



Companies and Value Sensitive Innovation



About the Minor: Aim

Do you want to know how innovation works and how it matters for companies and society? In this minor, you will learn about managing innovation responsibly and apply your knowledge to a case study. You will build a theoretical foundation by learning about the innovation process and its ethical significance in the first quarter, which will be enriched by deep dives into marketing, finance, strategy, and risk and safety management during both quarters.

Background

Innovations are the driving force for the betterment of the human condition, and are required for companies to stay competitive. They also bear grave ethical and societal risks. But as we say at TU Delft, “the choice should not be between pushing through an innovation despite justified concerns or foregoing its potential benefits” (VTI website).

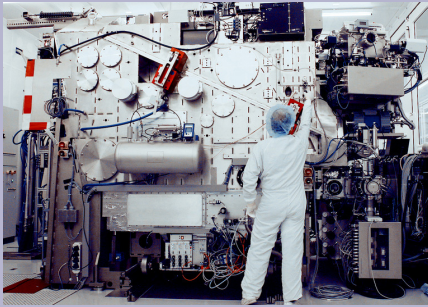
Therefore, innovation researchers and managers must learn to understand, analyse, and resolve tensions between different values in the design process to create innovations that meet ethical requirements while being economically feasible.

Focus

We focus on a comprehensive and practical understanding of the innovation process and its ethical dimensions. You will explore scientific theories and case studies, and address concrete business challenges so that you can apply your learning to real business situations.

You will take foundation modules on innovation management, and the ethical and societal significance of innovation and methods for thinking about the relation and tension between different values in the innovation process. You will then take deep dive modules that teach you the knowledge required to understand the perspective of finance, strategy, marketing, and risk & safety management and how they bear on innovation.

This emphasis on multidimensional assessment of technological innovations within companies make the minor relevant, attractive and challenging for enterprising students, particularly technology-oriented students who would like to enhance their knowledge of management of innovation.



What do you learn?

The main objectives of the Minor are to:

- To be able to *understand* and *analyse* the innovation process in existing companies, including its component parts and ethical significance.
- To be able to *understand*, *analyse*, and *create* requirement specifications from the perspectives of marketing, finance, strategy, and risk & safety.
- To be able to *analyse* and *evaluate* relations and tensions between requirements from an ethical perspective.
- To be able to *apply* knowledge about the innovation process, the different requirements, and their ethical aspects in a concrete business case

- Brightcycle is a bike projector that enhances safety in the dark. It shows cars behind cyclists whether the cyclist is for example slowing down or going to make a right turn.
- The Sitbit is a wearable electronic device, capable of giving simple directional signals to the wearer once this person (e.g. small child, confused elderly) has left a certain safe perimeter, additionally alerting the caretaker of this person via an app.

For whom?

Enterprising and creative students who want to pursue their ventures or career in established firms, who want to understand how companies work, who want to apply their engineering skills to enhance safety and sustainability in a cost effective and responsible way; overall, students who wish to broaden their horizon.

Overview subjects

First quarter

- Innovation management (5 ECTS)
- Ethics (ECTS)
- Marketing (5 ECTS)

Second quarter

- Financing Innovation (5 ECTS)
- Strategic Management Game (5 ECTS)
- Management of Risk & Safety (5 ECTS)

Note: All courses will be given in English.

Examples of previous case studies

- The H-Wing is a high performance sail in the sail market. The wingsail is hoistable and does not need modification to the mast or rigging, which makes it easy to integrate it in current boats
- The Robomop is a multi-purpose device which is able to vacuum, scrub, mop, and shine the floor. The device is able to walk and clean over stairs.
- The eyeSmart is a device containing image processing and analyzing software that would replace the ocular lens of existing microscopes and use AI image recognition technology to significantly lower the time required to detect diseases

Minor coordinator

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More information

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