3960

DESIGN FOR our future

TUDelft

DOS 3025   12/3/20

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.

family name	Iliohan		Your master programme (only select the options that apply to you):
initials	J.	given name Jimmy	IDE master(s): ( ) IPD ( ) DfI (★) SPD
student number	4344694 u3uu6g3		2nd non-IDE master:
street & no.			individual programme: _____ (give date of approval)
zipcode & city			honours programme: ( ) Honours Programme Master
country	N_h		specialisation / annotation: ( ) Medisign
phone			( ) Tech. in Sustainable Design
email			(★) Entrepeneurship

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

** chair	Deborah Nas	dept. / section:	DOS
** mentor	Tomasz Jaskiewicz	dept. / section:	DCC
2nd mentor			
	organisation:		
	city:	country:	

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.

Procedural Checks - IDE Master Graduation

TUDelft

APPROVAL PROJECT BRIEF
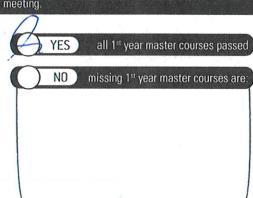To be filled in by the chair of the supervisory team.

chair   Deborah Nas   date   10 - 03 - 2020   signature

Deborah Nas

Digitally signed by Deborah Nas
Date: 2020.03.10 13:29:40 +01'00'

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: _24_ EC

Of which, taking the conditional requirements
into account, can be part of the exam programme   _24_ EC

○ **YES**   all 1st year master courses passed

○ **NO**   missing 1st year master courses are:

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

name _____ date 13 - 3 - 2020   signature _CB_

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: (v) **APPROVED**   ○ NOT APPROVED

Procedure: (v) **APPROVED**   ○ NOT APPROVED

Also approved for entrepreneurship

comments

name _Manon Borgstijn_   date _02-04-2020_   signature _MB_

Initials & Name   J.   Iliohan   Student number _4344694_

Title of Project   A business strategy for offering new smart office solutions for SMEs

A business strategy for offering new smart office solutions for SMEs   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   09 - 03 - 2020   07 - 08 - 2020   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, ...).

Small and Medium-sized Enterprises (SMEs) struggle with organizing their workplaces in a productive and attractive manner. For example, they have to deal with challenges such as a) saving energy costs, b) employees' need for more work flexibility, c) flex working causing stress and decreased productivity and social relationships at work, d) agile ways of working that need flexible office organization with dedicated rooms for teams and e) increased importance of well-being and health of employees (physical and psychological). Over the past years, there have been multiple attempts to introduce "smart" furniture and services to offices to deal with such problems. For example, there are smart building management systems that give insights into office use and give users the ability to control their environment. However, these systems fail to address the problems that SMEs are facing for two following reasons:

1. Building automation is typically developed from with a "technology push" approach: Stakeholders in the supply of smart offices are building owners, facility management and company management. The highly advanced systems are designed for facility management with some consideration for building owners and company management, with too little concern for employee experience. For example, EDGE, a real estate developer of smart buildings, did not succeed in improving the employee experience with their flagship building. Deloitte employees, occupants of this EDGE building, often find themselves confused with all the smartness in their office. Figure 1 (Accenture, 2019) shows the touchpoints between technology and employees and defines this area as the Workplace Experience (WEx). This framework points out that technology can only be used for improving the Workplace Experience when there is attention for the employee experience. When used in the right way, there lays excellent potential in using digital technology for increasing Workplace Experience. Trendwatchers from Mordor Intelligence (2019) expect that the market for smart offices will almost double in the next five years.

2. Clients of building automation systems are typically real estate developers and owners, not renters and occupants: The offered solutions focus on implementation at the time of construction of big company offices. Most SMEs are renting their offices in buildings that are managed by third parties. Building owners will mostly be interested in renting out as many square meters as possible and sparing as many costs as possible on non-essential issues. Renting makes it difficult for SMEs to smarten their offices.

To conclude, there are no smart office products and services on the market that would sufficiently appeal to SMEs that rent their office spaces. There is a market opportunity to fill that gap by introducing "smart" office solutions that take into account SME employees' daily needs and that do not require to be built-in as part of the rented building.

space available for images / figures on next page

Personal Project Brief - IDE Master Graduation
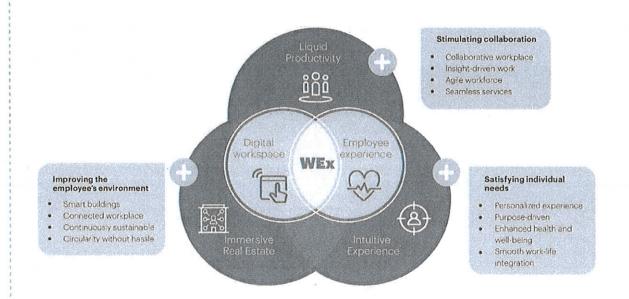
image / figure 1:   Figure 1: A framework for Workplace Experience (WEx)

image / figure 2: _____

Initials & Name J.   Iliohan   Student number 4344694

Title of Project   A business strategy for offering new smart office solutions for SMEs

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.

In the Netherlands, there are over 61.000 SMEs with 10 to 100 employees (CBS, 2020). Most of them are renting their office space. Being a renter limits opportunities to make adjustments to the workplace infrastructure. These limitations are caused by the fact that building installations and building management are owners', not tenants' responsibilities. Furthermore, several trends play a role in how corporates and SMEs are using office environments. These trends might enhance the opportunity of offering smart solutions for SMEs. Examples are:

1. Co-working in flexible spaces: 'Spaces' and 'WeWork' are examples that provide such flexible spaces for co-working. These companies offer monthly descriptions and the opportunity to grow within their buildings. Although this is mostly interesting for smaller enterprises, it is a trend that keeps expanding (Colliers, 2020).

2. Agile working: This way of working finds its origin in IT and is since a few years taking over an increasing number of teams in all kinds of departments. Groups that work with agile methods demand flexible workplaces that support teamwork. This trend has accelerated since 2017 (Frankwatching, 2017). Many corporates and SMEs are using this method.

3. Open-plan offices do not work: Although working in flexible workspaces has gained demand over the years, open-plan offices are losing in popularity. These kinds of spaces often cause users' headaches and stress (De Monitor, 2020). Instead, employees like to work in smaller and more diverse workplaces. More silent rooms, meeting rooms, fewer people in the same place and personal workstations will contribute to more diversity in the office.

The scope of this project revolves around identifying opportunities for smart office solutions for small-sized SMEs (10-100 employees). Several trends, such as co-working, agile working, and introduction of activity-based working, provide opportunities for coming up with new technological solutions. Examples are "smart" systems for booking meeting rooms and workplaces, setting lighting and temperature, giving insights to desk availability, controlling humidity and CO_2, or improving workplace ergonomics.

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.

The assignment is to design a business strategy for new "smart" office product-service combinations for SMEs.

The strategy developed in this project should consist, among others, of product(-service) ideas, a market development strategy, a roadmap, and a business model, applicable to a startup company. The purpose of this business strategy is to confirm the opportunities in the gap. Currently, there is no new or established "player" that covers this gap in the "smart" office market. Therefore, this strategy is most relevant for a startup company.

Initials & Name   J.   Iliohan   Student number   4344694

Title of Project   A business strategy for offering new smart office solutions for SMEs

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   9 - 3 - 2020   7 - 8 - 2020   end date

	Calendar week	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	Project week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	NOTES																						
DEADLINES	Kick-off																						
	Deliverables																						
	Mid-term																						
	Green Light																						
	Graduation																						
PHASE 1: DISCOVER	Trend research																						
	Technology scouting																						
	Competitor analysis																						
	Needs assessment																						
	Literature research																						
PHASE 2: DEFINE	Problem definition																						
	Justified value proposition																						
	Future visioning																						
	Validate with experts																						
	Future vision																						
PHASE 3: DEVELOP & DELIVER	Brainstorm on solutions																						
	Market development																						
	Business model																						
	Validate with users																						
	Roadmap design																						
PHASE 4: FINISHING TOUCH	Finish report																						
	Report design																						
	Pitch design																						
	Prepare pitch																						

For my planning, I considered to work 40 hours per week and have six public holidays. The 10th project week is blocked to work on a project for studiolab. Therefore, I will finish my graduation week in the 22nd project week with an ultimate deadline on the 17th of July.

Double diamond
In the first stage, I will focus on creating a future vision for 2030. Therefore, I will first need to understand the general context of the project, which requires market analysis and trend research. Such a context analysis enables me to arrange user research. I will do user research by using the ICT department at IDE as a case study. Employees of this department are approachable, and their needs are similar to those of SME employees. This case study will be validated by testing with the target group. With all of the outcomes together, I will create a future vision. Interviewing experts will confirm the future vision.

The second diamond is about designing a strategy for a new startup, which will lead to the desired future vision of stage one. A roadmap will visually express the strategy for market implementation of the product/service. The aim is to sketch several scenarios for market implementation. These scenarios contain a concept visualisation, business model and market development strategy. User testing enables validation of the concept.

Initials & Name   J.   Iliohan   Student number   4344694

Title of Project   A business strategy for offering new smart office solutions for SMEs

Personal Project Brief - IDE Master Graduation

Ever since I started to work on my own design, during the minor 'Interactive Environments', concerning the topic of smart office environments, I have had the ambition to continue within this domain. The topic interests me even more since this project turned out to be a success by being exhibited at Exceed! '18 and the Dutch Design Week '18. Therefore, I choose to set up my graduation project within the same domain so that I might be able to launch my own business. The outcome of this project might be an addition to my previous design.

During my graduation project, I want to put emphasis on going through all phases of the design process. I am very aware of the fact that I have a hard time presenting concrete concepts. Mostly, I like the fuzzy-front-end too much, which causes me to leave things unfinished. By holding on to strict planning and a lot of discipline, I hope to improve this throughout this project.

Furthermore, I want to show some competencies that I have developed during my studies and extracurricular activities. As both a rowing coach and information officer at the Port of Rotterdam, I have developed excellent communication skills. Especially by standing in front of big groups. For this project, I want to prove this by delivering an outstanding pitch for my design at the end of my project. Other competencies I want to test and improve are:
- Entrepreneurial
- User-centred
- Future-oriented
- Visualisation

Initials & Name   J._____ Iliohan _____   Student number _4344694_____

Title of Project   _A business strategy for offering new smart office solutions for SMEs_____