

SYLLABUS

SUMA PS5170: Sustainable Operations

Fall 2016 - Thursdays, 6:10 to 8:00 p.m.

Instructor information

Vance A. Merolla

e-mail: vm2467@columbia.edu

Office Hours: by appointment

Curriculum and Grading Assistants (Office Hours by appointment):

Victoria Adetuyi

Michelle Chen

e-mail: vaa2113@columbia.edu

e-mail: sc4108@columbia.edu

Course Overview

Leading and advancing sustainability within an organization's operations requires a strategic and balanced approach. Focusing on integrating a broad range of today's sustainability drivers, in a manner consistent with the organization's culture and business objectives, optimizes the chances for long term success. To that end, this course takes a broad high level approach at systematically analyzing opportunities to integrate sustainability at each step along a complex value chain. Specifically, students will be asked to assume the role of a sustainability professional within a private sector company, tasked with integrating various sustainability strategies, initiatives and tools into the fabric of the business.

Throughout the semester, the entire end-to-end value chain will be examined, however it is not the intent to conduct full in-depth technical analyses of each value chain area, rather we will look at sustainable operations from a high-level strategic management viewpoint, discussing integration opportunities and intersections related to: product design, procurement, distribution, direct operations (e.g. manufacturing, buildings), stakeholder engagement, product/service use and end-of-life disposition.

By considering the organization holistically, we will discuss analytical concepts and industry tools related to life cycle thinking, cost/benefit analyses, corporate sustainability strategies, and risk assessments. In addition to technical sustainability considerations such as climate change, energy, water and waste, students will learn to implement practical sustainability initiatives within operating organizations through innovative change management, culture change and other organizational strategies.

Importantly, students will be challenged to think concretely about making choices and balancing elements of sustainability in an overall business context, and communicate in concise written and oral formats to critical internal and external stakeholders.

Key Learning Objectives:

Sustainable Operations is a broad topic, applicable to nearly all sectors both public and private. This course will focus primarily on the private sector, however in order to address as many cross-sector themes as possible, we will look for meaningful operational sustainability elements applicable to most organizations, public and private. The primary learning objectives for students will include:

- Understand how to integrate business-driven Sustainable Operations across a value chain
- Learn to balance and align varying stakeholder (customers/consumers, NGOs, suppliers, employees and investors) expectations with business realities (both financial and cultural)
- Utilize life cycle thinking to prioritize sustainability efforts
- Gain practical experience in the application of various real-world sustainability tools related to carbon footprint analysis, energy efficiency, product sustainability, sustainable buildings, water risks and supplier engagement
- Understand the importance of sustainability data management and validation in developing meaningful metrics and goals
- Learn to communicate Sustainable Operations implications and business benefits in simple, effect and authentic ways, and to present clear business-focused updates to executive management

Course Structure

As a way to help develop practical Sustainable Operations skills, the course will utilize three (3) distinct (fictional) private sector companies in the following business sectors: consumer goods, hospitality and food/beverage. Student teams will be assigned to these business sectors, and will be given real-world scenarios and data to utilize throughout the course. Team-based midterm and final presentations will be required as a way to share ideas and illicit discussion/debate on various strategies.

The course will be structured into the following main sections: Value Chain Analysis, Stakeholder Engagement and Sustainability Communications.

- Value Chain Analysis: we will begin by examining end-to-end operational aspects of sustainability through the lens of greenhouse gases (GHG), to help identify potential “hotspots” where focus might bring greatest value. This section will also cover: facility operations & manufacturing, procurement & logistics, and product use & end-of-life. Students will be challenged to complete assignments related to carbon footprint analysis, product sustainability and sustainable buildings (LEED).
- Stakeholder Engagement: through critical analysis of varying internal and external stakeholder (customers/consumers, employees, NGOs, suppliers, and investors) expectations and business realities, this section will provide the backdrop to formulate successful sustainable operations strategies. Utilizing the private sector organizations assigned, teams will be challenged to complete activities related to designing and developing more sustainable products, tackling high-impact NGO priorities, assessing supplier water and climate risks (using WRI tools), and responding to investor inquiries and surveys (e.g. CDP, DJSI).

- Sustainability Communications: in this final section of the course, we will focus on developing and communicating sustainable operations metrics and goals. The importance of data management and validation will be discussed, as well as best practices in private sector companies “telling their stories” in simple, effective and authentic ways. Student teams will be challenged to develop and present clear business-focused sustainability reports (including goals, key metrics, and risks) in the form of Executive Summary slide presentations.

GUEST LECTURES: As a way to broaden the real-world aspects of the course, various industry practitioners will be invited to provide the class with their Sustainable Operations experiences and perspectives throughout the semester.

Course Schedule

Week 1 (Sept 8) – Introduction to Sustainable Operations

❖ **Section 1: Value Chain Analysis**

Week 2 (Sept 15) – The Value Chain Footprint

Week 3 (Sept 22) – Facility Operations: Energy Efficiency & Green Building

Week 4 (Sept 29) – Sustainable Procurement & Logistics

Week 5 (Oct 6) – Product Use and End-of-Life

Week 6 (Oct 13) – MIDTERM TEAM PRESENTATIONS

❖ **Section 2: Stakeholder Engagement**

Week 7 (Oct 20) - Customers/Consumers: Delivering Sustainable Products & Services

Week 8 (Oct 27) - Suppliers: Assessing Water & Climate Risks

Week 9 (Nov 3) - NGOs: Tackling high-impact priorities

Week 10 (Nov 10) - Investors: Surveys and Standards

❖ **Section 3: Sustainability Communications**

Week 11 (Nov 17) – Sustainability Data: Metrics, Validation & Goal Setting

Thanksgiving Holiday (Nov 24) – no class

Week 12 (Dec 1) – Sustainability Reporting: “telling your story” effectively

Week 13 (Dec 8) – Course Summary

Week 14 (Dec 15) – FINAL EXAM: TEAM PRESENTATIONS (note: class will be held from 6:10-9:10pm)

Method of Grading and Evaluation

1. **Attendance and Class Participation – 10%**
2. **Individual Deliverables – 65%**
3. **Midterm – 10%**
4. **Final Exam Presentations – 15%**

Grade Point System: the following identifies how points will be awarded and translated into letter grades for the course: A= 94-100, A-= 90-93, B+=87-89, B= 84-86, B-=80-83, C+=77-79, C=74-76, C-=70-73, D=66-69, F= 65 or lower

Course Deliverables and Point Scoring

✓ Attendance & Class Participation (10 points)

Participation in class is a critical element of the course and therefore attendance to each class is mandatory. Students are expected to arrive on time, attend all classes, and to stay until the end of class unless they have notified the instructor at the beginning of the session that they will be leaving early. Unexcused absences will affect a student's grade in the class.

✓ Individual Deliverables (65 points)

Five (5) individual deliverables will be assigned to students as follows:

1. GHG Value Chain Footprint (15 points)
2. LEED Scorecard economic analysis (10 points)
3. Product Sustainability Checklist (15 points)
4. Supplier Water Risk Mapping (15 points)
5. Science-based Targets (10 points)

✓ Midterm & Final (25 points)

Two (2) team deliverables will be assigned to students as follows:

1. Midterm Team Presentations: Senior Management briefing on Value Chain Analysis (10 points)
2. Final Team Presentations: Sustainable Operations Executive Summary (15 points)

Assignment Grading Criteria

A series of technical analyses and written management email memos will be assigned throughout the course. Additionally, two team oral presentations will be required.

Grading Criteria for Written Assignments:

- Evaluated on a scale of 100 points using the following guidelines: 20 points for spelling, grammar, and the overall quality and clarity of the writing. 20 points for adherence to assigned format. 60 points for data analysis (where applicable), persuasiveness and effectiveness in communicating all key messages and meeting the objectives of the assignment.

Grading Criteria for Verbal Presentations:

- The midterm and final team presentations will be graded on a scale of 100 points using the following guidelines: 20 points for technical analysis. 30 points for overall quality and clarity of written materials – including summary documents and ppt slides. 50 points for overall quality and clarity of the verbal presentation – including adherence to format guidelines, delivering within the prescribed time limit, and presentation effectiveness as related to the assigned objectives.

Course Readings

A variety of sources including journal articles, videos, webinars and websites will be used throughout this course. Documents can be found either on Courseworks or electronically. Readings should be completed prior to the appropriate session to help better inform the lecture and discussion.

Late Assignment Policy

Assignments are due on the dates/times identified. One letter grade will be deducted from any assignment submitted after the due date/time. No assignment will be accepted after the deadline for submitting final grades.

Incompletes

As outlined in the School's grading and academic starts policy, "A grade of 'I' (incomplete) is a temporary grade indicating failure to complete assigned work. The mark is given only upon the request of the student and at the discretion of the instructor. The student and faculty member must sign a completed 'Request for Grade of Incomplete Form' before the final class session. The 'I' must be removed within one year after the end of the semester in which the student received the grade. Students seeking an extension of this time limit must have the approval of the instruction and successfully petition of the director of their program. If no petition is made, or if the petition is unsuccessful, the grade is changed to an N-Permanent Incomplete- which remains on the student's permanent record.

Academic Integrity

The School of Continuing Education does not tolerate cheating and/or plagiarism in any form. Those students who violate the Code of Academic and Professional Conduct will be subject to the Dean's Disciplinary Procedures. The Code of Academic and Professional Conduct can be viewed online: <http://ce.columbia.edu/node/217>

Please familiarize yourself with the proper methods of citation and attribution. The School provides some useful resources online; we strongly encourage you to familiarize yourself with these various styles before conducting your research: <http://library.columbia.edu/help/howto/endnote.html>

Violations of the Code of Academic and Professional Conduct will be reported to the Associate Dean for Student Affairs.

Accessibility Statement

Columbia is committed to providing equal access to qualified students with documented disabilities. A student's disability status and reasonable accommodations are individually determined based upon disability documentation and related information gathered through the intake process. For more information regarding this service, please visit the University's Health Services website: <http://health.columbia.edu/services/ods/support>

❖ Course Schedule Details

Week 1: Introduction to Sustainable Operations (September 8)

The first class will be dedicated to personal introductions, discussing course approach & objectives, aligning expectations and previewing course materials & assignments.

This Week's Objectives:

- Provide an overview of the Sustainable Operations course
- Align on class objectives, course structure, and grading
- Review business sector organizational profiles & course assignments
- Discuss Ray Andersen TED Talk

Preparation prior to class:

- View: TED Talk - The Business Logic of Sustainability; Ray Anderson (Feb 2009); 15:54min
http://www.ted.com/talks/ray_anderson_on_the_business_logic_of_sustainability?language=en
- Review the three (3) fictitious organizational profiles assigned within the Consumer Goods, Hospitality, and Food/Beverage sectors (.xls files posted on Courseworks).

No Assignment this Week.

❖ Course Section 1: Value Chain Analysis

Week 2: The Value Chain Footprint (September 15)

We will examine end-to-end operational aspects of sustainability through the lens of greenhouse gases (GHGs), keeping in mind that this approach may also be applied equally to numerous sustainability aspects beyond climate. This exercise will highlight a strategy of identifying potential “hotspots” where focus may bring greatest business and environmental value.

This Week's Objectives:

- Understand the importance of taking a holistic view at an operational footprint (in this case via GHGs) to help identify areas of focus aligned with business goals
- Review how to analyze basic operational energy usage data (e.g. Scope 1 & 2) and convert to GHG emissions
- Appreciate the wide range of impacts associated with end-to-end operational GHGs (e.g. Scope 3 emissions), and gain experience utilizing leading industry approaches and tools (e.g. GHG Protocol and WRI Scope 3 Analyzer)
- Form working teams: Consumer Products, Hospitality, and Food/Beverage

Preparation prior to class:

- Read WRI/WBCSD's *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard* Revised Editions (March 2004) (Introduction and Chapters 1-4)
<http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf>
- Read Ben & Jerry's LCA Study overview <http://www.benjerry.com/values/issues-we-care-about/climate-justice/life-cycle-analysis>
- Review real-world company sustainability reports & corporate websites in the following business sectors (posted on Courseworks):
 - Consumer Products: Colgate-Palmolive, Procter & Gamble, Unilever
 - Hospitality: Marriott, Wyndham Worldwide, Xanterra
 - Food/Beverage: Pepsico, Coca-Cola, Mondelez

Individual Assignment #1: GHG Value Chain Footprint (15 points) due Week 4 (Sept 29)

This assignment will utilize industry accepted practices and tools to develop a topline GHG Footprint analysis for direct (Scope 1), indirect (Scope 2) and other (Scope 3) GHG emissions. Students will use their assigned organization's energy usage data and GHG factors provided to estimate the total annual GHG emissions associated with Scope 1 & 2 sources. Then, using the online World Resources Institute (WRI) Scope 3 Evaluator tool students will develop estimated GHG emissions associated with all 15 categories of Scope 3 emissions.

Week 3: Facility Operations - Energy Efficiency & Green Building (September 22)

Focus will be on understanding the importance, from both an environmental and economic perspective, of investing in energy reduction and efficiency projects for your facility operations. Additionally, we will explore both technical and business opportunities related to green building strategies for operations, by conducting a LEED preliminary scorecard evaluation exercise.

This Week's Objectives:

- To underscore the criticality of energy efficiency to Sustainable Operations
- Learn strategies to leverage cost to drive energy and GHG reduction projects within an organization's typical ROI
- Analyze a preliminary LEED Scorecard, including technical feasibility and cost implications, related to a newly proposed facility in your organization

Preparation prior to class:

- Read Energy Information Administration (EIA) - Annual Energy Outlook 2015 Executive Summary (Pages ES-1 through ES-8) [http://www.eia.gov/forecasts/aeo/pdf/0383\(2015\).pdf](http://www.eia.gov/forecasts/aeo/pdf/0383(2015).pdf)
- Visit US EPA ENERGY STAR website – Energy Strategies for Buildings & Plants <http://www.energystar.gov/buildings>; and US EPA ENERGY STAR Energy Treasure Hunt Guide http://www.energystar.gov/sites/default/files/buildings/tools/Energy_Treasure_Hunt_Guide_Jan2014.pdf
- Read NY Times International article; *Slowly, Asia's Factories begin to Turn Green* (January 2014) <http://www.nytimes.com/2014/01/08/business/international/asian-factories-see-sense-and-savings-in-environmental-certification.html?partner=yahoofinance&r=2>
- Visit USGBC website - <http://www.USGBC.org>

GUEST LECTURE: Criticality of Energy Efficiency

Jed Richardson, Global Energy Director
Johnson & Johnson



Individual Assignment #2: LEED Scorecard Analysis due Week 5 (October 6)

This assignment has students review a preliminary LEED Scorecard and cost estimates from a LEED consultant, and provide recommendations related to sustainable building practice options for the new facility being built in India. Students interpret the LEED scorecard results, estimate total costs, impacts to timelines and ultimately make a management recommendation on how to proceed.

Team Assignment #1: MIDTERM TEAM PRESENTATIONS – Value Chain Analysis: Senior Management Briefing due Week 6 (October 13)

Each of the 9 teams will prepare and present a 7-minute Senior Management briefing summarizing their Value Chain GHG Footprint findings, peer benchmarking observations, and recommendations related to sustainable operations areas of focus which would bring greatest business value. The presentations will be followed by a 3-minute question/answer session.

Week 4: Sustainable Procurement & Logistics (September 29)

Organizations engaged in sustainability must think and act beyond the walls of their own operations. Utilizing the results from the GHG footprint exercise conducted for our organizations, we will examine and discuss the opportunities related to suppliers and logistics.

This Week's Objectives:

- Review the results of the GHG Footprint exercise assigned in Week 2 with focus on the Supplier and Logistics aspects
- Discuss the business importance, challenges, risks, strategies and practicalities of engaging suppliers in sustainability
- Discuss Deforestation as a dynamic model of supplier engagement for companies, NGOs and governments

Preparation prior to class:

Supplier Engagement

- Read Harvard Business Review article *The Sustainable Supply Chain* by Steven Prokesch (October 2010) <https://hbr.org/2010/10/the-sustainable-supply-chain>
- Visit CDP Supply Chain website - <https://www.cdp.net/supplychain>

Deforestation

- Visit website – WRI Forests; <http://www.wri.org/our-work/topics/forests>
- Visit website – WWF deforestation; <https://www.worldwildlife.org/threats/deforestation>
- Visit website – The Forest Trust; <http://www.tft-earth.org/>
- Read The Economist article *A Clearing in the Trees* (Aug 2014) <http://www.economist.com/news/international/21613327-new-ideas-what-speeds-up-deforestation-and-what-slows-it-down-clearing-trees>

Logistics

- Visit website – US EPA SmartWay; <http://www.epa.gov/smartway/about/index.htm>

No Assignment this Week.

Week 5: Product Use and End-of-Life (October 6)

The sustainability impacts stemming from the use and disposal of an organization's products and/or services can often be significant. Product design and material/ingredient choices combined with sourcing decisions affect the overall sustainability profile of an organization as well as enable/disable the ability of suppliers, manufacturers and consumers to reduce their impacts. This week we will examine the both the internal and external aspects of sustainable product design.

This Week's Objectives:

- Review the LEED Scorecard Analysis assignment from Week 3
- Discuss operational waste reduction strategies
- Examine product sustainability aspects related to the design, use and disposal of an organization's products and/or services

Preparation prior to class:

- Harvard Business Review – *A New Algorithm for Fast Carbon Footprinting* (October 2012)
<https://hbr.org/2012/10/a-new-algorithm-for-fast-carbo/>
- Visit website – US EPA Safer Choice (formerly Design for the Environment)
<http://www2.epa.gov/saferchoice>
- Visit website - Closed Loop Fund <http://www.closedloopfund.com/>
- Read General Motors article – *The Business Case for Zero Waste*
http://www.gm.com/content/dam/gmcom/VISION/Environment/Waste_Reduction/Images/Landfill%20free%20blueprint%20_%20FINAL%205_28.pdf

GUEST LECTURE: Product End-of-Life

Rob Kaplan, Co-founder & Managing Director
The Closed Loop Fund



Individual Assignment #3: Product Sustainability Checklist due Week 8 (October 27)

In this assignment students will be given a product formulation change potentially impacting the overall sustainability profile of a product line. Through examining various product sustainability attributes (e.g. GHG, water, waste, ingredients, feedstocks, etc.) students will utilize a Product Sustainability Checklist to evaluate and recommend actions related to the overall sustainability of the new product line prior to it going to market.

No Assignment this Week.

Week 6: MIDTERM TEAM PRESENTATIONS – Value Chain Analysis: Senior Management Briefing (October 13)

Each of the 9 teams will present a 7-minute Senior Management briefing summarizing their Value Chain GHG Footprint findings, peer benchmarking observations, and recommendations related to sustainable operations areas of focus which would bring greatest business value. The presentations will be followed by a 3-minute question/answer session.

Note: *the Senior Management team has allotted only 7 minutes on their agenda for your briefing. Your presentations will be timed and the 7 minute limit will be strictly enforced, so not completing your presentation within the time limit will impact your grading evaluation.*

❖ Course Section 2: Stakeholder Engagement

Week 7: Customers/Consumers: Delivering Sustainable Products & Services (October 20)

Following our analysis of the value chain in Section 1 of the course, we begin Section 2 with a focus on understanding key stakeholder agendas and expectations. This week we will listen to what our customers and consumers are telling us about sustainability in terms of expectations and relevance, and discuss how best to integrate those in balance with other business drivers.

This Week's Objectives:

- Discuss Stakeholder Engagement within the context of understanding expectations and balancing with business realities and requirements
- Utilize the GHG Footprint developed in Section 1 to examine the impacts stemming from Consumer Use of Products/Service
- Discuss the organization's role in helping customers/consumers reduce their footprints

Preparation prior to class:

- Read Nielsen article *Global Consumers are willing to put their Money where their heart is when it comes to Good and Services from Companies committed to Social Responsibility* (June 2014); <http://www.nielsen.com/us/en/press-room/2014/global-consumers-are-willing-to-put-their-money-where-their-heart-is.html>
- Read US News & World Report article *Save Money, Live Sustainably?* (March 2015); <http://www.usnews.com/opinion/economic-intelligence/2015/03/30/new-wal-mart-program-shows-how-hard-sustainability-ratings-are>

No Assignment this Week.

Week 8: Suppliers: Assessing Water & Climate Risks (October 27)

Sustainable Operations are critically dependent upon understanding and managing the risks throughout the supply chain. This week we will examine approaches to analyzing and addressing water and climate risks associated with key material/service suppliers. An exercise using a real-world tool (World Resources Institute Aqueduct Water Risk mapping tool) will be included.

This Week's Objectives:

- Review the "Product Sustainability Checklist" assignment from Week 5
- Discuss Stakeholder Engagement within the context of how best to partner with suppliers to gather critical input used to inform the assessment of current and future risks
- Understand the criticality of assessing and managing water and climate related risks associated with suppliers
- Learn the application of a real-world analytical tool (WRI's Aqueduct Water Risk mapping) in the supplier evaluation and selection process

Preparation prior to class:

- Visit WRI Aqueduct website - <http://www.wri.org/our-work/project/aqueduct>
- Read *Supply Chain Sustainability Revealed: A Country Comparison* - CDP Global Supply Chain Report 2014-2015 - <https://www.cdp.net/CDPResults/CDP-Supply-Chain-Report-2015.pdf>

GUEST LECTURE: Assessing Supplier Risks

Adam Gordon, Account Manager Supply Chain
CDP



Individual Assignment #4: Supplier Water Risk Mapping due Week 11 (November 17)

In this assignment, students will utilize WRI's online Aqueduct water risk tool to map out the locations of 3 potential new suppliers in China, obtain water risk data associated with these supplier locations, and then summarize the findings and report back to the Global Procurement team with relevant graphs/tables and recommendations.

Week 9: NGOs - Tackling high-impact Priorities (November 3)

Organizations today engage with an increasing array of non-government organizations (NGOs) dedicated to driving various sustainability agendas. This week we will survey the current external NGO landscape, examine the business connections to the value chain, and discuss beneficial NGO engagement strategies.

This Week's Objectives:

- Understand the role of NGOs in driving Sustainable Operations, and survey the current external landscape
- Through examination of our value chain model, discuss which NGO issues are most relevant to Sustainable Operations
- Discuss various strategies in balancing NGO engagement with overall business risks & goals

Preparation prior to class:

- Read *Guide to Successful Corporate-NGO Partnerships*; GEMI/EDF (2008)
<http://dnr.wi.gov/topic/SmallBusiness/documents/caseStudies/GEMIGuideToSuccessfulCorporateNGOPartnerships.pdf>
- Visit World Resources Institute (WRI) website; <http://www.wri.org>
- Visit Environmental Defense Fund (EDF) website; <https://www.edf.org/>
- Visit Greenpeace website; <http://www.greenpeace.org/usa/>
- Visit US Green Building Council (USGBC) website; <http://www.usgbc.org/>

GUEST LECTURE: NGO Perspective - Corporate Engagement

JP Leous, Corporate Relations
World Resources Institute



Team Assignment #2: FINAL TEAM PRESENTATIONS – Sustainable Operations Executive Summary due Week 14

(Submit PPT files on Wednesday December 14 by 6pm, present to class on Thursday December 15)

As a more comprehensive followup to the executive briefing conducted in Week 6, each of the 9 teams will now prepare and present a 15-minute Senior Management update summarizing their Sustainable Operations findings and recommendations, followed by a 3-5 minute question/answer session. With the limited amount of time, teams should focus their presentations on high-level learnings, strengths, opportunities and recommendations from the Value Chain Analysis, Stakeholder Engagement and Sustainability Communications work conducted this semester. The audience includes your organization's CEO and COO, as well as management team leaders from finance, procurement, manufacturing/operations, human resources, corporate communications and sustainability.

Week 10: Investors - Surveys and Standards (November 10)

As sustainability becomes more deeply embedded into global business practices, the investment community is taking an increasingly active role. This week we will discuss how sustainable operations intersect with investor and shareholder expectations from both risk management and value creation perspectives. We will utilize a leading investor-facing environmental initiative (e.g. CDP) to help frame the discussion, as well as discuss emerging sustainability accounting standards (e.g. SASB).

This Week's Objectives:

- Understand how investors view sustainability from both the risk management and value creation perspectives
- Through review of the CDP investor initiatives, gain an understanding of the breadth and depth of issues related to how institutional investors may act to reduce the long-term risks arising from environmental externalities
- Discuss investors as key stakeholders in driving sustainability, as well as how emerging accounting standards help to provide critical governance and support

Preparation prior to class:

- View TED talk *The Investment Logic for Sustainability* (Nov 2013); 12:19min
http://www.ted.com/talks/chris_mcknett_the_investment_logic_for_sustainability?language=en
- Visit CDP website - <https://www.cdp.net/>
- View video WSJ and SASB Founder interview (March 2015); 3:53min
<http://www.sasb.org/economics-puts-spotlight-sasb/>
- Visit website: Sustainability Accounting Standards Board (SASB) website – Principles;
<http://www.sasb.org/approach/principles/>

No Assignment this Week.

❖ Course Section 3: Sustainability Communications

Week 11: Sustainability Data: Metrics, Validation & Goal Setting (November 17)

Following our work to understand key stakeholder agendas and expectations in Section 2 of the course, we move into Section 3 with a focus on measuring, utilizing and reporting Sustainable Operations data and KPIs. This week we will discuss how, just as in any key business function, sustainability data, metrics and goals are essential to driving performance. Additionally, we will examine how organizations go about collecting and validating sustainability data and set meaningful goals.

This Week's Objectives:

- Review the Supplier Water Risk assessment using WRI Aqueduct from Week 8
- Discuss the types of sustainability data organizations collect, track and validate, with focus on the Global Reporting Initiative (GRI) indices
- Understand how to establish meaningful goal-setting processes

Preparation prior to class:

- Review the real world company Sustainability Reports provided to gauge how KPIs, metrics and goals are communicated in the CPG, Hospitality and Food/Beverage sectors (posted on Courseworks)
- Visit GRI website <https://www.globalreporting.org/Pages/default.aspx>
- Read *G4 Reporting Principles and Standard Disclosures* (pages 3-5 preface & purpose; page 9 Table 1 Categories & Aspects; pages 16-18 Reporting Principles)
<https://www.globalreporting.org/resourcelibrary/GRIG4-Part1-Reporting-Principles-and-Standard-Disclosures.pdf>
- Visit WWF website sections
 - Visit WWF website: <http://www.worldwildlife.org/projects/the-3-solution>
 - Read WWF, CDP, McKinsey report *The 3% Solution* (Executive Summary; pages 6-9); https://c402277.ssl.cf1.rackcdn.com/publications/575/files/original/The_3_Percent_Solution_-_June_10.pdf?1371151781
 - Review Carbon Target & Profit calculator <http://www.worldwildlife.org/pages/carbon-target-and-profit-calculator>
- Visit website by CDP/UN Global Compact/WRI/WWF - <http://sciencebasedtargets.org/>
- Visit WRI website - Mind the Science, Mind the Gap <http://www.wri.org/our-work/project/mind-science-mind-gap-aligning-corporate-ghg-emissions-reduction-targets-climate> and read Mind the Science, Mind the Gap FAQs http://www.wri.org/sites/default/files/uploads/mind_the_gap_faqs.pdf

Individual Assignment #5: Science-based Targets due Week 12 (December 1)

In this assignment, students will be asked to set an absolute science-based Greenhouse Gas (GHG) reduction goal for Scope 1 & 2 emissions using the WWF's 3% Solution Carbon Target and Profit Calculator, as well as develop a Scope 3 target which conforms to CDP/WWF guidance criteria.

Week 12: Sustainability Reporting: “telling your story” effectively (December 1)

As organizations work to develop sustainability strategies and initiatives, reporting and communicating is essential to ensuring stakeholders at all levels have the clear information they need and expect. This week we will discuss the importance of meaningful, authentic and transparent public reporting, and what strategies to consider when developing a sustainability communications plan.

This Week’s Objectives:

- Review the Science-based Targets assignment from Week 11
- Appreciate the importance of meaningful, authentic and transparent sustainability reporting
- Ensure sustainability reporting is kept simple and clear for all stakeholders

Preparation prior to class:

- Visit EY website – *Value of Sustainability Reporting*
<http://www.ey.com/US/en/Services/Specialty-Services/Climate-Change-and-Sustainability-Services/Value-of-sustainability-reporting>
- Read Glass Lewis & Co. *In Depth: Sustainability Reporting* (April 2014)
<http://www.glasslewis.com/assets/uploads/2014/03/In-Depth-Sustainability-Reporting-2014.pdf>
- Visit Triple Pundit website – *What is Sustainability Reporting? 8 Tips for the Casual Reader*
<http://www.triplepundit.com/2012/08/what-is-sustainability-reporting/>

GUEST LECTURE: Corporate Sustainability Communications

Ann-Marie Keller, Sustainability Manager
Colgate-Palmolive Company



Tatiana Munoz, Corporate Communications Manager
Colgate-Palmolive Company



No Assignment this Week.

Weeks 13: COURSE SUMMARY – Sustainable Operations (December 8)

The final class will be dedicated to summarizing key topics and learning from the course, reviewing original objectives, and having an open class discussion on a selected sustainability “hot” topic and/or case study.

Time will also be provided to review final presentation expectations and for the Teams to meet together in class, as well as gather input from the professor and teaching assistants as they prepare for the presenting next week.

This Week’s Objectives:

- Open class discussion on a sustainability “hot” topic or case study (based on student survey)
- Conduct a course overview focused on the original objectives, as well as key learning
- Discuss expectations for Final Presentations next week, and provide time for Teams to meet in class to prepare

No Assignment this Week.

Weeks 14: FINAL TEAM PRESENTATIONS – Sustainable Operations Executive Summary (December 15 – *extended class from 6:10pm to 9:10pm)

Each of the 9 teams will present a 15-minute Senior Management update summarizing their Sustainable Operations findings and recommendations, followed by a 5-minute question/answer session. With the limited amount of time, teams should focus their presentations on high-level learnings, strengths, opportunities and recommendations from the Value Chain Analysis, Stakeholder Engagement and Sustainability Communications work conducted this semester. The audience includes your organization’s CEO and COO, as well as management team leaders from finance, procurement, manufacturing/operations, human resources, corporate communications and sustainability.

Note: *the Senior Management team has allotted only 15 minutes on their agenda for your briefing. Your presentations will be timed and the 15 minute limit will be strictly enforced, so not completing your presentation within the time limit will impact your overall assignment evaluation.*