

TECH-GB.3355: Digital Innovation and Crowdsourcing

(DRAFT Version updated 10/18/23– Further Changes to Follow)

Spring 2024

Prof. Natalia Levina

Counts for Specializations: Strategy, Supply Chain Management and Global Sourcing,
Management of Technology and Operations.

Prerequisites: Core management and strategy courses

Schedule:	Spring 2024: Wed 6:00-9:00 pm
Location:	TBD
Instructor:	Prof. Natalia Levina
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Office Hours:	By appointment online Zoom Personal Meeting Room: https://nyu.zoom.us/j/8655748300
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TA:	TBD

This course explores new ways in which traditional firms and start-ups can be more innovative by harnessing the power of collective intelligence enabled by digital technologies. We will discuss new digital innovation and crowdsourcing practices and evaluate the risks and benefits of such practices. **This course focuses on digital technologies that enable knowledge work, creativity, and information aggregation, not just exchanging goods.** The course focuses on qualitative analysis of cases, hands-on exercises, meetings of industry leaders, and experiential projects such as outsourcing your homework to an online platform.

TOPICS COVERED

Introduction

- Nature of digital innovation
- Collective Intelligence
- From firms to platforms

Future of Work

- AI: Decision Automation
- Algorithmic ethics

Organizing Work on Digital Platforms

- Wisdom-of-the-crowds' platforms
- User-centered crowdsourcing
- Online labor markets and gig economy
- Expert-centered crowdsourcing
- Collaborative online communities

Governing Digital Platforms

- Scaling digital platforms
- Ecosystem governance
- Community governance

Leading Digital Transformation

- Nature of digital disruption
- Leading organizational transformation for the digital era
- Evaluating Technology Trends

This course is designed to give students a truly multidisciplinary perspective, drawing on theories and practices from **strategy, international business, and innovation management.**

ASSIGNMENTS & GRADING POLICY

Grading will be done on the basis of:

- Individual Assignments & Discussion Board Postings (25%)
- Discussion Contributions, In-class Exercises, Reflection Memos, Professionalism (25%)
- Group Project (25%)
- Final Reflection Paper (25%)

Project (on Upwork or Fiverr) requires that you spend up to \$25.00 of your own money.

Re-grading requests may lead to your grade being increased or decreased, so use this option only if you are sure there was a mistake.

PROFESSIONALISM

Professional behavior is a critical component of this class. It involves **respect for others, preparedness, independence, and responsibility**. The following components help guide you in demonstrating professional behavior in class. However, they do not cover every aspect of professionalism.

1. Respect for Others:

Timeliness:

This course is based on a model of active learning, with class discussions and exercises playing a central role. Please come on time. Do not go in and out of the class excessively. Further aspects of the attendance policy are discussed below.

Laptops, Cell Phones, Smartphones, Recorders, and Other Electronic Devices

Due to the nature of this class and the potential disruptions caused by student use of electronic devices, students are not permitted to use any such devices during class without explicit permission from the instructor.

Guest Speaker Sessions:

Having guest speakers in class is a unique opportunity to meet business leaders without leaving Stern. These very busy people are dedicating their time to speaking with you. It is imperative that you are particularly diligent in showing professionalism when we have guest speakers. Guest speaker lectures will not be recorded. Make sure the speaker leaves the class with the best impression of Stern possible!

Norms and Evaluation of Participation:

The Golden Rule is a good guide here. Think of the best experiences you had in terms of students contributing to class. Usually, these include 1) students asking clarifying questions that others may be afraid to ask; 2) contributing a novel perspective on the discussion; 3) adding an interesting, succinct, and clear (e.g., without jargon) example based on experience; 4) referring to other student's statements, lecture notes, or readings; 5) not monopolizing the floor.

Your **participation grade** will be determined by how consistently you contribute and how insightful those contributions are. **Quality is more important than quantity**. Drawing on readings in your comments is highly valued. I will keep track of your participation throughout the semester and will be glad to provide you with feedback at any time.

If you are concerned that difficulty with English or some other situation will interfere with your ability to participate, please discuss this with me during the first two weeks of the course. I recognize that expressing viewpoints in a group may be difficult, but it is an important skill to develop while at Stern. Group projects will include a peer evaluation component.

2. Preparedness:

All readings and take-home assignments must be done before the class.

3. Independence

Professionals take pride in their independence and resist micromanagement. Instructions for the project and assignments will not prescribe every detail. Not being able to find an assignment or due date is not an excuse for not doing it or submitting it late. The info is either in the syllabus or on Brightspace or both.

4. Responsibility & Ethics

Professionals take full responsibility for their work and do not misrepresent the work of others as theirs. Many professional associations require that professionals within their field adhere to the code of ethics. How you deal with internet sources and AI tools should become of your professional ethics.

Stern Honor Code should be followed in all assignments, projects, and exams. More generally, the **Stern Student Code of Conduct** should be followed throughout the course.

This Class AI use Policy:

I expect you to use AI tools, including ChatGPT or similar AI tools (based on Large Language Models), on some assignments in this class. Here are some rules:

1. **You cannot upload copyrighted materials from the class or reading assignments into the AI tool** (this includes slides, handouts, readings from coursepack, etc.) ChatGPT and other tools do not have access to proprietary materials. If they seem to know the details from an HBS case, it is because somebody before you violated the publisher's copyright. If you upload proprietary materials into ChatGPT, you are violating the law.
2. **Some assignments would indicate that the use of AI tools like ChatGPT is not allowed.** Others will tell you to use it proactively. You should abide by these policies.
3. If you use AI tools to help your writing (beyond grammar correction), **you need to acknowledge using them.** Please include a short paragraph at the end of any assignment that uses AI explaining what you used the AI for and what prompts you used to get the results. Failure to do so is in violation of academic honesty policies. Be thoughtful about when this tool is useful. Don't use it if it isn't appropriate for the case or circumstance. **Remember that for any assignment, the graders can use AI tools to check if other AI tools were used.**
4. **No AI-enabled tech tools can be used for in-class work** (in general, there is no tech in the classroom policy as stated above)
5. You are **fully responsible for checking the accuracy of AI-generated** work as spelled out below

Be aware of the limits of ChatGPT (and similar tools):

If you provide minimum effort prompts, you will get low-quality results. You will need to refine your prompts to get good outcomes. This will take work. **Don't trust everything it says.** If it gives you a number or fact, assume it is wrong unless you either know the answer or can check in with another source. You will be responsible for any errors or omissions provided by the tool. It works best for topics you understand.

CLASS ATTENDANCE & MISSED CLASS ACCOMMODATION

NYU's Calendar Policy on Religious Holidays states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. You must notify me in advance of religious holidays or observances that might coincide with exams, assignments, or class times to schedule mutually acceptable alternatives. Students may also contact religiousaccommodations@nyu.edu for assistance.

Except for religious observances or other absences that may be required in compliance with nondiscrimination law, this **class otherwise requires attendance and participation and cannot accommodate conflicts.** Please review all class dates at the start of the semester and review all course

requirements to identify any foreseeable conflicts with exams, course assignments, projects, or other items required for participation and attendance. If you are aware of a potential conflict, it is strongly recommended that you do not take this class.

Unfortunately, sicknesses and family emergencies may occur during the term. Specifically, if you plan to miss a class, you need to 1) email me at least one hour before the session; 2) submit all pre-class work on time; 3) watch the recording of the class posted online; 4) submit a reflection summarizing the class and your own thoughts on the discussion forum before the next class (to get **partial attendance** credit rather than zero). For any missed class, you **do not receive participation credit**.

STUDENT ACCESSIBILITY

If you require academic accommodation of any kind during this course, you must notify me at the beginning of the course and provide a letter from the Moses Center for Student Accessibility (212-998-4980, mosescsa@nyu.edu) verifying your registration and outlining the accommodations they recommend. If you need to take an exam at the Moses Center for Student Accessibility, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation. For more information, visit the CSA website: <https://www.nyu.edu/students/communities-and-groups/student-accessibility.html>

STUDENT WELLNESS

Our aim is for students to be as successful academically as they can, and to help them overcome any impediments to that. Any student who may be struggling and believes this may affect their performance in this course is urged to contact the Moses Center for Student Accessibility (see also the Student Accessibility section of this syllabus) at 212-998-4980 to discuss academic accommodations. If mental health assistance is needed, call the NYU's 24/7 Wellness Exchange hotline 212-443-9999. Furthermore, please approach me if you feel comfortable doing so. This will enable me to provide relevant resources or referrals. There are also drop-in hours and appointments. Find out more at <http://www.nyu.edu/students/health-and-wellness/counseling-services.html>. Graduate students can also reach out to the Academic Advising team at academicaffairs@stern.nyu.edu if you would like to receive more information or further support.

INCLUSION STATEMENT

This course strives to support and cultivate diversity of thought, perspectives, and experiences. The intent is to present materials and activities that will challenge your current perspectives with a goal of understanding how others might see situations differently. By participating in this course, it is the expectation that everyone commits to making this an inclusive learning environment for all.

REQUIRED READINGS/MATERIALS

- **Online Coursepack** with HBR Digital Coursepack are linked through NYU Brightspace
- **Additional required articles and cases** are in the *Resources* folder of NYU Brightspace

RECOMMENDED BOOKS

- On AI: “*Competing in the age of AI: strategy and leadership when algorithms and networks run the world,*” **Marco Iansiti and Karim Lakhani**, 2020.
- On Collective Intelligence, “*Superminds: The Surprising Power of People and Computers Thinking Together,*” **Tom Malone**, 2019

- *On sharing economy*, “Sharing Economy” by **Arun Sundararajan**, 2016
- *On platform strategy*, “The Platform Revolution” by **Geoff Parker, Marshall van Alstyne, and Paul Choudary**

BRIGHTSPACE SITE

This course is hosted on NYU Brightspace. Students are expected to check the site regularly (at least once a week). **Please turn on notifications for postings.**

Abbreviations: HBR – Harvard Business Review, SMR – Sloan Management Review, CMR – California Management Review

#	Date	Session Title	Readings	Take-home Work
Digital Transformation of Firms & Work				
1	02/07	Digital Innovation		Online Discussion: Your Background
2	02/14	Future of work & AI	Read: “When to Trust Robots with Decisions,” Dhar (HBR) Read: “Amazon scraps secret AI recruiting tool ...” (Reuters) Read: GROW Case (HBS) Read: Should Algorithm Tell You Whom to Promote? (HBS)	GROW Case Write-up Online Discussion: Whom should Aliyah Jones hire?
3	02/21	Generative AI and Business Transformation	Read: BCG Study, “ Navigating the Jagged Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality (HBS)	Generative AI exercise
Human Cloud Models				
4	02/28	Human Cloud Models: Facilitator	Prepare: Upwork Case (HBS) Read: “The Inverted Firm” Levina Read: “Managing the Human Cloud,” Kaganer et al. (SMR)	Upwork Case Write-up
5	03/06	Human Cloud Models: Governor	Prepare: Instacart Case (HBS) Read: <i>WSJ “Instacart Looked Like a Savior”</i>	Online Discussion: What is next for Instacart? Form Project Teams
6	03/13	Human Cloud Models: Arbiter	Prepare: Innocentive Case (HBS) Read: Guinen et al, Experiments in Open Innovation at Harvard Medical School Watch: Prof. Levina on Sweet Spot of Crowdsourcing	Innocentive Case Write-Up
7	03/27	Human Cloud Models: Aggregator	Read: “Evidence of CI Factor,” Woolley et al. (Science) Read: Malone, Intro to Chapter 2 Watch Video: Prof. Scott Page on Diversity Prepare: Aggregator Platform Comparison Exercise	Prepare to teach classmates on your aggregator platforms
Management in the Digital Age				
8	04/03	Building & Governing Communities	Prepare: Disruptive Innovation Overview Prepare: OpenIDEO Case (A) & (B) (HBR)	Explore OpenIDEO Online Discussion: What is the future of OpenIDEO?
9	04/10	Leading Digital Transformation	Prepare: Havas: Change Faster, Multimedia Case (HBS) Read: “Organizational Ambidexterity in Action,” Tushman and O’Reilly (CMR)	Online Discussion: What should HAVAS CEO do next?
10	04/17	Assessing Technology Trends	Read: “The Top Technology Trends in 2023: Metaverse, AI, Sensors, and Digital Wallets” (Medium)	
11	04/24	Project Presentations	Project Presentations	Project Presentations
12	05/01	Future of Digital Society	Watch Video: Prof. MacAfee TED Talks	Online Discussion: Is AI revolution different from prior revolutions?