

LEIDEN – DELFT – ERASMUS MINOR

# SMART AND SHARED CITIES

CENTRE FOR  
**BOLD CITIES**



Erasmus  
University  
Rotterdam



# SHORT INTRODUCTION

The minor Smart and SHARED Cities is a 15 EC or 30 EC full-time minor programme. The minor is built on a combination of data, urban, political and social sciences. The minor touches upon important social issues deriving from making use of (new) technology within the city.

Classes on Monday, Wednesday, and Friday.

Schedule:

- Starting date: September 4th, 2023
- BLOCK A: until November 10th, 2023
- BLOCK B: until February 2nd, 2024

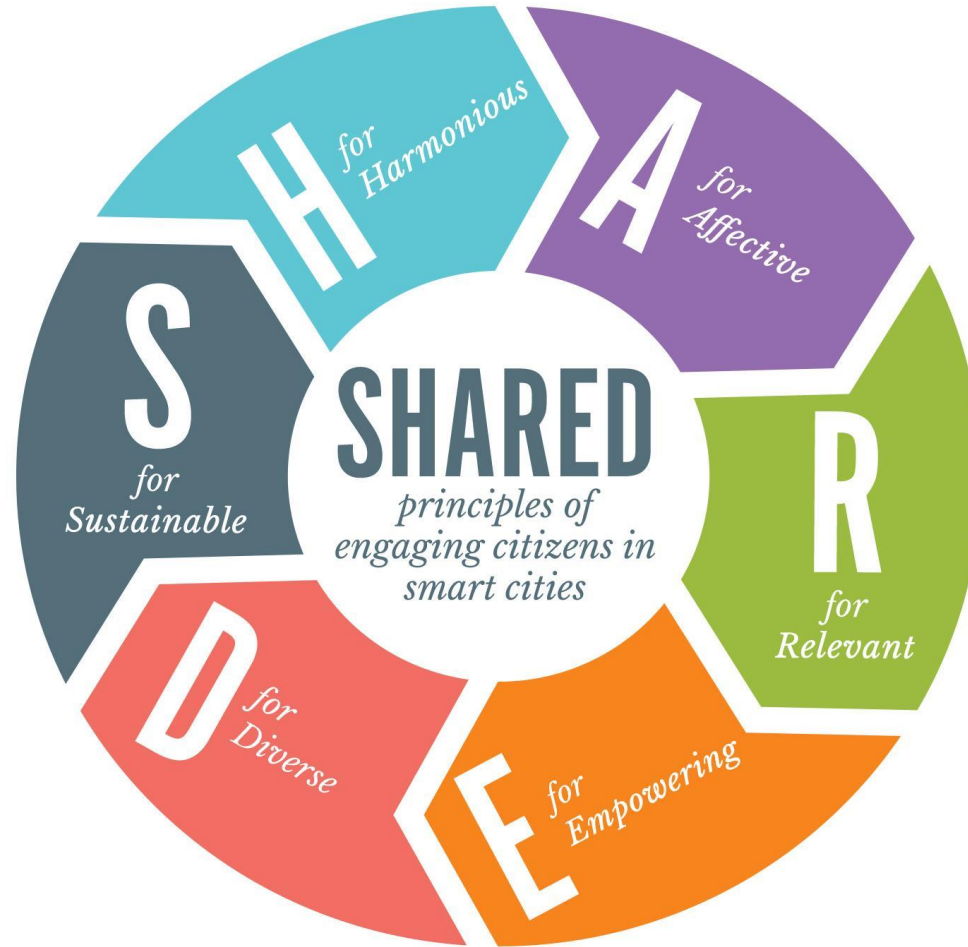


# WHAT IS A SMART CITY?

- A smart city is an urban area that uses different types of electronic Internet of things (IoT) sensors to collect data. Insights gained from that data are used to manage assets, resources and services efficiently; in return, that data is used improve the operations across the city. (Bellini et al 2022)
- A smart city is a place where traditional networks and services are made more efficient with the use of digital and telecommunication technologies for the benefit of its inhabitants and business. (European Commission)



# A SHARED CITY



# HOW IS THE MINOR BUILT UP?

## BLOCK A (15 EC)

Module 1: Introduction to the smart city

Module 2: Citizens and everyday experiences with the smart city

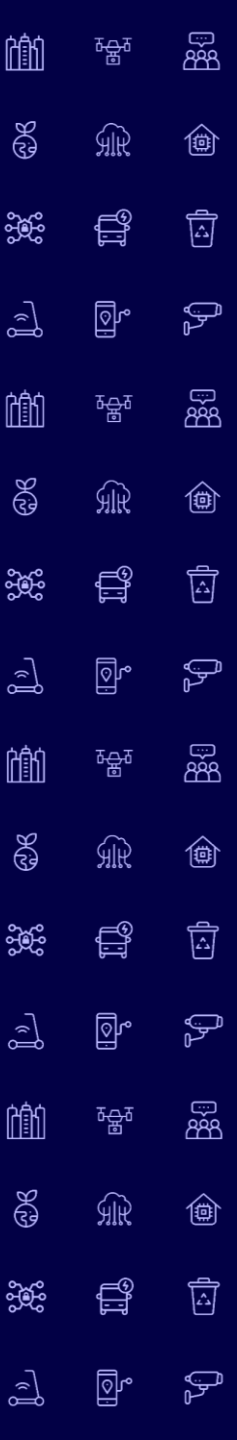
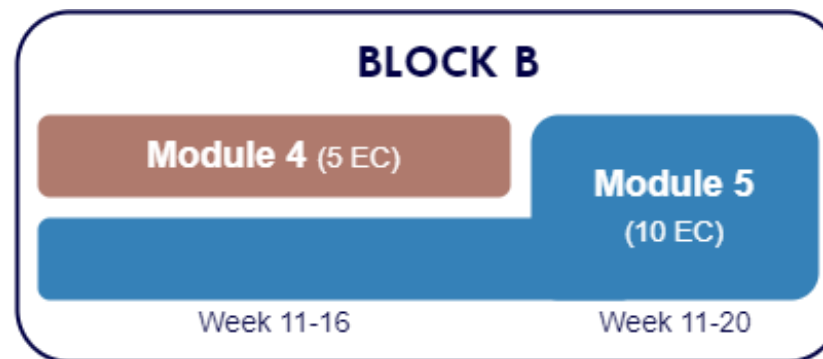
Module 3: Governing the smart city

*Resit in week 10*

## BLOCK B (30 EC)

Module 4: Urban data science

Module 5: Research participation and projects



# MODULE 1

## INTRODUCTION TO THE SMART CITY



Prof. dr.  
Liesbet van  
Zoonen  
**Module  
manager**

Dr. Jiska  
Engelbert  
**Lecturer**



ERASMUS UNIVERSITY ROTTERDAM

You learn more about the origins and functions of the smart city concept; different methodologies, meanings and possible positions (different stakeholders)

- Assessment: each week you write one individual essay
- Guest lectures from various stakeholders, such as the Municipality of Rotterdam and Argaleo
- Fieldtrip to RDM campus



# **MODULE 2**

## ***CITIZENS AND EVERYDAY EXPERIENCES WITH THE SMART CITY***

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You learn to understand the digital & social division in society; what is the position of the citizen and citizen groups?

- Assessment: 40% group work and 60% individual
- Guest lectures from artists and citizen groups

# **MODULE 3**

## **GOVERNING THE SMART CITY**



Dr. Sarah Giest  
**Module manager**

## LEIDEN UNIVERSITY

In this module the smart city is being explained from the governing perspective, what are the consequences of the complexity of governing the smart city?

- Assessment: individual policy brief
- Guest lectures from the police and professor Bram Klievink
- Field trip to Living Lab Scheveningen



# MODULE 4

## URBAN DATA SCIENCE



Dr. Achilleas Psyllidis  
**Module manager**

DELFT UNIVERSITY OF TECHNOLOGY

You learn about what urban data science means for a smart city, which tools can be used and what advantages and limitations different forms of data collection has. Afterwards you are able to develop a basic data-driven strategy for smart cities.

- Assessment: 50% group project on developing a data-driven strategy for smart cities and 50% individual report on theory and data analysis
- A combination of theory and practice

# **MODULE 5**

## **RESEARCH PARTICIPATION AND PROJECTS**



Prof. Dr. Roland Ortt  
**Module manager**

DELFT UNIVERSITY OF TECHNOLOGY

During this research project you put the theory into practice by working for a commissioner. You developing will learn professional and ethical responsibility and work in a group to develop and answer a research questions. Innovation models are a big part of the module.

- Assessment: based on the group project and professional attitude
- Commissioners: Municipality of Rotterdam, The Future Mobility Network, TechTics, Closer Cities

# COMBINATION OF THEORY AND PRACTICE

- By inviting guest lectures, we try to make the connection to practice from the start
- There are several obligatory readings and activities
- Learning by doing



*“This minor gave a lot more opportunities to use the theoretical information on practical examples than in my normal study. I have the feeling this minor gave me much more information I could really do something with in comparison with normal studies of the university”*

– Student evaluation

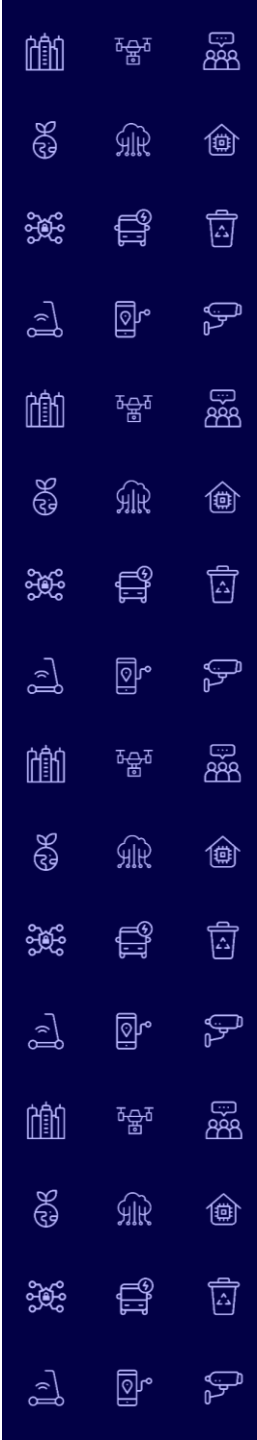
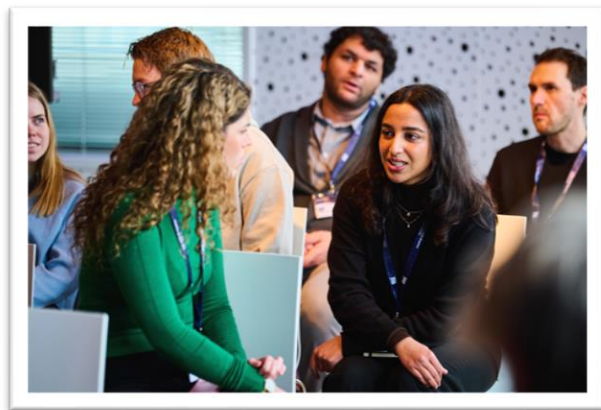


Robot Rosie – student project with the Future Mobility Network



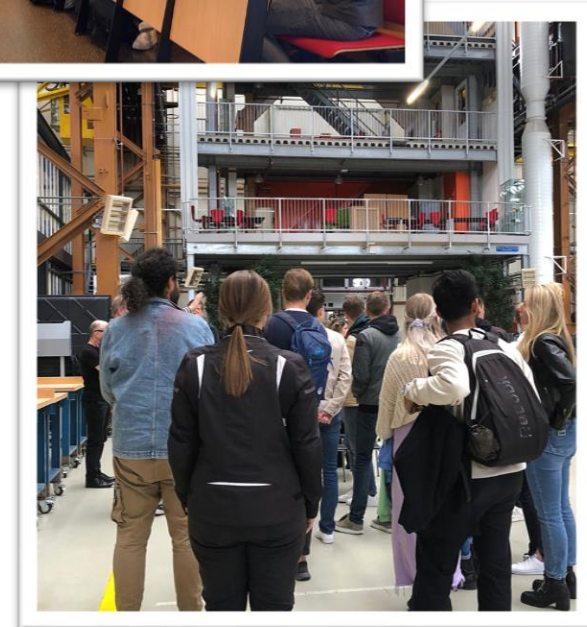
# COMBINATION OF INDIVIDUAL AND GROUP WORK

- Working together with different disciplines is indispensable when trying to find solutions for complex societal problems
- You learn to contribute to a group project from your own core discipline and are able to integrate different visions within a new idea or product
- Possibility for individual input and consolidation of knowledge



# COMBINATION OF CLASS AND FIELDTRIPS

- RDM Campus Rotterdam
- Smart City Scheveningen
- Brainport Eindhoven / Helmond
- Tutorials data science
- Pub Quiz



# OUR STUDENT SATISFACTION IS VERY HIGH

*“The lecturer was really enthusiastic and explained in a way so that even people who don't know much about governing could understand the lectures, this was really nice.”*

*“Being active in communicating and doing research for an actual business provides more insight in a more professional setting instead of only doing theoretical study/research.”*

– Student evaluation 2022-2023



# MORE INFORMATION



Merlina Slotboom  
Minor coordinator



Sanne van Herwijnen  
Student assistant

Check out our website  
or send an e-mail if  
you have any  
questions!



[minorssc@essb.eur.nl](mailto:minorssc@essb.eur.nl)



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Cities](https://www.leiden-delft-erasmus-centre-for-bold-cities.nl)



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**THANK YOU FOR  
ATTENDING  
ANY QUESTIONS?**



**SCAN ME**