market. It has quickly become a fast-paced start-up with 11 employees covering distribution in 4 channels: direct to consumer online, B2B (gyms, coffees shops, quick service restaurants), traditional grocery, and Amazon. We have a passionate customer base who is highly engaged, but are also trying to grow strategically. The founders previously worked with a Kellogg class to help them position the product and brand and adopted many of the students’ recommendations. Lindsay Levin is the VP of Marketing and a Kellogg alumnae (FT ’10)

The problems and questions that students will be solving for RXBAR in Analytical Consulting Lab are real issues that the company is facing. Student contributions from this class will be highly valued and implemented at the company. We have an extremely passionate team who you will be working with every week. You will not only help us solve problems, but will have an extremely rewarding experience apply your skills in an entrepreneurial start-up CPG company poised for growth.

We have 3 marketing projects we would like your help with – we have provided some questions below but please expand beyond these. We want your great thinking to help us!

Segmentation and Promotional/Engagement Strategy:

1. We have a lot of incredible B2C and B2B direct purchase data. Help us segment these customers and determine a promotional and engagement strategy based on their purchase behavior. We are looking for one for B2C and one for B2b. Some questions include: How do we target them more strategically based on their purchase behavior and segmentation? What is the right frequency of promotions and engagement? We do not want to promo heavily - what is the most effective promotional and engagement strategy without subsidizing our current consumers? How do we target new customers vs. existing ones?

Determining Value of Instagram in Marketing

2. Instagram has been incredibly influential in growing our business, but we need help in valuing it so we know the return on our investment there as well as how much we should continue to build in this influential channel. How can you help us determine the value of our own voice as well as the engagement from many of our influencers? Instagram does not have the same analytical tools as its sister – Facebook. For this project, we would provide you with access to our Instagram account so you can track our engagement, consumer engagement and Influencer engagement and pair that with our sales data and google analytics to see site traffic to help us understand the power of influencers. If you crack this case, I promise you will be in high demand!

Innovation Strategy

3. We have an aggressive product pipeline and are on a penetration strategy. Help us understand what the optimal amount and timing of innovation is in a year based on historical data. How much new business are we getting and how much of it is cannibalizing our current business? What is the long term impact of a new flavor? What's our optimal product mix at different stages throughout the year – where should we be focusing our attention throughout the year based on demand? How do we focus our promotional strategies to manage innovation? Should Pumpkin Spice be a limited time offer vs. an ongoing flavor? How incremental is it as an LTO vs. introducing a flavor for the entire year – what is most impactful for the business long term?

We also have 2 Operations/Finance Projects that we would like your help with:

Predictive Revenue Forecasting Model

1. We have a robust and dynamic business across multiple channels including B2C, B2B, Amazon and Retail with a growing portfolio of products. Help us understand how best to develop a predictive revenue model across these 4 channels based on our historical sales data, customer acquisition velocity, external macro-economic factors as well as any other identifiable correlating factors. There are also internal factors experienced which impact sales such as inventory outages and new product introductions which we also would want to consider and incorporate within the predictive forecasting model.

Stochastic Inventory Optimization Model

2. There are three key factors that impact the amount of inventory that is required and held throughout our supply chain, these factors are demand volatility/uncertainty, lead-times and minimum order quantities. By analyzing these elements help us optimize the inventory levels of our raw materials and finished goods with a goal of meeting necessary service levels and minimizing the total inventory carrying costs. An ideal output would be recommendations based on various scenarios of service levels, inventory levels, optimal order quantities, reorder points and the relative costs incurred for each.

Students should identify their top projects with RxBar. Up to two projects may occur.

AIG**WWW.AIG.COM****AIG Science Global Consumer Direct Marketing****AIG Science:**

The Science team acts as the catalyst for evidence-based decision-making at AIG. Our interdisciplinary team applies scientific methods to decision making from a variety of fields, including: data science, statistical modeling, behavioral decision science, economics, and others. In partnership with AIG's business and functional areas, the Science team integrates conceptual thinking, data preparation, model development, research from external institutions, and solution implementation into one structured process.

AIG Travel Insurance:

AIG Travel Guard specializes in providing innovative travel insurance, assistance and emergency travel service plans for millions of travelers and thousands of companies throughout the world.

The Project:

Travel Guard Canada has a product called Visitors to Canada (VTC), which allows people visiting Canada to buy health coverage while in country.

Some of VTC features:

- Up to \$150k a year coverage for trips lengths of 7 days up to 2 years
- Visitors seeking a 'Super Visa' for a 2 year stay from the Canadian Government (e.g. Parents/Grandparents of recent immigrants) require a product like VTC
- We are not currently marketing this product's unique benefits to targeted customer segments.
 - Most likely customers are a highly targeted audience in geo-ethnic clusters over-indexing in certain cities in Canada, India, and China
 - Requires go-to-market strategy and advanced analytics to tease out who the right people are, what the right message is, and how/where to target them.

Working closely with AIG Science, Travel Guard CA, and Global Advertising the ACL project team will help build a robust and multi-channeled go-to-market strategy using mostly secondary & some primary research findings and advanced analytic modeling.

- Analysis of the market and competitive set for a similar product offering.
- Size of market and future forecast modeling
- Key players and AIG's right to win
- Find the likely customers and suggest strategies on how to reach them
- E.g. Demographic data, text mining of social media, case studies with impact
- Segmentations with differentiated, actionable marketing strategies
- Launch and execute an aspect of the campaign
- Subsequent analysis of high level anonymous campaign performance data and make recommendations for optimization

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 study 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.

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.



SPRING 2016 ANALYTICAL CONSULTING LAB: DECS 915

Department of Managerial Economics and Decision Sciences

Kellogg School of Management • Northwestern University

Professor: Russell Walker

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.



SPRING 2016 ANALYTICAL CONSULTING LAB: DECS 915

Department of Managerial Economics and Decision Sciences

Kellogg School of Management • Northwestern University

Professor: Russell Walker

QANTAS AIRLINES WWW.QANTAS.COM.AU

About the Project

The project description will be updated, as it become available. Qantas is a repeat ACL client and will provide a project focused on the airline industry of Australia. Check back for more details.

This project is sponsored by Reed Tanger, Kellogg alumnus, and Head of Strategy at Qantas. He and Qantas are pleased to be back in the ACL.



SPRING 2016 ANALYTICAL CONSULTING LAB: DECS 915

Department of Managerial Economics and Decision Sciences

Kellogg School of Management • Northwestern University

Professor: Russell Walker

GOOGLE SKYBOX WWW.GOOGLE.COM

Google owns Skybox – a network of space satellites that can provide high definition imagery to most any point on the planet. The overall goal of these projects is the understand business value created by this data.

Projects will involve validating a scalable market opportunity to use data from space to solve problems on earth for commercial enterprise decision makers engaged in:

- **Competitive Intelligence** (Panama Canal Authority seeks comparative freighter traffic information from major ports that serve the Atlantic and Pacific Ocean to determine the Canal's relative control of freight logistics)

or

- **Financial Due Diligence** (e.g. Blackstone tracks construction progress at key infrastructure sites to verify official reporting and inform investment decisions)

The goal would be to gain an understanding of the use cases for business decision makers in these areas in an effort to: test the hypothesis that timely, accurate information about high value sites (that is currently unavailable or difficult to obtain) generates substantial addressable revenue opportunities in new or existing markets; estimate the size of these opportunities; identify key players in these areas.

**NORTHWESTERN UNIVERSITY SPORTS
WWW.NUSPORTS.COM**

There are multiple projects available with the NU Big Ten sports management team.

Digital and Social Media – Looking for a complete assessment on the social media components for the athletic department with the hope of understanding and defining best practices moving forward. Areas of focus to include:

1. Measuring Followers - We want to know how many followers of NU_Sports also follow NU_SportsLIVE, NUFBFamily, NUMensBball, etc. and vice-versa. Would want this for all of our accounts. (this is something in the Summer of 2014 with an open-source google doc, but it took me forever and I only did it for select accounts. I didn't look at NUFBFamily vs. NUMensbball, for example. I think they'd be more efficient with it).
2. Content - What type of content does the best (text, graphic, plain photo, .gif) on Twitter/Facebook/Instagram and what time of day performs the best in terms of reach with OUR audience. Also interested specifically in click-through data being isolated from other measures of engagement (sharing, liking, opening). Not interested in a general overall social theory of posting or what others are doing, just us specific.
3. Use of Video - What elements of video production produce the longest view times on social. (For example, are folks dropping off a video during an intro that they might otherwise stick around for if the action started right away).

Men's Basketball – The program recently installed a special camera tracking system (more information in article below), which produces significant basketball- and player health-related data for our program. They are one of only a handful of college programs in the country with this technology. These tracking cameras exist in the arenas of all 30 NBA teams and NBA front-offices are hiring MBA-types with the knowledge/background of this system in droves. We are looking for help, specifically, on how to analyze the information this system is able to produce and how best to deliver that information to the coaches/players for improved performance. (SportVU Player Tracking System: <http://grantland.com/features/the-toronto-raptors-sportvu-cameras-nba-analytical-revolution/>)

Marching Band – Program numbers fluctuate year to year based on a number of factors, so they are looking at how they can best engage their members and the general student population to increase membership and retention numbers.

Development/Fundraising - In the last few years the department has seen tremendous growth in fundraising, especially in gifts in the 6-8 figure range. We need help examining the donors who gave these significant gifts looking at previous giving, existing affinities, engagement patterns, and other data to build a model and best practices for identifying and converting future major gift donors. We are confident that we can find similarities and patterns that lead to other great prospects. Additionally, in the near future, we could share the success via publications and conference speaking opportunities with the potential for the group of students to monetize this type of work with other institutions.

**GOOGLE GLOBAL SALES
WWW.GOOGLE.COM****Objective:**

Google will partner with Kellogg to provide real-world business problems which MBA students taking the Analytical Consulting Lab (ACL) at the Kellogg School of Management will work with actual data to develop meaningful analytical analysis for managerial decision-making, and present results and recommendations to Executives.

Project 1: Assess Digital Marketing**Risks and Opportunities**

The Digital Marketing Landscape (Search, Display, YouTube, Programmatic, etc.) is a continually evolving with new entrants, threats and opportunities emerging regularly. For this project, you'll work to identify new competitors in the marketplace, assess how various markets are evolving in their shift from traditional to digital media spend and work to develop a benchmark for per capita / per market spend.

While we're all familiar with the usual players in digital advertising, however there are new ones being started all the time. For assessing the potential impact from these new entrants, you'll work with VentureOne, a database that documents all the fundraising rounds for new startups. Using this data you'll identify and screen for which companies might have an effect on Google's competitive landscape, particularly for the digital marketing landscape. By looking at the dates, number and change in valuations, you will be able to assess the rate at which these startups are growing, their potential impact and relative importance.

Also, key to understanding the marketplace is the relative maturity of key markets as the transition from traditional to digital marketing - particularly for emerging markets. The first part of this analysis focuses on benchmarking more mature countries like the US and Great Britain against others to see how they're evolving. Further by lining up the transitions, we can help to see what stage each country is in and the relative rates at which they're progressing.

Finally, we'll look to you to find us an internal benchmark we can use for determining whether our internal metrics (CPCs, RPMs, etc.) for a given country are performing above, at or below this benchmark to help drive Sales and Product teams - particularly for Emerging markets. The benchmark should consider factors such as traditional and digital marketing spend, disposable income, internet penetration rates, etc. and ideally be available both at a market level and per online capita. Data for the second two analyses will come from third party data sources either available through Kellogg or from Google's Share of Wallet dataset (compiles third party data sources).

Project 2: Understand the Evolving Nature of iOS vs. Android Phones

User adoption and usage of iOS vs. Android devices is an important dynamic in monetizing Search. For this project you'll work to provide deep insights into the ongoing changes between which devices are being purchased and how users are using their phones - ideally showing trends over the past 3-5 years as well as trying to use data to demonstrate where the market is going.

To start this analysis, you'll work to show how user device adoption is changing by country. First, you'll want to breakdown iPhones vs. Android phones to see which countries are showing changes in adoption then work to explain what is driving those changes. From there, you'll want to develop a deeper understanding of how the Android ecosystem is changing - mapping out which OEMs are gaining ground, which device features are driving these gains (phone size, camera, price, Android One, carriers, etc.), and if / where the adoption of forked Android phones which exclude Google services is occurring (Xiaomi MIUI).

Finally, you'll work to understand how OEMs are using Android phones. Traditionally, Android devices (Nexus, Samsung, etc.) came pre-installed with Google apps like the Search bar, Google Now, etc. However, there are a new breed of devices, mainly in emerging markets, where the focus is using the devices a means for delivering full service apps (WeChat) that allow users to exist outside of the world of search. And with all this in mind, see if you can determine if there is story around users changing behavior over time - one hypothesis is that they start starting with low-end Android devices which may or may not use Search then as their personal economics improve, carriers become more reliable / bandwidth gets cheaper, the ecosystem improves (new / better mobile sites) and/or they get more comfortable online, they move up to better Android and/or iPhones.

Data for this analysis will by design need to largely come from external resources. Internally, we have used Canalsys reports to pull information including installed base and new device sales but this data is limited in scope and doesn't get into the granularity needed for many of the questions above.

It's suggested that you focus on a handful of countries split between mature markets (US, Japan, Great Britain, Germany, France, Australia) and emerging markets (India, China, Indonesia, Brazil, South Africa, Mexico).



SPRING 2016 ANALYTICAL CONSULTING LAB: DECS 915

Department of Managerial Economics and Decision Sciences

Kellogg School of Management • Northwestern University

Professor: Russell Walker

CHICAGO WHITE SOX WWW.WHITESOX.COM

Project: Revenue Analysis of Ticket Pricing Plans

We currently offer the following season ticket packages:

- Full Plan – All 81 games
- Split Weekend Plan – 27 weekend games (including a weekday Crosstown Classic game)
- Split Weekday Plan – 27 weekday games (including Fridays and Opening Day)
- Pick 14 Plan – Choose two games from Opening Day and the Crosstown Classic and then two other games each month (a minimum of 14 games total)
- Pick 7 Plan – Choose one game from Opening Day and the Crosstown Classic and then one other game each month (a minimum of 7 games total)

Analysis: Are we maximizing revenue and ticket sales opportunities with these ticket packs as they're currently set-up?

*We will need all participants on this project to sign an NDA.

Students will work with Beth Grabowski, Kellogg alumnae and long-time supportive ACL client.

MENUS OF CHANGE
WWW.MENUSOFCHANGE.ORG

Project Descriptions

There are 2 projects available with Menus of Change. 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.

Livestock and Antibiotics? The Business Case for Better Food

Both national and international public health bodies have found that the use of antibiotics in livestock production is affecting human health, both prompting an increase in infections that are resistant to conventional treatments and also reducing the effectiveness of antibiotics in treating diseases in people. But the livestock industry is only now making commitments to reduce the use of antibiotics after ratcheting up use over many decades; today about 3/4 of all antibiotics use in the US are given to animals. A series of recent academic articles and government studies focus on the reasons why: antibiotics enable "industrial" livestock operations where animals live in crowded and unclean conditions and giving these animals antibiotics causes them to grow more quickly, producing perhaps \$40B in additional revenues to livestock producers.

At the same time, the industrial livestock industry has been subject to significant "shocks" in recent years from the rapid spread of resistant diseases such as early mortality syndrome which wiped out nearly 1/3 of the world's shrimp farms, infections that essentially eliminated Chile's salmon production for some time, and Porcine Endemic Diarrhea Disease which affect more than 1:10 pigs in the US.

This project would involve figuring out the overall risks and potential costs around continuing or dramatically reducing antibiotic use in livestock production for major companies that buy livestock to sell to people as food: healthcare costs, increased production costs, the relative "brittleness" or risk of major supply disruptions, and give major food companies a clear eyed view of what the consequences are of taking voluntary action to eliminate antibiotics in their supplier community.

Profit from Slavery: Where is money made in Fish and Seafood

Recent investigative journalism efforts have revealed extensive labor abuses in the global seafood industry, ranging from poor working conditions in Asia's fish and shrimp farming industries to the much more troubling instances of slavery in the tuna fishing industry where "workers" are recruited onto boats that fish on the high seas, underpaid and even abused, and sometimes never return to land. In some Asian countries and cultures, those treated as slaves are too embarrassed to ever discuss what happened, and the ability to recruit new "workers" continues on.

Slave labor and other poor working conditions are most often found "on the water" and with smaller companies and concerns that feed into the global supply chain that includes processors, distributors and consumer facing brands and companies. But who profits from slavery in the seafood industry, and which companies are best positioned to drive change and most at risk from



SPRING 2016 ANALYTICAL CONSULTING LAB: DECS 915

Department of Managerial Economics and Decision Sciences

Kellogg School of Management • Northwestern University

Professor: Russell Walker

growing public concern? What is the strategy for improving labor conditions at the other end of the supply chain, especially for tuna and farmed fish and shrimp.

This project would involve figuring out where value is added (what is the “mark up” and what is the value add) at each segment in the supply chains, which businesses profit most, and if profitability differs when engaged in supply chains that involve slave labor. Then the team would look at what are the drivers of more responsible business for major actors and make recommendations for what companies can do to drive improvements and which companies may be at risk of tarnished brands or loss of social license, and most likely to act quickly and proactively.

Sustainability, Transparency and Risk in the Food Industry

The food industry is at the intersection of some of the key risks impacting leading industries: Operational risk from climate and water constraints, reputational risk from poor labor and social conditions in supply chains, and financial risk from increasing volatility of key commodities. Some food companies are showing the strain on their bottom lines as supply chains grow more brittle while others are adopting new approaches that put transparency and corporate responsibility at the center of their strategies, creating vertically integrated “direct to farm” strategies like Mars and Starbucks which are investing in social development programs in key cocoa and coffee growing regions, Chipotle which selects the farmers its distributors and suppliers must work with, and others which are joining industry roundtables set up by global NGO’s like the World Wildlife Fund.

While all show concern, this project is intended to determine what leading sustainable food and agriculture sourcing strategies may already be driving business success. The project would involve identifying a substantial universe of large US or global restaurant and consumer-facing food companies, probably publicly traded and with regular public reporting and correlate the types of supply chain transparency and sustainable sourcing strategies they use, if any, with their performance on key financial indicators (growth in shareholder value, revenue, profit) and also the rate of “surprises”, or unforeseen problems, in their supply chain that they announce to the markets.

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

NEXT MEDIA – APPLE DAILY
WWW.NEXTMEDIA.COM

Taiwan Apple Daily

The Analytical Consulting Lab Project

About

Stemming from the highly successful print publications in Hong Kong, Apple Daily (owned by Next Media) set its foot in Taiwan in May 2003. Taiwan Apple Daily is the first mover venturing into the "infotainment" segment of the newspaper market in Taiwan with its dynamic way of reporting as well as emphasis placed on layout design. It steadily overtook all its rivals to become the island's bestselling and most widely read daily during the fourth quarter of 2008, a position it has retained ever since.

Given the challenging conditions in the print media industry and shift of advertising revenues from traditional print publications to online media, Taiwan Apple Daily has undergone a series of consolidation and innovative exercises to refocus its attention and devote more resources to further develop its digital platforms (covering web, mobile web, and Android, iPhone and iPad apps). As well as offering published articles from the Apple Daily newspaper, these digital platforms maximize their capabilities by featuring real-time news, live broadcasting, 3D animated videos and the use of social media (Facebook fan page, Google+, Twitter, and LINE official account) for content distribution and audience engagement.

Project Description

Over the years Taiwan Apple Daily has clearly established its position as a leading content provider and trendsetter in driving reading habits on digital, consistently attracting 17 million views every day from all platforms and devices with average daily active users reaching 4 million from all over the world.

Taiwan Apple Daily is continually looking for opportunities to evolve and grow its advertising business by expanding and fully utilizing the demographic profiles of readers. As part of this constant endeavor, Taiwan Apple Daily is tasking you with analyzing the traffics of our digital platforms to better optimize our readership to increases advertising sales. In particular, your analysis should help to answer the following key questions:

1. What is the relationship between our content and pageviews/unique users?
2. What external factors, such as demographics, are correlated with pageviews and unique users?



SPRING 2016 ANALYTICAL CONSULTING LAB: DECS 915

Department of Managerial Economics and Decision Sciences

Kellogg School of Management • Northwestern University

Professor: Russell Walker

3. How can we successfully increase pageviews, unique users, and pageviews per user?
4. How can we improve overall utilization of data to better optimize our advertising revenue?

The data we can provide includes Google Analytics access, comScore access, social media data and other internal logging data.



SPRING 2016 ANALYTICAL CONSULTING LAB: DECS 915

Department of Managerial Economics and Decision Sciences
Kellogg School of Management • Northwestern University

Professor: Russell Walker

BRIDESIDE WWW.BRIDESIDE.COM

About Brideside

Brideside.com is disrupting the \$14+ Billion wedding retail market with its no drama approach. Our try-at-home program brings the bridal boutique in the home for our busy customers and our style consultant program provides concierge assistance to our e-commerce experience. We first set out to tackle the age-old problem of finding bridesmaid dresses by appealing to the modern, busy woman – with our taste-making content engine and e-commerce solution to our human-centered support and off-line components.

Opportunity for an ACL Team

Like good Kellogg alumni, we build product and processes based on customer insights. Consequently, data is critical to the daily management of our teams and to major strategic decisions. Fortunately, we made a commitment to data collection early on and are rich with information. We are looking for an eager and creative team to dig deep and help us explore any of the following topics:

Sale Cycle Management

- We often draw parallels between this purchase and B2B sales – it's a long cycle. What are the variables that determine the length of our customer sales cycle? Which are most important and which are least important? How do we translate these learnings into the way we train our sales team. Where is their opportunity for machine learning to take over what is currently done by personnel?

Referrals and Word of Mouth

- What is our current viral coefficient and what marketing initiatives should be undertaken to improve it?

Offline Strategy

- We want to open brick & mortar boutiques in a few key locations. Based on market size, opportunity, competition and our current customer geographic distribution, where should we go?

Try-At-Home Program

- We are famous for our Brideside Box try-at-home experience. Define and analyze the KPIs of this program. What improvements do we make to keep this program working and competitive. (e.g., faster turns of inventory, closing the sales cycle more quickly, pricing, etc)?

Looking forward to inviting a Kellogg team to our offices in the West Loop where we can work alongside one another to answer some really tough but incredibly interesting and powerful questions.

The team will work with the founder, owner, Kellogg alumnae Sonali Lamba.