Sustainability Management
PS4100 Section 001, Fall 2018

Time: Tuesdays 6:10-8:00 PM (Except where noted)
Location: TBD - Hopefully: W&J Warren Hall, Room L107 (1125 Amsterdam Ave)

Professor Steven Cohen
Tel: 212-854-4445 e-mail: sc32@columbia.edu

Curriculum and Grading Assistants:
Hayley Martinez: Lead Curriculum Assistant | hmartinez@ei.columbia.edu | (Students last names A-H)
Shruti Deshpande: CGA | sd3213@columbia.edu
Alique Berberian: CGA | alique.berberian@columbia.edu

Office hours for Prof. Cohen and all CGAs by appointment. Professor Cohen’s hours are flexible and the best way to set up an appointment is to email him at sc32@columbia.edu.

Course Objectives:

Sustainability management matters because we only have one planet, and we must learn how to manage our organizations in a way that ensures that our planet is maintained. The course is designed to introduce you to the field of sustainability management. This is not an academic course that reviews the literature of the field and discusses how scholars think about the management of organizations that are environmentally sound. It is a practical, professional course organized around the core concepts of management and the core concepts of sustainability. The material has a specific emphasis on urban sustainability as the planet’s urban population continues to expand.

Each week we will read one or two cases in management and/or sustainability, and some background material designed to help you answer the questions posed at the end of each case exercise. The cases always pose practical issues for decision makers to address—but issues that are best addressed with a firm grounding in the literature of management and sustainability.

The literature and case material we will study this semester are based on lessons learned in government, non-profits and the private sector. However, most of my own work focuses on government and non-profits so this course will emphasize management in public and nonprofit organizations and the role of public policy in sustainability.

In this course you will be assigned to one team that will present a briefing in class on an assigned position for a particular case, for which another team will present an opposing view. You will also write three two-page memos according to a specified format. The syllabus includes a schedule for each assignment. There is also a take home final exam that is due the last day of class, Monday, December 3, 2018.
Schedule

**Week 1 (September 4):** Introduction to Management, Public Management, and Sustainability Management

**Week 2 (September 11):** Internal Organizational Management: People, Work, Money and Information

**Week 3 (September 18):** No class due to Yom Kippur

**Week 4 (September 25):** External Organizational Management: Strategy and Communications

**Week 5 (October 2):** The Role of Government in Promoting Sustainability

**Week 6 (October 9):** Sustainability Leadership: Panel moderated by George Sarrinikolaou

**Week 7 (October 16):** Sustainable Urban Systems: Defined and Explained

**Week 8 (October 23):** The Transition to Sustainably Managed Organizations Outsourcing, Network Management and Public-Private Partnerships

**Week 9 (October 30)** The Sustainable Lifestyle

**Week 10 (November 6):** No class due to Election Day

**Week 11 (November 13):** Sustainable Business and Finance

**Week 12 (November 20):** The Centrality of Energy: Moving from Fossil Fuels to Renewable Energy

**Week 13 (November 27):** Sustainability Metrics, Management Innovation and Quality Management

**Week 14 (MONDAY, December 3, 8:10 – 10:00pm):** A Sustainable Planet and Conclusions

(Optional session)

Required Readings

2. Steven Cohen, William Eimicke, Alison Miller, *Sustainability Policy: Hastening the Transition to a Cleaner Economy*
3. Steven Cohen, *The Sustainable City* (selected chapters)
11. Schwarz, J., B. Beloff and E. Beaver (2002). “Use sustainability metrics to guide decision-making.” *Chemical Engineering Progress*
14. Case Studies; available in the following locations:
Canvas

- “The Problem of Tom”
- “Colombia’s Bus Rapid Transit (BRT) Development and Expansion”
- “New York State Systems Benefit Charge”
- “Sustainability Planning in New York City”
- “Nuclear Power and the Japanese Earthquake of 2011”
- “Bike Lanes in New York City”
- “Public Private Partnerships for Green Space in NYC”

Harvard Business School

You must purchase these online in our Coursepack at: https://hbsp.harvard.edu/import/539329

- “Ferrero Group: Achieving Sustainability Through Supply Chain” Product #: W17371
- “Patagonia’s Path to Carbon Neutrality”: Product #B5916
- “Natura Cosmeticos, S.A.”: Product #: 412052

Method of Evaluation

1. Individual Case memos – 45%
2. Final exam – 35%
3. Group Case presentation & memo – 10%
4. Class participation and attendance – 10%

Grading Policy

ALL ASSIGNMENTS MUST BE SUBMITTED ON TIME. ANY LATE SUBMISSIONS RECEIVE AN AUTOMATIC REDUCTION OF ONE-HALF LETTER GRADE. IF AN ASSIGNMENT IS AN HOUR LATE OR A MONTH LATE, THE PENALTY IS THE SAME. IT IS A SMALL PENALTY AND IS NON-NEGOTIABLE.

Group Process

1. Each student will have one group project to complete. Groups will be assigned randomly in advance of the first class session, and one person will be assigned the role of group manager. Students that add the course late will be added to an existing group. Groups will consist of 3-4 members.
2. Group members are responsible for setting meetings and identifying roles and responsibilities.
3. Group manager will submit work plan to Hayley two weeks prior to presentation, outlining each person’s role and a timeline for completed activities.
4. Group manager will email power point presentation to Hayley by 9am on the day of the presentation. The power point should contain no more than 5-6 slides.
5. One person in the group submits the written memo via Canvas.
6. Both Groups A and B will give a 10 minute briefing (5 minute presentation and 5 minute Q&A), in-person at the start of class on the assigned date.
## Summary of Due Dates

Cases will be due by 6:10PM on the due date via upload to the Assignments section on Canvas.

<table>
<thead>
<tr>
<th>Week</th>
<th>Case Study</th>
<th>Due by 6:10pm (via Canvas)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Sep. 4</td>
<td>NONE</td>
</tr>
<tr>
<td>2)</td>
<td>Sep. 11</td>
<td>The Problem of Tom</td>
</tr>
<tr>
<td>3)</td>
<td>Sep. 18</td>
<td>NONE: No class due to Yom Kippur</td>
</tr>
<tr>
<td>4)</td>
<td>Sep. 25</td>
<td>Colombia’s Bus Rapid Transit (BRT) Development and Expansion</td>
</tr>
<tr>
<td>5)</td>
<td>Oct. 2</td>
<td>New York State Systems Benefit Charge Sustainability Planning in NYC</td>
</tr>
<tr>
<td>6)</td>
<td>Oct. 9</td>
<td>NONE: Panel Event</td>
</tr>
<tr>
<td>7)</td>
<td>Oct. 16</td>
<td>Waste Management in New York City, Hong Kong and Beijing (Chap 6 Sustainable City)</td>
</tr>
<tr>
<td>8)</td>
<td>Oct. 23</td>
<td>Ferrero Group: Achieving Sustainability Through Supply Chain Patagonia’s Path to Carbon Neutrality Public Private Partnership for Green Space in NYC</td>
</tr>
<tr>
<td>9)</td>
<td>Oct. 30</td>
<td>Sustainable Urban Living (Chap 10 Sustainable City)</td>
</tr>
<tr>
<td>10)</td>
<td>Nov. 6</td>
<td>NONE: No Class</td>
</tr>
<tr>
<td>11)</td>
<td>Nov. 13</td>
<td>Ford Motor Company: New Shades of Green through Soy Foam The</td>
</tr>
<tr>
<td>12)</td>
<td>Nov. 20</td>
<td>Building of the Smart Grid (Chapter 8 Sustainable City) Nuclear Power and the Japanese Earthquake of 2011</td>
</tr>
<tr>
<td>13)</td>
<td>Nov. 27</td>
<td>Natura Cosméticos, S.A. Bike Lanes in New York City</td>
</tr>
<tr>
<td>14)</td>
<td>Dec. 3</td>
<td>NONE</td>
</tr>
</tbody>
</table>

### Week 1: September 4, 2018: Introduction to Management, Public Management, and Sustainability Management

**Reading Assignment:**
- The Effective Public Manager: Chapters 1 and 2
- Sustainability Policy: Hastening the Transition to a Cleaner Economy: Chapter 1

**Class Videos:**
- Sustainability Management: Lessons from and for New York City, America and the Planet
• Transforming Organizations with Sustainability Management - What is Sustainability Management?

Week 2: September 11, 2018: Internal Organizational Management: People, Work, Money and Information

Reading Assignment:
• The Effective Public Manager: Chapters 3, 4, 5 and 8.

Class Videos:
• 5 reasons Google overhauled its structure
• Best Practice HR Tips from Liane Hornsey, Google VP Operations | MeetTheBoss

Group Case #1: “The Problem of Tom” (Available on Canvas)

This case details the management issues posed by Tom McKenna—a staff person with great technical skills whose personality problems impair his performance in the organization. This case could happen in any organization and it creates the classic problem—what to do with the staff person with excellent technical skills but poor social and/or political skills.

In this case you are Ginny Oliver, a Branch Chief in Navy’s Office of Electronic Communication. You are heading a small team that is considering the “problem of Tom.” Your boss, Gill Garber, has asked your team to brief him on the following issues:

1. Groups A and B: How have Tom McKenna’s actions effected his reputation, relationship with coworkers, and his performance?
2. Groups A and B: What could have been done to prevent some of these problems (if anything)?
3. Group A: Argue that Tom should not be terminated and his performance can be improved through effective management. Explain potential actions management can take.
   Group B: Argue that Tom should be terminated and explain what steps should be taken.

Week 3: September 18, 2018: No Class due to Yom Kippur

Week 4: September 25, 2017: External Organizational Management: Strategy and Communications

Reading Assignment:
• The Effective Public Manager: Chapters 10 and 11

Class Videos:
• Patagonia and Transparency
• Bus Rapid Transit System in Bogota, Colombia - CDM Project
Individual Memo #1: “Colombia’s Bus Rapid Transit (BRT) Development and Expansion” (Available on Canvas)

Many major cities in Colombia struggle with managing transportation issues arising from growing populations and vehicle use and the development of sustainable public transportation alternatives. Rapidly developing metropolises suffer from highly congested roadways, extreme air pollution, and high rates of road related accidents. In Colombia, these issues stem partly from the over-saturation of independent bus operators, underinvestment in infrastructure and inefficient operations. In 2002, Colombia championed the National Urban Transport Program (NUTP) that revolutionized the public transport system; implementing Strategic Public Transportation Systems (SPTS) and expanding Bus Rapid Transit (BRT) systems in major cities. In the process, Colombia had to overcome a variety of significant barriers. The first BRT system, TransMilenio, was built in Bogotá. Its initial success made it a model for the rest of the country. TransMilenio helped galvanize support for the national plan to expand BRT systems to 8 other cities in Colombia.

The National Urban Transport Program (NUTP) is considering expanding the BRT system to 5 other cities in Colombia, but smaller in size than where they previously operated (populations less than 600,000). However, NUTP wants to avoid some of the issues that have developed with Phase II of TransMilenio, which include questions about funding for future phases and increased public debates about the merits of a bus network over rail system. Public approval for TransMilenio is fairly low, and users complain about lack of maps at stations, overcrowding, lack of safety, and high prices for many users who live on less than minimum wage. In light of this controversy, the Transportation Commissioner has asked you, the Deputy Commissioner for Capital Projects, to make a recommendation regarding BRT expansion. You have been asked to address these four questions:

1. Should NUTP should expand the BRT system to other cities despite recent controversies with TransMilenio?
2. What are the key factors for success and steps for achieving them? How can the program overcome low public approval?
3. What are the political and managerial advantages/disadvantages of your strategy?
4. Who are the major stakeholders and how will you involve them in your plan?

Week 5: October 2, 2018: The Role of Government in Promoting Sustainability

Reading Assignment:
- Sustainability Policy: Hastening the Transition to a Cleaner Economy: Chapters 2 and 3
- The Sustainable City: Chapters 1 and 5
- New York State, 2016, “Reforming the Energy Vision” White Paper

Class Videos:
- GSFA 2017 | C40 Cities and Citi Foundation | We Live Here Together
- New York Green Bank
- Cities in Focus | New York City

Group Case #2: “New York State Systems Benefit Charge” (Available on Canvas)
You work for the Public Service Commission, the group that approved the state’s Clean Energy Fund (CEF) effective January 21, 2016. Your team is tasked with developing the CEF progress report and providing advice to other states that have public benefit funds, but might be considering the CEF model. The following questions need to be considered in your review:

1. **Groups A and B:** What is the role of the government in sustainability? How does this role differ at the local, state and national levels in the U.S.?
2. **Groups A and B:** What are the benefits of an energy fund plan that is more market-driven than the more conventional public benefit fund? What are some challenges that may arise?
3. **Group A:** Argue that the Clean Energy Fund, in its current state, is beneficial for the State of New York and additional states should also adopt something similar to the Clean Energy Fund in their own state.
   **Group B:** Argue that state CEF does not go far enough and should include specific targets for energy efficiency and renewable energy to ensure the state reaches the greatest levels of scale for clean energy. Suggest specific targets.

**Group Case #3: “Sustainability Planning in NYC” (Available on Canvas)**

Mayor Bloomberg launched “PlaNYC 2030: A Greener, Greater New York” in 2007 and formed the Office of Long-Term Planning and Sustainability to implement the plan’s 100+ initiatives across the categories of Energy, Transportation, Water, Solid Waste, Green Buildings, and Climate Change, among others. Working with over 25 city agencies to implement, the plan is based on the idea that environment and economic development are linked, and sustainability must be embedded in a city for it to flourish long-term and attract and retain business and residents. Bloomberg’s successor, Mayor de Blasio, has rebranded and revamped PlaNYC to “One New York: The Plan for a Strong and Just City,” with a new focus on equity and reducing poverty, recognizing that the environment is highly connected to these issues.

You are a team working for a sustainability consulting firm, and your firm has been hired by another large American city (of the group’s choice) that is interested in developing a sustainability plan for the first time. Your client wants you to consider the challenges that New York City faced in the transition from PlaNYC to OneNYC, the major differences between the two plans, and make a recommendation on how to approach the city’s first sustainability plan. You have been asked to address the following questions:

1. **Group A & B:** What are the major differences between the PlaNYC and OneNYC plans?
2. **Group A:** Recommend a PlaNYC approach that focuses primarily on environmental initiatives.
   **Group B:** Recommend an OneNYC approach that links environmental initiatives with other citywide goals related to poverty, equity and resiliency.
3. **Group A & B:** What are the advantages and disadvantages of your recommendation? What are the potential challenges?
4. **Group A & B:** What is the role of metrics/measurement in your recommended plan?
Week 6: October 9 Sustainability Leadership: Panel Moderated by George Sarrinikolaou

Week 7: October 16, 2018: Sustainable Urban Systems: Defined and Explained

Reading Assignment:
- Sustainability Policy: Hastening the Transition to a Cleaner Economy: Chapter 5
- The Sustainable City: Chapter 2

Class Videos:
- Sustainable City | Fully Charged
- China’s recycling businesses: A headache & an opportunity

Group Case #4: “Waste Management in New York City, Hong Kong and Beijing” (The Sustainable City Chap 6)

Hong Kong is one of the many regions in the world that faces waste capacity issues, due to high population growth, increased economic activity, and limited landfills. Your team of consultants has been hired by the Hong Kong Environmental Protection Department (EDP) to provide recommendations on improving waste management in Hong Kong. The Department has asked you to consider waste practices in other large cities, both in neighboring China and in the United States. Consider the practices of New York City and Beijing as you are developing your recommendation, and consider these questions:

1. Groups A and B: What are the major challenges to effective waste management in large, densely populated cities?
2. Group A: Argue that the EDP will be able to solve their landfill problem through recycling and a reduction of food waste going to the landfill.
   Group B: Argue that recycling and food waste reduction is not enough and therefore the EDP will have to implement a new waste program. Suggest a new waste program for EDP to implement.
3. Groups A and B: Using an example from either New York City or Beijing, what recycling mechanism should Hong Kong incorporate as part of its overall waste management plan?
4. Groups A and B: How will your plan address planned closure of the three landfills in 2020?


Reading Assignment:
- The Sustainable City: Chapter 4
Individual Case #2: “Ferrero Group: Achieving Sustainability Through Supply Chain Integration”  (Purchase via Harvard Business School)

You are the head of a team working on Corporate Social Responsibility at Ferrero Group. Ferrero believes they can grow and have sustainable products. However, the path to reaching their 2020 sustainability goals while growing is not clear. According to their CSR report, 13 goals are in progress or completed but the remaining four goals are not on track. You have been asked to recommend a strategy to reach the remaining goals while not negatively impacting the growth strategy. The recommendation is to be in the form of a two page action memo that addresses these questions:

1. What is a sustainable supply chain and why is it important to Ferrero?
2. What strategies should Ferrero pursue to achieve its sustainability goals?
3. How can Ferrero Group leverage their sustainability work to gain more market share?
4. How might your proposed sustainability strategy conflict with Ferrero Group’s growth goals? How can you minimize these impacts?
5. Which stakeholders should your team consult with as you develop this strategy? How should they be consulted and why are they important?

Group Case #5: “Patagonia’s Path to Carbon Neutrality by 2025”  (Purchase via Harvard Business School)

Patagonia, an outdoor clothing company based in Ventura, CA, has the goal of becoming carbon neutral by 2025. They are hoping to develop a strategy so that other companies can replicate the path they took. Patagonia believes the key to reaching their goal is through their supply chain. However, they have limited control over their suppliers since they are not largely not vertically integrated. The majority of their emissions, 80%, come from raw materials production. You are a leader of a team of sustainability consultants that have been commissioned by Patagonia to analyze their Carbon Neutrality Plan and develop additional ways they can reach their goal. The recommendation is to be in the form of a two page action memo that addresses these questions:
1. **Group A and B**: Is Patagonia’s Carbon Neutrality Plan realistic? How does being a private, B Corp company harm or benefit their goal?

2. **Group A**: Argue that Patagonia should focus on using existing fabrics (recycled and renewable materials) in order to reduce their carbon footprint.
   **Group B**: Argue that Patagonia should invest in potential fabrics (like biopolymers) or technology not yet developed fully, through the Tin Shed Ventures, in order to reach their goal.

3. **Groups A and B**: How can your suggestion be used as an example for other companies to replicate?

**Group Case #6: “Public Private Partnership for Green Space in NYC” (Available on Canvas)**

New York has some of the most highly visited and iconic public parks in the world. But what few of the millions of visitors realize is that many of the most famous green areas, such as Central Park and the High Line, are privately run and largely financed by private donations. It is a model that has been seen by some as an example to be reproduced and by others as a dangerous precedent that creates a two-tier system of well-funded parks in high-income areas, and underfunded parks in poorer ones. The Parks Commissioner, Mitchell Silver, has asked you, his Deputy Commissioner for Capital Projects, to develop an analysis of public private partnerships (PPPs) with the city’s parks, and to consider how this model might or might not work in lower-income areas.

1. **Group A**: Present the argument for expanding the city’s use of PPPs in the park system to lower-income areas. What are some of the challenges you would face?
   **Group B**: Present the argument against using PPPs in lower-income areas, and argue that it would be better to rely on public funding for these park systems. What are some of the challenges you would face?

2. **Groups A and B**: What are strengths and weakness of your recommendation (both the political and managerial)?

3. **Groups A and B**: What are the cost and benefits of PPPs in New York City?

---

**Week 9: October 30, 2018: The Sustainable Lifestyle: Defined and Explained**

Reading Assignment:
- The Sustainable City: Chapter 3
- Black and Cherrier (2010). “Anti-consumption as part of living a sustainable lifestyle: Daily practices, contextual motivations and subjective values.” *Journal of Consumer Behavior*

Class Videos:
- The High Line: N.Y.C.’s garden in the sky
- Airbnb: Sharing Economy Is The Antidote
- How Rent the Runway is attempting to revolutionize the way we shop

**Group Case #7: “Sustainable Urban Living” (The Sustainable City Chap 10)**
The sharing economy, fueled by the Internet and the growth of peer-to-peer networks, is a growing model that is becoming more common among various sectors of the economy. Airbnb is one of the innovative companies to emerge using the sharing economy as their business model. Cities have many resources that can easily and effectively be redistributed and shared, but sharing economy services have also presented cities with unprecedented, complex questions.

Thus far, Airbnb has not worked closely with city governments when expanding to new areas, and has largely challenged any city governments that have opposed their operations or tried to enforce regulations. You are part of a team that works for Greg Greeley, President of Homes for Airbnb, and are helping him prepare for his meeting with Airbnb’s CEO and head of Global Operations. Your team has been asked to recommend how closely and in what manner Airbnb should work with local governments, both in the U.S. and globally, moving forward. You have been asked to address the following questions:

1. **Group A:** Argue that Airbnb *should* work in close partnership with governments as it expands. Use an example from the case to support your argument.
   **Group B:** Argue that Airbnb *should not* work around governments as it expands. Use an example from the case to support your argument.

2. **Groups A and B:** What are the pros and cons of your approach? How do the challenges differ in the U.S. vs. globally?

3. **Groups A and B:** What opportunities do home-sharing services provide for sustainability and the environment?

---

**Week 10: November 6, 2018: No class due to Election Day**

**Week 11: November 13, 2018: Sustainable Business and Finance**

Reading Assignment:
- Haigh and Hoffman (2012). *Hybrid organizations: The next chapter of sustainable business.* *Organizational Dynamics*
- CFO Research Services and Jones Lang LaSalle (2010). *The Role of Finance in Environmental Sustainability Efforts.*

Class Videos
- Ford and Corporate Sustainability
- Ford Soy Foam

**Individual Case #3: “Ford Motor Company: New Shades of Green through Soy Foam”**
*(Purchase via Harvard Business School)*

Ford Motor Co. developed and commercialized a green technology that replaces a traditional and scarce resource with an abundant bio-material. The use of this technology was successful, and, within the company, the idea of expanding the use of bio-material gained considerable momentum, but implementation and customer acceptance proved to be a challenge. Two members from the company's research and engineering division are tasked to work together to overcome these obstacles and move the company toward a vision of sustainability that involves more than just fuel economy and cost reduction.
You are the Director of Sustainable Initiatives at Ford Motor Co. and you have been asked to develop a strategy to build on the use of bio-based materials and the success of the soy foam technology. You have been asked to analyze why the soy foam innovation succeeded and develop ideas to continue this sustainability push at Ford. You should answer the question: “What’s next?” and outline a plan to achieve it. Please address the following questions:

1. What is the best strategy for Ford moving forward to expand the soy-foam initiative geographically – outside North America?
2. What role does research and innovation play in developing new products? How should Ford encourage innovative sustainability management?
3. How does your plan make sustainability a viable component of the company’s long-term business plan?
4. How can internal champions (i.e. employees and managers within Ford) overcome resistance to change and bring new ideas to fruition now and in the future?


Reading Assignment:
- Sustainability Policy: Hastening the Transition to a Cleaner Economy: Chapter 4

Class Videos
- California Will Get Half Its Electricity from Renewables by 2020
- Microgrids: Evolving the Power Grid
- Japan Resumes Nuclear Power After Fukushima

Group Case #8: “The Building of the Smart Grid” (The Sustainable City Chap 8)

Your consulting firm has been hired by the U.S. Department of Energy to work on developing a set of recommendations for strengthening the nation’s energy policy. The DOE acknowledges that the centralized power grid is not perfect, and that it faces risk from natural disasters, as well as physical and cyber-attacks. Wide-ranging blackouts have the power to cripple our economy and disrupt livelihoods. The DOE has specifically asked you to look at the feasibility of microgrid development, and wants guidance on how microgrids can be implemented most effectively in the United States. Consider the following in your recommendation:

1. Groups A and B: What are the benefits of microgrids? What challenges must be overcome in the development of microgrid infrastructure? Use at least one example from the case to support your answer.
2. **Group A:** Argue that the U.S. government should pursue the development of microgrids. Which stakeholder (e.g., local government, state government, and public utility companies) should be included? What are the costs and benefits of your plan?

**Group B:** Argue that the U.S. government should not pursue the development of microgrids. What are the costs and benefits of your plan?

3. **Groups A and B:** What is the role of renewable energy in your recommendation?

**Group Case #9: “Nuclear Power and the Japanese Earthquake of 2011” (Available on Canvas)**

This case study discusses the factors that led to the Fukushima Daiichi nuclear disaster in 2011, when a series of equipment failures and nuclear meltdowns released radioactive chemicals from the power plant, resulting in a level-7 nuclear crisis. The case study chronicles the chronology of the accident and the history of the plant; and it examines Japan’s historical dependence on nuclear power, Japanese nuclear power regulation, and the politics of nuclear power in Japan.

You are the Japanese Minister of Energy, and the Japanese Prime Minister has asked you to form a team to come up with a ten-year energy plan for Japan. He is particularly concerned about the use of nuclear power – on the one hand, the country is heavily dependent on nuclear energy sources, but on the other hand, he does not want to see a second nuclear catastrophe. In addition, many Japanese citizens oppose restarting reactors that have been offline since the disaster.

1. **Group A:** Present the case for maintaining nuclear power as a primary source of energy in Japan’s energy plan over the next ten years.

**Group B:** Present the case against maintaining nuclear power as a primary source of energy in Japan’s energy plan over the next ten years.

2. **Groups A and B:** How will your position/argument effect greenhouse gas emissions? What are the economic challenges associated with your energy plan? How do you propose to overcome these challenges?

3. **Groups A and B:** What governance and regulatory structures will your plan employ to ensure safety of Japanese citizens?

---

**Week 13: November 27, 2017: Sustainability Metrics, Management Innovation and Quality Management**

**Reading Assignment:**
- The Effective Public Manager: Chapter 6
- Sustainability Policy: Hastening the Transition to a Cleaner Economy: Chapter 6
- Schwarz, J., B. Beloff and E. Beaver. (2002). “Use sustainability metrics to guide decision-making.” *Chemical Engineering Progress.* (Canvas)

**Class Videos**
- Sustainability Performance Metrics at Boisset Family Estates
- Scoring Suppliers on Sustainability
• Sustainability at Unilever - A smaller footprint
• Zero waste to landfill across Unilever's global factory network
• Dockless Bike Share Program Could Be Coming To NYC

Group Case #10: “Natura Cosméticos, S.A.” (Purchase via Harvard Business School)

A cosmetics company with a strong brand, robust growth in international and domestic markets, and premium price and margins, Natura was consistently rated as one of the preferred places to work in Brazil. Its focus on social and environmental responsibility was a source of innovation; strong employee motivation contributed to the company's superior productivity and market share gain in Brazil’s cosmetics, fragrances, and toiletries (CF&T) industry. By 2009, Natura’s direct sales business model generated income for over 1 million people in Brazil and Latin America. Natura was the first organization in Brazil to produce an integrated report. Senior leadership was convinced that Natura’s success over the years had been aided by its corporate responsibility and strategy to continuously seek improvements in both financial and nonfinancial (environmental, social, and governance) performance.

You are an analyst reporting to Rodolfo Guttila, Director of Corporate Affairs for Natura, and he’s asked you to help him prepare for his meeting with key stakeholders to discuss the future of integrated reporting at Natura. Guttila has emphasized the need for a more integrated report that will promote the actions needed to develop and implement innovative solutions to the company’s sustainability challenges. Please address the following issues:

1. **Groups A and B:** How did fostering a culture of integrated management help in transitioning to integrated reporting?
2. **Group A:** Argue that the best strategy moving forward in order to solve problems and improve their reporting process is to expand the groups of stakeholders. Provide a strategy to use stakeholder engagement to solve the problem of organic alcohol and explain how this can improve the reporting process overall.
   **Group B:** Argue that the best strategy moving forward is to focus on the use of Web-based technologies to promote the organization’s integrated reporting and sustainability objectives while solving problems. Provide two strategies for how Natura will do this, including one on how it can help to solve the organic alcohol problem.
3. **Groups A and B:** What are the difficulties in linking financial and nonfinancial performance, and how will your strategy address this challenge?
4. **Groups A and B:** What information will you include in future integrated reports in order to provide a clearer representation of Natura’s strategy and its ability to innovate and sustain value over the long-term?

Group Case #11: “Bike Lanes in New York City” (Available on Canvas)

Under New York City’s Bike Master Plan, the city plans to add 1,800 miles of new bike paths and lanes to its infrastructure by 2030. This effort seeks to achieve multiple goals including reducing greenhouse gas
emissions by encouraging alternate forms of transportation, and fighting the obesity epidemic while also making it safer for the existing cycling community. Former Mayor Bloomberg’s efforts in terms of promoting bicycle ridership in the city have incorporated innovative strategies including the Citi Bike bike-share system, an extensive public outreach campaign, and the Ninth Avenue Bicycle Path, which was the first urban on-street parking-and signal-protected bicycle facility in the U.S. As a result, New York City boasts the largest number of bike commuters as well as the largest supply of bike lanes and paths in the country. On the other hand, the city lags behind many other U.S. cities with the lowest proportion of bike share commuters, the highest cyclist fatality and injury rate and the lowest rate of women, children and senior cyclers.

Mayor de Blasio has decided to hold an open forum to discuss the Bike Master Plan’s progress to-date and the plan to move forward with the remainder of its goals. Your team has been asked to develop a recommendation that will be the basis for discussion at the forum. Consider the following in your recommendation:

1. **Groups A and B:** Briefly discuss how the city has facilitated the expansion of biking sharing in New York City. What were the primary challenges? How can these efforts be improved moving forward?
2. **Group A:** Argue for the continued expansion of the shared bikes program. Discuss how the city could approach its relationship with Citi Bike and other potential partners.  
   **Group B:** Argue against the continued expansion of the shared bikes program in the city. Discuss the issues that have arose around Citi Bikes and a potential alternative to shared bikes.
3. **Groups A and B:** How does your plan complement the city’s bike lane expansion plan?

---

**DISTRIBUTE QUESTIONS FOR TAKE-HOME FINAL EXAM MEMO**

---

**Week 14: Monday, December 3, 2017, 8:10 – 10:00pm: A Sustainable Planet and Conclusions**

**Reading Assignment:**
- Sustainability Policy: Hastening the Transition to a Cleaner Economy: Chapter 8
- The Sustainable City: Chapter 11

**Class Videos**
- Biomimicry

**SUBMIT AND DISCUSS FINAL**