



## DSO 554 – Digital Strategies for Sustainability in Global Markets

Global Immersion Offering, Spring 2022 – 3 Units  
7 Select Saturdays, 9am -12pm; Virtual Trip, March 14-18

Professor: Inge Lindholm  
Department of Data Sciences & Operations, Marshall School of Business

E-mail: [ilindhol@marshall.usc.edu](mailto:ilindhol@marshall.usc.edu)

Office Hours: By appointment/Zoom, by phone, or after class.

## DSO 554 – SPRING 2022 - COURSE GUIDE

### Digital Strategies for Sustainability in Global Markets

(Updated Nov 21, Subject to Change)

#### **Special Note:**

The first session is on Saturday, January 22<sup>nd</sup>, is required to attend the first session to stay enrolled and is front loaded in terms of workload in the first half of the semester. This course meets in person for 7 select Saturdays from 9am -12pm and is accompanied by a virtual experiential learning trip to Copenhagen, Denmark and environs during the week of March 14-18, 2022. The virtual trip week will start very early morning in LA (PST) to be able to visit the companies in the European time zone to accommodate the time needed for the MBA/MS project mid-point presentations with feedback from company managers.

#### **Course Description:**

This is a multidisciplinary cross-functional course that is suitable for MBA/MS students from all business functions and with interests in any industry. The course provides a managerial understanding of business strategies for sustainability in a global environment which is increasingly enabled by digital technologies and digital platforms.

*This course provides a managerial understanding of business strategies for sustainability in a global environment...*

In its simplest terms: *sustainability strategy is about meeting the needs of the present without compromising the ability of future generations to meet their own needs.* In the corporate world, strategies for sustainability are still in their infancy and not yet well integrated into corporate strategy or digital business strategy – but we are moving steadily in that integration direction.

It's important to recognize that *Sustainability has many other facets in addition to the temporal longitudinal dimension* of not compromising future generations nor resources. It comprises many different components. A successful business strategy for sustainability is much *broader than just "green" and must consider the multiple facets of the business ecosystem in which an organization operates: socio-cultural, economic, and technological – and not just the natural physical environment.* Thus, a successful business strategy for sustainability must worry about operating profitably while protecting/restoring the natural environment, but also about how actions affect members of society, and resonate with cultural values.

*A successful business strategy for sustainability is much broader than just “green” and must consider the multiple facets of the business ecosystem....*

Furthermore, a sustainability strategy has a cross-sectional ecosystem dimension and is also about creating common shared value for all stakeholders in the communities and markets that the enterprise operates within. Furthermore, sustainability strategy has a collaborative consumption dimension when idle resources are shared. Think Uber, Airbnb, etc... and how the sharing economy allows the shared use of idle resources. In short, sustainability strategy is a multi-faceted phenomenon that requires our careful managerial attention across the corporation, and *it is not about compliance, but it is about creating new opportunities and new business models.*

*In the context of sustainability strategy “the elephant in the room” are digital technologies, digital platforms, and digital business models and the new opportunities that this creates.* The course will also specifically focus on how to take advantage of digital technologies for sustainability strategies – and hopefully you will appreciate why as we go through the course. We now live in a technology intensive digital world that is filled with ubiquitous high-speed communication wireless networks, real-time sensors, smart grids, social networks, and a multitude of mobile devices. These technologies are enabling novel digital business models that enable open innovation, complex sensing, real-time information, health and environment monitoring, customer co-creation, and much more.

*This course will also specifically focus on how to take advantage of digital technologies for sustainability strategies....*

*This provides a multitude of new options for intelligent business strategies for sustainability, as well as strategies for online communities to thrive and be sustainable.* In the next few years, the energy and environment industries (include smart clean energy) will undergo a radical transformation due to the use of digital technologies, and many industry boundaries will shift in associated industries such as building and construction, real estate, tourism, transportation, and wellness/healthcare. Furthermore, smart cities and smart government services are also slowly but surely becoming more digital-platform-centric. Smart sustainable city initiatives in a growing number of cities around the world are steadily surely becoming a reality rather than just a battle cry.

Sustainability strategy has been further accentuated by the Covid-19 pandemic. Not just because it exposes climate change and accelerates digital transformation – but because it reminds us how globally interdependent, we are. We must worry about community and well-being of others more than ever. It shows us very vividly that it is not just about well doing -- but very much critically about well-being!

*This course includes a virtual international trip & immersive global consulting field project experience.*

#### **Field Consulting Projects & Companies:**

This course has always focused on global markets and has included field consulting projects with companies in an overseas location, and an international experiential learning trip. This is now the 11<sup>th</sup> year and round for this course and from 2011-2018 we focused on the UAE (Dubai and Abu Dhabi), a context which has provided a very rapid emerging growth global development venue where both innovation and sustainability issues abounded. The course experience has been consistently highly rated by both companies and participants. Starting from the 8<sup>th</sup> round

in Summer 2019 we have shifted our focus to the more established Nordic region – we specifically focused on Denmark and surrounding environs– where there is a refreshingly progressive view of sustainability strategy, digital strategies for sustainability, digitalization, humanistic perspectives, and smart city services. Furthermore, in case you did not know: Denmark has been consistently ranked among the top three happiest countries in the world year after year in the World Happiness Report. So, they must know or do something that the rest of us don't...

Previous project companies have included TDC (telecom and media), Coloplast (intimate healthcare), Novo Nordisk (Pharmaceuticals), Green Mobility (electric car service), DTU Wind lab (wind turbines), Maersk (shipping), Orsted (wind turbines), Holo (Autonomous vehicles), Biomar (Aquaculture), and Ingka Group (Retail). Due to Covid-19 restrictions, the trip will be virtual, however the immersive project interaction and experience still promises to provide meaningful, engaging, and fulfilling days.

### **Skills and Learning Objectives:**

It is becoming increasingly critical for managers to understand and appreciate what business strategies for sustainability are, how to design them, and to become sensitized to the challenges of organizational implementation. Most importantly, the course provides a managerial understanding of business strategies for sustainability in a business environment which is becoming increasingly driven and enabled by digital technologies. The object of the course is to give you the skills and mindset to be a full participant in such progressive undertakings at the managerial level. You will learn and understand:

- 1) How to scope & assess a business strategy for sustainability, & understanding the drivers of sustainability
- 2) Understanding digital business models and how they can enable novel sustainability strategies.
- 3) Understanding digital platform ecosystems and how they affect management.
- 4) Understanding how to proactively transform value chain activities in a company for sustainability.
- 5) An appreciation of economic global opportunities in the Nordic region in an experiential manner.
- 6) A team consulting experience in an international context.
- 7) A future-looking familiarity with the energy/environment/transportation/smart city sectors.
- 8) Forming a mature perspective on what business strategy for sustainability with multiple stakeholders means for your managerial future.
- 9) How Covid-19 has changed the sustainability mindset.

### **Pedagogy & Learning Methods:**

The course has 5 interrelated learning components as below.

**1. Cases & Readings:** The 1<sup>st</sup> component is a series of sector cases and readings to help you understand the key issues, underlying concepts, enabling technologies, and effective techniques for digital sustainability strategies. This learning will take place through five scheduled sessions before the virtual trip. Individual case-related write-ups are required.

**2. Team Consulting Project:** The 2<sup>nd</sup> component (major) is working on a team consulting project that gives you the challenge/opportunity of dealing with the details and the idiosyncrasies/fickleness/fuzziness of a company project and honing your skills through doing and shaping. Teams are assigned to each of the companies. An oral class presentation by each team is required before the virtual field trip; another is expected at the company virtually, as well as a final walkthrough at end of semester. A written report for each team is also required as well.

**3. Country Orientation:** The 3<sup>rd</sup> component is an orientation session on the Danish economy and Nordic model and culture.

**4. Virtual Field Trip:** The 4<sup>th</sup> component is a virtual field trip to the Denmark companies. It involves a 5-day schedule of virtual on-site visits to learn about and discuss digital sustainability strategies with managers of the 5 selected companies. All participants are expected to be actively engaged in this experience at **all** the companies during that week.

**5. Drawing Lessons for The Future:** The 5<sup>th</sup> component is an integrative recap of what was learned through the first 4 components, reflecting back, and drawing lessons for the future. One session and one “golden nuggets” assignment is dedicated for that immediately after returning from the field trip. We have also typically brought in class alums from previous years over video.

### **Course Materials & Readings:**

1. Book: Werbach, Adam *Strategy for Sustainability: A Business Manifesto*, Harvard Business School Press, 2009. The book is available from Amazon (Kindle edition too), Harvard Press, and other bookstores. You need to get this book and it is required. It is older but has IMHO the correct (and not always prevalent) business perspective on sustainability.

2. Other Readings: Articles from professional journals and trade press, and industry reports. These will be made available on-line through the Blackboard class folder.

3. Optional Book: Elkington, John *Green Swans: The Coming Boom in Regenerative Capitalism*, Fast Company, 2020. This is an intriguing book that is a manifesto for system change deserved to serve people, planet, and prosperity. Elkington shows how today's “Ugly Ducklings” may turn into tomorrow's world-saving “Green Swans”.

4. Initial field consulting project information for each of the companies will be provided at start of semester to each of the company teams. Each company team will then be responsible for gathering further information pertaining to the company and the field consulting project, and for maintaining liaison with the company.

5. Blackboard Course Folder: ***There will be a session preparation guide posted for every session on Blackboard.*** Other than the book that needs to be purchased, other readings will be posted on Blackboard course folder – as will session PowerPoints, assignment instructions, administrative information, etc. Please check it frequently! The sections that are populated typically are Syllabus, Assignments, and Content.

### **Related Books & Readings:**

If you have deeper special interest in any of the topics we will cover, let me know and I will recommend related books that may be useful and fun. I can also recommend readings related to your project focus as needed.

### **Course Assignments, Grading, & Policies:**

Each individual's effort and grade will be based on the following 4 components. Please note that extraordinary effort in any of those components will be recognized. Conversely, plagiarism in written assignments will be dealt with very severely as per USC rules.

### 1. Two Individual Case Write-Ups (20%)

Each participant is required to submit two individual case write-ups. The first is a sector case which will analyze exemplary company strategies using digital technologies in the clean energy/environment space. The second is a transportation or smart city case with a sustainability focus. Instructions provided for each case to guide your write-up.

### 2. Team Consulting Project (55% -- 38% for report, 17% for presentations)

We will form project teams based on student preferences, project requirements, and what the instructor thinks are balanced multi-skill teams. We therefore cannot guarantee that you will get your first preference. Each team will be responsible for organizing itself and gathering further information pertaining to the company and the consulting project. This may involve visiting the local Southern California offices of similar companies if appropriate.

There will be one team project report. Each team member will also be asked to assess the relative contributions/efforts of all the other member of their team in order to reward excellence and avoid free riders.

The team will be required to give two presentations: an interim presentation before the trip (Feb 27 - see course schedule), and a presentation to the company in Denmark. The two presentations are graded (a composite grade based on the first presentation and how much progress was achieved in the second). At the time of the trip presentation, the project is typically about 1/3 to 1/2 done depending on the project circumstances. There will also be a project walkthrough related to the final report presented to the company.

The final report is due after the final walkthrough. The report is expected to be about 40-50 VI<sup>3</sup>P pages (in addition, appendices can be attached). Apart from being reviewed and evaluated by the instructor, it will also be sent to the company. VI<sup>3</sup>P format is Vertical PowerPoint that is Intensive, Inviting, and Interactive. It is a consulting report format that we named in this course which yields consulting reports that are more likely to be read by senior executives and are more likely to engage them without being superficial. They also take advantage of internet active links. It is a format for the digital age.

### 3. Active Participation in Class Sessions & Field Trip (15%)

The course will move through material relatively quickly. Each class will build on material from previous classes. Thus ***it is very important that participants attend and be prepared for each class***. You are expected to actively discuss both readings and cases and add to the learning of the class. Quality is heavily favored over quantity.

Furthermore, to encourage cross-team fertilization and learning, a portion of your participation grade is based on how well you provide thoughtful input to consulting teams other than your own. Optional peer evaluations will be used for this latter component.

### 4. Integrative Golden Nuggets Assignment (10%)

There is also a written “golden nuggets” assignment that is due on Saturday immediately after returning from the virtual trip. A “golden nugget” is an insight, a management practice, a rule of thumb, a lesson, or a revelation that you have found to be particularly valuable or unique. In the context of this course the “golden nugget” would be about digital strategies for sustainability in global emerging markets --- especially in the context of Denmark and the Nordics, and that you “found” through your various experiences in this class. We would like you to reflect back on those experiences and to draw lessons for the future. Your write-up will identify and describe 5 “golden nuggets,” and how they have changed your understanding of digital strategies for sustainability, digital business models, smart cities, sustainability practices, or idiosyncrasies of contexts like Denmark and the Nordics, — and how you will

approach these in the future as a manager.

### **Class Participation Professionalism:**

Your participation grade is based on quality and a sincere effort to provoke, learn and understand, rather than quantity. The more you engage with the class with passion, intellectual curiosity, and interest, the higher will be your participation grade, and the more successful and exciting our learning experience will be – and the more fun you will have. We are all here to learn and share our understanding.

### **Classroom Policies:**

1. **ATTEND!** Class attendance and active participation is critical for developing a mastery of the materials covered in the course – as well as contributing to the class. You are expected to attend all sessions. If you cannot attend for an extenuating circumstance then please inform the professor that you are unable to attend, or your absence will affect your participation grade. Treat it like a professional meeting at work: if you cannot attend, you are expected to inform the person running the meeting as a professional courtesy. ***There are only 6 in-class sessions in addition to project walkthrough, so it is especially important to attend all sessions.***
2. **ENGAGE!** You are expected to attend and prepare for each class and to actively engage in the discussion of readings and cases. If you don't keep up with the reading, you will not enjoy the class. Thus it is very important that you be prepared for each class. You are also expected to raise questions that provoke the thinking of others. You may be randomly called upon in class to comment and answer questions, so please be prepared.
3. **PRACTICE PROFESSIONAL ETIQUETTE!**
  - Please arrive to class early or promptly
  - Please dress respectfully and professionally as you would with business colleagues.
  - Respectfully minimize distractions such as putting your phone on silent during class.

### **Statement on Academic Integrity:**

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. SCampus, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A:

<http://www.usc.edu/dept/publications/SCAMPUS/gov/>

### **Required USC Statement on Academic Conduct and Support Systems**

#### **Academic Conduct:**

Students are expected to make themselves aware of and abide by the University community's standards of behavior as articulated in the [Student Conduct Code](#). Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, "Behavior Violating University Standards" <https://policy.usc.edu/scampus-part-b/>. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

## **Support Systems:**

*Counseling and Mental Health - (213) 740-9355 – 24/7 on call*

[studenthealth.usc.edu/counseling](http://studenthealth.usc.edu/counseling)

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

*National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call*

[suicidepreventionlifeline.org](http://suicidepreventionlifeline.org)

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

*Relationship and Sexual Violence Prevention and Services (RSVP) - (213) 740-9355(WELL), press "0" after hours –*

*24/7 on call [studenthealth.usc.edu/sexual-assault](http://studenthealth.usc.edu/sexual-assault) Free and confidential therapy services, workshops, and training for situations related to gender-based harm.*

*Campus Support & Intervention (CSI) - (213) 740-0411*

<https://campussupport.usc.edu/>

A team of professionals here to assist students, faculty, and staff in navigating complex issues. Whether you are here seeking support for yourself or someone else, we are available to help you problem solve, understand options, and connect with resources. Please note that we are not an emergency resource and are not available 24/7.

*Office of Equity and Diversity (OED)- (213) 740-5086 | Title IX – (213) 821-8298*

[equity.usc.edu](http://equity.usc.edu), [titleix.usc.edu](http://titleix.usc.edu)

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following *protected characteristics*: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations. The university also prohibits sexual assault, non-consensual sexual contact, sexual misconduct, intimate partner violence, stalking, malicious dissuasion, retaliation, and violation of interim measures.

*Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298*

[usc-advocate.symplicity.com/care\\_report](http://usc-advocate.symplicity.com/care_report)

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity | Title IX for appropriate investigation, supportive measures, and response.

*The Office of Disability Services and Programs - (213) 740-0776*

[dsp.usc.edu](http://dsp.usc.edu)

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

*USC Support and Advocacy - (213) 821-4710*

[uscса.usc.edu](http://uscса.usc.edu)

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

*Diversity at USC - (213) 740-2101*

[diversity.usc.edu](http://diversity.usc.edu)

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

*USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call*

[dps.usc.edu](http://dps.usc.edu), [emergency.usc.edu](http://emergency.usc.edu)

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

*USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call*

[dps.usc.edu](http://dps.usc.edu)

Non-emergency assistance or information.

### **Students with Disabilities**

USC is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance, attendance, or grades in this course and require accommodations, you must first register with the Office of Disability Services and Programs ([www.usc.edu/disability](http://www.usc.edu/disability)). DSP provides certification for students with disabilities and helps arrange the relevant accommodations. Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to your TA) as early in the semester as possible. DSP is located in GFS (Grace Ford Salvatori Hall) 120 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776. Email: [ability@usc.edu](mailto:ability@usc.edu).



## DSO 554 COURSE SCHEDULE & TOPICS

### Digital Strategies for Sustainability in Global Markets

Session #	Date (2022)	Topic	Special Events
1	Sat Jan 22 <sup>1</sup> <i>(MLK is Jan 17)</i>	Course Orientation & Intro. to Smart Sustainability & Digital Business Models – and their inter-connection	<i>Introduction &amp; Explanation of Field Project Procedures &amp; Projects</i>
2	Sat Jan 29	Digital Disruption in the Smart Energy Sector -- and More on sustainability strategy and digital platform business models..	<i>Sector Case #1 – Smart Clean Energy/Environment</i> <b>Assignment#1 Due</b>
3	Sat Feb 5	Smart Mobility and Monitoring & Measuring Sustainability Initiatives	<i>Sector Case #2 – Smart Sustainable City/Transportation</i> <b>Assignment#2 Due</b>
4	Sat Feb 26 <i>(Presidents day is Feb 15)</i>	The Danish & Nordic Economic and Cultural Context, and its outlook on smart sustainability	<i>Country Orientation</i>
5	Sat Mar 5	Consulting Dry-Run Mid-point Project Presentations with Feedback	<b>Interim Class Presentations for Teams</b>
<b>Virtual International Trip</b>	Monday Mar 14 through Friday Mar 18	Virtual Denmark week will start very early morning in LA to be able to visit the Danish companies in European time afternoon – High energy required ..	<i>Presentations and Briefings by Senior Company Executives; Presentation by USC MBA teams; Discussions &amp; Feedback</i>
6	Sat March 26 <i>(Easter is Sun April 4)</i>	Integrative Re-Cap & Lessons for the Future	<i>Golden Nuggets Assignment &amp; Team “Left to-do” Consultations</i> <b>Assignment#3 Due</b>
7	Sat April 23	<b>Team Consulting Project Walkthroughs with Feedback</b>	<b>Final Walkthrough Presentations for Teams</b>
	Wed April 27	<b>*** Final Team Consulting Report due</b>	

**1 You do need to attend the first class to stay enrolled. Course is front-loaded and accelerates quickly! You will need to turn in your first assignment on Sat Jan 30, and there are readings for Sat Jan 23.**

(THIS PAGE INTENTIONALLY LEFT BLANK)