# Graduation Plan

# **Graduation Plan: All tracks**

The graduation plan consists of at least the following data/segments:

Personal information					
Name	KRIS Y. G. STEEN				
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Studio					
Name / Theme	Urban area development Laboratory				
Teachers / tutors	Yawei Chen				
Argumentation of choice of the studio	My fascination in planning of the built environment is the reason I have chosen for the master Real Estate and Housing. Particularly the planning on the larger scale, urban area (re)development, and strategic planning seems very relevant to me. Urban space is constantly changing, and urban (re)development is therefore vital to a city's existence. At the same time, humanity is becoming increasingly conscious of the need for sustainability. In the present era with the imminent climate change and the approaching end of the fossil-fuel period, this sense of sustainability is often compromised, especially in cities, as the sites of the largest conglomerations of people and resources. This has motivated me to choose a graduation research that addresses these two topics.				

<b>Graduation project</b>					
Title of the graduation project	Mixed-use urban area development and urban sustainability: an empirical study of the efficacy of mixed-use urban area development methods in achieving the full sustainability benefits of mixed-use from the end-user perspective.				
Goal					
Location:	Focus on mixed-use urban area development in the Netherlands: Case studies in Amsterdam and Rotterdam.				
The posed problem,	From research and examples from practice, it has been established that mixed-use development has a clear positive relationship with urban sustainability for numerous reasons, such as health, quality of life for the residents, transport, and ecological footprint. In practice however, we see an inconsistency in the physical form in which the concept of mixed-use is implemented, which leads to missed chances in terms of achieving the full sustainability benefits of mixed-use development. This is also true in the Netherlands. The cause of this problem is that the implemented form of mixed-use often does not facilitate the appropriate end-user behaviour needed to achieve these sustainability objectives.				
	When looking at the development process, it can be seen that the means that are used in the different mixed-use urban area development approaches in the Netherlands to translate the concept of mixed-use translated into a physical urban form of				

implementation, are apparently not always adequate in achieving the appropriate physical form. Underlying problem in science that the theory on mixed-use development gives insufficient specifics that can translate the aims of the concept of mixed-use into physical features that can be used in practice. The main problem to be solved is to establish a clear and transparent link between the means that are used to develop mixed-use areas in the Netherlands, and the achievement of the full sustainable potential of mixed-use development through appropriate end-user behaviour. Following the problem analysis, the main research research questions and question I am going to investigate is: Through which means is the concept of mixeduse translated into a physical urban form of implementation in the different mixed-use urban area development approaches in the Netherlands, and how effective are these means in achieving the full sustainability benefits of mixed-use development from the end-user perspective? The detailed research questions I am going to go into in order to answer this question are: 1. What are the different mixed-use urban area development approaches in the Netherlands? 2. Through which means is the concept of mixed-use translated into a physical urban form of implementation in the mixed-use urban area development approaches in the Netherlands? 3. Are these means effective in achieving the full sustainability benefits of mixed-use development from the end-user perspective? 4. What recommendations can be made in the field of urban form so that it achieve the full sustainable benefits of mixed-use through sustainable end-user behaviour? 5. What recommendations can be made in the field of the development process so that it yields a physical urban form that achieves the full sustainable benefits of mixed-use through sustainable end-user behaviour? The goal of this research is to investigate how the design assignment in which these result. development of mixed-use urban areas can be perfected with the eye on urban sustainability. Ultimate goal is to enhance the success of mixed-use development and to maximize the long term urban sustainability of urban areas. The assignment ahead is to formulate a set of specific

conditions in the field of product and process that have proven to be vital in the creation of successful mixed-use areas that achieve the full urban sustainability benefits of mixed-use development.

This will be done by testing the used development approaches and -instruments (used to translate the concept of mixed-use into a physical form of implementation in practice) to the requirements from practice (end-user interviews) and theory (literature review). By doing this, potential inaccuracies and inconsistencies can be identified and corrected, enabling the strategic planning regarding urban mixed-use (re)developments to be in line with the current practice and stance of research.

#### **Process**

### **Method description**

This assignment will be executed by the means of a mixed methods strategy.

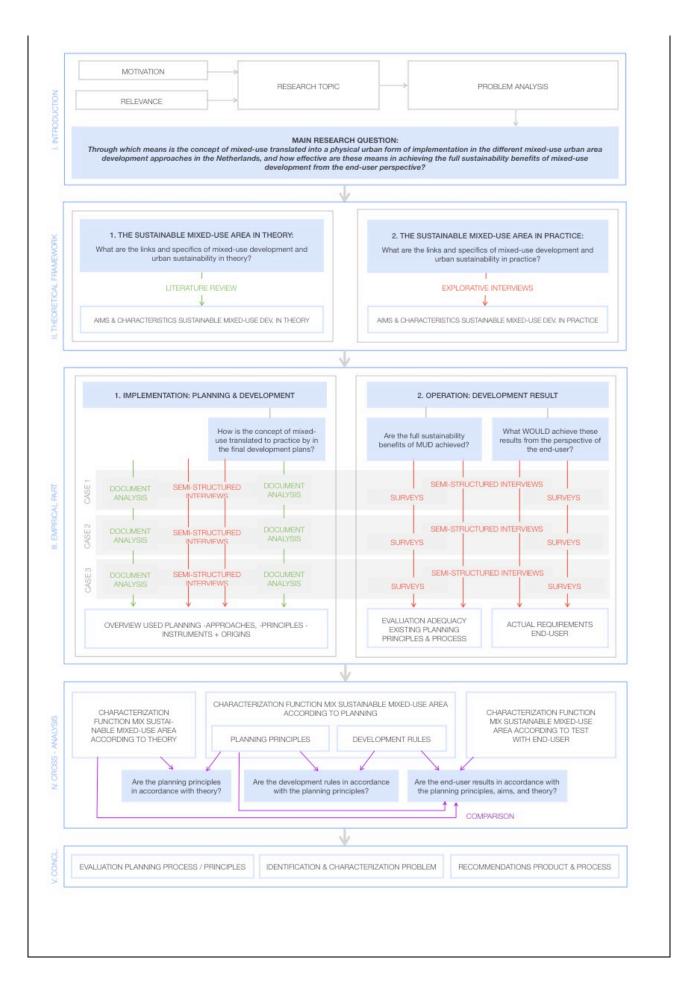
The qualitative research will firstly be used to establish the theoretical framework, furthermore to perform the qualitative interviews in the empirical part of the research, and finally for the cross-analysis in which the findings of the empirical research will be evaluated and causally linked.

The quantitative research will be used in the form of quantitative questionnaires in the empirical part of the research to supplement the qualitative interviews with more concrete and objective data, and in the cross-analysis part to compare the quantitative data from the various tests to one-another.

The research design will be a descriptive case study design. The aim of descriptive research is to observe and to describe "what exists" with respect to variables or conditions in a certain situation; in this case the planning process and adequacy of the guidelines on the physical implementation of mixed-use that are used in mixed-use developments. The case study design is employed to narrow down a very broad field of research into one or a few easily researchable examples.

The research methods that will be used in this research are literature review, document analysis, secondary data gathering, semi-structured interviews, questionnaires and comparison.

The exact research design, supplemented with the research questions, research methods and outputs along with the logical sequence of how is moved from one subject to the next, is visualized on the next page



#### Literature and general practical preference

For my literature approach I will rely on scientific sources such as Dutch and international, books, (graduation) reports and scientific magazines. This will firstly be established authors on sustainable urbanism and the concept of mixed-use. Where relevant these are supplemented with very interesting, well substantiated, more recent sources, which give additional background information or have further developed the concept or theory / put it into perspective. For literature review of the second chapter of the theoretical framework about the exploration of the planning process on mixed use developments in the institutional landscape in the Netherlands, literature will be reviewed on government documents on the procedures for making development plans, such as the *Beleidsnota nieuwe Wet ruimtelijke ordening*, and on the analysis of the current planning approaches in urban area developments in the Netherlands of authors who have done precedented research.

Furthermore, information will be retrieved from practice through semi-structured interviews and questionnaires. Firslty, explorative interviews will be used to explore the current planning practice in the institutional landscape in the Netherlands in the theoretical framework, and secondly to gather qualitative data in the empirical part. To collect data from users for the empirical part of the research, information will be gathered from respondents by the means of surveys. These surveys will ask about specific aspects related to function mix and user behaviour and will be aimed at the users (residents and others) of several case-study neighbourhoods.

Also documents like the policy documents, structural visions, zoning plans and development plans will be analyzed, to see which numbers or requirements are set on mixed-use development.

Last but not least, the exact application and operation of concepts mentioned in theory in practice will be researched through case studies of certain specific projects that demonstrate the different development approaches: in this case, the Amsterdam Eastern Docklands, the Cruquius area in Amsterdam, and Rotterdam Kop van Zuid.

#### Reflection

#### Relevance

I think this graduation project is very valuable in the larger social and scientific framework, because both urban (re)development, sustainability and the application of the concept of mixed-use is very relevant in the current place and time we live in.

In practice we see that the concept of mixed-use, although pursued enthusiastically in projects all over the world and mostly to positive effect, the physical interpretation of how the concept of mixed-use should be adopted in urban context varies greatly from project to project. The inconsistency in the approach to mixed-use development leads to inconsistent results in the field of sustainability. The effect is that some (re)developed areas are not achieving the full potential of sustainability benefits of mixed-use development.

This is an important issue. In order to maximize the sustainability of urban areas, well-planned mixed-use areas are necessary, and adequate guidelines regarding the physical implementation of mixed-use developments are crucial. With this research I want to contribute to the closing of the knowledge gap between the theory known on the concept of mixed-use development and the lack of specific rules on how this concept can best be implemented in practice, from the perspective of maximizing the long term urban sustainability of the physical development result.

## Time planning

The schedule of the research in practice through time is presented on the next page:

			A								
44	1.9	26/10 - 1/11			S DATA NAIRES	ANALYZE	DATA QUESTION- NAIRES			4	2.10
43	1.8	19/10 - 25/10		ONNAIRES  SIS)  PROCESS DATA  QUESTIONNAIRES						ဇ	2.9
42	1.7	12/10 - 18/10		CONDUCT QUESTIONNAIRES (with end-users)						2	2.8
		12/		ö					- E	-	2.7
	10	1/10		YZE SEMI-	UNED	ဟ	ot ION- ES				
41	1.5	4/10 - 11/10		ANALYZE DATA SEMI-	STRUCTURED INTERVIEWS	PROCESS INTERVIEWS	ADAPT QUESTION- NAIRES			51	2.6
40	1.5	28/09 - 4/10	LITERATURE REVIEW	JCTURED Inicipality, nitiators,		PROCESS		WRITE REPORT		50	2
			ERATL	MI-STR with m	ers, private end-users)			WRITE		2	2.5
39	4.1	21/09 - 27/09		CONDUCT SEMI-STRUCTURED INTERVIEWS (with municipality, developers, private initiators, end-users)						49	2.4
38	1.3	14/09 - 20/09		& .⊹ ∨	rerviews	illatols, elia-	ES			48	2.3
37	1.2	7/09 - 13/09		ANALYZE POLICY-, PLANNING- & DEVELOPMENT DOCUMENTS	CONSTRUCT SEMI-STRUCTURED INTERVIEWS	users)	CONSTRUCT QUESTIONNAIRES (for End-users)			47	2.2
				ZE POL LOPME	SEMI-S	, dave	TRUCT (for E			46	2.1
36	Ţ.	29/08 - 6/09		ANALY. DEVE	TRUCT		CONS			4	C)
		29/08			CONST	(WILLIAM)				45	1.10
WEEK NR.	ONDERW. WEEK	DATA									

4	2.10	25/01-31/01				
ဇ	2.9	18/01 - 24/01	PREPARE PRESENTATION			
2	2.8	11/01- 17/01	PREPARE PR	Т.		
F	2.7	4/01 - 10/01		FINALIZE REPORT		
51	2.6	14/12 - 20/12		ш		
50	2.5	7/12 - 13/12				
49	2.4	30/11 - 6/12		REPORT		
48	2.3	23/11- 29/11	SYNTHESIZE FINDINGS & FORMULATE CONCLUSIONS	FINALIZE REPORT		
47	2.2	16/11- 22/11	SYNTHESIZE FORMI CONCLI			
46	2.1	2/11 - 8/11   9/11 - 15/11   16/11 - 22/11   23/11 - 29/11   30/11 - 6/12   7/12 - 13/12   14/12 - 20/12   4/01 - 10/01   11/01 - 17/01   18/01 - 24/01   25/01 - 31/01	CROSS-ANALYZE FINDINGS FROM THEORY, DEVELOPMENT PRACTICE AND END-USER	WRITE REPORT		
45	1.10	2/11 - 8/11	CROSS-ANAL FROM T DEVELOPMEI AND EN			

SYNTHESIS

ANALYSIS

PROCESSING

EMPIRICAL RESEARCH

DESK WORK

LEGEND:

**P**4

**P**5