



IDE Master Graduation Project

Project team, procedural checks and Personal Project Brief

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

- Student defines the team, what the student is going to do/deliver and how that will come about
- Chair of the supervisory team signs, to formally approve the project's setup / Project brief
- SSC E&SA (Shared Service Centre, Education & Student Affairs) report on the student's registration and study progress
- IDE's Board of Examiners confirms the proposed supervisory team on their eligibility, and whether the student is allowed to start the Graduation Project

STUDENT DATA & MASTER PROGRAMME

Complete all fields and indicate which master(s) you are in

Family name	Verbeek	IDE master(s)	IPD ☐	Dfi ☐	SPD ☒
Initials	RJJ	2 nd non-IDE master			
Given name	Renske	Individual programme (date of approval)			
Student number		Medisign	☐		
		HPM	☐		

SUPERVISORY TEAM

Fill in the required information of supervisory team members. If applicable, company mentor is added as 2nd mentor

Chair	Marina Bos- De Vos	dept./section	DOS - DIVE / Designing Value in	! Ensure a heterogeneous team. In case you wish to include team members from the same section, explain why. ! Chair should request the IDE Board of Examiners for approval when a non-IDE mentor is proposed. Include CV and motivation letter. ! 2nd mentor only applies when a client is involved.
mentor	Willemijn Brouwer	dept./section	DOS - CP / Creative Processes	
2 nd mentor	Nina Timmers			
client:	DJI / Dienst Justitiële Inrichtingen			
city:	The Hague	country:	The Netherlands	
optional comments				

APPROVAL OF CHAIR on PROJECT PROPOSAL / PROJECT BRIEF -> to be filled in by the Chair of the supervisory team

Sign for approval (Chair)

Marina
Bos-de Vos

Digitally signed by
Marina Bos-de Vos
Date: 2025.09.25
20:46:57 +02'00'

Name Marina Bos-de Vos Date 25 Sep 2025 Signature _____

CHECK ON STUDY PROGRESS

To be filled in by **SSC E&SA** (Shared Service Centre, 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 _____ EC

Of which, taking conditional requirements into account, can be part of the exam programme _____ EC

★	YES	all 1 st year master courses passed
☐	NO	missing 1 st year courses

Comments:

Sign for approval (SSC E&SA)

K. Veldman
Digitally signed by K. Veldman
Date: 2025.09.29 13:00:19 +02'00'

Name K. Veldman Date 29 Sep 2025 Signature _____

APPROVAL OF BOARD OF EXAMINERS IDE on SUPERVISORY TEAM -> to be checked and filled in by IDE's Board of Examiners

Does the composition of the Supervisory Team comply with regulations?

YES	★	Supervisory Team approved
NO	☐	Supervisory Team not approved

Comments:

Based on study progress, students is ...

★	ALLOWED to start the graduation project
☐	NOT allowed to start the graduation project

Comments:

Sign for approval (BoEx)

Paul Mommers
Digitally signed by Paul Mommers
Date: 2025.09.29 16:30:02 +02'00'

Name Paul Mommers Date 29 Sep 2025 Signature _____

Personal Project Brief – IDE Master Graduation Project

Name student Renske Verbeek

Student number 4,836,499

PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT

Complete all fields, keep information clear, specific and concise

Project title The role of smart buildings in DJI's prison system; designing a shared definition and strategic plan for the future

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 Custodial Institutions Agency (Dienst Justitiële Inrichtingen (DJI)) manages the correctional system in the Netherlands on behalf of the Ministry of Justice and Security. A custodial sentence (imprisonment) is the most severe punishment that can be imposed in the Netherlands (Rijksoverheid, n.d.). DJI contributes to public safety by carrying out these sentences and measures imposed by the courts within its facilities (see image 1). DJI's mission is to contribute to a safer society by enforcing custodial sentences and measures while also offering those in its care the opportunity to build a socially responsible life; supporting successful reintegration (Dienst Justitiële Inrichtingen, n.d.).

As one of the largest government organizations in the Netherlands, DJI consists of many departments (see image 2) (DJI, 2024). Facing staff shortages of around 30% on the work floor, the organization is actively seeking solutions while continuing its mission. Within the department Directie Informatievoorziening (DI), an innovation program has been set up. Within this innovation team one of the sub-departments specifically focuses on addressing staff shortages through innovation. This team of around 25 people - consisting of designers, managers, and business analysts - works on various themes that may help address this problem, with a new emerging theme being smart buildings.

The department being responsible for DJI's facilities and other components essential for its operational activities is called 'Directie Facilitaire zaken, Huisvesting & Inkoop'. One of their current areas of work is future-proof buildings (DJI, n.d.-a). Combining all these developments within DJI, provide an opportunity to explore what smart buildings could mean for DJI and how they might help address staff shortages, while being future-proof and aligned with DJI's mission. To successfully drive innovation related within this theme, collaboration will be required across multiple levels and between different departments.

introduction (continued): space for images



image / figure 1 Penitentiare Inrichting (PI) Arnhem - One of 27 prison facilities in the Netherlands (DJI, n.d.)

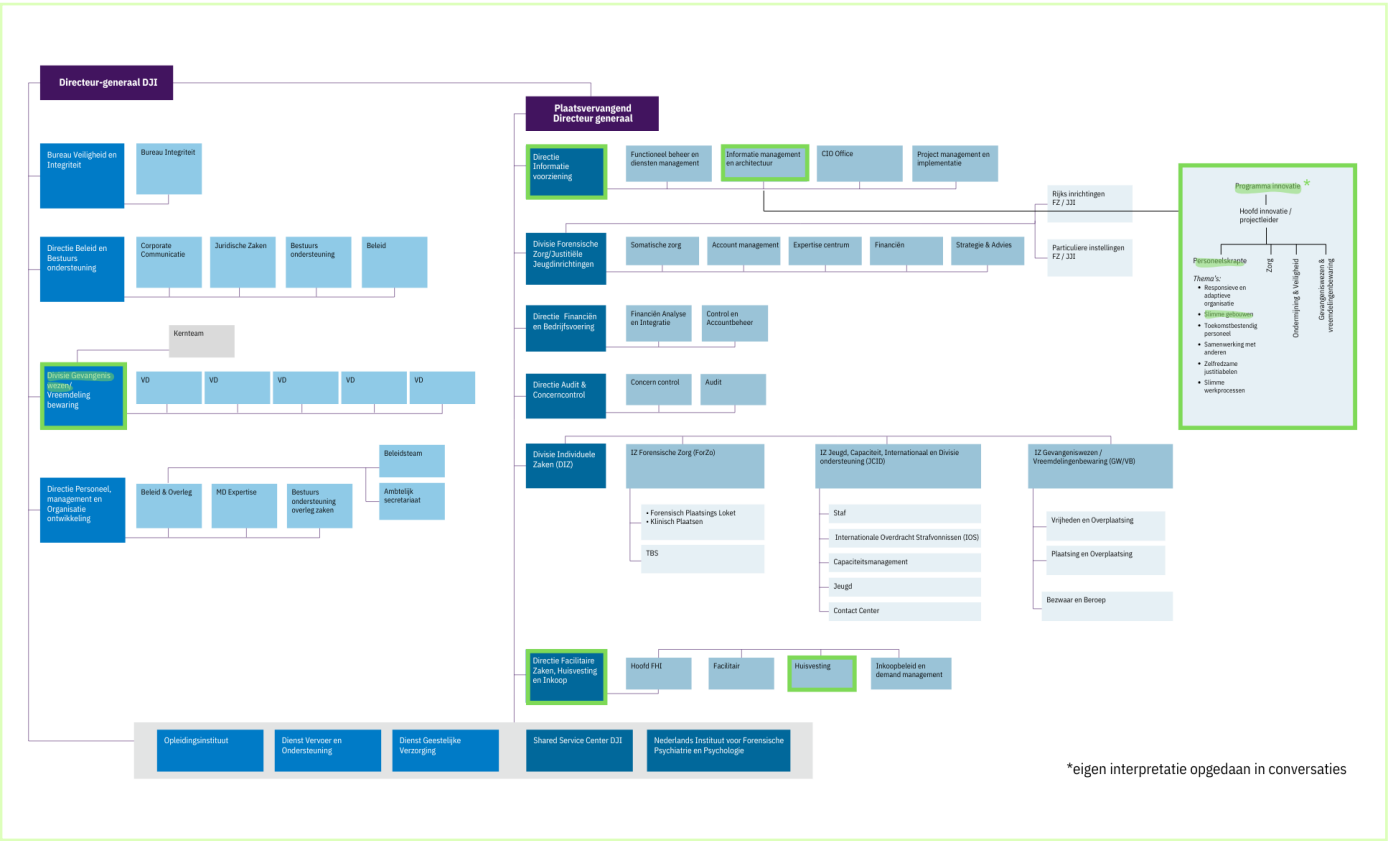


image / figure 2 Own adjustment (and interpretation) of organogram DJI, green = relevant for project (DJI, 2024)

Personal Project Brief – IDE Master Graduation Project

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)*

Even though DJI focuses on rehabilitation, recidivism rates remain high: 47% of ex-prisoners return to prison within two years of release (WODC, 2021). Meanwhile, the number of detainees is rising, with 30,000 new entries compared to 27,000 in 2020 (Dienst Justitiële Inrichtingen, n.d.-b; CBS, 2024), creating a shortage of places. At the same time, DJI faces a 30% staff shortage and a 20% absenteeism rate. The key challenge is how DJI can stay true to its mission while managing staff shortages and a growing detainee population. At the same time, there are opportunities for innovation. Smart buildings are emerging within DJI as a potential tool to support operations. However, their role is still undefined: there is no shared vision, no alignment between departments, and no strategic plan for the future. In addition, the issue falls under the responsibility of several departments within DJI (see image 2), which currently operate largely in isolation. As a government organization, DJI also tends to show resistance to change. Value can be created by connecting stakeholders and their interests, building a unified direction, and developing a strategic plan for smart buildings. Such a plan would clarify their role, guide implementation, and help DJI in their work to address staff shortages and future challenges while remaining committed to its mission.

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:

Design a shared definition and strategic plan for future work on the role of smart buildings within DJI's Dutch prison system.

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)

This project will follow an approach of Participatory Design (Bødker et al., 2022) and Design-Based Learning (Puentes et al., 2012). The focus is not on co-creating the final product but on “creating meaning together and generating insights throughout the process.” It will begin with exploratory research, including desk research and a literature review, to deepen understanding of the Dutch prison system. The first phase centers on context mapping, described in *Convivial Toolbox* (Sanders & Stappers, 2013) and Visser et al. (2005). The aim is to create a stakeholder map clarifying the system, along with journey maps of prisoners' daily experiences, the detention process, and system flows. These will be developed through semi-structured interviews with prison staff, departments, the innovation team, and ex-prisoners, complemented by observations and literature. Findings will lead to a shared definition and direction. Academically, I will select one topic to explore more deeply, challenging myself to view it from a different perspective. The project will conclude with a plan or redesign of the current system to support DJI's future work. This outcome may take the form of a roadmap, set of guidelines, handbook, or toolkit etc.

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 16 sept 2025

Mid-term evaluation 27 nov 2025

Green light meeting 24 feb 2026

Graduation ceremony 31 mrt 2026

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	25
Number of project days per week	4,0

Comments:

Due to the nature of working with a government institution, where information processes can take longer, I have chosen to do my graduation part-time (4 days a week)

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)

I chose this graduation topic because of my interest in solving complex challenges. During a previous MSc Strategic Design course, I became acquainted with working for a governmental organization. I realized that assignments for governmental institutions are often complex, as government is a relatively rigid environment, while design is about driving change. From an outside perspective, these kinds of challenges might even seem like impossible places to create change, but that is precisely what makes them interesting to me. It feels like a challenge in which I trust there is a possibility for change; implemented in a human-centred way, step by step, with a strategic approach. This project is the first time for me working directly within a company/organization, I am particularly curious to see how design interventions function in such a context. For my graduation I have the following personal learning objectives:

- 1) Apply the principles of the Resilient Designer Project to myself during this project, maintaining personal well-being while managing the demands of driving change (Resilient Designers, 2025).
- 2) Gain experience in creating and using creative materials, toolkits, and prototyping techniques, both during research and meetings.