



SENIOR CAPSTONE 2014 - 2015



THE C.V. STARR PROGRAM IN
BUSINESS, ENTREPRENEURSHIP
AND ORGANIZATIONS

BEO CAPSTONE • 2014-15 PROJECTS

The C.V. Starr Program in Business, Entrepreneurship and Organizations (BEO) is a unique, interdisciplinary, undergraduate concentration at Brown University focused on the study of business, entrepreneurship, technological innovation, and organizational theory. BEO educates students to be creative and flexible leaders for careers in for-profit, social mission and start-up organizations. Through the disciplines of economics, sociology, engineering and entrepreneurship, students learn methodological approaches to address challenges in national and global economic context.

All BEO seniors are required to take a capstone course which includes a one- or two-semester long project. Project teams, usually comprised of five students, are supervised by a faculty advisor. Students apply conceptual and theoretical grounding obtained in BEO courses to deliver analysis and recommendations related to a specific challenge facing a sponsor organization. Sponsor organizations appoint a senior level mentor to help define and guide the project.

This academic year marks the second full BEO cohort to participate in the capstone. Close to 90 students worked on eighteen projects in the fall with ten continuing in the spring. Student learning experiences were excellent. Mentors and faculty were thrilled with the teams' work products. Join us in celebrating this accomplishment.

BEO Capstone Faculty

MARY FENNELL

Director, BEO, Professor of Sociology

ERIC SUUBERG

Professor of Engineering

LISA DI CARLO

Lecturer in Sociology

BRENDAN MCNALLY

Associate Director, BEO

TIM NGUYEN

Adjunct Lecturer in Economics

STEVE PETERUTI

Adjunct Lecturer in Engineering

Entrepreneurship and Technology Projects (Fall & Spring Semester)

Each team works with a mentor company to create a start-up venture that will bring a technology to market. Fall semester focuses on becoming expert in a technology, identifying potential markets and defining a product or service. The spring semester involves prototype development and crafting a business plan to bring the product or service to customers.

TrustFall (fall 2014)

Nordic, a Providence-based start-up, builds health-monitoring products to help aging people live independently. Nordic worked with the team (dubbed TrustFall) to add a mobile emergency alarm to Nordic's product portfolio. The capstone project analyzed the market opportunity and competing technologies, and created a business plan for a mobile emergency alarm.

Sponsor: Nordic Technology Group, Providence, RI

Mentor: Erik Wernevi, Founder, CEO

Project Advisor: Steve Petteruti

Nordic Technology Group



TEAM: CHAD GINSBURG, DANIEL GIOVACCHINI AND ALON SACKS

EquiTrue (spring 2015)

EquiTrue is a start-up that seeks to radically redefine the role of balance and proprioception in athletic performance training and concussion management. Through the use of a rocker board, accelerometers and a proprietary software application, the team designed a working, interactive prototype to quantify a user's balance score in a 30 second game of Doodle Jump (a la EquiTrue)! With the system, athletes can systematically reduce injury and improve performance as well as objectively determine their neurological state post-concussion.

Sponsor: Delos International

Mentor: Tony Giovacchini, US Agent

Project Advisor: Steve Petteruti



TEAM: DANIEL GIOVACCHINI, TRENT GREEN AND PATRICK O'NEILL

EverCore

The EverCore team worked with Core Composites a Bristol, RI, designer and supplier of composite materials to industries that utilize fiberglass, carbon fiber and resins. The team refined a Core Composite product to compete in the spa cover market. The newly designed product is a lightweight, highly efficient insulator that has impressive structural strength and can be produced at relatively low-cost. The EverCore team developed a prototype and business plan, proving they can offer safe, strong and cost-effective spa covers.

Sponsor: Core Composites, Bristol, RI

Mentor: Richard O'Meara, Owner/President

Project Advisor: Steve Petteruti



TEAM: TAYLOR JOHNSON, CHARLES KLEINRICHERT, PATRICK O'NEILL, MICHAEL PORZIO, NICOLAS TALBOTT AND KENYA WRIGHT

T3 Technologies

T3 Technologies partnered with Penske Automotive Group of RI to develop a mobile application to better locate new cars on dealer lots. More than 30% of a salesperson's time is spent searching for a cars, wasting a valuable resource that could be better spent selling. The T3 Technologies prototype tested in the spring uses a "pin drop" based system to provide real-time vehicle tracking information.

*Sponsor: Penske Automotive Group of RI,
Warwick RI*

*Mentors: Ron Girouard/GM BMW/Mini of
Warwick, Rich Palian/Area IT Mgr.,
Jack Guthrie/Area VP, Stephen Aylward/
GM Lexus Warwick and Rich Palan/
Area IT Mgr.*

Project Advisor: Steve Petteruti



TEAM: JENNIFER CASEY, ALTER JACKSON, JORDAN MANDLEBAUNN, CAMERON RINN, SANG WON SIM, PHILLIP SMITH AND ZHI (TOM) ZHANG

Business/Consulting/ Finance Projects (Fall Semester)

Projects are designed generally as one-semester commitments. Students typically act as members of the mentor organization or in a “consultant” role to tackle critical issues for the sponsor organization. Students must collect data, analyze information, and make recommendations all within the fall term.

University Endowment Modeling - Brown Investment Office

The endowment model developed by Yale’s David Swenson has been the “default” asset allocation model for many university endowments, however, very few have been able to achieve Yale’s results. The capstone team worked with Investment Office professionals to analyze Brown endowment investment strategy and found that Yale’s superior performance is more from manager selection and preferable fee structures than asset allocation. The team recommended breaking from the Swenson model and focusing more on manager selection and better fee arrangements.

*Sponsor: Brown University Investment Office #1,
Providence, RI*

Mentor: Joseph Dowling, Chief Investment Officer

Project Advisor: Tim Nguyen



BROWN



TEAM: TYLER LANDIS, NICHOLAS PIROLI, WILLIAM SWINDELL, JONATHAN WHITE
AND CHRISTOPHER WHITTLES

Insurance Industry Investment Analysis - Brown Investment Office

The capstone team assisted the Brown Investment Office in exploring different ways the Brown endowment could benefit from direct investment in the insurance industry. Specifically, the project investigated the opportunity to use Brown's access to world class investors who could help structure an investment approach that could utilize the "float" of an insurance company to enhance Brown's endowment. The team also analyzed which types of insurance and re-insurance companies should be considered.

*Sponsor: Brown University Investment Office #2,
Providence, RI*

*Mentor: Daniel McCollum, Managing Director
Project Advisor: Tim Nguyen*



TEAM: CHESLEY BROOKS, NICHOLAS FORNACA, ROBERT GREBENC,
NICHOLAS LAWLEY AND JESSICA TRAN

Pension Fund Asset Allocation Review

Like many municipalities across the country, the Town of West Warwick, RI faces considerable unfunded pension fund liabilities. The Pension Board Chair worked with the capstone team to review the Town's asset allocation and provide asset allocation recommendations for the Town's five-year funding improvement plan. Additionally students analyzed and made recommendations to improve choice and benchmarks metrics.

*Sponsor: Town of West Warwick,
West Warwick, RI*

*Mentor: Nicholas Denice, Chairman
Project Advisor: Tim Nguyen*



TEAM: NICHOLAS CODREA, MARCUS FULLER, MATTHEW GAROFALO,
RYAN JACOBSON AND MADELINE PAGE

Hedge Fund Portfolio Construction – “Pure Alpha”

Textron, an international diversified holding company based in Providence, RI, owns companies in aerospace, financial services, commercial lawn/golf equipment and defense related systems. Managers of their pension fund tasked the capstone team to analyze the fund’s current performance, including risk exposure, and construct a portfolio that maximizes alpha generators. Students analyzed over 20 hedge fund return streams to select the necessary mix to meet risk/return objectives.



Sponsor: Textron, Inc., Providence, RI
Mentor: David Azzolina, Director of Investments
Charles Van Vleet, Chief Investment Officer
Project Advisor: Tim Nguyen

TEAM: AUSTIN JENNINGS, JUSTIN MILLER, ZACHARY REES, ALEXANDRA STANTON AND MARK VILLANUEVA

Financing Mechanisms for Energy & Economic Development in Residential and Commercial Properties

The capstone team worked with the RI Treasury and Energy Resources offices to research and design creative financing mechanisms to increase energy efficiency upgrades to residential and commercial property. The team identified states with best practice programs and analyzed the complexity of tax credit mechanisms that rely on vastly different municipal real estate valuation models. The project also suggested ideas for statewide implementation of the recently legislated PACE program.



Sponsor: State of Rhode Island Treasury Office,
Providence, RI
Mentor: Heather Hudson, Director of
Economic Development
Project Advisor: Tim Nguyen

TEAM: JESSICA CHERNESS, RYAN DAVENPORT, GABRIELLE GENNACI, KYLE QUICK AND CHRISTOPHER SMITH

Assessing Alternative Betas

The Rhode Island State pension portfolio has roughly half of its assets in low-cost equity index funds which capture moves in the overall equity market. The students evaluated “alternative beta” investment approaches, selected an “alternative beta” strategy, and designed and implemented a test to determine the attractiveness of their recommendations. The team worked with the client to determine better ways to improve the risk/return performance of this portion of the portfolio.



*Sponsor: State of Rhode Island Investment Office,
Providence, RI*

*Mentor: Anne-Marie Fink,
Chief Investment Officer*

Project Advisor: Tim Nguyen



TEAM: GEORGIY BURKOVSKIY, BELLA GONZALEZ LIZARRAGA, REILEY HIGGINS, STEPHANIE RANDALL AND JESSICA SKOCZYLAS

Risk Analysis for Environmental, Social and Governance Investments

Mariner Investment Group is a diversified alternative asset manager founded in 1992. The team analyzed a portfolio of securities to quantitatively test whether ESG - environmental, social and governance - related factors impact company performance. Students researched different ESG factors, analyzed which should be weighed more heavily, assessed the effectiveness of corporate engagement to reduce risk, and recommended an investment strategy based on the correlation of ESG ratings to earnings performance.



*Sponsor: Mariner Investment Group, New York,
NY/Boston, MA*

*Mentor: Basil Williams, Co-Chief
Investment Officer*

Project Advisor: Brendan McNally



TEAM: MATTHEW DORROS, ANDREW HANSEN, MATTHEW HARLOW, TANNER LARSON AND JOSHUA WEINSTEIN

Program Evaluation of “Helping Innovators Thrive” – HIT

Five years ago, the international, full service law firm of Edwards Wildman (now Locke Lord), launched HIT – Helping Innovators Thrive - a program designed to provide entrepreneurs and young companies with financial support and strategic legal advice. The capstone team was tasked to help the firm evaluate program effectiveness and better understand which factors added to the success/failure of the start-up ventures in the program. The team provided recommendations for improving HIT based extensive interviews, surveys and data analysis.

**EDWARDS
WILDMAN**



Sponsor: Edwards Wildman, Providence, RI

Mentors: Christopher Graham, Partner; Courtney Jones, Department Manager

Project Advisor: Brendan McNally

**TEAM: ABRAHAM DUBE, ZADAAI GONZALEZ, JUSTIN NANCE, BRENT TOMLINSON
AND ZACHARY WHITMAN**

Social Innovation/Social Entrepreneurship Projects (Fall & Spring Semester)

Students typically act as members of the mentor organization or in a “consultant” role to tackle critical issues for the sponsor organization. Most projects are full-year commitments with the fall semester focused on research design and data gathering and the spring devoted to research analysis and recommendations.

Developing diagnostics for cultural integration in Mergers and Acquisitions

Innovation Places (IP) is a small, growing international consultancy founded by former Pfizer colleagues to help clients to understand, measure, predict and improve organizational and workplace dynamics that drive performance. The BEO team helped IP identify target markets based on industries experiencing significant organizational change. In addition to analyzing competitors, the team developed value propositions for companies that can benefit from IP’s unique organizational and network analysis consulting services.



Sponsor: Innovation Places, Shelton, CT
Mentor: Nat Bulkley, Principal Innovator
Project Advisor: Brendan McNally

TEAM: LAWRENCE DAVIS, RAFAEL DONATTI ALVES MAIA, LIZBETH MALDONADO,
SHALINI RAMANAN AND SOLEIL VAUGHN

Public Montessori: Evidence-based Talking Points for Prospective Funders

This team worked with The National Center for Montessori in the Public Sector (NCMPS) in its mission to support and strengthen new and existing charter, district and magnet Montessori schools. Students analyzed the best options to recruit and train teachers examining various successful models such as Teach for America. The team conducted extensive interviews, surveys and outreach and then piloted recruitment strategies at Brown, University of Rhode Island, Rhode Island College and Providence College.

Sponsor: National Association for Montessori Public Education, Boston, MA

Mentor: Sara Suchman, Strategy and Development

Project Advisor: Lisa DiCarlo

NATIONAL CENTER for
MONTESSORI in the PUBLIC SECTOR



TEAM: ERIC ARMAGOST, MICHELLE CHEN, EDWARD FITZPATRICK, DANIELLE HOFFMAN, AND JANE PARK

Assessing the Viability of Social Impact Funds

Mariner Investment Group, a diversified alternative asset manager, seeks to offer impact investment options for its client base of institutional and high net worth individuals. This capstone team assisted Mariner in developing a conceptual framework for studying different approaches to delivering social impact solutions to investors. The project involved mapping and analyzing various instruments and concluded with recommendations to structure a portfolio of investment options.

Sponsor: Mariner Investment Group, New York, NY
Mentor: Basil Williams, Co- Chief Investment Officer
Project Advisor: Lisa DiCarlo



TEAM: JANE GION, SARAH ROBSON, XAVIER RUSSO, BRIAN STRACHAN AND GIRI SUARSANA

Program and Organizational Planning of BrownConnect

BrownConnect is a new initiative of President Christina Paxson to better link students to the Brown community (alumni and parents) for career mentoring and internship opportunities. The team participated in strategy development and provided implementation support for issues related to organizational planning, branding, and communication. They helped develop strong performance metrics to define success of the program that will lead to future best practices. The team made recommendations on BrownConnect's strategic direction and presented to the Co-Chairs of President's Internship Advisory Council and Director of Alumni Leadership.

*Sponsor: Brown University – CareerLAB,
Providence, RI*

Mentor: Aixa Kidd, Director, BrownConnect

Project Advisor: Brendan McNally



TEAM: TRISTA CHAVEZ, CLAYTON CHRISTUS, ALYSSA DIBONA, WHITNEY NAYLOR, AND MEGHAN O'DONNELL,

Planning, Policy and Outreach for Expansion of Electric Vehicle Network

Drive Electric Cars New England (DECNE) is a RI non-profit organization and a chapter of the Electric Auto Association dedicated to promoting the adoption of electric cars through direct consumer and public education, infrastructure development and policy initiatives. Through extensive research and analysis of 12 months of charging station data, the team assisted DECNE in the development of a plan to achieve strategic goals in three areas: education and outreach initiatives, availability of charging stations, and formulation of policy proposals.



Sponsor: Drive Electric Cars New England, Providence, RI

Mentor: Al Dahlberg, Principal

Project Advisor: Lisa DiCarlo

TEAM: OPHIR BERNSTEIN, CHRIS DRAPER, BRITTANY MOOREHEAD, WHITNEY RUHLIN, AND EMILY WAITT

Advancing a RI Composite Recycling Initiative

The capstone team assisted the Rhode Island Marine Trade Association (RIMTA) in researching and developing recommendations related to the economics and policy considerations for recycling discarded and damaged boat hulls. The project included creating a financial model to understand the economics of the recycling value chain, identifying best practices (and technologies) in other industries and countries, and recommending actions steps RIMTA can take to influence its members and government leaders in RI.



Sponsor: Rhode Island Marine Trade Association, Bristol, RI

Mentor: Wendy Mackie, Executive Director

Project Advisor: Lisa DiCarlo

TEAM: ABEBA CHERINET, ANDRES CRUZ, ZACHARY SPARBER, AND DOCKERY WALKER,

Strategic Planning and New Revenue Options

AS220 is a successful Rhode Island-based, artist-run organization committed to providing an unjuried and uncensored forum for the arts. The capstone project worked with AS220 leadership - recognized as a national leader in new program development - to evaluate strategic options for growth and improvement. The capstone team helped plan and launch an initiative called the Interactive Center for Creativity (ICC) which will act as a physical and virtual gateway for people interested in arts and culture in Providence.



Sponsor: AS220, Providence, RI

Mentor: Cynthia Langlykke, Development Director

TEAM: JULIA KELLY, ALEXANDER QUOYESER, ARNIE RAMIREZ, CHRISTINE RUSH, AND HTUT WIN



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