Northwestern
Kellogg
School of Management

KPPI 925-5
Social Impact & Technology Innovation
Fall 2018 - 2nd Five Weeks

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Office Hours By appointment, email professor
Teaching Assistant TBD
Classroom TBD

Course Description, Goals, and Objectives
In this five-week course, we will explore the intersection of technology and social impact from several perspectives and sources. Whether mass-market technology has been adapted for impact or impact-first technology has been designed for a particular issue area, this course will explore the drivers of impact, nuances of technology use and financial levers for technology’s application to social change endeavors. Some of the technology innovations we’ll explore will include blockchain deployed for public benefit deployment, SMS used for crisis text services, machine learning in the impact context, VR technology used for telemedicine, the global expansion of M-Pesa, and the massive explosion in crowd-funding technology and platform development.

During the course, we will hear from and visit with technology leaders and innovators who leverage what’s new in tech to make the greatest difference for people and the planet. For their final project, students will formulate a strategy for and pitch real technology and impact-sector leaders with their creative and market-based concepts and plans for the deployment of technology innovation for social impact.

Student teams will take a current technological innovation (blockchain, drones, AI, VR, 3D printing, wearable tech, RFID, etc.) and craft an early conceptual and strategic idea or approach based on that innovation coupled with a deep exploration of a real social or environmental problem or challenge to be addressed. Students need not know how to code nor are they expected to come to this class with a social impact tech innovation already in mind. Those student entrepreneurs who are already on a path towards social impact technology innovation will be challenged to think and work through concepts of strategy, scale and opportunities beyond this course.

Students will gain deep and broad knowledge and understanding of the possibilities at the intersection of technology and social impact as well as strategies to take forward to corporate or consulting work to consider the creative social applications that a company’s existing technology strengths can contribute to social impact and strategies for impact organizations to leverage technology innovation for increased and expanded outcomes and impact.
**Course Format**
This course runs on parallel paths of academic and intellectual engagement and experiential learning. While reading, engaging with lectures and guest speakers and completing assignments on current innovations and frameworks for innovation at the intersection of technology and social impact, students will simultaneously form teams and launch into the ideation process for their own technology application for social impact. Coaches and judges who are themselves innovators will share their insights and feedback on student team ideas. The readings in this course are carefully selected due to the short duration and intensive nature of the course.

This course adheres to the guidelines established in the Kellogg Honor Code and the Kellogg Code of Classroom Etiquette.

**Course Requirements, Grading, and Expectations**
Grading will be based on three inputs: class participation, student discovery assignments, and group projects. Because of the short duration of this class, these three facets of engagement will be critical to completing this course with the breadth and depth of understanding to navigate the realm of technology innovation for social impact and the opportunities that arise in mainstream and social tech for crossover between the two.

<table>
<thead>
<tr>
<th>In-Class Contribution, Attendance &amp; Participation</th>
<th>20%</th>
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<tbody>
<tr>
<td>Student Discovery Assignment</td>
<td>20%</td>
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<tr>
<td>Engagement with Classmates’ Discovery Assignments</td>
<td>20%</td>
</tr>
<tr>
<td>Group Project</td>
<td>40%</td>
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**In-Class Course Contribution (20%)**
- Full participation consists of active contribution and discussion with a demonstrated grasp of the readings and frameworks.
- Students should arrive to class prepared to share ideas and listen to and interpret issues presented. Participation is assessed on the basis of quality as opposed to quantity.
- Students should come to class prepared to engage with the instructor and with guest speakers.

**Student Discovery Assignment (20%)**
- Prompt to be posted on Canvas
  - Students will analyze existing technology innovations as assigned by the instructor
  - *Intentional Impact* analysis and short-answer written responses regarding the technology innovation and its potential
    - Short answers to core questions about the technology or approach analyzed will be completed by the student and uploaded to Yellowdig along with a link to the tech platform for the purpose of sharing content with classmates for learning and comment.
  - Completed assignment to be uploaded to Yellowdig (through Canvas)
    - Due by Monday, November 5th at noon.
    - Late submissions will lose 20% of assignment grade for each day late
  - Presenting and sharing technology discovery analyses with the class
    - All students should come to classes on November 6th and 13th prepared to present their analysis to the entire class. Instructor will cold-call on select students to
present on the 6th and 13th. Those who successfully present in class will receive credit for 2 engagements on classmates’ discovery assignments (see below).

- Possible student discovery topics include (but are not limited to):
  - Remittance Technology
  - Digital Phone Access
  - Impact Investing Tech
  - Broadband & Internet
  - Micro-Insurance Platforms
  - Gaming Cancer Treatment
  - Teacher Support Tech
  - Tech for Returning Citizens
  - Eye Tracking Technology
  - Virtual Reality
  - RFID
  - QR Codes
  - FinTech
  - Blockchain
  - Water ATM
  - 3D Printing
  - Machine Learning
  - Skills Gap Platforms
  - Tech to Combat Police Violence
  - Community Lending Platforms

**Engagement with Classmates’ Discovery Assignments (20%)**

- In order to ensure that students learn from one another’s exploration and analyses (above), once student discovery short answers and links are posted, each student will be expected to demonstrate engagement with the shared content.

- Using Yellowdig (through Canvas), students will engage with the information shared about differing technological innovations, adding reflections and comments on a range of posted information.

- Students will be expected to engage by reflecting, commenting and adding to the conversation on a minimum of seven posts with meaningful content between November 5th and November 15th (at midnight).

**Group Project (40%)**

- Clear instructions and assessment criteria to be posted to Canvas
  - Students submit potential group project concepts (via posted google doc link) by November 4th at midnight.
  - Students form teams in class on November 6th.

- Innovation
  - Each group will come up with a creative application of technology to address a social challenge.
  - Group pitches and planning should cover
    - *Intentional Impact* framework
    - Assumptions & Risks
    - Customer or user need and reason for adoption of the technology
    - Revenue & scaling vision
    - Reason to believe/invest/support this innovation

- Presentation to be submitted through Canvas by noon on December 4th
  - Pitch presentations in class on December 4th.
  - Each presentation will consist of 10 minutes of presentation followed by five minutes of Q&A. All group members are expected to participate.
• Team member evaluation
  o Online form to be completed by all students by December 5th
  o Link to google form for team member evaluation will be posted to Canvas
  o Failure to complete the evaluation by midnight on December 5th will result in a 20% decrease in the student’s group project score.

Course Schedule and Reading Assignments

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<tr>
<th>1</th>
<th>Tuesday, Oct 30th</th>
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<tbody>
<tr>
<td></td>
<td>6:30-9:30pm</td>
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<tr>
<td></td>
<td>Intentional Impact – A Framework for Social Innovation</td>
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<td>Considering technology for impact through the framework of Intentional Impact including: problem, opportunity, iteration, success.</td>
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<td>- Intentional Impact Canvas</td>
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<td>- Case treatment and analysis of impact</td>
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Readings in advance of this class session:
1. Syllabus. The class syllabus is required reading in advance of the first class session.
2. Readings to be posted to Canvas.

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<tr>
<th>2</th>
<th>Tuesday, Nov 6th</th>
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<tr>
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<td>6:30pm-9:30pm</td>
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<td>Impact Arenas &amp; Externalities</td>
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<td>Consideration of the impact applications and potential across technology areas.</td>
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<td></td>
<td>- Impact assessment &amp; analysis</td>
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<td>- Risk &amp; externalities</td>
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<td>- Pivots into &amp; away from impact</td>
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<td></td>
<td>Guest Speaker: Paul Makin, M-Pesa original project lead (invited)</td>
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<td>Select Student Discovery Report-Outs</td>
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<td>Group Project Team Formation</td>
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Readings in advance of this class session:
1. Readings to be posted to Canvas.
2. Paul Makin Bio

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<thead>
<tr>
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<th>Tuesday, Nov 13th</th>
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<td>6:30-9:30pm</td>
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<td></td>
<td>Applied Concepts &amp; Student Project Workshopping</td>
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<td>In this class, students will learn about customer journey mapping and pitch basics and then workshop their group innovation concepts with guest instructors.</td>
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<tr>
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<td>Student Report-Outs</td>
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<td>Guest Speaker: Bilyan Belchev (Webitects), Jonny Imerman (CloxTalk)</td>
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Guest Instructors (invited):
- Shaina Morphew Doar ’10, Sidewalk Labs
- Hayes Ferguson, HistoryIT, Northwestern Garage
- Charles Adler, Kickstarter & Lost Arts
- George Aye, Greater Good Studios

Readings in advance of this class session:
1. Readings to be posted to Canvas.
2. Guest Instructor Bios
<table>
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<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
<th>Details</th>
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| 4 Tuesday, Nov 27<sup>th</sup> | 6:30-9:30pm   | Financial Levers for Impact & Scale                                  | Exploration of financial and corporate models for technology deployed for impact – at stages including innovation, scale and sunsetting.  
- Corporate forms  
- Revenue sources & models  
- Scaling & growth  
Guest Speaker: Kavita Gupta, Consensys (invited)  
Readings in advance of this class session:  
1. Readings to be posted to Canvas.  
2. Kavita Gupta Bio |
| 5 Tuesday, Dec 4<sup>th</sup>    | 6:30-9:30pm   | Final Project Pitches & Judge Feedback                               | Student Pitches & Judge Feedback  
Course Conclusion - Summary of Frameworks & Learnings  
Readings in advance of this class session:  
1. Readings to be posted to Canvas.  
2. Judge Bios |