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## PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT
Complete all fields, keep information clear, specific and concise

**Project title**  Measuring the perception of nuisance generated by canal traffic to houseboat owners in Amsterdam

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

### Introduction

*Describe the context of your project here; What is the domain in which your project takes place? Who are the main stakeholders and what interests are at stake? Describe the opportunities (and limitations) in this domain to better serve the stakeholder interests. (max 250 words)*

The goal of this project is to create a citizen sensing tool which determines the perception of houseboat owners on nuisance generated by canal traffic (see figure 1). This tool should empower houseboat owners in a conversation with the municipality of Amsterdam about their needs regarding boat traffic in the canals of Amsterdam.

This project contributes to the interests of the Senseable Amsterdam Laboratory(SAL), a research initiative between AMS Institute and MIT, who embed sensors throughout Amsterdam and generate data of the environment. They created the '100$ City Scanner' which gathers data of the environment like surface temperature, air quality, noise and emissions as a modular platform. (see figure 2)
This project stands as an opportunity to explore how the perception of nuisance for houseboat owners might be integrated into a modular platform like the '100$ City Scanner' while simultaneously empower the houseboat owners in the conversation of their perceived environment.

This project will focus mainly on the perception of houseboat owners on nuisance due to boat traffic, how this project could benefit their needs and how they would like to give feedback on their experiences. The houseboat owners will be actively involved as collaborators during the whole project.
This project will not elaborate on the quantitative data of sound/movement that possibly could be gathered with the tool, but the data could then be further researched within the team of MIT SAL.

Canal traffic is in the assignment a variable which could change/be adjusted after researching the needs of the houseboat owners.
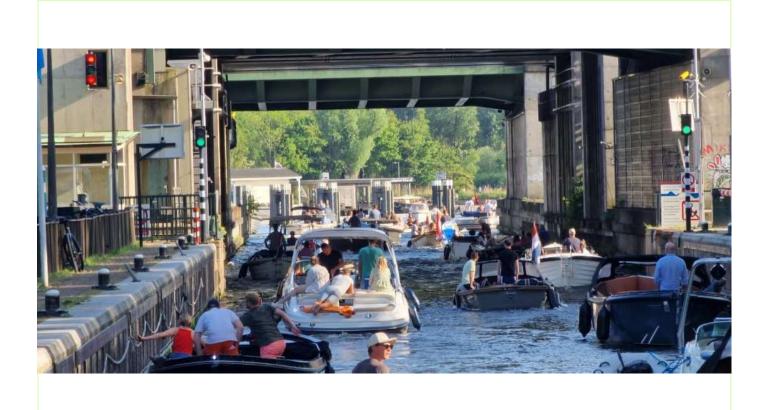
➔ *space available for images / figures on next page*

image / figure 1    Canal traffic in Amsterdam



image / figure 2    The 100$ City Scanner by MIT

## Problem Definition

*What problem do you want to solve in the context described in the introduction, and within the available time frame of 100 working days? (= Master Graduation Project of 30 EC). What opportunities do you see to create added value for the described stakeholders? Substantiate your choice.*
*(max 200 words)*

The WVA, the board of the houseboat association of Amsterdam, explain that houseboat owners are suffering from noise pollution by canal traffic in Amsterdam. The houseboat owners experience that the current ways of reporting nuisance to the municipality of Amsterdam does not provoke action or change for their well-being (WVA, Overlast en ondergrens, 2021).

This is firstly because the issue of nuisance is very complex to measure for creating enforcement (de Waag, Het ritme van de stad, 2021). The perception of nuisance differs per person and the accumulation of different species of sound can be experienced differently than one single sound. Moreover, different parties are responsible for nuisance on and around the water which makes it hard to address the nuisance. Lastly, the current policy lacks of enforcement for immediate nuisance, because the source of the nuisance is already passed when action is being taken.

A new perspective on the nuisance problem is needed to create a suitable policy for which citizen sensing will be valuable. Citizens sensing is used to empower residents in conversation of their interests by employing low-cost sensors to gather data of their environment.

## Assignment

*This is the most important part of the project brief because it will give a clear direction of what you are heading for.*
*Formulate an assignment to yourself regarding what you expect to deliver as result at the end of your project. (1 sentence)*
*As you graduate as an industrial design engineer, your assignment will start with a verb (Design/Investigate/Validate/Create), and you may use the green text format:*

Create a citizen sensing tool to evaluate and communicate the perception on nuisance generated by canal traffic for houseboat owners in Amsterdam

*Then explain your project approach to carrying out your graduation project and what research and design methods you plan to use to generate your design solution (max 150 words)*

The project will start with understanding the perception of nuisance generated by canal traffic in Amsterdam by contextmapping(Convivial toolbox, 2014). The houseboat owners will receive a sensitizing toolkit including assignments to delve into their own feelings regarding the nuisance and to introduce them to the concept of citizen sensing. This will be followed by in-depth interviews at their homes about nuisance.
Simultaneously research on citizen sensing, the role of the municipality and other stakeholders, the perception and effect of nuisance and the current ways of giving report of nuisance will be done.

New ideas on how to report feedback on nuisance generated by canal traffic will be generated by facilitating co-design workshops with the houseboat owners for which I will let them experiment with sound/movement sensors to measure their environmental data and help them solve their problem(Road Map for Creative Problem Solving Techniques, 2019). I will use the outcomes of the co-design workshops as inspiration and basis for creating the citizen sensing tool and test and evaluate the prototype

## Project planning and key moments

*To make visible how you plan to spend your time, you must make a planning for the full project. You are advised to use a Gantt chart format to show the different phases of your project, deliverables you have in mind, meetings and in-between deadlines. Keep in mind that all activities should fit within the given run time of 100 working days. Your planning should include a **kick-off meeting, mid-term evaluation meeting, green light meeting** and **graduation ceremony**. 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 course activities).*

*Make sure to attach the full plan to this project brief.*
*The four key moment dates must be filled in below*

| | |
|---|---|
| **Kick off meeting** | 1 Mar 2024 |
| **Mid-term evaluation** | 17 May 2024 |
| **Green light meeting** | 3 Sep 2024 |
| **Graduation ceremony** | 4 Oct 2024 |

*In exceptional cases (part of) the Graduation Project may need to be scheduled part-time. Indicate here if such applies to your project*

| | |
|---|---|
| Part of project scheduled part-time | ✓ |
| For how many project weeks | 26 |
| Number of project days per week | 4,0 |

Comments:

## Motivation and personal ambitions

*Explain why you wish to start this project, what competencies you want to prove or develop (e.g. competencies acquired in your MSc programme, electives, extra-curricular activities or other).*

*Optionally, describe whether you have some personal learning ambitions which you explicitly want to address in this project, on top of the learning objectives of the Graduation Project itself. You might think of e.g. acquiring in depth knowledge on a specific subject, broadening your competencies or experimenting with a specific tool or methodology. Personal learning ambitions are limited to a maximum number of five.*
*(200 words max)*

For this project I want to apply my skills of contextmapping, visualising, photograph/film and prototyping which I learned during my bachelor and Master at IDE. I followed all the electives regarding drawing and visualisations at TUDelft and followed the course 'contextmapping skills' to get more experienced with this method. Before starting my graduation I am also following the course 'creative facilitation' which I want to use for co-designing workshop with houseboat owners.

As I grew up on a small houseboat with my brother and parents I have a strong connection with the context of this project and I am very excited to design for this specific community.
My personal learning ambitions are gaining more knowledge on the perception of nuisance, organising co-design workshops in the ideation phase, prototype with sensors and communicate my findings with experts outside of IDE academy.