

# IDE Master Graduation

## Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSC E&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

**! USE ADOBE ACROBAT READER TO OPEN, EDIT AND SAVE THIS DOCUMENT**

Download again and reopen in case you tried other software, such as Preview (Mac) or a webbrowser.

### STUDENT DATA & MASTER PROGRAMME

Save this form according the format "IDE Master Graduation Project Brief\_familyname\_firstname\_studentnumber\_dd-mm-yyyy". Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 !



family name  
initials  
student number  
street & no.  
zipcode & city  
country  
phone  
email

Your master programme (only select the options that apply to you):

IDE master(s):  IPD  Dfl  SPD

2<sup>nd</sup> non-IDE master: \_\_\_\_\_

individual programme: \_\_\_\_\_ (give date of approval)

honours programme:  Honours Programme Master

specialisation / annotation:  Medisign

Tech. in Sustainable Design

Entrepreneurship

### SUPERVISORY TEAM \*\*

Fill in the required data for the supervisory team members. Please check the instructions on the right !

\*\* chair  
\*\* mentor  
2<sup>nd</sup> mentor

comments  
(optional)



Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v..



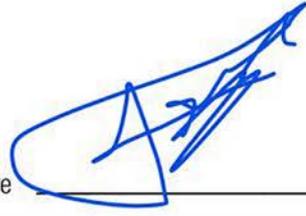
Second mentor only applies in case the assignment is hosted by an external organisation.



Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

**APPROVAL PROJECT BRIEF**

To be filled in by the chair of the supervisory team.

chair Toon Huysmans date 26 - 04 - 2022 signature 

**CHECK STUDY PROGRESS**

To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total: 30 EC  
 Of which, taking the conditional requirements into account, can be part of the exam programme 30 EC

List of electives obtained before the third semester without approval of the BoE

YES all 1<sup>st</sup> year master courses passed

NO missing 1<sup>st</sup> year master courses are:

name K. Veldman date 2 - 5 - 2023 signature 

**FORMAL APPROVAL GRADUATION PROJECT**

To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked \*\*. Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

- Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)?
- Is the level of the project challenging enough for a MSc IDE graduating student?
- Is the project expected to be doable within 100 working days/20 weeks ?
- Does the composition of the supervisory team comply with the regulations and fit the assignment ?

Content:  APPROVED  NOT APPROVED

Procedure:  APPROVED  NOT APPROVED

comments

name Monique von Morgen date - KE 16/5/2023 signature MvM

## How to get more cyclists to wear helmets in the Netherlands \_\_\_\_\_ project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 03 - 04 - 2023 \_\_\_\_\_ 24 - 08 - 2023 \_\_\_\_\_ end date

### INTRODUCTION \*\*

Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...).

In 2020, over 70,000 people had to visit the emergency department in hospitals because of cycling accidents. Twenty percent of these victims had brain injuries, and five percent of the victims (also) suffered open wounds and/or fractures to the head or face. One in five victims was wearing a bicycle helmet at the time of the accident, but this percentage was significantly higher among sports cyclists (79%) and mountain bikers (69%). The chance of brain injury was one third lower when victims wore a helmet during the riding accident compared to victims who did not wear a helmet.\* Nevertheless, Dutch cyclists rarely wear helmets.

Getting people to wear bicycle helmets is a task that requires behavioral change as well as a shift in perception from society. Such change can only be made with innovation and a new way of looking at bicycle helmets and what a helmet can be/do.

The stakeholders in this project are:

- Erasmus Medical Centre (who is the main client, and deals with the consequences of bicycle head-injuries on a regular basis).
- Cyclists (for whom a helmet decreases the chance of cycling related injuries).
- Public safety organisations like VeiligheidNL and Veilig verkeer Nederland (whose interests are in public safety and wellbeing).
- ANWB (who will contribute in marketing the helmet and also advocates for public safety and wellbeing in transportation).
- Bicycle helmet manufacturers like ABUS and Closca (who are partners in the helmet initiative and have financial gain if bicycle helmets in general become more popularized).

\* source: Veiligheid.nl

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introduction (continued): space for images

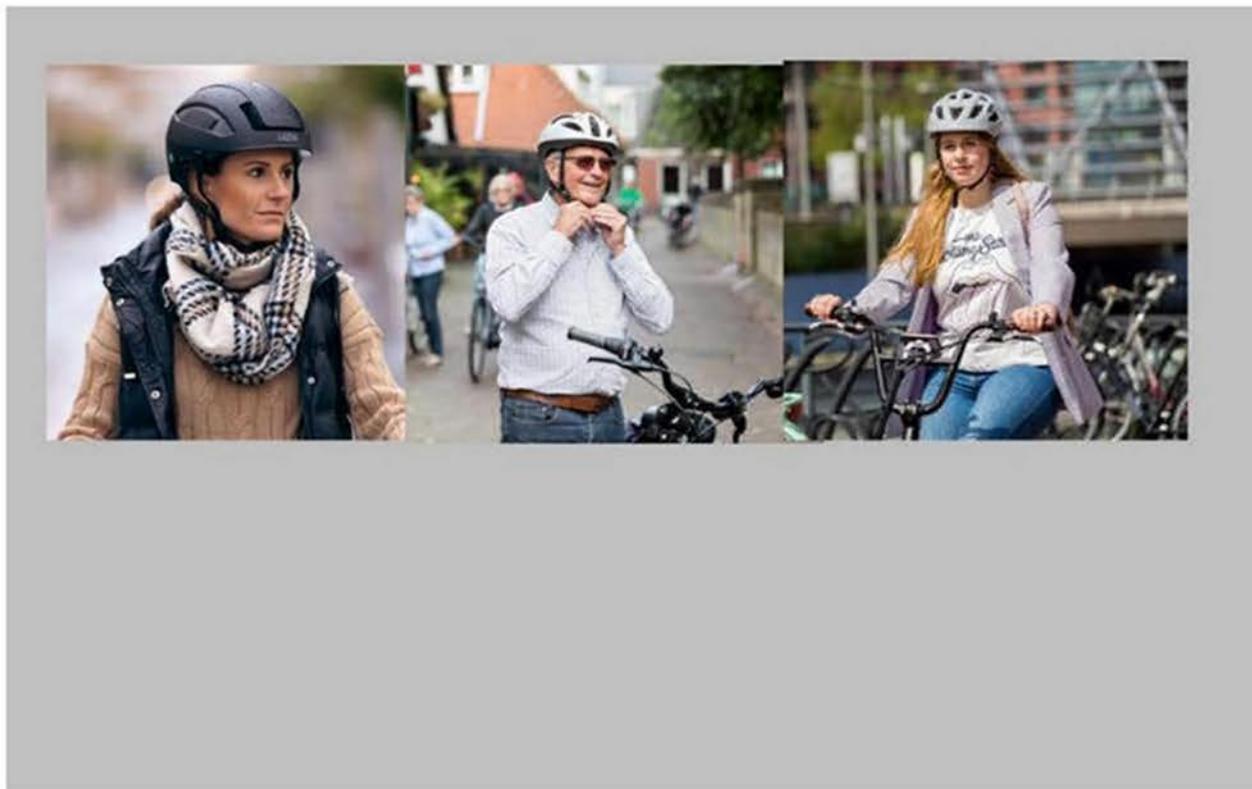


image / figure 1: The average bicycle helmet with functional design

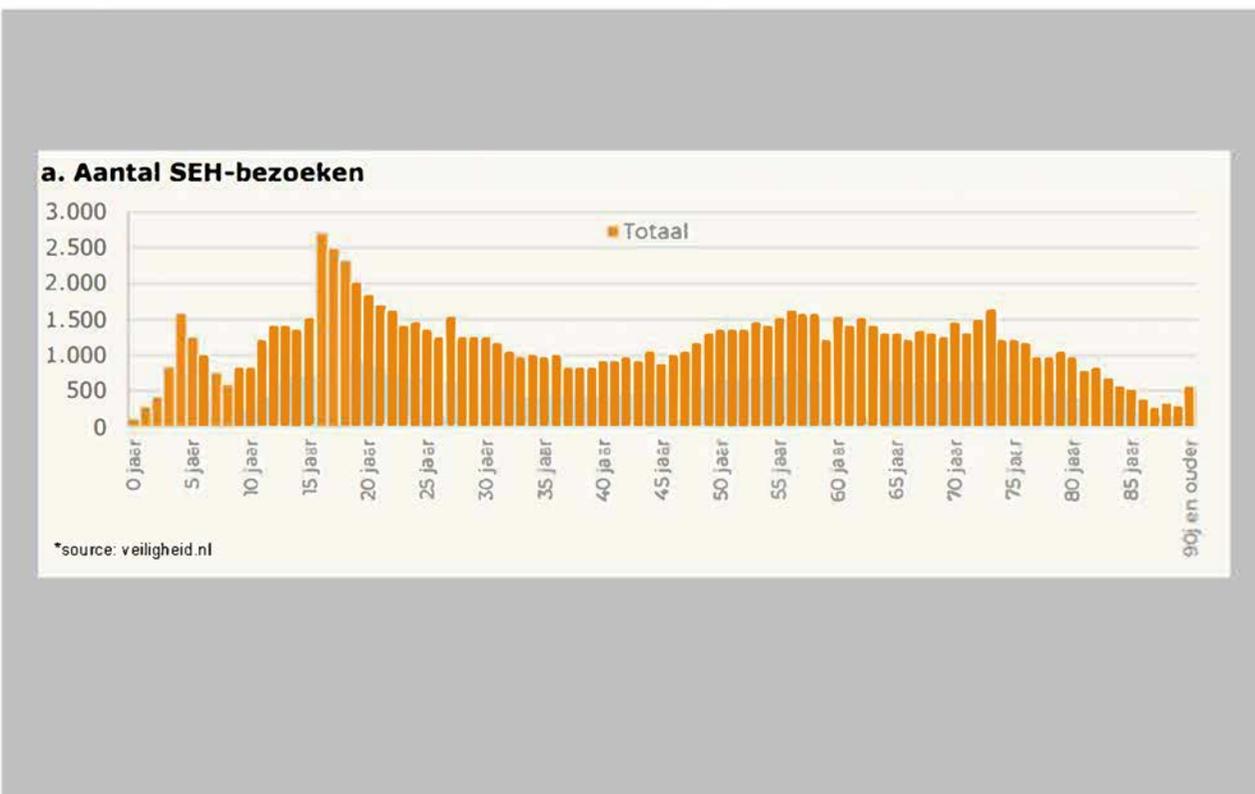


image / figure 2: The number of visits to the emergency department due to cycling accidents, per age group, per year

**PROBLEM DEFINITION \*\***

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

This graduation project concerns the prevention of bicycling head-injuries in the Netherlands, by overcoming the socio-cultural unwillingness and undesirability of bicyclists to wear a helmet. This concerns the general, non-sports oriented, bicyclist. This population rarely wears bicycle helmets in the Netherlands due an unwillingness caused by:

Social and Environmental factors, such as:

-Socio-cultural norms of being perceived unattractive or feeble/cowardly, and standing out while wearing a helmet.

Physical factors, such as:

-The inconvenience of bringing and storing a helmet.

-The negative impact a helmet can have on one's hairdo.

-The uncomfortable feeling of wearing a helmet compared to not wearing one.

Psychological and Emotional factors such as:

-The perceived low risk cycling without a helmet.

-The majority of bicycle helmets only offering the value of safety. Additional value drivers can have a great impact on desirability.

-The majority of bicycle helmets being styled functionally and industrially, instead of fashionably and human centered.

-The price of bicycle helmets compared to the values they provide.

The choice of an appropriate target group to focus the study on will be explored through research.

**ASSIGNMENT \*\***

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, ... . In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

I will do research that concerns cyclist behavior, context, trends, and the helmet market.

I will design a helmet/system that addresses the most prevalent causes of the problem.

This will result in a well defined helmet concept in terms of features, shaping, and interaction. The helmet concept will be a part of a strategy illustrated through product or product service combination ideas, to change the norms and people's perception of bicycle helmets in the Netherlands.

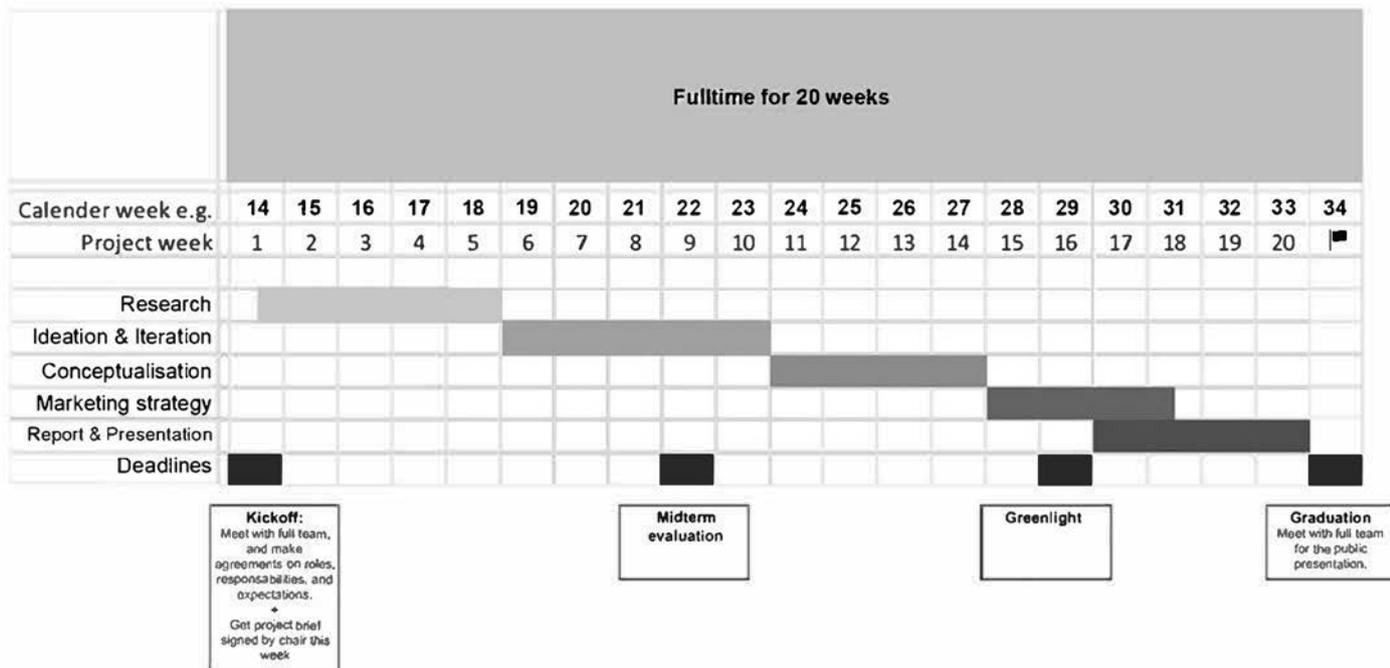
This strategy will also include positioning and marketing.

**PLANNING AND APPROACH \*\***

Include a Gantt Chart (replace the example below - more [examples can be found in Manual 2](#)) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

 start date 3 - 4 - 2023
25 - 8 - 2023

end date


**Explanation**
**Research phase:**

In order to understand and define the project context, I will start off with market and contextual research about bicycle helmets, along with trend research. Next I will interview stakeholders to get their insights and perspectives.

In order to understand the target group, customer need assessment will be done by sending out questionnaires (quantitative research), and use focus groups to gather rich data, as well as observe and participate in context (qualitative research) to discover latent needs. This will also lead to a better specified target group to design for.

**Ideation and Iteration:**

Using the gathered insights, I will set up design requirements and create moodboards, as a starting point for ideation.

Next is ideation (lots of sketches), I might also invite the targetgroup for a co-creation session. Using feedback I will iterate continuously and lastly I will apply Idea selection methods

**Conceptualisation:**

Here I will create detailed visuals,

Depending on the idea maybe a prototype

Do some testing to get feedback on smaller elements of the concept.

**Strategy creation:**

This is done parallel to the designing of the helmet. The design and strategy should tell the same story and reinforce each other.

Which company can do this concept, and how?

Create roadmaps, and marketing strategies.

### MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, ... . Stick to no more than five ambitions.

As a strategic product designer I love operating in the front-end of design where innovation takes place. And for this complex and challenging problem, innovation is exactly what is needed. This involves competences like doing various kinds of research (mostly qualitative), and empathising with the target group through observing and interacting with them. Emphasis will be put on finding new values and study cyclists' responses to these proposed values. I also want to create an exciting concept with my visualisation skills which will have me drawing out many ideas, and create detailed presentation drawings. And as industrial design is a collaborative process, I will bring together and manage the different stakeholders so that multiple expertises will be joined resulting in a well thought out concept on multiple levels. Finally, I hope to come up with an exciting concept that changes the negative way most people (myself included) perceive bicycle helmets.

### FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant.