

SYLLABUS

InnoLab: Solving Innovation Challenges through Collective Intelligence

In today's business world, organizational success is highly dependent on innovation. In addition to the fact that innovation allows organizations to stay relevant in the competitive market, it also plays an important role in economic growth and society. The ability to resolve critical problems depends on new innovations.

Whether a company is looking for fresh ideas for its business, or wants to explore a problem it is facing, an Innovation Challenge is a chance to leverage dozens of new perspectives to enhance their business. Innovation Challenges - as part of the concept of Open Innovation - usually build on the insights that knowledge is broadly distributed in society and hence capitalizing on the "wisdom of crowds" can be effective and efficient.

The purpose of this course is to introduce students to two major approaches on how organizations can proactively pursue innovation activities: creative problem solving and collective intelligence.

By following the hands-on approach of creative problem solving in a structured way, students will learn and live the principles of solving innovation-related challenges – spanning from defining the problem and generating possible responses to evaluating and selecting a final solution for implementation. In addition to being able to execute innovation challenges internally in an organization, students will acquire timely skills on how to tap into external knowledge by means of distributed innovation systems. Distributed innovation systems are an approach to organizing for innovation that seems to meet the challenge of accessing knowledge that resides outside the boundaries of any one organization.

The phenomenon-based approach of collective intelligence emerges through many different applications in innovation management and technology plays an increasingly important part in this. Technology facilitates the development and maintenance of crowdsourcing platforms where people can come together in order to exchange information. Unlike simple problems which have obvious fixes, making progress on complex problems requires dealing with uncertainty and multiple unknowns. Collective Intelligence draws on a combination of data, technology and diverse human skills to address different aspects of uncertainty. In addition, AI is already being used by many businesses and is a great opportunity to augment collective intelligence in real ways.

During this course, students will resolve real-world challenges relating to the working world or the broader society and develop new creative solutions in multidisciplinary teams. The course aims to provide theoretically-based understandings of complex real-world innovation challenges, allowing the student to conceptualize innovation related issues and to reflect on these in a practically informed manner. In addition, students will leave the course with enhanced skills in the areas of team building, leadership and project management.

The course uses a workshop format (see below), including a variety of teaching methodologies such as theory sessions with class discussions, input sessions provided by guest speakers, teamwork-based co-working, coaching sessions based on external expert and peer feedback as well as student presentations. Besides, it deliberately leverages the exceptional entrepreneurship and innovation ecosystem provided by SSE and Stockholm by integrating different player like the SSE Business Lab, companies such as Scania, Telia, Voi, Klarna or Spotify and international field experts sharing their insights and experiences.

ILOs

The overall intended learning outcome (ILO) for the course is that upon completion, course participants should be able to understand and apply approaches such as structured creative problem solving and collective intelligence as tools to address innovation challenges. Successful participants will also enhance their soft skills with regard to teamwork, leadership, communication and project management.

More specifically, after completing the course students should be able to:

1. Execute and reflect on a structured use of internal and external innovation approaches to gain deeper understanding of organizational challenges that restrict or promote the way on how to pursue innovation activities and organizational transformation.
2. Leverage the conceptual and theoretical knowledge skills set of two concrete innovation approaches in order to increase their individual and team-based innovation activity:
 - Structured understanding of how to manage and solve organizational challenges by exploring creativity in innovation management (turning idea generation and opportunity recognition into actions)
 - Theoretical understanding and strategic use of collective intelligence (and distributed innovation systems) and how it relates to timely phenomena such as crowds, contests, communities and platforms as well as their underlying mechanisms such as collaborative learning, collective decision making and co-creation.

Date & Time

The course is scheduled weekly on Wednesdays and Fridays mornings (10:15 – 12:00) and afternoons (13:15 – 15:00), starting on Jan. 31st till March 6th, 2024.

Attendance:

The course will be held online via Zoom. Attendance is non-mandatory. Please note that your participation, both in class and as a member of the teamwork, contributes to your final course assessment.

Apart from the in-class contact hours (in total 28), students are supposed to independently work on their project progress and team deliverables in the period between lectures and coachings.

Assessment

The overall grade is based on 60% individual assessment and 40% team assessment.

The individual assessment consist of:

20% participation (in-class and teamwork) and 40% reflection paper.

The team assessment is based on .

10% pitch presentation and 30% pitch deck.

Prerequisites

No previous knowledge required.

Faculty

[Kathrin Reinsberger](#) (Assistant Professor, House of Innovation/Stockholm School of Economics)

Format & Structure

Phase 1: Definition (Problem)

Jan. 31, 2024

Introductory Session: Setting the Stage (10:15 – 12:00)
Theory Session: Creative Problem Solving (13:15 – 15:00)

Feb. 2, 2024

Theory Session: Open Innovation (10:15 – 12:00)
Workshop: Intro to Innovation Challenge (13:15 – 15:00)

Phase 2: Ideation (Solution)

Feb. 7, 2024

Theory Session: Collective Intelligence (CI) (10:15 – 12:00)
Keynote: How to Leverage CI for Organizational Transformation (13:15 – 15:00)

Feb. 9, 2024

Workshop: Collective Innovation (10:15 – 12:00)

Phase 3: Formation (Action)

Feb. 14, 2024

Keynote: The Collective Intelligence of Remote Teams (10:15 – 12:00)
Workshop: Team Formation/Building (13:15 – 15:00)

Feb. 21, 2024

Theory Session: Problem Definition (10:15 – 12:00)
Keynote: TBD
Workshop: GOOTB (13:15 – 15:00)

Feb. 23, 2024

Coaching I: (10:15 – 12:00)

Phase 4: Validation (Action)

Feb. 28, 2024

Theory Session: Solution Development (10:15 – 12:00)
Keynote: Generating collective insights through prediction markets
Workshop: GOOTB (13:15 – 15:00)

Mar. 1, 2024

Coaching II: (10:15 – 12:00)

Phase 5: Implementation/Presentation

Mar. 6, 2024

Elevator Pitch: Student's Presentation with Jury (13:15 – 15:00)

Literature

The lectures follow three books (non-mandatory), several articles and two cases on the major topics of creative problem solving and collective intelligence, as listed below.

Most of the information (e.g. books) in this course is explicated in lectures. Mandatory readings will be made available via Canvas.

Mandatory:

Brabham, D. C. (2008). Crowdsourcing as a model for problem solving: An introduction and cases. *Convergence*, 14(1), 75–90.

Edmondson, A. C. (2016). Wicked Problem Solvers. *Harvard Business Review*, 94(6), 52-9.

Lakhani K. (2013). Using the crowd as an innovation partner. *Harvard Business Review* 91(4): 60-69, 140.

Leimeister, J. M. (2010). Collective intelligence. *Business & Information Systems Engineering*, 2(4), 245-248.

Riedl, C., Malone, T.W., Woolley, A.W. (2021). “The Collective Intelligence of Remote Teams,” *MIT Sloan Management Review*, October, 2021, article

Cases:

Israeli & Avery (2017). Predicting Consumer Tastes with Big Data at Gap

Lakhani (2011). InnoCentive.com

Lakhani et al. (2013). OpenIDEO

Optional:

Surowiecki, J. (2005). *The wisdom of crowds*. New York: Anchor Books.

Treffinger, D. J., Isaksen, S. G., & Stead-Dorval, K. B. (2006). *Creative problem solving: An introduction*. Prufrock Press Inc.

Malone, T. W. (2018). *Superminds: The surprising power of people and computers thinking together*. New York: Little Brown.

Karlusch, A., Sachsenhofer, W., & Reinsberger, K. (2018). Educating for the development of sustainable business models: Designing and delivering a course to foster creativity. *Journal of Cleaner Production*, 179, 169-179.